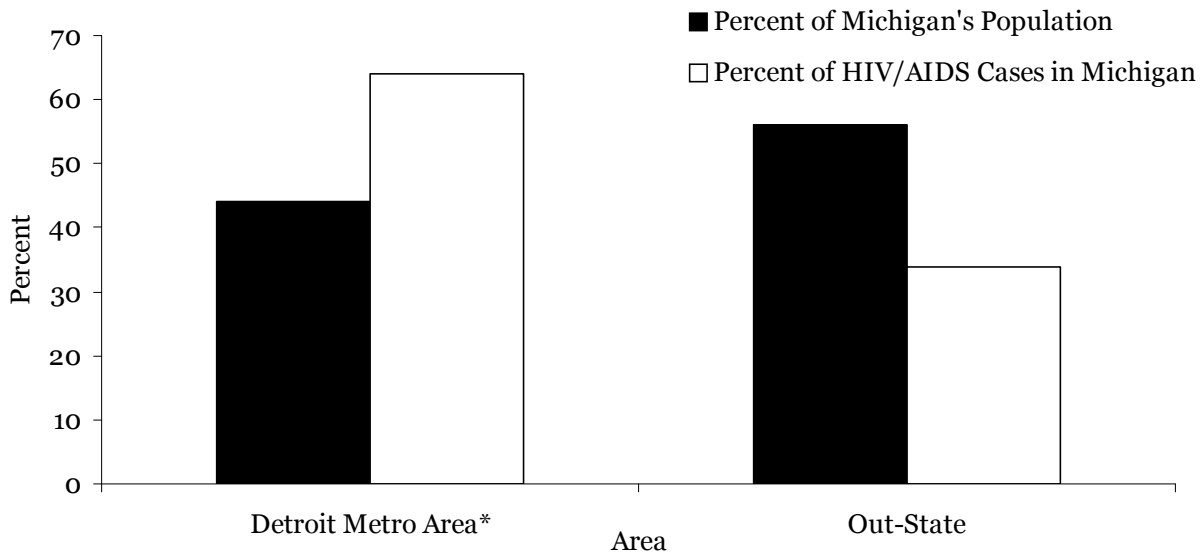
2010 Profile of HIV/AIDS in Michigan

Figure 1: Michigan Living HIV/AIDS Cases and Population by Area, January 2010



**Detroit Metro Area includes the City of Detroit, Lapeer County, Macomb County, Monroe County, Oakland County, St. Clair County, and Wayne County.*

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Summary of HIV/AIDS Epidemic in Michigan

- **How many cases?** The Michigan Department of Community Health (MDCH) estimates that there are 18,800 people currently living with HIV/AIDS in the state, of which 15,285 were reported as of January 1, 2010. The number and rate of new HIV diagnoses decreased significantly in Michigan for the first time from 907 cases in 2004 (9.0 per 100,000) to 846 cases in 2008 (8.5 per 100,000), with an average decrease in rate of two percent per year. Despite this decrease, each year, there are more new diagnoses of HIV infection than deaths. As a result, the reported number of persons living with HIV disease in Michigan is increasing.

- **How are the cases geographically distributed?** HIV disease is distributed disproportionately in Michigan. The Detroit Metro Area has 64 percent of those living with HIV (9,765 of the 15,285 cases reported statewide), but only 44 percent of the general population (Figure 1, page 3-1). The rest of the state has fewer cases compared with the general population distribution.

- **How does the epidemic in Michigan compare with national and worldwide statistics?** According to the Joint United Nations Programme on HIV/AIDS, an estimated 2.7 million new HIV infections and 2 million AIDS deaths occurred during 2008 worldwide, bringing the total persons infected with HIV to 33.4 million. This translates to 7,400 persons being newly infected with HIV and 5,500 persons dying from AIDS each day. Just less than three-quarters (71 percent) of new cases and deaths (70 percent) were in Sub-Saharan Africa, where transmission is predominately heterosexual.

  (Joint United Nations Programme on HIV/AIDS. *AIDS epidemic update: December 2008*. Available at http://data.unaids.org/pub/Report/2009/JC1700_Epi_Update_2009_en.pdf)

  Nationally, the number of persons living with HIV/AIDS per year increased 15 percent between 2004 and 2007 in the 34 states with established confidential, name-based HIV infection reporting. At the end of 2007, an estimated 549,196 persons were living with HIV/AIDS. In 2007, the estimated rate of HIV/AIDS cases in the 34 states with confidential name-based HIV infection reporting since at least 2003 was 21.1 per 100,000. The number of AIDS deaths per year in the 50 states, District of Columbia, and U.S. territories, possessions, and associated nations decreased 17 percent from 2004 through 2007.

  (Centers for Disease Control and Prevention, *HIV/AIDS Surveillance Report 2007*, Volume 19. Atlanta: U.S. Department of Health and Human Services, Center for Disease Control and Prevention; 2009. Available at http://www.cdc.gov/hiv/topics/surveillance/resources/reports/2007report/pdf/ 2007SurveillanceReport.pdf)

Recommendations: Ranking of Behavioral Groups

To assist in prioritizing prevention activities, the MDCH HIV/STD/VH/TB Epidemiology Section is charged with ranking the top three primary behavioral groups at risk for HIV disease in Michigan. The guiding question used in this process is, "In which populations can strategies prevent the most infections from occurring?" Effectively reducing transmission in populations where most of the HIV transmission is taking place will have the greatest impact upon the overall epidemic. The percentage of cases for each behavioral group and trends over time were used to determine the ranked order of the following three behavioral groups: MSM, heterosexual, and IDU. For more information on trends overtime, see the section on Trends in HIV/AIDS Data on pages 3-18—21.

- **Men Who Have Sex With Men (MSM)*:** MSM make up 52 percent of all reported cases of HIV/AIDS (8,073 out of 15,285 cases). The MSM behavioral group continues to be the most affected behavioral group statewide. Between 2004 and 2008, the number of new diagnoses among MSM remained stable with 384 cases diagnosed in 2008. However, the percent of cases among black MSM increased by an average of four percent per year during this time period and the percent of cases among white MSM decreased by an average of eight percent per year.

- **Heterosexuals**: Heterosexual cases constitute 17 percent of the total number of reported cases (2,663 out of 15,285 cases) and are comprised of High-Risk Heterosexuals (HRH) and females who are presumed to have been infected heterosexually (PH-Fem). HRH are defined as HIV-infected persons whose heterosexual sex partners are known to be IDUs, behaviorally bisexual men, blood recipients known to be HIV +, and/or HIV+ individuals, and PH-Fem are defined as females whose only reported risk is heterosexual contact, and their male partner's risk and HIV status are unknown. The trend in persons reporting heterosexual transmission decreased by six percent each year from 2004 through 2008. This is the first year we have seen this decrease, which is related to the decrease among black females, who make up 62 percent of persons with heterosexual risk.

- **Injecting Drug Users (IDU)*:** Of all reported cases of HIV/AIDS, 16 percent are IDU (2,467 out of 15,285 cases). The trend in persons diagnosed with HIV and reporting IDU behavior between 2004 and 2008 have decreased an average of 14 percent per year (67 to 34 cases). This is the fifth year in a row that Michigan trend analyses have shown a significant decrease among IDUs.

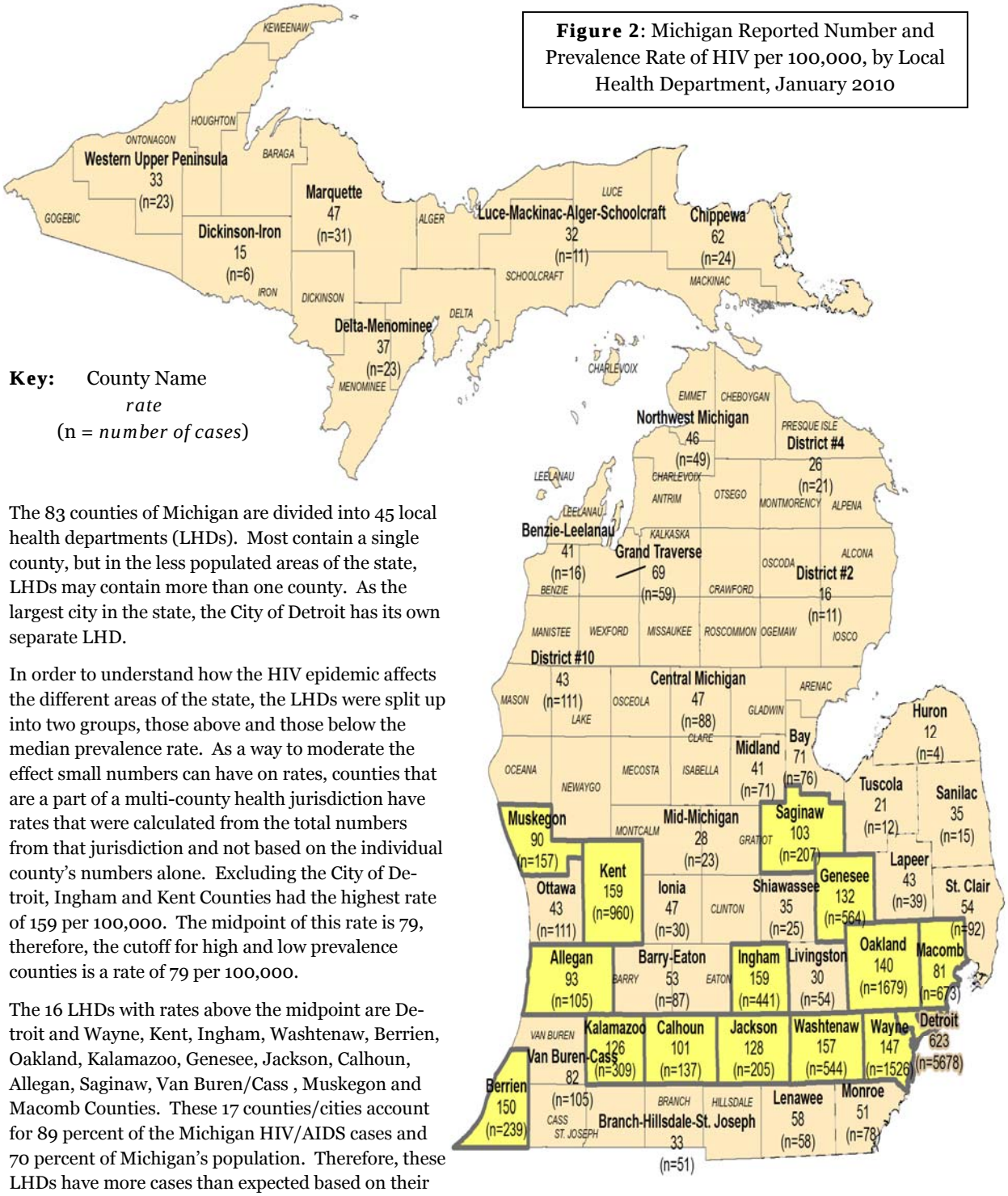
*****_These numbers include MSM/IDU in totals and percent calculations._

2010 Profile of HIV/AIDS in Michigan

Distribution of HIV/AIDS Cases by Local Health Jurisdiction

Data from HIV/AIDS Reporting System (eHARS)

Figure 2: Michigan Reported Number and Prevalence Rate of HIV per 100,000, by Local Health Department, January 2010



Key: County Name
rate
(n = *number of cases*)

The 83 counties of Michigan are divided into 45 local health departments (LHDs). Most contain a single county, but in the less populated areas of the state, LHDs may contain more than one county. As the largest city in the state, the City of Detroit has its own separate LHD.

In order to understand how the HIV epidemic affects the different areas of the state, the LHDs were split up into two groups, those above and those below the median prevalence rate. As a way to moderate the effect small numbers can have on rates, counties that are a part of a multi-county health jurisdiction have rates that were calculated from the total numbers from that jurisdiction and not based on the individual county's numbers alone. Excluding the City of Detroit, Ingham and Kent Counties had the highest rate of 159 per 100,000. The midpoint of this rate is 79, therefore, the cutoff for high and low prevalence counties is a rate of 79 per 100,000.

The 16 LHDs with rates above the midpoint are Detroit and Wayne, Kent, Ingham, Washtenaw, Berrien, Oakland, Kalamazoo, Genesee, Jackson, Calhoun, Allegan, Saginaw, Van Buren/Cass , Muskegon and Macomb Counties. These 17 counties/cities account for 89 percent of the Michigan HIV/AIDS cases and 70 percent of Michigan's population. Therefore, these LHDs have more cases than expected based on their populations. The remaining 29 LHDs account for 11 percent of the cases and 30 percent of the population.

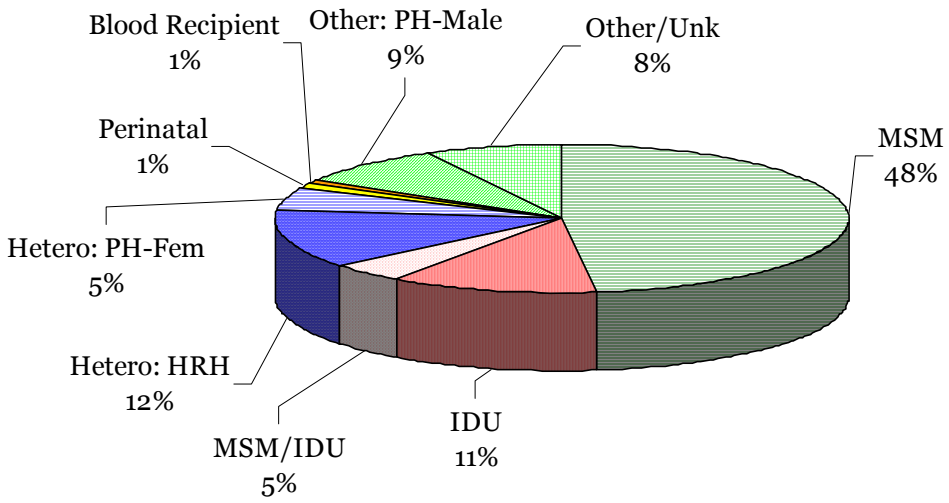
2010 Profile of HIV/AIDS in Michigan

Distribution of Living HIV/AIDS Cases by Mode of Transmission

Data from HIV/AIDS Reporting System (eHARS)

Current surveillance methods cannot distinguish the specific transmission route in individuals who have engaged in more than one transmission behavior. Although case reporting includes ascertainment of many behaviors associated with HIV transmission, for the purposes of analysis and interpretation, cases are assigned to a risk hierarchy designated by the Centers for Disease Control and Prevention. This hierarchy takes into account the efficiency of HIV transmission associated with each behavior as well as the probability of exposure to an infected person within the population. The adult/adolescent categories, in order, are as follows: (1) men who have sex with men (MSM), (2) injecting drug users (IDU), (3) men who have sex with men and inject drugs (MSM/IDU), (4) hemophilia/coagulation disorders, (5) heterosexual (HRH) (see glossary for more in-depth description), (6) receipt of HIV-infected blood or blood components, and (7) no identified risk (NIR). Often times, partners are unaware of their partners' risky behaviors. For this reason, Michigan uses two additional categories to help define the heterosexual transmission pattern: Presumed Heterosexual (PH)-Female and PH-Male (please see the glossary in Appendix B for further explanation). Figure 3 indicates persons living with HIV/AIDS in Michigan by mode of transmission.

Figure 3: Reported Persons Living with HIV/AIDS Michigan, by Risk, January 2010 (N = 15,285)



- Over half (53 percent) of the people living with HIV/AIDS are MSM, including five percent who also injected drugs (MSM/IDU).
- Seventeen percent have a risk of heterosexual sex, including 12 percent HRH and five percent PH-Female.
- Sixteen percent are injecting drug users, including five percent who are also MSM (MSM/IDU).
- Seventeen percent have a categorical 'unknown' risk, including nine percent PH-Male and eight percent other or unknown.

Distribution of Reported Rate and Estimated Prevalence of HIV/AIDS Cases by Race and Sex

Data from HIV/AIDS Reporting System (eHARS)

Figures 4 and 5 show the impact of this epidemic on six race and sex groups.

Figure 4: Estimated Prevalence of Persons Living with HIV/AIDS in Michigan, by Race and Sex

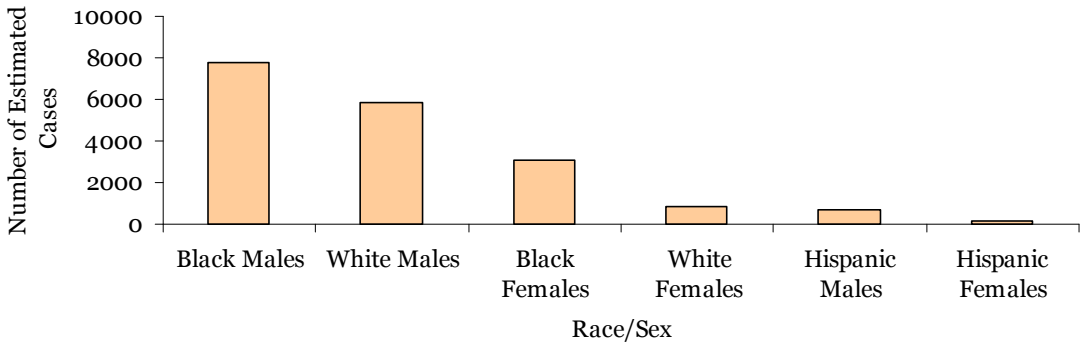
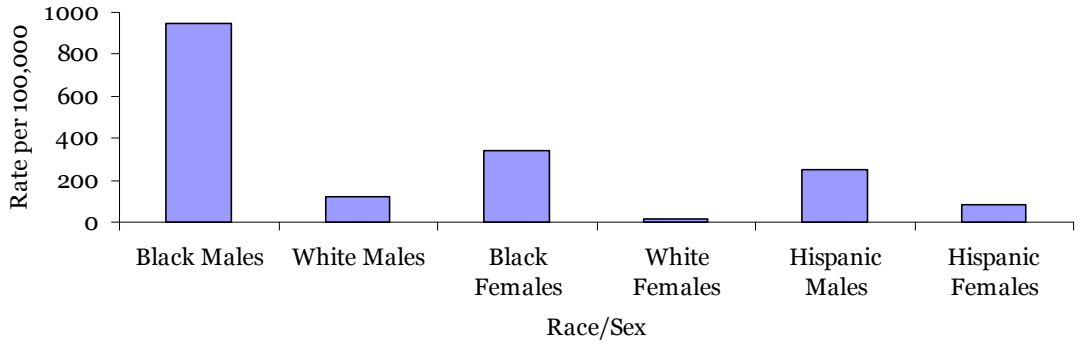


Figure 5: Reported Prevalence Rate of Persons Living with HIV/AIDS in Michigan, by Race and Sex



- Black males have both the highest rate per 100,000 (950) and the highest estimated number (7,750) of HIV/AIDS cases. This high rate means the impact of the epidemic is greatest on this demographic group.
- Black females have the second highest rate (338) and the third highest estimated number (3,070) of cases of HIV/AIDS.
- Hispanic males have the third highest rate (250) and the fifth highest estimated number (670) of cases. This means that the impact of this epidemic is high on a relatively small demographic group.
- White males have the fourth highest rate (124) and the second highest estimated number (5,850) of cases.
- Hispanic females have the fifth highest rate (81) and the lowest estimated number (190) of HIV/AIDS.
- White females have the lowest rate (18) and the fourth highest estimated number (860) of HIV/AIDS cases.

Trends in HIV/AIDS Data

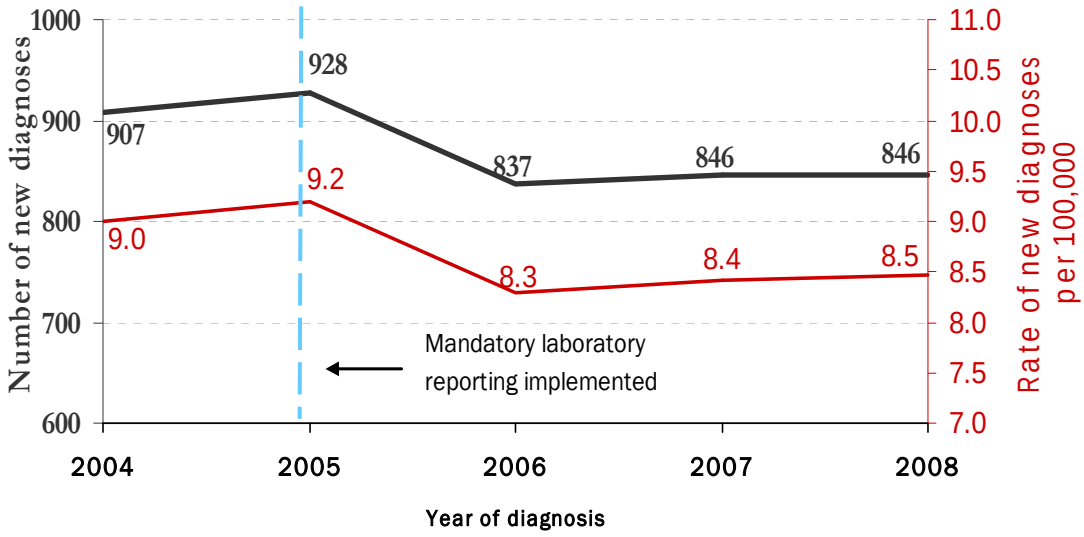
Data from HIV/AIDS Reporting System (eHARS)

To evaluate recent trends, we estimated the number of persons newly diagnosed with HIV infection each year by adjusting the number of reported cases diagnosed from 2004 through 2008. This adjustment was applied to account for those who may not have been reported to the health department by January 1, 2010. The adjustments were calculated by weighting the data. Please see Forward (Page 1-5) for further description on methods used to evaluate the trends and page 3-107 for further analyses on trends over time.

New Diagnoses of HIV:

The number and rate of new HIV diagnoses decreased significantly in Michigan from 907 (9.0 per 100,000) in 2004 to 846 (8.5 per 100,000) in 2008, with an average decrease in rate of two percent per year. The rate peaked at 9.2 per 100,000 in 2005, and is likely due to the implementation of mandatory laboratory reporting in 2005, instead of reflecting a true increase in the number of new diagnoses that year (Figure 6). Prior to this, Michigan relied on a few voluntary laboratories to report positive HIV-related tests and health care providers, who are required by law to report positive cases. We cannot say whether these decreases are due to successes in prevention or are the result of decreases in the population of the state between 2004 and 2008.

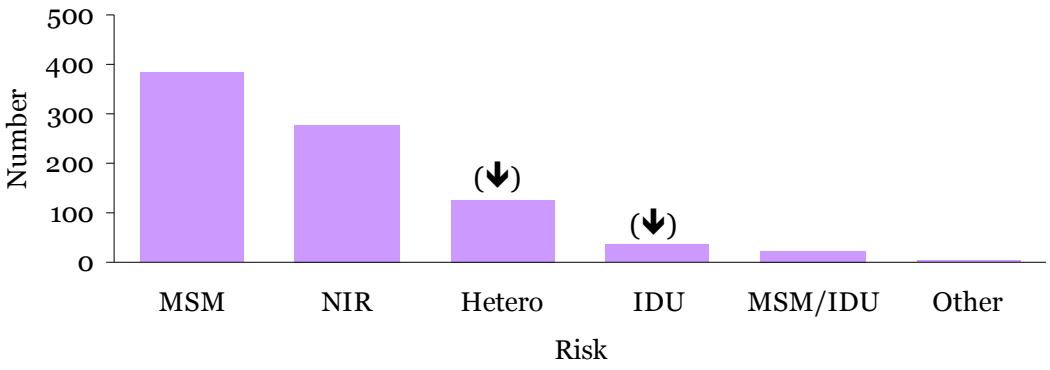
Figure 6: Number and Rate of New HIV Diagnoses in Michigan, 2004-2008



Transmission of HIV 2004-2008:

Between 2004 and 2008, the number of newly diagnosed persons who were injection drug users (IDU) decreased by an average of 14 percent per year. The number also decreased among persons who were infected through heterosexual sex by an average of six percent per year. The trend among IDU is a continuation of the decreasing trend we have seen over the past 5 years we have run trend reports. Data from Michigan's HIV Behavioral Surveillance suggest reductions among IDU may partly be attributable to the success of harm reduction programs, such as needle exchange. This is the first year that we saw decreases among persons infected heterosexually. These decreases are related to the decreases among black females, who make up 62 percent of persons with heterosexual risk.

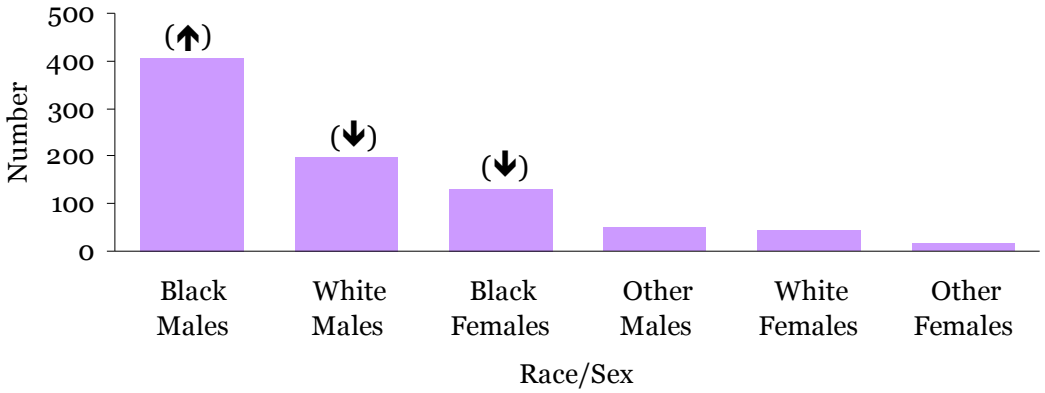
Figure 7: Adjusted Number of New HIV Diagnoses in 2008 and Trend Between 2004 and 2008, by Risk



The "Other known" risk category includes perinatal and blood product transmission. The numbers have been low in this group over the years, owing to programmatic successes in preventing perinatal and blood-borne transmissions.

Newly diagnosed persons with no identified risk (NIR) include males who reported sex with females of unknown risk/HIV status as their only risk, and males and females for whom no risk has yet been reported.

Figure 8: Number of New Diagnoses in 2008 and Trend Between 2004-2008, by Race/Sex



Race and Sex 2004-2008 :

The rate of new diagnoses increased among black males (average 2 percent per year) between 2004 and 2008. This is the third consecutive year that we have seen increases during a 5-year assessment period among black males. The rate decreased among white males for the second time at an average of six percent per year. The rate also decreased among black females (average 9 percent per year). (Figure 8)

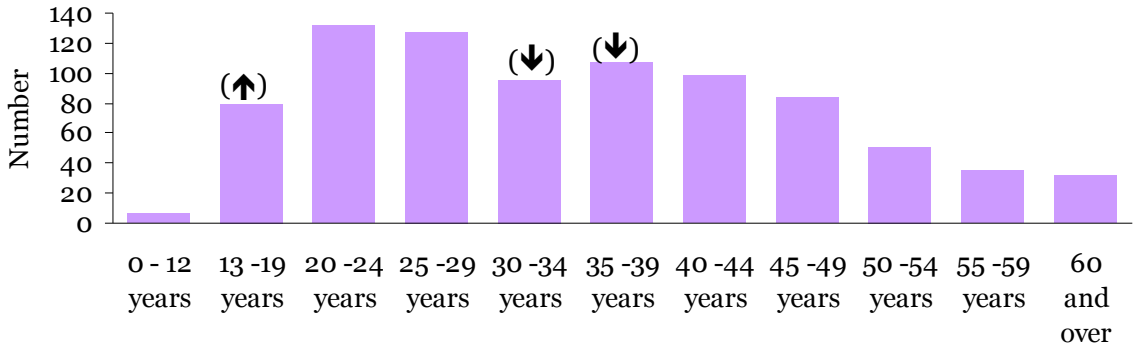
Trends in HIV/AIDS Data

Data from HIV/AIDS Reporting System (eHARS)

Age at HIV Diagnosis 2004-2008 :

The rate of new diagnoses increased significantly among persons 13-19 years of age (average increase in rate of 23 percent per year) and decreased significantly among persons aged 30-39 between 2004 and 2008 (Figure 9) . Rates in all other ages groups were stable. This is the fifth consecutive year that we have trends over a 5-year period where we have seen significant increases in new diagnoses among 13-19 year olds. Although these trends are alarming and demand action, it is important to remember that the largest numbers and highest rates of new diagnoses continue to be among 20-44 year olds.

Figure 9: Number of New Diagnoses in 2008 and Trends 2004-2008, by Age at HIV Diagnosis



New Diagnoses, Deaths and Prevalence of HIV by Year:

The unadjusted number of new HIV diagnoses, number of HIV-related deaths and HIV prevalence are presented in Figure 10. The trend among new HIV diagnoses reflects reported cases. These data were not adjusted for reporting delay, as they were in Figures 7—9. Consequently the decreases in new diagnoses seen in the most recent years will likely level out as more cases diagnosed during those years are reported.

Figure 10: New Diagnoses, Deaths, and Prevalence of HIV/AIDS by Year

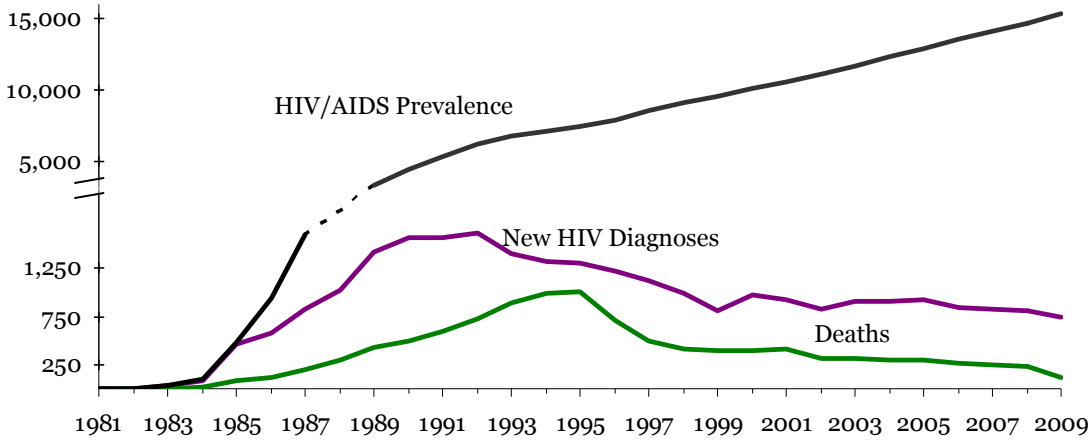
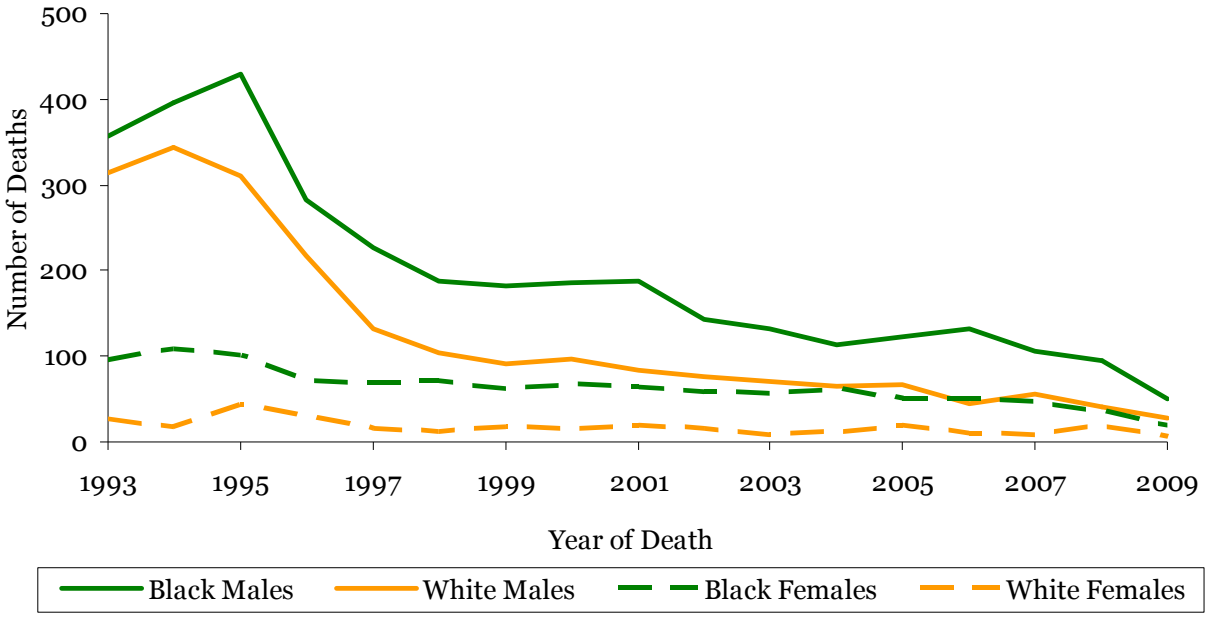


Figure 11: HIV/AIDS Deaths by Race/Sex



HIV related Deaths by Race/Sex:

Figure 11 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 were relatively stable until 2001. It should be noted that the percent decrease in deaths among white males (73 percent) between 1995 and 2001 was more pronounced than the percent decrease among black males (57 percent), and the percent decrease among white females (55 percent) was larger than the percent decrease among black females (38 percent). Encouragingly, the number of deaths in black males has fallen substantially between 2001 and 2008 (49 percent), as have the number of deaths among white males (52 percent) and black females (44 percent). Compared to the other groups, the number of deaths among white females fell by a smaller amount (5 percent) between 2001 and 2008.

2010 Profile of HIV/AIDS in Michigan

HIV Incidence Estimates

Data from HIV/AIDS Reporting System (eHARS) & Incidence Data

Overview:
HIV incidence rates have been estimated nationally and in Michigan for 2006. It is estimated that Michigan had 870 new infections in 2006 for an overall HIV incidence rate of 10.4 cases per 100,000 ages 13 and older, using 2006 intercensal estimates. While unacceptably high, this rate contrasts with the national overall rate of 22.8 cases per 100,000 population (56,300 new infections for 2006), which is more than double Michigan's rate.

HIV incidence estimates are based on reported cases and a minimum number of cases are required to release estimates for a particular category such as sex, race, age or risk. Thus, the reporting of HIV incidence estimates at the state level is more limited than what can be reported at a national level. Some groups in subcategories must be combined to satisfy the minimum number of reported cases required to release estimates.

For 2006, Michigan has produced HIV incidence estimates for the following subcategories:
Males and Females
Blacks and All Other Race/Ethnicity Groups
Age groups 13-29, 30-39 and 40+
MSM and Other/Unknown Modes of Transmission

See Table 10a on page 3-91.

Sex:
Males in Michigan were infected with HIV in 2006 at a rate more than four times that of females. The rate in males was 17.2 per 100,000 compared to 3.9 per 100,000 in females. Of the 870 new infections estimated to have occurred in 2006, 700 (80 percent) were in males and 170 (20 percent) were in females.

Race:
Of the 870 new infections estimated to have occurred in Michigan in 2006, 480 (55 percent) were in black persons (even though black persons comprise only 14 percent of Michigan's general population) and 390 (45 percent) were in other racial/ethnic groups. This translates to an HIV infection rate in black persons that is nearly eight times all other race/ethnicity groups. The rate among black persons was 42.3 per 100,000 compared to 5.4 per 100,000 for others. In order to satisfy the minimum number of cases required to report an estimate whites, Hispanic and all other racial/ethnic groups comprise the "All Other" subcategory.

Age at Diagnosis:
HIV incidence estimates in Michigan point to high infection rate among the young. Twenty-nine percent of new infections in 2006 were in persons between 13 and 29 years, resulting in an estimated infection rate of 10.3 per 100,000 for that group, although the highest rates of infection were among 30—39 year olds. Twenty-five percent of new infections in 2006 were in persons in their 30s, producing an estimated infection rate of 16.5 per 100,000 population. Persons estimated to be infected with HIV over the age of 40 comprise 45 percent of the new infections for 2006 for a rate of 8.4 per 100,000.

HIV Incidence Estimates

Mode of Transmission:
An estimated 43 percent of the new infections in 2006 occurred in men who have sex with men (MSM). All other risk subcategories had to be combined into "Other/Unknown" to satisfy the minimum number of cases required to report an estimate for the group. Fifty-six percent fall into this group for 2006. The group includes injection drug users (IDU), MSM/IDU, Heterosexual Transmission and Unknown.

Compared to National Data:
The most highly impacted groups in Michigan tend to mirror what is seen nationally. Across the U.S. in 2006, 73 percent of new infections occurred in males; 45 percent in black persons; 53 percent among males who have sex with other males (MSM); and 34 percent in persons under age 30. See Table 10b on page 3-91.

The significant racial/ethnic disparities seen in Michigan were also seen nationwide where the black population bears a disproportionate burden of HIV infection. Nationally, black persons were estimated to have an infection rate of 83.7 per 100,000 in 2006 compared with 29.3 per 100,000 among Hispanics and 11.5 per 100,000 among whites. Additionally, the HIV incidence rate among black females was 14.7 times the rate among whites females and 3.9 times the rate among Hispanics females.

Please refer to the Morbidity and Mortality Weekly Report (MMWR) from September 12, 2008/Vol. 57/ No. 36 for further analysis of national data on subgroups. (Note that national and statewide HIV incidence estimates are not directly comparable for modes of transmission. The national incidence estimates redistributed cases with unknown mode of transmission into known categories while Michigan did not.) Sometime in 2011 we expect to release incidence estimates for more recent years.

2010 Profile of HIV/AIDS in Michigan

Patterns of Service Utilization of HIV-infected Persons

Data from HIV/AIDS Reporting System (eHARS), Uniform Reporting System (URS), Adult and Adolescent Spectrum of disease (ASD) & Medical Monitoring Project (MMP)

The *Ryan White HIV AIDS Treatment Extension Act of 2009* (Ryan White), which replaced the *Treatment and Modernization Act of 2006*, provides federal funds to help communities and States increase the availability of primary health care and support services for people living with HIV/AIDS disease (PLWH/A). Ryan White Part A funds are allocated to Eligible Metropolitan Areas (EMA) heavily impacted by the epidemic, and in Michigan, the Detroit EMA receives Part A funds. States and U.S. Territories receive Ryan White Part B funds, including resources earmarked for AIDS Drug Assistance Programs (ADAP). Part C funds are allocated to local clinics for outpatient HIV early intervention services and Part D is used to coordinate and enhance services for women, infants, children and youth. Ryan White funds are funds of last resort.

Table 1: Comparing HIV Services with Reported Cases throughout Michigan, January 2010

Group	Services	Cases
White	36%	36%
Black	54%	58%
Hispanic	5%	5%
Other	4%	2%
Unknown	1%	na
Males	76%	77%
White Males	*31%*	*31%*
Black Males	*37%*	*41%*
Hispanic Males	*4%*	*4%*
Other Males	*3%*	*2%*
Unknown Males	*0%*	*na*
Females	24%	23%
White Females	*5%*	*5%*
Black Females	*17%*	*16%*
Hispanic Females	*1%*	*1%*
Other Females	*1%*	*1%*
Unknown Females	*<1%*	*na*
0-12 Years^	1%	<1%
13-19 Years^	2%	1%
20-24 Years^	5%	4%
25-44 Years^	44%	37%
45+ Years^	48%	54%
Infants: 0-1 Years^	<1%	<1%
Children: 2-12 Years^	1%	<1%
Youth: 13-24 Years^	7%	5%
Women 25+ Years^	22%	21%
Total	**100% (N = 6,840)**	**100% (N = 15,285)**

^*"Years" within this table refers to* ***current age****, not age at diagnosis*

The Uniform Reporting System (URS) is a statewide client-level data system designed to document the quantity and types of services provided by agencies receiving Ryan White funds, and to describe the populations receiving the services. A wide range of clinical and supportive services are reported in the URS including outpatient medical care, dental care, mental health services, case management, the AIDS Drug Assistance Program. URS data may include HIV/AIDS services that are not directly funded by Ryan White, as long as the reported service is eligible to be funded. However, most services reported in the URS are at least partially funded by Ryan White resources.

There are several client-level data systems in Michigan that collect URS data. Demographic and service data from all these systems were extracted into a standard format, and these data were then combined and unduplicated to produce a statewide URS dataset for analysis. The statewide dataset includes records from all Ryan White A-D funded programs in Michigan, including the AIDS Drug Assistance Program.

Tables 1 and 2 represent HIV+ male and female clients served by Ryan White funded HIV service programs during 2009 and reported through the HIV/AIDS surveillance system by December 31, 2009.

Patterns of Service Utilization of HIV-infected Persons

Table 1 compares Ryan White clients served to living cases reported through the HIV/AIDS surveillance system. In 2009 there were 6,840 HIV-infected persons who received Ryan White services in the state of Michigan. Ryan White clients represent 45 percent of the total reported living cases in Michigan.

URS data have a higher proportion of records with unreported race than surveillance data, and also more clients whose race is reported as "other minority". (This category in the URS includes persons reporting more than one race).

The Ryan White Treatment Modernization Act puts a priority on providing services to women, infants, children and youth (WICY) with HIV infection. As a result, the proportion of youth age 13 to 24, and women age 25 or older receiving care is somewhat higher than in reported cases.

Overall, the comparison table shows that persons receiving Ryan White care services are similar demographically to reported cases, however reported cases are slightly older and more likely to be black males. In other words, on a statewide basis, it appears that Ryan White funded programs are serving clients who are representative of the general population of persons living with HIV/AIDS in Michigan.

Table 2: Core Services per Ryan White Client, Michigan Residents, 2009

Total Clients Served: 8,019	Outpatient Medical Care	Oral Health Care	Mental Health Care	Medical Case Management	DAP (Medication Assistance)
No. of unduplicated clients served*	5,372	911	1008	3,406	2,958
Percent receiving the service	67%	11%	13%	42%	37%
Total Days of Service (Visits)	18,699	2,626	5,287	61,200	32,659
Average no. of visits per client	3.5	2.9	5.2	18.0	11.0
Median no. of visits per client	3	2	3	11	10
Range of visits per client	1-23	1-15	1-61	1-120	1-61

* Clients are unduplicated for the service across all providers and may be counted in more than one service category.

The service utilization data available for this report are limited to the HIV/AIDS care service programs contained in the four Ryan White CAREWare data systems in Michigan. Services provided by private physicians or HIV Service programs not funded by Ryan White or MHI resources are not included.

