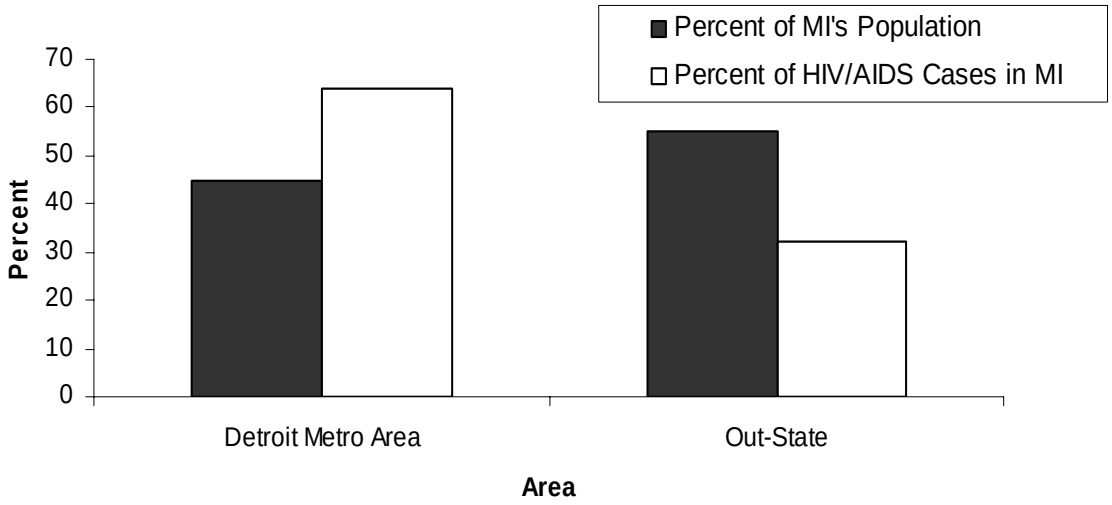
2006 Profile of HIV/AIDS in Michigan

Figure 1: Michigan Living HIV/AIDS Cases and Population by Area, 1/1/06



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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Statewide Summary of HIV/AIDS Epidemic in Michigan

- **How many cases?** The Michigan Department of Community Health (MDCH) estimates that there are 16,200 people currently living with HIV/AIDS in the state, of which 12,972 were reported as of January 1, 2006. Incidence of HIV (the number of newly diagnosed HIV infections) was roughly level at around 890 cases each year between 2000 and 2004. The number of HIV related deaths declined significantly in 1996 and 1997, likely due to effective therapies that prolong life but do not eliminate HIV infection. From 1998-2004, however, the number of HIV related deaths did not decline significantly. (See Figure 8, page 3-13) The prevalence of HIV disease (all persons living with HIV infection or AIDS, whether diagnosed recently or years ago) is increasing because new cases are still being diagnosed and infected persons are living longer.

- **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 (8,286 of the 12,972 cases reported statewide), but only 45 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 4.9 million new HIV infections and 3.1 million AIDS deaths occurred during 2005 worldwide, bringing the total persons infected with HIV to 40.3 million. There have been more than 25 million deaths since the beginning of the epidemic. Nearly two-thirds of new cases and three-quarters of deaths were in Sub-Saharan Africa, where transmission is predominately heterosexual.
(Joint United Nations Programme on HIV/AIDS. *AIDS epidemic update: December 2005*. Available at http://www.unaids.org/resources/publications/Corporate_Publications.pdf)

  The number of new diagnoses of HIV/AIDS per year decreased slightly from 2001 to 2004 in the 35 areas of the U.S. with confidential, name-based, integrated HIV and AIDS infection reporting in place since 2000. At the end of 2004, an estimated 462,792 persons in the 35 areas were living with HIV/AIDS. The number of AIDS deaths per year in the 50 states, District of Columbia, and U.S. territories, possessions, and associated nations decreased eight percent from 2000 through 2004, with 15,798 occurring in 2004. Through December 2004, an estimated 944,306 adult/adolescents have been diagnosed with AIDS; of these, 529,113 (56 percent) have died. (Centers for Disease Control and Prevention, *HIV/AIDS Surveillance Report 2004*, Volume 16, 2005. Available at http://www.cdc.gov/hiv/stats/harslink/htm)

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Recommendations: Ranking of Behavioral Groups

To assist in prioritizing prevention activities, the MDCH HIV/STD & Other Bloodborne Infections Surveillance 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 was used in determining the ranked order of the following three behavioral groups: MSM, IDU, and high-risk heterosexual.

- **Men Who Have Sex With Men (MSM)*:** MSM make up 52 percent of all HIV/AIDS reported (6,725 out of 12,972). The MSM behavioral group continues to be the most affected behavioral group statewide. The proportion of persons reporting MSM behavior has significantly increased from 2000 to 2004 from 51 percent to 57 percent (461 to 550 cases).

- **Injecting Drug Users (IDU)*:** Of all HIV/AIDS reported cases, 19 percent are IDU (2,420 out of 12,972). Cases among IDUs are closely linked to HIV among women and their infants and the heterosexual groups. The trend in IDU behavior in persons diagnosed each year with HIV infection between 2000 and 2004 decreased significantly from 17 percent to 12 percent (150 to 120 cases).

- **High Risk Heterosexuals (HRH):** Heterosexual cases constitute 13 percent of the total number of reported cases (1,690 out of 12,972) and 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. The trend in heterosexual transmission appears to be level.

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

Future Changes Expected in the Rankings of Behavioral Groups:

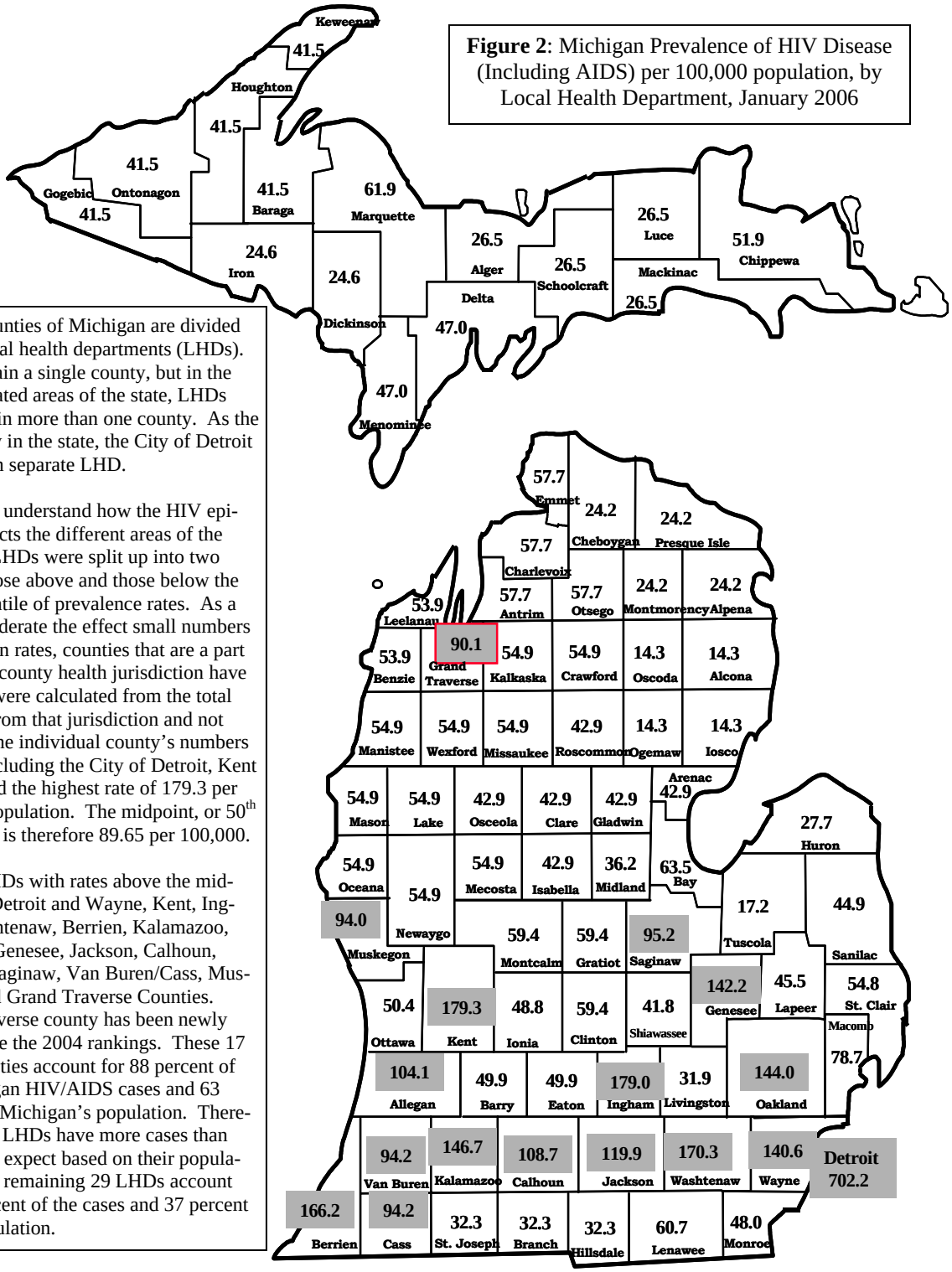
This year, the proportion of new cases among IDUs has shown a significant decrease. The proportion among HRHs was level. In addition, when reported cases are adjusted for cases reported without risk, over twice as many HRHs as IDUs were reported (246 HRH, 120 IDU) in 2004. These data point to the conclusion that HRH are likely to surpass IDUs in the near future.

2006 Profile of HIV/AIDS in Michigan

Distribution of HIV/AIDS Prevalence by Local Health Jurisdiction

Data from HIV/AIDS Reporting System (HARS)

Figure 2: Michigan Prevalence of HIV Disease (Including AIDS) per 100,000 population, by Local Health Department, January 2006



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 50th percentile of prevalence rates. 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, Kent County had the highest rate of 179.3 per 100,000 population. The midpoint, or 50th percentile, is therefore 89.65 per 100,000.

The 16 LHDs with rates above the midpoint are Detroit and Wayne, Kent, Ingham, Washtenaw, Berrien, Kalamazoo, Oakland, Genesee, Jackson, Calhoun, Allegan, Saginaw, Van Buren/Cass, Muskegon, and Grand Traverse Counties. Grand Traverse county has been newly added since the 2004 rankings. These 17 counties/cities account for 88 percent of the Michigan HIV/AIDS cases and 63 percent of Michigan's population. Therefore, these LHDs have more cases than you would expect based on their populations. The remaining 29 LHDs account for 12 percent of the cases and 37 percent of the population.

NOTE: These data are generated using statewide prevalence estimates. The calculation for this estimate has not been adjusted since the implementation of laboratory-based reporting (April 2005).

2006 Profile of HIV/AIDS in Michigan

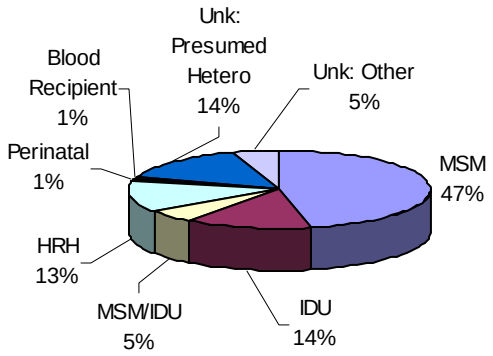
Distribution of HIV/AIDS (Living) Cases by Mode of Transmission

Data from HIV/AIDS Reporting System (HARS)

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). However, the recent publication of CDC's Technical Guidance for HIV/AIDS Surveillance Programs—Risk Factor Ascertainment also explains categorization of risk, called the exposure category. This term summarizes the multiple risk factors that an individual may have had by including combination of categories of the three most common ones (MSM, IDU, HRH). Exposure categories are mutually exclusive and are not hierarchical. These categories are not currently in use in Michigan.

Figure 3 indicates persons living with HIV/AIDS in Michigan by mode of transmission for the 10,435 reported cases.

Figure 3: Reported Persons Living with HIV/AIDS
Michigan, by Risk, 1/1/06 (N = 12,972)



- This chart demonstrates that over half (52 percent) of the people living with HIV/AIDS are MSM, including five percent who also injected drugs (MSM/IDU).

- Nineteen percent are injecting drug users, including five percent who are also MSM (MSM/IDU).

- Thirteen percent of the total had high-risk heterosexual sex partners as their only mode of transmission.

- Twenty percent of the total had unknown risk or no risk reported.

Discussion of Persons with 'No Identified Risk':

Persons in the 'No Identified Risk' (NIR) category make up 20 percent of the HIV-infection population in Michigan and are 62 percent male and 38 percent female. Those persons in the NIR category are 69 percent black, 21 percent white, and 10 percent other races. Almost three-quarters of the NIRs fall under the 'presumed heterosexual' subcategory. Presumed Heterosexual includes infected persons with no recognized risk that have reported heterosexual sex with a man or a woman (not including male-male sex) and accounts for 11 percent of men living with HIV and 33 percent of women living with HIV. See Table 8, page 3-66.

There are many reasons why risk is not reported to the Michigan Department of Community Health on the initial case report form. Lack of provider elicitation and patient denial, as well as patients truly not knowing their risks and the risks of their partners, are reasons why there is a growing proportion of NIRS.

2006 Profile of HIV/AIDS in Michigan

Distribution of Estimated HIV/AIDS Cases by Race and Sex

Data from HIV/AIDS Reporting System (HARS)

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

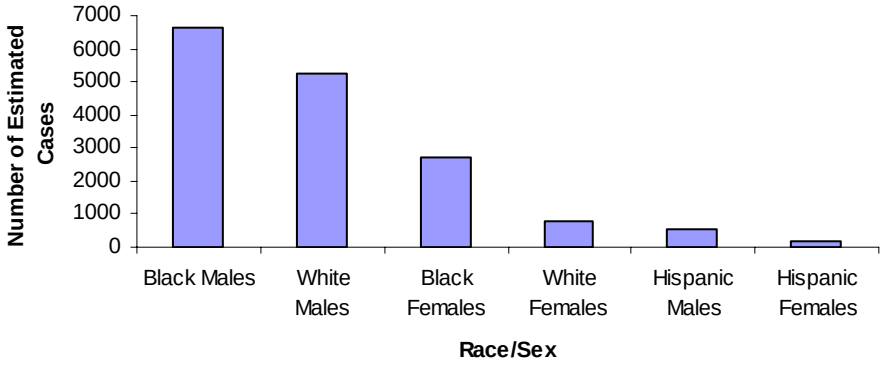
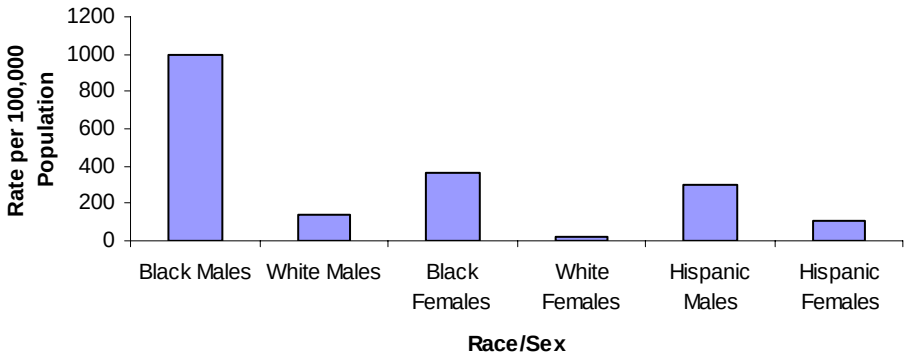


Figure 5: Estimated Case Rates of Persons Livin with HIV/AIDS in Michigan, by Race and Sex



- Black males have both the highest rate per 100,000 population (999) and the highest estimated number (6,630) 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 (368) and the third highest estimated number (2,720) of cases of HIV/AIDS.
- Hispanic males have the third highest rate (305) and the fifth highest estimated number (520) 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 (137) and the second highest estimated number (5,260) of cases.
- Hispanic females have the fifth highest rate (111) and the lowest estimated number (170) of HIV/AIDS.
- White females have the lowest rate (20) and the fourth highest estimated number (790) of HIV/AIDS cases.

2006 Profile of HIV/AIDS in Michigan

Trends in HIV/AIDS Data

Data from HIV/AIDS Reporting System (HARS)

- Transmission of HIV 2000-2004: Figure 6 shows that the proportion of persons diagnosed each year with HIV infection between 2000 and 2004 increased significantly in men who have sex with men (MSM) from 51 percent to 57 percent (461 to 550 cases) whereas the proportion decreased significantly in Injection Drug Users (IDU) from 17 percent to 12 percent (150 to 120 cases). The proportion of new diagnoses remained level in all the other risk groups, including High Risk Heterosexuals (HRH). HRH are 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.

Of the 971 new HIV diagnoses in 2004, there were 550 (57 percent) among MSM, 246 (25 percent) among HRHs, 120 (12 percent) among IDUs, 41 (4 percent) among MSM/IDUs, and 14 (1 percent) among persons with other risks. Other risks include transmission from blood product exposure, perinatal exposure, and those with no identified risk. One percent of diagnoses were among persons who first acquired infection from blood products received either before 1985 in the U.S. or in other countries. Less than 1 percent of diagnoses were among infants born to HIV-infected mothers.

Figure 6: Number of New Diagnoses in 2004 and Trends 2000-2004, by Mode of Transmission

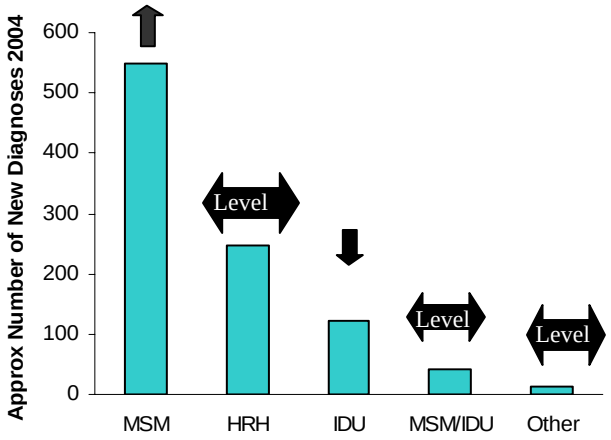
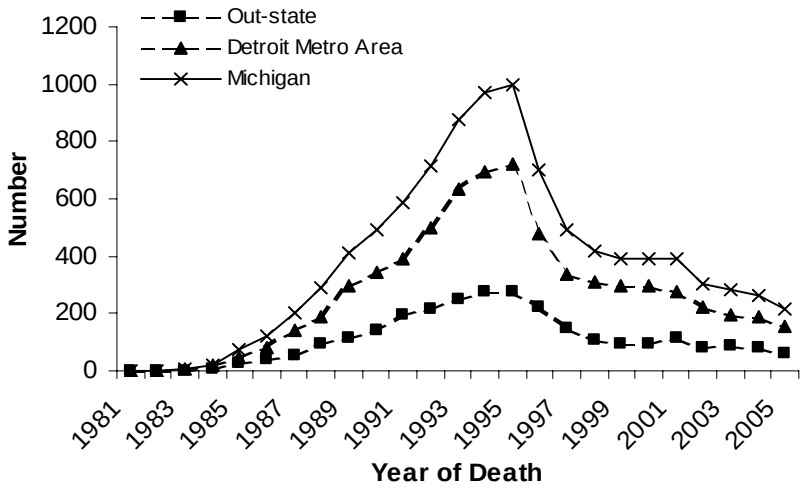


Figure 7: HIV Related Deaths in Michigan, by Area



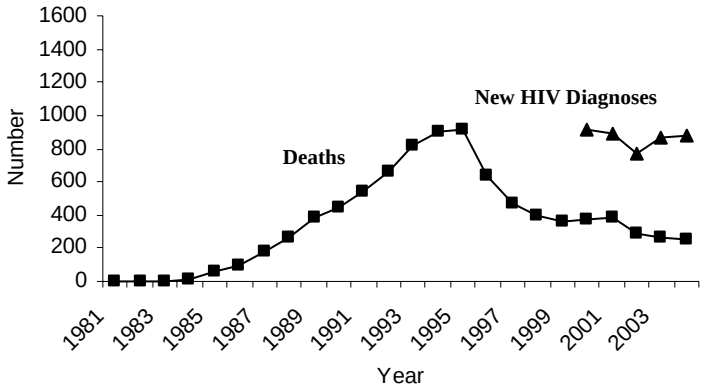
- The number of HIV related deaths decreased 45 percent between 2001 and 2005. In Figure 7, the top line reflects the total HIV related deaths for the state of Michigan (the sum of the two lower lines). The second line represents the Detroit Metro Area and the third line consists of the balance of Michigan (Out-state).

2006 Profile of HIV/AIDS in Michigan

Trends in HIV/AIDS Data (Continued)

Data from HIV/AIDS Reporting System (HARS)

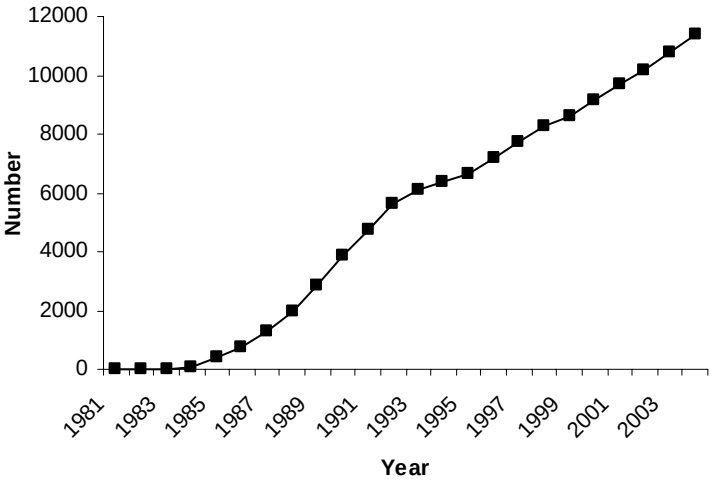
Figure 8: New diagnoses of HIV infection and HIV deaths in Michigan, 1/1/06



- New HIV diagnoses (HIV incidence) and deaths are level 2000-2004. HIV incidence and HIV related deaths are shown in Figure 8. The overall decrease in deaths is likely due to the more effective treatments available since 1996 that delay or prevent the onset of AIDS in HIV-infected persons. The number of persons newly diagnosed with HIV each year was roughly level at about 890 cases between 2000 and 2004.

- The total number of persons living with HIV/AIDS has reached an all-time high and continues to increase because new HIV infections continue to occur but HIV related deaths are dropping. Figure 9 shows this increase using reported HIV and AIDS cases. These cases comprise everyone reported with HIV in Michigan with a name, including those who also meet the AIDS case definition. Persons who were reported anonymously or those who have not been diagnosed are not represented in this graph.

Figure 9: Michgan residents reported living with HIV/AIDS through January 1, 2006



2006 Profile of HIV/AIDS in Michigan

Trends in HIV/AIDS Data (Continued)

Data from HIV/AIDS Reporting System (HARS)

Race and Sex 2000-2004: The proportion of persons diagnosed each year with HIV infection between 2000 and 2004 was stable across race/sex groups. Figure 10 shows that in 2004, there were 395 (41 percent) diagnoses in black males, 276 (28 percent) in white males, 207 (21 percent) in black females, 50 (5 percent) in non-white/non-black males, 31 (3 percent) in white females, and 12 (1 percent) in non-white/non-black females. Although the trends in new HIV diagnoses among black males and females are level, they are still impacted disproportionate to their numbers in the population. Black persons make up 14 percent of the general population of Michigan, but accounted for 62 percent of new HIV diagnoses in 2004 and 58 percent of persons living with HIV/AIDS.

Figure 10: Number of New Diagnoses in 2004 and Trends 2000-2004 According to Race/Sex

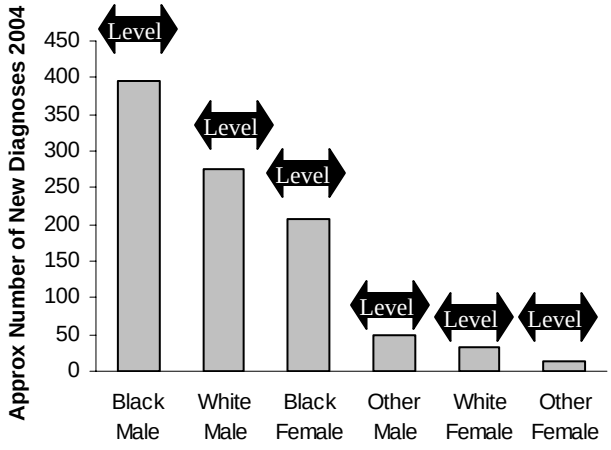
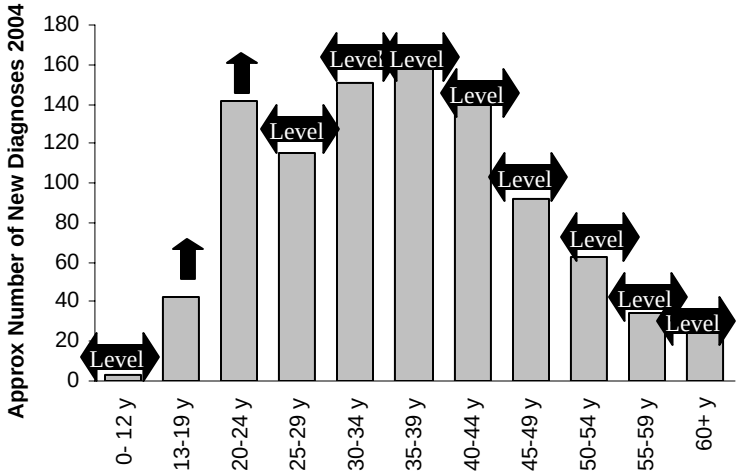


Figure 11: Number of New Diagnoses in 2004 and Trends 2000-2004 According to Age at HIV Diagnosis



Age at HIV Diagnosis 2000-2004: Figure 11 shows that the proportion of persons diagnosed each year with HIV infection increased significantly among those diagnosed at 13-19 years from two percent to four percent (22 to 43 cases) and also increased significantly among those diagnosed at 20-24 years of age from seven percent to 15 percent (61 to 142 cases). In all other age groups, the trends in new diagnoses are level. In 2004, there were 3 (<1 percent) persons diagnosed at 0-12 years of age, 43 (4 percent) 13-19 years, 142 (15 percent) 20-24 years, 116 (12 percent) 25-29 years, 150 (15 percent) 30-34 years, 159 (16 percent) 35-39 years, 140 (14 percent) 40-44 years, 92 (9 percent) 45-49 years, 63 (6 percent) 50-54 years, 35 (4 percent) 55-59 years, and 30 (3 percent) 60+ years. (*To account for reporting delays, weights are applied to the data. (The number of new diagnoses in each age group do not sum up to 971 due to rounding error)*

2006 Profile of HIV/AIDS in Michigan

Patterns of Service Utilization of HIV-infected Persons

Data from HIV/AIDS Reporting System (HARS), Uniform Reporting System (URS) & Adult and Adolescent Spectrum of disease (ASD)

The Ryan White Comprehensive AIDS Resources Emergency (CARE) Act provides federal funds to help communities and States increase the availability of primary health care and support services for people living with HIV/AIDS (PLWH/A). CARE Act funds are allocated to Title I (for Eligible Metropolitan Areas heavily impacted by the epidemic), Title II (for States and U.S. Territories) which includes funding earmarked for AIDS Drug Assistance Programs (ADAP), Title III (for outpatient HIV early intervention services) and Title IV (to coordinate and enhance services for women, infants, children and youth). CARE Act funds are funds of last resort.

Table 1: Comparing Services with Cases

Group	Services	Cases
Males	74%	77%
Females	26%	23%
White	35%	37%
Black	56%	57%
Hispanic	5%	4%
Other Minorities	2%	1%
Unknown Race	2%	2%
White Males	30%	32%
Black Males	38%	40%
Hispanic Males	4%	3%
Other Minority Males	1%	1%
Unknown Race Males	1%	1%
White Females	5%	5%
Black Females	19%	17%
Hispanic Females	1%	1%
Other Minority Females	1%	<1%
Unknown Race Females	<1%	<1%
0-12 Years*	1%	1%
13-19 Years*	2%	1%
20-24 Years*	4%	3%
25-44 Years*	53%	52%
45+ Years*	40%	44%
Infants: 0-1 Years*	<1%	<1%
Children: 2-12 Years*	1%	<1%
Youth: 12-24 Years*	6%	4%
Women: 25 Years*	24%	21%
Total	100% (N = 6,867)	100% (N = 12,972)

"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 CARE Act funds, and to identify and describe the populations receiving the services. All HIV+ clients served by funded providers are included in the URS, even if the CARE Act did not directly fund the reported service. The URS data files submitted by individual service agencies are combined and unduplicated across all providers using an encrypted client identifier, so that all services received by a client are combined into a single client record. Until 2005 Michigan has been able to combine and deduplicate URS data across all Titles of the CARE Act but recent changes in data systems reduced the number of Title I programs whose data could be included in 2005. Services reported in the URS include outpatient medical care, dental care, mental health services, case management, drug assistance and a wide range of support services.

Tables 1 and 2 represent all HIV+ clients served between January 1, 2005 and December 31, 2005, by the 30 CARE Act programs that submitted URS data to the Michigan Department of Community Health (MDCH). All providers that received CARE Act funding from Titles II, III, and IV are included in the data and most (58 percent) of the service providers funded by Title I. Because data from some Title I funded agencies are not included, these tables represent the minimum number of clients served and services delivered in 2005 by Michigan's CARE Act programs.

2006 Profile of HIV/AIDS in Michigan

Patterns of Service Utilization of HIV-infected Persons

Table 1 (previous page) shows that in 2005, 6,867 HIV-infected persons were reported receiving Ryan White services in the state of Michigan. Clients served by CARE Act programs represent more than half (53 percent) of the total of known cases in Michigan. A comparison also shows that persons receiving services from CARE Act providers were more likely than the reported population to be female, specifically black females and less likely to be 45 years or older.

The Ryan White CARE 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 12 to 24, and women age 25 or older receiving care is somewhat higher than in reported cases.

Table 2 gives additional detail about the core services of medical care, dental care, mental health care, case management and medication assistance delivered by the 30 CARE Act programs that reported URS data in 2005. The service units in the table are not units of time (e.g. 15 minutes, or 1 hour) but are "visits" (or a day in which the service occurred). Only one "visit" per day is counted for any service category except for case management which can have up to 2 per day. However, the unit of service for the AIDS Drug Assistance program is one prescription filled, rather than a day of service.

Table 2: Core services per CARE Act client, Statewide, 2005

	Medical Care	Dental Care	Mental Health services	HIV/AIDS Drug Assistance	Case Mgt
No. of providers supplying valid data*	16	8	13	1	17
No. of unduplicated clients served**	3,840	835	817	2,160	2,898
Total Days of Service***	17,427	2,709	4,439	67,912	48,818
Average no. of visits per client	4.54	3.24	5.43	31.44	16.85
Median no. of visits per client	3	3	3	24	10
Range of visits per client	1-77	1 - 18	1 - 81	1 - 224	1-125

* Data based on the number of CARE Act providers in Michigan that reported URS data for the service in CY 2005.

* A provider may be included in more than 1 service category

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

*** The Drug Assistance service unit is a prescription filled rather than a visit or day of service.

Medical care services in this table are for outpatient medical care visits ranging from a complete physical with a physician to a brief check-up with a nurse, drug review with a pharmacist, or a visit for a blood draw or lab test. The average of 4.54 visits per client, with a median of 3, is consistent with HIV care standards that recommend monitoring of health status on a quarterly basis. (Table 2)

Dental care services reported in the URS are primarily provided through the statewide Michigan Dental Program, administered by the Division of Health, Wellness and Disease Control of MDCH. Dental services for clients may be extensive, and require multiple visits, but may also simply be for annual prophylaxis. The average of 3.24 visits per client is consistent with an initial exam to plan the care needed and two or more treatment visits following approval of the care plan. (Table 2)

2006 Profile of HIV/AIDS in Michigan

Patterns of Service Utilization of HIV-infected Persons

Mental Health 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. Case management services include both face-to-face contacts and other contacts (by phone or mail) with or on behalf of the client, with the goal of linking HIV+ clients to care services, especially health care services.

The AIDS Drug Assistance Program (ADAP), administered by the Division of Health, Wellness and Disease Control of MDCH pays for medications dispensed to eligible HIV+ clients. The ADAP covers all HIV medications and many other medications as well. The unit of service for the Drug Assistance Program is a prescription filled, rather than a day of service

Table 3: Average number of visits per client, by type of CARE Act service, Statewide 2001 - 2005

Year of Service	Medical Care	Dental Care	Mental Health Services	Drug Assistance Program	HIV/AIDS Case Mgt
2001	4.41	3.52	9.62	N/A	17.34
2002	4.7	2.69	6.53	N/A	17.18
2003	4.02	3.65	7.43	33.22	17.04
2004	4.27	3.67	4.44	33.15	16.15
2005	4.54	3.24	5.43	31.44	16.85

Table 3 summarizes service averages over the last 5 years. For the years 2001 through 2004 the URS data included service records from all CARE Act funded programs in Michigan except for services from one Title III provider. In 2005, data from all Title II, III, and IV providers are included in the URS, but only 14 of the 24 Title I funded programs. Title I data are incomplete due to the introduction of a new data system in the DEMA. Analysis of the 2005 annual Title I provider reports (the CARE Act Data Reports) indicates that the 2005 URS data include 76 percent of Title I medical clients and services, 95 percent of Title I case management clients, and 100 percent of Title I mental health and dental care clients and services.

This table also illustrates that the average number of services reported for medical and dental care has been reasonably consistent from year to year. However, the per person average for mental health services has decreased, going from 9.62 visits a person in 2001 to 5.43 visits a person in 2005. This decrease is attributed to stricter standards for mental health services, which now require clients to have an official mental health diagnosis. As a result, services to clients without an official DSM IV diagnosis were reported in the more general service category of psychosocial support services and are not reported in Table 3.

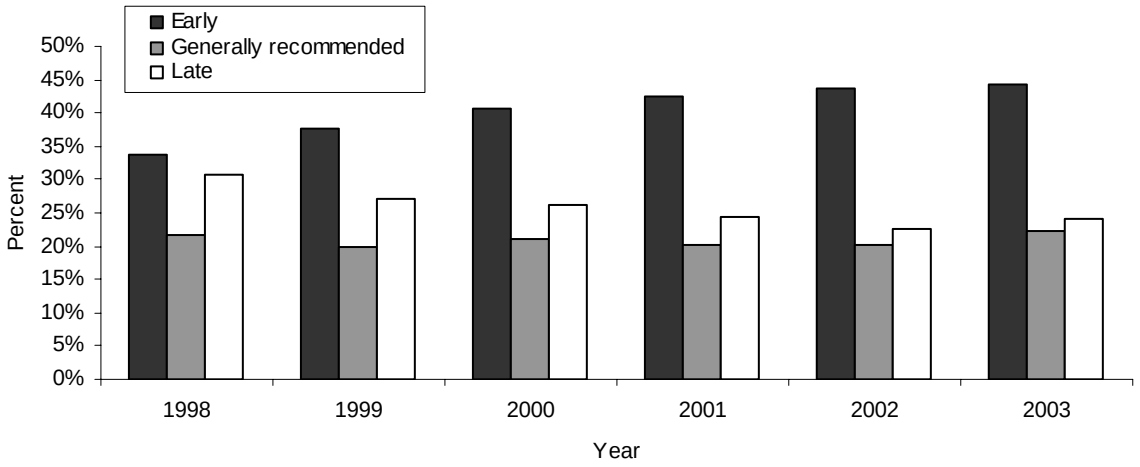
The average number of case management services per client has decreased slightly over the last five years, going from 17.34 per client in 2001 to 16.85 in 2005. In the years 1995 to 2000, case management services were reported for about 4,000 clients a year, but in 2001 through 2005 the number of clients receiving case management services was closer to 3,000 a year. This difference is partly the result of changes in reporting practices so that clients who only receive short-term assistance or information

Patterns of Service Utilization of HIV-infected Persons

and referral are more accurately reported in another service category. Also, fewer agencies are funded to deliver case management: 17 providers reported case management in 2005 compared to 29 in 1995.

Although the average number of ADAP prescriptions filled per person declined slightly between 2003 and 2005, the number of clients receiving drugs through the program has increased significantly during the same time frame. The total number of clients served by ADAP in 2003 was 1,457 compared to 2,160 in 2005, an increase of 48 percent in just two years. Naturally, the amount spent on medications by ADAP has also increased significantly. The demand for ADAP 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 and fewer have access to prescription drug coverage

Figure 12: Proportion of patients who received antiretroviral treatment late, at the recommended time, or early, ASD Study-Michigan, 1999-2003*



*Data from 2003 may be incomplete
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).

Figure 12 shows the timing of the initiation of antiretroviral treatment and the proportions of patients whose treatments began at each 3 times (each time corresponds to a category of CD4 count). 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 1999 to 24 percent in 2003. Inversely, the proportion whose antiretroviral treatment was begun early has increased from 34 percent in 1999 to 44 percent in 2003.

2006 Profile of HIV/AIDS in Michigan

Estimate of At-Risk Populations

Data from Holtgrave D, et al

Sexual Activity:

A 2002 study by Emory University for the Michigan Department of Community Health estimates 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 same study referenced above estimates 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 and HIV

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

As the HIV/AIDS epidemic continues to grow, there are indications of a correlation between those infected with HIV and tuberculosis, although TB cases have been declining in Michigan since the early 1990s. There are now a total of 174 persons known to be living and definitively co-infected, with HIV and Tuberculosis (TB). These include:

- 128 males (74 percent) and 46 females.
- 132 Non-Hispanic Black (76 percent), 25 Non-Hispanic White (14 percent), 15 Hispanic, 1 Asian/Hawaiian/Pacific Islander, and 1 Multi-racial person.
- Age at diagnosis of HIV: Four (2 percent) were 0 – 9 years, 2 (1 percent) were 10-19 years, 42 (24 percent) were in their 20s, 82 (47 percent) were in their 30s, 29 (17 percent) were in their 40s, and 15 (8 percent) were 50+ years.
- Residence at diagnosis of HIV: Sixty-three percent lived in the Detroit Metro Area. Areas with the majority of diagnoses are as follows: 81 City of Detroit (47 percent), 16 Wayne County, 13 Kent County, 11 Oakland County, 9 Berrien County, 4 Ingham County, 4 Jackson County, 3 Calhoun County, 3 Genesee County, 2 Washtenaw County, and one each in Kalamazoo County, Macomb County, Mecosta County, St. Clair County, St. Joseph County, and Wexford County. Twenty-two had no county listed or were diagnosed with HIV in another state.
- Cumulatively, a total of 614 have ever been definitively co-infected with HIV and TB, of which 440 (72 percent) have died.
- Of the 174 HIV positive persons currently living in Michigan who had been co-infected with tuberculosis, 137 (79 percent) were infected with pulmonary tuberculosis and 37 (21 percent) were infected with extra-pulmonary tuberculosis (outside of the lung).
- Twenty percent of the 174 co-infected with HIV and TB were born outside of the United States.

2006 Profile of HIV/AIDS in Michigan

Sexually Transmitted Diseases

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

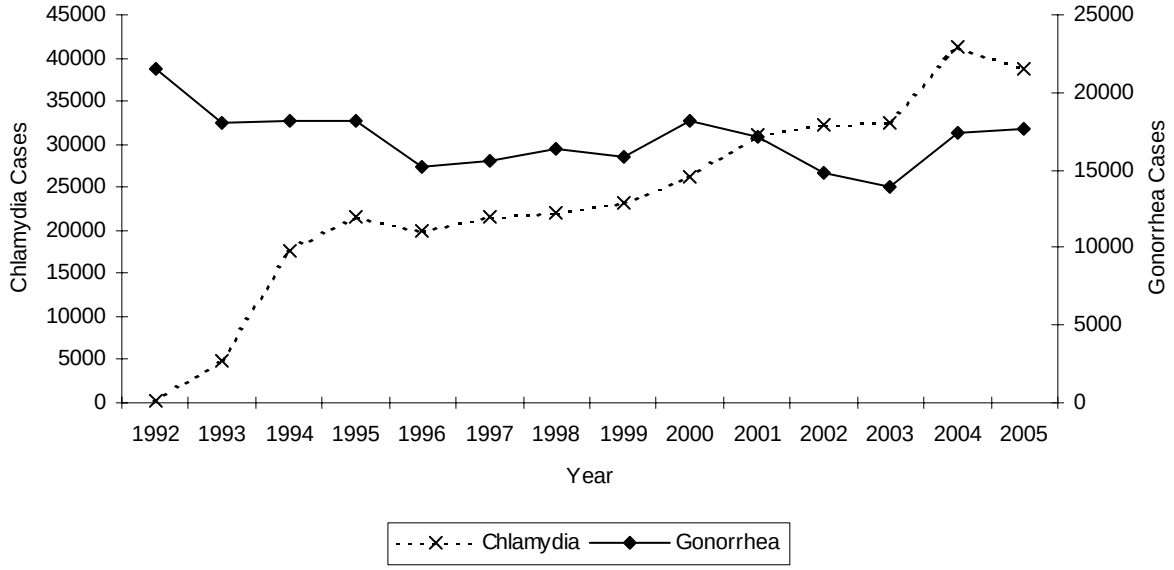
Several sexually transmitted diseases (STDs) are more common than HIV infection, have a short incubation period, and are curable. Reviewing their patterns of transmission can provide additional information regarding recent sexual behavior and potential risk, not available from HIV/AIDS data. Studies 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 2005 alone, there were nearly 39,000 cases of chlamydia and over 17,000 cases of gonorrhea reported in Michigan (Figure 13). See Table 11, page 3-69. For both diseases, the highest rates of infection were among persons age 20-24. This age group comprises 6 percent of the Michigan population but accounted for 30 percent of gonorrhea and 35 percent of chlamydia cases. The rates of chlamydia and gonorrhea among blacks were much higher than among whites. Even though 49 percent of gonorrhea cases and 47 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-two percent of gonorrhea cases were male, however, approximately 78 percent of reported chlamydia cases were female. This is likely because more women than men are screened for chlamydia.

Figure 13: Michigan Gonorrhea and Chlamydia 1992-2005

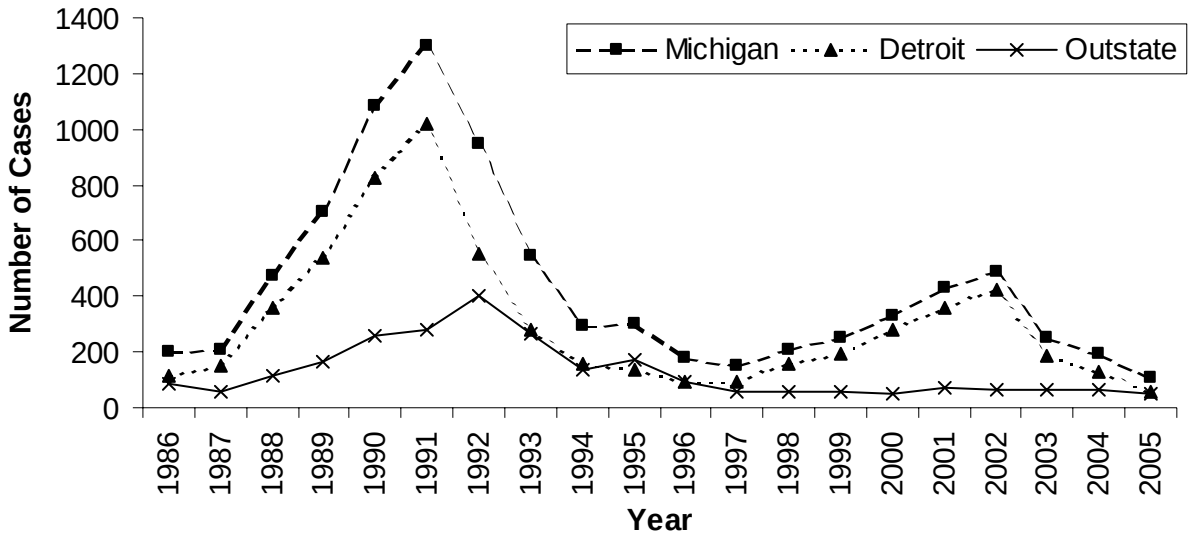


Sexually Transmitted Diseases (continued)

Syphilis

Figure 14 shows that infectious syphilis was diagnosed much less frequently than gonorrhea and chlamydia (105 infectious syphilis cases) in 2005. 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 represent a 55 percent decrease from 2004. Approximately 24 percent of cases were reported in the 45-54 year age group, representing an older at-risk population than gonorrhea or chlamydia (as shown in Table 11 on page 3-69). Syphilis cases reported in 2005 were 66 percent black and 81 percent male.

Figure 14: Michigan Primary and Secondary Syphilis Cases, by Area 1986-2005



Sexual Orientation

Nationwide, there have been increases in STD cases among self-identified men who have sex with men. Michigan recently began collecting site of specimen data for gonorrhea and chlamydia cases but does not collect data on sexual orientation for these cases. In 2005, one percent of male gonorrhea cases were collected from a rectal or pharyngeal site and .02 percent of chlamydia cases were collected from a rectal or pharyngeal site. These data can be used as a proxy for the number of MSM with STDs, although they are certainly an underestimate. Sexual orientation data are collected for syphilis cases. Approximately 37 percent of male syphilis cases in Detroit are men who have sex with men and nearly 60 percent of male syphilis cases in the rest of the state are men who have sex with men. Between 2001 and 2004, the syphilis epidemic in Detroit was largely heterosexual with the male female ratio being closer to 1:1. Due to a national and statewide effort focusing on drug use and commercial sex workers, primary and secondary syphilis cases decreased starting in 2002. Recently, although numbers of primary and secondary cases are quite low, the percent of cases among MSM has increased. In 2005, the male:female ratio for primary and secondary syphilis was 4:1 Statewide, ranging from 3.6:1 in the Detroit area to 8:1 in the out-state areas. This is a trend that is mirrored nationally and is the focus of prevention efforts around the country.

2006 Profile of HIV/AIDS in Michigan

Sexually Transmitted Diseases (continued)

Quinolone-resistant *Neisseria gonorrhea*

There were 33 cases (five percent of submitted isolates) of quinolone-resistant *Neisseria gonorrhea* (QRNG) diagnosed in Michigan in 2005. This was an increase of 69 percent compared to 2004. Several local health departments and private laboratories send their gonorrhea samples to the State Laboratories for susceptibility testing as part of surveillance for QRNG. Enhanced surveillance information such as sexual orientation, travel, symptoms, and STD history are collected to compare quinolone-resistant and susceptible gonorrhea cases. In 2005, cases were clustered in Oakland (12) and Kent (11) counties. Two cases were attributed to travel in endemic areas such as Hawaii, California, or Asia and/or heterosexual sex. Gonorrhea cases were more likely to have QRNG if they were white, older than 30 years, or a man who has sex with men. QRNG prevalence among men who have sex with men was 23 percent of gonorrhea cases versus one percent in heterosexual males and just under one percent for females.