Table 2 gives additional detail about the core services of outpatient medical care, oral health care, mental health care, medical case management and ADAP medication assistance delivered by these HIV service programs in 2009. The service counts in the table are visits, not units of time. Only one "visit" per day is counted for any one service category in URS summary data.

Outpatient medical care services in this table are for outpatient ambulatory medical care visits ranging from a complete physical with a physician, to a brief or repeat visit with a physician or nurse practitioner, and may include adherence counseling with a medical practitioner. The average of 3.5 visits per client, with a median of three, is consistent with HIV care standards that recommend monitoring of health status every three to four months. (Table 2)

Oral health care services reported in the URS are provided primarily through the statewide Michigan Dental Program (MDP), administered by the Division of Health, Wellness and Disease Control of MDCH. The University of Detroit/Mercy Dental School provides many of these services for MDP clients

in the Detroit area. Dental services for clients may be extensive, and require multiple visits, but may also simply be for annual or more frequent prophylaxis. The average of 2.9 visits per client is consistent with an initial exam to plan the care needed and one or more treatment visits following approval of the care plan. (Table 2)

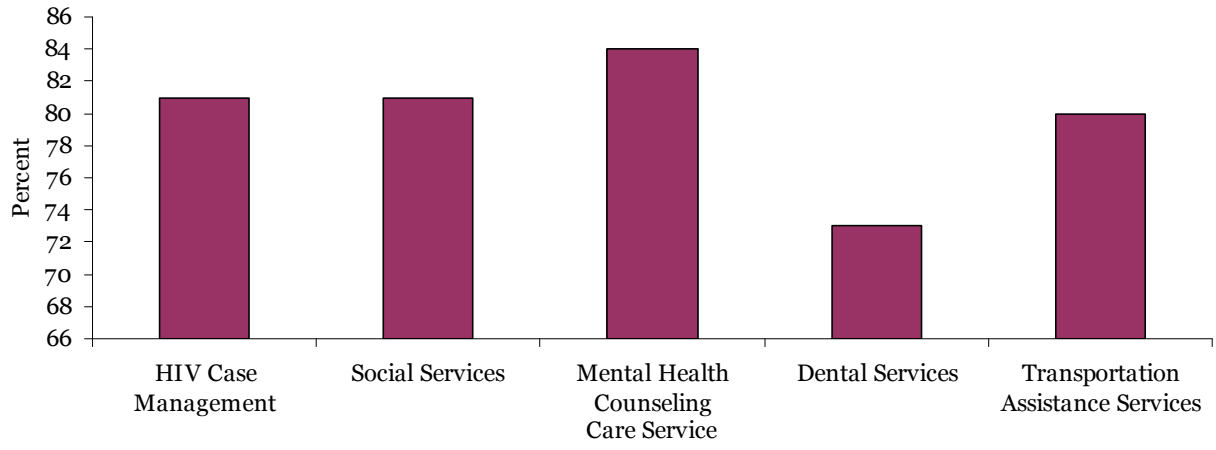
The Drug Assistance Program (DAP), administered by the Division of Health, Wellness and Disease Control of MDCH pays for medications dispensed to eligible HIV+ clients. The DAP covers all HIV medications and many other medications as well, in addition to CD4, viral load, and HIV genotype tests. The unit of service reported in Table 2 is one day in which medications were dispensed or when DAP-reimbursed monitoring tests (CD4 or viral load) took place. This is not an indication of the number of medications dispensed or prescriptions filled during the year, as several medications can be dispensed on one day of service. In 2009, 34 percent of statewide clients received medications through DAP services, at an average of 11 visits a year (or about once a month).

The need for DAP services continues to increase because more people are living with HIV each year, more are entering into care where drugs are prescribed to treat the disease, and each year it seems that fewer have access to prescription drug coverage through other sources.

Mental health care services encompass mental health assessments, individual counseling, and group sessions for HIV+ clients with a mental health diagnosis, and must be conducted by a licensed mental health professional. Mental health services do not include substance abuse treatment. In 2009, 13 percent of statewide clients received mental health care services at an average of 5.2 visits per person.

The Medical Monitoring Project (MMP) collected data on service utilization and complements the Ryan White data. Among the 148 persons living with HIV who were in care and interviewed for the MMP in 2007, 84 percent of patients who needed mental health counseling received it and 73 percent of patients who needed dental services received them. (Figure 12)

Figure 12: Proportion of Most Frequently Reported Care Received (MMP, 2007)



Medical case management visits include intake, assessments, care planning, medication adherence counseling, and monitoring of medical status, and may be conducted in person, by phone or by mail, with the goal of linking HIV+ clients to health care services, and assisting them to remain in care. In 2009, 42 percent of statewide clients received medical case management services at an average of 18 visits per client.

Patterns of Service Utilization of HIV-infected Persons

Among the persons living with HIV who were in care and interviewed for the MMP in 2007, 93 percent indicated that they have used antiretroviral drugs in the 12 months prior to the interview. Although the numbers are quite low, there is a marked difference in proportion of males who were not on ART compared to females (5 percent v 15 percent) (Figure 13a & 13b).

Figure 13a: ART Use in Males (MMP, 2007) N = 115

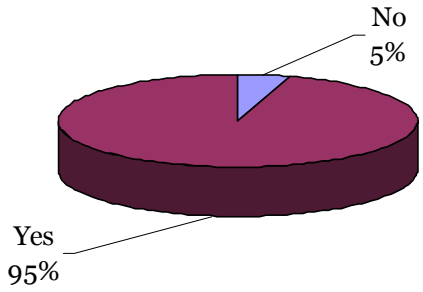
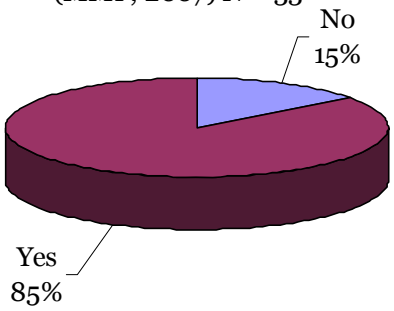
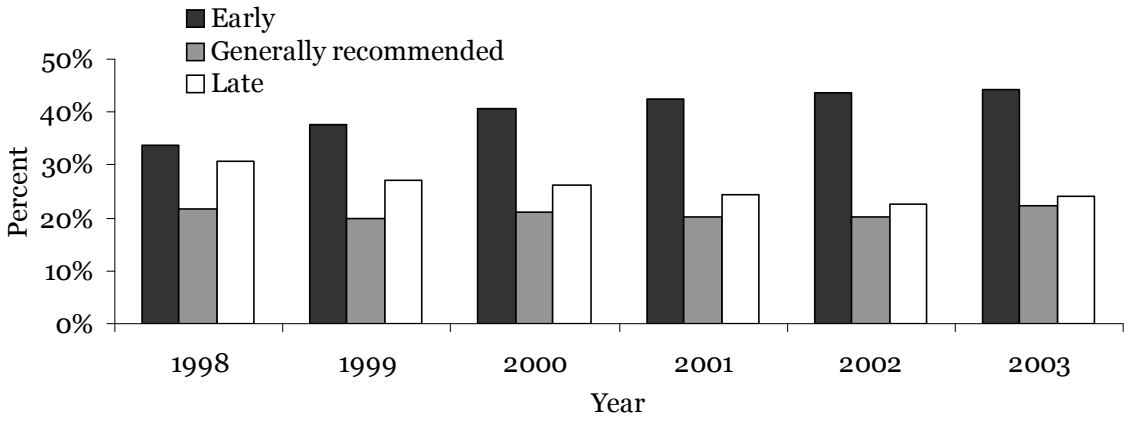


Figure 13b: ART Use in Females (MMP, 2007) N = 33



The Adult/Adolescent Spectrum of Disease Project (ASD) collected data on the timing of the initiation of antiretroviral treatment and the proportions of patients whose treatments began at each three times (each time corresponds to a category of CD4 count) (Figure 14). This analysis included only intervals during which the person had either an outpatient clinic visit or a hospitalization, and did not include intervals in which the person had only visited the ER or had telephone contact with the clinic staff. Of patients receiving care at the two health care systems included in the ASD study, the proportion whose antiretroviral treatment was begun late decreased from 31 percent in 1998 to 24 percent in 2003. Inversely, the proportion whose antiretroviral treatment was begun early increased from 34 percent in 1998 to 44 percent in 2003. The most current treatment guidelines (December 2009) include a statement that there is growing evidence to start ART for patients with > 500 CD4 cells/µl, but this recommendation is optional and should be considered on a case by case basis.

Figure 14: Proportion of Patients who Received Antiretroviral Treatment Late, at the Recommended Time, or Early, ASD Project-Michigan, 1998-2003



Note. Late (CD4 count of less than 200 cells/µL), generally recommended time (CD4 count of greater than or equal to 200 µL, but less than 350 cells/µL), or early (CD4 count greater than or equal to 350 cells/µl).

2010 Profile of HIV/AIDS in Michigan

Unmet Need and Time to Care

Data from HIV/AIDS Reporting System (eHARS) & Medical Monitoring Project (MMP)

Overview:
Primary Medical Care (PMC) for people living with HIV/AIDS (PLWHA) is defined as having a laboratory result for a CD4 count and/or percent or a VL measure during a 12-month time period. Those who did not receive PMC were considered to have unmet need. For this report, unmet need was calculated by determining the number of PLWHA who were diagnosed prior to January 1, 2009 and had not received a VL or CD4 test between January 1, 2009 and December 31, 2009. Overall, 39 percent of HIV-positive people in Michigan had unmet need. The highest percentages of unmet need were noted among persons with HIV, not AIDS, Hispanics, injection drug users (IDU), persons who were 20-24 years at diagnosis, persons who were 60 years or older at the end of 2009, and residents of Benton Harbor MSA and Jackson MSA (excluding prisoners).

Race/Ethnicity :
The highest percentage of unmet need during this period was among Hispanics, with 51 percent of HIV-positive Hispanics not having received care during 2009. The lowest percentage of unmet need was among persons of multi, other, or unknown race/ethnicity at 26 percent. Please see Table 11, page 3-92.

Sex:
Overall, males and females had comparable levels of unmet need at 39 and 38 percent, respectively. However, looking at race/sex breakdowns reveals disproportionate impact of unmet need among different groups. Hispanic males had the highest level of unmet need at 52 percent, followed by Hispanic females at 47 percent. The lowest levels of unmet need were among males and females of Other race or ethnicity at 31 and 30 percent respectively. Unmet need among black males and black females was higher than their white counterparts, although the black and white female levels were close. Please see Table 11, page 3-92.

Risk:
IDU had the highest percentage of unmet need (52 percent), followed by MSM/IDU (45 percent), and persons with no identified risk (43 percent). The lowest percentages of unmet need were among people infected perinatally or through blood products (30 percent), heterosexuals (35 percent), and MSM (36 percent). Please see Table 11, page 3-92.

Age at HIV diagnosis:
The highest percentages of unmet need were among persons who were between 13 and 29 at HIV diagnosis, while the lowest percentage of unmet need was among persons who were 0-12 years. This makes sense, as children may be eligible to receive care through their parents' insurance or may qualify for low-cost children's health, such as Medicaid. Persons who were 20-24 at diagnosis had the highest percentage of unmet need at 45 percent. Please see Table 11, page 3-92.

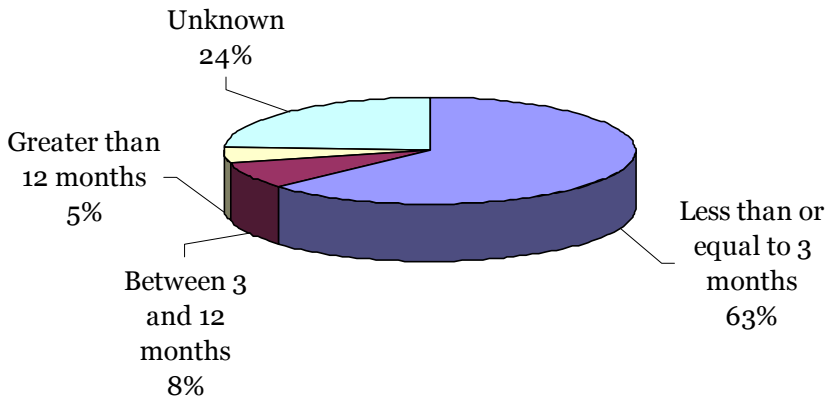
Geographic distribution:
In Michigan, 63 percent of HIV-positive people reside in the Detroit Metro Area, 34 percent reside in Out-State Michigan, while the remaining three percent have an unknown residence. The level of unmet need in the Detroit Metro Areas, was 38 percent, which is comparable to the unmet need in Out-State Michigan (39 percent). Please see Table 11, page 3-92.

Unmet Need and Time to Care

Behavioral Data:

Among the 148 HIV positive persons in care and interviewed in 2007 as part of the Medical Monitoring Project, 63 percent reported entering into HIV care within 3 months of diagnosis (Figure 15). This proportion was similar among males and females.

Figure 15: Time between HIV Diagnosis and Entry into Care (MMP, 2007)



Estimate of At-Risk Populations

Sexual Activity:

A 2002 study by Emory University for the Michigan Department of Community Health estimated that there are 259,344 (range: +/- 1% of the relevant population) persons living in Michigan at continued sexual risk for the HIV infection (Holtgrave D., et al. *Phase I Report: Number of Persons at Risk of HIV Infection in the State of Michigan*, Emory University Center for AIDS Research. Nov 2002). This estimate was gained from compiling estimates from numerous sources and incorporates both homosexual and heterosexual behaviors.

Substance Abuse:

The study referenced above estimated that there are 229,000 (range: 183,000 - 283,000) persons living in Michigan at substance abuse risk for HIV. This estimate was gained from the 1999 National Household Survey of Drug Abuse and incorporates the use of both injection and non-injection drugs. Of these persons estimated to be at substance abuse risk for HIV, 38,000 are 12-17 years old, 65,000 are 18-25 years old, and 126,000 are 26 years or older. This report also shows that 3.3 percent of Michigan high school males and 1.4 percent of high school females have ever used illicit injection drugs.

Tuberculosis

Data from TB Registry & HIV/AIDS Reporting System (eHARS)

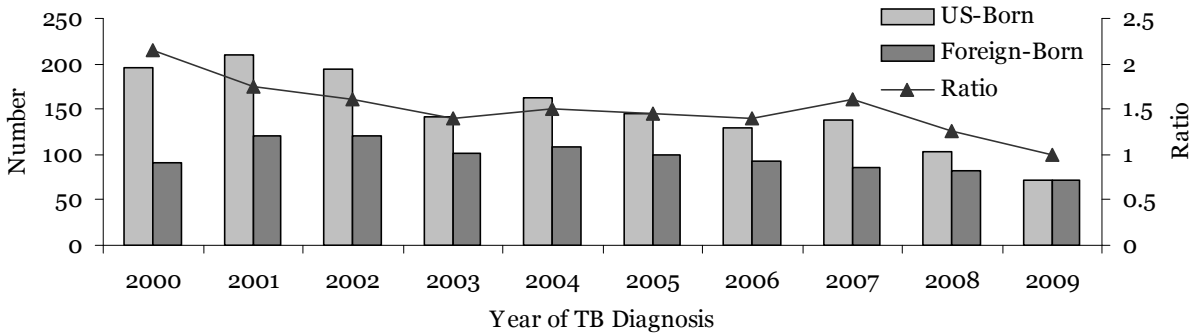
Overview of Tuberculosis in Michigan:

The incidence rate for Tuberculosis (TB) in 2009 was 1.4 cases per 100,000. While Michigan is considered to have 'low incidence' of TB, the demographic characteristics warrant some attention.

Fifty-eight percent of the 144 reported TB cases reside in the Detroit Metro Area (DMA). Of these, 24 percent (35 cases) are residents of the City of Detroit. These cases are managed and reported by the Detroit Department of Health and Wellness Promotion (DDHWP). Specifically, DDHWP manages and reports all TB cases that are residents of Detroit and its surrounding areas. The remaining cases in the DMA are residents of the following counties: Wayne County (excluding Detroit) (18 percent, 26 cases), Macomb County (3 percent, 4 cases), and Oakland County (13 percent, 18 cases).

In 2009, Michigan started to align with national data that show that the majority of TB cases are found in persons born outside the US. In 2009, 50 percent of Michigan cases were born in the US and 50 percent were foreign-born. It is expected that the number of foreign born cases will increase. (Figure 16)

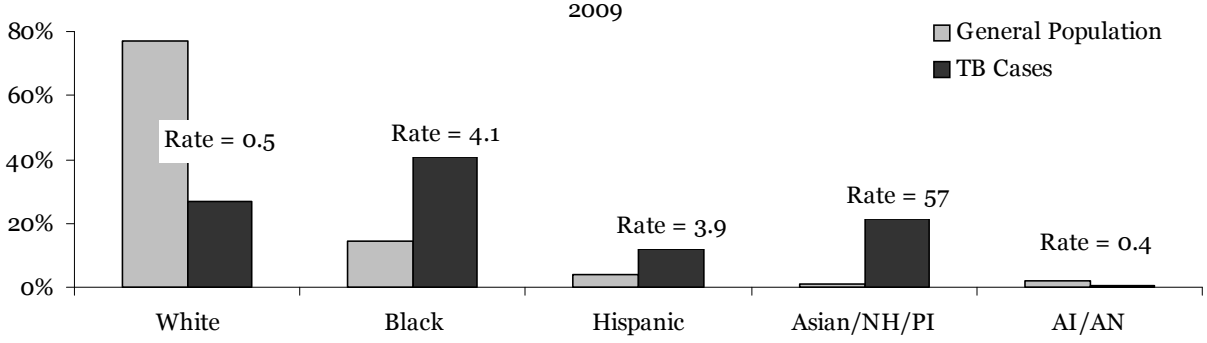
Figure 16: TB Cases by National Origin, Michigan 2000-2009



Racial Disparities Related to TB:

TB disease in Michigan currently faces the challenge of racial and ethnic disparities. Figure 17 illustrates the racial/ethnic disparities of TB patients in Michigan. The rate of TB disease among the white population is quite low (0.5 per 100,000). The rate among black persons is higher (4.1 per 100,000), however highest is the rate among the Asian/Native Hawaiian/Pacific Islander population (57 per

Figure 17: Proportions of Michigan's Population and TB cases living in Michigan, by Race, 2009



Tuberculosis and HIV

Data from TB Registry & HIV/AIDS Reporting System (eHARS)

100,000). This group comprises 21 percent of the TB cases, but only two percent of the general population. While black persons make up only 14 percent of the general population, they represent 41 percent of the TB population. These data demonstrate a need for targeted intervention and education among these disproportionately affected groups.

Co-Infection of TB and HIV:

As the HIV/AIDS epidemic continues to grow, there are indications of a correlation between those infected with HIV and TB, although TB cases have been declining in Michigan since the early 1990s. There are now a total of 178 persons known to be living and definitively co-infected with HIV and TB in Michigan.

Sex/Race:

Seventy-five percent of these co-infected cases are male and 25 percent are female. The majority are black (70 percent), 15 percent are white, 11 percent are Hispanic, and the remaining four percent are made up of other race/ethnicities.

Age at HIV Diagnosis:

The largest proportion of co-infected cases are in their thirties at HIV diagnosis (42 percent), followed by those in their forties (21 percent). Teens (13-19 years at HIV diagnosis) make up two percent and young adults (20-24 years at HIV diagnosis) make up 10 percent of these cases.

Residence at diagnosis of HIV:

Over one-third (37 percent) of co-infected cases were residents of Wayne County (including the city of Detroit) at HIV diagnosis. Kent county represents the second highest proportion at five percent, followed by Oakland county (3 percent) and Calhoun, Jackson and Washtenaw Counties (2 percent each). Just less than half (44 percent) were from unknown counties. The remaining six percent consists of other counties throughout Michigan (4 percent) and counties in other states (2 percent).

Other information:

Cumulatively, a total of 643 co-infected cases have ever been definitively co-infected with HIV and TB, of which 465 (72 percent) have died.

Of the 178 HIV cases currently living in Michigan who had been co-infected with TB, 134 (75 percent) had pulmonary tuberculosis and 44 (25 percent) had extra-pulmonary tuberculosis (outside of the lung).

Twenty-three percent of the 178 co-infected with HIV and TB were born outside of the United States.

Conclusion:

Data on HIV/AIDS-TB co-infection are gained by matching the HIV surveillance data to the TB surveillance data, however these data could still be underreported. The HIV status of 32 percent of active TB cases in Michigan is unknown for 2009. Out of these, 17 percent refused an HIV test, 28 percent were never offered the test, seven percent had the test but the results were unknown and 48 percent were reported with an unknown HIV status. This demonstrates a need for education, not only for patients regarding their risk for HIV infection, but also for health care practitioners on the need for HIV testing in this population.

Sexually Transmitted Diseases

Data from STD Reporting System & HIV/AIDS Reporting System (eHARS)

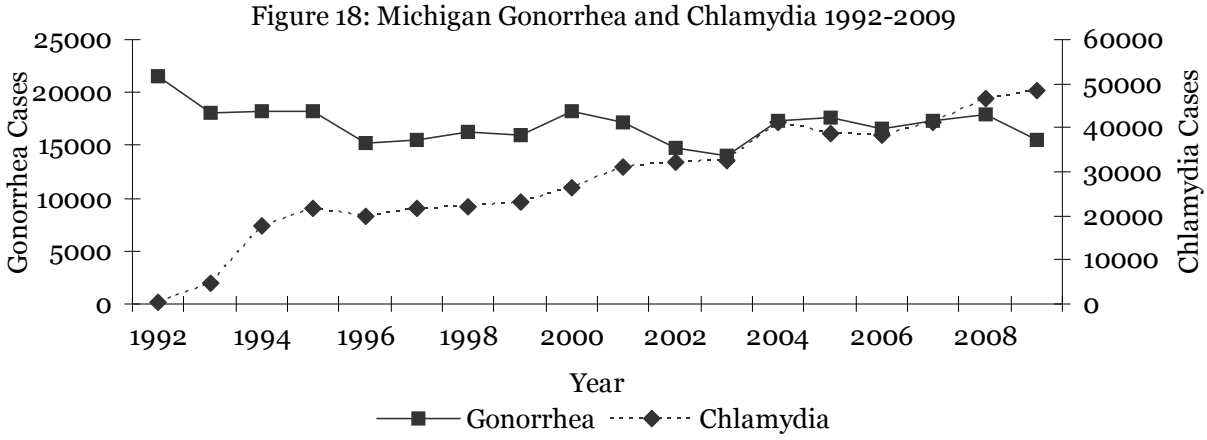
Several sexually transmitted diseases (STDs) are more common than HIV infection, have a short incubation period, and are curable. Reviewing their patterns of transmission can provide additional information regarding recent sexual behavior and potential risk, not available from HIV/AIDS data. Studies have shown that the risk of both acquiring and spreading HIV is two to five times greater in people with STDs. Aggressive STD treatment in a community can help to reduce the rate of new HIV infections.

Gonorrhea and Chlamydia

During 2009 alone, there were over 48,000 cases of chlamydia and over 15,000 cases of gonorrhea reported in Michigan (Figure 18). See Table 12, page 3-93. For both diseases, the highest rates of infection were among persons age 20-24. This age group comprises 6.7 percent of the Michigan population but accounted for 32 percent of gonorrhea and 34 percent of chlamydia cases. The rates of chlamydia and gonorrhea among blacks were much higher than among whites. Even though 37 percent of gonorrhea cases and 41 percent of chlamydia cases were missing race information, the rates (number of cases per population) among blacks remain higher even if all unknown cases were among whites.

Forty percent of gonorrhea cases were male, however, approximately 74 percent of reported chlamydia cases were female. This is because chlamydia screening targets females specifically.

Figure 18: Michigan Gonorrhea and Chlamydia 1992-2009

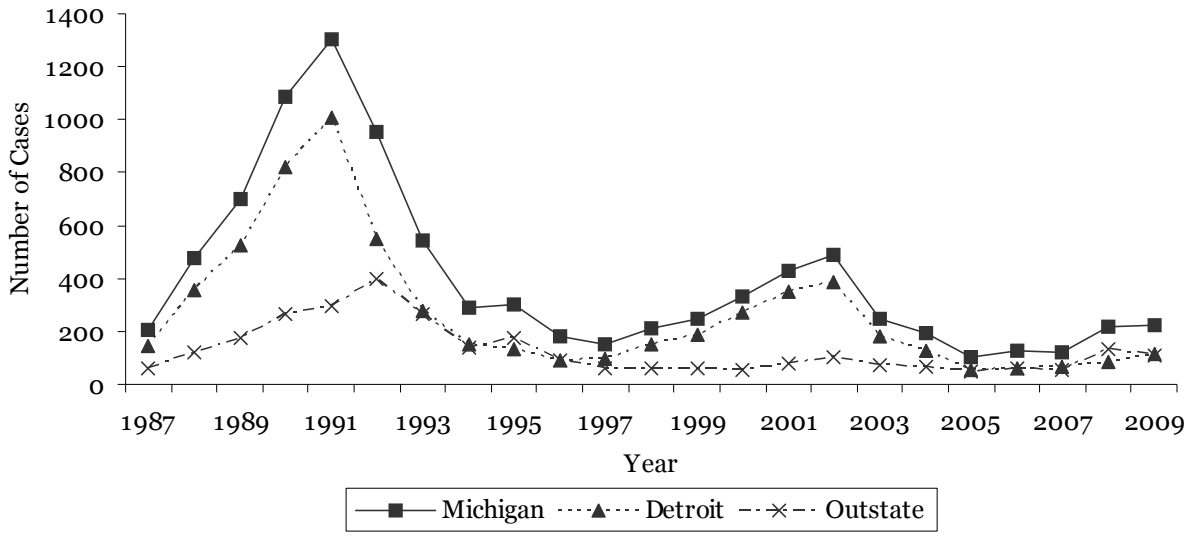


Syphilis

Figures 18 & 19 show that P & S syphilis was diagnosed much less frequently than gonorrhea and chlamydia (224 primary and secondary syphilis cases) in 2009. Syphilis in Michigan and nationally has followed a cyclical trend, increasing every ten years. Major outbreaks peaked in 1991 and decreased until 1997. Reported syphilis cases have increased each year in Michigan since 1997, peaking in 2002, with 486 cases. There was a steady and statistically significant downward trend in reported cases during the 2002 and 2003 calendar years, resulting in a nearly 50 percent decrease in reported cases compared to 2002. This decrease has continued and cases reported in 2005 represented a 55 percent decrease from 2004. However, syphilis cases have increased slightly steady since that time, due to general increases in MSM, many of whom are HIV+ and because of an outbreak in Genesee County in 2008. Approximately 28 percent of cases were reported in those younger than 25 years, representing a trend towards younger syphilis cases. However, an equal percentage of cases (28 percent) are still over the age of 40, representing an older at-risk population than gonorrhea or chlamydia (as shown in Table 12 on page 3-93). Syphilis cases reported in 2009 were 70 percent black and 83 percent male.

Sexually Transmitted Diseases

Figure 19: Michigan Primary and Secondary Syphilis Cases, by Area, 1987-2009



Sexual Orientation

Nationwide, there have been increases in STD cases among self-identified men who have sex with men. Michigan does not collect data on sexual orientation for gonorrhea or chlamydia cases. Sexual orientation data are collected for syphilis cases. Of primary and secondary syphilis cases in 2009, approximately 61 percent of male syphilis cases in Detroit and 62 percent of male syphilis cases in the rest of the state are men who have sex with men. Of these men, 80 percent of Detroit MSM cases are HIV+ as are 46 percent of cases outside of Detroit. Between 2001 and 2004, the syphilis epidemic in Detroit was largely heterosexual with the male female ratio being closer to 1:1 while MSM transmission was prevalent in most other areas. In 2005, the male to female ratio was 3.1:1 in the Detroit area to 6.3:1 in the out-state areas. In 2009, the male to female ratio was almost 4.5 in Detroit and seven in the out-state areas (not including Genesee County), showing a greater increase in the number of male cases compared to female cases. This is a trend that is mirrored nationally and is the focus of prevention efforts around the country.

Geographic Distribution

There are several areas in Michigan that consistently report high rates of STDs. For gonorrhea, there are six areas with rates above the Healthy Michigan (HM) 2010 goal of 180 gonorrhea cases per 100,000. The five areas with the highest rate per 100,000 persons are the City of Detroit (837), Genesee County (273), Calhoun County (242), Kalamazoo County (237), and Muskegon County (231). For chlamydia, there are 19 areas with rates above the HM 2010 goal of 215 cases of chlamydia per 100,000. The five areas with the highest rate per 100,000 persons are the City of Detroit (1,945), Muskegon County (782), Genesee County (765), Kalamazoo County (648), and Ingham County (614). For primary and secondary syphilis, the HM 2010 goal is 0.2 cases per 100,000 persons. There are 21 health departments with rates higher than the HM 2010 goal. The health departments reporting the highest rates per 100,000 are City of Detroit (31), Ingham County (10), Genesee County (15), and Kent County (6). See Table 13 on page 3-94.

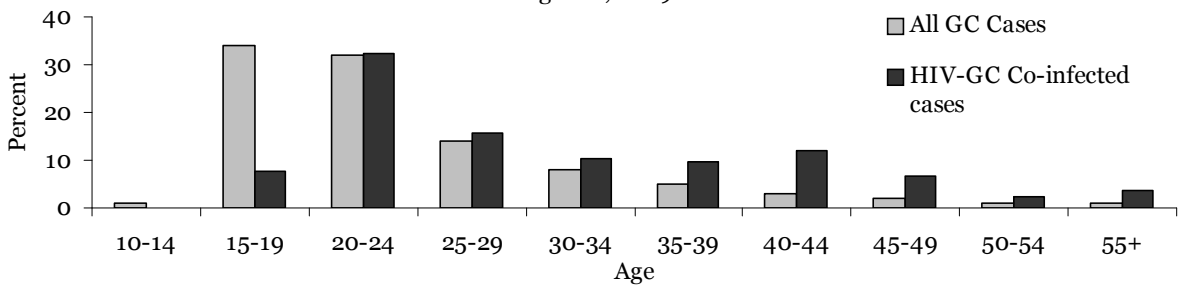
Sexually Transmitted Diseases

Co-infection with HIV:

HIV/Gonorrhea:

In 2009, 167 of the 15,539 gonorrhea cases were HIV co-infected (1.1 percent). More than half of these cases resided in the City of Detroit (54 percent), however cases were also found in Wayne (12), Oakland (18), Saginaw (5), Washtenaw (3), Kent (4), Genesee (8), and Ingham counties (5). The majority (82 percent) of cases were diagnosed with HIV first. Two percent of cases were Hispanic, 86 percent of the cases were black, and 13 percent were White. The majority of cases were male (83 percent). The majority of co-infected females (93 percent) had an HIV mode of transmission of heterosexual sex and seven percent were IDUs. Among these males, 77 percent were MSM, six percent had a risk of heterosexual sex, and three percent were IDUs. Of the cases, the majority had HIV (62 percent) and 35 percent had progressed to AIDS. The age distribution of all gonorrhea cases compared to co-infected cases is shown in Figure 20.

Figure 20: Percent of Gonorrhea (GC) cases and HIV/GC Co-infected Cases by Age at GC Diagnosis, 2009

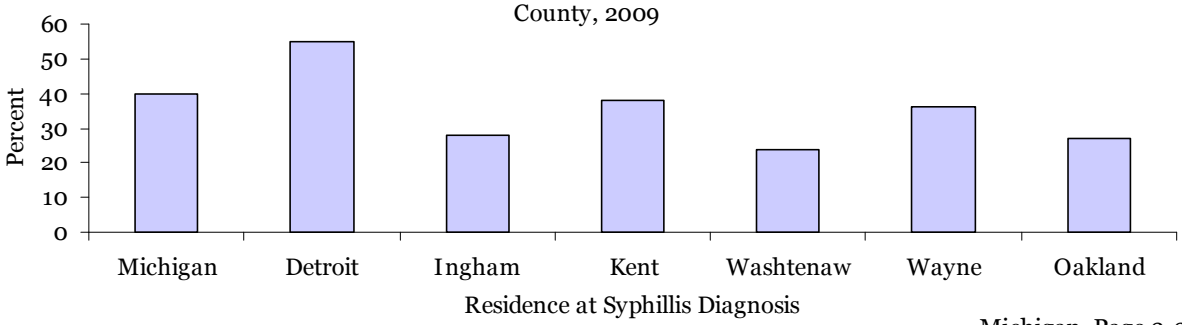


HIV/Syphilis:

In 2008, 110 of the 590 syphilis cases were HIV co-infected (19 percent), although this represented 27 percent of the male cases. In 2009, this percentage increased to 30 percent of overall cases and 40 percent of male cases. The increase was mostly due to an increase of co-infected cases in the Detroit Metro Area (DMA). Of the co-infected cases in 2009, 47 percent were P & S syphilis, overall 60 percent were residents of the DMA, 72 percent were black, 26 percent were white and two percent were Hispanic. Forty percent were between 20-29 years old. The distribution of co-infected cases by selected county is show in Figure 21.

Syphilis infections increase the likelihood of acquiring and spreading HIV infection two to five fold. Increases among syphilis in HIV+ MSM may be attributed to prevention fatigue, serosorting, the high rate of anonymous partners met on the Internet, and prevention messages not reaching marginalized populations.

Figure 21: Percent of Syphillis Cases Co-infected with HIV Statewide and by Selected County, 2009



Hepatitis C

Data from Michigan Disease Surveillance System (MDSS)

Overview

Hepatitis C is a disease of the liver caused by infection with the hepatitis C virus, in which the acute (or newly acquired) infection can progress to a chronic, long-term infection. Hepatitis C is the most common bloodborne infection in the United States and is the leading indicator for liver transplantation. Fifteen to 25 percent of those acutely infected will resolve the infection on their own. However, the majority of infected people, 75 to 85 percent, will develop chronic infection. Disease progression in those chronically infected is variable but can advance from fibrosis, to cirrhosis, to end-stage liver disease and death. Ten to 20 percent of those chronically infected will develop cirrhosis within 20 to 30 years after infection. An estimated 60 to 70 percent of hepatitis C-infected individuals are unaware of their infection.

Since 1992, the primary mode of transmission for the hepatitis C virus is through the sharing of needles, syringes, and other drug paraphernalia. An estimated 60 to 90 percent of injection drugs users are infected with the virus. Other routes of hepatitis C transmission include sexual contact, from mother to child during the birth process, and via occupational exposure to blood. In addition, the virus was transmitted through blood transfusions prior to 1992 and during receipt of blood products developed before 1987. No vaccine against hepatitis C infection exists.

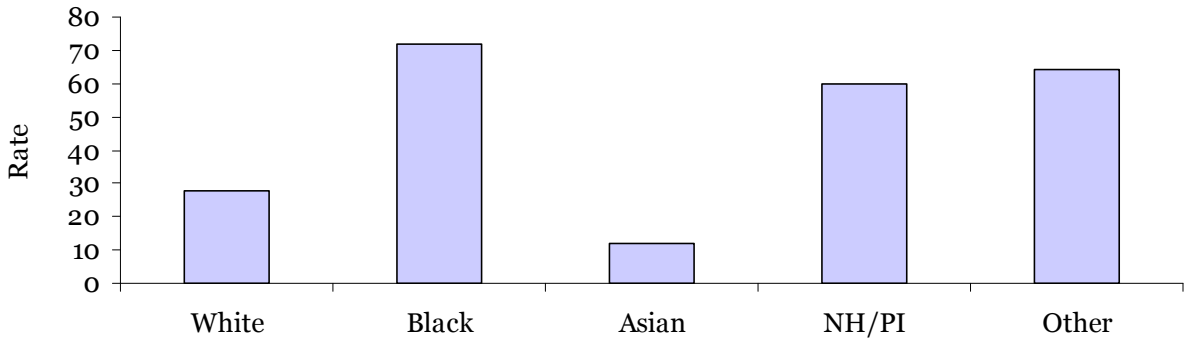
Acute Hepatitis C

In 2009, 34 cases of acute hepatitis C were reported statewide in Michigan (Table 14, page 3-95). Forty-seven percent of acute cases were among males, while 53 percent were among females. Ethnicity is not consistently collected for hepatitis C cases, therefore we cannot provide a measure of infection among Hispanic or non-Hispanic persons. Additionally, the race/ethnicity of the client was unknown in 18 percent of reported acute cases. Due to extremely small numbers, rates are unavailable for cases of acute hepatitis C in 2009.

Chronic Hepatitis C

In 2009, 6,747 cases of chronic hepatitis C were reported statewide in Michigan (Table 14, page 3-95), a rate of 67 cases of chronic hepatitis C per 100,000 Michigan residents. Sixty-six percent of chronic cases were among males, while 34 percent were among females. The rate of chronic hepatitis C in Michigan was 60 per 100,000 in American Indian/Alaska Native persons, 72 per 100,000 in black per-

Figure 22: Rate of Chronic Hepatitis C in Michigan Residents, by Race 2009

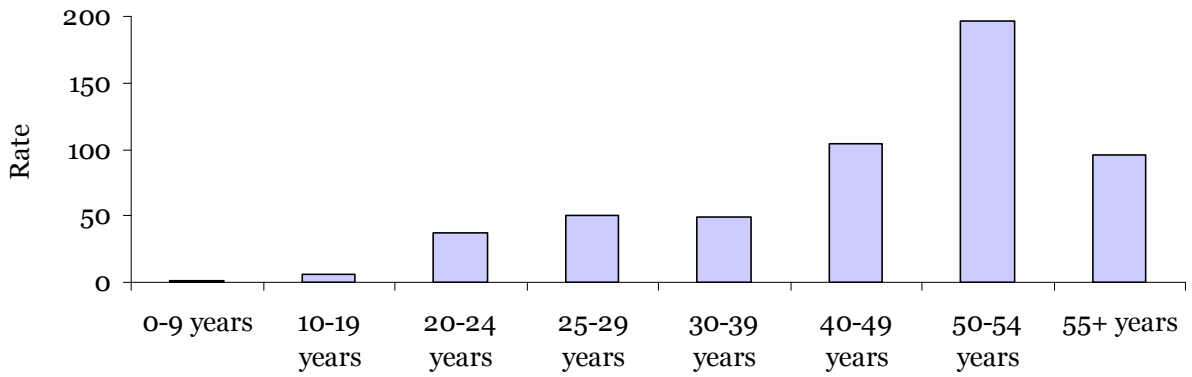


Hepatitis C

sons and 28 per 100,000 in white persons (Figure 22). However, these rates must be viewed with caution as the race/ethnicity of the client was unknown in almost half (48 percent) of reported chronic cases. The highest rate of chronic hepatitis C was found in the 50-54 year age group (Figure 23).

Please note that chronic hepatitis C data must be interpreted with caution. Chronic hepatitis C data do not represent the incidence or prevalence of chronic hepatitis C in Michigan; rather the data represent an aggregate of newly diagnosed cases reported to local health departments by laboratories and health-care providers. Although these cases were newly diagnosed in 2009, the patient may have been chronically infected with hepatitis C for years, but remained undiagnosed until 2009.

Figure 23: Rate of Chronic Hepatitis C in Michigan Residents, by Age, 2009



Limitations of the data

Since acute and chronic hepatitis C infections are often asymptomatic and can remain undetected and unreported for years, we often rely on estimates of hepatitis C infection rather than reported cases. Using data from the National Health and Nutrition Examination Survey (NHANES) gathered between 1999 and 2002, the Centers for Disease Control and Prevention (CDC) estimates that 1.6 percent of the population has ever been exposed to hepatitis C and 1.3 percent of the population has developed a chronic hepatitis C infection. However, NHANES does not include homeless, incarcerated, institutionalized, hospitalized or military populations and therefore under-estimates the percentage of the population who have ever been infected with hepatitis C or are chronically infected with hepatitis C, since these excluded populations are often at high risk for hepatitis C infection. While not perfect, we use these NHANES estimates to determine how many cases of chronic hepatitis C we may have in Michigan. According to these estimates, approximately 131,000 Michigan residents have been chronically infected with hepatitis C. See Table 15, page 3-96 for county estimates of how many Michigan residents have been infected with hepatitis C.

Hepatitis C

Hepatitis & HIV Co-Infection:

Data for this analysis were provided by a supplemental surveillance project, Adult and Adolescent Spectrum of Disease (ASD). ASD collected data from the medical records of HIV patients at two major medical centers in Detroit, between 1990 and 2004, from the time the persons first contacted either site, until they died or were lost to follow-up.

Hepatitis C (HCV) was the most common hepatitis co-infection among HIV-infected persons. Of the 1,790 persons in care and in ASD in 2001-2003, 353 (20 percent) had a diagnosis of HCV at some time during ASD follow-up, while 207 (12 percent) had a diagnosis of hepatitis B (HBV), and 64 (4 percent) of hepatitis A (HAV). The true rates of co-infection with HBV, and particularly with HCV, may be higher than these estimates because HBV and HCV infections are frequently asymptomatic, and only a portion of the persons in ASD were tested for HBV and HCV.

Table 16 (page 3-97) shows the demographic and HIV transmission risk profiles for all the persons in ASD co-infected with HAV, HBV and HCV. Of persons co-infected with HCV, higher proportions were female and black, compared to the proportions among all persons in ASD, and a higher proportion were over 40 years of age. The predominance of blood transfer as the transmission mode for HCV was reflected in the higher proportions of HCV-co-infected persons who had a history of drug injection or other blood contact recorded as their HIV transmission risk. In contrast, the demographic and HIV transmission risk profiles of persons co-infected with HAV (predominantly oral-fecal transmission) did not differ significantly from the profiles of all the persons in ASD. Among persons co-infected with HBV, the only significant differences were that higher proportions were male and had MSM or drug injection recorded as their HIV transmission risk, reflecting the transmission modes for HBV (sexual contact and blood transfer).

The proportions of persons in ASD who were vaccinated against HAV and HBV were lower among persons co-infected with the respective viruses. These differences were expected because of the lack of need for immunization as a result of the long-term immunity (HAV and HBV) and chronic infection (HBV) that are associated with these viruses.