Geographic Distribution

There are several areas in Michigan that consistently report high rates of STDs. For gonorrhea, there are nine 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 (879), Muskegon County (363), Genesee County (346), Calhoun County (260), and Berrien County (263). For chlamydia, there are 15 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 (1,411), Muskegon County (673), Genesee County (615), Ingham County (572) and Saginaw County (561). For primary and secondary syphilis, the HM 2010 goal is 0.2 cases per 100,000 persons. There are 11 counties with rates higher than the HM 2010 goal. The four areas with the highest rates are the City of Detroit (5.7), Grand Traverse County (2.6), Ingham County (2.1), and Washtenaw County (1.5). See Table 10 on page 3-68.

2006 Profile of HIV/AIDS in Michigan

Hepatitis and HIV

Data from Adult and Adolescent Spectrum of Disease (ASD)

Data for this analysis was 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, from the time the persons first contacted either site, until they died or were lost to follow-up. The proportion of males in ASD was lower than in the HIV-infected population overall, because ASD included all the women, but only 40 percent of the men who presented for HIV care at ASD sites.

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 part of the persons in ASD were tested for HBV and HCV.

Table 12 (page 3-70) shows the demographic and HIV transmission risk profiles for all the persons in care and for the populations 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 care, 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 care. 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 (high-risk sexual contact and blood transfer).

The proportions of persons in care 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.

The impact of HCV co-infection on the health of HIV-infected persons is increasing. The numbers of new HCV cases in the U.S. increased in the 1970's and 1980's, and dropped precipitously in the early 1990's.[1] These changes created a cohort of HCV-infected persons in the population, and the aging of this cohort is expected to lead to an increase in the number of persons with HCV-related late stage liver disease through at least 2015.[2] HIV-infected persons will be impacted even more than the general population, because HIV/HCV co-infected persons have a higher risk of liver disease than persons infected with HCV alone.[3] Planning for the care of HIV-infected persons will need to take into account the increasing numbers of HIV-HCV co-infected persons who are expected to develop late stage liver disease over the next decade or more.

[1]Centers for Disease Control and Prevention. Hepatitis Surveillance Report No. 58. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2003.
[2]Armstrong GL, et al. 2000. Hepatology 31:777-782.
[3]Graham CS, et al. 2001. Clin Infect Disease 33:562-569.

2006 Profile of HIV/AIDS in Michigan

Ranked Behavioral Group: MSM

Data from HIV/AIDS Reporting System (HARS), Family of HIV Seroprevalence Surveys, & Supplement to HIV/AIDS Surveillance Project II (SHAS)

Number of Cases:

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 of all reported infected persons. MDCH estimates that there are approximately 8,510 MSM living with HIV disease in Michigan. This includes an estimated 840 HIV-infected men whose risk is a combination of having sex with other men and injecting drugs. (See Table 7, page 3-64)

Incidence:

Archived serum from HIV-infected clients tested at HIV Counseling, Testing & Referral (CTR) sites throughout Michigan from 1993-2002 was tested using the less sensitive assay (STARHS) to determine whether HIV infection was recently acquired (in the 4-6 months prior to the blood draw). During this time period, approximately 58,000 and 68,000 HIV tests were performed annually. The number of incident infections ranged from 22-54 (13 to 24 percent) of HIV-positive persons tested. Overall HIV incidence among all persons tested was stable throughout most of the study period, reaching a low of 0.17 percent in 2000 and then rising to the highest level during this study period at 0.41 percent in 2002. MSM accounted for almost half of incident HIV infections. Incidence among MSM was stable through the 1990s then dipped and rose, settling at 3 percent in 2002. MSM/IDU had many high peaks, but did drop below that of MSM.

The racial distribution of MSM with newly acquired HIV shifted over time. Whites accounted for the majority of newly acquired infections among MSM (61 percent) in the first 5 study years, but 46 percent in the last 5 years, while the proportion of blacks increased from 34 percent to 47 percent during that same time period. Black MSM had higher incidence compared with the other MSM and had greater increases in incidence in recent years. Incidence increased from two percent in 1999 to seven percent in 2002 among black MSM whereas incidence among white MSM increased from 1.1 percent to 1.6 percent over this same time period. HIV incidence among Hispanic MSM was more erratic due to smaller numbers in this population.

Increases in recent years were most apparent among MSM in the 30-39 year and 40-49 year age groups . Among MSM in their 30s, incidence increased from 1.1 percent in 1998 to 2.6 percent in 2002. The increase was greater still among MSM in their 40s, from 0.8 percent in 1999 to 5.3 percent in 2002.

Race/Ethnicity:

Having sex with other men infected most males in Michigan. This is true for black, white and Hispanic men. In reviewing reported cases for MSM and MSM/IDU of all races (total cases equaling 6,707), white males (3,386) comprise half of men in this combined category; blacks (3,004) account for just under half (45 percent). See Table 8, page 3-66.

2006 Profile of HIV/AIDS in Michigan

Ranked Behavioral Group: MSM (continued)

Concurrent Diagnoses:

Of the 12,972 persons living with HIV/AIDS in Michigan, 2,578 (20 percent) had concurrent HIV and AIDS diagnoses. Of these, 1,396 (54 percent) reported MSM behavior, including MSM who where also IDU. MSMs make up the majority of those getting tested for HIV late in the course of the disease. See Table 7, page 3-64.

Age:

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 (41 percent). MSM is the predominant mode of transmission for males aged 13 and up, accounting for over 75 percent of infections among those aged 20-29 at diagnosis. See Table 9, page 3-67.

Geographic Distribution:

Just under two-thirds (64 percent) of HIV-infected MSM statewide reside in the Detroit Metro Area. In both the high and low HIV/AIDS prevalence areas (see map on page 3-9), MSM comprise the single largest mode of transmission. Within high prevalence counties MSM comprise over half of reported cases (51 percent) while in the lower prevalence counties about two-thirds (61 percent) of reported persons living with HIV/AIDS are MSM. These percentages include MSM who are also IDU.

Trends and Conclusions:

MDCH estimates that HIV infection increased significantly in men who have sex with men (MSM) from 51 percent to 57 percent (461 to 550 cases) from 2000 to 2004.

The data also suggest that prevention activities among male teenagers and male young adults should be geared towards males having sex with older males. These activities should recognize that adolescents at highest risk are those whose sex partners are older, since older men are more likely to be HIV-infected than are younger males.

2006 Profile of HIV/AIDS in Michigan

Ranked Behavioral Group: MSM: Discussion of Behaviorally Bisexual Men

Data from HIV/AIDS Reporting System (HARS), HIV Testing Survey (HITS), & 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 usually completed by health care providers and surveillance staff reviewing medical records rather than through extensive interviews of the infected person. Only 52 percent of all case reports have complete 'yes or no' answers to both questions, "has the patient had sex with men," and "has the patient had sex with women." Based on these complete forms, 44 percent of all MSM reported also having sex with women since 1977. These more complete forms also show that three percent of women report having sex with behaviorally bisexual men. These data from case reporting should be viewed as minimum estimates of these behaviors. Nonetheless, they suggest that more women have sex with behaviorally bisexual men than the surveillance system collects. There have been no changes over time.

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 MI 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), 63 percent (332) reported having sex with other men in the 12 months prior to the interview; 254 (77 percent) were black and 72 (22 percent) were white. Of these 332 men, 10 percent (33) also reported having sex with women in the 12 months prior to the interview. This represents 12 percent (30) of the 254 black men and three percent (2) of the 72 white men who reported same-sex behavior.

During the HIV Testing Survey (HITS) HIV-negative MSM were interviewed in Detroit (55 MSM), Oakland County (5 MSM) and Grand Rapids (23 MSM). Data from these areas are left combined to maintain statistical power. The mean age of the respondents sampled at these bars was 30 years. Please see the Data Sources Section (page 1-5) to learn more about HITS. This section describes bisexual activity among this group. Among the 81 respondents interviewed in gay bars, the question "Have you had sex with a woman in the past 12 months?" was asked. As can be seen in Figures 9 and 10, men older than 24 years (28 percent) and black men (27 percent) were more likely to report bisexual behavior.

Figure 15: MSM by Age: Have you had sex with a woman in the past 12 months? (n=81)

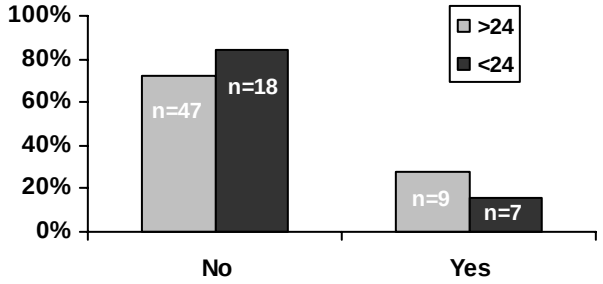
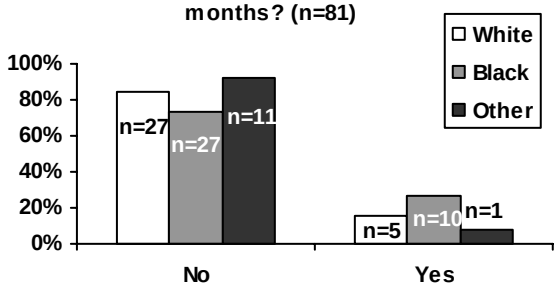


Figure 16: MSM by Race: Have you had sex with a woman in the past 12 months? (n=81)



2006 Profile of HIV/AIDS in Michigan

Ranked Behavioral Group: MSM: A Look at Condom Usage

Data from Community Intervention Trial for Your (CITY), HIV Testing Survey (HITS), & Supplement to HIV/AIDS Surveillance Project II (SHAS)

A survey of sexual risk and preventive behavior among young men who have sex with men was conducted in the summer of 1999 in Milwaukee, Wisconsin and Detroit called the Community Intervention Trial for Youth (CITY). Men were randomly recruited outside of venues frequented by young men who have sex with men in the two cities. A total of 547 men were surveyed, 48 percent were from Detroit. The mean age from the two cities was 21.2 years. Data provided are combined from Detroit and Milwaukee. The survey shows that 1 in 5 men (20 percent) reported not using a condom during insertive and/or receptive anal sex. Non-white participants were more likely to report insertive anal sex with a condom than white participants. More than half of the total sample (55 percent) had non-main partners in addition to main partners. Almost one-third (32 percent) reported that drugs or alcohol was a factor for having sex with their last non-main partner, while less than a quarter (22 percent) reporting being high on drugs or alcohol during sex with their main partner.

This section discusses questions from SHAS interviews with infected MSM regarding condom use with male partners. Among the 333 men who report having sex with a man in the 12 months prior to the interview, 65 percent (216) reported being in a steady relationship with a man. Fifty-six percent (187) reported having sex with a non-steady man during the 12 months prior to the interview. As shown in Figures 17 and 18, of the 111 male respondents who reported having insertive anal sex with a steady male partner, 28 percent reported not using condoms the last time they had sex. Of the 119 male respondents who reported having receptive anal sex with a steady male partner, 30 percent reported that their partner did not use a condom. The percentages of condom use are similar for most recent non-steady partners the last time they had sex.

Figure 17: Condom Usage During Insertive Anal Sex Among HIV Infected MSM in SHAS (N = 111)

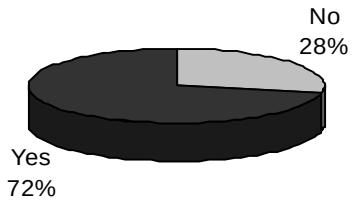
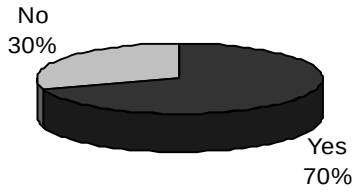


Figure 18: Partner's Condom Usage During Receptive Anal Sex Among HIV Infected MSM in SHAS (N = 119)



2006 Profile of HIV/AIDS in Michigan

Ranked Behavioral Group: MSM: HIV-Negative, At-Risk Persons

Data from HIV Testing Survey (HITS)

During the HIV Testing Survey (HITS) HIV-negative MSM were interviewed in Detroit (55 MSM), Oakland County (5 MSM) and Grand Rapids (23 MSM). Use of condoms with male partners was assessed and indicated inconsistent condom usage. Condom use was more frequent among those who reported being the insertive partner. Figure 19 shows that of 40 respondents reporting a "primary" partner who participated in receptive anal sex, 13 (32 percent) reported that their partner used condoms "Always" in the past year. Figure 20 shows that of the 47 respondents reporting a "primary" male partner who participated in insertive anal sex, 22 (47 percent) reported using a condom "Always".

Figure 19: In the past 12 months, when you had receptive anal sex with a primary male partner, how often did he use a condom? (n=40)

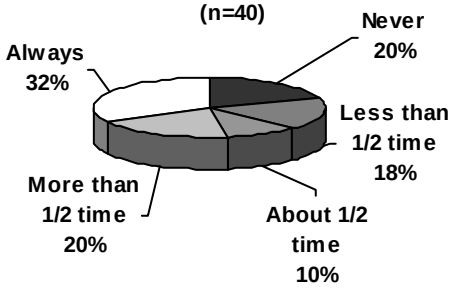


Figure 20: In the past 12 months, when you had insertive anal sex with a primary male partner, how often did you use a condom? (n=47)

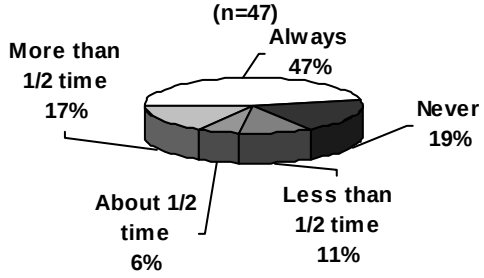


Figure 21 shows that among the 19 respondents with a "non-primary" male partner, 7 (37 percent) reported that their partner used condoms "Always" in the past year when they participated in receptive anal sex. Figure 22 shows that of the 32 respondents who participated in insertive anal sex with a non-primary male partner, 19 (60 percent) reported that they used a condom "Always".

Figure 21: In the past 12 months, when you had receptive anal sex with a non-primary male partner, how often did he use a condom? (n=19)

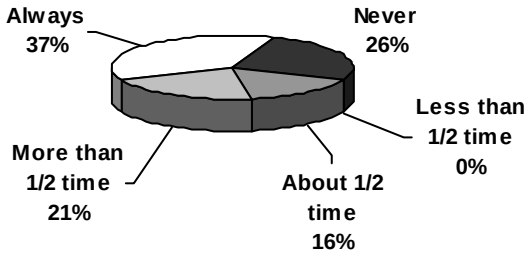
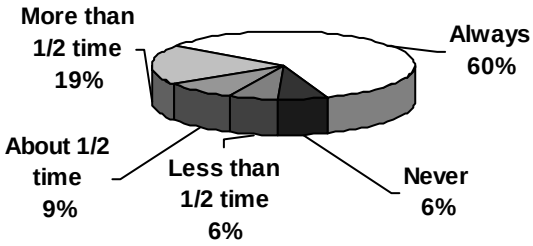


Figure 22: In the past 12 months, when you had insertive anal sex with a non-primary male partner, how often did you use a condom? (n=32)



2006 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 the Midwest AIDS Prevention Project (MAPP). 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; typically 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 participants' 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.

2006 Profile of HIV/AIDS in Michigan

Ranked Behavioral Group: IDU

Data from HIV/AIDS Reporting System (HARS), Family of HIV Seroprevalence Surveys & Supplement to HIV/AIDS Surveillance Project II (SHAS)

Number of Cases

Injecting drug users (IDUs) are the number-two ranked behavioral group in Michigan and account for under one fifth of reported infected persons (including MSM/IDU). MDCH estimates there are approximately 3,070 IDUs living with HIV disease in Michigan. This estimate includes 840 HIV-infected men whose risk is a combination of having sex with other men and injecting drugs (MSM/IDU).

When considering the effect of IDU on the HIV/AIDS epidemic, it is important to note that this group is additionally linked to heterosexuals, infants, and MSM. Almost half (47 percent) of the reported cases among non-MSM IDUs also had high-risk heterosexual sex partners. Additionally, of the 1,690 cases with reported high-risk heterosexual risk, 495 individuals (29 percent) reported having a partner who was an IDU. Fifty percent of perinatally infected infants (infants infected at birth) have mothers who are IDU or have a mother whose partner was an IDU. When these linked populations are considered, IDU-related transmission accounts for 23 percent (3,002 cases) of people reported with HIV disease in Michigan. This is similar to the nationwide picture of 24 percent IDU.

Incidence:

In the early 2000s, a less sensitive EIA assay was used to measure incidence (recently acquired infections) by testing stored specimens from the Family of Seroprevalence Surveys that were collected between 1988 and 1999. A total of 20 persons were identified during the period as having recently acquired HIV infection, with the annual number of incident infections ranging from zero to seven (0 to 9 percent are HIV-positive) persons tested. The small number of recently infected persons tested limits the generalizability of the trends. Overall HIV incidence ranged from zero percent in 1988, 1989, and 1993 to two percent in 1992. In the most recent survey years, incidence increased from a low of 0.15 percent in 1997 to 0.62 percent in 1999. Because the number of recent infections identified each year was small, data were pooled in 3-year intervals to get more stable estimates of incidence over time. The pooled estimates show a peak in incidence between 1990-1992 at 0.82 percent and then a decline over the years. Again, in the later years, incidence began to increase, but it did not reach the levels seen from 1990-92.

Black males and black females were the only groups with recently acquired infections. Incidence was highest in these two groups in the early 1990s, peaking for black males in 1992 at 2.82 percent and for black females in 1999 at 2.68 percent. Incident infections occurred more often among older age groups in the early years and occurred in the latter part of the decade in younger persons. For instance, incidence peaked in 1999 for persons 25-29 years (3.34 percent) and 30-34 years (1.58 percent), but the highest incidence occurred in 1992 among persons 40-44 years (6 percent).

2006 Profile of HIV/AIDS in Michigan

Ranked Behavioral Group: IDU (continued)

Incidence (continued):

IDU and NIDU (non-injecting drug use) were the only risk groups with recently acquired infections. HIV incidence was higher among IDU than NIDU in the early years of the survey, peaking at three percent in 1992, but there were no recently acquired infections among IDU after 1996. New infections were identified in NIDU from 1994 onward, with incidence ranging from 0.1 percent in 1996 to 0.88 percent in 1998-99. Among IDU, recently acquired infections were only identified among persons whose primary drug was heroin. Among NIDU, new infections were found primarily among crack cocaine users, and incidence increased among crack users from 1997 (0.4 percent) to 1999 (1.4 percent). None of the newly infected clients chose to be HIV tested at intake to substance abuse services. Please refer to the Data Sources section of this profile for more information on the Family of Seroprevalence Surveys (page 1-8).

Race/Ethnicity and Sex:

Of the 2,420 IDU and MSM/IDU HIV/AIDS cases, 1,122 are black men (46 percent), 540 are black women (22 percent), 481 are white men (20 percent), 138 are white women (6 percent), 85 are Hispanic men (4 percent) and 25 are Hispanic women (1 percent). In total, nearly three quarters (1,662 cases) of the IDU cases occur in black persons. Approximately two-thirds of the cases are men (71 percent) and one-third are women (29 percent). Among the 710 women who's HIV infection has been attributed to IDU, over half (56 percent) were also reported with high-risk heterosexual sex partners. See Table 8, page 3-66.

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 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). One hundred and seventy-four (98 percent) injection drug users have 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) of injection drug users are potential alcoholics-17 percent of males (44) and 28 percent of females (30). A 'potential alcoholic' is defined as a person who answered 'Yes' to 2 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?

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.

Questions used to screen respondents for potential alcoholism reveal that 32 percent (371) of all respondents are potential alcoholics-31 percent of males (263) and 32 percent of females (108). Further SHAS data describing the drug use behaviors of participants in this project are available online at www.michigan.gov/mdch.

2006 Profile of HIV/AIDS in Michigan

Ranked Behavioral Group: IDU (continued)

Concurrent Diagnoses:

Of the 12,972 persons living with HIV/AIDS in Michigan, 2,578 (20 percent) had concurrent HIV and AIDS diagnoses. Of these, 420 (15 percent) reported IDU behavior, including IDU who where also MSM. Of those reporting IDU with no MSM behavior, 36 percent also reported high-risk heterosexual sex, while 64 percent reported no sexual behavior of any kind. IDUs are less likely then MSMs to get tested late in the progression of HIV disease. See Table 7, page 3-64.

Age:

Among men 20 and older at the time of HIV diagnosis, IDU (including MSM/IDU) is the second most common mode of transmission. Thirty-nine percent of all the male IDU cases are among men who were diagnosed with HIV in their thirties (42 percent of these were MSM/IDU), and 30 percent of all the male IDU cases are recorded among men who were diagnosed with HIV in their forties (28 percent of these were MSM/IDU).

Among women aged 13 and older at the time of HIV diagnosis, IDU is the second most common mode of transmission. For women who were diagnosed with HIV in their thirties and forties, high-risk heterosexual and IDU are very close. For women in their thirties, IDU makes up 56 percent while HRH makes up 43 percent. For women in their forties, IDU makes up 51 percent while HRH makes up 48 percent.

There are very few cases of HIV/AIDS attributed to IDU among persons who were teenagers at the time of their HIV diagnosis (N=31) and less then half of those are among MSM/IDU; the proportion among those in their twenties is also small (13 percent of cases with a known risk). See Table 9, page 3-67.

Geographic Distribution:

IDU is a more common mode of transmission in the higher prevalence areas of the state (see Figure 2 on page 3-9). Within high prevalence counties, 18 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.

Trends and Conclusions:

The proportion of persons diagnosed each year with HIV infection between 2000 and 2004 decreased significantly in IDUs from 17 percent to 12 percent (150 to 120 cases). Some of these persons were likely exposed heterosexually because IDUs are more likely to have IDU sex partners than are persons who do not inject drugs. IDU becomes a more primary mode of transmission as people get older. In addition, the impact of this transmission group on non-IDUs is important to recognize. Decreasing HIV among IDUs will decrease the number of cases attributed to heterosexual transmission as well as to their infants via perinatal transmission.

2006 Profile of HIV/AIDS in Michigan

Ranked Behavioral Group: IDU: HIV Negative, At-Risk Persons

Data from HIV Testing Survey (HITS)

The HITS survey assessed behaviors in HIV-negative IDUs. This section includes data from Detroit (66 IDUs), Oakland County (7 IDUs), and Grand Rapids (21 IDUs). Figure 23 shows approximately three in ten respondents reporting use of non-sterile needles at least some of the time during the 12 months prior to the survey. Figure 24 shows that 62 percent reported injecting only heroin on a "Daily" basis.

Figure 23: In the last 12 months, how often have you used a dirty needle? (n=94)

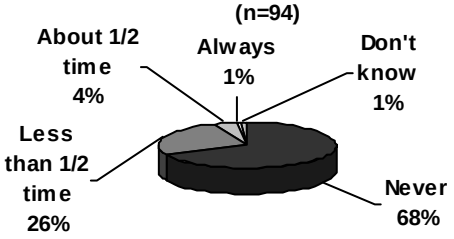
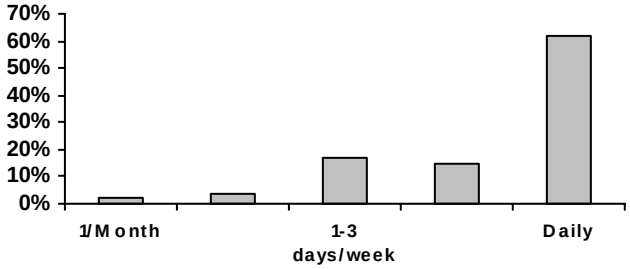


Figure 24: In the past 12 months, how often did you inject heroin only? (n=94)



Inconsistent condom use among female injection drug users is higher with primary male sex partners. Among female IDUs reporting "primary" male sex partners, 57 percent reported "Never" using a condom (Figure 25). Among female IDUS reporting "non-primary" male sex partners, 18 percent reported "Never" using a condom (Figure 26).

Figure 25: Women: In the past 12 months, when you had vaginal sex with a primary male partner, how often did he use a condom? (n=23)

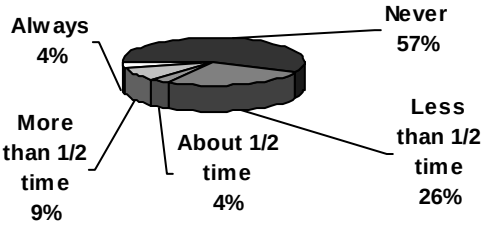
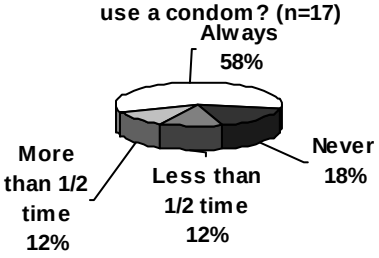


Figure 26: Women: In the past 12 months, when you had vaginal sex with a non-primary male partner, how often did he use a condom? (n=17)



Male injection drug users reported comparable condom usage rates with their female partners. Among those reporting a "primary" female sex partner, 57 percent reported "Never" using a condom with the primary female partner (Figure 27). Fifteen percent of male respondents reported "Never" using a condom with their female non-primary partner (Figure 28).

Figure 27: Men: In the past 12 months, when you had vaginal sex with a primary female partner, how often did you use a condom? (n=37)

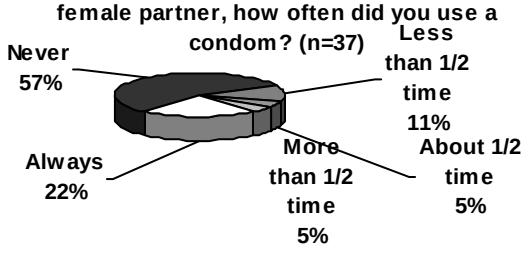
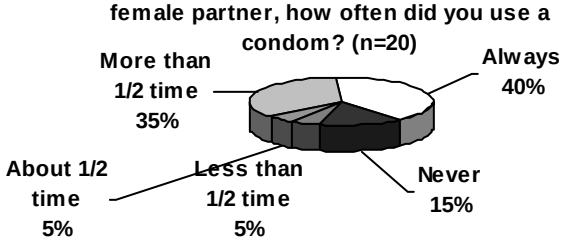


Figure 28: Men: In the past 12 months, when you had vaginal sex with a non-primary female partner, how often did you use a condom? (n=20)



2006 Profile of HIV/AIDS in Michigan

Ranked Behavioral Group: High-Risk Heterosexuals

Data from HIV/AIDS Reporting System (HARS) & Family of HIV Seroprevalence Surveys

Number of Cases:

Heterosexual transmission is the number-three ranked behavioral group in Michigan. Heterosexual sex accounts for 13 percent of reported infected persons. MDCH estimates that 2,140 persons living with HIV disease in Michigan were infected with HIV through heterosexual sex. Transmission is classified as heterosexual when one or more heterosexual sex partners are known to be IDUs, behaviorally bisexual men, blood recipients known to be HIV +, and/or HIV+ individuals (these are referred to as high-risk heterosexual partners).

Currently there are an estimated 1,050 infected persons who are classified as IDUs and also had one or more high-risk heterosexual sex partner(s). These persons may have been exposed to HIV heterosexually or through sharing injecting equipment. Among reported cases, the dual risk IDU/heterosexual cases comprise six percent of all reported HIV/AIDS cases and are 48 percent women and 52 percent men.

Incidence:

In the early 2000s, a less sensitive EIA assay, was used to measure incidence (recently acquired infections) by testing stored specimens from the Family of Seroprevalence Surveys that were collected between 1988 and 1999. At Michigan HIV counseling, testing, & referral centers incidence ranged from 22-54 cases (13 to 24 percent) of HIVpositive persons tested annually. Overall HIV incidence among all persons tested was stable throughout most of the study period, reaching a low of 0.17 percent in 2000 and then rising to the highest level during this study period at 0.41 percent in 2002,. Specifically, heterosexuals were represented by two groups: a person engaging in only heterosexual sex, with no other risk and a person whose sex partner was at risk for HIV. Each of these groups accounted for 14 percent of recently acquired HIV infection during this period. The majority of recently acquired infections in the heterosexual group were black, and the proportion of blacks increased in the later study years, with the greatest increase seen among black females (29 to 44 percent).

Race/Ethnicity and Sex:

Among females reported with HIV/AIDS, over one-third (40 percent) of these cases contracted HIV heterosexually. About one-quarter of females, 24 percent, were infected through IDU. Thirteen percent of women reported with HIV/AIDS are IDUs who also had high-risk heterosexual sex partners. These data underscore the point that these two modes of transmission are closely intertwined for women.

Among the 1,690 men and women living with HIV/AIDS and infected heterosexually, 29 percent reported their heterosexual partner as injecting drug users, five percent as behaviorally bisexual men (this applies to women only) and two percent as persons infected through blood products. Two thirds (63 percent) reported their partner(s) as HIV-infected without reporting the partner(s) risk for contracting HIV.

2006 Profile of HIV/AIDS in Michigan

Ranked Behavioral Group: High-Risk Heterosexuals (continued)

Race/Ethnicity and Sex (continued):

While women account for 23 percent of all reported HIV/AIDS cases in Michigan, they have consistently accounted for over two-thirds of heterosexually acquired infections -- currently 71 percent. Just over one-third of all black women were infected heterosexually (37 percent). Fifty percent of white women and 53 percent of Hispanic women, half of each group, were infected through heterosexual sex.

Most heterosexual cases of HIV/AIDS are black--66 percent of female and 71 percent of male. It should be noted that the percent of men infected heterosexually is low--six percent of cases among men of all races. See Table 8, page 3-66.

The heterosexual transmission category includes sub-categories to describe mode of transmission in more detail. This is especially helpful for women since they make up most (71 percent) of the heterosexually transmitted cases. To be reported as a heterosexual transmission case, a female must have a male partner who is an IDU, behaviorally bisexual man, blood recipient known to be HIV +, and/or HIV positive. Heterosexual and IDU modes of transmission and associated sub-categories for infected black and white women are shown in Figures 29 and 30.

Figure 29: Black Females Living with HIV/AIDS in Michigan, by Expanded Mode of Transmission (N = 2,143)

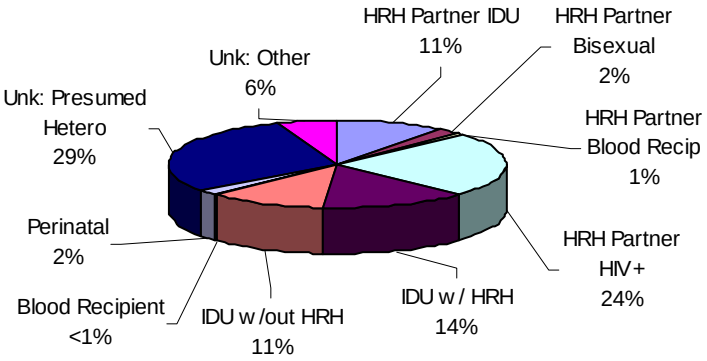
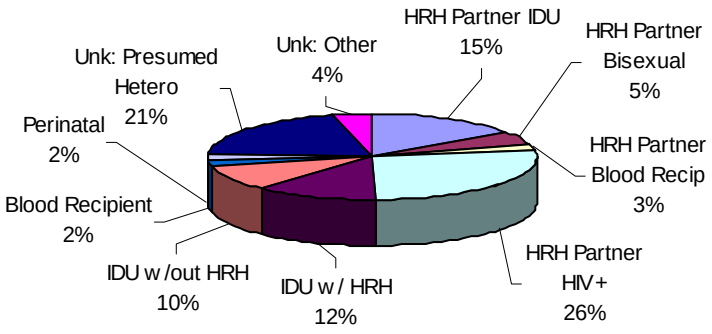


Figure 30: White Females Living with HIV/AIDS in Michigan, by Expanded Mode of Transmission (N = 623)



2006 Profile of HIV/AIDS in Michigan

Ranked Behavioral Group: High-Risk Heterosexuals (continued)

Concurrent Diagnoses:

Of the 12,972 persons living with HIV/AIDS in Michigan, 2,578 (20 percent) had concurrent HIV and AIDS diagnoses. Of these, 284 (11 percent) reported high-risk heterosexual behavior. HRH are as likely as IDUs, and less likely as MSM to get tested late for HIV. See Table 7, page 3-64.

Age:

High-risk 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. However, among women 40-49, the proportions of high-risk heterosexual and IDU transmissions are very close at 34 and 37 percent, respectively. Among men, the percentage with high-risk heterosexual sex as the mode of HIV transmission remains low. However as the age at diagnosis gets older, HRH makes up a larger proportion, but never surpasses 10 percent. See Table 9, page 3-67.

Geographic Distribution:

The 1,690 persons living with HIV/AIDS who acquired HIV heterosexually (prisoners excluded) are located proportionately throughout the state. In the high and low prevalence areas (Figure 2 on page 3-9), they comprise 13 percent and 12 percent, respectively, of reported cases in these areas.

Trends and Conclusions:

New HIV diagnoses that are high-risk heterosexual remained level at 246 (25 percent of all new HIV diagnoses) during 2004. The data 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 high-risk heterosexuals compared with men who have sex with men, this mode of transmission is unlikely to surpass that of MSM. However, recent trends show that heterosexually acquired cases are likely to surpass the proportion of cases attributed to IDU in the coming years.

2006 Profile of HIV/AIDS in Michigan

Ranked Behavioral Group: High-Risk Heterosexuals: Condom Usage

Data from Supplement to HIV/AIDS Surveillance Project II (SHAS)

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, most (208 or 98 percent) reported having sex with a man in the 12 months prior to the interview. We asked these 208 women questions about use of a barrier with their steady (someone they feel committed to above anyone else and have sex with) partners. Eighty-five percent (176) of the (208) women report being in a steady relationship with a man during the 12 months prior to interview. Use of a barrier with these partners is displayed in Table 4.

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 529, 228 men (43 percent) report having had sex with a woman in the 12 months prior to the interview. Sixty-five percent (148) of these men reported being in a steady relationship with a woman in the 12 months prior to interview. Condom use at that sexual contact with these partners is displayed in Table 4.

Table 4: Barrier/Condom Use with Steady Partner, Among Heterosexuals

	Females (n=176) Percent (barrier use/sexual activity)	**Males** (n=148) Percent (condom use/sexual activity)
Sexual Activity*		
Vaginal sex	69% (118/172)	78% (113/145)
[#*]Oral sex	22% (7/32)	40% (16/40)

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

In addition, we asked women and men, questions regarding barrier/condom use with their most recent other male and female partners. Among the female SHAS respondents, 68 (33 percent) report having sex with a man other than a steady male partner in the 12 months prior to interview. While among the male SHAS respondents, 115 (50 percent) report having sex with a woman other than a steady female partner in the 12 months prior to interview. Barrier/condom use at last sexual contact with these partners is displayed in Table 5.

Table 5: 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*

2006 Profile of HIV/AIDS in Michigan

Ranked Behavioral Group: High-Risk Heterosexuals: HIV Negative, At-Risk Persons

Data from HIV Testing Survey (HITS)

In 2002, high-risk HIV-negative heterosexuals were interviewed as a part of HITS at the sexually transmitted disease clinics of the Detroit City (62), Oakland County (27), and Kent County (28) Health Departments. Men interviewed reported "Never" using a condom 45 percent of the time with their primary female partner and "Never" using a condom 19 percent of the time with a non-primary female partner (Figures 31 and 32). Women interviewed in the STD clinics reported "Never" using a condom 38 percent of the time with their primary male partners, and "Never" using a condom 42 percent with the non-primary male partners (Figures 33 and 34).

Figure 31: Men: In the past 12 months, when you had vaginal sex with a primary female partner, how often did you use a condom? (n=48)

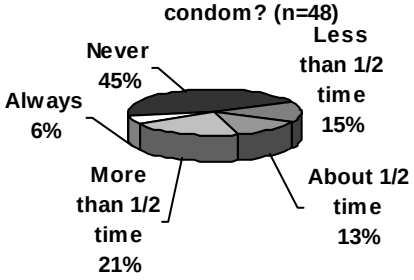


Figure 32: Men: In the past 12 months, when you had vaginal sex with a non-primary female partner, how often did you use a condom? (n=37)

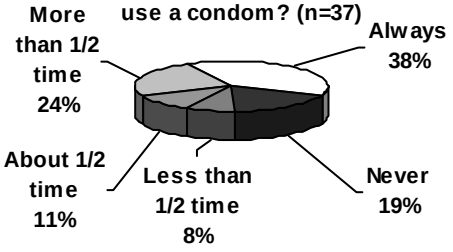


Figure 33: Women: In the past 12 months, when you had vaginal sex with a primary male partner, how often did he use a condom? (n=50)

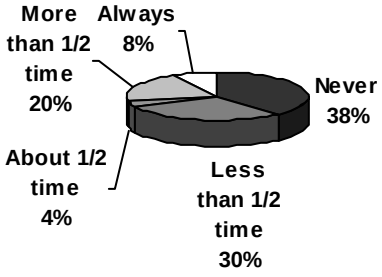
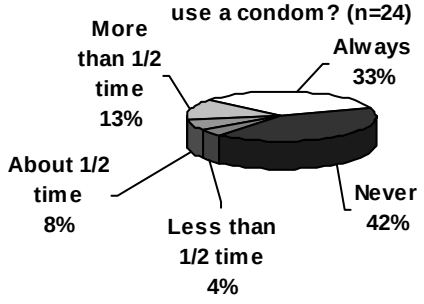


Figure 34: Women: In the past 12 months, when you had vaginal sex with a non-primary male partner, how often did he use a condom? (n=24)



2006 Profile of HIV/AIDS in Michigan

Description of the Epidemic by Race and Sex

Data from HIV/AIDS Reporting System (HARS)

Number of Cases:

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 (57 percent) of the cases of HIV/AIDS. MDCH estimates 9,340 black persons are living with HIV/AIDS in Michigan. The rate of HIV infection among blacks is 670 per 100,000 population, eight times higher than the rate among whites. MDCH estimates that as many as one out of 100 black males and one out of 260 black females may be HIV-infected.

White persons comprise over a third (37 percent) of reported HIV/AIDS cases and 79 percent of Michigan's population. MDCH estimates 6,050 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 (78 per 100,000 population) than blacks or Hispanics. MDCH estimates that as many as one out of 730 white males and one out of 5,030 white females may be HIV-infected.

Hispanics comprise four percent of cases and three percent of the population. MDCH estimates 680 Hispanics 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 (210 per 100,000 population) than that among whites. MDCH estimates that as many as one out of 330 Hispanic males and one out of 900 Hispanic females may be HIV-infected.

Most persons living with HIV/AIDS in Michigan are male (77 percent) and this proportion has decreased over time from 85 percent in 1991. Although women continue to be a smaller proportion of persons living with HIV/AIDS, their proportion has increased and they currently comprise 23 percent of the infected population in Michigan.

The majority of the 10,001 male HIV/AIDS cases are black (52 percent), 41 percent white, four percent Hispanic and two percent are other or unknown race. The majority of the 2,971 female HIV/AIDS cases are black (72 percent), almost one-quarter (21 percent) are white, four percent are Hispanic and three percent are other or unknown race.

Concurrent Diagnoses:

Of the 12,972 persons living with HIV/AIDS in Michigan, 2,578 (20 percent) had concurrent HIV and AIDS diagnoses. Of these, 81 percent are male and 19 percent are female; males are disproportionately represented. This likely means they are tested later and/or present for care later then females.

Over half (56 percent) are black, 38 percent are white, and 5 percent are Hispanic. Black males make up the majority at 42 percent, followed by white males (35 percent) and black females (14 percent). The remainder of the race-sex groups are all below 5 percent. See Table 7, page 3-64.

2006 Profile of HIV/AIDS in Michigan

Description of the Epidemic by Race and Sex (continued)

Mode of Transmission:

Figures 35 and 36 display the proportion of black and white male cases by mode of transmission.

Figure 35: Black Males Living with HIV/AIDS in Michigan, by Expanded Mode of Transmission (N = 5,222)

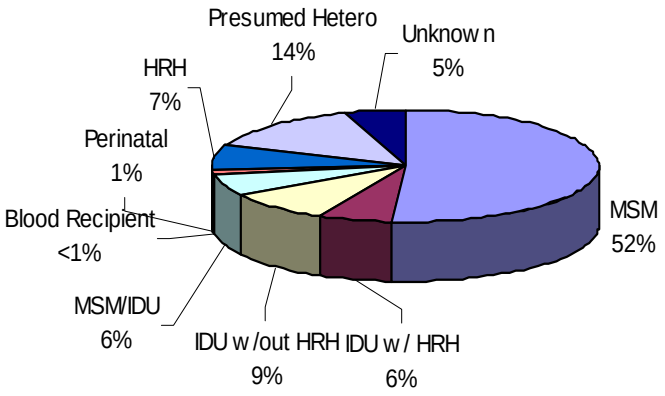
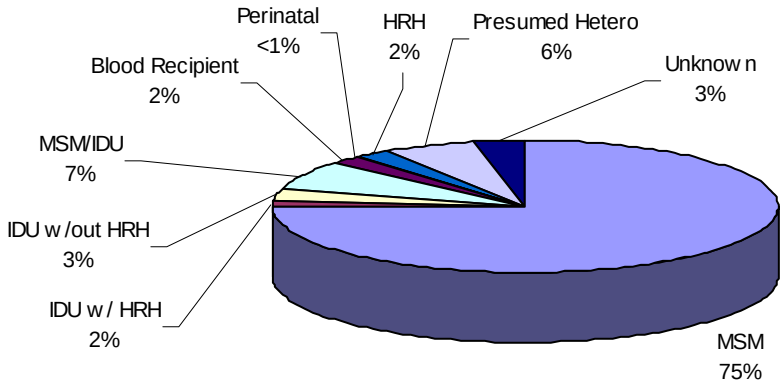


Figure 36: White Males Living with HIV/AIDS in Michigan, by Expanded Mode of Transmission (N = 4,147)



Refer to Figures 29 and 30, page 3-35 for black and white female distributions.

2006 Profile of HIV/AIDS in Michigan

Description of the Epidemic by Race and Sex (continued)

Geographic Distribution of Cases:

Looking at the proportions of cases by race in a particular area of the state (e.g., number of black cases/total number of cases) does not fully measure the impact of this disease. This is because the proportions of whites and blacks living in high and low prevalence areas are different. See page 3-9 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 37 shows that the HIV/AIDS case rate among blacks is six to nine times higher than the rate among whites in both high and low prevalence areas of the state, even though there are fewer cases among blacks in the low prevalence areas. This shows that this disease disproportionately affects blacks in both high and low prevalence areas of Michigan. Also, the HIV/AIDS case rate among Hispanics is two to three times higher than the rate among whites in both high and low prevalence areas of the state, even though there are fewer cases among Hispanics in the low prevalence areas.

Figure 37: Case Rates of Persons with HIV/AIDS Living in High & Low Prevalence Areas by Race, 2006

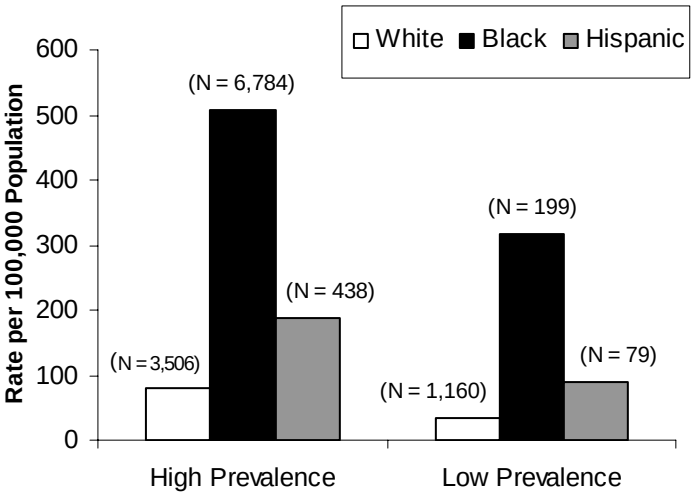
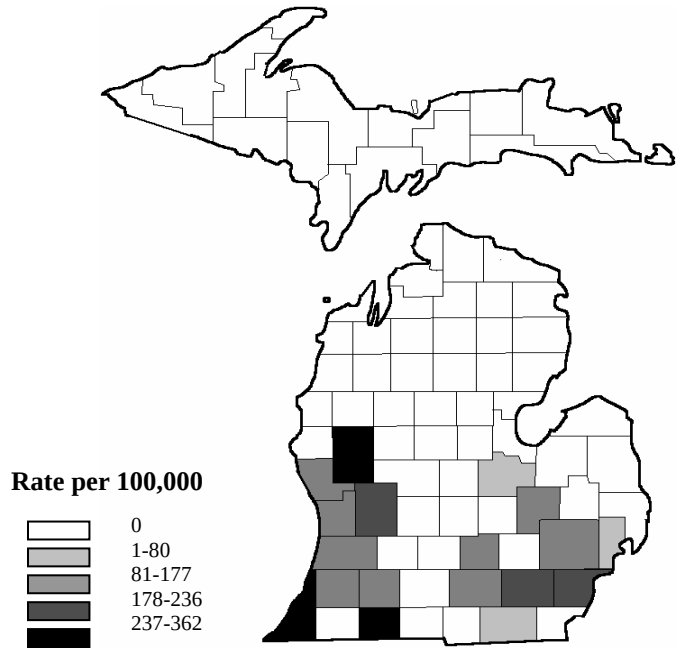


Figure 38: Prevalence Rates for Hispanics Living with HIV



Hispanics comprise four percent of all persons living with HIV/AIDS. Figure 38 shows the rate per 100,000 of Hispanics living with HIV/AIDS in counties across Michigan. Counties with five or more reported Hispanic cases are included in the map. The areas with the highest case rates for Hispanics (9 of the 18 counties that meet this definition) are either on the Lake Michigan shoreline or just to the 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 fifth highest rate (219 per 100,000). The individual county rates include St. Joseph (326), Berrien (286), Newaygo (271), Kent (236), Wayne (219), Washtenaw (215), Van Buren (177), Ingham (173), Oakland (166), Kalamazoo (158), Jackson (143), Muskegon (133), Allegan (132), Genesee (118), Ottawa (96), Macomb (80), Lenawee (73), and Saginaw (50).

2006 Profile of HIV/AIDS in Michigan

Description of the Epidemic by Race and Sex (continued)

Trends and Conclusions:

MDCH estimates that the number of new HIV infections annually among blacks has remained level from 2000 through 2004 and was at 602 in 2004. During this same time period, the estimated annual number among whites has remained level at 307 persons in 2004, and the estimated annual number among Hispanic and other races/ethnicities has remained level at 62 cases in 2004.

Trends in new HIV diagnoses among males and females show similar patterns. The number of males newly diagnosed with HIV each year is level at about 721 new infections (74 percent of cases) in the year 2004. Among females the number appears to also be stable at 250 (26 percent cases) in the year 2004.