2010 Profile of HIV/AIDS in Michigan

Ranked Behavioral Group: MSM

Data from HIV/AIDS Reporting System (eHARS) &
Supplement to HIV/AIDS Surveillance Project II (SHAS)

Overview:
Men who have sex with men (MSM) are the number-one ranked behavioral group in Michigan for HIV infection. MSM remain the single largest behavioral group affected by this epidemic, and account for over half (53 percent) of all reported infected persons, including MSM/IDU. MDCH estimates that there are approximately 9,930 MSM living with HIV disease in Michigan. This includes an estimated 880 HIV-infected men whose risk is a combination of having sex with other men and injecting drugs. (See Table 5, page 3-85)

Race/Ethnicity:
MSM accounts for most HIV infection among men in Michigan. This is true for black, white and Hispanic men. In reviewing reported cases for MSM and MSM/IDU of all races (8,073 cases), white males comprise a little less than half of men in this combined category (47 percent, 3,863 cases); black males account for just under half (46 percent, 3,743 cases); and Hispanic males account for four percent (319 cases). See Table , page 3-8.

Age at HIV Diagnosis:
Among those reporting male-male sex (including MSM/IDU), the highest percent of all living cases of HIV/AIDS is found among those aged 30-39 at diagnosis (37 percent). MSM is the predominant mode of transmission for males aged 13 and up, accounting for 78 percent of infections among those aged 20-29 at diagnosis. See Table 9, page 3-90.

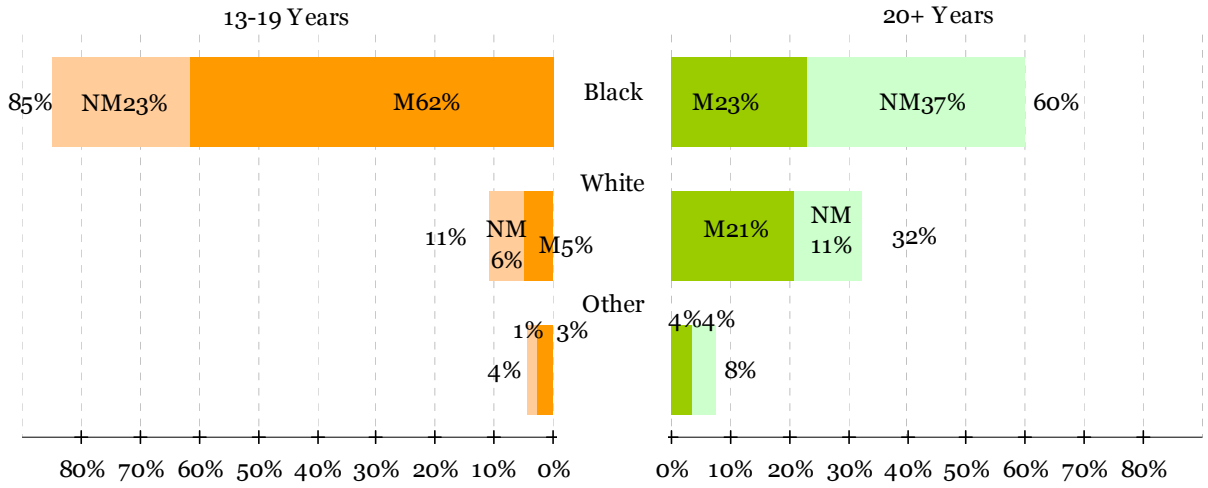
Concurrent Diagnoses:
Of the 15,285 persons living with HIV/AIDS in Michigan, 54 percent (8,317 cases) have progressed to AIDS. Of these, 3,561 (43 percent) had concurrent HIV and AIDS diagnoses. MSM make up 55 percent (N = 4,601) of persons living with AIDS, of which 42 percent (N = 1,931) had concurrent HIV and AIDS diagnoses. MSMs make up the majority of those getting tested for HIV late in the course of the disease and are more likely to test later when compared to IDU and persons reporting heterosexual sex. See Table 5, page 3-85.

Geographic Distribution:
In both the high and low HIV/AIDS prevalence areas (see Figure 2, page 3-15), MSM comprise the single largest mode of transmission. Within high prevalence counties MSM comprise over half of reported cases (53 percent) while in the lower prevalence counties 62 percent of reported persons living with HIV/AIDS are MSM. About two-thirds (62 percent) of HIV-infected MSM statewide reside in the Detroit Metro Area, which is in line with the percent of all HIV cases in the DMA. These percentages include MSM who are also IDU. Data not shown in Tables.

Trends and Conclusions:
MDCH estimates that HIV infection among men who have sex with men remained stable from 2004 to 2008, with this group comprising 44 percent of all new diagnoses in 2008. However, the percent of cases among black MSM increased significantly, while the percent among white MSM decreased. Also, the rate of infection in those who were 13-24 years old at the time of HIV diagnosis has significantly increased during this time period. Those in this age group are much more likely to be black MSM compared to adults 20 years and older (62 percent vs. 23 percent) (Figure 24). For more information on trends overtime, see the section on Trends in HIV/AIDS Data on pages 3-18—21.

Ranked Behavioral Group: MSM

Figure 24: Race/Ethnicity by Age at HIV Diagnosis, All Persons Living with HIV, 2004-2008



NM (lighter outside bars) = Not MSM (Males and Females)
M (darker inside bars) = MSM (Males only)

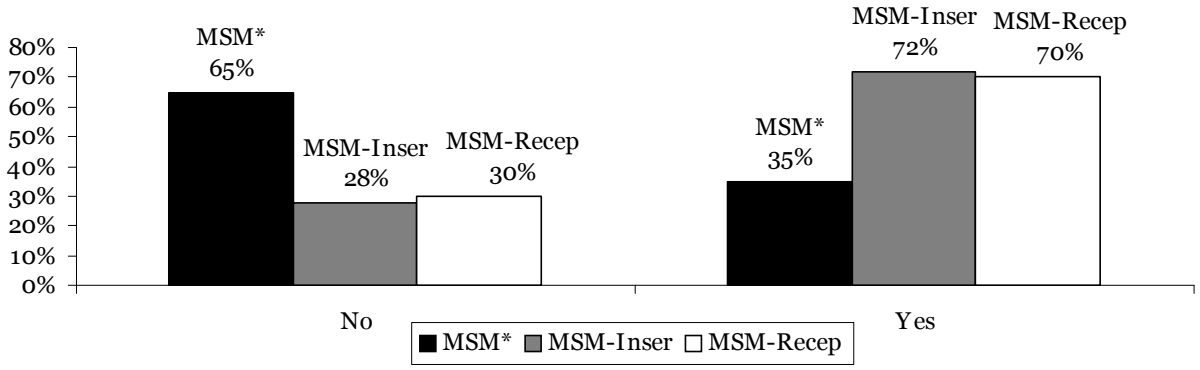
Ranked Behavioral Group: MSM: A Look at Condom Usage

Data from Supplement to HIV/AIDS Surveillance Project II (SHAS) & Medical Monitoring Project (MMP)

Among the 333 men who report having sex with a man in the 12 months prior to the SHAS interview between 2000 and 2004, 111 reported having insertive anal sex with a steady male partner. As seen in Figure 25, 72 percent reported using condoms the last time they had sex. Of the 119 male respondents who reported having receptive anal sex with a steady male partner, 70 percent reported that their partner used a condom.

More recent data shows that among the persons living with HIV who were in care and interviewed for **MMP** in 2007, 35 percent of men that have sex with men (MSM) reported having unprotected sex with at least 1 partner. Although the populations interviewed in SHAS and MMP are different, it is difficult to ignore this drastic decrease in condom usage among MSM.

Figure 25: Condom Use among HIV Infected Men (SHAS-2000-2004 & **MMP* - 2007**)



Ranked Behavioral Group: MSM: Discussion of Behaviorally Bisexual Men

Data from HIV/AIDS Reporting System (eHARS) & Supplement to HIV/AIDS Surveillance Project II (SHAS)

Case reporting data are collected statewide but have only limited information on male bisexual behavior. Case reports are completed by health care providers and surveillance staff reviewing medical records rather than through interviews with infected persons. Only 56 percent of all completed case reports have complete 'yes or no' answers to both questions, "prior to HIV diagnosis, has the patient had sex with men" and "prior to HIV diagnosis, has the patient had sex with women". Based on these complete forms, 60 percent of all MSM (including MSM/IDU) reported also having sex with a woman. These more complete forms also show that 10 percent of women report having sex with behaviorally bisexual men. These data should be viewed as minimum estimates of these behaviors, because 44 percent of case reports did not have these two questions answered completely. Nonetheless, they suggest that more women are having sex with behaviorally bisexual men than the surveillance system collects.

In an effort to help focus prevention activities, we present the data that are available on bisexual behavior among HIV-infected men in southeast (SE) Michigan from the Supplement to HIV/AIDS Surveillance Project (SHAS), which was conducted in Michigan 1990-2004. The SHAS interview asked HIV-infected persons directly about specific behaviors. It was conducted only in SE Michigan; therefore, is not representative of all HIV-infected persons in the state. Please see the Data Sources Section (page 1-7) to learn more about SHAS. Of all male SHAS respondents who reported having vaginal, oral, and/or anal sex in the 12 months prior to the interview (530 persons), 63 percent (333 persons) reported having sex with other men in the 12 months prior to the interview; 77 percent (254 persons) were black and 22 percent (72 persons) were white. Of these 332 men, 10 percent (33 persons) also reported having sex with women in the 12 months prior to the interview. This represents 12 percent (30 persons) of the 254 black men and three percent (2 persons) of the 72 white men who reported same-sex behavior.

2010 Profile of HIV/AIDS in Michigan

Ranked Behavioral Group: MSM: Health Needs & Risk Perceptions

HIV/AIDS and Health Related Needs and Risk Perceptions Among African-American Men who Have Sex with Men in Michigan

In October of 2005, the health related needs and risk perceptions of HIV/AIDS among African-American men who have sex with other men were assessed by MDCH/DHWDC. Interviews (N=32) and/or focus groups (N = 6 with 37 participants) were conducted in six communities around Michigan: Benton Harbor, Detroit, Flint, Grand Rapids, Lansing, and Ypsilanti. Quota and network sampling methodology were used to access participants on streets, in parks, at clubs, and at community-based organizations known to serve MSM.

Few of the interview participants listed HIV/AIDS as their primary health concern (unless they reported being HIV positive), but many said they think HIV is the most important health issue facing African American men today, generally because most men perceived that African Americans are at higher risk for getting HIV. People did not see HIV as a personal risk factor, but as a risk for the larger African American community. However, when asked about the personal importance of HIV relative to other health risks, most rated it as more important or as important as other health issues. Further, most participants reported fear or negative emotion associated with hearing the term HIV.

Questions were asked concerning where participants would and would not feel comfortable going for information on HIV. When asked about the places they would *not* go for HIV information, there was a very consistent pattern to participant's responses. Specifically, many participants said they would not go to churches, clubs, bars, or parks, generally because of confidentiality concerns and fears about the type of information they would get from the sources in these places. There were a number of places people listed that they *would* go for HIV-related information including their private doctor, the internet, the health department, hospitals, and community-based organizations. The reasons people gave for choosing these particular organizations were because they were perceived as being open (one can "speak freely"), confidential, and comfortable. Importantly, concerns about going to particular places for information seemed to be largely related to stigma around gay sexual identity and HIV, rather than about concerns about racism. Agencies targeting African American MSM with prevention interventions should carefully consider the venue in which these services are provided. It appears that the public nature of bars and clubs in particular raises concerns among this population.

In this sample, people's perceptions of HIV risk and vulnerability did not seem to be closely tied with homosexuality. The MSM in this sample, who would not talk to others about their sexual orientation, were quite willing to talk with those same people about HIV (as long as they were talking about other people), and at community-based organizations known to serve MSM.

2010 Profile of HIV/AIDS in Michigan

Ranked Behavioral Group: Heterosexuals

Data from HIV/AIDS Reporting System (eHARS)

Overview:

Heterosexual transmission is the number-two ranked behavioral group in Michigan. Heterosexual sex accounts for 17 percent of reported infected persons. MDCH estimates that 3,280 persons living with HIV disease in Michigan were infected through heterosexual sex. Heterosexual transmission is comprised of High-Risk Heterosexuals (HRH) and females who are presumed to have heterosexual risk (PH-Fem). HRH are defined as HIV-infected persons whose heterosexual sex partners are known to be IDUs, behaviorally bisexual men, blood recipients known to be HIV +, and/or HIV+ individuals without additional behavioral information. PH-Fem are defined as females whose only reported risk is heterosexual contact, and their male partner's risk and HIV status are unknown. Currently there are an estimated 2,340 infected persons who are classified as HRH and 940 who are PH-Fem. (See Table 5, page 3-85).

Not all heterosexuals are at equal risk for HIV, as the risk for contracting HIV is higher for persons living in areas where prevalence of HIV is higher. Data from behavioral studies across the US, including Wayne County, show a strong connection between poverty and heterosexual HIV risk in urban areas.

Race/Ethnicity and Sex:

Among the 2,663 men and women living with HIV/AIDS and infected heterosexually, under three-quarters (71 percent) are HRH and 29 percent are PH-Fem. Of the 2,663 HRH, 27 percent reported their heterosexual partner as injecting drug users (73 percent women, 27 percent men), six percent as behaviorally bisexual men (this applies to women only) and two percent as persons infected through blood products (80 percent women, 20 percent men). Just less than two-thirds (64 percent; 66 women, 34 percent men) reported their partner(s) as HIV-infected without reporting the partner(s) risk for contracting HIV. See Table 7, page 3-88.

While women account for 22 percent of all reported HIV/AIDS cases in Michigan, they have consistently accounted for over three-quarters of heterosexually acquired infections -- currently 79 percent. Over half of all black women were infected heterosexually (60 percent). Sixty-three percent of white women, 71 percent of Hispanic women, and 63 percent of women of other or unknown race, at least two-thirds of each group, were infected through heterosexual sex. Black women and women of other or unknown race have higher proportions of PH-Fem then white or Hispanic women (black-24 percent, other/unk-29 percent, Hispanic-17 percent, white-15 percent).

Most heterosexual cases of HIV/AIDS are among black persons--71 percent of both females and males. It should be noted that the overall proportion of men infected heterosexually is low--five percent of cases among men of all races. See Table 7, page 3-88.

As noted above, the HRH transmission category includes subcategories to describe mode of transmission in more detail. This is especially helpful for women since they make up most (79 percent) of the heterosexually transmitted cases. Risk breakdowns for black and white women living with HIV/AIDS are shown in Figures 26 and 27.

Ranked Behavioral Group: Heterosexuals

Figure 26: Black Females Living with HIV/AIDS in Michigan, by Expanded Mode of Transmission (N = 2,500)

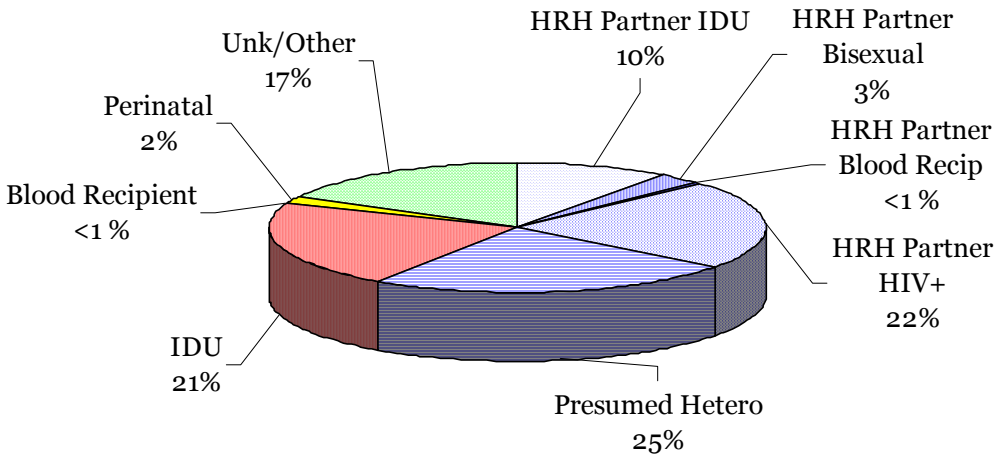
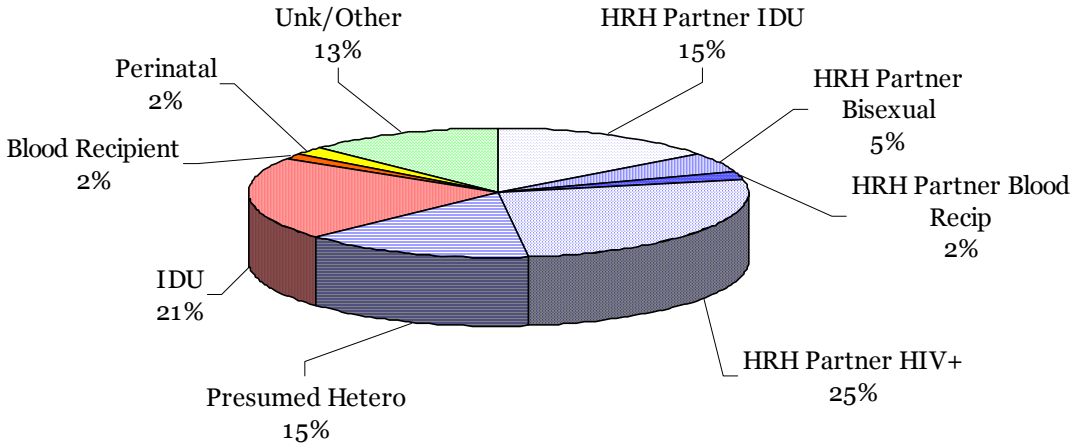


Figure 27: White Females Living with HIV/AIDS in Michigan, by Expanded Mode of Transmission (N = 696)



Age at HIV Diagnosis:

Heterosexual transmission is the predominant mode of HIV transmission for females who were 13 years of age and older at the time of their HIV diagnosis. Three-quarters (76 percent) of those 13-19 at the time of HIV diagnosis report heterosexual sex (64 percent HRH, 36 percent PH-Fem). As age increases, the proportion made up by heterosexual sex decreases, but still remains higher than IDU for all age groups 13 years and older.

Among men, the percentage with heterosexual sex as the mode of HIV transmission remains low (5 percent). However as the age at diagnosis gets older, HRH makes up a larger proportion, but never surpasses 10 percent. See Table 9, page 3-90.

Ranked Behavioral Group: Heterosexuals

Concurrent Diagnoses:

Of the 15,285 persons living with HIV/AIDS in Michigan, 54 percent (8,317 cases) have progressed to AIDS. Of these, 3,561 (43 percent) had concurrent HIV and AIDS diagnoses. Heterosexual sex makes up 16 percent (N = 1,359) of persons living with AIDS, of which 38 percent (N = 521) had concurrent HIV and AIDS diagnoses. Overall, heterosexuals are more likely than IDUs and less likely than MSMs to get tested late in the progression of HIV disease. See Table 5, page 3-85.

Geographic Distribution:

In the high and low prevalence areas (Figure 2 on page 3-15), persons living with HIV/AIDS who acquired HIV heterosexually comprise 18 percent and 16 percent, respectively, of reported cases in these areas. Of these ,64 percent reside in the Detroit Metro Area. Data not included on Tables.

Trends and Conclusions:

Between 2004 and 2008, new HIV diagnoses attributed to heterosexual sex decreased by an average of six percent per year. The data also show that although there is heterosexual transmission from women to men, it is a much smaller problem in Michigan (and the U.S.) than transmission from men to women. In light of the much lower seroprevalence rates among heterosexuals compared with men who have sex with men, this mode of transmission is unlikely to surpass that of MSM. However, trends show that heterosexually acquired cases have surpassed the proportion of cases attributed to IDU. For more information on trends overtime, see the section on Trends in HIV/AIDS Data on pages 3-18—21.

Ranked Behavioral Group: Heterosexuals: Condom Usage

Data from Supplement to HIV/AIDS Surveillance Project II (SHAS) & Medical Monitoring Project (MMP)

In SHAS, 64 percent (213) of female respondents reported having vaginal, oral, and/or anal sex in the 12 months prior to the interview. Of these, 68 (33 percent) reported having sex with a man other than a steady male partner in the 12 months prior to interview. Sixty-three percent (529) of male SHAS respondents reported having vaginal, oral, and/or anal sex during the 12 months prior to the interview. Of these, 115 (50 percent) reported having sex with a woman other than a steady female partner in the 12 months prior to interview.

Table 3 shows that around three-quarters of females and males used a condom during vaginal sex with their most recent, non-steady partner (70 and 78 percent, respectively). Additionally, 35 percent of females and 29 percent of males reported condom use during their most recent oral sex with a non-steady partner.

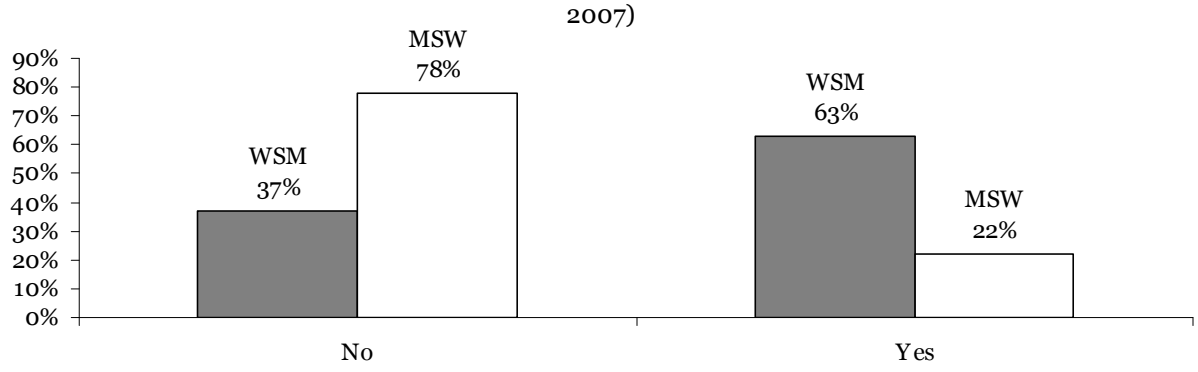
Table 3: Barrier/Condom Use with Most Recent Non-Steady Partner, Among Heterosexuals

	Females (n=68) Percent (barrier use/sexual activity)	**Males** (n=115) Percent (condom use/sexual activity)
Sexual Activity*		
Vaginal sex	70% (46/66)	78% (84/108)
#*Oral sex	35% (7/20)	29% (14/48)

**Categories are not mutually exclusive*
*#*Oral sex: mouth-vagina and penis-mouth*

Figure 28 shows that among the persons living with HIV who were in care and interviewed for MMP in 2007, males and females reported discordant experiences with condom use during heterosexual sex. While almost two-thirds (63 percent) of females reported condom use, only less than one-quarter (22 percent) of men reported condom use. For Figure 28, "WSM" = Woman having sex with a man and "MSW" = Man having sex with a woman.

Figure 28: Condom Use Among Males and Females During Heterosexual Sex (MMP, 2007)



2010 Profile of HIV/AIDS in Michigan

Ranked Behavioral Group: IDU

Data from HIV/AIDS Reporting System (eHARS), Supplement to HIV/AIDS Surveillance Project II (SHAS), National HIV Behavioral Surveillance (NHBS) & Medical Monitoring Project (MMP)

Overview:
Injecting drug users (IDUs) are the number-three ranked behavioral group in Michigan and account for 16 percent (2,467 cases) of reported infected persons (including MSM/IDU). MDCH estimates there are 3,030 IDUs living with HIV in Michigan. This estimate includes 880 HIV-infected men whose risk is a combination of having sex with other men and injecting drugs (MSM/IDU). (See Table 5, page 3-85).

Race/Ethnicity and Sex:
Of the 2,467 IDU and MSM/IDU persons living with HIV, 1,122 are black men (45 percent), 535 are black women (22 percent), 502 are white men (20 percent), 143 are white women (6 percent), 91 are Hispanic men (4 percent) and 30 are Hispanic women (1 percent). In total, two-thirds (1,657 cases, 67 percent) of the IDU cases occur in black persons. Approximately three-quarters of the cases are among men (71 percent) and 29 percent are among women. See Table 7, page 3-88.

Additional behavioral data on HIV-infected IDUs and other drug users in Southeast Michigan is known from the SHAS interview project. Of the 1,174 persons interviewed in SHAS II between 2000 and 2004, 15 percent (178) injected drugs at some time during their lives. This 15 percent (178) was mostly comprised of males (63 percent). Of all injection drug users, 51 percent (90) reported ever being told by a doctor or health care provider that they had hepatitis C; this was 59 percent of males (53) and 71 percent of females (37).

Age at HIV Diagnosis:
Among men in their 30s IDU is tied with Unknown risk for the second most common mode of transmission (16 percent). Overall, as age at diagnosis increases, the proportion attributed to IDU behavior increases (as opposed to MSM behavior, where the proportion decreases with age). However, this proportion peaks with persons 40-49 and then begins to decrease.

Overall, IDU is the second most common risk for women. However, this is true only for women between 25 and 49 at the time of HIV diagnosis (17 to 30 percent). For women who were 50 and older at HIV diagnosis, IDU falls behind Unknown risk and becomes the third most common mode of transmission. There are very few cases of HIV/AIDS attributed to IDU among persons who were teenagers at the time of their HIV diagnosis (4 percent) and half of those are among male MSM/IDU). See Table 9, page 3-90.

Concurrent Diagnoses:
Of the 15,285 persons living with HIV/AIDS in Michigan, 54 percent (8,317 cases) have progressed to AIDS. Of these, 3,561 (43 percent) had concurrent HIV and AIDS diagnoses. IDUs make up 18 percent (N = 1,490) of persons living with AIDS, of which 33 percent (N = 490) had concurrent HIV and AIDS diagnoses. Overall, IDUs are less likely then either heterosexuals or MSMs to get tested late in the progression of HIV disease. See Table 5, page 3-85.

Geographic Distribution:
Within high prevalence counties (see Figure 2 on page 3-15), 16 percent of reported cases are IDU, while in the lower prevalence counties 14 percent of persons living with HIV/AIDS are IDU. These percentages include those male IDUs who are also MSM. Data not included in Tables.

Ranked Behavioral Group: IDU

Non-injection drug use:

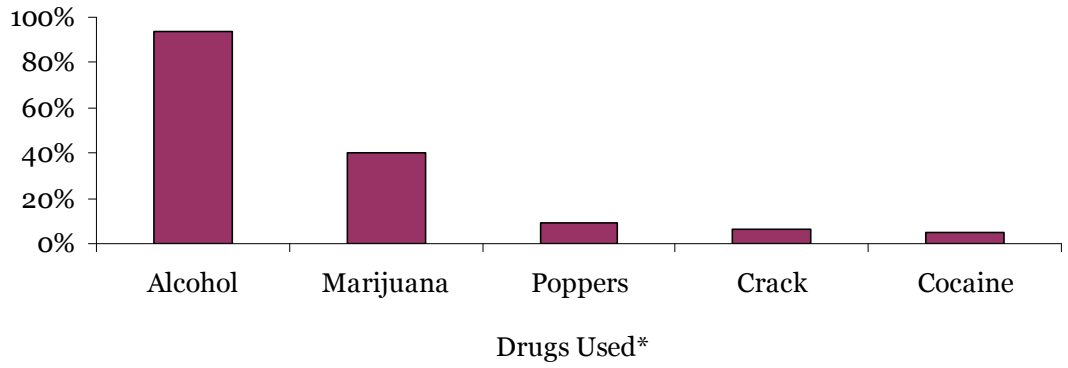
Among SHAS participants, 174 (98 percent) were injection drug users who had ever used some kind of non-injection drugs in the past. When injection drug users were asked about ever being in a drug or alcohol treatment program, 135 persons (76 percent) responded in the affirmative. Forty-two percent (74 persons) of injection drug users are potential alcoholics—17 percent of males (44 persons) and 28 percent of females (30 persons). A 'potential alcoholic' is defined as a person who answered 'Yes' to two or more of the following questions on the SHAS II questionnaire: 1) Have you ever felt you ought to cut down on your drinking?, 2) Have people ever annoyed you by criticizing your drinking?, 3) Have you ever felt bad or guilty about your drinking?, and 4) Have you ever had a drink first thing in the morning to steady your nerves or rid yourself of a hangover?

Asking these screening questions of all respondents revealed that 32 percent (371) are potential alcoholics-31 percent of males (263) and 32 percent of females (108). Other drug use information shows 772 (66 percent) of all respondents (1,174) have ever used some kind of non-injection drugs in the past. Among non-injection drug users, the primary non-injected drug for men and women was marijuana, followed by crack cocaine for both men and women. Further SHAS data describing the drug use behaviors of participants in this project are available online at www.michigan.gov/hivstd.

Injection drug use:

Figure 29 shows the most frequently reported drug use among the persons living with HIV who were in care and interviewed for the MMP in 2007. Ninety-nine percent reported having not injected drugs in the 12 months prior to the interview. However, about two-thirds admitted to using non-injection drugs and alcohol in the 12 months prior to the interview (shown in Figure 29). While injection drug use was reportedly used the least, alcohol was used the most.

Figure 29: Most Frequently Used Non-Injection Drugs (MMP, 2007)

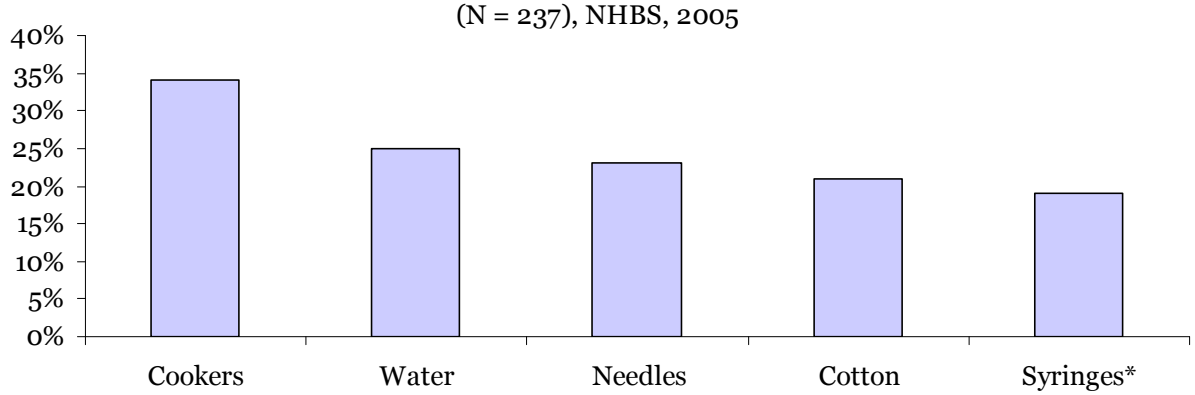


*Drug use is not mutually exclusive (one case can be represented in multiple categories)

Ranked Behavioral Group: IDU

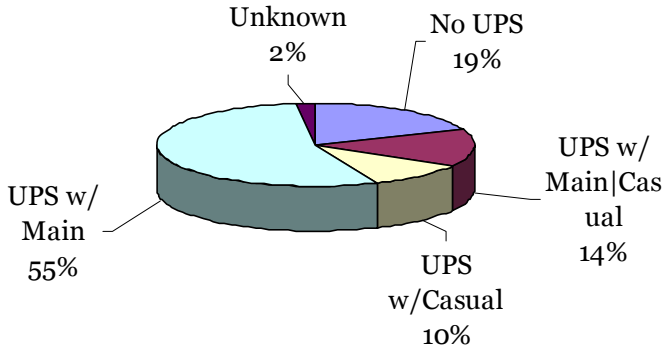
Forty-six percent (237 persons) of injection drug users interviewed during the IDU1 cycle of the NHBS Project (2005) in Wayne County shared some form of drug equipment and 35 percent (178 people) reported using a sterile needle for all injections. There was no consistent pattern among which equipment was or was not shared: 34 percent shared cookers, 25 percent shared water, 23 percent shared needles, 21 percent shared cotton, and 19 percent shared syringes for dividing drugs (Figure 30). However, 77 percent (399 persons) responded that they never share needles, suggesting that many reuse their own needles. Six percent (32 persons) reported sharing all pieces of equipment.

Figure 30: Equipment Sharing Among IDUs who share drug equipment (N = 237), NHBS, 2005



*Syringes were shared to divide drugs, not for injecting

Figure 31: Unprotected Vaginal Sex (UPS) among IDUs by Type of Sexual Partner (NHBS, 2005)



Condom Use:
Additionally, data was collected on condom use from the IDU1 cycle of NHBS (Figure 31). Nearly 80 percent (346 persons) of injecting drug users reported having unprotected vaginal sex 12 months prior to the interview. Fifty-five percent (239 persons) reported unprotected sex with main partners only and 24 percent (107 persons) with casual only or casual and main partners. Forty-four percent (194 persons) of this mainly HIV negative sample never discussed their HIV status or their partners' HIV status before having sex the first time.

Trends and Conclusions:
Between 2004 and 2008, the proportion of newly diagnosed persons who were injection drug users (IDU) decreased by an average of 14 percent per year. This a continuation of the decreasing trend we have seen over the past 5 years we have run trend reports. Data from Michigan's HIV Behavioral Surveillance suggest reductions among IDUs may partly be attributable to the success of harm reduction programs, such as needle exchange. For more information on trends overtime, see the section on Trends in HIV/AIDS Data on pages 3-18—21.

2010 Profile of HIV/AIDS in Michigan

Description of the Epidemic by Race and Sex

Data from HIV/AIDS Reporting System (eHARS)

Overview:

Black persons comprise the majority of those living with HIV/AIDS in Michigan. They comprise 14 percent of Michigan's population yet make up over half (58 percent) of the cases of HIV/AIDS. MDCH estimates 10,820 black persons are living with HIV/AIDS in Michigan. The rate of HIV infection among black persons is 627 per 100,000, almost nine times higher than the rate among white persons. As many as one out of 100 black males and one out of 300 black females are living with HIV.

White persons comprise over a third (36 percent) of reported HIV/AIDS cases and 77 percent of Michigan's population. MDCH estimates 6,710 whites are living with HIV/AIDS in the state. However, since these cases are spread out among a much larger population they have a lower rate of HIV infection (70 per 100,000) than black or Hispanic persons. As many as one out of 800 white males and one out of 5,640 white females are living with HIV.

Hispanic persons comprise five percent of cases and four percent of the population. MDCH estimates 860 Hispanic persons are living with HIV/AIDS in Michigan. However, the relatively few cases are spread out among a small population and therefore they have a higher rate (170 per 100,000) than that among white persons. As many as one out of 400 Hispanic males and one out of 1,240 Hispanic females are living with HIV.

Arab, Asian/Native Hawaiian/Pacific Islander and American Indian/Alaskan Native persons living with HIV are discussed further on pages 3-75—79.

Most persons living with HIV/AIDS in Michigan are male (77 percent). The majority of the 11,842 male HIV/AIDS cases are black (53 percent), 40 percent white, five percent Hispanic and two percent are other or unknown race. The majority of the 3,443 female HIV/AIDS cases are also black (73 percent), 20 percent are white, five percent are Hispanic and three percent are other or unknown race.

Please refer to Table 5, page 3-85 for the data discussed in the above section.

Concurrent Diagnoses:

Of the 15,285 persons living with HIV/AIDS in Michigan, 54 percent (8,317 cases) have progressed to AIDS. Of these, 3,561 (43 percent) had concurrent HIV and AIDS diagnoses. Males make up 80 percent of AIDS cases, of which 44 percent had concurrent HIV and AIDS diagnoses. Females make up 20 percent of AIDS cases, of which 38 percent had concurrent diagnoses.

Although black persons make up a larger proportion of persons living with AIDS compared to white persons (57 v. 36 percent), more white persons living with AIDS were concurrently diagnosed, compared with black persons (45 v. 41 percent). Hispanic persons make up five percent of AIDS cases, of which 52 percent were concurrently diagnosed. This disproportionate spread is also seen among other race groups: Less than one percent of Asian/PI/NH and AI/AN are living with AIDS, of these 59 percent of Asian/PI/NH and 23 percent of AI/AN had concurrent diagnoses. See Table 5, page 3-85.

Description of the Epidemic by Race and Sex (continued)

Mode of Transmission:

Figures 32 and 33 display the proportion of black and white male cases by mode of transmission. Refer to Figures 26 and 27, page 3-43 for black and white female distributions.

Figure 32: Black Males Living with HIV/AIDS in Michigan, by Expanded Mode of Transmission (N = 6,300)

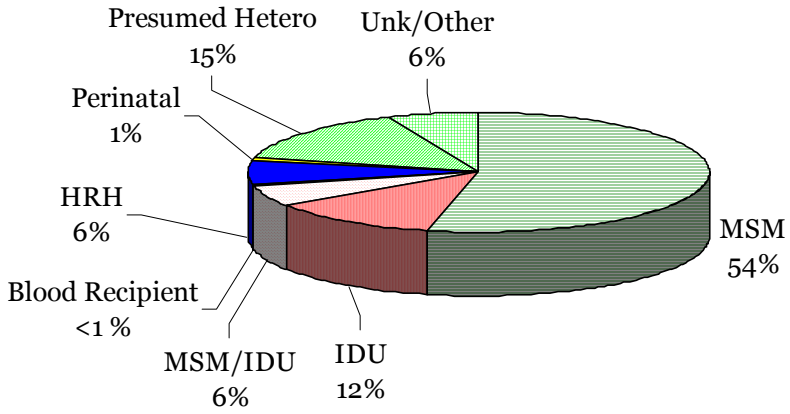
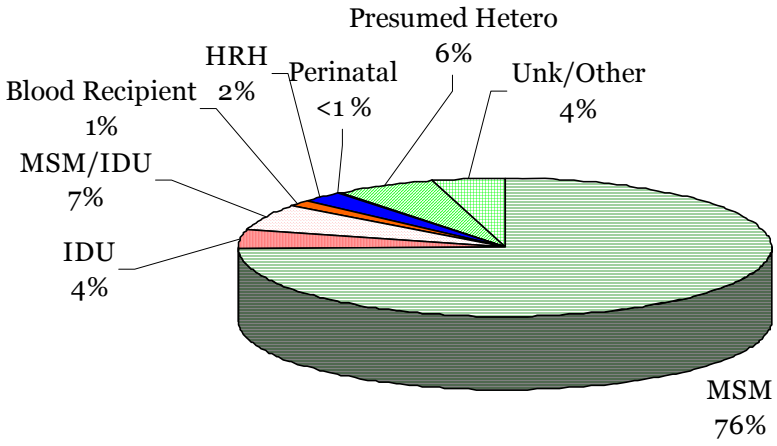


Figure 33: White Males Living with HIV/AIDS in Michigan, by Expanded Mode of Transmission (N = 4,759)



Trends and Conclusions:

The rate of new diagnoses increased among black males (average 2 percent per year) between 2004 and 2008. This is the third consecutive yearly analysis that has shown increases among black males. The rate decreased among white males for the second time at an average of six percent per year. The rate also decreased among black females (average 9 percent per year), which resulted in a decrease in rate for all females (average six percent per year), as blacks make up about 75 percent of cases among females. Diagnosis rates remain highest among blacks of both sexes, compared to all other race/sex groups. For more information on trends overtime, see the section on Trends in HIV/AIDS Data on pages 3-18—21.

Description of the Epidemic by Race and Sex

Geographic Distribution:

Looking at the proportions of cases by race (e.g., number of black cases/total number of cases) in a particular area of the state does not fully measure the impact of this disease. This is because the proportions of white and black persons living in high and low prevalence areas are different. See page 3-15 for high and low prevalence areas. Therefore, instead of proportions, rates are used (e.g., number of black cases/total number of blacks living in that area). Figure 34 shows that the HIV/AIDS case rate among black persons is seven times higher than the rate among white persons in both high and low prevalence areas of the state, even though there are fewer cases among black persons in the low prevalence areas. This shows that this disease disproportionately affects black persons in both high and low prevalence areas of Michigan. Also, the HIV/AIDS case rate among Hispanic persons is two to three times higher than the rate among white persons in both high and low prevalence areas of the state, even though there are fewer cases among Hispanic persons.

Figure 34: Case Rates of Persons with HIV/AIDS Living in High & Low Prevalence Areas by Race, 2010

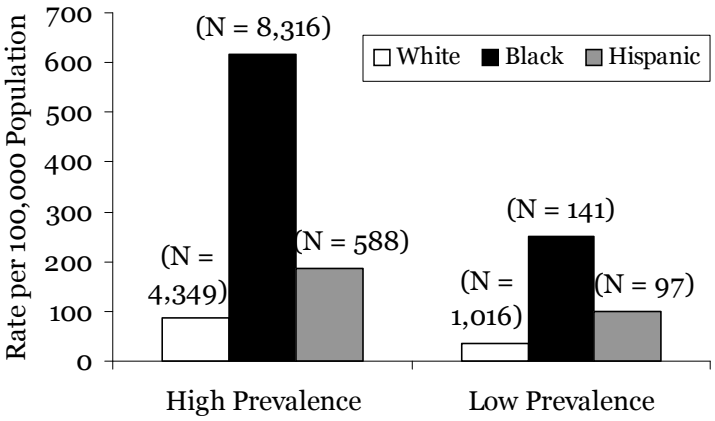
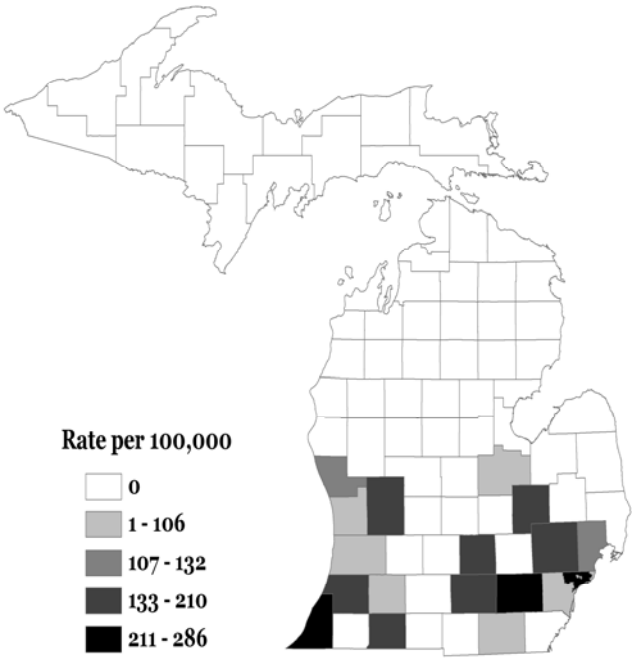


Figure 35: Prevalence Rates for Hispanic Persons Living with HIV



Focus on Hispanics:

Hispanic persons comprise five percent of all persons living with HIV/AIDS. Figure 35 shows the rate per 100,000 of Hispanic persons living with HIV/AIDS in counties across Michigan. Counties with five or more reported Hispanic cases are included in the map. Eight of the 17 counties that meet this definition are either on the Lake Michigan shoreline or just east of it. This is most likely due to the large population of migrant workers in this area. Although Wayne County has the largest number of cases, it has the third highest rate (203 per 100,000). The individual rates for the remaining counties are as follows: Washtenaw (271), Berrien (249), Kent (210), Jackson (202), St. Joseph (190), Ingham (186), Van Buren (186), Genesee (177), Oakland (166), Macomb (132), Muskegon (115), Allegan (105), Lenawee (93), Saginaw (88), Ottawa (85) and Kalamazoo (84).