Mortality:

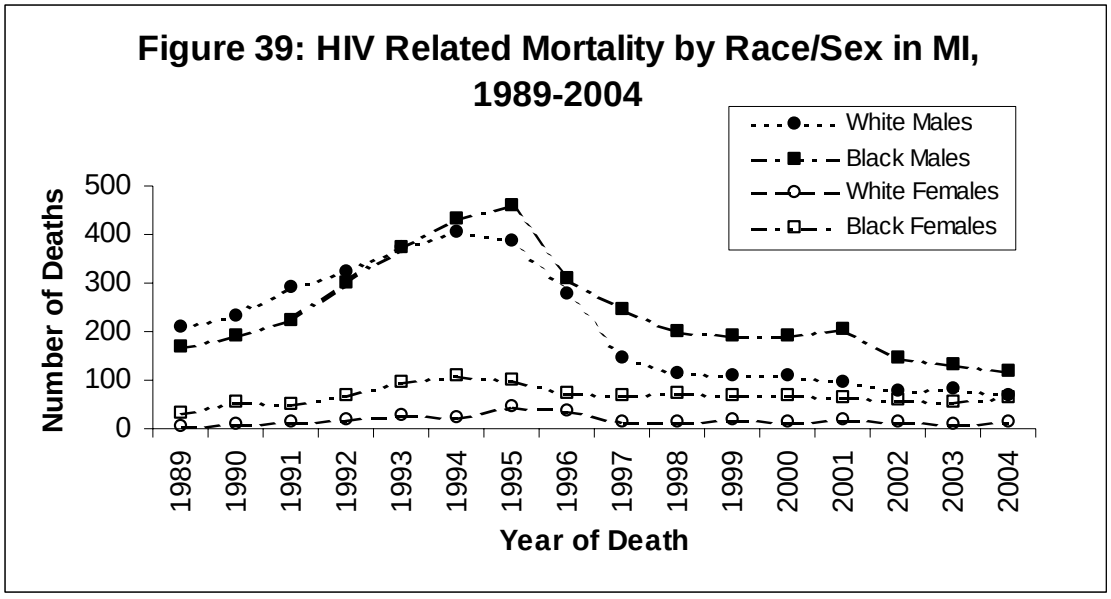


Figure 39 shows that HIV related mortality dropped for the four race and sex groups shown. There was a statistical difference in the 1995-2001 declines among white men (79 percent), black men (65 percent), and women (47 percent). From 2001 to 2004 there was also a 43 percent decline in deaths among black men. The number of deaths among Hispanics was too small to appear on this graph.

When all the data are considered, the consistent impact across transmission behaviors and geographic areas that this epidemic is having on blacks is apparent. The rate of HIV infection among blacks is nine times higher than the rate among whites.

2006 Profile of HIV/AIDS in Michigan

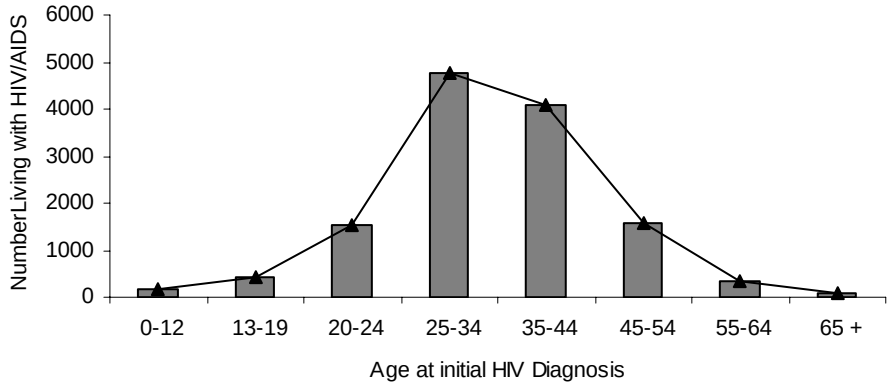
Description of the Epidemic by Age

Data from HIV/AIDS Reporting System (HARS)

Age at Diagnosis:

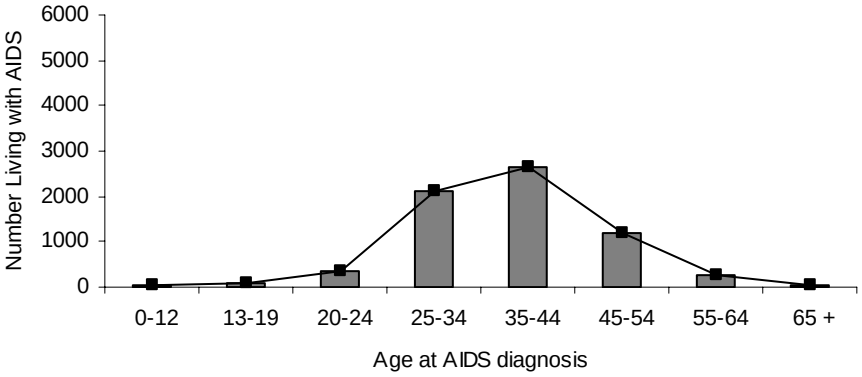
From 2000 to 2004, the proportion of persons diagnosed each year with HIV infection increased significantly among those diagnosed at 13-19 years from two percent to four percent (22 to 43 cases) and also increased significantly among those diagnosed at 20-24 years of age from seven percent to 15 percent (61 to 142 cases). In all other age groups, the trends in new diagnoses are level. Figure 40 shows that persons who were between the ages of 25 and 34 at their initial diagnosis of HIV make up the majority of those living with HIV/AIDS (37 percent), while those between the ages 35-44 at their initial diagnosis of HIV are the second largest group (31 percent). Figure 41 shows this latter group is the largest age group at AIDS diagnosis (39 percent).

Figure 40: Age at initial HIV Diagnosis for those living with HIV/AIDS in Michigan, 1/1/06



Not included are 3 HIV/AIDS cases with missing information

Figure 41: Age of AIDS Diagnosis for those living with AIDS in Michigan, 1/1/06



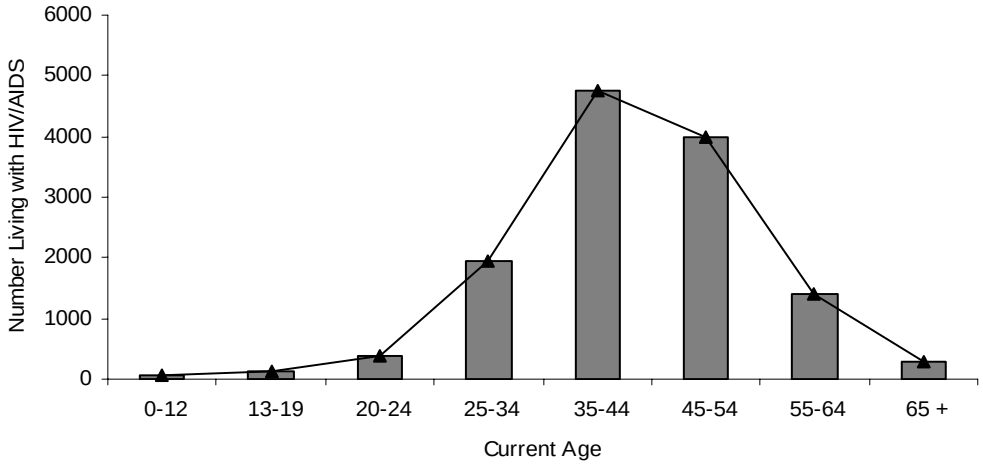
2006 Profile of HIV/AIDS in Michigan

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 42, which displays the current ages of those living with HIV in Michigan. Those currently ages 35 to 44 years make up the largest group of those living with HIV (37 percent). While persons who were ages 55 and older at AIDS diagnosis made up only five percent of those diagnosed with AIDS (Figure 41), persons in this age group make up 13 percent of persons living with HIV/AIDS.

Figure 42: Current age of those living with HIV/AIDS in Michigan, 1/1/06



Not included are 7 HIV/AIDS cases with missing information

2006 Profile of HIV/AIDS in Michigan

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

Data from HIV/AIDS Reporting System (HARS)

Number of Cases:

MDCH estimates that there are 220 individuals living with HIV, who were ages 0-12 when they were diagnosed. They comprise 1.2 percent of the reported infected persons. Most of them (82 percent) were infected perinatally, i.e., before, during or shortly after birth. (Those infected after birth would be infected via breastfeeding). Of the remaining individuals**,** 14 percent were infected via blood exposure before 1985 and four percent have an unknown risk.

No individuals aged 0-12 at the time of HIV diagnosis have been infected through sexual behavior or injection drug use. Five percent have an unknown risk, of which one percent (N=2) are further categorized as presumed heterosexual, unfortunately, these cases were infected as a result of sexual abuse. The remainder were probably due to perinatal transmission or receipt of blood products in other countries.

Demographic Description of Cases:

Of the 176 individuals who were ages 0-12 when diagnosed with HIV/AIDS, living in Michigan, 57 percent were male and 43 percent were female; about two thirds were black (65 percent), under one quarter were white (24 percent) and 10 percent were Hispanic or of unknown race. See Table 9, page 3-67.

Of the 153 individuals infected perinatally, 54 percent were male and 46 percent were female; 70 percent were black, 19 percent were white, and 11 percent were Hispanic or other races. Fifty-seven percent of the HIV infections in these children were IDU related (41 percent had mothers who were IDUs and 16 percent of these had a mother was not known to be an IDU but one or more of her sex partners were IDUs). An additional 17 percent had mothers with HIV-infected sex partners. For 20 percent all that was known about the mother is that she was HIV-infected with no additional maternal risk information.

Geographic Distribution of Infected Cases:

Eighty-two percent of the 176 children diagnosed and reported with HIV/AIDS between the ages of 0 and 12 years are located in high prevalence counties (See page 3-9). The remaining 17 percent are located in low prevalence counties. Sixty-four percent of HIV cases that were diagnosed as children in Michigan are currently residents of the Detroit Metro Area.

Trends and Conclusions:

The best measurable success in reducing HIV transmission has been among those infected perinatally. Without Zidovudine (ZDV) prophylaxis, about 25 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 four percent in 2005. As of January 1, 2006, one of the 49 children born in 2003, one of the 53 children born in 2004, and two of the 54 children born in 2005 to HIV-infected women were diagnosed with HIV infection. In addition, a third child born in 2005 to an HIV-infected woman was diagnosed with AIDS.

2006 Profile of HIV/AIDS in Michigan

Description of the Epidemic by Age: Children (0-12): Focus on Missed Opportunities

Data from HIV/AIDS Reporting System (HARS)

Since 1989, Michigan law requires health care providers to test pregnant women for HIV or an antibody to HIV, unless the woman refuses consent for testing, or if the health care provider determines the tests are medically inadviseable.[1] Health care providers are required to test pregnant women in three instances: 1) at the time of a pregnant woman's initial examination, 2) if a pregnant woman presents at a health care facility to deliver her infant and no record of test results is readily available, nor is there a record of the woman's refusal to test, and 3) if the pregnant woman presents for care in the immediate postpartum period, having recently delivered an infant outside a health care facility and there is no record of test results readily available, nor is there record of the woman's refusal to test. HIV testing is required at the initial prenatal care visit and is strongly recommended to be performed again in the third trimester before 36 weeks gestation.[2]

In 1994, the Centers for Disease Control and Prevention issued a report indicating that zidovudine (ZDV) be given to mothers in three therapeutic arms: 1) prenatally, 2) during delivery and 3) to the infant neonatally, in order to reduce transmission of HIV from mother to child. When one of these three arms is missed the birth is referred to as a "missed opportunity".

As of January 1, 2006, the Michigan Department of Community Health has received reports on 1,070 cases of births to HIV-positive mothers. Since 1994, 308 births to HIV-positive mothers have occurred in which a lapse in one of the three therapeutic arms occurred. Seventeen percent (52 children) of these "missed opportunity" births have since tested HIV positive compared to only 2 percent of births that were not "missed opportunities".

The race/ethnicity of missed opportunity births (76 percent black, non-Hispanic, 16 percent white, non-Hispanic, and 4 percent Hispanic) was similar to non-missed opportunity births (75 percent black, non-Hispanic, 19 percent white, non-Hispanic, and 5 percent Hispanic) and the distribution of women currently living with HIV in Michigan.

The majority of "missed opportunity" births (N = 104, 34 percent) were characterized as such because there was no/unknown documentation of administration of ZDV for all three arms of therapy. Furthermore, 69 of the 308 missed opportunities since 1994 had "no's" documented in each of the three arms.

Three-quarters of missed opportunity births are to mothers diagnosed with HIV before or during pregnancy. These women must have had contact with the health care system in order to have been tested. Furthermore, 106 of the 308 missed opportunities had prenatal care and no/unknown documentation for receipt of prenatal ZDV (defined as "prenatal missed opportunities"). The majority of these women initiated their prenatal care in the first or second trimester. This suggests that women of childbearing age that test HIV positive should be counseled about what steps are be taken if/when they become pregnant. Prenatal care visits offer the ideal opportunity to test and counsel pregnant women for HIV in order to avoid potential perinatal transmission. Mothers of the majority of prenatal and delivery/neonatal missed opportunities were residing in Southeast Michigan at the time of birth, which is similar to that of all currently living HIV positive women.

[1] MCL 333.5123 Public Act 491 of 1998, as amended by Act 200 of 1994.
[2] State of Michigan Guidelines to Reduce the Transmission of Perinatal HIV, Hepatitis B, and Syphilis, 2003.

2006 Profile of HIV/AIDS in Michigan

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

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

Number of Cases:
MDCH estimates that there are 2,460 persons currently living in Michigan who were ages 13-24 years when they were diagnosed with HIV. They comprise 15 percent of all persons reported with HIV/AIDS in Michigan (3 percent age 13-19 years; 12 percent age 20-24 years). The rate of HIV/AIDS among these young people is lower than the rate among those aged 25-44 years. The number of prevalent cases among persons age 13-24 years is not as high as the level among persons age 25-39 years. However, some young people are at particularly high risk. Specifically these are teens who live in areas with high HIV prevalence and have male sex partners who are age 20 or older.

Every two years a Youth Risk Behavior Survey is conducted in Michigan high schools using a nationally standardized survey. This captures behaviors in children grades 9-12. In an attempt to report on behaviors of children not in mainstream high schools, Michigan was one of the first states to conduct a Youth Risk Behavior Survey in 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 5 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 10 and 11 (pages 3-68–69). In persons age 15-24 years, the rate of chlamydia is over two and a half times higher and the rate of gonorrhea is nearly two times half times higher than the rate among persons age 25-29 years (please refer to the Sexually Transmitted Diseases section on page 3-20-22 for further discussion of these high rates). 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 population.

2006 Profile of HIV/AIDS in Michigan

Additional Discussions: Teens and Young Adults (continued)

Teen Pregnancy:
Teen (ages 15-19) pregnancy rates have shown decreases over time and decreased significantly from 2000 to 2004. Lake County had the highest teen pregnancy rate in the state in 2004 (114 per 1,000), followed by the city of Detroit (111 per 1,000). The 2004 rate among teens in Detroit exceed the rate among women age 15-44 years in that same area (111 vs. 100). However, in 2002, the rate among teens in Detroit was equal to the rate among women aged 15-44. The statewide teen pregnancy rate in 2004 was 55 pregnancies per 1,000 females aged 15-19 years. In Out-State Michigan, the 2004 rates range from 17-114 pregnancies per 1,000 females aged 15-19 and in the Detroit Metro Area, the 2004 rates

Race/Ethnicity:

Sixty-eight percent of persons aged 13-19 at the time of HIV diagnosis are black, 26 percent are white, and six percent are Hispanic or other race. Sixty-one percent of persons aged 20-24 at the time of HIV diagnosis are black, 33 percent are white, and six percent are Hispanic or other race.

Geographic Distribution of Teens and Young Adults Cases:

The 1,937 persons diagnosed and reported with HIV/AIDS between the ages 13-24 are located disproportionately 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 85 and 84 percent of reported cases, respectively. In the low prevalence areas they compromise 10 and 11 percent of reported cases, respectively. (Figure 2 on page 3-9)

Mode of Transmission:

Teenagers: The unknown category for teenagers and young adults is quite large. Historically, 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.

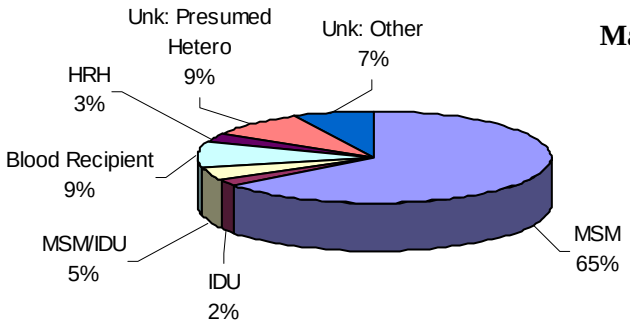
Figure 43 (next page) shows that among the 423 persons living with HIV in Michigan who were ages 13-19 at time of diagnosis, 270 (64 percent) are male. Among these male cases, over two-thirds had sex with other males (69 percent) which includes the MSM/IDU cases, while 9 percent had been infected with HIV through blood products before 1985. Seven percent could be attributed to IDU (including MSM/IDU) and three percent to heterosexual transmission. Teenage males have the largest proportion of unidentified risk (17 percent) compared with any other age group of men under age 40. Experience with investigating such persons shows that it is likely that many of these males were infected through having sex with other males.

Figure 43 (next page) also shows that among the 423 persons living with HIV in Michigan who were ages 13-19 at the time of diagnosis, 153 (36 percent) are female. This is considerable higher then the proportion of all infected persons who are female (23 percent). Of females who were 13-19 years at the time of diagnosis, over half (55 percent) were infected through heterosexual sex; eight percent were IDUs. Similar to males of this age, there is a large proportion that did not report a mode of transmission (36 percent), however this proportion of cases with an unknown mode of transmission is consistent with females of any age. It is likely that most females above age 13 with an unknown risk were infected through heterosexual contact.

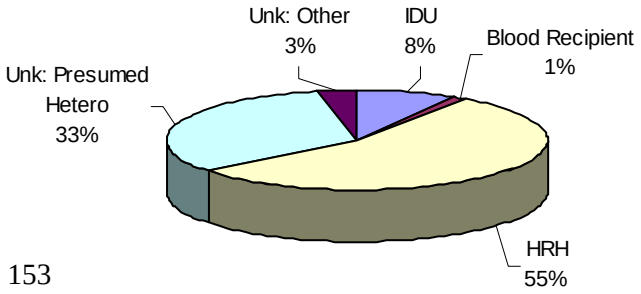
2006 Profile of HIV/AIDS in Michigan

Additional Discussions: Teens and Young Adults (continued)

Figure 43: Persons living in Michigan who were aged 13-19 when diagnosed with HIV (Teenagers), by Sex and Mode of Transmission (N = 423)



Males n = 270



Females n = 153

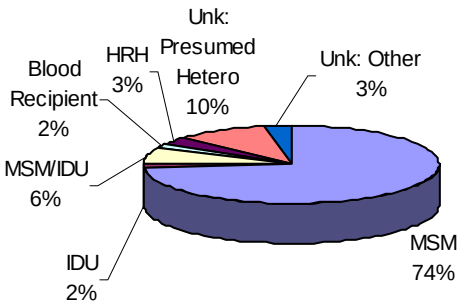
2006 Profile of HIV/AIDS in Michigan

Additional Discussions: Teens and Young Adults (continued)

Young Adults: Figure 44 shows that among the 1,514 persons living with HIV in Michigan who were ages 20-24 at time of diagnosis, almost three quarters (73 percent) are male. Eighty-one percent of male young adults reported sex with other males (including those MSM who also are IDU); 13 percent did not report a mode of transmission.

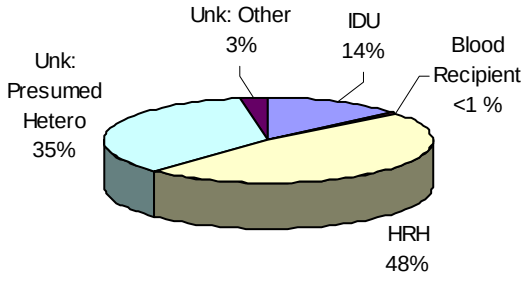
Figure 44 also shows that among the 408 women living with HIV who were ages 20-24 at time of diagnosis, just less then half (48 percent) were infected heterosexually and 14 percent were IDUs. Over one-third (38 percent) did not report a mode of transmission. Like the teenage females, many were likely infected heterosexually. Women aged 20-29 at the time of HIV diagnosis have the highest proportion of unknown risk compared with all HIV infected women under 60.

Figure 44: Persons living in Michigan who were aged 20-24 when diagnosed with HIV (Young Adults), by Sex & Mode of Transmission (N = 1,514)



Males n= 1,106

Females n= 408



Trends and Conclusions:

The proportion of persons diagnosed each year between 2000 and 2004 with HIV infection increased significantly among those diagnosed at 13-19 years from 2 percent to 4 percent (22 to 43 cases) and also increased significantly among those diagnosed at 20-24 years of age from 7 percent to 15 percent (61 to 142 cases). In all other age groups, the trends in new diagnoses are level.

The data also suggest that prevention activities among teenagers and young adults of both sexes should be geared towards those having sex with older males. These activities should recognize that adolescents at highest risk are those whose sex partners are older, since older men are more likely to be HIV-infected than are younger males.

2006 Profile of HIV/AIDS in Michigan

Description of the Epidemic by Age: 50 years and older

Data from HIV/AIDS Reporting System (HARS)

Number:

MDCH estimates there are 1,270 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. 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. Three-quarters of this population is male.

Mode of Transmission:

When discussing mode of transmission, those who were in their fifties at the time of HIV diagnosis have different transmission mode proportions than those who were aged 60 or older. Therefore, these two populations are discussed separately.

Description of Cases aged 50-59 at the time of diagnosis: Persons who were in their fifties when first diagnosed with HIV are 77 percent male and 23 percent female. Among these 826 persons reported with HIV/AIDS about just under two-thirds are black (59 percent), one third are white (34 percent) and 7 percent are Hispanic or of unknown race.

Figure 45: Males aged 50-59 at time of diagnosis, Living with HIV/AIDS in MI by mode of transmission (N = 635)

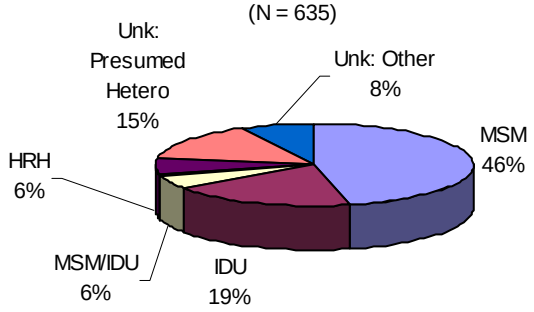
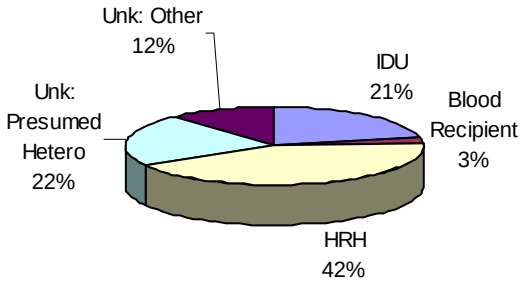


Figure 45 shows that over half of the 635 males in their fifties at time of HIV diagnosis and currently living with HIV (53 percent) reported having sex with other males (including those MSM who also are IDU). One quarter reported injection drug use (including those IDU who were also MSM). Six percent were infected heterosexually. Twenty-two percent did not report a mode of transmission; many of these were likely infected through sex with other men.