Race and Ethnic Health Disparities

Data from HIV/AIDS Reporting System (eHARS) & US Census

Comparison by race/ethnicity:

The state of Michigan is similar to the rest of the country in that large racial and ethnic disparities are seen in HIV/AIDS rates. The epidemic disproportionately impacts black and Hispanic populations. In the black community HIV/AIDS has had the most devastating effect, with 58 percent of the HIV/AIDS cases occurring in this population. In addition to the black community, the Hispanic population is also disproportionately impacted with four percent of the reported cases occurring in this demographic. To put this in perspective, the state of Michigan's population is currently 77 percent white, non-Hispanic, 14 percent black, non-Hispanic, four percent Hispanic, and three percent Asian American/Pacific Islander/Native American, with the percentage of racial/ethnic minorities increasing each year. The black population is Michigan's largest minority group and the Hispanic population is one of Michigan's fastest growing; the importance of eliminating disparities is evident.

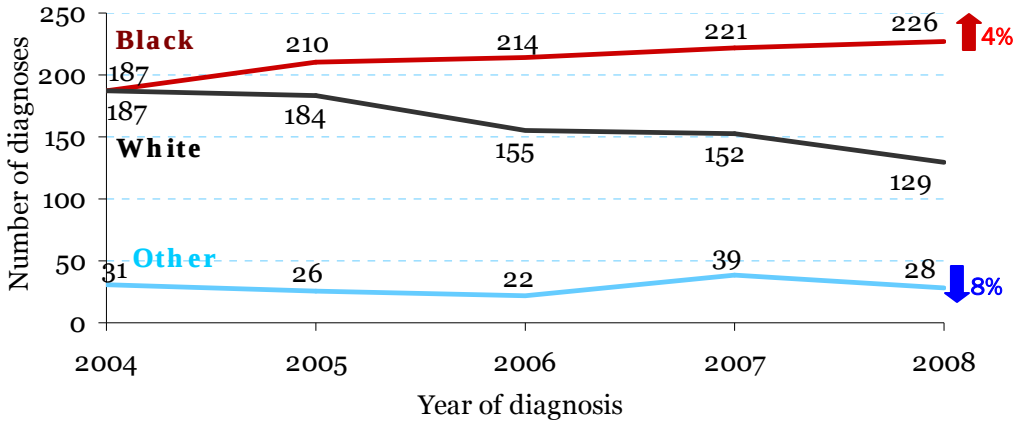
Focus: Young Black MSM

Data from HIV/AIDS Reporting System (eHARS), MDCH Vital Records, STD Reporting System, Medical Monitoring Project (MMP) & National HIV Behavioral Surveillance (NHBS) Young MSM Study

Age (Impact on Young Black MSM):

Nationally and in Michigan, the fastest growing population of HIV-infected persons are young black males. Surveillance data from the 33 states with confidential HIV reporting since 2001 show that HIV diagnoses among black MSM aged 13-24 increased by 93 percent between 2001 and 2006. Similarly, in Michigan, significant increases in the rates of HIV infection in Michigan were noted among 13-19 year olds, black males, and black MSM. Special analyses (Figure 24, page 3-39) show that of all teens diagnosed in the last five years, 85 percent are black compared to 60 percent of persons diagnosed at older ages. Furthermore, teens are significantly more likely to be black MSM compared to adults 20 years and older (62 percent v 23 percent). This continues to underscore a need for prevention campaigns tailored to young black MSM, as the differences we have been seeing over the last five years in this young group will likely widen the already large racial gap among persons living with HIV.

Figure 36: Race among MSM



Focus: Young Black MSM

MSM behavior:

MSM were 46 percent of all HIV diagnoses between 2004 and 2008. Of these newly diagnosed MSM, 53 percent were black, while 40 percent were white. Figure 36 shows that the number of black MSM cases increased significantly during this period—the third consecutive five-year analysis. The number of white MSM cases decreased significantly for the second year in a row.

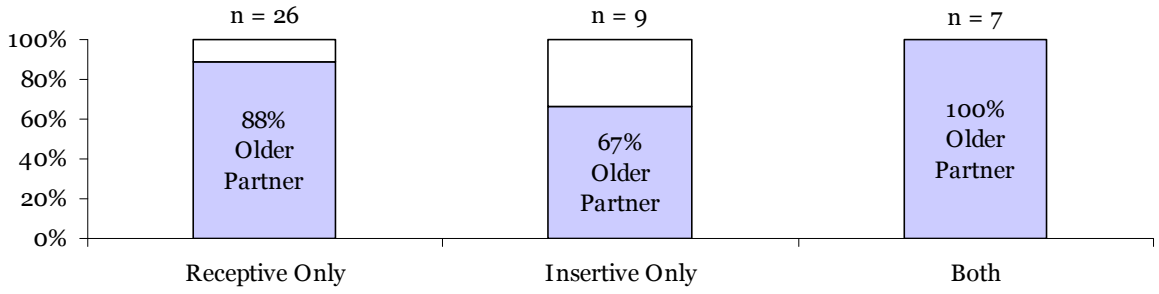
During the Young MSM Study of the MSM2 cycle of NHBS (2008), 52 mostly negative 13-17 years old males who ever had sex (anal or oral) with another male were interviewed about their last or most recent sexual encounter (anal or oral). Seventy-one percent were with their main partner compared to 25 percent who reported their last sexual encounter was with a casual partner. Eight-one percent of respondents (42) reported having anal sex at their most recent sexual encounter. Among respondents who had anal sex, about two-thirds used a condom during anal sex the whole time compared to five percent using a condom part of the time and 26 percent not using a condom at all (Table 4).

Table 4: Young Males who have Sex with Males Reporting Anal Sex During Most Recent Sexual Encounter

Condom Usage	No.	(%)
Anal sex , condom used the whole time	29	(69%)
Anal sex, condom used part of the time	2	(5%)
Anal sex, did not use condom	11	(26%)

Additionally, Figure 37 shows the 81 percent of participants (42 of 52) who reported having anal sex. About two-thirds (62 percent) had receptive only anal sex (26 of 42) compared to 21 percent who reported insertive anal sex only (9 of 42) and 17 percent reported having had both receptive and insertive anal sex (7 of 42) during last sexual encounter. Of those that engaged in receptive only sex, the majority (88 percent) reported their partners being older. Thirteen percent of participants had their first sexual encounter with another man at age 13 or younger, including one respondent reporting his first sexual encounter at 10 years of age.

Figure 37: Receptive and Insertive Anal Sex During Last Sexual Encounter Among Detroit YMSM Participants Relative to Age of Partner



Focus: Young Black MSM

STDs:

In 2009, 2025 chlamydia cases were reported among black males age 13 to 19. The rate of infection in this population is 2,087 per 100,000, or 3.5 times the rate of infection among all persons in Michigan. Following statewide trends, the number of reported cases has increased each year since 2007 for chlamydia cases reported among young black males. In terms of gonorrhea, 951 cases were reported in this demographic in 2009, with a rate of 980 per 100,000. In 2009, only 56 cases of gonorrhea were reported among white males in this same age group. This rate is 6.3 times the rate of infection in the general population, and nearly two times the rate of infection among those 13-19. Gonorrhea rates among young black males in cities such as Flint, Detroit, Kalamazoo, and Muskegon have rates showing even higher levels of disproportional impact.

In 2007, only three cases of syphilis were reported among black males between the ages of 13 and 19. This represented only three percent of male cases and two percent of the overall case load. In 2008, this increased to 19 young black males which was 12 percent of the male population and nine percent of the overall population. This increase was due mostly to increases in Genesee County and Detroit. In 2009, 15 young black males had primary and secondary syphilis, which was eight percent of the male population and seven percent of the total population. In 2008 and 2009, the young black male cases with primary and secondary syphilis were entirely MSM and more than half were co-infected with HIV.

General Risky Behavior:

Data from the 2009 YRBS show that black students (grades 9—12) were more likely to have had sexual intercourse than Hispanic and white students (66, 49 and 41 percent respectively). Black students were more likely than white students to: have sex in the past three months (49 and 31 percent, respectively); have four or more lifetime sexual partners (28 and 10 percent, respectively); and have sex before the age of 13 (12 and 3 percent, respectively). Black and Hispanic students were more likely than white students to have used heroin (10, 11 and 3 percent), and methamphetamines (12, 11 and 4 percent) one or more times during their life. Black and Hispanic students were also more likely than white students to use a needle to inject an illegal drug into their body one or more times during their life (8, 7 and 2 percent respectively).

Geographic Distribution:

While nearly two-thirds of persons living with HIV in Michigan are living in the Detroit Metro Area, nearly three-fourths of the new diagnoses among persons 13 to 19 years old are residents of the DMA. There are disparities even within this area as nearly half of persons 13-19 at HIV diagnosis are living in City of Detroit (49 percent), while 23 percent reside in the remaining parts of the Detroit Metro Area.

Death rates:

The epidemic is of special concern in the black community where the death rate from AIDS is 8.6 per 100,000; this towers above the rate for whites at 0.8 AIDS deaths per 100,000. If we separate the black rate by sex, black males have a death rate of 13.7 per 100,000 and the black female rate is 4.4 per 100,000. The black male rate is alarming because black males make up only seven percent of the total population, yet constitute 41 percent of the epidemic. The main mode of transmission in this group is MSM, however, IDU and heterosexual transmission also play a significant role. HIV/AIDS is also a serious area of concern for black women. The main mode of transmission for this group is heterosexual sex.

2010 Profile of HIV/AIDS in Michigan

Focus: Young Black MSM: Field Outreach Intervention

Data from Outreach, Prevention, and Care Services for Young African American MSM (YMSM)

Overview:
The Health Resources and Services Administration (HRSA) Special Project of National Significance (SPNS) project Brothers Saving Brothers (BSB) involved encouraging African American young men who have sex with men (YMSM) to learn their HIV status, and obtain information on possible barriers to HIV counseling and testing (HIV C&T). A motivation-based intervention (motivational interviewing; MI) was implemented in field outreach to encourage African American YMSM in the Detroit metropolitan area to know their status (i.e., receive HIV C&T and return for test results) and to compare two forms of field outreach (Field Outreach plus MI vs. Field Outreach Alone) to encourage HIV C&T and returning for test results. A web-based survey was also implemented as part of BSB to African American YMSM in the Detroit metropolitan area to assess the sexual behavior among online African American YMSM and to determine possible barriers to HIV C&T for this population. Both studies are discussed in detail below.

Field Outreach Intervention:
Participants were 188 African American YMSM aged 16-24. Participants were randomly assigned to one of the following intervention conditions: Field Outreach plus Motivational Interviewing (MI) (N=96) or Field Outreach alone (N=92). Both conditions encouraged HIV C&T and returning for test results (OraSure testing). A baseline survey inquired about: risk behaviors (i.e., sexual risk and substance use). Results indicated that African American YMSM in the Outreach plus MI condition received HIV C&T and returned for test results at a significantly higher rate than African American YMSM in the Field Outreach alone condition. There were no other significant differences between the groups. Overall, African American YMSM participants reported risk behavior in the past 90 days (i.e., unprotected intercourse and substance use) and being 'Unsure/Not Ready" to change some of these behaviors.

Internet Survey:
Participants were 270 African American YMSM chat room participants aged 18-24. The survey inquired about: sexual behavior (e.g., condom use, sexual partners, etc.); barriers to HIV C&T: structural barriers (e.g., transportation, etc.), stigma (e.g., I don't want others to know I am being tested, etc.), invulnerability (e.g., I don't think I have HIV, etc.); and preferred testing venues (e.g., health department, physician's office, etc.). Results indicated that 39 percent of African American YMSM engaged in sexual intercourse without a condom in the past 30 days. Barriers to HIV C&T included fear of testing and/or receiving the test results, and waiting too long for test results. Finally, African American YMSM endorsed a physician's office/professional setting or the privacy of home as more comfortable locations for HIV C&T.

Summary:
The addition of MI to field outreach is effective in encouraging a high-risk population (i.e., African American YMSM) to know their HIV status and increasing their awareness of risky sexual behavior. The data support the efficacy of an intervention based on individual motivation to reduce sexual risk in addition to traditional HIV C&T. Adapting prevention programming to the Internet can also be effective in targeting high-risk youth. These data support the need for more innovative outreach strategies to target high-risk and difficult to engage populations (e.g., the integration of Internet outreach with opportunities for HIV C&T in more private settings).

Focus: Young Black MSM: Statewide Needs Assessment

Data from The Young Men's Health Study: A Statewide Needs Assessment of Young Black MSM

Daily Living:
These data paint a picture of young black MSM (YBMSM) in Michigan that reflects national data on older black MSM in many ways. The data show that many young men are well adjusted, successfully engaged in school and work, and have positive relationships with friends and family.

Family and Community:
We find that YBMSM in the state are enmeshed in a wide variety of local settings including schools, churches, work, and recreational and entertainment venues, so could be reached with prevention messages through many mainstream settings and channels. However, we also find that some of these settings are not perceived as safe or comfortable for young men. Specifically, YBMSM report mixed experiences within their racial community, families of origin, and churches. In examining young men's narratives about safety and acceptance and their reports regarding where and by whom they feel most supported, these data suggest that young men are heavily reliant upon the community of their peers. Strong reliance on peers may be a double-edged sword as these data also illustrate that peers may not always be a source of accurate HIV-related information and that peers may engage in unsafe sexual practices.

Mental Health:
Although many of the young men are proud of who they are and display strong positive self-regard, a troubling aspect of our data concerns the mental health of a sizeable minority of the young men. Men outside of Detroit report poorer mental health than men in Detroit. Additionally, far too many of the young men report being exposed to a diversity of traumatic experiences such as adolescents and young adults. Equally troubling is that, on the average, this sample of young men report clinically significant levels of problem substance use, which was more common among outstate residents than Detroit residents.

Young men reported coerced sexual experiences starting at an average age of 10, typically at the hands of family members and other adults. Consistent with other studies of MSM, we found that being a sexual assault survivor was associated with engaging in unprotected sexual intercourse. A consistent body of evidence indicates that among adult MSM, HIV positive status is strongly associated with having a sexual assault history. The very high rate of assault in this sample is of particular concern in light of the degree to which it is associated with later acquisition of HIV.

Condom Use:
On the whole, young men are concerned about HIV and most recognize that they are at risk of exposure to it. These YBMSM also possess relatively positive attitudes toward condoms, even though young men report a range of challenges in using condoms each and every time that they have sex. Nearly half of the young men had two concurrent sexual partners in the 90 days prior to being interviewed. According to their self-reports, men were less safe with their casual and one-time partners than with their steady partners, though rates of condom use could be improved across all types of partners. We also found that young men made their sexual debut early, with half reporting their first sexual experience occurred before they were 14 years old and probably before they had significant exposure to relevant, MSM-tailored HIV prevention information. Early sexual initiation is a documented risk factor for multiple partners, safer sexual practices, and STIs. Taken together, the data we have collected underscore the importance of increased prevention activity directed specifically toward young Black MSM.

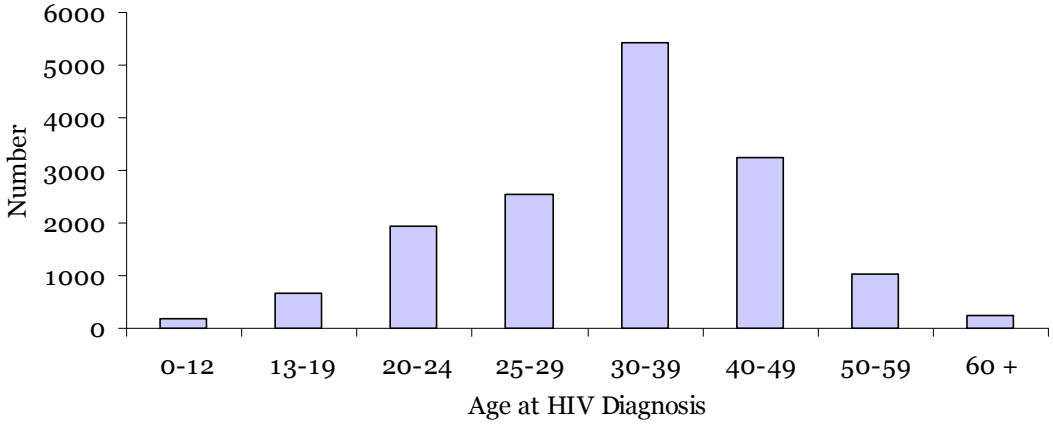
Description of the Epidemic by Age

Data from HIV/AIDS Reporting System (eHARS)

Age at Diagnosis:

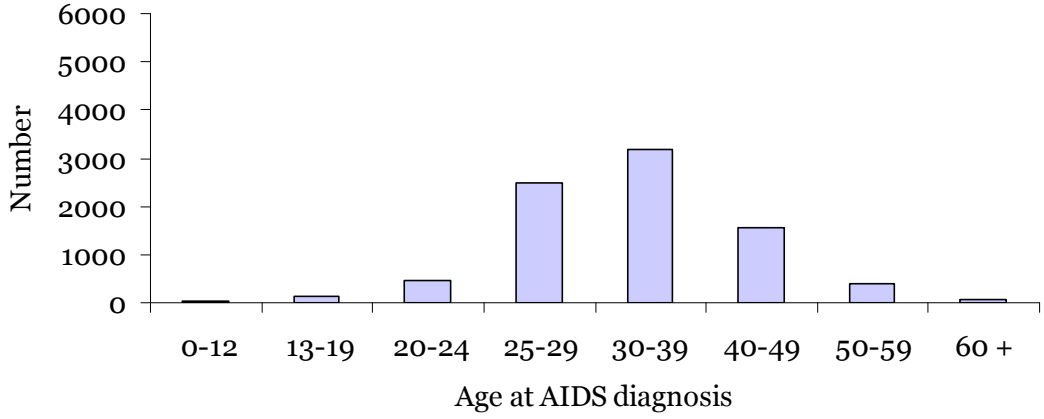
The rate of new diagnoses increased significantly among persons 13-19 years of age (average increase in rate of 23 percent per year) and decreased significantly among persons aged 30-39 between 2004 and 2008 (Figure 9, page 3-20). In all other age groups, the trends in new diagnoses are level. Figure 38 shows that while the trend has been increasing among teens, they make up a relatively small proportion of persons newly diagnosed with HIV or AIDS (6 percent and 3 percent, respectively). Additionally, while the trend is decreasing among those in their 30s, this group has consistently had the largest proportion of new diagnoses (33 percent of HIV and 38 percent of AIDS). While both those in their 40s and those that were in their late 20s (25-29) at HIV diagnosis are the next largest group, those in their late 20s is the second largest group of persons newly diagnosed with AIDS (Figure 39). This discrepancy is seen because of the time lag in progression of HIV to AIDS.

Figure 38: Age at HIV Diagnosis for Those Living with HIV/AIDS in Michigan, 2010 (N = 15,282*)



*Not included are 3 HIV/AIDS cases with missing age information

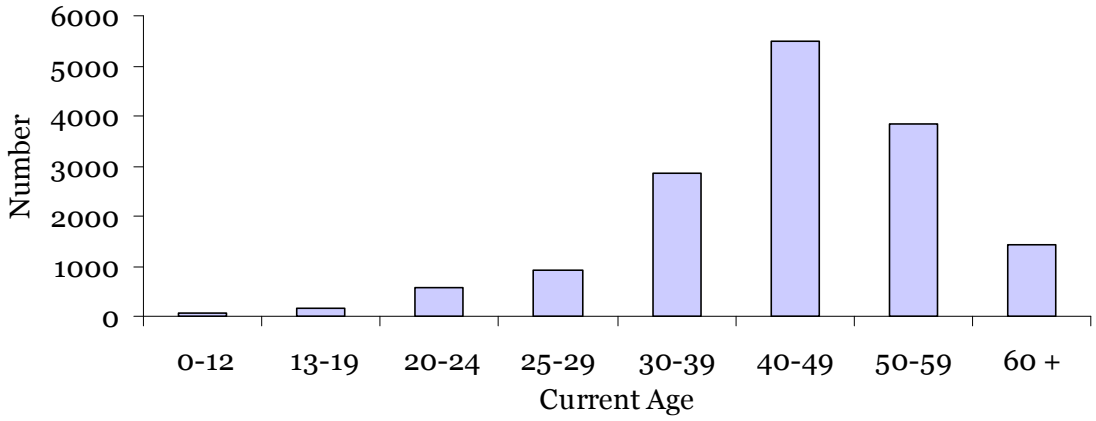
Figure 39: Age at AIDS Diagnosis for Those Living with AIDS in Michigan, 2010 (N = 8,317)



Description of the Epidemic by Age

Current Age:
Since the start of widespread use of Highly Active Anti-Retroviral Therapy (HAART) in 1996, persons infected with HIV have been living longer. Evidence of this is shown in Figure 40, which displays the current ages of those living with HIV in Michigan. Those currently in their forties make up the largest group of those living with HIV (36 percent). While persons who were 50 years and older at the time of their HIV diagnosis represent only eight percent (Figure 39), persons who are currently in this age group make up over one-third (34 percent) of persons living with HIV/AIDS.

Figure 40: Current Age of Those Living with HIV/AIDS in Michigan, 2010
(N = 15,282*)



*Not included are 3 HIV/AIDS cases with missing age information

Concurrent Diagnoses:
Of the 15,285 persons living with HIV/AIDS in Michigan, 54 percent (8,317 cases) have progressed to AIDS. Of these, 3,561 (43 percent) had concurrent HIV and AIDS diagnoses. When looking at persons living with AIDS by age group, the proportion of AIDS cases with concurrent diagnoses increases as the age groups increase, peaking at 71 percent of AIDS cases who were 60 years and older have been concurrently diagnosed. See Table 5, page 3-85.

Trends and Conclusions:
The rate of new diagnoses increased significantly among persons 13-19 years of age (average increase in rate of 23 percent per year) and decreased significantly among persons aged 30-39 between 2004 and 2008. Rates in all other ages groups were stable. This is the fifth consecutive five-year analysis showing significant increases in new diagnoses among 13-19 year olds. The rate of new diagnoses among 20-24 year olds remained stable for the second consecutive year, following three annual analyses showing increases. Although these trends are alarming and demand action, it is important to remember that the largest number and highest rates of new diagnoses continue to be among 20-44 year olds. For more information on trends overtime, see the section on Trends in HIV/AIDS Data on pages 3-18—21.

2010 Profile of HIV/AIDS in Michigan

Description of the Epidemic by Age: Children (0-12)

Data from HIV/AIDS Reporting System (eHARS)

Overview:

MDCH estimates that there are 240 individuals living with HIV who were ages 0-12 when they were diagnosed. They comprise one percent of reported persons. Most of them (85 percent) were infected perinatally, i.e., before, during or shortly after birth. Those infected perinatally after birth would be infected via breastfeeding. Of the remaining individuals, seven percent were infected via blood products/blood exposure before 1985 and eight percent have an unknown risk. No individuals currently living with HIV and aged 0-12 at the time of HIV diagnosis have been infected through sexual abuse or injection drug use. Table 9, page 3-90.

Demographic Description:

Of the 193 individuals living in Michigan who were ages 0-12 when diagnosed with HIV, 57 percent are male and 43 percent are female; about two thirds are black (65 percent), about one quarter are white (24 percent) and 11 percent are Hispanic or of unknown race. See Table 8, page 3-89.

Of the 164 individuals who were ages 0-12 when diagnosed with HIV and perinatally infected, 53 percent are male and 46 percent are female; 68 percent are black, 19 percent are white, and 13 percent are Hispanic or other races. Less than one percent of the HIV infections in these children are known to be IDU-related (i.e., mothers who were IDUs). For the majority (99 percent) all that was known about the mother is that she was HIV-infected with no additional maternal risk information.

Concurrent Diagnoses:

Of the 15,285 persons living with HIV/AIDS in Michigan, 54 percent (8,317 cases) have progressed to AIDS. Of these, 3,561 (43 percent) had concurrent HIV and AIDS diagnoses. Children make up one percent (N = 64) of persons living with AIDS, of which 39 percent (N = 25) had concurrent HIV and AIDS diagnoses. Those with perinatal risk factors make up one percent of persons living AIDS (N = 53), of which 53 percent had concurrent diagnoses. See Table 5, page 3-85.

Geographic Distribution:

Eighty-four percent of the 193 children diagnosed and reported with HIV between the ages of 0 and 12 years are residents of high prevalence counties (See Figure 2, page 3-15). The remaining 15 percent are living in low prevalence counties. Sixty-two percent of HIV cases that were diagnosed as children in Michigan are currently residents of the Detroit Metro Area.

Trends and Conclusions:

Among the best measurable successes in reducing HIV transmission has been among those infected perinatally. Without Zidovudine (ZDV) prophylaxis, about two percent of children born to HIV-infected women could expect to become HIV-infected. In Michigan, the proportion of these children who become infected has dropped precipitously, from 12 percent in 1996 to less than one percent in 2009. As of January 1, 2010, three of the 52 children born in 2007 and one of the 30 children born in 2009 to HIV-infected women were diagnosed with HIV infection. None of the 35 children born in 2008 to an HIV-infected woman have been diagnosed with HIV.

2010 Profile of HIV/AIDS in Michigan

Description of the Epidemic by Age: Children: Focus on Screening Tests During Prenatal Care, Labor & Delivery and Newborns

Data from Assessment of HIV and other Recommended Perinatal Screening Tests Project

Overview:

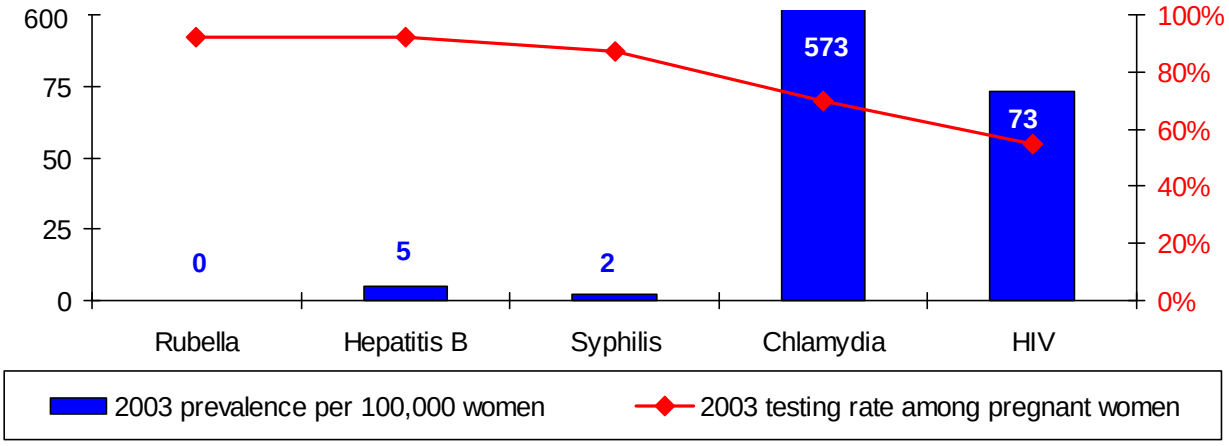
This evaluation assessed perinatal screening for HIV, group B streptococcus, hepatitis B surface antigen, rubella, syphilis, and chlamydia in all live births that occurred between January 1, 2003 and December 31, 2003 in delivery hospitals in selected counties. Delivery hospitals that delivered 20 or more babies in 2003 were eligible for this project. The assessment protocol was developed for 13 prevention areas (selected counties in the states of California, Connecticut, Delaware, Florida, Georgia, Illinois, South Carolina, Tennessee, New Jersey, Maryland, Pennsylvania, Michigan and the District of Columbia). The prevention areas in each state were selected because they met one or more of the following criteria: (1) high prevalence of HIV among women of childbearing age, (2) high numbers of cumulative pediatric AIDS cases, and (3) state policies likely to have an important impact on screening rates. The Michigan counties chosen were Wayne, Oakland, Kent, Kalamazoo, and Grand Traverse.

Analysis:

Women with known HIV/AIDS diagnoses prior to pregnancy were excluded from the HIV testing analysis. Figure 42 shows that among the 1,886 women included in the study, about half received HIV screening at their first prenatal test (965 women, 51 percent). Figure 43 shows that among the 932 women that did not receive prenatal screening, nine percent (108 women) received HIV screening at delivery. Figure 44 shows that among the mother-infant pairs, at least one HIV screening test was documented during prenatal, delivery or the neonatal period for over half of the pairs (1,075 pairs, 55 percent). In all three tables, the testing rates for non-HIV infections well exceeded the HIV screening rates found and show room for improvement throughout Michigan. Among the 10 areas included in this project, Michigan had the second lowest HIV testing rates among pregnant women

Anecdotally, physicians report that they don't screen for HIV because they don't believe that their patients are infected with or at risk for HIV. However, the infections with the lowest prevalence among pregnant women have the highest testing rates. Figure 41 shows that Rubella, Hepatitis B and syphilis

Figure 41: Testing and Prevalence Rates of Selected STDs/Other Infections among Women in Michigan, 2003



Description of the Epidemic by Age: Children: Focus on Screening Tests During Prenatal Care, Labor & Delivery and Newborns

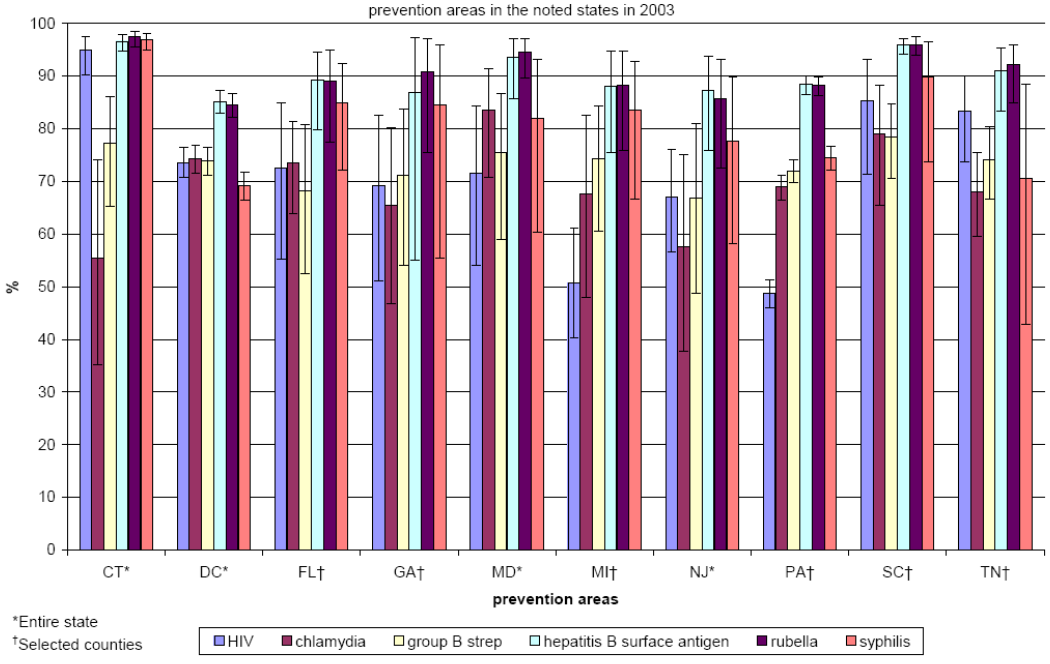
had 2003 prevalence rates of between zero and five cases per 100,000 women. Corresponding testing rates were 87 to 92 percent. The chlamydia and HIV 2003 prevalence rates were 573 and 73 per 100,000 women respectively. The chlamydia and HIV testing rates were 70 percent and 55 percent respectively.

Summary and Recommendations:

These data should be used to assess perinatal screening rates in Michigan and work toward improving them. The MDCH Division of Health, Wellness, and Disease Control (DHWDC) leads Michigan's Statewide Perinatal Prevention Working Group (PPWG) and is addressing the suboptimal rates of HIV testing of pregnant women in Michigan in several ways. In collaboration with the MDCH Division of Immunization Perinatal Hepatitis B Program, the DHWDC Ryan White Part D Program provides technical assistance to hospitals found to have suboptimal testing of pregnant women for HIV, hepatitis B and syphilis through Division of Immunization surveys and chart reviews. The intention is to make sure hospitals have written policies (WP) and/or standing orders (SO) to include hepatitis B, HIV and syphilis testing and reporting. The PPWG is also working to update and revise State Guidelines for Perinatal HIV, Hepatitis B, and Syphilis Testing. The updated guidelines will be published and distributed statewide to providers, organizations, and institutions involved in prenatal and postnatal care for women, including those HIV infected and their infants. Education and training will be provided in collaboration with the Wayne State University AIDS Education and Training Center (AETC) to increase provider awareness of the guidelines throughout the state. In addition to updating its guidelines, the DHWDC is updating its consumer and provider brochures to address the updated guidelines and include missed opportunity case studies to help women and providers understand the importance of routinized perinatal testing.

Figure 42: Received First Prenatal Test (All Women)

Proportion of women with documentation of a first prenatal test for selected infections, in selected prevention areas in the noted states in 2003



Description of the Epidemic by Age: Children: Focus on Screening Tests During Prenatal Care, Labor & Delivery and Newborns

Figure 43: Received Labor and Delivery Test (Eligible Women)

Proportion of eligible women (e.g., women without documentation of a prenatal test) with documentation of a labor and delivery test for selected infections, in selected prevention areas in the noted states in 2003

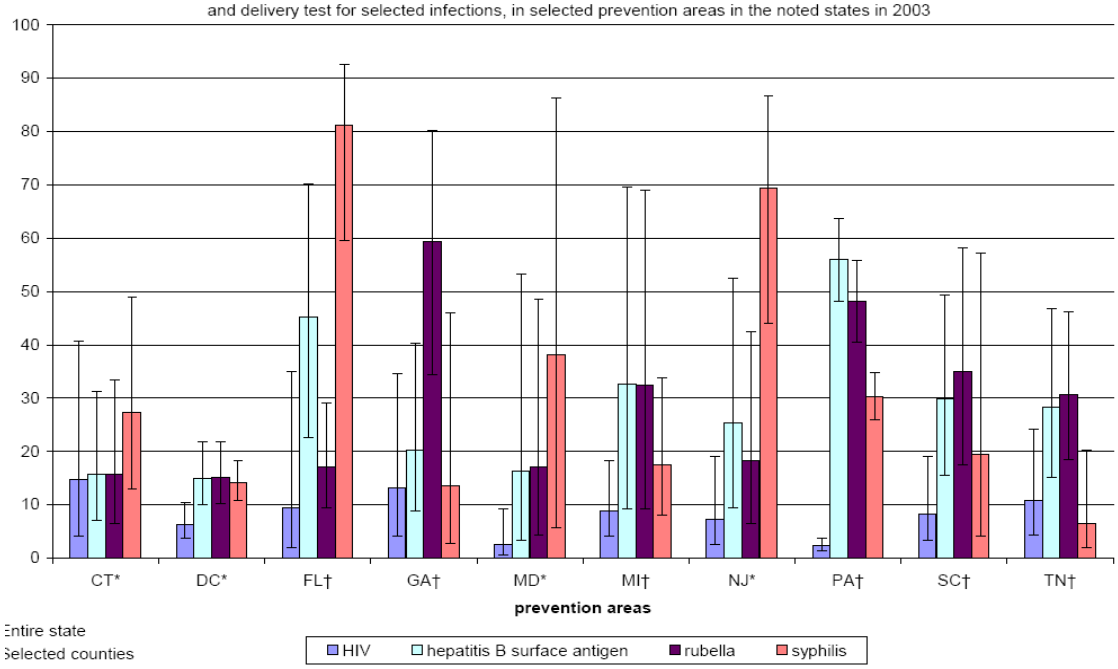
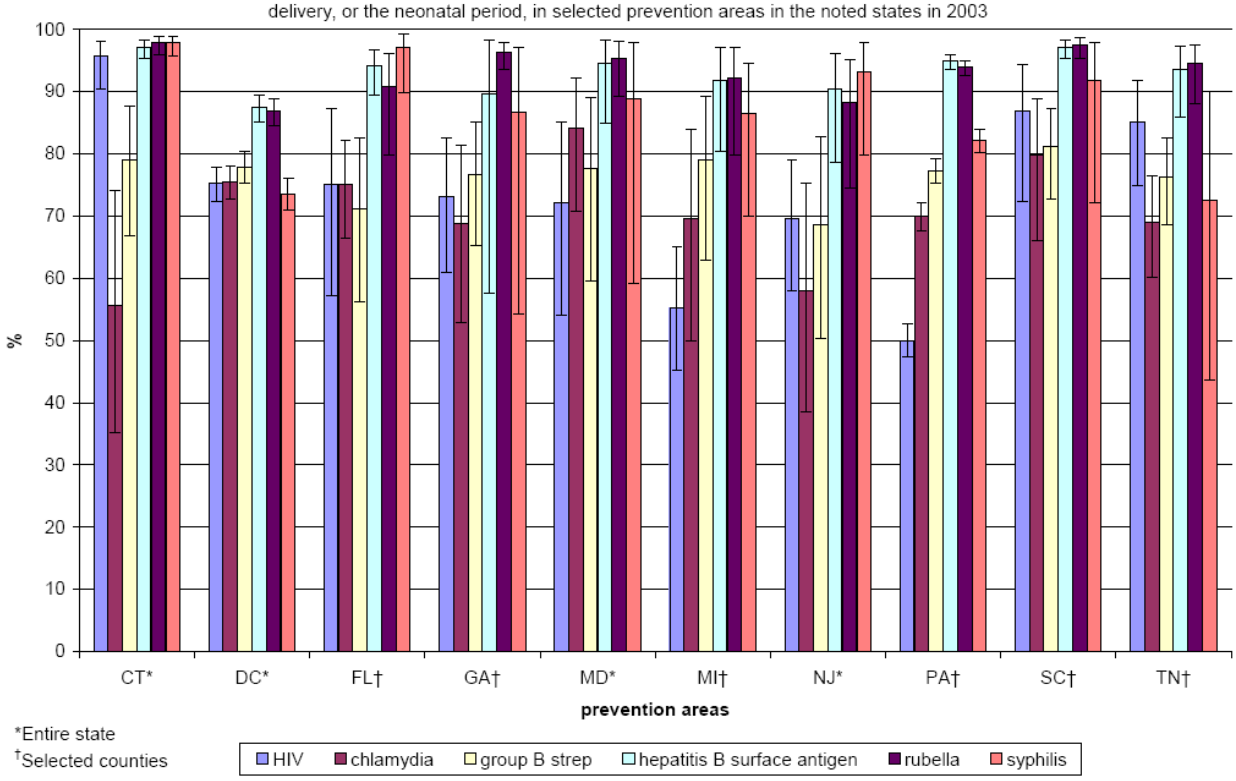


Figure 44: Received at Least One Test

Proportion of mother-infant pairs with documentation of at least one test for selected infections during pregnancy, delivery, or the neonatal period, in selected prevention areas in the noted states in 2003



2010 Profile of HIV/AIDS in Michigan

Description of the Epidemic by Age: Teens and Young Adults, 13-24)

Data from HIV/AIDS Reporting System (eHARS), STD Reporting System, MDCH Vital Records Youth Risk Behavior Survey, & Bureau of Juvenile Justice Youth Risk Behavior Survey

Overview:

MDCH estimates that there are 3,230 persons currently living in Michigan who were ages 13-24 years when they were diagnosed with HIV. They comprise 17 percent of all persons reported with HIV/AIDS in Michigan (four percent age 13-19 years; 13 percent age 20-24 years). The number of prevalent cases among persons age 13-24 years at diagnosis is not as high as the level among persons age 25-39 years at diagnosis.

General Risk Behaviors:

Every two years the Youth Risk Behavior Survey (YRBS) is conducted in Michigan high schools using a nationally standardized survey and was last conducted in 2009, Following are some highlights related to sexual risk behaviors and substance use behaviors that may be risk factors for acquiring HIV. Forty-six percent of all Michigan high school students (9-12th grade) have had sexual intercourse. Thirty-four percent of 9-12th graders have had intercourse in the past three months. Five percent of 9-12th graders have used heroin and six percent have used methamphetamines one or more times during their life. Four percent of 9-12th graders have used a needle to inject any illegal drug into their body one or more times during their life. Sixty-five percent of 12th graders report having had intercourse. Twenty-two percent of 12th graders report having had four or more sexual partners. Of students who had sexual intercourse during the past three months, 61 percent used a condom during last sexual intercourse. Of students who had ever had sexual intercourse, 25 percent drank alcohol or used drugs before their last sexual intercourse.

In an attempt to report on behaviors of youth not in mainstream high schools, in 2002 Michigan was one of the first states to conduct a YRBS with the juvenile justice population (ages 12-21). This Bureau of Juvenile Justice Youth Risk Behavior Survey (BJJ) had an 89 percent completion rate and 83 percent were between the ages of 15 and 18 (similar to ages found in YRBS). It showed that 23 percent of females had ever injected drugs, compared with 12 percent of males. Eighty-nine percent had reported ever having sex and 42 percent had sex for the first time at 11 years of age or younger. When comparing BJJ surveys to those taken by mainstream high schoolers, 16 percent of BJJ youth had reported ever injecting drugs, compared with two percent from the mainstream youths. Sixty-two percent of BJJ youths started having sex before age 13 compared with five percent of mainstream youths. Fifty-four percent of BJJ youths reported using no form of birth control at their last sexual encounter, compared with five percent of mainstream youths. Finally, 23 percent of BJJ youth fit under the umbrella category of sexual minority youth (SMY) due to self-identifying as gay, lesbian, or bisexual, or participating in same-sex behavior. SMY were at higher risk for HIV than their mainstream counterparts: 21 percent had ever used injection drugs, 73 percent had sex before age 13, and 86 percent had four or more sexual partners in their lifetime.