Figure 46 shows that among the 191 females who were in their fifties at time of HIV diagnosis and currently living with HIV, just under half (42 percent) were infected heterosexually and 21 percent were IDUs. Just over one-third (34 percent) did not report a mode of transmission; many of these were likely infected through heterosexual contact.

Figure 46: Females aged 50-59 at time of diagnosis, Living with HIV/AIDS in MI by mode of transmission (N = 191)



2006 Profile of HIV/AIDS in Michigan

Description of the Epidemic by Age: 50 years and older (continued)

Description of Cases 60 years and older at the time of diagnosis: Persons who were 60 years and older when first diagnosed with HIV are 78 percent male and 22 percent female. Among these 182 persons reported with HIV/AIDS over half are black (52 percent), over one-third are white (39 percent) and nine percent are Hispanic or of unknown race.

Figure 47: Males aged 60 and older at time of diagnosis, Living with HIV/AIDS in MI by mode of transmission (N = 142)

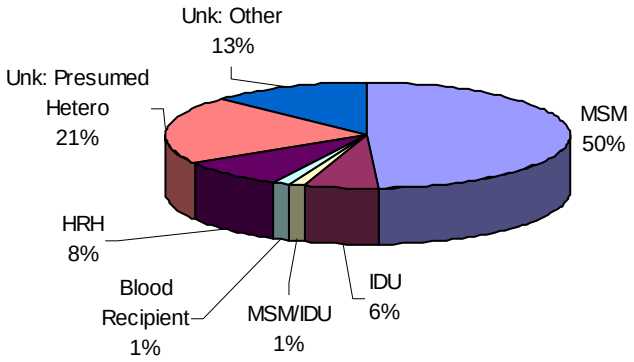
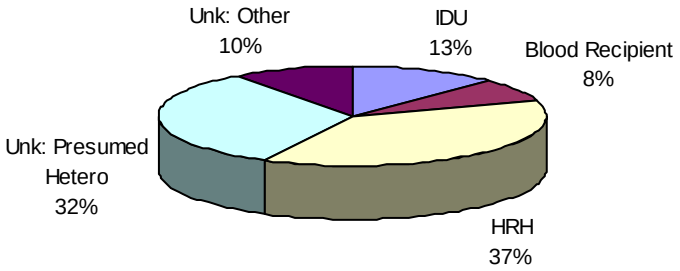


Figure 47 shows that over half of the 142 males who were 60 years and older at time of HIV diagnosis and currently living with HIV (51 percent) reported sex with other males (including those MSM who also are IDU). Seven percent reported injection drug use (including those IDU who were also MSM). Eight percent were infected heterosexually. Thirty-four percent did not report a mode of transmission; many of these were likely infected through sex with other men.

Figure 48 shows that among the 40 females who were 60 and older at the time of HIV diagnosis and currently living with HIV, more then a third (37 percent) were infected heterosexually and 13 percent were IDUs. Just under a half (42 percent) did not report a mode of transmission; many of these were likely infected through heterosexual contact.

Figure 48: Females aged 60 and older at time of diagnosis, Living with HIV/AIDS in MI by mode of transmission (N = 40)



2006 Profile of HIV/AIDS in Michigan

Description of the Epidemic by Age: 50 years and older (continued)

Trends and Conclusions:

The proportion of persons who were 50 years and older at the time of diagnosis has remained level from 2000 through 2004. There were 128 persons diagnosed with HIV and 2,456 who are currently this age living with HIV in 2004. As treatment for HIV allows infected persons to live longer, persons in this age group may be a source of infections for their peers and others. Therefore, it is important for prevention programs to include this age group when designing prevention activities.

Description of the Epidemic by Age: Persons Currently Aged 50 Years and Older

As of January 1, 2006 there are 3,224 persons who are **currently** age 50 or older and living with HIV/AIDS in Michigan. This represents 25 percent of the 12,972 persons diagnosed in and living with HIV/AIDS in Michigan as of the first of this year. Data in this section were analyzed differently than for the rest of the profiles. All numbers used in the 2006 Profile of HIV/AIDS in Michigan represent those HIV infected persons currently living in Michigan, regardless of where they were initially diagnosed.

These persons are comparable to the population of persons of all ages living with HIV/AIDS in Michigan with regards to sex and race. However, persons who were 50 years and older at the time of diagnosis are more likely to have been infected by injecting drugs than the total population of HIV infected persons- 27 vs. 14 percent.

The proportion of persons **currently** age 50 and older in Michigan has increased over the last five years. This can be attributed, at least in part, to the more effective anti-retroviral medications have been available since 1996. As a result, infected persons are living longer and are, therefore, getting older. Table 6 shows the percent of persons who were age 50 and older at the beginning of each of the seven years listed.

Table 6: Percent of Persons aged 50 and older living in Michigan by 'Year End'

	Number	Percent
1/1/2000	1,245	13%
1/1/2001	1,524	15%
1/1/2002	1,803	17%
1/1/2003	2,108	19%
1/1/2004	2,456	21%
1/1/2005	2,821	23%
1/1/2006	3,224	25%

Nearly 70 percent of persons 50 years and older who are currently living were less then 50 years at the time of HIV diagnosis. However, if persons in this age group have sex with others in their age group, they can infect others their own age. In order to minimize transmission among this age group, sexually active persons of all ages should be given risk reduction messages and offered HIV testing when they present for medical care.

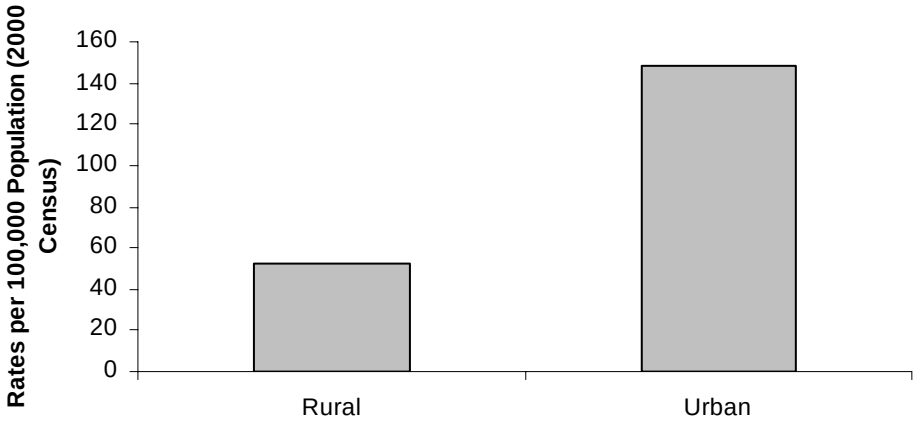
2006 Profile of HIV/AIDS in Michigan

Special Populations: Rural HIV

Data from HIV/AIDS Reporting System (HARS)

Using these US Census Bureau's definitions, MDCH established a category of Urban Counties. For the sake of this publication, we considered a county to be "Urban" if any part of the city or area was part of that county. (i.e., the city of Kalamazoo is in Kalamazoo County and also has substantial commuting interchange with Battle Creek, which is in Calhoun County; so 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.

Figure 49: Case rates of persons living with HIV/AIDS in Michigan Rural or Urban Counties, 1/1/06



Using this definition, the reported cases were divided into rural or urban categories. Rural cases constitute eight percent of reported cases (1,061); 21 percent of Michigan's population lives in these counties. The estimated rate of infection in rural areas is 52 per 100,000. Urban areas account for 90 percent of cases while 79 percent of Michigan's population lives in these areas. The estimated rate for the urban counties is almost three times higher than rural areas, 148 per 100,000. (Figure 49)

2006 Profile of HIV/AIDS in Michigan

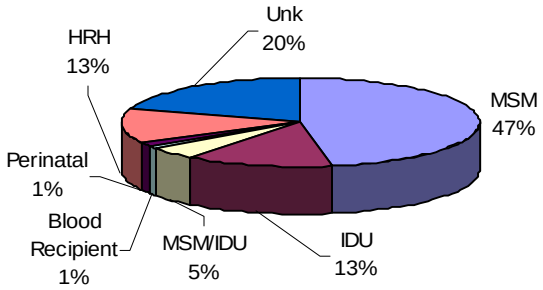
Special Populations: Rural HIV (continued)

Data from HIV/AIDS Reporting System (HARS)

Figure 50 shows that in Michigan's rural communities, HIV is more likely to be attributable to injecting drug (including MSM/IDU) use when compared with urban areas primarily due to a larger proportion of MSM/IDU. There is little to no difference between rural and urban communities with respect to the relative proportion of cases reported with MSM, heterosexual, and an unknown risk.

Figure 50: Rural v. Urban: Persons living with HIV/AIDS in Michigan by mode of transmission

Urban: (N = 11,706)



Rural: (N = 1,061)

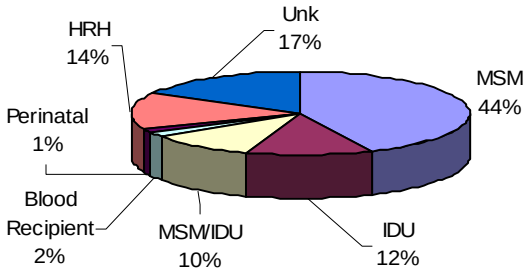
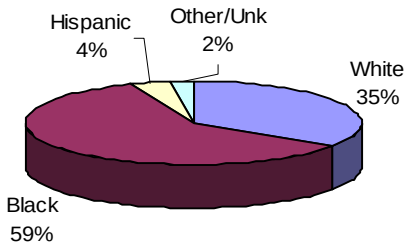
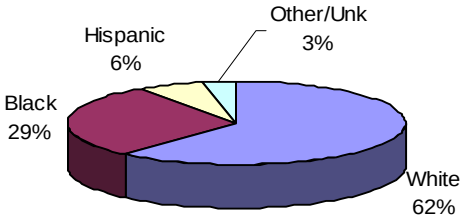


Figure 51 shows that in urban counties of Michigan, the greatest proportion of HIV/AIDS cases occurs among blacks. In rural communities although the largest proportion of cases occurs among whites, the rates are higher among blacks (See Figure 37, page 3-41).

Figure 51: Rural v. Urban: Persons living with HIV/AIDS in Michigan by race/ ethnicity



Urban: (N = 11,706)



Rural: (N = 1,061)

2006 Profile of HIV/AIDS in Michigan

Special Populations: Arab-American Community

Data from HIV/AIDS Reporting System (HARS)

Arabic is considered an ethnicity and not a racial category and has not been routinely collected by the surveillance system. Consequently, the numbers presented here may be an undercount. Beginning in the year 2001 a question was added about Arabic ethnicity on the HIV/AIDS Case Report Form that reads "Does this patient consider him-/her-self Arabic?".

In Michigan, the largest concentration of Arab-Americans is in Southeastern Michigan, where most of these HIV/AIDS cases were diagnosed. Of the 54 known cases, 31 percent were HIV not AIDS and 69 percent were AIDS. The counties where persons of Arabic descent were initially diagnosed with HIV include Wayne, including Detroit city (48 percent), Oakland (22 percent), Macomb (13 percent), St. Clair (2 percent), Kalamazoo (2 percent), Ingham (2 percent), Ottawa (2 percent), Kent (2 percent), and 'out of state' (6 percent).

Eighty percent (43) of the cases are among males, 20 percent (11) among females. Among the 11 females, over half were infected heterosexually and 27 percent had no reported mode of transmission. Among the 43 male cases, over two-thirds were attributed to MSM (including MSM/IDU) and 19 percent had no reported mode of transmission. See Figures 52 and 53. The age at HIV diagnosis (including those with AIDS) is similar to the age distribution for all cases in Michigan, with six percent (3), ages 0-19, 24 percent (13) ages 20-29, 37 percent (20) ages 30-39, 20 percent (11) ages 40-49, 11 percent (6) ages 50 and older, and one with an unknown age at diagnosis.

Figure 52: Persons of Arabic Descent, Living with HIV/AIDS in Michigan by Mode of Transmission, as of 1/1/06 (N=54)

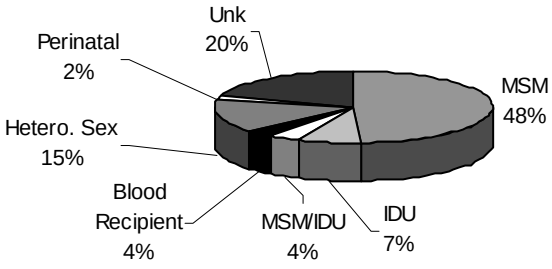
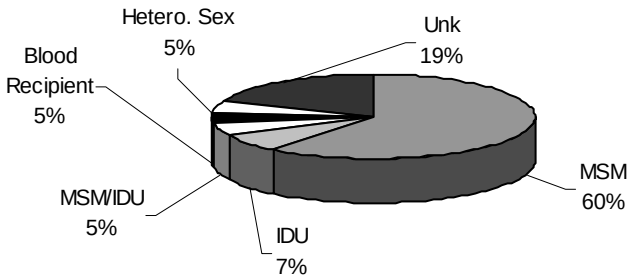


Figure 53: Males of Arabic Descent, Living with HIV/AIDS in Michigan by Mode of Transmission, as of 1/1/06 (N=43)



2006 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, five percent reported injecting drug use. Participants also exhibited low perceived susceptibility to HIV and few perceived barriers to risk reduction, possibly because low perceived susceptibility is grounded in participants' reality. That is, many of these participants do not report behaviors that put them at risk for HIV. In other words, this population has 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 the services above, but might also 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 them 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 then one-third of participants in the sample were either receiving mental health services at the time of the interview or had received such service 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: hospitals (particularly emergency rooms) and shelters. Both of these places provide venues for recruitment of homeless persons into prevention activities. It is well know that private doctors, hospitals, 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 in order to reach the homeless population, further engagement with private providers and persons working in hospitals is critical. These venues provide an opportunity for engagement with this population.

2006 Profile of HIV/AIDS in Michigan

Special Populations: Incarcerated Population

Data from HIV/AIDS Reporting System (HARS), Michigan Department of Corrections, & Family of Seroprevalence Surveys

Number of Cases:

From 1989 to present, a cumulative total of 1,699 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 610 are known to have died both inside and outside of prison. This section on the Michigan Department of Corrections describes the 310 HIV infected inmates known to be incarcerated at state facilities, as of January 2006.

Race/Ethnicity and Sex:

Ninety-six percent of HIV-infected prisoners are male and four percent are female. Most (78 percent) are black, 16 percent are white, and five percent are Hispanic or other race/ethnicity. Please see Table 13, page 3-71 for more information.

Among the 13 females currently in prison living with HIV, 62 percent are black and 31 percent are white. Figure 54 shows that half were infected through injecting drug use, one-third report a history of high-risk heterosexual behavior (e.g., partner was HIV-infected or was an injecting drug user), and 15 percent have an unknown risk.

Among the 297 males currently in prison living with HIV, 79 percent are black. Figure 55 shows that among the 207 black males, 29 percent are men who have sex with men, 18 percent have injected drugs, and 15 percent have had both behaviors. Another 12 percent indicate they had a heterosexual sex partner who was HIV-infected or who was an injecting drug user. Among the 47 white males 43 percent are attributed to men having sex with men, 17 percent have injected drugs, and 21 percent have had both behaviors. See Table 13, page 3-71.

Figure 54: Females living with HIV/AIDS in prison by mode of transmission (N = 13)

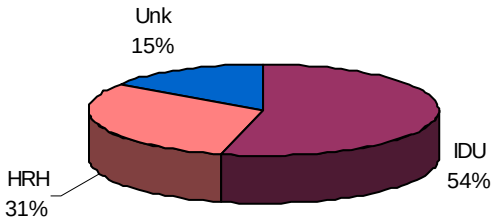
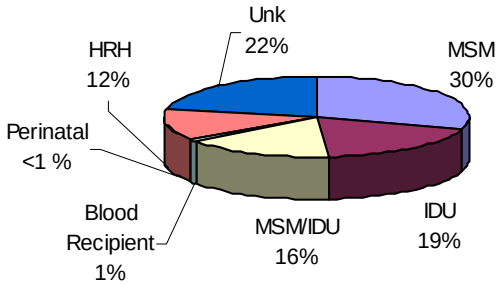


Figure 55: Males living with HIV/AIDS in prison by mode of transmission (N = 297)



2006 Profile of HIV/AIDS in Michigan

Special Populations: Incarcerated Population (continued)

Prison Populations:

As of January 1, 2006, there are 49,377 prisoners in MDOC correction facilities, 931 of these prisoners are 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, approximately one percent of all prisoners are HIV-infected; among young men under age 20, the proportion is higher (1.6 percent). See Table 14, page 3-72. The one percent of overall HIV infection in the prison population is a decrease from the three percent reported in 2004. These data are often collected at the time of incarceration, although there are occasional updates.

Wayne County Jail HIV Anonymous Unlinked Serosurvey, 1999

From March-August 1999, an anonymous, unlinked HIV seroprevalence study was conducted among 5,556 persons who were incoming prisoners to the Wayne County Jail. From these participants, 4,909 HIV test results were available and revealed an overall seroprevalence of 1.7 percent (85 persons). Most of the incoming prisoners were residents of Wayne County (94.1 percent), and most were male (87.8 percent), black (75.5 percent) and had previously been incarcerated (86 percent). MSM had the highest HIV seroprevalence (13 percent), followed by persons exchanging money or drugs for sex (5 percent) and then IDU (4 percent). This population of incoming prisoners had an HIV seroprevalence rate (1.7 percent) comparable to the rate of those who utilize voluntary HIV counseling and testing services in Wayne county (1.2 percent) and higher than the general Michigan population (0.14 percent).

Specimens from this unlinked serosurvey that had adequate samples were tested using the STARHS algorithm for determining recent infections. Of the 85 prisoners that tested positive for HIV, about half had adequate specimens (44), and of these, 5 (11 percent) were determined to be recently acquired infections. After adjustments, overall HIV incidence was 0.4 percent. Incidence was highest among IDU (2.4 percent), followed by persons who exchanged money or drugs for sex (1.8 percent), and persons using non-injecting drugs (0.5 percent). More than a quarter (28 percent) of HIV-infected IDU had recently acquired infections, as did 17 percent of HIV-infected persons exchanging money or drugs for sex and 15 percent of HIV infected non-injecting drug users.

2006 Profile of HIV/AIDS in Michigan

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, the primary concern being transmission of sexually transmitted diseases (STDs) and HIV/AIDS, asthma, and high blood pressure. Importantly, HIV or AIDS was the most frequently mentioned concern by participants (22 percent). Followed by equal proportions of concerns for getting sexually transmitted disease and dying or getting killed on the streets as their primary health concern (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 4 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 (8 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.

2006 Profile of HIV/AIDS in Michigan

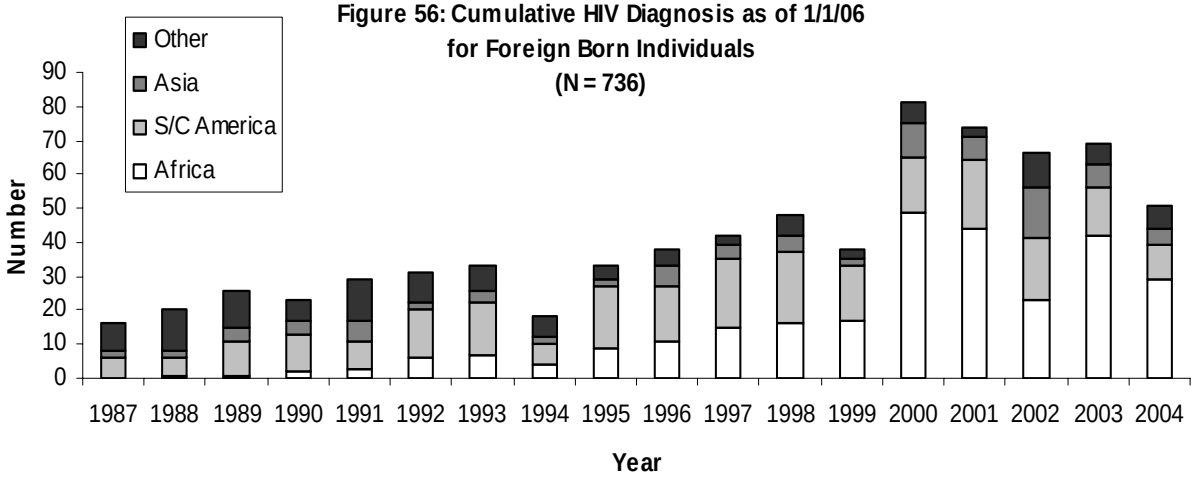
Special Populations: Foreign Born

Data from HIV/AIDS Reporting System (HARS)

Trends:
HIV infection in foreign-born individuals accounts for 4 percent (N = 736) of the total number of HIV/AIDS cases in Michigan, however, in recent years, the number of newly diagnosed cases in this group has increased. The majority of these persons were born in Africa and South & Central America (including Mexico). In Michigan, these persons may be migrant farm workers, who are mainly from South & Central America, and African-born individuals, who are participants in refugee resettlement programs. As can be seen in Figure 56, cases among foreign-born individuals have been climbing over time, but experienced a large jump in the year 2000. The number of HIV infections diagnosed in Michigan among foreign-born individuals has increased from 13 cases in 1987 to 51 cases in 2004, with a peak of 81 cases in 2000.

Geographical Distribution:
One quarter of the African-born cases were diagnosed in Berrien County, 18 percent were diagnosed in Kent County, 14 percent were diagnosed in the city of Detroit, and the rest were diagnosed throughout the remainder of Michigan. Twenty-two percent of the South & Central America-born cases were diagnosed in Kent County, 18 percent were diagnosed in the city of Detroit, and the rest were diagnosed throughout the remainder of Michigan.

Conclusion:
This is an under-estimate of these populations as they can be hard to contact. Notification about resettlement programs and migrant worker networks would be essential to ensure that reporting from these populations is complete. This could be accomplished by linking or networking with organizations that provide assistance to refugees and immigrants. This effort would identify and address barriers to health care among foreign-born HIV-infected persons and data obtained would assist in monitoring the specific health needs of these special populations.



2006 Profile of HIV/AIDS in Michigan

Special Focus: Health Disparities

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 Latino/Hispanic populations. In the black community HIV/AIDS has had the most devastating effect, with 57 percent of the HIV/AIDS cases occurring in this population. In addition to the black community, the Latino/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 79 percent white, non-Hispanic, 14 percent black, non-Hispanic, three percent Latino/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 Latino/Hispanic population is one of Michigan's fastest growing; the importance in eliminating disparities is evident.

The epidemic is of special concern in the black community where the death rate from AIDS is 10.2 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 14.7 per 100,000 and the black female rate is 6.3 per 100,000. The black male rate is alarming because black males make up only seven percent of the state of Michigan's total population, yet constitute 40 percent of the epidemic. The main mode of transmission in this group is MSM, however, IDU and high-risk heterosexual transmission also play a significant role. HIV/AIDS is also a serious area of concern for black women. The main modes of transmission for this group are high-risk heterosexual transmission and IDU.

Footnotes for Michigan, Tables 7 through 9 and 13 through 14

* Indicates there are fewer than five (n=1,2,3 or 4) reported cases

[#] Indicates an explanatory definition exists in Appendix B

[X] Indicates age is at time of HIV diagnosis (Unknown age: Males=2, Females=1)

[1] The minimum estimate is 10 cases.

[2] Total HIV+AIDS refers to the number of reported cases alive as of 1/1/06

[3] Rate calculated (Estimated HIV Infection/2000 Census) * 100,000

[4] This is a subset of all HIV/AIDS cases reported alive as of 1/1/06

[5] Totals for counties/areas includes infected prisoners who were discharged/paroled if no current residence is available.