STDs:

STD rates are highest in these age groups. The STD data are shown on Tables 12 and 13 (pages 3-93–94). In persons age 20-24 years, the rate of chlamydia is five times higher and the rate of gonorrhea is nearly five times higher than the rate among the general population. Although those age 15-24 make up

Description of the Epidemic by Age: Teens and Young Adults, 13-24)

only 18 percent of the population, they represent 66 percent of gonrorhea cases and 76% of chlamydia cases. In 2007, only 15 percent of primary and secondary syphilis cases were under the age of 24 compared to 27 percent in 2009, representing a younger at risk-group. While rates of STDs among 15-24 year olds are higher than any other age groups, the rates of HIV in this demographic group are comparably low. Also, since the rates of HIV among teens are very low, and because most teens have sex with other teens, the gonorrhea and chlamydia epidemic is perpetuated and HIV is rarely introduced into the general teen population. However, as discussed in other sections of this Profile, young black MSM are becoming HIV infected at an alarming rate.

Teen Pregnancy:
Teen (ages 15-19) pregnancy rates have shown decreases over time and decreased significantly since 2000. The 2006 rate among teens in Detroit exceeded the rate among women age 15-44 years in that area (124 vs. 99). However, the 2008 rate among teens in Detroit is slightly lower then the rate among women 15-44 (112 per 1,000). The city of Detroit had the highest teen pregnancy rate in the state in 2008 (107 per 1,000), followed by Luce County (94 per 1,000).

The statewide teen pregnancy rate in 2008 was 54 pregnancies per 1,000 females aged 15-19 years. In Out-State Michigan, the 2008 rates range from 20-94 pregnancies per 1,000 females aged 15-19 and in the Detroit Metro Area, the 2008 rates ranged from 26-107 pregnancies per 1,000 females aged 15-19.

Race/Ethnicity:
Seventy-six percent of persons aged 13-19 at the time of HIV diagnosis are black, 18 percent are white, and six percent are Hispanic or other race. Sixty-three percent of persons aged 20-24 at the time of HIV diagnosis are black, 30 percent are white, and seven percent are Hispanic or other race. Comparing these proportions with the racial/ethnic breakdown of those over 24 years (56 percent black, 38 percent white, and 6 percent Hispanic or other race), shows that these youth are disproportionately black. See Table 8, page 3-89.

Geographic Distribution:
The 2,621 persons diagnosed and reported with HIV/AIDS between the ages 13-24 are located proportionately throughout the state. In the high prevalence areas, those who were 13-19 years and 20-24 years at the time of HIV diagnosis make up five and 13 percent of reported cases, respectively. In the low prevalence areas they compromise three and 13 percent of reported cases, respectively. (Figure 2 on page 3-15).

Mode of Transmission:
Teenagers: In the 1980s, most infected teenagers were recipients of HIV-infected blood or blood products. However, since screening of all blood products began in 1985 this proportion has steadily declined.

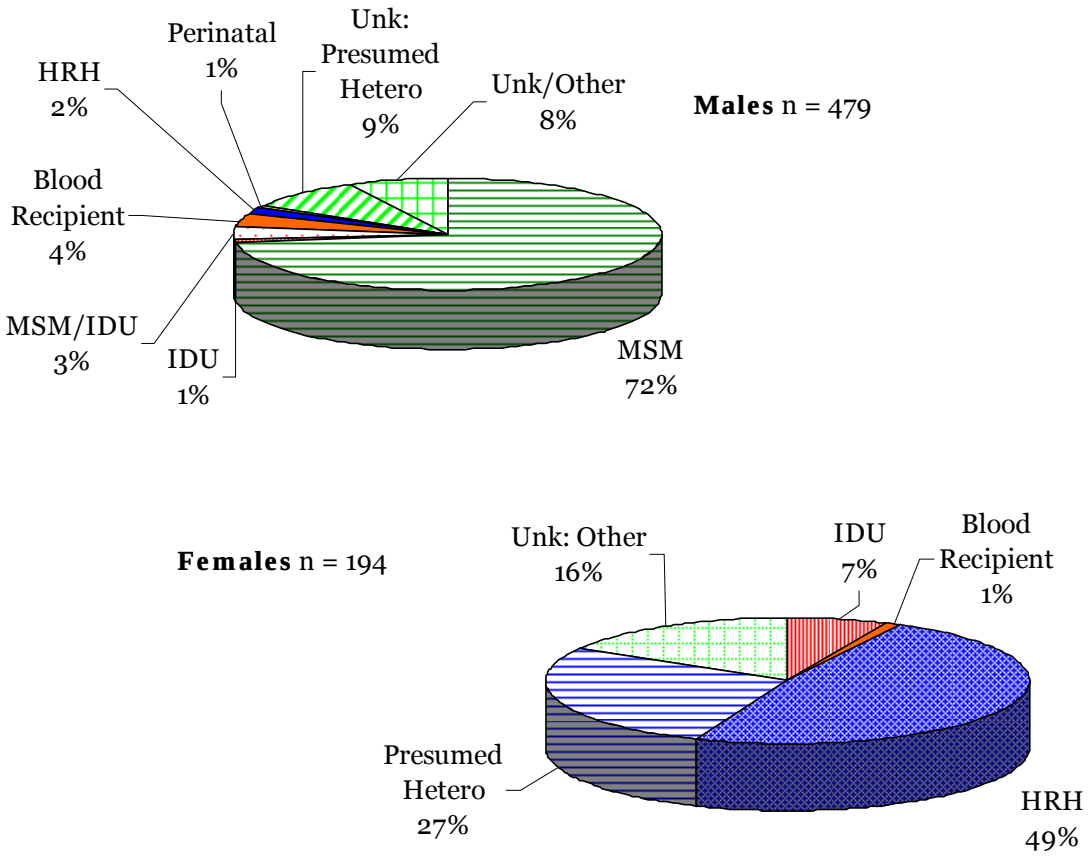
Figure 45 (next page) shows that among the 673 persons living with HIV in Michigan who were ages 13-19 at time of diagnosis, 479 (71 percent) are male. Among these male cases, three-quarters had sex with other males (76 percent) which includes the MSM/IDU cases, while four percent had been infected with HIV through blood products before 1985. Four percent could be attributed to IDU (including MSM/

Description of the Epidemic by Age: Teens and Young Adults, 13-24)

IDU) and two percent to heterosexual transmission. Sixteen percent of teenage males had no identified risk. Experience with investigating such persons shows that it is likely that many of these males were infected through having sex with other males.

Figure 45 also shows that among the 673 persons living with HIV in Michigan who were ages 13-19 at the time of diagnosis, 194 (29 percent) are female. This is higher than the proportion of all infected persons who are female (23 percent). Of females who were 13-19 years at the time of diagnosis, three-quarters (76 percent) were infected through heterosexual sex (overall, 48 percent reporting HRH and 27 percent reporting PH-Fem); seven percent were IDUs. Similar to males of this age and females of any age, 16 percent do not have an identified mode of transmission. It is likely that most females above age 13 with an unknown risk were infected through heterosexual contact.

Figure 45: Persons Living in Michigan who were 13-19 Years Old when diagnosed with HIV (Teenagers), by Sex and Mode of Transmission (N = 673)

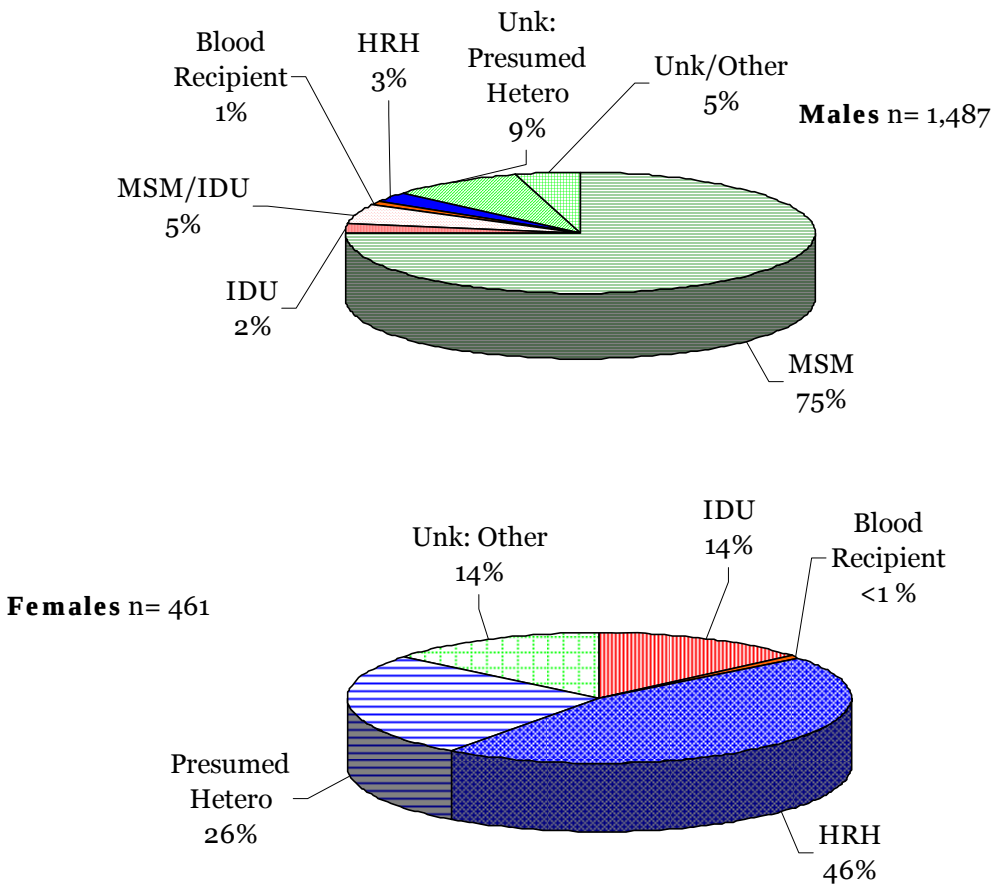


Young Adults: Figure 46 (next page) shows that among the 1,948 persons living with HIV in Michigan who were ages 20-24 at time of diagnosis, almost three-quarters (76 percent) are male. Eighty percent of male young adults reported sex with other males (including MSM/IDU); 14 percent did not have an identified mode of transmission; and seven percent reported IDU (including MSM/IDU).

Additional Discussions: Teens and Young Adults

Figure 46 also shows that among the 461 women living with HIV who were ages 20-24 at time of diagnosis, almost three-quarters (72 percent) were infected heterosexually (overall, 46 percent HRH and 26 percent PH-Fem) and 14 percent were IDU. Fourteen percent of women in this age group have an unknown risk, however this is consistent with females across all age groups.

Figure 46: Persons Living in Michigan who were 20-24 Years Old when Diagnosed with HIV (Young Adults), by Sex & Mode of Transmission (N = 1,948)



Trends and Conclusions:

The rate of new diagnoses increased significantly among persons 13-19 years of age (average increase in rate of 23 percent per year). This is the fifth consecutive analysis showing a significant increases in new diagnoses among 13-19 year olds over five years. The rate of new diagnoses among 20-24 year olds remained stable for the second consecutive year, following three consecutive 5-year analyses showing increases. For more information on trends overtime, see the section on Trends in HIV/AIDS Data on pages 3-18—21.

2010 Profile of HIV/AIDS in Michigan

Description of the Epidemic by Age: 50 years and older

Data from HIV/AIDS Reporting System (eHARS)

Overview:

MDCH estimates there are 1,560 persons living in Michigan, who were 50 years and older when they were diagnosed with HIV. They comprise eight percent of all reported infected persons and over three-quarters (79 percent) are male. This population was mainly infected through sexual contact (either men having sex with men or heterosexually), however those who were in their fifties when diagnosed with HIV have a substantial proportion infected through injection drug use and with an unknown risk. See Table 9, page 3-90.

Mode of Transmission:

When discussing mode of transmission, those who were in their fifties at the time of HIV diagnosis have differing transmission mode proportions than those who were aged 60 or older. Therefore, these two populations are discussed separately on the following two pages. See Table 9, page 3-90.

Specifically, men who were in their 50s at HIV diagnosis are more likely to have been IDU, compared to men 60 years and older (19 compared to 9 percent). This discrepancy is accounted for by a larger proportion of men 60 years and older with unknown risks. Overall, women who were in their 50s at HIV diagnosis have similar risks compared to women who were 60 years and older. However, women 60 years and older were more likely to have been infected via blood products (6 compared to 1 percent), and women in their 50s were more likely to have been infected via IDU (19 compared to 14 percent).

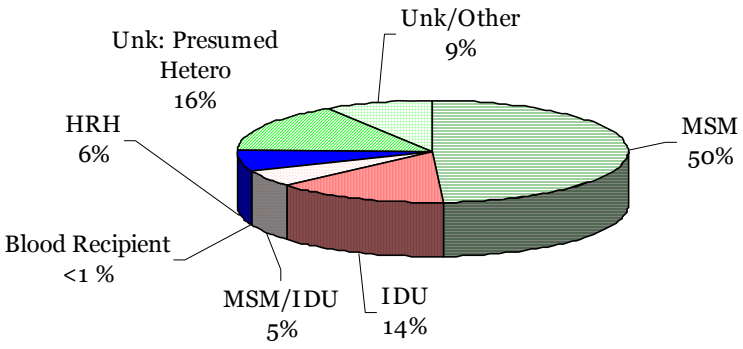
Overall persons in their 50s at HIV diagnosis are twice as likely as persons 60 years and older to have been infected via IDU (20 compared to 10 percent).

Mode of Transmission for those 50 –59 at time of HIV Diagnosis:

Persons who were in their fifties when first diagnosed with HIV are 77 percent male and 23 percent female. Among these 1,034 persons reported with HIV/AIDS, under two-thirds are black (59 percent), 35 percent are white and six percent are Hispanic or of unknown race.

Figure 47 shows that among the 792 males in their fifties at time of HIV diagnosis, over half (55 percent) reported having sex with other males (including those MSM who also are IDU). Nineteen percent reported injection drug use (including those IDU who were also MSM). Six percent were infected heterosexually and twenty-five percent did not report a mode of transmission; many of these were likely infected through sex with other men.

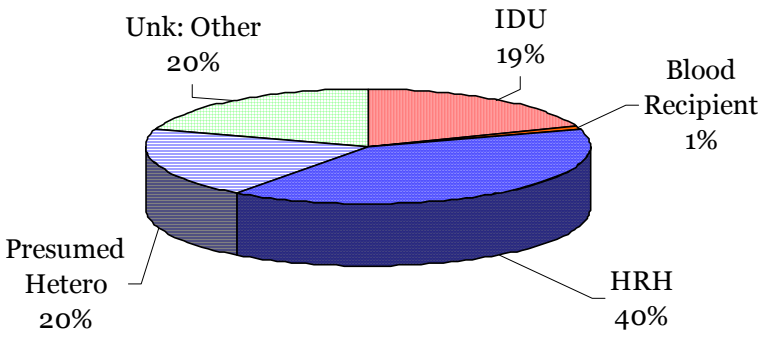
Figure 47: Males aged 50-59 at time of diagnosis, Living with HIV/AIDS in MI by mode of transmission (N = 792)



Description of the Epidemic by Age: 50 years and older

Figure 48 shows that among the 242 females who were in their fifties at time of HIV diagnosis, less than two-thirds (60 percent) were infected heterosexually (overall, 40 percent HRH and 20 percent PH-Fem) and 19 percent were IDU. Twenty percent did not report a mode of transmission; many of these were likely infected through heterosexual contact.

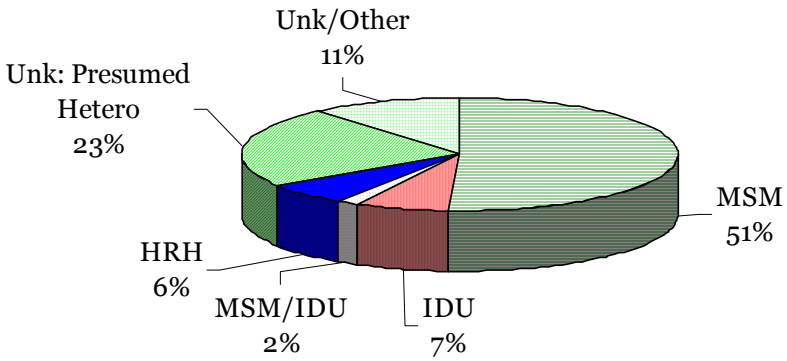
Figure 48: Females aged 50-59 at time of diagnosis, Living with HIV/AIDS in MI by mode of transmission (N = 242)



Mode of Transmission for those 60 and older at time of HIV Diagnosis:
Persons who were 60 years and older when first diagnosed with HIV are 79 percent male and 21 percent female. Among these 235 persons reported with HIV/AIDS, about half are black (48 percent), 42 percent are white and 10 percent are Hispanic or of unknown race.

Figure 49 shows that among the 185 males who were 60 and older at time of HIV diagnosis, over half (53 percent) reported having sex with other males (including those MSM who also are IDU). Nine percent reported injection drug use (including those IDU who were also MSM). Six percent were infected heterosexually and thirty-four percent did not report a mode of transmission.

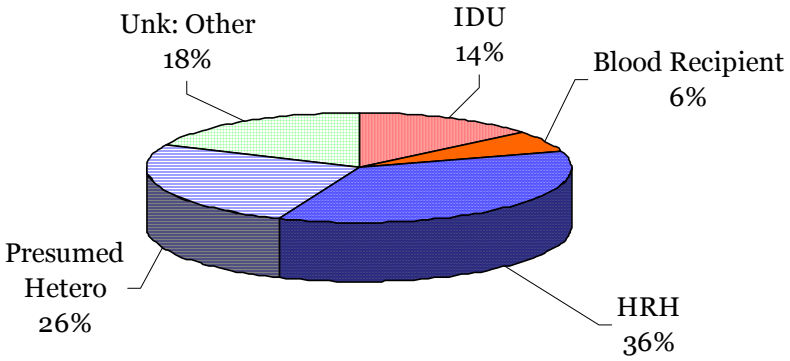
Figure 49: Males aged 60 and older at time of diagnosis, Living with HIV/AIDS in MI by mode of transmission (N = 185)



Description of the Epidemic by Age: 50 years and older

Figure 50 shows that among the 50 females who were 60 and older at the time of HIV infection, less than two-thirds (62 percent) were infected heterosexually (overall, 36 percent HRH and 26 percent PH-Fem) and 14 percent were IDU. Eighteen percent did not report a mode of transmission; many of these were likely infected through heterosexual contact.

Figure 50: Females aged 60 and older at time of diagnosis, Living with HIV/AIDS in MI by mode of transmission (N = 50)



STDs:

Gonorrhea and chlamydia are largely epidemics affecting young people, with less than one percent of chlamydia cases and two percent of gonorrhea cases being over 50. Of the gonorrhea cases, 69 percent are male and of the chlamydia cases, 53 percent are male. In contrast, nine percent of primary and secondary syphilis cases are over the age of 50. These individuals are more likely to be male (95 percent v 83 percent) and are more likely to be white than black (62 percent v 26 percent). Of primary and secondary syphilis cases, the highest percentage of cases age 50 or older were in Kent County (31 percent), Wayne County (27 percent), and Oakland County (12 percent).

Concurrent Diagnoses:

Of the 15,285 persons living with HIV/AIDS in Michigan, 54 percent (8,317 cases) have progressed to AIDS. Of these, 3,561 (43 percent) had concurrent HIV and AIDS diagnoses. Persons who were in their fifties at HIV diagnosis make up seven percent (N = 607) of persons living with AIDS, of which 61 percent (N = 370) had concurrent HIV and AIDS diagnoses. Those who where 60 and older make up two percent of persons living AIDS (N = 143), of which 71 percent (N = 101) had concurrent diagnoses. See Table 5, page 3-85.

Trends and Conclusions:

In Michigan, the rate of persons who were 50 years and older at the time of diagnosis has remained level from 2004 through 2008 (Figure 9, page 3-20). As the persons living with HIV continue to age, it is important to be aware of specific challenges faced by older Americans and to ensure they get information and services to help protect them from infection.

Although it is still low (6 percent), men who were 50 years and older at HIV diagnosis have the highest proportion of heterosexual cases of men in any age group. This is an important distinction when preparing targeting prevention and interventions. For more information on trends overtime, see the section on Trends in HIV/AIDS Data on pages 3-18—21.

2010 Profile of HIV/AIDS in Michigan

Special Populations: Rural HIV

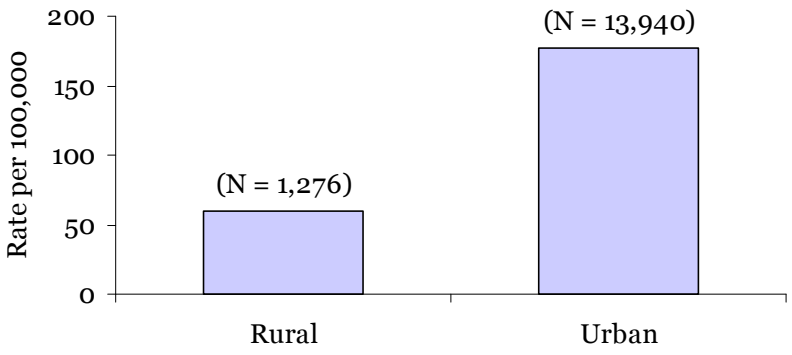
Data from HIV/AIDS Reporting System (eHARS)

Overview:

Using the U.S. Census Bureau's definitions, MDCH established a category of Urban Counties. For the purpose of this publication, we considered a county to be "Urban" if any part of the city or area was part of that county. For example, the city of Kalamazoo is in Kalamazoo County and also has substantial commuting interchange with Battle Creek, which is in Calhoun County. Therefore, the counties of Kalamazoo and Calhoun are considered to be "Urban". Please see Appendix A for a more detailed definition of 'Urban County' and the rural/urban categorization of Michigan counties.

Using this definition, the reported cases were divided into rural or urban categories. Rural cases constitute eight percent of reported cases (1,276); 21 percent of Michigan's population lives in these counties. The estimated rate of infection in rural areas is 60 per 100,000. Urban areas account for 92 percent of cases while 79 percent of Michigan's population lives in these areas. The estimated rate for the urban counties is three times higher than rural areas, 177 per 100,000. (Figure 51)

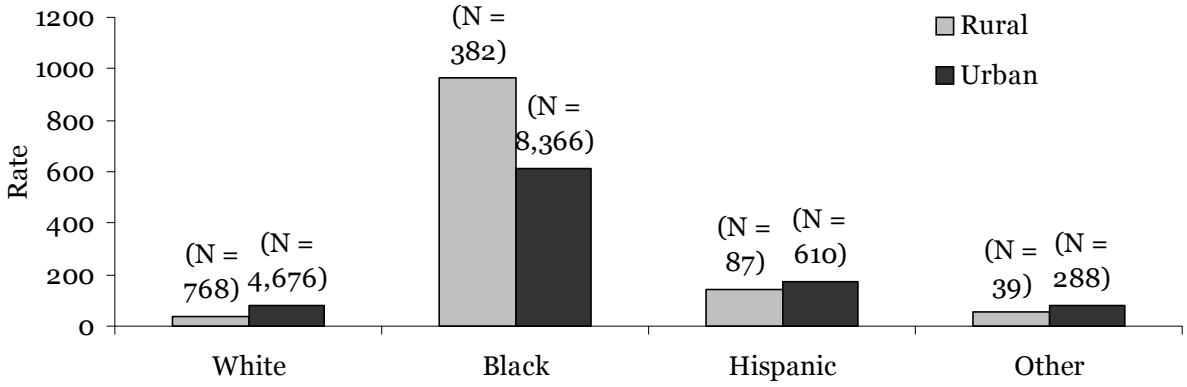
Figure 51: Case Rates of Persons Living with HIV/AIDS in Michigan Rural or Urban Counties



Race/Ethnicity:

Figure 52 shows that in Michigan, the highest rates of HIV cases occurs among black persons, regardless of whether they are rural or urban counties. In rural communities, although the largest proportion of cases occurs among white persons, the rates are higher among black persons.

Figure 52: Rates of Persons Living with HIV in Rural v. Urban Areas by Race/Ethnicity

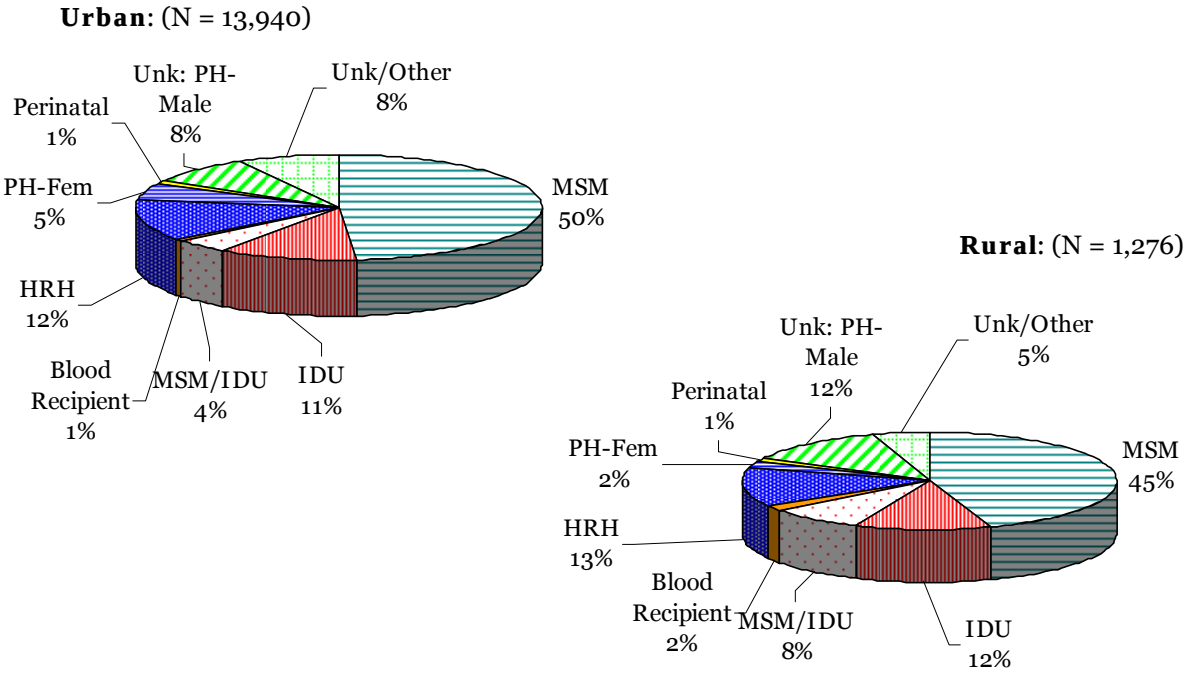


Special Populations: Rural HIV

Mode of Transmission:

Figure 53 shows that in Michigan's rural and urban counties, there is little to no difference with respect to the relative proportion of cases reported with MSM, IDU, heterosexual, or an unknown risk. However the proportion of MSM/IDUs is twice as high in rural counties.

Figure 53: Rural v. Urban: Persons Living with HIV/AIDS in Michigan by Mode of Transmission



2010 Profile of HIV/AIDS in Michigan

Special Populations: Incarcerated Population

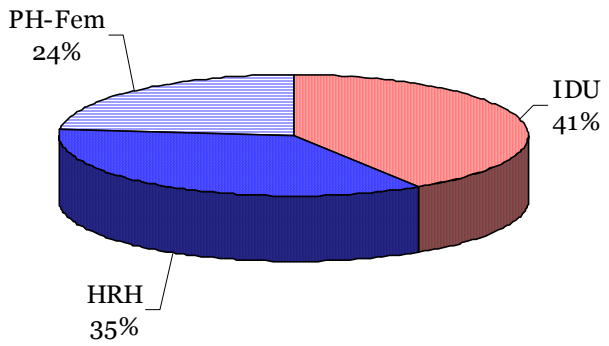
Data from HIV/AIDS Reporting System (eHARS) & Michigan Department of Corrections

Overview:
From 1989 to present, a cumulative total of 1,876 prisoners have been confirmed with HIV infection. Many were first diagnosed upon intake to prison, some were diagnosed while in prison, and others diagnosed prior to incarceration. A total of 689 HIV positive inmates (37 percent) are known to have died either inside or outside of prison. This section on the Michigan Department of Corrections describes the 335 HIV-infected inmates known to be incarcerated at state facilities, as of January 2010.

Race/Ethnicity, Sex, and Mode of Transmission:
Ninety-six percent of HIV-infected prisoners are male and four percent are female. Most (75 percent) are black, 20 percent are white, three percent are Hispanic, and one percent are another race/ethnicity. Please see Tables 17-18, pages 3-98—99 for more information.

Among the 17 females currently in prison living with HIV, 59 percent are black and 41 percent are white. Figure 54 shows that most (59 percent) were infected through heterosexual sex (overall, 35 percent HRH and 24 percent PH-Fem). Forty-one percent were infected through injection drug use. This is twice as high as the proportion of IDU cases among other HIV infected females.

Figure 54: Females living with HIV/AIDS in prison by mode of transmission (N = 17)



Among the 318 males currently in prison living with HIV, 76 percent are black. Figure 55 shows that among the 242 black males, 41 percent are men who have sex with men (including MSM/IDU) and 29 percent have injected drugs (including MSM/IDU). Another 12 percent indicate they had high-risk heterosexual sex. Thirty percent have an unknown risk. Figure 56 shows that among the 60 white males, 62 percent are men who have sex with men (including MSM/IDU) and 33 percent have injected drugs (including MSM/IDU). Another seven percent indicate they had high-risk heterosexual sex. Fifteen percent have an unknown risk. See Table 17, page 3-98.

Age at HIV Diagnosis:
The majority of males currently in prison and living with HIV were in their twenties and thirties at HIV diagnosis (80 percent). This group of males also make up 85 percent of males infected through MSM behavior. Interestingly, males in their thirties, forties, and fifties at HIV diagnosis and currently in prison have higher proportions of persons with unknown mode of transmission than MSM behavior (See Table 19, page 3-100).

Special Populations: Incarcerated Population

Females currently in prison and living with HIV were slightly older than males at HIV diagnosis and 76 percent were from 25 to 49 years old at HIV diagnosis. Most of these females were infected heterosexually, however 67 percent of females who were in their forties and 80 percent of females in their late 20s at HIV diagnosis were infected through IDU behavior. See Tables 18-19, pages 3-99—100.

Figure 55: Black males living with HIV/AIDS in prison by mode of transmission (N = 242)

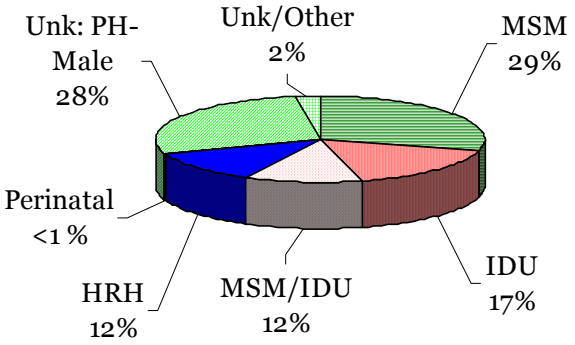
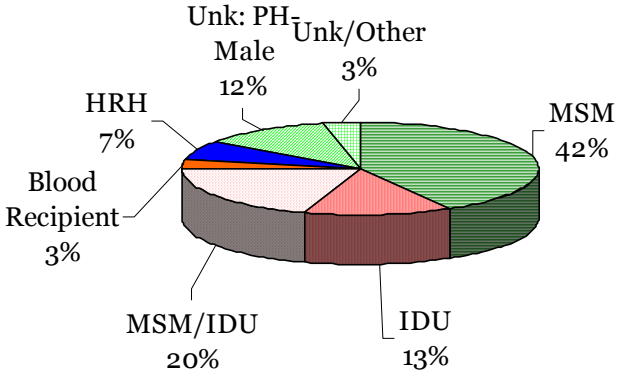


Figure 56: White males living with HIV/AIDS in prison by mode of transmission (N = 60)



General Prison Population:

As of January 1, 2010, there were 45,478 prisoners in MDOC facilities, 1,122 (2 percent) of these prisoners were less than 20 years old. Since 1989, all prisoners have been tested for HIV infection and other infectious diseases upon intake to state correctional facilities. This testing shows that among both men and women, 0.9 percent of all prisoners are HIV-infected; among young prisoners under age 20, the proportion is currently higher (3.6 percent). To put this in perspective, between 2008 and 2010, the proportion of persons living with HIV in the overall prison population decreased by nine percent while the proportion among prisoners less than 20 years old increased from 1.3 percent to 3.6 percent (an increase of 64 percent).

2010 Profile of HIV/AIDS in Michigan

Highlight on Formerly Incarcerated Persons

Data from the report on HIV/AIDS and Health Related Needs of Formerly Incarcerated Persons in Michigan

In August of 2006, a study was conducted by the Michigan Department of Community Health (MDCH) to determine the HIV prevention-related needs of formerly incarcerated persons (FIPs) in the State of Michigan. The State has no previous needs assessment data from this population; therefore, the goal of this project was to determine if, where, and how to target HIV prevention-related services to this population. The study involved 104 structured interviews with people who self-reported as recently released from prison or jail. It is important to note that HIV status of participants was unknown at the start of their interviews. Participants were sampled from five communities around Michigan: Ypsilanti, Muskegon, Detroit, Flint, and Grand Rapids. A quota sampling methodology was employed based on prisoner release data from the Michigan Department of Corrections (MDOC).

All of the participants reported being incarcerated in the year prior to completing the survey, reporting having been incarcerated from 1 to 26 times (mean = 6.54). Eighty percent of the participants reported being on parole at the time of the interview.

Most participants did not see HIV/AIDS as a primary concern, as 'finding employment' was reported as the primary concern since their release or parole. The second most frequently mentioned concern was housing, followed by concerns with their finances and worries about drug use. None of the respondents mentioned HIV/AIDS when asked about their biggest worries or concerns; the only health issues mentioned were mental health, drug use and access to health insurance.

When asked specifically about their health concerns, three participants listed HIV/AIDS as a primary health concern. The health concerns mentioned most frequently were Hepatitis C, not having medical insurance, dental health, mental health, diabetes and problems with their legs.

Fifty-seven percent mentioned having visited a health care provider since their release or parole. Of these, 32 percent reported having been offered an HIV test at their last visit. All participants were asked about HIV testing since their release/parole. Almost half (49 percent) reporting having been tested for HIV; three reported that their test was positive.

Sexual activity among this group is fairly high, with 75 percent reported being sexually active at the time of the interview. However condom use was low as nearly half were engaged with a primary partner and rarely used condoms. Fourteen percent of all respondents reported exchanging sex for money or drugs; most often participants reported buying rather than selling sex.

Substance use among participants was relatively low with 60 percent of participants reporting they were enrolled in a drug treatment plan. Few (10 percent) reported IDU behavior and most of these indicated knowing where to access clean needles.

Social networks did not appear to play a critical role in HIV sexual risk behaviors for this group. The number of persons with whom participants communicated while inside or outside was not associated with perceived risk for HIV or sexual risk behaviors since their release or parole. Drug use behaviors were associated with social networks. Family networks tended to be negatively associated with drug use (that is, the more family one communicated with, the less drug use). Most of these relationships were not statistically significant due to small sample size, and merit additional research.

2010 Profile of HIV/AIDS in Michigan

Special Populations: Arab-Americans

Data from HIV/AIDS Reporting System (eHARS)

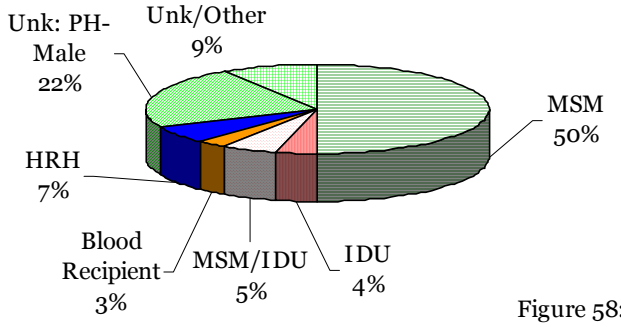
Arabic is considered an ethnicity and not a racial category and has not been routinely collected by the HIV surveillance system. Consequently, the numbers presented here are an underestimate. Beginning in the year 2001 and at the request of an Arabic community-based organization, a question was added about Arabic ethnicity on the HIV/AIDS Case Report Form that reads "Does this patient consider him or herself Arabic?".

In Michigan the largest concentration of Arab-Americans is in Southeastern Michigan where most of these HIV/AIDS cases were diagnosed. A total of 110 persons of Arabic descent have ever been diagnosed with HIV and confidentially reported to MDCH. Of these, 83 persons are living; 45 percent are living with HIV, not AIDS and 54 percent have progressed to AIDS. The counties where persons of Arabic descent were living when initially diagnosed with HIV include Wayne (34 percent), Oakland (19 percent), Macomb (13 percent) and 27 percent were diagnosed while living in another state or have an unknown residence at diagnosis. The remaining seven percent are among Kent, St. Clair, Ingham, Kalamazoo and Chippewa counties.

The age at HIV diagnosis (including those with AIDS) is similar to the age distribution for all cases in Michigan, with six percent ages 0-19, 10 percent 20-24, 20 percent 25-29, 34 percent 30-39, 22 percent 40-49, four percent 50 –59, and four percent age 60 and older.

For more data on Arab-Americans living with HIV in Michigan, please see Tables 20 & 21, pages 3-101—102.

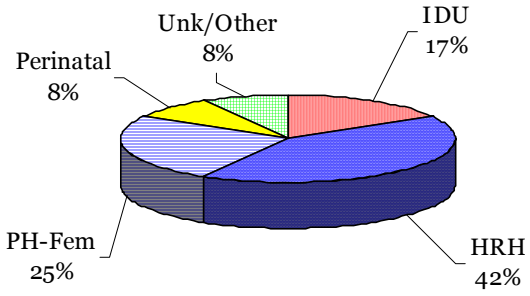
Figure 57: Males of Arabic Descent, Living with HIV/AIDS in Michigan, by Mode of Transmission (N = 71)



Eight-six percent of the cases are among males and 14 percent are among females. Figure 57 shows that among the 71 male cases, over half (55 percent) were attributed to MSM (including MSM/IDU) and nine percent reported injection drug use. Thirty-one percent have an unknown mode of transmission.

Figure 58 shows that among the 12 females, over two-thirds were infected heterosexually (overall, 42 percent HRH and 25 percent PH-Fem) and 17 percent reported a risk of injection drug use. Eight percent were infected perinatally and another eight percent had no reported mode of transmission.

Figure 58: Females of Arabic Descent, Living with HIV/AIDS in Michigan, by Mode of Transmission (N = 12)



Special Populations: Arab-Americans: Focus on Identifying Community Need

Data from Census Bureau & ACCESS, Community Health & Research Center

Within the US, the largest concentration of Arab-Americans lives in Dearborn, Michigan. This group constitutes five percent of the Michigan population and 30 percent of the Dearborn population. Because approximately 40 percent of this group was born outside of the US, there are many barriers to services.

From October 2003 through July 2005 the Arab Community Center for Economic and Social Services (ACCESS) conducted 15 rounds of focus groups on men in the Arab-American community identifying as gay or bisexual. Approximately 95 percent of attendees were Arab/Chaldean and were residents of Detroit, Dearborn and other areas of Metro Detroit, however a few were residents of Toledo, OH and Toronto, ON. The ages of the attendees ranged from 13 to 58. The majority of attendees were older than 25 from October 2002 through September 2004, however from October 2004 through July 2005 the majority were men under 25 years.

These focus groups allowed participants to freely discuss concerns surrounding being a gay or bisexual male in the Arab community. About 80 percent of attendees rarely negotiated safer sex practices with their partners, stating that barriers to this are a lack of negotiating skills and exchanging sex for money, drugs or gifts. The attendees were also afraid of getting tested for HIV for fear of the results and backlash from family and community. This discussion uncovered a belief that if men only have sex with other Arabic/Chaldean men, they have no risk for contracting HIV.

Additionally, these participants discussed their desire for more social networks among gay Arab males, which they felt would allow for more opportunities to deliver prevention, education and counseling on risky behaviors.

Special Populations: Asians, Native Hawaiians & Pacific Islanders

Data from HIV/AIDS Reporting System (eHARS)

In this report Asians, Native Hawaiians and Pacific Islanders (A/NH/PI) have been combined into one race/ethnicity category. This group makes up one percent of those living with HIV in Michigan and one percent of the general population of Michigan. (Table 5, page 3-85)

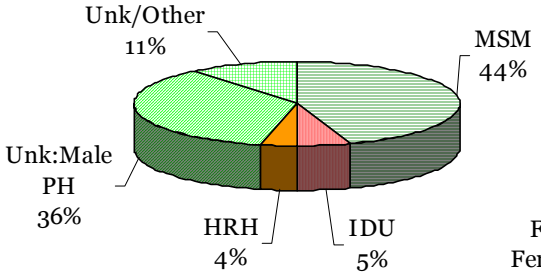
MDCH estimates that there are approximately 90 A/NH/PI persons living with HIV disease in Michigan. Sixty-one percent of this population live in the Detroit Metro Area, where most of these cases were diagnosed. Of the 77 reported cases, 49 percent are HIV, not AIDS and 51 percent are AIDS. Of those who have progressed to AIDS, 59 percent were concurrently diagnosed with AIDS at the same time as their initial HIV diagnosis. This is higher than the proportion of all concurrent AIDS diagnosis (43 percent), indicating that A/NH/PI persons test later than the persons living with HIV statewide.

The counties where A/NH/PI were initially diagnosed with HIV include Wayne (27 percent), Oakland (25 percent), Ingham (6 percent), Kent (6 percent), Kalamazoo (4 percent), Jackson (3 percent), Macomb (3 percent), and unknown and out of state (14 percent). The remaining 12 percent are among Barry, Bay, Calhoun, Eaton, Genesee, Ottawa, Saginaw, Shiawassee and Washtenaw counties.

The age at HIV diagnosis (including those with AIDS) is similar to the age distribution for all cases in Michigan, with four percent ages 0-19, 10 percent 20-24, 32 percent 25-29, 34 percent 30-39, 17 percent 40-49, three percent 50 –59, and none age 60 and older. The main difference is that more HIV-infected A/NH/PI persons were 25-29 at HIV diagnosis (32 percent A/NH/PI v 17 percent all cases).

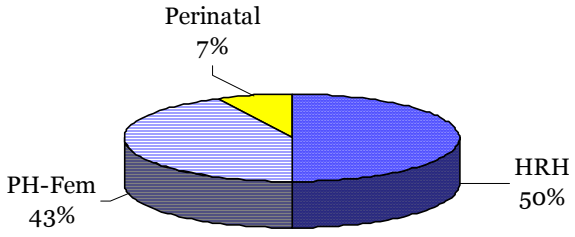
For more data on A/NH/PI persons living with HIV in Michigan, please see Tables 22 & 23, pages 3-103—104.

Figure 59: Asian/Pacific Islander/Native Hawaiian Males, Living with HIV/AIDS in Michigan, by Mode of Transmission (N = 56)



Seventy-three percent of the cases are among males and 27 percent are among females. Among the 56 male cases, less than half (44 percent) were attributed to MSM and five percent attributed to injection drug use. Forty-seven percent have an unknown mode of transmission. See Figure 59.

Figure 60: Asian/Pacific Islander/Native Hawaiian Females, Living with HIV/AIDS in Michigan, by Mode of Transmission (N = 21)



Among the 21 females, almost all were infected heterosexually (overall, 50 percent HRH and 43 percent PH-Fem) . None were attributed to injection drug use and seven percent were infected through perinatal transmission. See Figure 60.

2010 Profile of HIV/AIDS in Michigan

Special Populations: American Indians & Alaskan Natives

Data from HIV/AIDS Reporting System (eHARS)

In this report American Indians & Alaskan Natives (AI/AN) have been combined into one race/ethnicity category. This group makes up less than one percent of those living with HIV in Michigan and one percent of the general population of Michigan. We recognize that people who belong to this racial category may not be recorded as such in the medical record. Therefore the information we present here should be viewed as the minimum number of AI/AN persons infected with HIV. (Table 5, page 3-85)

MDCH estimates that there are approximately 50 AI/AN persons living with HIV disease in Michigan. Just over half of AI/AN living with HIV/AIDS are in Out-State Michigan (55 percent), where the same proportion of these cases were diagnosed. Of the 44 reported cases, half are HIV, not AIDS and half percent are AIDS. The proportion of AI/AN who have progressed to AIDS (50 percent) is slightly lower than the proportion diagnosed with AIDS among persons living with HIV statewide (54 percent). Of those who have progressed to AIDS, 23 percent were concurrently diagnosed with AIDS at the same time as their initial HIV diagnosis. This is lower than the proportion of all cases with concurrent diagnoses of HIV and AIDS (43 percent).

The counties where AI/AN were initially diagnosed with HIV include Wayne (23 percent), Kent (11 percent), Ingham (9 percent), Oakland (9 percent), Grand Traverse (7 percent), Macomb (5 percent) counties, and 14 percent were diagnosed while living in another state. The remaining 22 percent are among Bay, Chippewa, Eaton, Isabella, Jackson, Mackinac, Menominee, Muskegon, Newaygo and Tuscola counties.

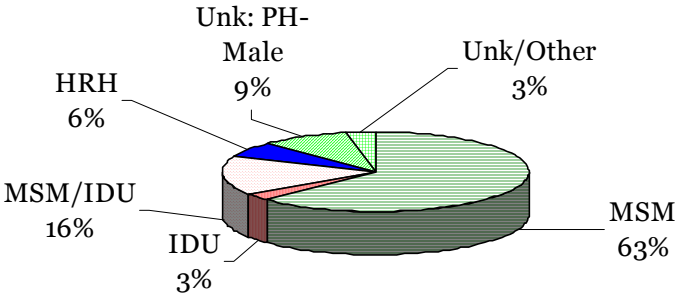
The age at HIV diagnosis (including those with AIDS) is similar to the age distribution for all cases in Michigan, with two percent ages 0-12, none 13-19, 25 percent 20-24, nine percent 25-29, 43 percent 30-39, 14 percent 40-49, five percent 50 –59, and two percent age 60 and older. The main difference is that more HIV-infected AI/AN persons are 20-24 (25 percent AI/AN v 13 percent all cases) and in their 30s (43 percent AI/AN v 36 percent all cases). Also, fewer are 25 to 29 (9 percent AI/AN v 17 percent all cases) and in their forties (12 percent AI/AN v 21 percent all cases).

For more data on AI/AN persons living with HIV in Michigan, please see Tables 24 & 25, pages 3-105—106.

Special Populations: American Indians & Alaskan Natives

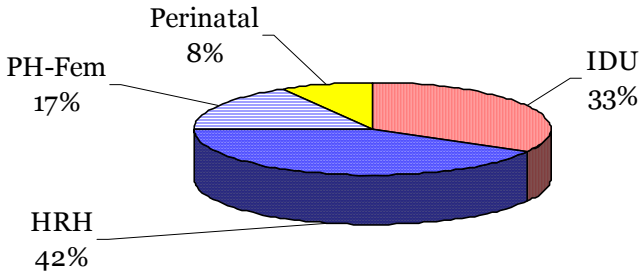
Seventy-three percent of the cases are among males and 27 percent are among females. Among the 32 male cases, over three-quarters (79 percent) were attributed to MSM (including MSM/IDU) and 19 percent attributed to injection drug use (including MSM/IDU). Six percent report HRH and 12 percent have an unknown mode of transmission. See Figure 61.

Figure 61: American Indian and Alaskan Native Males, Living with HIV/AIDS in Michigan, by Mode of Transmission (N = 32)



Among the 12 females, over half (59 percent) were infected heterosexually (overall, 42 percent HRH and 17 percent PH-Fem) . Thirty-three percent have reported a risk of injection drug use and eight percent were infected through perinatal transmission. See Figure 62.

Figure 62: American Indian & Alaskan Native Females, Living with HIV/AIDS in Michigan, by Mode of Transmission (N = 12)



2010 Profile of HIV/AIDS in Michigan

Special Populations: Foreign Born

Data from HIV/AIDS Reporting System (eHARS)

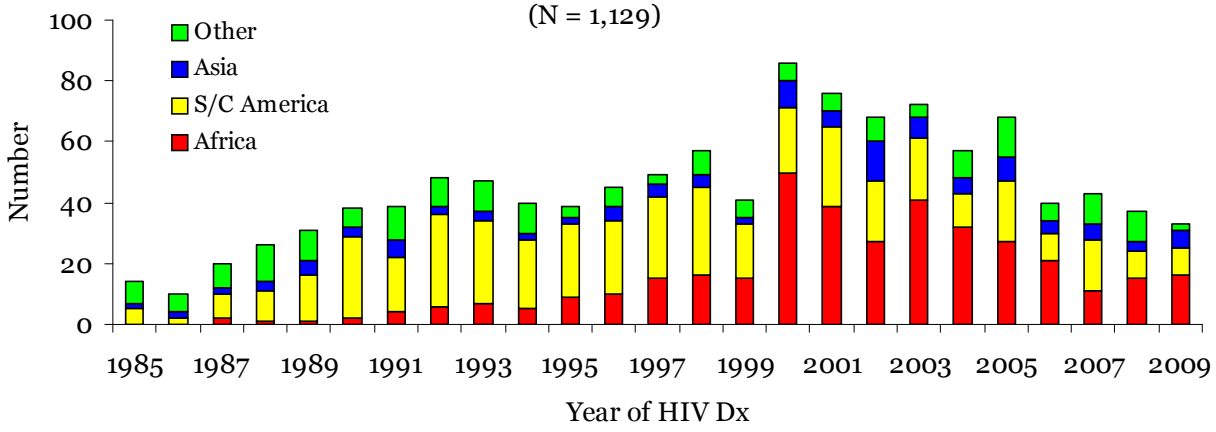
Introduction:

While the majority of HIV infection in Michigan is in persons born in the US (72 percent), almost one-quarter (23 percent) have a missing or unknown country of birth. Five percent (834 cases) of the total number of HIV/AIDS cases living in Michigan were born in a country other than the US (foreign-born, FB). Because of the high proportion of missing data, information reported on FB individuals is considered to be a minimum estimate and must be interpreted with caution.

Trends:

The Immigration and Nationality Act was updated in 1999. This allowed HIV positive refugees to enter the US. From 1999 to 2000 Michigan experienced a 110 percent increase in HIV diagnoses among FB individuals, which was mostly likely an effect of the updated Act. The number of HIV infections diagnosed in Michigan among FB individuals increased from 14 cases in 1985 to 33 cases in 2009, with a peak of 86 cases in 2000. (Figure 63). The majority of these persons were born in Africa and South and Central America, including Mexico (S/C America). In Michigan, these persons may be migrant farm workers, who are mainly from S/C America, and African-born individuals, who are participants in refugee resettlement programs.

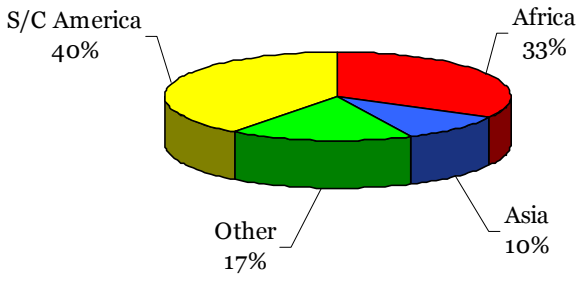
Figure 63: All HIV Cases Ever Diagnosed in Foreign Born Individuals, January 2010 (N = 1,129)



Country of Origin:

Figure 64 shows that 33 percent of FB individuals living with HIV in Michigan were born in Africa; 40 percent were born in S/C America; 10 percent were born in Asia; and 17 percent were born in other countries.

Figure 64: Country of Birth for Foreign Born persons living with HIV/AIDS in Michigan, January 2010 (N = 834)



Special Populations: Foreign Born

Data from HIV/AIDS Reporting System (eHARS)

Sex:
Overall, 63 percent of FB persons are male and 37 percent are female. This is quite different from the proportion seen among all persons living with HIV in Michigan (77 percent male and 23 percent female). Those born in Africa also have different proportions of males and females (43 percent male and 59 percent female) while those born in S/C America and Asia are closer to the proportion seen among all persons living with HIV (79 percent male and 21 percent female). This reflects the higher proportion in heterosexual cases among HIV infected persons from Africa.

Race:
As would be expected, the racial breakdown among FB individuals is different depending on the country of origin. African born individuals are almost entirely black (99 percent). Persons born in S/C America are 84 percent Hispanic, 11 percent black and four percent white, while persons born in Asia are 50 percent Asian/Pacific Islander/Native Hawaiian, 43 percent white, three percent black and five percent other or unknown race.

Geographical Distribution:
The highest proportion of African-born cases were diagnosed while living in Kent county (18 percent); 13 percent in Wayne county, 10 percent in Berrien county, nine percent in Ingham county, and eight percent in Oakland county. Five percent were diagnosed in a state other than Michigan, 23 percent were diagnosed in an unknown location, and the rest were diagnosed while living throughout the remainder of Michigan.

The highest proportion of S/C American-born cases were diagnosed among residents of Wayne and Kent Counties (16 and 14 percent, respectively). Eight percent were diagnosed in a state other than Michigan, 33 percent were diagnosed in an unknown location, and the rest were diagnosed while living throughout the remainder of Michigan.

Forty-one percent of Asian-born cases were among residents of the Detroit Metro Area (9 percent in Oakland county, 18 percent in Wayne county and 5 percent in Macomb county). Five percent were among residents of Kent county, three percent were diagnosed in a state other than Michigan, 35 percent were diagnosed in an unknown location, and the rest were diagnosed while living throughout the remainder of Michigan.

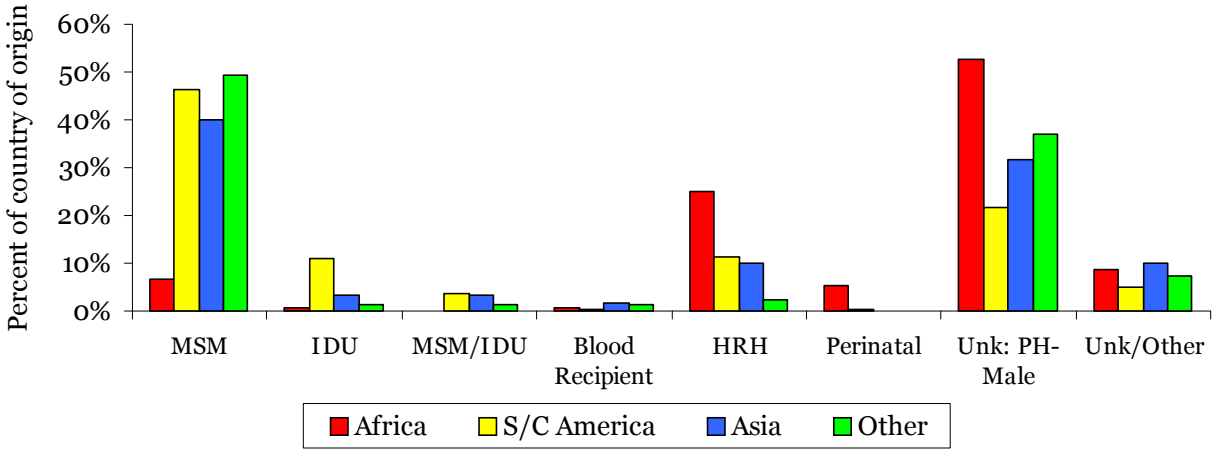
Persons diagnosed in other foreign countries follow a similar pattern to Asian-born cases: 21 percent were living in Oakland county, 13 percent in Wayne county, nine percent in Kent county and the rest were diagnosed while living throughout the remainder of Michigan, five percent were diagnosed in a state other than Michigan, 21 percent were diagnosed in an unknown location, and the rest were diagnosed while living throughout the remainder of Michigan.

Mode of Transmission:
As with race, mode of transmission differs for FB persons by country of origin. Figure 65 (next page) demonstrates that males born in Africa are one-quarter (25 percent) HRH and almost two-thirds unknown (62 percent). Most were likely infected via heterosexual sex. Males born in S/C America are largely MSM (50 percent - including MSM/IDU). Fifteen percent are IDU (including MSM/IDU) and 27 percent have an unknown risk. Males born in Asia have similar risk pattern as those from S/C America, however men born in Asia are less likely to be IDU (6 v 15 percent).

Special Populations: Foreign Born

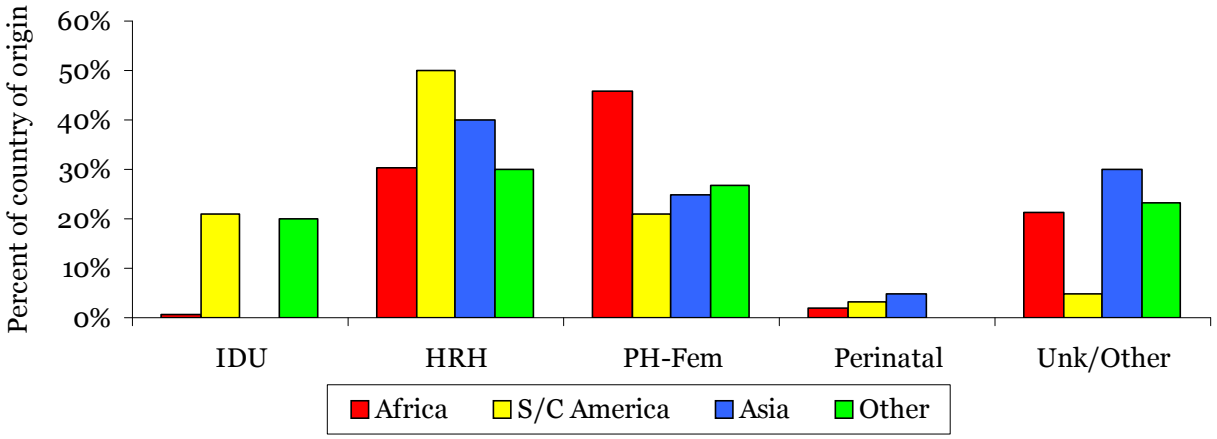
Data from HIV/AIDS Reporting System (eHARS)

Figure 65: Foreign Born Males living with HIV in Michigan, by mode of transmission and country of origin (N = 525)



As with males, the risk pattern among female FB persons differs based on country of origin. Figure 66 shows that females born in African countries are over three-quarters heterosexual (overall—30 percent HRH; 46 percent PH-Fem). Twenty-one percent have an unknown risk. Females born in S/C America also have a large proportion infected through heterosexual sex (71 percent: overall—50 percent HRH; 21 percent PH-Fem). These females also have a considerable proportion infected from IDU (21 percent) and less than five percent have an unknown risk. Females born in Asian countries are largely infected through heterosexual sex (65 percent; overall—40 percent HRH; 25 percent PH-Fem). The remainder of cases (30 percent) have an unknown risk. Those females born in other countries have risks similar to those born in S/C America.

Figure 66: Foreign Born Females living with HIV in Michigan, by mode of transmission and country of origin (N = 309)



2010 Profile of HIV/AIDS in Michigan

Special Populations: Homeless Community

Data from HIV/AIDS and Health Related Needs Among Homeless Persons in Michigan

In January of 2006, a study was conducted by the Michigan Department of Community Health (MDCH) to determine the HIV prevention-related needs of homeless persons in the state of Michigan. The state has no previous needs assessment data from this population; therefore, the goal of this project was to determine if, where, and how to target HIV prevention-related services to this population. The study involved 98 structured interviews with people who self-reported as homeless. Participants included those accessing food banks and shelters in six communities around Michigan: Ann Arbor, Benton Harbor, Detroit, Flint, Grand Rapids, and Lansing.

Few sample participants reported sexual activity, with a quarter of participants reporting no sexual activity in the year prior to the survey. Similarly, few reported injecting drug use (five percent). Participants also exhibited low perceived susceptibility to HIV and few perceived barriers to risk reduction, possibly because low perceived susceptibility is grounded in participant's reality. That is, many of these participants do not report behaviors that put them at risk for HIV. This population seems to have limited need for HIV prevention activities because they are not highly sexually active and few are IDUs. However, about 12 percent reported engaging in "survival sex" in order to get access to things to meet their basic needs, drugs, or money. This minority might benefit from carefully targeted HIV prevention services that are sensitive to the challenges faced by this population. Despite this information, only one person identified homelessness as a barrier to taking steps to reduce risks for HIV.

Most participants in the sample did not see HIV/AIDS as a primary concern in their lives. Not surprisingly, it appears that the problems related to being homeless (i.e., access to food, clothes, and shelter) are the most salient issues to these participants along with other, more pressing health issues. Thus, getting participants access to adequate housing and health care (including dental care) should be a priority for providers. To the extent that HIV prevention staff can facilitate this process, this addresses an important need for members of this community. A number of people reported misconceptions about HIV risk reduction behaviors. It appears that among a small segment of this sample, knowledge of HIV transmission risk is very low.

Less than one-third of participants in the sample were either receiving mental health services at the time of the interview or had received such services in the past. Further, 16 percent of participants reported substance use. These issues present important challenges for HIV prevention and suggest members of this population are likely to face a number of issues that are more pressing than concerns about HIV. Addressing these issues should be a priority before initiation of prevention activities.

Many reported going to several places consistently, primarily hospitals (particularly emergency rooms) and shelters. Both of these places provide venues for recruitment of homeless persons into prevention activities. In general, it is known that private doctors and health departments are trusted sources of HIV information as are people with HIV, however homeless persons are not seeking services from these sources. This suggests that to reach the homeless population, further engagement with persons working in hospitals and shelters is critical, as these venues could provide an opportunity for engagement with this population.

Special Populations: Commercial Sex Workers

Data from HIV/AIDS and Health Related Needs Among Commercial Sex Workers in Michigan

In December of 2004, a study was conducted by the Michigan Department of Community Health (MDCH) to fill a gap in existing knowledge in the State of Michigan on the needs of a population known to be at high risk for HIV/AIDS: commercial sex workers (CSWs). The study involved 59 structured interviews with people who self-reported exchanging sex for money, drugs, or other goods on a regular basis. Participants included CSWs from five communities around Michigan: Benton Harbor, Detroit, Flint, Grand Rapids, and Ypsilanti.

The participants mentioned a variety of health concerns, including asthma and high blood pressure. However, the primary concern was transmission of sexually transmitted diseases (STDs) and HIV. Importantly, HIV or AIDS was the most frequently mentioned health concern by participants (22 percent), followed by equal proportions concerned with getting sexually transmitted diseases and dying or getting killed on the streets (14 percent, each). Most participants indicated that they do not or only infrequently use HIV risk reduction strategies with what they considered to be primary or secondary non-paying sex partners. All of those who reported using a risk reduction strategy reported using male condoms.

About 25 percent of participants reported injecting drugs in the year prior to the interview. Of those, 86 percent injected drugs (heroin only) within the week prior to the interview. After heroin, alcohol and crack/cocaine were the drugs most frequently used by respondents. The range of number of times participants used crack/cocaine within the week prior to the interview was fairly wide with some indicating they used only once, while others saying they used all day, every day. One CSW estimated she had smoked crack about 240 times in the week prior to the interview. For many participants, commercial sex work was initiated and continued because of drug dependency. It was common for participants to indicate that they had considered stopping commercial sex work, but had to continue in order to obtain drugs; they needed money and felt like they did not have the skills to do other jobs.

Ninety-eight percent of respondents reported that they have been tested for HIV at some time in their lives. When asked their reason for testing the last time they tested, participants indicated that they “just wanted to know” or “wanted peace of mind”. Other reasons cited frequently by participants included that they habitually test, were pregnant or incarcerated at the time they were tested.

The majority of the participants indicated consistent condom use with clients for both oral and vaginal sex. When asked if they do anything to protect themselves from HIV when having sex with clients, 66 percent said they “always” use condoms, 30 percent said “sometimes” and only four percent said they “never” use condoms. Participants indicated a variety of other HIV risk reduction strategies with clients including keeping clean through rinsing, washing, or occasionally bleaching their body parts after sex with clients. Visual inspection of clients for signs of disease was also a common strategy reported by participants.

Twenty-nine percent of the participants indicated that they don’t talk to anyone about HIV or AIDS. Additionally, about 50 percent indicated they had never specifically sought HIV information from an agency, such as a local health department or community-based organization. Of those who reported seeking information about HIV, most went to their private doctor (30 percent), health department (20 percent), or family member, significant other, and customers (eight percent). The organizations that participants mentioned going to most often for HIV-related information were local health departments, clinics, or other local community-based organizations.

Table 5: Demographic Information on HIV/AIDS Cases Currently Living in Michigan, 2010

	EST PREV*	REPORTED PREVALENCE									CENSUS 2008 ESTIMATES£	
		HIV, not AIDS		AIDS		TOTAL			CONCURRENT AIDS			
	Number	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total	Rate per 100,000	Number	Percent of AIDS cases	Number	Percent of Total
RACE/ ETHNICITY§												
White	6,710	2,429	35%	3,026	36%	5,455	36%	70	1,348	45%	7,750,818	77%
Black	10,820	4,077	59%	4,723	57%	8,800	58%	627	1,943	41%	1,403,051	14%
Hispanic	860	305	4%	398	5%	703	5%	170	205	52%	413,827	4%
Asian/PI	90	38	1%	39	0%	77	1%	141	23	59%	54,714	1%
Am Indian/AN	50	22	0%	22	0%	44	0%	19	5	23%	236,236	2%
Multi/Unk/Other	250	97	1%	109	1%	206	1%	N/A	37	34%	144,776	1%
SEX & RACE												
Males	14,570	5,225	75%	6,617	80%	11,842	77%	240	2,912	44%	4,923,929	49%
White Males	*5,850*	*2,058*	*30%*	*2,701*	*32%*	*4,759*	*31%*	*124*	*1,235*	*46%*	*3,825,990*	*38%*
Black Males	*7,750*	*2,831*	*41%*	*3,469*	*42%*	*6,300*	*41%*	*950*	*1,454*	*42%*	*662,992*	*7%*
Hispanic Males	*670*	*230*	*3%*	*315*	*4%*	*545*	*4%*	*250*	*172*	*55%*	*217,942*	*2%*
Other Males	*290*	*106*	*2%*	*132*	*2%*	*238*	*2%*	*110*	*51*	*39%*	*217,005*	*2%*
Females	4,230	1,743	25%	1,700	20%	3,443	23%	68	649	38%	5,079,493	51%
White Females	*860*	*371*	*5%*	*325*	*4%*	*696*	*5%*	*18*	*113*	*35%*	*3,924,828*	*39%*
Black Females	*3,070*	*1,246*	*18%*	*1,254*	*15%*	*2,500*	*16%*	*338*	*489*	*39%*	*740,059*	*7%*
Hispanic Fmls	*190*	*75*	*1%*	*83*	*1%*	*158*	*1%*	*81*	*33*	*40%*	*195,885*	*2%*
Other Females	*110*	*51*	*1%*	*38*	*0%*	*89*	*1%*	*41*	*14*	*37%*	*218,721*	*2%*
RISK*												
Male-Male Sex	9,050	3,181	46%	4,177	50%	7,358	48%	N/A	1,807	43%	N/A	N/A
Injection Drug Use	2,150	686	10%	1,066	13%	1,752	11%	N/A	366	34%	N/A	N/A
MSM/IDU	880	291	4%	424	5%	715	5%	N/A	124	29%	N/A	N/A
Blood Products	130	34	0%	69	1%	103	1%	N/A	19	28%	N/A	N/A
Heterosexual	3,280	1,304	19%	1,359	16%	2,663	17%	N/A	521	38%	N/A	N/A
HRH	*2,340*	*874*	*13%*	*1,027*	*12%*	*1,901*	*12%*	*N/A*	*345*	*34%*	*N/A*	*N/A*
PH-Female	*940*	*430*	*6%*	*332*	*4%*	*762*	*5%*	*N/A*	*176*	*53%*	*N/A*	*N/A*
Perinatal	210	115	2%	53	1%	168	1%	N/A	28	53%	N/A	N/A
Undetermined	3,110	1,357	19%	1,169	14%	2,526	17%	N/A	696	60%	N/A	N/A
PH-Male	*1,640*	*609*	*9%*	*722*	*9%*	*1,331*	*9%*	*N/A*	*426*	*59%*	*N/A*	*N/A*
Unknown	*1,470*	*748*	*11%*	*447*	*5%*	*1,195*	*8%*	*N/A*	*270*	*60%*	*N/A*	*N/A*
AGE AT HIV DIAGNOSIS												
0 - 12 years	240	129	2%	64	1%	193	1%	N/A	25	39%	N/A	N/A
13 - 19 years	830	411	6%	262	3%	673	4%	N/A	53	20%	N/A	N/A
20 - 24 years	2,400	1,077	15%	871	10%	1,948	13%	N/A	183	21%	N/A	N/A
25 - 29 years	3,120	1,205	17%	1,331	16%	2,536	17%	N/A	397	30%	N/A	N/A
30 - 39 years	6,680	2,289	33%	3,146	38%	5,435	36%	N/A	1,349	43%	N/A	N/A
40 - 49 years	3,970	1,335	19%	1,893	23%	3,228	21%	N/A	1,083	57%	N/A	N/A
50 - 59 years	1,270	427	6%	607	7%	1,034	7%	N/A	370	61%	N/A	N/A
60 years and over	290	92	1%	143	2%	235	2%	N/A	101	71%	N/A	N/A
Unspecified	10	3	0%	0	0%	3	0%	N/A	0	0%	N/A	N/A
AREA OF RESIDENCE AT DIAGNOSIS¥												
Detroit Metro	12,070	4,354	62%	5,411	65%	9,765	64%	222	2,376	44%	4,395,484	44%
Out-State	6,260	2,369	34%	2,694	32%	5,063	33%	90	1,151	43%	5,607,938	56%
TOTAL: Both Areas	18,320	6,723	96%	8,105	97%	14,828	97%	148	3,527	44%	10,003,422	100%
Prison	*390*	*203*	*3%*	*185*	*2%*	*388*	*3%*	*N/A*	*34*	*18%*	*N/A*	*N/A*
TOTAL: Known Residence	17,950	6,926	99%	8,290	100%	15,216	100%	N/A	3,561	43%	N/A	N/A
Unknown	*90*	*42*	*1%*	*27*	*0%*	*69*	*0%*	*N/A*	*-*	*0%*	*N/A*	*N/A*
STATEWIDE TOTAL	***18,800***	***6,968***	***100%***	***8,317***	***100%***	***15,285***	***100%***	***153***	***3,561***	***43%***	***10,003,422***	***100%***

**See page 1-3 for descriptions of prevalence estimate calculations and pages 6-7,8 for risk category groupings. Risk categories used in Michigan are newly defined as of July 2007.*

§ In this report, persons described as white, black, Asian/Pacific Islander (PI) or American Indian/Alaskan Native (AN) are all non-Hispanic. Persons described as Hispanic could be of any race.

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

£ Census values in the age category are available, however they have been excluded because Census data presents the Michigan population at their 'current age' and Michigan's HIV data presents those persons living with HIV at their age at HIV diagnosis.

Table 6: HIV/AIDS Cases Currently Living in Michigan, by County of Residence, 2010

COUNTY	EST PREV*	REPORTED PREVALENCE									CENSUS 2008 ESTIMATES	
		HIV, not AIDS		AIDS		TOTAL			CONCURRENT AIDS			
	Number	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total	Rate per 100,000	Number	Percent of AIDS cases	Number	Percent of Total
Alcona	10	0	0%	0	0%	0	0%	0	0	0%	11,556	0%
Alger	10	1	0%	6	0%	7	0%	74	2	33%	9,438	0%
Allegan	130	39	1%	66	1%	105	1%	93	25	38%	112,975	1%
Alpena	10	1	0%	9	0%	10	0%	34	3	33%	29,520	0%
Antrim	10	5	0%	4	0%	9	0%	37	1	25%	24,109	0%
Arenac	10	2	0%	1	0%	3	0%	18	1	100%	16,361	0%
Baraga	10	1	0%	5	0%	6	0%	70	4	80%	8,528	0%
Barry	30	8	0%	16	0%	24	0%	41	7	44%	58,890	1%
Bay	90	38	1%	38	0%	76	0%	71	12	32%	107,495	1%
Benzie	10	2	0%	4	0%	6	0%	34	1	25%	17,396	0%
Berrien	300	99	1%	140	2%	239	2%	150	58	41%	159,481	2%
Branch	20	13	0%	2	0%	15	0%	33	1	50%	45,726	0%
Calhoun	170	63	1%	74	1%	137	1%	101	20	27%	135,861	1%
Cass	40	12	0%	19	0%	31	0%	62	9	47%	50,185	1%
Charlevoix	20	4	0%	10	0%	14	0%	54	5	50%	25,936	0%
Cheboygan	10	3	0%	4	0%	7	0%	27	1	25%	26,354	0%
Chippewa	30	13	0%	11	0%	24	0%	62	3	27%	38,971	0%
Clare	20	9	0%	10	0%	19	0%	63	3	30%	30,312	0%
Clinton	40	18	0%	16	0%	34	0%	49	2	13%	69,726	1%
Crawford	10	2	0%	4	0%	6	0%	41	3	75%	14,463	0%
Delta	20	9	0%	9	0%	18	0%	48	2	22%	37,179	0%
Dickinson	10	1	0%	4	0%	5	0%	19	2	50%	26,812	0%
Eaton	80	32	0%	31	0%	63	0%	59	11	35%	106,781	1%
Emmet	20	5	0%	8	0%	13	0%	39	4	50%	33,535	0%
Genesee	700	263	4%	301	4%	564	4%	132	114	38%	428,790	4%
Gladwin	10	3	0%	5	0%	8	0%	31	4	80%	25,920	0%
Gogebic	10	2	0%	2	0%	4	0%	25	1	50%	16,043	0%
Grand Traverse	70	28	0%	31	0%	59	0%	69	15	48%	86,071	1%
Gratiot	20	4	0%	9	0%	13	0%	31	5	56%	42,245	0%
Hillsdale	10	2	0%	3	0%	5	0%	11	2	67%	46,212	0%
Houghton	10	6	0%	5	0%	11	0%	31	4	80%	35,174	0%
Huron	10	2	0%	2	0%	4	0%	12	1	50%	32,805	0%
Ingham	540	220	3%	221	3%	441	3%	159	91	41%	277,528	3%
Ionia	40	13	0%	17	0%	30	0%	47	11	65%	63,833	1%
Iosco	10	3	0%	2	0%	5	0%	19	1	50%	25,932	0%
Iron	10	0	0%	1	0%	1	0%	8	0	0%	12,001	0%
Isabella	50	19	0%	18	0%	37	0%	55	7	39%	66,778	1%
Jackson	250	104	1%	101	1%	205	1%	128	55	54%	160,180	2%
Kalamazoo	380	157	2%	152	2%	309	2%	126	55	36%	245,912	2%
Kalkaska	10	3	0%	1	0%	4	0%	23	0	0%	17,066	0%
Kent	1,190	432	6%	528	6%	960	6%	159	226	43%	605,213	6%
Keweenaw	10	0	0%	0	0%	0	0%	0	0	0%	2,202	0%
Lake	10	5	0%	7	0%	12	0%	109	4	57%	11,014	0%
Lapeer	50	18	0%	21	0%	39	0%	43	10	48%	90,875	1%
Leelanau	10	3	0%	7	0%	10	0%	46	4	57%	21,783	0%
Lenawee	70	25	0%	33	0%	58	0%	58	14	42%	100,801	1%
Livingston	70	24	0%	30	0%	54	0%	30	12	40%	182,575	2%
Luce	10	1	0%	0	0%	1	0%	15	0	0%	6,614	0%

Table 6: HIV/AIDS Cases Currently Living in Michigan, by County of Residence, 2010

COUNTY	EST PREV*	REPORTED PREVALENCE									CENSUS 2008 ESTIMATES	
		HIV, not AIDS		AIDS		TOTAL			CONCURRENT AIDS			
	Number	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total	Rate per 100,000	Number	Percent of AIDS cases	Number	Percent of Total
Mackinac	10	1	0%	0	0%	1	0%	9	0	0%	10,624	0%
Macomb	830	322	5%	351	4%	673	4%	81	177	50%	830,663	8%
Manistee	10	3	0%	8	0%	11	0%	45	3	38%	24,640	0%
Marquette	40	17	0%	14	0%	31	0%	47	11	79%	65,492	1%
Mason	10	3	0%	8	0%	11	0%	38	6	75%	28,782	0%
Mecosta	20	10	0%	7	0%	17	0%	41	4	57%	41,562	0%
Menominee	10	4	0%	1	0%	5	0%	21	1	100%	24,202	0%
Midland	30	8	0%	15	0%	23	0%	28	8	53%	82,605	1%
Missaukee	10	3	0%	4	0%	7	0%	47	1	25%	15,001	0%
Monroe	100	33	0%	45	1%	78	1%	51	23	51%	152,949	2%
Montcalm	30	9	0%	15	0%	24	0%	38	6	40%	62,971	1%
Montmorency	10	0	0%	3	0%	3	0%	29	2	67%	10,335	0%
Muskegon	190	82	1%	75	1%	157	1%	90	34	45%	174,344	2%
Newaygo	20	7	0%	11	0%	18	0%	37	4	36%	48,897	0%
Oakland	2,070	786	11%	893	11%	1,679	11%	140	396	44%	1,202,174	12%
Oceana	10	6	0%	6	0%	12	0%	43	4	67%	27,598	0%
Ogemaw	10	2	0%	2	0%	4	0%	19	1	50%	21,016	0%
Ontonagon	10	1	0%	1	0%	2	0%	29	1	100%	6,819	0%
Osceola	10	1	0%	3	0%	4	0%	17	0	0%	22,930	0%
Oscoda	10	0	0%	2	0%	2	0%	23	0	0%	8,836	0%
Otsego	20	5	0%	8	0%	13	0%	55	5	63%	23,808	0%
Ottawa	140	48	1%	63	1%	111	1%	43	30	48%	260,364	3%
Presque Isle	10	0	0%	1	0%	1	0%	7	1	100%	13,650	0%
Roscommon	20	6	0%	11	0%	17	0%	68	7	64%	25,042	0%
Saginaw	260	102	1%	105	1%	207	1%	103	48	46%	200,745	2%
Sanilac	20	4	0%	11	0%	15	0%	35	6	55%	43,024	0%
Schoolcraft	10	2	0%	0	0%	2	0%	24	0	0%	8,220	0%
Shiawassee	30	12	0%	13	0%	25	0%	35	7	54%	70,880	1%
St. Clair	110	49	1%	43	1%	92	1%	54	24	56%	168,894	2%
St. Joseph	40	10	0%	21	0%	31	0%	50	10	48%	62,232	1%
Tuscola	10	7	0%	5	0%	12	0%	21	3	60%	56,187	1%
Van Buren	90	38	1%	36	0%	74	0%	95	15	42%	77,801	1%
Washtenaw	670	274	4%	270	3%	544	4%	157	124	46%	347,376	3%
Wayne Total	8,900	3,146	45%	4,058	49%	7,204	47%	369	1,746	43%	1,949,929	19%
Wayne, excl. Detroit	*1,890*	*666*	*10%*	*860*	*10%*	*1,526*	*10%*	*147*	*380*	*44%*	*1,037,867*	*10%*
Detroit	*7,020*	*2,480*	*36%*	*3,198*	*38%*	*5,678*	*37%*	*623*	*1,366*	*43%*	*912,062*	*9%*
Wexford	20	5	0%	8	0%	13	0%	41	3	38%	31,673	0%
FOCUS AREAS¥												
Detroit Metro	12,070	4,354	62%	5,411	65%	9,765	64%	222	2,376	44%	4,395,484	44%
Out-State	6,260	2,369	34%	2,694	32%	5,063	33%	90	1,151	43%	5,607,938	56%
Total: Both Areas	18,320	6,723	96%	8,105	97%	14,828	97%	148	3,527	44%	10,003,422	100%
Prison	*390*	*203*	*3%*	*185*	*2%*	*388*	*3%*	*N/A*	*34*	*18%*	*N/A*	*N/A*
Total: Known Residence	17,950	6,926	99%	8,290	100%	15,216	100%	N/A	3,561	43%	N/A	N/A
Unknown	*90*	*42*	*1%*	*27*	*0%*	*69*	*0%*	*N/A*	*-*	*0%*	*N/A*	*N/A*
STATEWIDE TOTAL	**18,800**	**6,968**	**100%**	**8,317**	**100%**	**15,285**	**100%**	**153**	**3,561**	**43%**	**10,003,422**	**100%**

**See page 1-3 for descriptions of prevalence estimate calculations and pages 6-7,8 for risk category groupings. Risk categories used in Michigan are newly defined as of July 2007.*

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

Table 7: Sex, Race, and Risk Among HIV/AIDS Cases Currently Living in Michigan, 2010

MALES	**White**		**Black**		**Hispanic**		**Other or Unknown**		**Male Subtotal**	
Male-Male sex	3,561	75%	3,374	54%	290	53%	133	56%	7,358	62%
Injecting Drug Use	200	4%	753	12%	62	11%	12	5%	1,027	9%
Male-Male Sex/IDU	302	6%	369	6%	29	5%	15	6%	715	6%
Blood Products	68	1%	16	0%	2	0%	2	1%	88	1%
Heterosexual*	106	2%	401	6%	45	8%	10	4%	562	5%
Perinatal	20	0%	64	1%	3	1%	5	2%	92	1%
Undetermined	502	11%	1,323	21%	114	21%	61	26%	2,000	17%
PH-Male	*294*	*6%*	*917*	*15%*	*83*	*15%*	*37*	*16%*	*1,331*	*11%*
Unknown	*208*	*4%*	*406*	*6%*	*31*	*6%*	*24*	*10%*	*669*	*6%*
Male Subtotal	**4,759**	**40%**	**6,300**	**53%**	**545**	**5%**	**238**	**2%**	**11,842**	**100%**

FEMALES	**White**		**Black**		**Hispanic**		**Other or Unknown**		**Female Subtotal**	
Injecting Drug Use	143	21%	535	21%	30	19%	17	19%	725	21%
Blood Products	11	2%	4	0%	0	0%	0	0%	15	0%
Heterosexual	441	63%	1,492	60%	112	71%	56	63%	2,101	61%
HRH	*336*	*48%*	*888*	*36%*	*85*	*54%*	*30*	*34%*	*1,339*	*39%*
PH-Female	*105*	*15%*	*604*	*24%*	*27*	*17%*	*26*	*29%*	*762*	*22%*
Perinatal	13	2%	50	2%	9	6%	4	4%	76	2%
Undetermined*	88	13%	419	17%	7	4%	12	13%	526	15%
Female Subtotal	**696**	**20%**	**2,500**	**73%**	**158**	**5%**	**89**	**3%**	**3,443**	**100%**

TOTAL	**White**		**Black**		**Hispanic**		**Other or Unknown**		**Risk Total**	
Male-Male sex	3,561	65%	3,374	38%	290	41%	133	41%	7,358	48%
Injecting Drug Use	343	6%	1,288	15%	92	13%	29	9%	1,752	11%
Male-Male Sex/IDU	302	6%	369	4%	29	4%	15	5%	715	5%
Blood Products	79	1%	20	0%	2	0%	2	1%	103	1%
Heterosexual	547	10%	1,893	22%	157	22%	66	20%	2,663	17%
HRH	*442*	*8%*	*1,289*	*15%*	*130*	*18%*	*40*	*12%*	*1,901*	*12%*
PH-Female	*105*	*2%*	*604*	*7%*	*27*	*4%*	*26*	*8%*	*762*	*5%*
Perinatal	33	1%	114	1%	12	2%	9	3%	168	1%
Undetermined	590	11%	1,742	20%	121	17%	73	22%	2,526	17%
PH-Male	*294*	*5%*	*917*	*10%*	*83*	*12%*	*37*	*11%*	*1,331*	*9%*
Unknown	*296*	*5%*	*825*	*9%*	*38*	*5%*	*36*	*11%*	*1,195*	*8%*
RACE TOTAL	***5,455***	***36%***	***8,800***	***58%***	***703***	***5%***	***327***	***2%***	***15,285***	***100%***

**In the male subset all cases in the heterosexual category are HRH because the PH-Female category is not applicable to males. 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.*

Table 8: Sex, Race, and Age at HIV Diagnosis Among HIV/AIDS Cases Currently Living in Michigan, 2010