Table 7: Statewide Distribution of HIV/AIDS: Prevalence Estimates, Reported Cases, and Population currently living within Michigan

Prisoners and persons with unknown residence are included

January 1, 2006

	Estimated HIV Infection [1]	Estimated Rate per 100,000 [3]	Total HIV + AIDS Reported [2]		Initial HIV diagnosis at same time as AIDS diagnosis [4]		2000 Census	
			Reported Cases	%	Reported AIDS Cases	%		%
Male	**12,690**	**260.4**	**10,001**	**77%**	**2,101**	**81%**	**4,873,095**	**49%**
White, Non-Hispanic Males	*5,260*	*137.1*	*4,147*	*32%*	*895*	*35%*	*3,836,091*	*39%*
Black, Non-Hispanic Males	*6,630*	*999.4*	*5,222*	*40%*	*1,077*	*42%*	*663,406*	*7%*
Hispanic Males	*520*	*304.9*	*407*	*3%*	*111*	*4%*	*170,555*	*2%*
Asian, Hawaiian, Pacific Islander Males	*60*	*67.9*	*46*	*<1%*	*11*	*<1%*	*88,314*	*1%*
American Indian Males	*40*	*150.7*	*28*	*<1%*	*2*	*<1%*	*26,537*	*<1%*
Other/Multi Race Males	*N/A*	*	*151*	*1%*	*5*	*<1%*	*88,192*	*N/A*
Female	**3,770**	**74.4**	**2,971**	**23%**	**477**	**19%**	**5,065,349**	**51%**
White, Non-Hispanic Females	*790*	*19.9*	*623*	*5%*	*82*	*3%*	*3,970,600*	*40%*
Black, Non-Hispanic Females	*2,720*	*368.2*	*2,142*	*17%*	*366*	*14%*	*738,641*	*7%*
Hispanic Females	*170*	*110.9*	*131*	*1%*	*23*	*1%*	*153,322*	*2%*
Asian, Hawaiian, Pacific Islander Females	*20*	*22.4*	*14*	*<1%*	*3*	*<1%*	*89,142*	*1%*
American Indian Females	*20*	*74.4*	*13*	*<1%*	*1*	*<1%*	*26,884*	*<1%*
Other/Multi Race Females	*N/A*	*	*48*	*<1%*	*2*	*<1%*	*86,760*	*N/A*
White, Non-Hispanic	**6,050**	**77.5**	**4,770**	**37%**	**977**	**38%**	**7,806,691**	**79%**
Black, Non-Hispanic	**9,340**	**666.2**	**7,364**	**57%**	**1,443**	**56%**	**1,402,047**	**14%**
Hispanic	**680**	**210.0**	**538**	**4%**	**134**	**5%**	**323,877**	**3%**
Asian, Hawaiian, Pacific Islander	**80**	**45.1**	**60**	**<1%**	**14**	**1%**	**177,456**	**2%**
American Indian	**50**	**93.6**	**41**	**<1%**	**3**	**<1%**	**53,421**	**1%**
Other/Multi Race	**N/A**	*	**199**	**2%**	**7**	**<1%**	**174,952**	**N/A**
Male-Male Sex[#]	**7,670**	**N/A**	**6,046**	**47%**	**1,295**	**50%**		
Injecting Drug Use[#]	**2,230**	**N/A**	**1,759**	**14%**	**319**	**12%**		
IDU with heterosexual risk	*1,050*	*N/A*	*824*	*6%*	*115*	*4%*		
IDU without heterosexual risk	*1,190*	*N/A*	*935*	*7%*	*204*	*8%*		
M-M Sex and Inject Drugs[#]	**840**	**N/A**	**661**	**5%**	**101**	**4%**		
Blood Recipients[#]	**160**	**N/A**	**126**	**1%**	**23**	**1%**		
Perinatal	**190**	**N/A**	**153**	**1%**	**22**	**1%**		
Heterosexual[#]	**2,140**	**N/A**	**1,690**	**13%**	**284**	**11%**		
Partner IDU	*630*	*N/A*	*495*	*4%*	79	3%		
Partner Bisexual	*110*	*N/A*	*87*	*1%*	7	<1%		
Partner Blood Recipient	*50*	*N/A*	*42*	*<1%*	8	<1%		
Partner HIV+	*1,350*	*N/A*	*1,066*	*8%*	190	7%		
Known Risk Total	**13,240**	**N/A**	**10,435**	**80%**	**2,044**	**79%**		
Unknown Risk[#]	**N/A**	**N/A**	**2,537**	**20%**	**534**	**21%**		
Presumed Heterosexual	*N/A*	*N/A*	*1,875*	*14%*	*435*	*17%*		
Other	*N/A*	*N/A*	*662*	*5%*	*99*	*4%*		
0 - 4 years[x]	**150**	**22.3**	**121**	**1%**	**16**	**1%**	**672,005**	**7%**
5 - 9 years[x]	**50**	**6.7**	**41**	**<1%**	**5**	**<1%**	**745,181**	**7%**
10-12 years[x]	**20**	**4.4**	**14**	**<1%**	**1**	**<1%**	**454,587**	**5%**
13-19 years[x]	**540**	**53.3**	**423**	**3%**	**25**	**1%**	**1,012,292**	**10%**
20-24 years[x]	**1,920**	**298.2**	**1,514**	**12%**	**131**	**5%**	**643,839**	**6%**
25-29 years[x]	**2,810**	**429.3**	**2,216**	**17%**	**310**	**12%**	**654,629**	**7%**
30-34 years[x]	**3,250**	**459.3**	**2,559**	**20%**	**501**	**19%**	**707,542**	**7%**
35-39 years[x]	**3,030**	**384.8**	**2,387**	**18%**	**535**	**21%**	**787,367**	**8%**
40-44 years[x]	**2,150**	**265.1**	**1,691**	**13%**	**432**	**17%**	**811,006**	**8%**
45-49 years[x]	**1,260**	**171.5**	**995**	**8%**	**305**	**12%**	**734,905**	**7%**
50-54 years[x]	**730**	**115.3**	**578**	**4%**	**179**	**7%**	**633,034**	**6%**
55-59 years[x]	**310**	**63.8**	**248**	**2%**	**75**	**3%**	**485,895**	**5%**
60-64 years[x]	**140**	**37.1**	**112**	**1%**	**33**	**1%**	**377,144**	**4%**
65 and older[x]	**90**	**7.4**	**70**	**1%**	**30**	**1%**	**1,219,018**	**12%**
Unknown Age	**N/A**	**N/A**	**3**	**<1%**	**-**	**0%**	**0**	**N/A**
Detroit Metropolitan Area	10,510	236.6	8,286	64%	1,745	68%	4,441,551	45%
Out-State	5,290	96.2	4,171	32%	782	30%	5,496,893	55%
Total both areas	**15,810**	**N/A**	**12,457**	**96%**	**2,527**	**98%**		
In Prison	*390*	*N/A*	*310*	*2%*	*30*	*1%*		
Total Known Residence	**16,200**	**163.0**	**12,767**	**98%**	**2,557**	**99%**	**9,938,444**	**100%**
Unknown Residence	N/A	N/A	205	2%	21	1%		
Statewide Total	**16,200**	**163.0**	**12,972**	**100%**	**2,578**	**100%**	**9,938,444**	**100%**

See page 3-63 for footnotes

Table 7a: Statewide Distribution of HIV/AIDS Prevalence Estimates by County [5]
Reported Cases, and Population Currently Living within Michigan
Prisoners and persons with unknown residence are included

	Estimated HIV Infection [1]	Rate per 100,000 [3]	Total HIV + AIDS Reported [2] Reported Cases	%	Initial HIV diagnosis at same time as AIDS diagnosis [4] Reported AIDS Cases	%	Census 2000	%
ALCONA CO.	10	*	0	0%	0	0%	11,719	<1%
ALGER	10	*	1	<1%	0	0%	9,862	<1%
ALLEGAN CO.	110	104.1	86	1%	19	1%	105,665	1%
ALPENA CO.	10	31.9	5	<1%	1	<1%	31,314	<1%
ANTRIM CO.	10	43.3	9	<1%	1	<1%	23,110	<1%
ARENAC CO.	10	*	2	<1%	1	<1%	17,269	<1%
BARAGA CO.	10	114.3	7	<1%	3	<1%	8,746	<1%
BARRY CO.	30	52.9	20	<1%	7	<1%	56,755	1%
BAY CO.	70	63.5	56	<1%	9	<1%	110,157	1%
BENZIE CO.	10	*	3	<1%	0	0%	15,998	<1%
BERRIEN CO.	270	166.2	211	2%	46	2%	162,453	2%
BRANCH CO.	10	21.8	10	<1%	0	0%	45,787	<1%
CALHOUN CO.	150	108.7	112	1%	16	1%	137,985	1%
CASS CO.	40	78.3	28	<1%	9	<1%	51,104	1%
CHARLEVOIX CO.	20	76.7	14	<1%	3	<1%	26,090	<1%
CHEBOYGAN CO.	10	37.8	6	<1%	1	<1%	26,448	<1%
CHIPPEWA CO.	20	51.9	17	<1%	2	<1%	38,543	<1%
CLARE CO.	20	64.0	12	<1%	1	<1%	31,252	<1%
CLINTON CO.	50	77.2	42	<1%	5	<1%	64,753	1%
CRAWFORD CO.	10	70.1	5	<1%	2	<1%	14,273	<1%
DELTA CO.	20	51.9	17	<1%	1	<1%	38,520	<1%
DICKINSON CO.	10	*	4	<1%	1	<1%	27,472	<1%
EATON CO.	60	57.9	44	<1%	4	<1%	103,655	1%
EMMET CO.	10	31.8	11	<1%	2	<1%	31,437	<1%
GENESEE CO.	620	142.2	473	4%	85	3%	436,141	4%
GLADWIN CO.	10	38.4	5	<1%	2	<1%	26,023	<1%
GOGEBIC CO.	10	*	2	<1%	0	0%	17,370	<1%
GRAND TRAVERSE CO.	70	90.1	52	<1%	10	<1%	77,654	1%
GRATIOT CO.	10	23.6	9	<1%	3	<1%	42,285	<1%
HILLSDALE CO.	10	21.5	8	<1%	2	<1%	46,527	<1%
HOUGHTON CO.	10	27.8	11	<1%	4	<1%	36,016	<1%
HURON CO.	10	*	4	<1%	1	<1%	36,079	<1%
INGHAM CO.	500	179.0	381	3%	67	3%	279,320	3%
IONIA CO.	30	48.8	21	<1%	8	<1%	61,518	1%
IOSCO CO.	10	*	4	<1%	1	<1%	27,339	<1%
IRON CO.	10	*	0	0%	0	0%	13,138	<1%
ISABELLA CO.	20	31.6	19	<1%	2	<1%	63,351	1%
JACKSON CO.	190	119.9	143	1%	20	1%	158,422	2%
KALAMAZOO CO.	350	146.7	267	2%	41	2%	238,603	2%
KALKASKA CO.	10	60.3	5	<1%	0	0%	16,571	<1%
KENT CO.	1,030	179.3	791	6%	148	6%	574,335	6%
KEWEENAW	10	*	0	0%	0	0%	2,301	<1%
LAKE CO.	10	88.2	11	<1%	4	<1%	11,333	<1%
LAPEER CO.	40	45.5	27	<1%	6	<1%	87,904	1%
LEELANAU CO.	10	47.4	9	<1%	3	<1%	21,119	<1%
LENAWEE CO.	60	60.7	46	<1%	9	<1%	98,890	1%
LIVINGSTON CO.	50	31.9	39	<1%	10	<1%	156,951	2%
LUCE CO	10	*	0	0%	0	0%	7,024	<1%
MACKINAC CO.	10	*	1	<1%	0	0%	11,943	<1%
MACOMB CO.	620	78.7	479	4%	118	5%	788,149	8%
MANISTEE CO.	20	81.5	13	<1%	3	<1%	24,527	<1%
MARQUETTE CO.	40	61.9	33	<1%	8	<1%	64,634	1%
MASON CO.	20	70.7	13	<1%	6	<1%	28,274	<1%
MECOSTA CO.	20	49.3	14	<1%	2	<1%	40,553	<1%
MENOMINEE CO.	10	*	3	<1%	0	0%	25,326	<1%
MIDLAND CO.	30	36.2	24	<1%	5	<1%	82,874	1%
MISSAUKEE CO.	10	*	4	<1%	0	0%	14,478	<1%
MONROE CO.	70	48.0	51	<1%	13	1%	145,945	1%
MONTCALM CO.	30	49.0	24	<1%	2	<1%	61,266	1%
MONTMORENCY CO.	10	*	3	<1%	0	0%	10,315	<1%
MUSKEGON CO.	160	94.0	120	1%	20	1%	170,200	2%
NEWAYGO CO.	30	62.7	20	<1%	3	<1%	47,874	<1%
OAKLAND CO.	1,720	144.0	1,323	10%	259	10%	1,194,156	12%
OCEANA CO.	10	37.2	9	<1%	3	<1%	26,873	<1%
OGEMAW CO.	10	*	2	<1%	0	0%	21,645	<1%
ONTONAGON CO.	10	*	2	<1%	1	<1%	7,818	<1%
OSCEOLA CO.	10	43.1	6	<1%	1	<1%	23,197	<1%
OSCODA CO.	10	*	3	<1%	1	<1%	9,418	<1%
OTSEGO CO.	10	42.9	10	<1%	3	<1%	23,301	<1%
OTTAWA CO.	120	50.4	92	1%	21	1%	238,314	2%
PRESQUE ISLE CO.	10	*	3	<1%	2	<1%	14,411	<1%
ROSCOMMON CO.	20	78.5	18	<1%	4	<1%	25,469	<1%
SAGINAW CO.	200	95.2	153	1%	33	1%	210,039	2%
SANILAC CO.	20	44.9	13	<1%	4	<1%	44,547	<1%
SCHOOLCRAFT CO.	10	*	1	<1%	0	0%	8,903	<1%
SHIAWASSEE CO.	30	41.8	22	<1%	4	<1%	71,687	1%
ST CLAIR CO.	90	54.8	73	1%	17	1%	164,235	2%
ST JOSEPH CO.	30	48.1	24	<1%	3	<1%	62,422	1%
TUSCOLA CO.	10	17.2	10	<1%	2	<1%	58,266	1%
VAN BUREN CO.	90	118.0	68	1%	12	<1%	76,263	1%
WASHTENAW CO.	550	170.3	425	3%	81	3%	322,895	3%
WAYNE CO.	1,560	140.6	1,198	9%	255	10%	1,109,892	11%
DETROIT	6,680	702.2	5,135	40%	1,077	42%	951,270	10%
WEXFORD CO.	20	65.6	16	<1%	4	<1%	30,484	<1%
Total Known Res. (w/o Prison)	**390**	**N/A**	**310**	**2%**	**30**	**1%**		
In Prison	*16,200*	*N/A*	*12,767*	*98%*	*2,557.0*	*99%*		
Total Known Residence	N/A	N/A	205	2%	21.0	1%		
Unknown Residence	16,200	163.0	12,972	100%	2,578.0	100%	9,938,444.0	100%
Statewide Total	**16,200**	**163.0**	**11,527**	**100%**	**2,578**	**100%**	**9,938,444**	**100%**

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Table 8: Living HIV/AIDS Cases Currently Living in Michigan
Sex and Race by Risk
January 1, 2006

Male Only	White		Black		Hispanic		Other		All Races	
	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%
Male-Male Sex[#]	**3,100**	**75%**	**2,665**	**51%**	**199**	**49%**	**82**	**36%**	**6,046**	**60%**
Injecting Drug Use[#]	**195**	**5%**	**783**	**15%**	**58**	**14%**	**13**	**6%**	**1,049**	**10%**
IDU w/ heterosexual	*70*	*2%*	*325*	*6%*	*28*	*7%*	*2*	*1%*	*425*	*4%*
IDU w/o heterosexual	*125*	*3%*	*458*	*9%*	*30*	*7%*	*11*	*5%*	*624*	*6%*
Male-Male Sex/IDU[#]	**286**	**7%**	**339**	**6%**	**27**	**7%**	**9**	**4%**	**661**	**7%**
Blood Recipients[#]	**77**	**2%**	**19**	**<1%**	**2**	**<1%**	**4**	**2%**	**102**	**1%**
Perinatal	**18**	**<1%**	**58**	**1%**	**2**	**<1%**	**4**	**2%**	**82**	**1%**
Heterosexual[#]	**96**	**2%**	**350**	**7%**	**38**	**9%**	**8**	**4%**	**492**	**5%**
Partner IDU	*29*	*1%*	*106*	*2%*	*9*	*2%*	*2*	*1%*	*146*	*1%*
Partner Blood Recipient	*4*	*<1%*	*6*	*<1%*	*1*	*<1%*	*0*	*0%*	*11*	*<1%*
Partner HIV+	*63*	*2%*	*238*	*5%*	*28*	*7%*	*6*	*3%*	*335*	*3%*
Total Known Risks	**3,772**	**91%**	**4,214**	**81%**	**326**	**80%**	**120**	**53%**	**8,432**	**84%**
Unknown Risk[#]	**375**	**9%**	**1,008**	**19%**	**81**	**20%**	**105**	**47%**	**1,569**	**16%**
Presumed Heterosexual	*234*	*6%*	*741*	*14%*	*65*	*16%*	*35*	*16%*	*1,075*	*11%*
Other	*141*	*3%*	*267*	*5%*	*16*	*4%*	*70*	*31%*	*494*	*5%*
Total All Cases	**4,147**	**41%**	**5,222**	**52%**	**407**	**4%**	**225**	**2%**	**10,001**	**100%**

Female Only	White		Black		Hispanic		Other		All Races	
	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%
Injecting Drug Use[#]	**138**	**22%**	**540**	**25%**	**25**	**19%**	**7**	**9%**	**710**	**24%**
IDU w/ heterosexual	*75*	*12%*	*306*	*14%*	*14*	*11%*	*4*	*5%*	*399*	*13%*
IDU w/o heterosexual	*63*	*10%*	*234*	*11%*	*11*	*8%*	*3*	*4%*	*311*	*10%*
Blood Recipients[#]	**13**	**2%**	**10**	**<1%**	**1**	**1%**	**0**	**0%**	**24**	**1%**
Perinatal	**11**	**2%**	**49**	**2%**	**8**	**6%**	**3**	**4%**	**71**	**2%**
Heterosexual[#]	**309**	**50%**	**796**	**37%**	**69**	**53%**	**24**	**32%**	**1,198**	**40%**
Partner IDU	*93*	*15%*	*227*	*11%*	*20*	*15%*	*9*	*12%*	*349*	*12%*
Partner Bisexual	*32*	*5%*	*48*	*2%*	*6*	*5%*	*1*	*1%*	*87*	*3%*
Partner Blood Recipient	*16*	*3%*	*13*	*1%*	*2*	*2%*	*0*	*0%*	*31*	*1%*
Partner HIV+	*168*	*27%*	*508*	*24%*	*41*	*31%*	*14*	*19%*	*731*	*25%*
Total Known Risks	**471**	**76%**	**1,395**	**65%**	**103**	**79%**	**34**	**45%**	**2,003**	**67%**
Unknown Risk[#]	**152**	**24%**	**747**	**35%**	**28**	**21%**	**41**	**55%**	**968**	**33%**
Presumed Heterosexual	*128*	*21%*	*624*	*29%*	*25*	*19%*	*23*	*31%*	*800*	*27%*
Other	*24*	*4%*	*123*	*6%*	*3*	*2%*	*18*	*24%*	*168*	*6%*
Total All Cases	**623**	**21%**	**2,142**	**72%**	**131**	**4%**	**75**	**3%**	**2,971**	**100%**

Male and Female	White		Black		Hispanic		Other		All Races	
	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%
Male-Male Sex[#]	**3,100**	**65%**	**2,665**	**36%**	**199**	**37%**	**82**	**27%**	**6,046**	**47%**
Injecting Drug Use[#]	**333**	**7%**	**1,323**	**18%**	**83**	**15%**	**20**	**7%**	**1,759**	**14%**
IDU w/ heterosexual	*145*	*3%*	*631*	*9%*	*42*	*8%*	*6*	*2%*	*824*	*6%*
IDU w/o heterosexual	*188*	*4%*	*692*	*9%*	*41*	*8%*	*14*	*5%*	*935*	*7%*
Male-Male Sex/IDU[#]	**286**	**6%**	**339**	**5%**	**27**	**5%**	**9**	**3%**	**661**	**5%**
Blood Recipients[#]	**90**	**2%**	**29**	**<1%**	**3**	**1%**	**4**	**1%**	**126**	**1%**
Perinatal	**29**	**1%**	**107**	**1%**	**10**	**2%**	**7**	**2%**	**153**	**1%**
Heterosexual[#]	**405**	**8%**	**1,146**	**16%**	**107**	**20%**	**32**	**11%**	**1,690**	**13%**
Partner IDU	*122*	*3%*	*333*	*5%*	*29*	*5%*	*11*	*4%*	*495*	*4%*
Partner Bisexual	*32*	*1%*	*48*	*1%*	*6*	*1%*	*1*	*<1%*	*87*	*1%*
Partner Blood Recipient	*20*	*<1%*	*19*	*<1%*	*3*	*1%*	*0*	*0%*	*42*	*<1%*
Partner HIV+	*231*	*5%*	*746*	*10%*	*69*	*13%*	*20*	*7%*	*1,066*	*8%*
Total Known Risks	**4,243**	**89%**	**5,609**	**76%**	**429**	**80%**	**154**	**51%**	**10,435**	**80%**
Unknown Risk[#]	**527**	**11%**	**1,755**	**24%**	**109**	**20%**	**146**	**49%**	**2,537**	**20%**
Presumed Heterosexual	*362*	*8%*	*1,365*	*19%*	*90*	*17%*	*58*	*19%*	*1,875*	*14%*
Other	*165*	*3%*	*390*	*5%*	*19*	*4%*	*88*	*29%*	*662*	*5%*
Total All Cases	**4,770**	**37%**	**7,364**	**57%**	**538**	**4%**	**300**	**2%**	**12,972**	**100%**

See page 3-63 for footnotes

Table 9: Living HIV/AIDS Cases Currently Living in Michigan
Age[X] at Diagnosis by Risk
January 1, 2006