MALES	White		Black		Hispanic		Other or Unknown		Male Subtotal	
0 - 12 years	32	1%	69	1%	3	1%	6	3%	110	1%
13 - 19 years	77	2%	375	6%	19	3%	8	3%	479	4%
20 - 24 years	459	10%	929	15%	68	12%	31	13%	1,487	13%
25 - 29 years	793	17%	1,021	16%	106	19%	45	19%	1,965	17%
30 - 39 years	1,875	39%	2,103	33%	203	37%	94	39%	4,275	36%
40 - 49 years	1,106	23%	1,304	21%	97	18%	40	17%	2,547	22%
50 - 59 years	327	7%	420	7%	33	6%	12	5%	792	7%
60 years and over	90	2%	77	1%	16	3%	2	1%	185	2%
Unknown	0	0%	2	0%	0	0%	0	0%	2	0%
Male Subtotal	**4,759**	**40%**	**6,300**	**53%**	**545**	**5%**	**238**	**2%**	**11,842**	**100%**

FEMALES	White		Black		Hispanic		Other or Unknown		Female Subtotal	
0 - 12 years	14	2%	56	2%	9	6%	4	4%	83	2%
13 - 19 years	45	6%	135	5%	11	7%	3	3%	194	6%
20 - 24 years	133	19%	297	12%	21	13%	10	11%	461	13%
25 - 29 years	136	20%	389	16%	29	18%	17	19%	571	17%
30 - 39 years	220	32%	852	34%	53	34%	35	39%	1,160	34%
40 - 49 years	101	15%	545	22%	23	15%	12	13%	681	20%
50 - 59 years	38	5%	190	8%	8	5%	6	7%	242	7%
60 years and over	8	1%	36	1%	4	3%	2	2%	50	1%
Unknown	1	0%	0	0%	0	0%	0	0%	1	0%
Female Subtotal	**696**	**20%**	**2,500**	**73%**	**158**	**5%**	**89**	**3%**	**3,443**	**100%**

TOTAL	White		Black		Hispanic		Other or Unknown		Age Total	
0 - 12 years	46	1%	125	1%	12	2%	10	3%	193	1%
13 - 19 years	122	2%	510	6%	30	4%	11	3%	673	4%
20 - 24 years	592	11%	1,226	14%	89	13%	41	13%	1,948	13%
25 - 29 years	929	17%	1,410	16%	135	19%	62	19%	2,536	17%
30 - 39 years	2,095	38%	2,955	34%	256	36%	129	39%	5,435	36%
40 - 49 years	1,207	22%	1,849	21%	120	17%	52	16%	3,228	21%
50 - 59 years	365	7%	610	7%	41	6%	18	6%	1,034	7%
60 years and over	98	2%	113	1%	20	3%	4	1%	235	2%
Unknown	1	0%	2	0%	0	0%	0	0%	3	0%
RACE TOTAL	***5,455***	***36%***	***8,800***	***58%***	***703***	***5%***	***327***	***2%***	***15,285***	***100%***

Table 9: Sex, Risk and Age at HIV Diagnosis Among HIV/AIDS Cases Currently Living in Michigan, 2010

MALES	**0 - 12 years**		**13 - 19 years**		**20 - 24 years**		**25 - 29 years**		**30 - 39 years**		**40 - 49 years**		**50 - 59 years**		**60 years and over**		**Male Subtotal**	
Male-Male sex	0	0%	349	73%	1,117	75%	1,393	71%	2,697	63%	1,319	52%	389	49%	94	51%	7,358	62%
Injecting Drug Use	0	0%	3	1%	30	2%	89	5%	370	9%	408	16%	113	14%	13	7%	1,026	9%
Male-Male Sex/IDU	0	0%	16	3%	81	5%	121	6%	298	7%	153	6%	43	5%	3	2%	715	6%
Blood Products	14	13%	20	4%	17	1%	16	1%	16	0%	4	0%	1	0%	0	0%	88	1%
Heterosexual*	0	0%	8	2%	41	3%	96	5%	228	5%	127	5%	50	6%	12	6%	562	5%
Perinatal	88	80%	4	1%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	92	1%
Undetermined	8	7%	79	16%	201	14%	250	13%	666	16%	536	21%	196	25%	63	34%	1,999	17%
PH-Male	*0*	*0%*	*43*	*9%*	*134*	*9%*	*167*	*8%*	*475*	*11%*	*344*	*14%*	*126*	*16%*	*42*	*23%*	*1,331*	*11%*
Unknown	*8*	*7%*	*36*	*8%*	*67*	*5%*	*83*	*4%*	*191*	*4%*	*192*	*8%*	*70*	*9%*	*21*	*11%*	*668*	*6%*
Male Subtotal^	**110**	**1%**	**479**	**4%**	**1,487**	**13%**	**1,965**	**17%**	**4,275**	**36%**	**2,547**	**22%**	**792**	**7%**	**185**	**2%**	**11,840**	**100%**

FEMALES	**0 - 12 years**		**13 - 19 years**		**20 - 24 years**		**25 - 29 years**		**30 - 39 years**		**40 - 49 years**		**50 - 59 years**		**60 years and over**		**Female Subtotal**	
Injecting Drug Use	0	0%	13	7%	64	14%	95	17%	295	25%	204	30%	47	19%	7	14%	725	21%
Blood Products	0	0%	2	1%	2	0%	0	0%	5	0%	1	0%	2	1%	3	6%	15	0%
Heterosexual	0	0%	147	76%	330	72%	384	67%	680	59%	385	57%	144	60%	31	62%	2,101	61%
HRH	*0*	*0%*	*94*	*48%*	*210*	*46%*	*247*	*43%*	*436*	*38%*	*238*	*35%*	*96*	*40%*	*18*	*36%*	*1,339*	*39%*
PH-Female	*0*	*0%*	*53*	*27%*	*120*	*26%*	*137*	*24%*	*244*	*21%*	*147*	*22%*	*48*	*20%*	*13*	*26%*	*762*	*22%*
Perinatal	76	92%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	76	2%
Undetermined*	7	8%	32	16%	65	14%	92	16%	180	16%	91	13%	49	20%	9	18%	525	15%
Female Subtotal^	**83**	**2%**	**194**	**6%**	**461**	**13%**	**571**	**17%**	**1,160**	**34%**	**681**	**20%**	**242**	**7%**	**50**	**1%**	**3,442**	**100%**

TOTAL	**0 - 12 years**		**13 - 19 years**		**20 - 24 years**		**25 - 29 years**		**30 - 39 years**		**40 - 49 years**		**50 - 59 years**		**60 years and over**		**Age Total**	
Male-Male sex	0	0%	349	52%	1,117	57%	1,393	55%	2,697	50%	1,319	41%	389	38%	94	40%	7,358	48%
Injecting Drug Use	0	0%	16	2%	94	5%	184	7%	665	12%	612	19%	160	15%	20	9%	1,751	11%
Male-Male Sex/IDU	0	0%	16	2%	81	4%	121	5%	298	5%	153	5%	43	4%	3	1%	715	5%
Blood Products	14	7%	22	3%	19	1%	16	1%	21	0%	5	0%	3	0%	3	1%	103	1%
Heterosexual	0	0%	155	23%	371	19%	480	19%	908	17%	512	16%	194	19%	43	18%	2,663	17%
HRH	*0*	*0%*	*102*	*15%*	*251*	*13%*	*343*	*14%*	*664*	*12%*	*365*	*11%*	*146*	*14%*	*30*	*13%*	*1,901*	*12%*
PH-Female	*0*	*0%*	*53*	*8%*	*120*	*6%*	*137*	*5%*	*244*	*4%*	*147*	*5%*	*48*	*5%*	*13*	*6%*	*762*	*5%*
Perinatal	164	85%	4	1%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	168	1%
Undetermined	15	8%	111	16%	266	14%	342	13%	846	16%	627	19%	245	24%	72	31%	2,524	17%
PH-Male	*0*	*0%*	*43*	*6%*	*134*	*7%*	*167*	*7%*	*475*	*9%*	*344*	*11%*	*126*	*12%*	*42*	*18%*	*1,331*	*9%*
Unknown	*15*	*8%*	*68*	*10%*	*132*	*7%*	*175*	*7%*	*371*	*7%*	*283*	*9%*	*119*	*12%*	*30*	*13%*	*1,193*	*8%*
AGE TOTAL^	***193***	***1%***	***673***	***4%***	***1,948***	***13%***	***2,536***	***17%***	***5,435***	***36%***	***3,228***	***21%***	***1,034***	***7%***	***235***	***2%***	***15,282***	***100%***

**In the male subset all cases in the heterosexual category are HRH because the PH-Female category is not applicable to males. 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.*

^ Not included in this table are the following cases with unknown age at diagnosis: one male IDU, one male with unknown risk, and one female with unknown risk.

Table 10a: Michigan[#] 2006 HIV Incidence[*] Estimate for Persons 13 and Older at HIV Diagnosis

	Num	%	Rate ^
SEX			
Male	700	80%	17.2
Female	170	20%	3.9
RACE/ETHNICITY			
Black	480	55%	42.3
All Other Race/Ethnicity Groups	390	45%	5.4
AGE AT HIV DIAGNOSIS			
13-29 years	250	29%	10.3
30-39 years	220	25%	16.5
40 years and older	390	45%	8.4
MODE OF TRANSMISSION			
MSM	370	43%	na
Other/Unknown	490	56%	na
Total	**870**	**100%**	**10.4**

Table 10b: U.S.[#] 2006 HIV Incidence[*] Estimate for Persons 13 and Older at HIV Diagnosis

	Num	%	Rate ^
SEX			
Male	41,400	73%	34.3
Female	15,000	27%	11.9
RACE/ETHNICITY			
White	19,600	35%	11.5
Black	24,900	45%	83.7
Hispanic	9,700	17%	29.3
Asian/Pacific Islander	1,200	2%	10.3
American Indian/Alaskan Native	290	1%	14.6
AGE AT HIV DIAGNOSIS			
13-29	19,200	34%	26.8
30-39	17,400	31%	42.6
40-49	13,900	35%	30.7
50 +	5,800	10%	6.5
MODE OF TRANSMISSION			
MSM	28,700	53%	na
IDU	6,600	12%	na
MSM/IDU	2,100	4%	na
Heterosexual	16,800	31%	na
TOTAL	**56,300**	**100%**	**22.8**

Note: The categories displayed in this table satisfy the minimum requirements of 200 reported HIV cases, 40 incidence tests and 10 recent incidence results.

[#]These numbers have been adjusted for reporting delay as in the 2002-2006 MI Trends. Numbers are estimates and rounded to the nearest ten. All subcategories may not add up to the Michigan estimated total.

*Estimate of recent HIV infections in 2006

^Rate per 100,000 population age 13 and older, 2006 intercensal estimates

Table 11: Disease status of persons with met need compared to persons with unmet need, Michigan, as of June 2010

	Met need		Unmet need		Total		Overall Percent unmet need
	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total	
Disease Status							
HIV, not AIDS	3,304	38%	2,862	51%	6,166	43%	46%
AIDS	5,476	62%	2,772	49%	8,248	57%	34%
Race/Ethnicity [§]							
White	3,349	38%	1,902	34%	5,251	36%	36%
Black	4,884	56%	3,300	59%	8,184	57%	40%
Hispanic	331	4%	338	6%	669	5%	51%
Asian/PI	43	<1%	27	<1%	70	<1%	39%
Am Indian/AN	26	<1%	16	<1%	42	<1%	38%
Multi/Unk/Other	147	2%	51	1%	198	1%	26%
Sex/Race							
Males	6,786	77%	4,407	78%	11,193	78%	39%
White Males	*2,932*	*33%*	*1,654*	*29%*	*4,586*	*32%*	*36%*
Black Males	*3,446*	*39%*	*2,418*	*43%*	*5,864*	*41%*	*41%*
Hispanic Males	*249*	*3%*	*265*	*5%*	*514*	*4%*	*52%*
Other Males	*159*	*2%*	*70*	*1%*	*229*	*2%*	*31%*
Females	1,994	23%	1,227	22%	3,221	22%	38%
White Females	*417*	*5%*	*248*	*4%*	*665*	*5%*	*37%*
Black Females	*1,438*	*16%*	*882*	*16%*	*2,320*	*16%*	*38%*
Hispanic Females	*82*	*1%*	*73*	*1%*	*155*	*1%*	*47%*
Other Females	*57*	*1%*	*24*	*<1%*	*81*	*1%*	*30%*
Mode of Transmission							
MSM	4,486	51%	2,526	45%	7,012	49%	36%
IDU	828	9%	889	16%	1,717	12%	52%
MSM/IDU	397	5%	331	6%	728	5%	45%
Heterosexual	1,651	19%	892	16%	2,543	18%	35%
HRH	*1,188*	*14%*	*657*	*12%*	*1,845*	*13%*	*36%*
PH-Female	*463*	*5%*	*235*	*4%*	*698*	*5%*	*34%*
Undetermined	1,230	14%	916	16%	2,146	15%	43%
PH-Male	*690*	*8%*	*524*	*9%*	*1,214*	*8%*	*43%*
Unknown	*540*	*6%*	*392*	*7%*	*932*	*6%*	*42%*
Other*	188	2%	80	1%	268	2%	30%
Age at HIV diagnosis							
0 - 12 yrs	143	2%	44	1%	187	1%	24%
13 - 19 yrs	352	4%	244	4%	596	4%	41%
20 - 24 yrs	976	11%	803	14%	1,779	12%	45%
25 - 29 yrs	1,391	16%	1,011	18%	2,402	17%	42%
30 - 34 yrs	1,606	18%	1,100	20%	2,706	19%	41%
35 - 39 yrs	1,587	18%	938	17%	2,525	18%	37%
40 - 44 yrs	1,215	14%	701	12%	1,916	13%	37%
45 - 49 yrs	746	8%	402	7%	1,148	8%	35%
50 - 54 yrs	426	5%	223	4%	649	5%	34%
55 - 59 yrs	197	2%	90	2%	287	2%	31%
60+ years	141	2%	78	1%	219	2%	36%
Current Residence							
Detroit Metro Area	5,625	64%	3,426	61%	9,051	63%	38%
Lapeer	*29*	*<1%*	*7*	*<1%*	*36*	*<1%*	*19%*
Macomb	*422*	*5%*	*208*	*4%*	*630*	*4%*	*33%*
Monroe	*43*	*<1%*	*32*	*1%*	*75*	*1%*	*43%*
Oakland	*946*	*11%*	*605*	*11%*	*1,551*	*11%*	*39%*
St Clair	*58*	*1%*	*29*	*1%*	*87*	*1%*	*33%*
Wayne co, excl. Detroit	*928*	*11%*	*493*	*9%*	*1,421*	*10%*	*35%*
Detroit	*3,199*	*36%*	*2,052*	*36%*	*5,251*	*36%*	*39%*
Out-State Michigan	2,993	34%	1,951	35%	4,944	34%	39%
Washtenaw County	*327*	*4%*	*187*	*3%*	*514*	*4%*	*36%*
Berrien County	*109*	*1%*	*116*	*2%*	*225*	*2%*	*52%*
Genesee County	*317*	*4%*	*222*	*4%*	*539*	*4%*	*41%*
Allegan, Kent, Muskegon and Ottawa Counties	*830*	*9%*	*441*	*8%*	*1,271*	*9%*	*35%*
Jackson County	*143*	*2%*	*165*	*3%*	*308*	*2%*	*54%*
Kalamazoo and Calhoun Counties	*235*	*3%*	*177*	*3%*	*412*	*3%*	*43%*
Clinton, Eaton and Ingham Counties	*323*	*4%*	*187*	*3%*	*510*	*4%*	*37%*
Saginaw, Bay and Midland Counties	*157*	*2%*	*128*	*2%*	*285*	*2%*	*45%*
Other Out-State Counties	*552*	*6%*	*328*	*6%*	*880*	*6%*	*37%*
Other/Unknown[¥]	162	2%	257	5%	419	3%	61%
Total	***8,780***	***100%***	***5,634***	***100%***	***14,414***	***100%***	***39%***

[§] In this report, persons described as white, black, Asian/Pacific Islander (PI) or American Indian/Alaskan Native (AN) are all non-Hispanic. Persons described as Hispanic could be of any race.

**'Other' included Blood Products and Perinatal exposure*

Table 12: Gonorrhea, Syphilis, and Chlamydia Case by Sex, Race and Age Group, Michigan, 2009

	Gonorrhea			P&S Syphilis*			Chlamydia			Census 2006 Estimate
	Num	%	Rate^	Num	%	Rate^	Num	%	Rate^	
RACE/ ETHNICITY										
White	1,550	10%	20.0	58	26%	0.7	8,964	19%	115.7	7,750,818
Black	7,813	50%	556.9	157	70%	11.2	17,471	36%	1245.2	1,403,051
Hispanic	203	1%	49.1	4	2%	1.0	1,017	2%	245.8	413,827
Other/Multi	207	1%	47.5	4	2%	0.9	827	2%	189.8	435,726
Unknown Race	5,773	37%	N/A	1	0%	N/A	20,008	41%	N/A	N/A
SEX & RACE										
Males	6,285	40%	127.6	185	83%	3.8	12,216	25%	248.1	4,923,929
White Males	*393*	*3%*	*10.3*	*53*	*24%*	*1.4*	*2,072*	*4%*	*54.2*	*3,825,990*
Black Males	*3,761*	*24%*	*567.3*	*125*	*56%*	*18.9*	*5,649*	*12%*	*852.0*	*662,992*
Hispanic Males	*62*	*0%*	*28.4*	*3*	*1%*	*1.4*	*269*	*1%*	*123.4*	*217,942*
Other Males	*66*	*0%*	*N/A*	*3*	*1%*	*N/A*	*209*	*0%*	*N/A*	*217,005*
Unknown Males	*2,003*	*13%*	*N/A*	*1*	*0%*	*N/A*	*4,017*	*8%*	*N/A*	*N/A*
Females	9,092	58%	179.0	39	17%	0.0	35,884	74%	706.4	5,079,493
White Females	*1,156*	*7%*	*29.5*	*5*	*2%*	*0.1*	*6,890*	*14%*	*175.5*	*3,924,828*
Black Females	*3,965*	*26%*	*535.8*	*32*	*14%*	*4.3*	*11,800*	*24%*	*1594.5*	*740,059*
Hispanic Fem.	*141*	*1%*	*72.0*	*1*	*0%*	*0.5*	*748*	*2%*	*381.9*	*195,885*
Other Females	*140*	*1%*	*N/A*	*1*	*0%*	*N/A*	*615*	*1%*	*N/A*	*218,721*
Unknown Fem.	*3,690*	*24%*	*N/A*	*0*	*0%*	*N/A*	*15,831*	*33%*	*N/A*	*N/A*
Unknown Sex - All Races	169	1%	N/A	0	0%	N/A	187	0%	N/A	N/A
Age										
0-4 years	11	0%	1.8	0	0%	0.0	12	0%	1.9	624,295
5-9 years	10	0%	1.5	0	0%	0.0	11	0%	1.7	645,446
10-14 years	153	1%	22.5	0	0%	0.0	625	1%	92.0	679,592
15-19 years	5,342	34%	722.3	18	8%	2.4	20,394	42%	2757.5	739,588
20-24 years	4,911	32%	737.0	43	19%	6.5	16,215	34%	2433.6	666,310
25-29 years	2,164	14%	339.1	45	20%	7.1	6,008	12%	941.6	638,091
30-34 years	1,236	8%	209.2	27	12%	4.6	2,408	5%	407.5	590,880
35-39 years	701	5%	103.7	28	13%	4.1	1,245	3%	184.2	676,048
40-44 years	395	3%	55.5	21	9%	3.0	604	1%	84.9	711,151
45-54 years	425	3%	27.6	34	15%	2.2	483	1%	31.4	1,539,667
55-64 years	110	1%	9.4	7	3%	0.6	105	0%	9.0	1,170,708
65 and over	57	0%	4.4	1	0%	0.1	77	0%	5.9	1,301,223
Unknown Age	31	0%	N/A	0	0%	N/A	100	0%	N/A	N/A
Total	**15,546**	**100%**	**155.4**	**224**	**100%**	**2.2**	**48,287**	**100%**	**482.7**	**10,003,422**

* P&S: Primary and Secondary Syphilis
^ Rate per 100,000

Table 13: Gonorrhea, Syphilis, and Chlamydia by Area and Local Health Department Jurisdiction, 2009

Local Health Department Jurisdiction	Gonorrhea		P&S Syphilis*		Chlamydia		Census 2008 Estimate
	Cases	Rate^	Cases	Rate^	Cases	Rate^	
Allegan	46	40.7	0	0.0	236	208.9	112,975
Barry/Eaton	50	30.2	0	0.0	379	228.8	165,671
Bay	38	35.4	0	0.0	305	283.7	107,495
Benzie/Leelanau	7	17.9	0	0.0	60	153.1	39,179
Berrien	332	208.2	1	0.6	846	530.5	159,481
Br/Hills/St Joseph	27	17.5	0	0.0	271	175.8	154,170
Calhoun	329	242.2	2	1.5	786	578.5	135,861
Chippewa	-	0.0	1	2.6	51	130.9	38,971
Central MI Dist	55	29.4	1	0.5	359	191.6	187,343
Delta/Menominee	6	9.8	0	0.0	76	123.8	61,381
Dickinson/Iron	2	5.2	0	0.0	56	144.3	38,813
District #2	10	14.9	0	0.0	83	123.3	67,340
District #4	8	10.0	0	0.0	61	76.4	79,859
District #10	28	10.7	3	1.2	456	174.9	260,696
Genesee	1,169	272.6	18	4.2	3,279	764.7	428,790
Grand Traverse	29	33.7	0	0.0	256	297.4	86,071
Huron	1	3.0	0	0.0	35	106.7	32,805
Ingham	384	138.4	13	4.7	1,705	614.4	277,528
Ionia	9	14.1	0	0.0	96	150.4	63,833
Jackson	149	93.0	1	0.6	678	423.3	160,180
Kalamazoo	583	237.1	4	1.6	1,594	648.2	245,912
Kent	869	143.6	16	2.6	3,008	497.0	605,213
Lapeer	16	17.6	0	0.0	115	126.5	90,875
Lenawee	41	40.7	1	1.0	229	227.2	100,801
Livingston	27	14.8	3	1.6	203	111.2	182,575
LMAS District	6	17.2	0	0.0	29	83.1	34,896
Macomb	572	68.9	2	0.2	2,221	267.4	830,663
Marquette	2	3.1	0	0.0	117	178.6	65,492
Midland	28	33.9	1	1.2	118	142.8	82,605
Monroe	51	33.3	0	0.0	306	200.1	152,949
Muskegon	403	231.2	1	0.6	1,364	782.4	174,344
Mid-MI District	32	18.3	2	1.1	289	165.2	174,942
NW Michigan	9	8.4	1	0.9	144	134.1	107,388
Oakland	984	81.9	17	1.4	3,668	305.1	1,202,174
Ottawa	55	21.1	0	0.0	502	192.8	260,364
Saginaw	245	122.0	0	0.0	1,084	540.0	200,745
Sanilac	6	13.9	0	0.0	46	106.9	43,024
Shiawassee	21	29.6	1	1.4	100	141.1	70,880
St Clair	123	72.8	0	0.0	397	235.1	168,894
Tuscola	15	26.7	0	0.0	97	172.6	56,187
Van Buren/Cass	40	31.3	0	0.0	337	263.3	127,986
Washtenaw	329	94.7	8	2.3	1,145	329.6	347,376
Wayne excl Detroit	778	75.0	11	1.1	3,262	314.3	1,037,867
City of Detroit	7,631	836.7	116	12.7	17,741	1945.2	912,062
WestUpDist	1	1.5	0	0.0	97	141.1	68,766
Detroit Metro Area#	10,154	231.0	146	3.3	27,694	630.1	4,395,484
Out-State	5,392	96.1	78	1.4	20,594	367.2	5,607,938
Total	***15,546***	***155.4***	***224***	***2.2***	***48,287***	***482.7***	***10,003,422***

#Detroit Metro Area includes Lapeer, Monroe, Macomb, Oakland, St. Clair, and Wayne Counties

* P&S: Primary and Secondary Syphilis

^ Rate per 100,000

Table 13: County Estimates* for Hepatitis C, Michigan 2007

	Ever infected with HCV *(estimated 1.6% of population)*	***Chronically infected with HCV*** *(estimated 1.3% of population)*	***Census 2006 Estimate***
Allegan	1,816	1,476	113,501
Barry/Eaton	2,674	2,173	167,136
Bay	1,734	1,409	108,390
Benzie/Leelanau	636	517	39,764
Berrien	2,587	2,102	161,705
Br/Hills/St Joseph	2,494	2,026	155,858
Calhoun	2,208	1,794	137,991
Chippewa	619	503	38,674
Central MI Dist	3,053	2,480	190,805
Delta/Menominee	1,006	817	62,852
Dickinson/Iron	637	518	39,824
District #2	1,110	902	69,395
District #4	1,312	1,066	81,971
District #10	4,257	3,459	266,085
Genesee	7,071	5,746	441,966
Grand Traverse	1,359	1,104	84,952
Huron	546	444	34,143
Ingham	4,430	3,600	276,898
Ionia	1,037	843	64,821
Jackson	2,622	2,130	163,851
Kalamazoo	3,852	3,129	240,720
Kent	9,592	7,794	599,524
Lapeer	1,500	1,219	93,761
Lenawee	1,635	1,328	102,191
Livingston	2,952	2,399	184,511
LMAS District	578	470	36,143
Macomb	13,326	10,827	832,861
Marquette	1,035	841	64,675
Midland	1,341	1,089	83,792
Monroe	2,481	2,015	155,035
Muskegon	2,804	2,278	175,231
Mid-MI District	2,816	2,288	175,993
NW Michigan	1,747	1,420	109,203
Oakland	19,428	15,785	1,214,255
Ottawa	4,123	3,350	257,671
Saginaw	3,301	2,682	206,300
Sanilac	711	578	44,448
Shiawassee	1,167	948	72,912
St Clair	2,748	2,232	171,725
Tuscola	926	752	57,878
Van Buren/Cass	2,086	1,695	130,347
Washtenaw	5,505	4,473	344,047
Wayne excl Detroit	17,612	14,310	1,100,732
City of Detroit	13,938	11,325	871,121
WestUpDist	1,120	910	69,985
Detroit Metro Area[δ]	71,032	57,713	4,439,490
Out-State	90,498	73,530	5,656,153
Total	***161,530***	***131,243***	***10,095,643***

*Estimates are based on NHANES, see page 3-36 for more detail.

δDetroit Metro Area includes Lapeer, Monroe, Macomb, Oakland, St. Clair, and Wayne Counties

Table 14: Reported Cases of Acute and Chronic Hepatitis C by Sex, Race and Age Group, Michigan, 2007

	Acute hepatitis C			Chronic hepatitis C			Census 2006 Estimate
	Num	%	Rate	Num	%	Rate	
SEX							
Male	53	59%	1.1	3,550	63%	71.4	4,969,692
Female	37	41%	0.7	2,020	37%	39.4	5,125,951
RACE[§]							
White	50	56%	0.6	1,933	34%	23.6	8,198,927
Black	11	12%	0.8	819	14%	56.7	1,444,451
Asian	0	0%	0.0	29	1%	12.2	237,389
Native Hawaiian/ Pacific Islander	0	0%	0.0	3	0%	79.9	3,757
American Indian/ Alaska Native	1	1%	1.6	38	1%	62.5	60,820
Other	2	2%	1.3	121	2%	80.5	150,299
Unknown Race	26	29%	N/A	2,716	48%	N/A	N/A
AGE							
0-4 years	1	1%	0.2	11	0%	1.7	638,195
5-9 years	0	0%	0.0	5	0%	0.8	664,169
10-14 years	0	0%	0.0	1	0%	0.1	717,303
15-19 years	7	8%	0.9	54	1%	7.2	745,908
20-24 years	8	9%	1.2	135	2%	19.4	695,604
25-29 years	9	10%	1.4	206	4%	31.8	648,347
30-34 years	8	9%	1.3	150	3%	24.0	624,512
35-39 years	6	7%	0.9	284	5%	40.4	703,352
40-44 years	10	11%	1.3	547	10%	72.1	758,900
45-49 years	19	21%	1.2	1,014	18%	66.2	1,530,887
50-54 years	10	11%	1.6	1,532	27%	238.4	642,566
55-64 years	8	9%	1.7	1,316	23%	283.0	465,036
65 and over	4	4%	0.3	394	7%	31.2	1,260,864
Unknown Age	0	0%	N/A	11	0%	N/A	N/A
Total	***90***	***100%***	***0.9***	***5,660***	***100%***	***56.1***	***10,095,643***

[§]Hispanic ethnicity is not categorized due to incomplete data. Each racial category includes both Hispanic and non-Hispanic persons

Table 16: Characteristics of HIV/Hepatitis Co-Infected Persons in Care, in Southeast Michigan, Adult/Adolescent Spectrum of Disease (ASD), 2001-2003

	ALL (N = 1,790)	HAV/HIV Co-infected (N = 64)	HBV/HIV Co-infected (N = 207)	HCV/HIV Co-infected (N = 353)
SEX			*	
Male	58%	66%	68%	50%
Female	42%	34%	32%	50%
RACE/ETHNICITY				*
White	20%	30%	17%	13%
Black	75%	67%	80%	83%
Other/Multi	5%	3%	2%	4%
AGE				*
<20	1%	0%	0%	0%
20-29	10%	11%	5%	3%
30-39	27%	14%	29%	9%
40-49	38%	39%	38%	43%
50 and older	24%	36%	28%	44%
RISK FOR HIV			*	*
MSM	38%	45%	45%	10%
IDU	30%	34%	41%	78%
Blood Exposure	2%	5%	1%	5%
High-Risk Heterosexual	21%	8%	8%	6%
Presumed Heterosexual	8%	8%	3%	1%
Unknown/Other	1%	0%	<1%	0%
HAV Vaccination	14%	5%*	13%	23%*
HBV Vaccination	21%	24%	4%*	14%*

*Proportions significantly different from the proportions among all the persons in ASD $p<0.05$ in Chi square test comparing the distribution of co-infected patients among the categories of the demographic, vaccination or transmission risk factor to the distribution of all the persons in ASD.

NOTE: Hepatitis A (HAV), Hepatitis B (HBV), or Hepatitis C (HCV) co-infection is defined as diagnosis of HAV, HBV (acute or chronic) or HCV, recorded in ASD at any time in the past. Age is the age as of the last care recorded in 2001-2003. HAV and HBV Vaccination include vaccinations recorded in ASD at any time in the past.

Table 17: Sex, Race, and Risk Among Currently Incarcerated HIV/AIDS Cases, Michigan, 2010

MALES	**White**		**Black**		**Hispanic**		**Other or Unknown**		**Male Subtotal**	
Male-Male sex	25	42%	71	29%	2	18%	2	40%	100	31%
Injecting Drug Use	8	13%	40	17%	4	36%	1	20%	53	17%
Male-Male Sex/IDU	12	20%	28	12%	2	18%	1	20%	43	14%
Blood Products	2	3%	0	0%	0	0%	0	0%	2	1%
Heterosexual*	4	7%	29	12%	2	18%	1	20%	36	11%
Perinatal	0	0%	1	0%	0	0%	0	0%	1	0%
Undetermined	9	15%	73	30%	1	9%	0	0%	83	26%
PH-Male	*7*	*12%*	*67*	*28%*	*1*	*9%*	*0*	*0%*	*75*	*24%*
Unknown	*2*	*3%*	*6*	*2%*	*0*	*0%*	*0*	*0%*	*8*	*3%*
Male Subtotal	**60**	**19%**	**242**	**76%**	**11**	**3%**	**5**	**2%**	**318**	**100%**

FEMALES	**White**		**Black**		**Hispanic**		**Other or Unknown**		**Female Subtotal**	
Injecting Drug Use	2	29%	5	50%	0	0%	0	0%	7	41%
Blood Products	0	0%	0	0%	0	0%	0	0%	0	0%
Heterosexual	5	71%	5	50%	0	0%	0	0%	10	59%
HRH	*1*	*14%*	*5*	*50%*	*0*	*0%*	*0*	*0%*	*6*	*35%*
PH-Female	*4*	*57%*	*0*	*0%*	*0*	*0%*	*0*	*0%*	*4*	*24%*
Perinatal	0	0%	0	0%	0	0%	0	0%	0	0%
Undetermined*	0	0%	0	0%	0	0%	0	0%	0	0%
Female Subtotal	**7**	**41%**	**10**	**59%**	**0**	**0%**	**0**	**0%**	**17**	**100%**

TOTAL	**White**		**Black**		**Hispanic**		**Other or Unknown**		**Risk Total**	
Male-Male sex	25	37%	71	28%	2	18%	2	40%	100	30%
Injecting Drug Use	10	15%	45	18%	4	36%	1	20%	60	18%
Male-Male Sex/IDU	12	18%	28	11%	2	18%	1	20%	43	13%
Blood Products	2	3%	0	0%	0	0%	0	0%	2	1%
Heterosexual	9	13%	34	13%	2	18%	1	20%	46	14%
HRH	*5*	*7%*	*34*	*13%*	*2*	*18%*	*1*	*20%*	*42*	*13%*
PH-Female	*4*	*6%*	*0*	*0%*	*0*	*0%*	*0*	*0%*	*4*	*1%*
Perinatal	0	0%	1	0%	0	0%	0	0%	1	0%
Undetermined	9	13%	73	29%	1	9%	0	0%	83	25%
PH-Male	*7*	*10%*	*67*	*27%*	*1*	*9%*	*0*	*0%*	*75*	*22%*
Unknown	*2*	*3%*	*6*	*2%*	*0*	*0%*	*0*	*0%*	*8*	*2%*
RACE TOTAL	***67***	***20%***	***252***	***75%***	***11***	***3%***	***5***	***1%***	***335***	***100%***

**In the male subset all cases in the heterosexual category are HRH because the PH-Female category is not applicable to males. 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.*

Table 18: Sex, Race, and Age at HIV Diagnosis Among Currently Incarcerated HIV/AIDS Cases, Michigan, 2010

MALES	White		Black		Hispanic		Other or Unknown		Male Subtotal	
0 - 12 years	0	0%	1	0%	0	0%	0	0%	1	0%
13 - 19 years	1	2%	10	4%	0	0%	1	20%	12	4%
20 - 24 years	12	20%	38	16%	1	9%	0	0%	51	16%
25 - 29 years	14	23%	51	21%	5	45%	2	40%	72	23%
30 - 39 years	22	37%	103	43%	4	36%	2	40%	131	41%
40 - 49 years	10	17%	31	13%	1	9%	0	0%	42	13%
50 - 59 years	1	2%	8	3%	0	0%	0	0%	9	3%
60 years and over	0	0%	0	0%	0	0%	0	0%	0	0%
Male Subtotal	**60**	**19%**	**242**	**76%**	**11**	**3%**	**5**	**2%**	**318**	**100%**

FEMALES	White		Black		Hispanic		Other or Unknown		Female Subtotal	
0 - 12 years	0	0%	0	0%	0	0%	0	0%	0	0%
13 - 19 years	0	0%	1	10%	0	0%	0	0%	1	6%
20 - 24 years	2	29%	1	10%	0	0%	0	0%	3	18%
25 - 29 years	2	29%	3	30%	0	0%	0	0%	5	29%
30 - 39 years	2	29%	3	30%	0	0%	0	0%	5	29%
40 - 49 years	1	14%	2	20%	0	0%	0	0%	3	18%
50 - 59 years	0	0%	0	0%	0	0%	0	0%	0	0%
60 years and over	0	0%	0	0%	0	0%	0	0%	0	0%
Female Subtotal	**7**	**41%**	**10**	**59%**	**0**	**0%**	**0**	**0%**	**17**	**100%**

TOTAL	White		Black		Hispanic		Other or Unknown		Age Total	
0 - 12 years	0	0%	1	0%	0	0%	0	0%	1	0%
13 - 19 years	1	1%	11	4%	0	0%	1	20%	13	4%
20 - 24 years	14	21%	39	15%	1	9%	0	0%	54	16%
25 - 29 years	16	24%	54	21%	5	45%	2	40%	77	23%
30 - 39 years	24	36%	106	42%	4	36%	2	40%	136	41%
40 - 49 years	11	16%	33	13%	1	9%	0	0%	45	13%
50 - 59 years	1	1%	8	3%	0	0%	0	0%	9	3%
60 years and over	0	0%	0	0%	0	0%	0	0%	0	0%
RACE TOTAL	***67***	***20%***	***252***	***75%***	***11***	***3%***	***5***	***1%***	***335***	***100%***

Table 19: Sex, Risk and Age at HIV Diagnosis Among Currently Incarcerated HIV/AIDS Cases, Michigan, 2010

MALES	**0 - 12 years**		**13 - 19 years**		**20 - 24 years**		**25 - 29 years**		**30 - 39 years**		**40 - 49 years**		**50 - 59 years**		**60 years and over**		**Male Subtotal**	
Male-Male sex	0	0%	7	58%	28	55%	27	38%	30	23%	6	14%	2	22%	0	0%	100	31%
Injecting Drug Use	0	0%	0	0%	4	8%	6	8%	29	22%	12	29%	2	22%	0	0%	53	17%
Male-Male Sex/IDU	0	0%	1	8%	8	16%	12	17%	15	11%	5	12%	2	22%	0	0%	43	14%
Blood Products	0	0%	1	8%	1	2%	0	0%	0	0%	0	0%	0	0%	0	0%	2	1%
Heterosexual*	0	0%	2	17%	3	6%	12	17%	15	11%	4	10%	0	0%	0	0%	36	11%
Perinatal	1	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	1	0%
Undetermined	0	0%	1	8%	7	14%	15	21%	42	32%	15	36%	3	33%	0	0%	83	26%
PH-Male	*0*	*0%*	*1*	*8%*	*7*	*14%*	*15*	*21%*	*37*	*28%*	*12*	*29%*	*3*	*33%*	*0*	*0%*	*75*	*24%*
Unknown	*0*	*0%*	*0*	*0%*	*0*	*0%*	*0*	*0%*	*5*	*4%*	*3*	*7%*	*0*	*0%*	*0*	*0%*	*8*	*3%*
Male Subtotal	**1**	**0%**	**12**	**4%**	**51**	**16%**	**72**	**23%**	**131**	**41%**	**42**	**13%**	**9**	**3%**	**0**	**0%**	**318**	**100%**

FEMALES	**0 - 12 years**		**13 - 19 years**		**20 - 24 years**		**25 - 29 years**		**30 - 39 years**		**40 - 49 years**		**50 - 59 years**		**60 years and over**		**Female Subtotal**	
Injecting Drug Use	0	0%	0	0%	0	0%	4	80%	1	20%	2	67%	0	0%	0	0%	7	41%
Blood Products	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Heterosexual	0	0%	1	100%	3	100%	1	20%	4	80%	1	33%	0	0%	0	0%	10	59%
HRH	*0*	*0%*	*1*	*100%*	*1*	*33%*	*1*	*20%*	*3*	*60%*	*0*	*0%*	*0*	*0%*	*0*	*0%*	*6*	*35%*
PH-Female	*0*	*0%*	*0*	*0%*	*2*	*67%*	*0*	*0%*	*1*	*20%*	*1*	*33%*	*0*	*0%*	*0*	*0%*	*4*	*24%*
Perinatal	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Undetermined*	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Female Subtotal	**0**	0%	**1**	6%	**3**	18%	**5**	29%	**5**	29%	**3**	18%	**0**	0%	**0**	0%	**17**	100%

TOTAL	**0 - 12 years**		**13 - 19 years**		**20 - 24 years**		**25 - 29 years**		**30 - 39 years**		**40 - 49 years**		**50 - 59 years**		**60 years and over**		**Age Total**	
Male-Male sex	0	0%	7	54%	28	52%	27	35%	30	22%	6	13%	2	22%	0	0%	100	30%
Injecting Drug Use	0	0%	0	0%	4	7%	10	13%	30	22%	14	31%	2	22%	0	0%	60	18%
Male-Male Sex/IDU	0	0%	1	8%	8	15%	12	16%	15	11%	5	11%	2	22%	0	0%	43	13%
Blood Products	0	0%	1	8%	1	2%	0	0%	0	0%	0	0%	0	0%	0	0%	2	1%
Heterosexual	0	0%	3	23%	6	11%	13	17%	19	14%	5	11%	0	0%	0	0%	46	14%
HRH	*0*	*0%*	*3*	*23%*	*4*	*7%*	*13*	*17%*	*18*	*13%*	*4*	*9%*	*0*	*0%*	*0*	*0%*	*42*	*13%*
PH-Female	*0*	*0%*	*0*	*0%*	*2*	*4%*	*0*	*0%*	*1*	*1%*	*1*	*2%*	*0*	*0%*	*0*	*0%*	*4*	*1%*
Perinatal	1	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	1	0%
Undetermined	0	0%	1	8%	7	13%	15	19%	42	31%	15	33%	3	33%	0	0%	83	25%
PH-Male	*0*	*0%*	*1*	*8%*	*7*	*13%*	*15*	*19%*	*37*	*27%*	*12*	*27%*	*3*	*33%*	*0*	*0%*	*75*	*22%*
Unknown	*0*	*0%*	*0*	*0%*	*0*	*0%*	*0*	*0%*	*5*	*4%*	*3*	*7%*	*0*	*0%*	*0*	*0%*	*8*	*2%*

AGE TOTAL	***1***	***0%***	***13***	***4%***	***54***	***16%***	***77***	***23%***	***136***	***41%***	***45***	***13%***	***9***	***3%***	***0***	***0%***	***335***	***100%***

**In the male subset all cases in the heterosexual category are HRH because the PH-Female category is not applicable to males. 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.*

Table 20: Demographic Information on Arab-American HIV/AIDS Cases Currently Living in Michigan, 2010

	REPORTED PREVALENCE							
	HIV, not AIDS		AIDS		TOTAL		CONCURRENT AIDS	
	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total	Number	Percent of AIDS cases
SEX								
Males	29	78%	42	91%	71	86%	21	50%
Females	8	22%	4	9%	12	14%	1	25%
RISK*								
Male-Male Sex	17	46%	21	46%	38	46%	9	43%
Injection Drug Use	3	8%	2	4%	5	6%	1	50%
MSM/IDU	1	3%	3	7%	4	5%	2	67%
Blood Products	1	3%	1	2%	2	2%	1	100%
Heterosexual	6	16%	7	15%	13	16%	1	14%
HRH	*4*	*11%*	*6*	*13%*	*10*	*12%*	*0*	*0%*
PH-Female	*2*	*5%*	*1*	*2%*	*3*	*4%*	*1*	*100%*
Perinatal	1	3%	0	0%	1	1%	0	0%
Undetermined	8	22%	12	26%	20	24%	8	67%
PH-Male	*4*	*11%*	*8*	*17%*	*12*	*14%*	*6*	*75%*
Unknown	*4*	*11%*	*4*	*9%*	*8*	*10%*	*2*	*50%*
AGE AT HIV DIAGNOSIS								
0 - 12 years	1	3%	0	0%	1	1%	0	0%
13 - 19 years	3	8%	1	2%	4	5%	0	0%
20 - 24 years	3	8%	5	11%	8	10%	0	0%
25 - 29 years	11	30%	6	13%	17	20%	2	33%
30 - 39 years	11	30%	17	37%	28	34%	9	53%
40 years and older	7	19%	17	37%	24	29%	11	65%
Unspecified	1	3%	0	0%	1	1%	0	0%
AREA OF RESIDENCE AT DIAGNOSIS								
Detroit Metro Area	35	95%	43	93%	78	94%	22	51%
Out-State	2	5%	3	7%	5	6%	0	0%
TOTAL	***37***	***100%***	***46***	***100%***	***83***	***100%***	***22***	***48%***

**See page 1-3 for descriptions of prevalence estimate calculations and pages 6-7,8 for risk category groupings. Risk categories used in Michigan are newly defined as of July 2007.*

Table 21: Sex, Risk and Age at HIV Diagnosis Among Arab-American HIV/AIDS Cases Currently Living in Michigan, 2010

MALES	**0 - 19 years**		**20 - 29 years**		**30 years and older**		**Male Subtotal**	
Male-Male sex	1	25%	13	72%	24	49%	38	54%
Injecting Drug Use	0	0%	0	0%	3	6%	3	4%
Male-Male Sex/IDU	0	0%	0	0%	4	8%	4	6%
Blood Products	1	25%	1	6%	0	0%	2	3%
Heterosexual*	0	0%	1	6%	4	8%	5	7%
Perinatal	0	0%	0	0%	0	0%	0	0%
Undetermined	2	50%	3	17%	14	29%	19	27%
PH-Male	*2*	*50%*	*2*	*11%*	*8*	*16%*	*12*	*17%*
Unknown	*0*	*0%*	*1*	*6%*	*6*	*12%*	*7*	*10%*
Male Subtotal	**4**	**6%**	**18**	**25%**	**49**	**69%**	71	**100%**

FEMALES	**0 - 19 years**		**20 - 29 years**		**30 years and older**		**Female Subtotal**	
Injecting Drug Use	0	0%	1	14%	1	33%	2	18%
Blood Products	0	0%	0	0%	0	0%	0	0%
Heterosexual	0	0%	6	86%	2	67%	8	73%
HRH	*0*	*0%*	*4*	*57%*	*1*	*33%*	*5*	*45%*
PH-Female	*0*	*0%*	*2*	*29%*	*1*	*33%*	*3*	*27%*
Perinatal	1	0%	0	0%	0	0%	1	9%
Undetermined*	0	0%	0	0%	0	0%	0	0%
Female Subtotal^	**1**	**9%**	**7**	**64%**	**3**	**27%**	11	**100%**

TOTAL	**0 - 19 years**		**20 - 29 years**		**30 years and older**		**Age Total**	
Male-Male sex	1	20%	13	52%	24	46%	38	46%
Injecting Drug Use	0	0%	1	4%	4	8%	5	6%
Male-Male Sex/IDU	0	0%	0	0%	4	8%	4	5%
Blood Products	1	20%	1	4%	0	0%	2	2%
Heterosexual	0	0%	7	28%	6	12%	13	16%
HRH	*0*	*0%*	*5*	*20%*	*5*	*10%*	*10*	*12%*
PH-Female	*0*	*0%*	*2*	*8%*	*1*	*2%*	*3*	*4%*
Perinatal	1	20%	0	0%	0	0%	1	1%
Undetermined	2	40%	3	12%	14	27%	19	23%
PH-Male	*2*	*40%*	*2*	*8%*	*8*	*15%*	*12*	*15%*
Unknown	*0*	*0%*	*1*	*4%*	*6*	*12%*	*7*	*9%*
AGE TOTAL ^	***5***	***6%***	***25***	***30%***	***52***	***63%***	***82***	***100%***

**In the male subset all cases in the heterosexual category are HRH because the PH-Female category is not applicable to males. 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.*

^ Not included in this table are the following cases with unknown age at diagnosis: one female with unknown risk.

Table 22: Demographic Information on Asian, Native Hawaiian and Pacific Islander HIV/AIDS Cases Currently Living in Michigan, 2010

	REPORTED PREVALENCE							
	HIV, not AIDS		AIDS		TOTAL		CONCURRENT AIDS	
	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total	Number	Percent of AIDS cases
SEX								
Males	25	66%	31	79%	56	73%	19	61%
Females	13	34%	8	21%	21	27%	4	50%
RISK*								
Male-Male Sex	12	32%	13	33%	25	32%	10	77%
Injection Drug Use	2	5%	1	3%	3	4%	1	100%
MSM/IDU	0	0%	0	0%	0	0%	0	0%
Blood Products	0	0%	0	0%	0	0%	0	0%
Heterosexual	6	16%	9	23%	15	19%	3	33%
HRH	*4*	*11%*	*5*	*13%*	*9*	*12%*	*1*	*20%*
PH-Female	*2*	*5%*	*4*	*10%*	*6*	*8%*	*2*	*50%*
Perinatal	1	3%	0	0%	1	1%	0	0%
Undetermined	17	45%	16	41%	33	43%	9	56%
PH-Male	*7*	*18%*	*13*	*33%*	*20*	*26%*	*6*	*46%*
Unknown	*10*	*26%*	*3*	*8%*	*13*	*17%*	*3*	*100%*
AGE AT HIV DIAGNOSIS								
0 - 12 years	1	3%	0	0%	1	1%	0	0%
13 - 19 years	2	5%	0	0%	2	3%	0	0%
20 - 24 years	6	16%	2	5%	8	10%	0	0%
25 - 29 years	12	32%	13	33%	25	32%	6	46%
30 - 39 years	14	37%	12	31%	26	34%	10	83%
40 years and older	3	8%	12	31%	15	19%	7	58%
Unspecified	3	8%	0	0%	3	4%	0	0%
AREA OF RESIDENCE AT DIAGNOSIS								
Detroit Metro Area	20	53%	27	69%	47	61%	17	63%
Out-State	18	47%	11	28%	29	38%	5	45%
Unknown/Prison	0	0%	1	3%	1	1%	1	100%
TOTAL	**38**	**100%**	**39**	**100%**	**77**	**100%**	**23**	**59%**

**See page 1-3 for descriptions of prevalence estimate calculations and pages 6-7,8 for risk category groupings. Risk categories used in Michigan are newly defined as of July 2007.*

Table 23: Sex, Risk and Age at HIV Diagnosis Among Asian, Native Hawaiian and Pacific Islander HIV/AIDS Cases Currently Living in Michigan, 2010

MALES	**0 - 19 years**		**20 - 29 years**		**30 years and older**		**Male Subtotal**	
Male-Male sex	0	0%	11	48%	14	44%	25	45%
Injecting Drug Use	0	0%	1	4%	2	6%	3	5%
Male-Male Sex/IDU	0	0%	0	0%	0	0%	0	0%
Blood Products	0	0%	0	0%	0	0%	0	0%
Heterosexual*	0	0%	2	9%	0	0%	2	4%
Perinatal	0	0%	0	0%	0	0%	0	0%
Undetermined	1	0%	9	39%	16	50%	26	46%
PH-Male	*0*	*0%*	*6*	*26%*	*14*	*44%*	*20*	*36%*
Unknown	*1*	*0%*	*3*	*13%*	*2*	*6%*	*6*	*11%*
Male Subtotal	**1**	**2%**	**23**	**41%**	**32**	**57%**	56	**100%**

FEMALES	**0 - 19 years**		**20 - 29 years**		**30 years and older**		**Female Subtotal**	
Injecting Drug Use	0	0%	0	0%	0	0%	0	0%
Blood Products	0	0%	0	0%	0	0%	0	0%
Heterosexual	1	50%	5	50%	7	78%	13	62%
HRH	*1*	*50%*	*1*	*10%*	*5*	*56%*	*7*	*33%*
PH-Female	*0*	*0%*	*4*	*40%*	*2*	*22%*	*6*	*29%*
Perinatal	1	50%	0	0%	0	0%	1	5%
Undetermined*	0	0%	5	50%	2	22%	7	33%
Female Subtotal	**2**	**10%**	**10**	**48%**	**9**	**43%**	21	**100%**

TOTAL	**0 - 19 years**		**20 - 29 years**		**30 years and older**		**Age Total**	
Male-Male sex	0	0%	11	33%	14	34%	25	32%
Injecting Drug Use	0	0%	1	3%	2	5%	3	4%
Male-Male Sex/IDU	0	0%	0	0%	0	0%	0	0%
Blood Products	0	0%	0	0%	0	0%	0	0%
Heterosexual	1	33%	7	21%	7	17%	15	19%
HRH	*1*	*33%*	*3*	*9%*	*5*	*12%*	*9*	*12%*
PH-Female	*0*	*0%*	*4*	*12%*	*2*	*5%*	*6*	*8%*
Perinatal	1	33%	0	0%	0	0%	1	1%
Undetermined	1	33%	14	42%	18	44%	33	43%
PH-Male	*0*	*0%*	*6*	*18%*	*14*	*34%*	*20*	*26%*
Unknown	*1*	*33%*	*8*	*24%*	*4*	*10%*	*13*	*17%*
AGE TOTAL	***3***	***4%***	***33***	***43%***	***41***	***53%***	***77***	***100%***

**In the male subset all cases in the heterosexual category are HRH because the PH-Female category is not applicable to males. 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.*

Table 24: Demographic Information on American Indian and Alaskan Native HIV/AIDS Cases Currently Living in Michigan, 2010

	REPORTED PREVALENCE							
	HIV, not AIDS		AIDS		TOTAL		CONCURRENT AIDS	
	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total	Number	Percent of AIDS cases
SEX								
Males	16	73%	16	73%	32	73%	4	25%
Females	6	27%	6	27%	12	27%	1	17%
RISK*								
Male-Male Sex	10	45%	10	45%	20	45%	3	30%
Injection Drug Use	2	9%	3	14%	5	11%	0	0%
MSM/IDU	2	9%	3	14%	5	11%	0	0%
Blood Products	0	0%	0	0%	0	0%	0	0%
Heterosexual	5	23%	4	18%	9	20%	1	25%
HRH	*4*	*18%*	*3*	*14%*	*7*	*16%*	*1*	*33%*
PH-Female	*1*	*5%*	*1*	*5%*	*2*	*5%*	*0*	*0%*
Perinatal	1	5%	0	0%	1	2%	0	0%
Undetermined	2	9%	2	9%	4	9%	1	50%
PH-Male	*2*	*9%*	*1*	*5%*	*3*	*7%*	*1*	*100%*
Unknown	*0*	*0%*	*1*	*5%*	*1*	*2%*	*0*	*0%*
AGE AT HIV DIAGNOSIS								
0 - 12 years	1	5%	0	0%	1	2%	0	0%
13 - 19 years	0	0%	0	0%	0	0%	0	0%
20 - 24 years	7	32%	4	18%	11	25%	1	25%
25 - 29 years	1	5%	3	14%	4	9%	0	0%
30 - 39 years	8	36%	11	50%	19	43%	3	27%
40 years and older	5	23%	4	18%	9	20%	1	25%
Unspecified	0	0%	0	0%	0	0%	0	0%
AREA OF RESIDENCE AT DIAGNOSIS								
Detroit Metro Area	10	45%	8	36%	18	41%	3	38%
Out-State	12	55%	12	55%	24	55%	2	17%
Unknown/Prison	0	0%	2	9%	2	5%	0	0%
TOTAL	**22**	**100%**	**22**	**100%**	**44**	**100%**	**5**	**23%**

**See page 1-3 for descriptions of prevalence estimate calculations and pages 6-7,8 for risk category groupings. Risk categories used in Michigan are newly defined as of July 2007.*

Table 25: Sex, Risk and Age at HIV Diagnosis Among American Indian and Alaskan Native HIV/AIDS Cases Currently Living in Michigan, 2010

MALES	**0 - 19 years**		**20 - 29 years**		**30 years and older**		**Male Subtotal**	
Male-Male sex	0	0%	7	64%	13	62%	20	63%
Injecting Drug Use	0	0%	0	0%	1	5%	1	3%
Male-Male Sex/IDU	0	0%	3	27%	2	10%	5	16%
Blood Products	0	0%	0	0%	0	0%	0	0%
Heterosexual*	0	0%	1	9%	1	5%	2	6%
Perinatal	0	0%	0	0%	0	0%	0	0%
Undetermined	0	0%	0	0%	4	19%	4	13%
PH-Male	*0*	*0%*	*0*	*0%*	*3*	*14%*	*3*	*9%*
Unknown	*0*	*0%*	*0*	*0%*	*1*	*5%*	*1*	*3%*
Male Subtotal	**0**	**0%**	**11**	**34%**	**21**	**66%**	32	**100%**

FEMALES	**0 - 19 years**		**20 - 29 years**		**40 years and older**		**Female Subtotal**	
Injecting Drug Use	0	0%	1	25%	3	43%	4	33%
Blood Products	0	0%	0	0%	0	0%	0	0%
Heterosexual	0	0%	3	75%	4	57%	7	58%
HRH	*0*	*0%*	*2*	*50%*	*3*	*43%*	*5*	*42%*
PH-Female	*0*	*0%*	*1*	*25%*	*1*	*14%*	*2*	*17%*
Perinatal	1	100%	0	0%	0	0%	1	8%
Undetermined*	0	0%	0	0%	0	0%	0	0%
Female Subtotal	**1**	**8%**	**4**	**33%**	**7**	**58%**	12	**100%**

TOTAL	**0 - 19 years**		**20 - 29 years**		**40 years and older**		**Age Total**	
Male-Male sex	0	0%	7	47%	13	46%	20	45%
Injecting Drug Use	0	0%	1	7%	4	14%	5	11%
Male-Male Sex/IDU	0	0%	3	20%	2	7%	5	11%
Blood Products	0	0%	0	0%	0	0%	0	0%
Heterosexual	0	0%	4	27%	5	18%	9	20%
HRH	*0*	*0%*	*3*	*20%*	*4*	*14%*	*7*	*16%*
PH-Female	*0*	*0%*	*1*	*7%*	*1*	*4%*	*2*	*5%*
Perinatal	1	100%	0	0%	0	0%	1	2%
Undetermined	0	0%	0	0%	4	14%	4	9%
PH-Male	*0*	*0%*	*0*	*0%*	*3*	*11%*	*3*	*7%*
Unknown	*0*	*0%*	*0*	*0%*	*1*	*4%*	*1*	*2%*
AGE TOTAL	***1***	***2%***	***15***	***34%***	***28***	***64%***	***44***	***100%***

**In the male subset all cases in the heterosexual category are HRH because the PH-Female category is not applicable to males. 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.*

APPENDIX: Annual Review of HIV Trends in Michigan, 2004 - 2008

Michigan Department of Community Health
Jennifer M. Granholm, Governor
Janet Olszewski, Director

ANNUAL REVIEW OF HIV TRENDS IN MICHIGAN (2004 - 2008)

Bureau of Epidemiology, HIV/STD/VH/TB Epidemiology Section
May 2010

Overall trends in new Michigan HIV diagnoses

METHODS. To evaluate trends over time, we estimated the number of persons newly diagnosed with HIV infection each year by adjusting the number of reported cases diagnosed from 2004 through 2008 to account for those who may not have been reported to the health department by January 1, 2010. These adjustments were made by weighting the data.

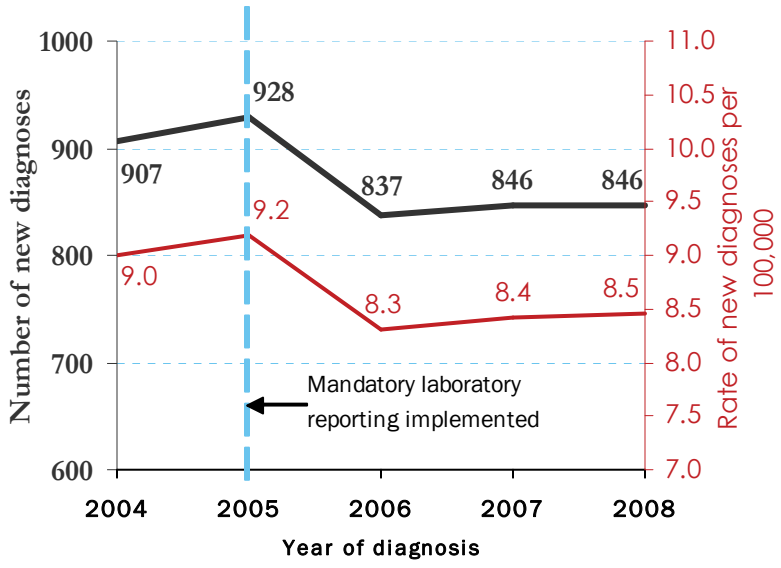
In this report, significant" indicates statistical significance assessed at $p<0.05$. Unless otherwise noted, numbers cited are for new HIV diagnoses between 2004 and 2008. We used regression modeling on the adjusted data to assess significant changes in annual rates of new diagnoses overall and by race, sex, and age. For risk groups, we analyzed annual counts instead of rates since there are no reliable denominator data available to allow rate calculation. Trends overall and in subgroups are described using *average annual percent changes* in rates (or annual counts) of new diagnoses. Only significant trends and their corresponding percent changes are shown. Rates of new diagnoses are all calculated using intercensal annual population estimates released by the Census Bureau in 2008, the most recent year for which demographic breakdowns are available. All rates in this report are rates per 100,000 population. For concurrent diagnoses, we used the Chi Square Mantel-Haenszel test for trend to test for trends over time. This test allows us to assess increases and decreases in the *proportion* of concurrent diagnoses, while taking into account the total number of diagnoses for a particular race/sex/year combination.

The date of new HIV *diagnosis* does not tell us when persons were first *infected*, because HIV diagnosis may take place months or years after infection. However, this is the best current measure of how fast the epidemic is spreading among different populations. MDCH has conducted incidence surveillance, which estimated new *infections* rather than *new diagnoses* using the Serologic Testing Algorithm for Recent HIV Seroconversion (STARHS), since 2005. We will supplement this report with incidence data once they are available for multiple years.

OVERVIEW OF TRENDS. The number and rate of new HIV diagnoses decreased significantly in Michigan for the first time since we began analyzing new diagnosis trends in 2001 from 907 (9.0 per 100,000) in 2004 to 846 (8.5 per 100,000) in 2008, with an average decrease in rate of 2% per year.

(Continued on page 4)

Figure 1. Number and rate of new HIV diagnoses, Michigan, 2004–2008



KEY FINDINGS

- Rates and numbers of new diagnoses decreased in Michigan.
- Increases were noted among teens for the 5th consecutive trend report
- 85% of newly diagnosed teens are black , compared to 60% of those aged 20+. Black MSM were 62% of these newly diagnosed teens.
- There were decreases among IDUs—the 5th consecutive report to show this trend—and black females.
- Concurrent diagnoses decreased among black males, all males, and overall for the 2nd consecutive trend report
- There were increases among black MSM, and decreases among white MSM.

Overall trends in new HIV diagnoses (cont.)

The rate peaked at 9.2 per 100,000 in 2005, and is likely due to the implementation of mandatory laboratory reporting in 2005, instead of reflecting a true increase in the number of new diagnoses that year (Fig 1). Prior to this, the HIV Surveillance Program in Michigan relied on a few laboratories that voluntarily reported positive HIV-related tests and health care providers, who are required by law to report positive cases. We cannot say whether these decreases are due to successes in prevention or are the result of decreases in the population of the state between 2004 and 2008.

The new HIV diagnoses described in this report include persons diagnosed with HIV, non-AIDS and those who learned of their HIV infection status after developing symptoms of AIDS. Each year, there are more new diagnoses of HIV infection than deaths. As a result, the reported number of persons living with HIV disease in Michigan is increasing. MDCH estimates that 18,800 people are living with HIV infection in Michigan.

New HIV diagnoses by age at diagnosis

The rate of new diagnoses increased significantly among persons 13-19 years of age (average increase in rate of 23% per year) and decreased significantly among persons aged 30-39 between 2004 and 2008 (Table 1) . Rates in all other ages groups were stable.

This is the fifth consecutive trend report showing significant increases in new diagnoses among 13-19 year olds. While nearly two-thirds of Michigan cases are in Southeast (SE) Michigan, nearly three-fourths of the state's new cases among 13-19 year olds are SE Michigan residents (49% are Detroit residents and 23% reside in other parts of SE Michigan).

The rate of new diagnoses among 20-24 year olds remained stable for the second consecutive year, following 3 annual trend reports showing increases. Although these trends are alarming and demand action, it is important to remember that the largest number and highest rates of new diagnoses continue to be among 20-44 year olds.

Of all teens diagnosed in the last five years, 85% are black compared to 60% of persons diagnosed at older ages. Furthermore, teens are much more likely to be black males who have sex with males (MSM) compared to adults 20 years and older (62% vs. 23%) (Figure 2). This continues to underscore a need for prevention campaigns tailored to young black MSM, as the differences we have been seeing over the last five years in this young group will likely widen the already large racial gap among persons living with HIV.

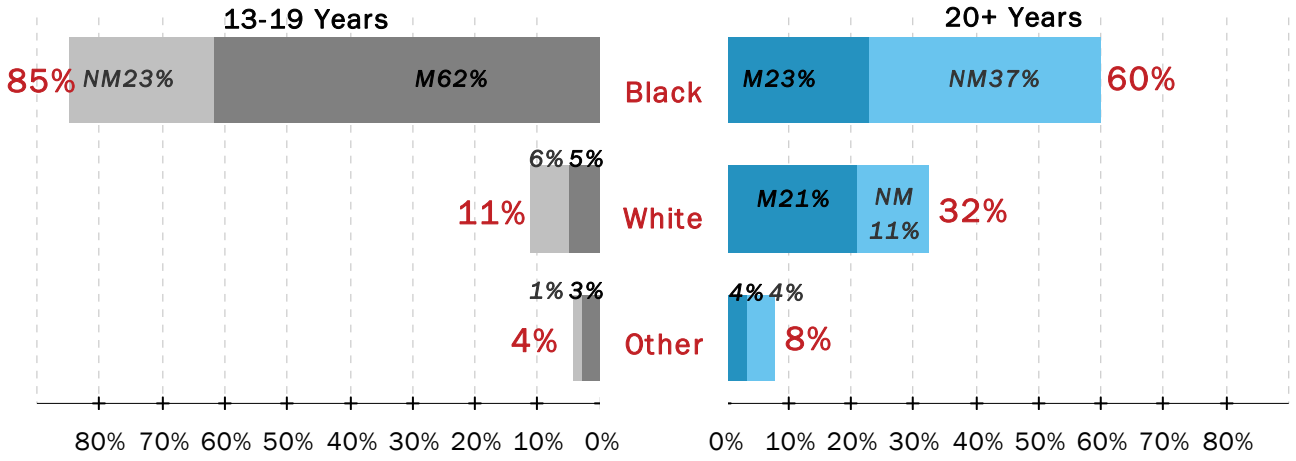
Table 1.‡ New HIV diagnoses by age at diagnosis

	Year of diagnosis										
	2004		*2005*		*2006*		*2007*		*2008*		
Age at diagnosis	Num (Pct)	Rate	Num (Pct)	Rate	Num (Pct)	Rate	Num (Pct)	Rate	Num (Pct)	Rate	
0 - 12 yrs	4 (0%)	0.2	3 (0%)	0.2	5 (1%)	0.3	3 (0%)	0.2	6 (1%)	0.4	
13 -19 yrs	**37 (4%)**	**3.6**	**43 (5%)**	**4.1**	**55 (7%)**	**5.3**	**72 (9%)**	**7.0**	**79 (9%)**	**7.8**	↑ 23%
20 -24 yrs	131 (14%)	18.8	118 (13%)	16.9	105 (13%)	15.2	108 (13%)	15.9	132 (16%)	19.4	
25 -29 yrs	112 (12%)	18.0	112 (12%)	17.6	100 (12%)	15.4	106 (12%)	16.1	127 (15%)	19.6	
30 -34 yrs	**137 (15%)**	**20.3**	**134 (14%)**	**20.5**	**104 (12%)**	**16.7**	**95 (11%)**	**15.9**	**95 (11%)**	**16.0**	↓ 7%
35 -39 yrs	**143 (16%)**	**20.2**	**132 (14%)**	**18.8**	**137 (16%)**	**19.6**	**116 (14%)**	**16.8**	**107 (13%)**	**15.9**	↓ 5%
40 -44 yrs	135 (15%)	17.0	151 (16%)	19.3	137 (16%)	18.1	130 (15%)	17.7	98 (12%)	13.8	
45 -49 yrs	87 (10%)	10.9	106 (11%)	13.2	88 (10%)	10.9	93 (11%)	11.7	84 (10%)	10.7	
50 -54 yrs	59 (7%)	8.5	70 (8%)	9.9	51 (6%)	7.1	69 (8%)	9.3	51 (6%)	6.7	
55 -59 yrs	33 (4%)	5.7	34 (4%)	5.6	32 (4%)	5.0	26 (3%)	4.1	35 (4%)	5.4	
60 and over	28 (3%)	1.7	26 (3%)	1.5	22 (3%)	1.3	27 (3%)	1.5	32 (4%)	1.8	
Total	**907 (100%)**	**9.0**	**928 (100%)**	**9.2**	**837 (100%)**	**8.3**	**846 (100%)**	**8.4**	**846 (100%)**	**8.5**	↓ 2%

‡TABLE FOOTNOTES:

- The number of new diagnoses shown are not reported case counts. These are estimates based on the number of reported cases that are adjusted to account for reporting delay. As a result, summed counts will not always match the column total shown due to rounding error.
- **Bold/colored text** indicates that statistically significant trends occurred in that group. The arrow indicates the direction of change in rates over the 5-year period, while the percentage is the *average change per year* in the rates, as calculated using regression modeling.
- Rates are per 100,000 population. Rates are not reliable for <10 cases.

Figure 2. MSM vs. non-MSM risks by race/ethnicity and age at HIV diagnosis, 2004-2008



NM (lighter outside bars) = Not MSM, includes males and females

M (darker inside bars) = MSM, includes MSM/IDU

Percentages to the left or right of the gray/blue bars indicate the percentage of Black, White, or Other race/ethnicity cases in each age group

New HIV diagnoses by race/sex

The rate of new diagnoses increased among black males (average 2% per year) between 2004 and 2008. This is the third consecutive annual trend report that we have seen increases among black males. The rate decreased among white males for the second time at an average of 6% per year. This is likely what caused a decrease in rate among whites overall (average 5% per year) during this period, as 86% of white cases are male. The rate also decreased among black females (average 9% per year), which resulted in a decrease in rate for all females (average 6% per year), as blacks make up about 75% of cases among females (Table 2). Diagnosis rates remain highest among blacks of both sexes, compared to all other race/sex groups. We did not see the significant increases among persons of Other race/ethnicity, of whom 62% are Hispanic, that we saw between 2003 and 2007. We also did not see the significant increases among males that we saw in last year's report.

Table 2.‡ New HIV diagnoses by race/sex

	Year of diagnosis										
	2004		2005		2006		2007		2008		
Race/sex	Num (%)	Rate	Num (%)	Rate	Num (%)	Rate	Num (%)	Rate	Num (%)	Rate	
Males	674 (74%)	13.6	703 (76%)	14.2	641 (77%)	13.3	657 (78%)	13.4	658 (78%)	13.4	
Black	369 (41%)	54.7	386 (42%)	57.4	371 (44%)	55.3	378 (45%)	56.6	407 (48%)	61.4	↑ 2%
White	254 (28%)	6.5	266 (29%)	6.9	226 (27%)	5.8	221 (26%)	5.7	200 (24%)	5.2	↓ 6%
Other	51 (6%)	12.7	50 (5%)	12.2	44 (5%)	10.5	59 (7%)	13.7	52 (6%)	11.9	
Females	233 (26%)	4.5	225 (24%)	4.4	196 (23%)	3.7	189 (22%)	3.7	188 (22%)	20.2	↓ 6%
Black	192 (21%)	25.6	163 (18%)	21.7	147 (18%)	19.7	142 (17%)	19.1	130 (15%)	17.6	↓ 9%
White	29 (3%)	0.7	48 (5%)	1.2	31 (4%)	0.8	33 (4%)	0.8	42 (5%)	1.1	
Other	12 (1%)	3.1	14 (2%)	3.6	17 (2%)	4.3	14 (2%)	3.5	15 (2%)	3.7	
All	907 (100%)	9.0	928 (100%)	9.2	837 (100%)	8.3	846 (100%)	8.4	846 (100%)	8.5	↓ 5%
Black	561 (62%)	39.4	549 (59%)	38.6	518 (62%)	36.5	520 (61%)	36.8	537 (63%)	38.3	
White	283 (31%)	3.6	315 (34%)	4.0	257 (31%)	3.3	253 (30%)	3.2	242 (29%)	3.1	↓ 5%
Other	63 (7%)	8.0	64 (7%)	8.0	62 (7%)	7.5	73 (9%)	8.7	67 (8%)	7.9	

‡TABLE FOOTNOTES:

- The number of new diagnoses shown are not reported case counts. These are estimates based on the number of reported cases that are adjusted to account for reporting delay. As a result, summed counts will not always match the column total shown due to rounding error.
- **Bold/colored text** indicates that statistically significant trends occurred in that group. The arrow indicates the direction of change in rates over the 5-year period, while the percentage is the *average change per year* in the rates, as calculated using regression modeling.
- Rates are per 100,000 population.

New HIV diagnoses by risk

Between 2004 and 2008, the number of newly diagnosed persons who were injection drug users (IDU) decreased by an average of 14% per year. The number also decreased among persons who were infected through heterosexual sex by an average of 6% per year (Table 3). The trend among IDU is a continuation of the decreasing trend we have seen over the past 5 years we have run trend reports. Data from Michigan's HIV Behavioral Surveillance suggest reductions among IDUs may partly be attributable to the success of harm reduction programs, such as needle exchange. This is the first year that we saw decreases among persons infected heterosexually. These decreases are related to the decreases among black females, who make up 62% of persons with heterosexual risk.

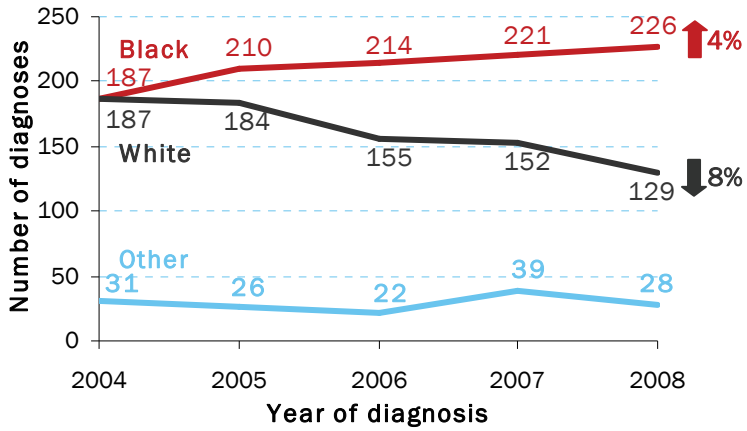
Table 3.‡ New HIV diagnoses by risk

	Year of diagnosis					
	2004	*2005*	*2006*	*2007*	*2008*	
Risk	Num (%)	Num (%)	Num (%)	Num (%)	Num (%)	
MSM	406 (45%)	420 (45%)	391 (47%)	412 (49%)	384 (45%)	
IDU	**67 (7%)**	**70 (8%)**	**45 (5%)**	**55 (6%)**	**34 (4%)**	↓14%
MSM/IDU	27 (3%)	26 (3%)	19 (2%)	15 (2%)	24 (3%)	
Heterosexual	**170 (19%)**	**172 (19%)**	**147 (18%)**	**162 (19%)**	**125 (15%)**	↓6%
Other known	4 (0%)	4 (0%)	3 (0%)	3 (0%)	4 (0%)	
No identified risk	233 (26%)	235 (25%)	231 (28%)	199 (24%)	276 (33%)	
Total	**907 (100%)**	**928 (100%)**	**837 (100%)**	**846 (100%)**	**846 (100%)**	

‡TABLE FOOTNOTES:

- The number of new diagnoses shown are not reported case counts. These are estimates based on the number of reported cases that are adjusted to account for reporting delay. As a result, summed counts will not always match the column total shown due to rounding error. **Bold/colored text** indicates that statistically significant trends occurred in that group. The arrow indicates the direction of change in number of new diagnoses over the 5-year period, while the percentage is the *average change per year* in the the number of new diagnoses, as calculated using regression modeling.
- The heterosexual category includes males and females categorized as "high-risk" heterosexuals (persons who knew they had one or more partners that were an IDU, bisexual for females, a recipient of HIV infected blood, or a person infected with HIV) as well as females who reported sex with males of unknown risk/HIV status as their only risk. The NIR category includes males who reported sex with females of unknown risk/HIV status as their only risk and males and females for whom no risk has yet been reported.

Figure 3. Race among MSM



The "Other known" risk category includes perinatal and blood product transmission. The numbers have been low in this group over the years, owing to programmatic successes in preventing perinatal and blood-borne transmissions.

Newly diagnosed persons with no identified risk (NIR) include males who reported sex with females of unknown risk/HIV status as their only risk, and males and females for whom no risk has yet been reported. Although they account for about 27% of all diagnoses *each year*, NIRs make up 17% of *all persons* living with HIV in MI regardless of year of diagnosis.

Figure 3 illustrates trends among MSM by race/ethnicity. MSM were 46% of all new diagnoses between 2004 and 2008. Of these newly diagnosed MSM, 53% are black, while 40% are white. The number of black MSM cases increased significantly during this period—the third consecutive year since we first looked at race/ethnicity trends among MSM in the 2008 *Annual Review of Trends*. The number of white MSM cases decreased significantly for the second year in a row.

Concurrent HIV and AIDS diagnoses

The proportion of persons diagnosed with AIDS within 30 days of HIV diagnosis ("concurrent") decreased significantly overall from 25% in 2004 to 20% in 2008 (Table 4). Similarly, there were significant decreases in the proportion of concurrent diagnoses among all males (28% in 2004 to 21% in 2008) and black males (27% in 2004 to 18% in 2008). On average, 23% (205) of new HIV diagnoses in any given year were concurrent.

Among all persons diagnosed with HIV between 2004 and 2008, the proportion of males concurrently diagnosed continues to be significantly higher than that of females (25% vs. 19%). Whites and persons of Other race also had sig-

(Continued on page 7)

(Continued from page 6)

Concurrent HIV and AIDS diagnoses (cont.)

nificantly higher proportions of concurrent diagnoses (26% and 28%, respectively) compared to blacks (22%) .

Most concurrent diagnoses represent a failure to diagnose HIV early in the course of the person's infection as well as to start treatment early. Persons who are unaware of their HIV infection cannot benefit from early antiretroviral therapy and have a poorer prognosis than those diagnosed earlier in the disease course. They are also not accessible for primary prevention (transmission to uninfected individuals). Expanding routine HIV testing in medical settings, including emergency departments and community health clinics, and provision of HIV testing at community-based and outreach settings will ensure and facilitate access to and promote HIV testing, which may improve health outcomes for those who are infected. The significant decrease in the proportion of concurrent diagnoses among blacks, over time as well as compared to other race groups, suggests this group engages in earlier and probably more frequent testing.

Table 4.‡ Concurrent HIV diagnoses in each race/sex group

	Year of diagnosis						
	2004	2005	2006	2007	2008	Total	
Race/Sex	Num (%)	Num (%)	Num (%)	Num (%)	Num (%)	Num (%)	
Males	187 (28%)	189 (27%)	152 (24%)	161 (25%)	137 (21%)	827 (25%)	↓ 7%*
Black	99 (27%)	98 (25%)	84 (23%)	79 (21%)	73 (18%)	432 (23%)	↓ 9%*
White	70 (28%)	78 (29%)	54 (24%)	66 (30%)	51 (25%)	319 (27%)	
Other	18 (35%)	14 (28%)	14 (32%)	16 (28%)	13 (26%)	76 (30%)	
Females	38 (16%)	56 (25%)	34 (18%)	39 (20%)	33 (18%)	200 (19%)	
Black	33 (17%)	37 (23%)	27 (19%)	28 (20%)	24 (18%)	150 (19%)	
White	4 (14%)	13 (27%)	2 (6%)	8 (25%)	6 (15%)	33 (18%)	
Other	1 (8%)	6 (43%)	5 (29%)	2 (14%)	3 (20%)	17 (24%)	
All	225 (25%)	246 (26%)	187 (22%)	200 (24%)	170 (20%)	1027 (24%)	↓ 5%*
Black	132 (24%)	135 (25%)	111 (21%)	108 (21%)	96 (18%)	582 (22%)	
White	74 (26%)	91 (29%)	56 (22%)	74 (29%)	57 (24%)	352 (26%)	
Other	19 (30%)	20 (31%)	19 (31%)	18 (25%)	17 (25%)	93 (28%)	

‡TABLE FOOTNOTES:

- The number of new diagnoses shown are not reported case counts. These are estimates based on the number of reported cases that are adjusted to account for reporting delay. As a result, summed counts will not always match the column total shown due to rounding error.
- Percentages are counted as the number of concurrent diagnoses for a race/sex/year combination divided by the total diagnoses for that race/sex/year combination.
- Asterisk (*) indicates significant trends over the 5-year period occurred in a race/sex group. Significance was assessed using the Mantel-Haenszel chi-square test. The arrow indicates the direction of change, while the accompanying percentage is the *change in percentage of concurrent diagnoses* from 2004 to 2008, which do not take into account the fluctuations between each year.

New HIV diagnoses by residence at diagnosis

The *rate* of new HIV diagnoses remained stable in SE Michigan (Wayne, Oakland, Macomb, Monroe, Lapeer and St. Clair counties) but decreased in the rest of the state ("Out-State") (Table 5). The *numbers* of new HIV diagnoses decreased significantly in SE Michigan and Out-State. SE and Out-State Michigan experienced a population decline during this period, which may explain the decreases in the number of new diagnoses. A stable rate where population is decreasing, e.g., in SE Michigan, suggests that the impact of the disease on the population is level or increasing. Overall, about two-thirds of new diagnoses are among residents of SE Michigan and about one-third are among Out-State residents.

Table 5.‡ New HIV diagnoses by residence at diagnosis

	Year of diagnosis										
	2004		2005		2006		2007		2008		
Residence	Num (%)	Rate	Num (%)	Rate	Num (%)	Rate	Num (%)	Rate	Num (%)	Rate	
SE Mich	599 (66%)	13.4	620 (67%)	13.9	568 (68%)	12.7	572 (68%)	12.9	571 (67%)	13.0	
Out-State	308 (34%)	5.5	308 (33%)	5.5	269 (32%)	4.8	274 (32%)	4.9	276 (33%)	4.9	↓ 3%
Total	907 (100%)	9.0	928 (100%)	9.2	837 (100%)	8.3	846 (100%)	8.4	846 (100%)	8.5	↓ 2%

‡TABLE FOOTNOTES:

- The number of new diagnoses shown are not reported case counts. These are estimates based on the number of reported cases that are adjusted to account for reporting delay. As a result, summed counts will not always match the column total shown due to rounding error.
- **Bold/colored text** indicates that statistically significant trends occurred in that group. The arrow indicates the direction of change in rates over the 5-year period, while the percentage is the *average change per year* in the rates, as calculated using regression modeling.
- Rates are per 100,000 population.

Summary

- For the first time since we began analyzing trends in new diagnoses, the number and rate of new diagnoses in Michigan between 2004—2008, decreased from 907 (9.0 per 100,000) in 2004 to 846 (8.5 per 100,000) in 2008
- The highest rates of new HIV diagnoses occurred among:
    - 20 - 44 year olds
    - Black males and females
    - Males who have sex with males (MSM)*
    - Southeast Michigan residents
- INCREASES in rates occurred among:
    - 13 - 19 year olds (fifth consecutive trend report)
    - Black males
    - Black MSM*
- DECREASES in rates occurred among:
    - 30- 39 year olds
    - White males, black females, all whites, and all females
    - White MSM*
    - Injection drug users (fifth consecutive trend report) and persons heterosexually infected*
    - Persons residing outside Southeast Michigan
- This is the fifth consecutive trend report where we have seen statistically significant increases among 13 - 19 year olds.
- While nearly two-thirds of Michigan cases are in Southeast (SE) Michigan, nearly three-fourths of Michigan's new cases among 13-19 year olds are SE Michigan residents (49% are Detroit residents and 23% reside in other parts of SE Michigan).
- 85% of new 13-19 year old cases are black (of whom just under three-quarters are MSM), whereas 60% of those aged 20 and older are black. This finding suggests that black teens and young adults in general, and young black MSM in particular, should continue to be the focus of aggressive prevention campaigns.
- This is the second trend report to show significant decreases in the proportion of concurrent diagnoses among black males, all males, and overall.
- The significant decrease in the proportion of concurrent diagnoses among black males, along with lower proportions of concurrent diagnoses among blacks compared to whites and persons of Other races, suggest this group engages in earlier and probably more frequent testing.

*Annual counts were analyzed for risk groups since there are no reliable denominator data available to allow rate calculation

For more information:

Michigan Department of Community Health
HIV/AIDS Surveillance Program
(313) 876-0353
(517) 335-8165
(**www.michigan.gov/hivstd** —> HIV/AIDS —> Statistics and Reports)
State of Michigan HIV/AIDS Statistics and Reports

Michigan Department of Community Health
HIV/AIDS Prevention and Intervention Services
(517) 241-5900
(**www.michigan.gov/hivstd** —> HIV/AIDS —> Prevention and Care)
State of Michigan HIV/AIDS Programmatic Information

MI Counseling, Testing, & Referral Sites
http://www.michigan.gov/documents/resourceguide_6921_7.pdf

Michigan AIDS Hotline
1-800-872-2437

Centers for Disease Control & Prevention
http://www.cdc.gov/hiv
CDC HIV/AIDS Resources

AIDSInfo
http://www.aidsinfo.nih.gov/
HIV/AIDS Treatment and Clinical Trial Resources

CDC National Statistics & Surveillance
http://www.cdc.gov/hiv/topics/surveillance/index.htm
CDC HIV/AIDS Statistics and Reports

World Health Organization
http://www.who.int/topics/hiv_infections/en/
HIV/AIDS Global Resources