Male Only	0-12 years		13-19 years		20-24 years		25-29 years		30-39 years		40-49 years		50-59 years		60+ years		All Ages	
	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%
Male-Male Sex[#]	**0**	**0%**	**175**	**65%**	**811**	**73%**	**1,194**	**70%**	**2,435**	**62%**	**1,067**	**51%**	**294**	**46%**	**70**	**49%**	**6,046**	**60%**
Injecting Drug Use[#]	**0**	**0%**	**5**	**2%**	**26**	**2%**	**91**	**5%**	**389**	**10%**	**409**	**19%**	**120**	**19%**	**8**	**6%**	**1,048**	**10%**
IDU w/ heterosexual	*0*	*0%*	*3*	*1%*	*6*	*1%*	*45*	*3%*	*180*	*5%*	*154*	*7%*	*32*	*5%*	*5*	*4%*	*425*	*4%*
IDU w/o heterosexual	*0*	*0%*	*2*	*1%*	*20*	*2%*	*46*	*3%*	*209*	*5%*	*255*	*12%*	*88*	*14%*	*3*	*2%*	*623*	*6%*
Male-Male Sex/IDU[#]	**0**	**0%**	**13**	**5%**	**70**	**6%**	**117**	**7%**	**282**	**7%**	**141**	**7%**	**36**	**6%**	**2**	**1%**	**661**	**7%**
Blood Recipients[#]	**14**	**14%**	**24**	**9%**	**18**	**2%**	**15**	**1%**	**23**	**1%**	**4**	**<1%**	**2**	**<1%**	**2**	**1%**	**102**	**1%**
Perinatal	**82**	**82%**	**0**	**0%**	**0**	**0%**	**0**	**0%**	**0**	**0%**	**0**	**0%**	**0**	**0%**	**0**	**0%**	**82**	**1%**
Heterosexual[#]	**0**	**0%**	**8**	**3%**	**38**	**3%**	**91**	**5%**	**195**	**5%**	**107**	**5%**	**41**	**6%**	**12**	**8%**	**492**	**5%**
Partner IDU	*0*	*0%*	*0*	*0%*	*6*	*1%*	*29*	*2%*	*58*	*1%*	*38*	*2%*	*11*	*2%*	*4*	*3%*	*146*	*1%*
Partner Blood Recipient	*0*	*0%*	*0*	*0%*	*1*	*<1%*	*3*	*<1%*	*3*	*<1%*	*2*	*<1%*	*1*	*<1%*	*1*	*1%*	*11*	*<1%*
Partner HIV+	*0*	*0%*	*8*	*3%*	*31*	*3%*	*59*	*3%*	*134*	*3%*	*67*	*3%*	*29*	*5%*	*7*	*5%*	*335*	*3%*
Total Known Risks	**96**	**96%**	**225**	**83%**	**963**	**87%**	**1,508**	**88%**	**3,324**	**85%**	**1,728**	**82%**	**493**	**78%**	**94**	**66%**	**8,431**	**84%**
Unknown Risk[#]	**4**	**4%**	**45**	**17%**	**143**	**13%**	**206**	**12%**	**609**	**15%**	**371**	**18%**	**142**	**22%**	**48**	**34%**	**1,568**	**16%**
Presumed Heterosexual	*1*	*1%*	*25*	*9%*	*110*	*10%*	*138*	*8%*	*440*	*11%*	*237*	*11%*	*94*	*15%*	*30*	*21%*	*1,075*	*11%*
Other	*3*	*3%*	*20*	*7%*	*33*	*3%*	*68*	*4%*	*169*	*4%*	*134*	*6%*	*48*	*8%*	*18*	*13%*	*493*	*5%*
Total All Cases	**100**	**1%**	**270**	**3%**	**1,106**	**11%**	**1,714**	**17%**	**3,933**	**39%**	**2,099**	**21%**	**635**	**6%**	**142**	**1%**	**9,999**	**100%**

	0-12 years		13-19 years		20-24 years		25-29 years		30-39 years		40-49 years		50-59 years		60+ years		All Ages	
	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%
Injecting Drug Use[#]	**0**	**0%**	**13**	**8%**	**57**	**14%**	**91**	**18%**	**301**	**30%**	**202**	**34%**	**41**	**21%**	**5**	**13%**	**710**	**24%**
IDU w/ heterosexual	*0*	*0%*	*8*	*5%*	*31*	*8%*	*51*	*10%*	*178*	*18%*	*112*	*19%*	*18*	*9%*	*1*	*3%*	*399*	*13%*
IDU w/o heterosexual	*0*	*0%*	*5*	*3%*	*26*	*6%*	*40*	*8%*	*123*	*12%*	*90*	*15%*	*23*	*12%*	*4*	*10%*	*311*	*10%*
Blood Recipients[#]	**0**	**0%**	**2**	**1%**	**1**	**<1%**	**3**	**1%**	**7**	**1%**	**3**	**1%**	**5**	**3%**	**3**	**8%**	**24**	**1%**
Perinatal	**71**	**93%**	**0**	**0%**	**0**	**0%**	**0**	**0%**	**0**	**0%**	**0**	**0%**	**0**	**0%**	**0**	**0%**	**71**	**2%**
Heterosexual[#]	**0**	**0%**	**83**	**54%**	**196**	**48%**	**219**	**44%**	**389**	**38%**	**215**	**37%**	**81**	**42%**	**15**	**38%**	**1,198**	**40%**
Partner IDU	*0*	*0%*	*15*	*10%*	*40*	*10%*	*51*	*10%*	*124*	*12%*	*87*	*15%*	*27*	*14%*	*5*	*13%*	*349*	*12%*
Partner Bisexual	*0*	*0%*	*7*	*5%*	*13*	*3%*	*18*	*4%*	*31*	*3%*	*13*	*2%*	*5*	*3%*	*0*	*0%*	*87*	*3%*
Partner Blood Recipient	*0*	*0%*	*0*	*0%*	*8*	*2%*	*8*	*2%*	*12*	*1%*	*1*	*<1%*	*0*	*0%*	*2*	*5%*	*31*	*1%*
Partner HIV+	*0*	*0%*	*61*	*40%*	*135*	*33%*	*142*	*28%*	*222*	*22%*	*114*	*19%*	*49*	*26%*	*8*	*20%*	*731*	*25%*
Total Known Risks	**71**	**93%**	**98**	**64%**	**254**	**62%**	**313**	**62%**	**697**	**69%**	**420**	**72%**	**127**	**66%**	**23**	**58%**	**2,003**	**67%**
Unknown Risk[#]	**5**	**7%**	**55**	**36%**	**154**	**38%**	**189**	**38%**	**316**	**31%**	**167**	**28%**	**64**	**34%**	**17**	**43%**	**967**	**33%**
Presumed Heterosexual	*1*	*1%*	*50*	*33%*	*143*	*35%*	*155*	*31%*	*271*	*27%*	*125*	*21%*	*42*	*22%*	*13*	*33%*	*800*	*27%*
Other	*4*	*5%*	*5*	*3%*	*11*	*3%*	*34*	*7%*	*45*	*4%*	*42*	*7%*	*22*	*12%*	*4*	*10%*	*167*	*6%*
Total All Cases	**76**	**3%**	**153**	**5%**	**408**	**14%**	**502**	**17%**	**1,013**	**34%**	**587**	**20%**	**191**	**6%**	**40**	**1%**	**2,970**	**100%**

Male and Female	0-12 years		13-19 years		20-24 years		25-29 years		30-39 years		40-49 years		50-59 years		60+ years		All Ages	
	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%
Male-Male Sex[#]	**0**	**0%**	**175**	**41%**	**811**	**54%**	**1,194**	**54%**	**2,435**	**49%**	**1,067**	**40%**	**294**	**36%**	**70**	**38%**	**6,046**	**47%**
Injecting Drug Use[#]	**0**	**0%**	**18**	**4%**	**83**	**5%**	**182**	**8%**	**690**	**14%**	**611**	**23%**	**161**	**19%**	**13**	**7%**	**1,758**	**14%**
IDU w/ heterosexual	*0*	*0%*	*11*	*3%*	*37*	*2%*	*96*	*4%*	*358*	*7%*	*266*	*10%*	*50*	*6%*	*6*	*3%*	*824*	*6%*
IDU w/o heterosexual	*0*	*0%*	*7*	*2%*	*46*	*3%*	*86*	*4%*	*332*	*7%*	*345*	*13%*	*111*	*13%*	*7*	*4%*	*934*	*7%*
Male-Male Sex/IDU[#]	**0**	**0%**	**13**	**3%**	**70**	**5%**	**117**	**5%**	**282**	**6%**	**141**	**5%**	**36**	**4%**	**2**	**1%**	**661**	**5%**
Blood Recipients[#]	**14**	**8%**	**26**	**6%**	**19**	**1%**	**18**	**1%**	**30**	**1%**	**7**	**<1%**	**7**	**1%**	**5**	**3%**	**126**	**1%**
Perinatal	**153**	**87%**	**0**	**0%**	**0**	**0%**	**0**	**0%**	**0**	**0%**	**0**	**0%**	**0**	**0%**	**0**	**0%**	**153**	**1%**
Heterosexual[#]	**0**	**0%**	**91**	**22%**	**234**	**15%**	**310**	**14%**	**584**	**12%**	**322**	**12%**	**122**	**15%**	**27**	**15%**	**1,690**	**13%**
Partner IDU	*0*	*0%*	*15*	*4%*	*46*	*3%*	*80*	*4%*	*182*	*4%*	*125*	*5%*	*38*	*5%*	*9*	*5%*	*495*	*4%*
Partner Bisexual	*0*	*0%*	*7*	*2%*	*13*	*1%*	*18*	*1%*	*31*	*1%*	*13*	*<1%*	*5*	*1%*	*0*	*0%*	*87*	*1%*
Partner Blood Recipient	*0*	*0%*	*0*	*0%*	*9*	*1%*	*11*	*<1%*	*15*	*<1%*	*3*	*<1%*	*1*	*<1%*	*3*	*2%*	*42*	*<1%*
Partner HIV+	*0*	*0%*	*69*	*16%*	*166*	*11%*	*201*	*9%*	*356*	*7%*	*181*	*7%*	*78*	*9%*	*15*	*8%*	*1,066*	*8%*
Total Known Risks	**167**	**95%**	**323**	**76%**	**1,217**	**80%**	**1,821**	**82%**	**4,021**	**81%**	**2,148**	**80%**	**620**	**75%**	**117**	**64%**	**10,434**	**80%**
Unknown Risk[#]	**9**	**5%**	**100**	**24%**	**297**	**20%**	**395**	**18%**	**925**	**19%**	**538**	**20%**	**206**	**25%**	**65**	**36%**	**2,535**	**20%**
Presumed Heterosexual	*2*	*1%*	*75*	*18%*	*253*	*17%*	*293*	*13%*	*711*	*14%*	*362*	*13%*	*136*	*16%*	*43*	*24%*	*1,875*	*14%*
Other	*7*	*4%*	*25*	*6%*	*44*	*3%*	*102*	*5%*	*214*	*4%*	*176*	*7%*	*70*	*8%*	*22*	*12%*	*660*	*5%*
Total All Cases	**176**	**1%**	**423**	**3%**	**1,514**	**12%**	**2,216**	**17%**	**4,946**	**38%**	**2,686**	**21%**	**826**	**6%**	**182**	**1%**	**12,969**	**100%**

See page 3-63 for footnotes

Table 10: Gonorrhea, Syphilis, and Chlamydia by Area and Local Health Department Jurisdiction
January 1, 2005 to December 31, 2005

Patient Group	2000 Population	Gonorrhea Cases	Gonorrhea Rate^	P&S Syphilis* Cases	P&S Syphilis* Rate^	Chlamydia Cases	Chlamydia Rate^
Detroit EMA	4,441,551	10,795	243	78	1.8	20,580	463
Out-State	5,496,893	6,889	125	27	0.5	18,149	330
Allegan	105,665	29	27	0	0.0	185	175
Bay	110,157	44	40	0	0.0	164	149
Berrien	162,453	428	263	0	0.0	781	481
Barry/Eaton	160,410	82	51	1	0.6	361	225
Benzie/Leelanau	37,117	0	0	0	0.0	43	116
Br/Hills/St Joseph	154,736	36	23	0	0.0	258	167
Calhoun	137,985	359	260	0	0.0	719	521
Chippewa	38,543	2	5	0	0.0	75	195
Central MI Dist	186,561	67	36	0	0.0	397	213
Detroit	951,270	8,363	879	54	5.7	13,425	1411
Delta/Menominee	63,846	0	0	0	0.0	95	149
Dickinson/Iron	40,610	0	0	0	0.0	26	64
District #2	70,121	2	3	0	0.0	30	43
District #4	82,488	9	11	0	0.0	32	39
District #10	255,240	77	30	0	0.0	414	162
Genesee	436,141	1,511	346	1	0.2	2,684	615
Grand Traverse	77,654	15	19	2	2.6	162	209
Huron	36,079	1	3	0	0.0	44	122
Ingham	279,320	465	166	6	2.1	1,598	572
Ionia	61,518	12	20	0	0.0	91	148
Jackson	158,422	370	234	1	0.6	626	395
Kalamazoo	238,603	526	220	0	0.0	1,199	503
Kent	574,335	1,137	198	6	1.0	2,877	501
Lapeer	87,904	20	23	0	0.0	103	117
Lenawee	98,890	26	26	0	0.0	178	180
Livingston	156,951	19	12	0	0.0	146	93
LMAS District	37,732	3	8	0	0.0	36	95
Macomb	788,149	399	51	3	0.4	1,379	175
Marquette	64,634	9	14	0	0.0	131	203
Midland	82,874	23	28	0	0.0	115	139
Monroe	145,945	49	34	0	0.0	228	156
Muskegon	170,200	617	363	1	0.6	1,145	673
Mid-MI District	168,304	47	28	0	0.0	273	162
NW Michigan	103,938	20	19	1	1.0	116	112
Oakland	1,194,156	948	79	11	0.9	2,644	221
Ottawa	238,314	62	26	1	0.4	428	180
Saginaw	210,039	500	238	2	1.0	1,178	561
Sanilac	44,547	7	16	0	0.0	68	153
Shiawassee	71,687	14	20	0	0.0	100	139
St Clair	164,235	152	93	0	0.0	380	231
Tuscola	58,266	10	17	0	0.0	63	108
Van Buren/Cass	127,367	54	42	0	0.0	265	208
Washtenaw	322,895	304	94	5	1.5	996	308
Wayne exc Detroit	1,109,892	864	78	10	0.9	2,421	218
WestUpDist	72,251	2	3	0	0.0	50	69
Total	9,938,444	17,684	178	105	1.1	38,729	390

*** P&S: Primary and Secondary Syphilis**

^ Rate per 100,000 population

Table 11: Gonorrhea, Syphilis, and Chlamydia by Sex Race, and Age Group in Michigan January 1, 2004 to December 31, 2005

	2000	Gonorrhea			P&S Syphilis			Chlamydia		
Patient Group	Population	Cases	Pct	Rate	Cases	Pct	Rate	Cases	Pct	Rate
Male	4,873,095	7,469	42%	153	85	81%	2	8,525	22%	175
White Males	3,836,091	548	3%	14	27	26%	1	1,474	4%	38
Black Males	663,406	3,867	22%	583	51	49%	8	3,719	10%	561
Hispanic Males	170,555	69	0%	40	3	3%	2	203	1%	119
Other Males	203,043	73	0%	N/A	2	2%	N/A	220	1%	N/A
Unk Males	N/A	2,912	16%	N/A	2	2%	N/A	2,909	8%	N/A
Female	5,065,349	10,161	57%	201	20	19%	0	30,080	78%	594
White Females	3,970,600	1,212	7%	31	1	1%	0	5,827	15%	147
Black Females	738,641	3,015	17%	408	18	17%	2	7,537	19%	1020
Hispanic Females	153,322	101	1%	66	1	1%	1	498	1%	325
Other Females	202,786	181	1%	N/A	0	0%	N/A	850	2%	N/A
Unk Females	N/A	5,652	32%	N/A	0	0%	N/A	15,368	40%	N/A
White	7,806,691	1,759	10%	23	28	27%	0	7,301	19%	94
Black	1,402,047	6,886	39%	491	69	66%	5	11,264	29%	803
Hispanic	323,877	170	1%	52	4	4%	1	701	2%	216
Other	405,829	256	1%	63	2	2%	0	1,087	3%	268
Unknown Race	N/A	8,613	49%	N/A	2	2%	N/A	18,376	47%	N/A
0-4 years	672,005	24	0%	4	0	0%	0	49	0%	7
5-9 years	745,181	10	0%	1	0	0%	0	20	0%	3
10-14 years	747,012	240	1%	32	0	0%	0	650	2%	87
15-19 years	719,867	5,170	29%	718	0	0%	0	14,514	37%	2016
20-24 years	643,839	5,375	30%	835	10	10%	2	13,511	35%	2099
25-29 years	654,629	2,857	16%	436	13	12%	2	5,344	14%	816
30-34 years	707,542	1,614	9%	228	16	15%	2	2,399	6%	339
35-39 years	787,367	1,006	6%	128	13	12%	2	1,098	3%	139
40-44 years	811,006	571	3%	70	19	18%	2	492	1%	61
45-54 years	1,367,939	591	3%	43	25	24%	2	323	1%	24
55-64 years	863,039	103	1%	12	7	7%	1	67	0%	8
65 and over	1,219,018	53	0%	4	1	1%	0	70	0%	6
Unknown Age	N/A	70	0%	N/A	1	1%	N/A	192	0%	N/A
Total	9,938,444	17,684	100%	178	105	100%	1	38,729	100%	390

Table 12: Characteristics of HIV/Hepatitis Co-Infected Persons in Care, in Southeast Michigan ASD, 2001-2003.

	All (n=1790)	HAV Co-infected (n=64)	HBV Co-infected (n=207)	HCV Co-infected (n=353)
Sex			*	*
Male	58%	66%	68%	50%
Female	42%	34%	32%	50%
Race				*
White	20%	30%	17%	13%
Black	75%	67%	80%	83%
Others	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	24%	36%	28%	44%
HIV Transmission Risk			*	*
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/Others	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 care, $p<0.05$ 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 care.

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 13: Living HIV/AIDS Cases in Michigan
Sex and Race by Risk
Michigan Department of Corrections
January 1, 2006

Male Only	White		Black		Hispanic		Other		All Races	
	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%
Male-Male Sex[#]	**20**	**43%**	**67**	**29%**	**0**	**0%**	**1**	**20%**	**88**	**30%**
Injecting Drug Use[#]	**8**	**17%**	**42**	**18%**	**5**	**45%**	**1**	**20%**	**56**	**19%**
IDU w/ heterosexual	*6*	*13%*	*26*	*11%*	*4*	*36%*	*1*	*20%*	*37*	*12%*
IDU w/o heterosexual	*2*	*4%*	*16*	*7%*	*1*	*9%*	*0*	*0%*	*19*	*6%*
Male-Male Sex/IDU[#]	**10**	**21%**	**34**	**15%**	**2**	**18%**	**1**	**20%**	**47**	**16%**
Blood Recipients[#]	**2**	**4%**	**1**	**<1%**	**0**	**0%**	**0**	**0%**	**3**	**1%**
Perinatal	**0**	**0%**	**1**	**<1%**	**0**	**0%**	**0**	**0%**	**1**	**<1%**
Heterosexual[#]	**3**	**6%**	**29**	**12%**	**3**	**27%**	**1**	**20%**	**36**	**12%**
Partner IDU	*1*	*2%*	*17*	*7%*	*1*	*9%*	*0*	*0%*	*19*	*6%*
Partner Blood Recipient	*0*	*0%*	*0*	*0%*	*1*	*9%*	*0*	*0%*	*1*	*<1%*
Partner HIV+	*2*	*4%*	*12*	*5%*	*1*	*9%*	*1*	*20%*	*16*	*5%*
Total Known Risks	**43**	**91%**	**174**	**74%**	**10**	**91%**	**4**	**80%**	**231**	**78%**
Unknown Risk[#]	**4**	**9%**	**60**	**26%**	**1**	**9%**	**1**	**20%**	**66**	**22%**
Presumed Heterosexual	*4*	*9%*	*50*	*21%*	*1*	*9%*	*1*	*20%*	*56*	*19%*
Other	*0*	*0%*	*10*	*4%*	*0*	*0%*	*0*	*0%*	*10*	*3%*
Total All Cases	**47**	**16%**	**234**	**79%**	**11**	**4%**	**5**	**2%**	**297**	**100%**

Female Only	White		Black		Hispanic		Other		All Races	
	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%
Injecting Drug Use[#]	**2**	**50%**	**5**	**63%**	**0**	**0%**	**0**	**0%**	**7**	**54%**
IDU w/ heterosexual	*2*	*50%*	*3*	*38%*	*0*	*0%*	*0*	*0%*	*5*	*38%*
IDU w/o heterosexual	*0*	*0%*	*2*	*25%*	*0*	*0%*	*0*	*0%*	*2*	*15%*
Blood Recipients[#]	**0**	**0%**	**0**	**0%**	**0**	**0%**	**0**	**0%**	**0**	**0%**
Perinatal	**0**	**0%**	**0**	**0%**	**0**	**0%**	**0**	**0%**	**0**	**0%**
Heterosexual[#]	**1**	**25%**	**3**	**38%**	**0**	**0%**	**0**	**0%**	**4**	**31%**
Partner IDU	*0*	*0%*	*1*	*13%*	*0*	*0%*	*0*	*0%*	*1*	*8%*
Partner Bisexual	*1*	*25%*	*0*	*0%*	*0*	*0%*	*0*	*0%*	*1*	*8%*
Partner Blood Recipient	*0*	*0%*	*0*	*0%*	*0*	*0%*	*0*	*0%*	*0*	*0%*
Partner HIV+	*0*	*0%*	*2*	*25%*	*0*	*0%*	*0*	*0%*	*2*	*15%*
Total Known Risks	**3**	**75%**	**8**	**100%**	**0**	**0%**	**0**	**0%**	**11**	**85%**
Unknown Risk[#]	**1**	**25%**	**0**	**0%**	**0**	**0%**	**1**	**100%**	**2**	**15%**
Presumed Heterosexual	*1*	*25%*	*0*	*0%*	*0*	*0%*	*1*	*100%*	*2*	*15%*
Other	*0*	*0%*	*0*	*0%*	*0*	*0%*	*0*	*0%*	*0*	*0%*
Total All Cases	**4**	**31%**	**8**	**62%**	**0**	**0%**	**1**	**8%**	**13**	**100%**

Male and Female	White		Black		Hispanic		Other		All Races	
	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%
Male-Male Sex[#]	**20**	**39%**	**67**	**28%**	**0**	**0%**	**1**	**17%**	**88**	**28%**
Injecting Drug Use[#]	**10**	**20%**	**47**	**19%**	**5**	**45%**	**1**	**17%**	**63**	**20%**
IDU w/ heterosexual	*8*	*16%*	*29*	*12%*	*4*	*36%*	*1*	*17%*	*42*	*14%*
IDU w/o heterosexual	*2*	*4%*	*18*	*7%*	*1*	*9%*	*0*	*0%*	*21*	*7%*
Male-Male Sex/IDU[#]	**10**	**20%**	**34**	**14%**	**2**	**18%**	**1**	**17%**	**47**	**15%**
Blood Recipients[#]	**2**	**4%**	**1**	**<1%**	**0**	**0%**	**0**	**0%**	**3**	**1%**
Perinatal	**0**	**0%**	**1**	**<1%**	**0**	**0%**	**0**	**0%**	**1**	**<1%**
Heterosexual[#]	**4**	**8%**	**32**	**13%**	**3**	**27%**	**1**	**17%**	**40**	**13%**
Partner IDU	*1*	*2%*	*18*	*7%*	*1*	*9%*	*0*	*0%*	*20*	*6%*
Partner Bisexual	*1*	*2%*	*0*	*0%*	*0*	*0%*	*0*	*0%*	*1*	*<1%*
Partner Blood Recipient	*0*	*0%*	*0*	*0%*	*1*	*9%*	*0*	*0%*	*1*	*<1%*
Partner HIV+	*2*	*4%*	*14*	*6%*	*1*	*9%*	*1*	*17%*	*18*	*6%*
Total Known Risks	**46**	**90%**	**182**	**75%**	**10**	**91%**	**4**	**67%**	**242**	**78%**
Unknown Risk[#]	**5**	**10%**	**60**	**25%**	**1**	**9%**	**2**	**33%**	**68**	**22%**
Presumed Heterosexual	*5*	*10%*	*50*	*21%*	*1*	*9%*	*2*	*33%*	*58*	*19%*
Other	*0*	*0%*	*10*	*4%*	*0*	*0%*	*0*	*0%*	*10*	*3%*
Total All Cases	**51**	**16%**	**242**	**78%**	**11**	**4%**	**6**	**2%**	**310**	**100%**

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Table 14: Living HIV/AIDS Cases in Michigan
Age[x] at HIV Diagnosis by Risk
Michigan Department of Corrections
January 1, 2006

Male Only	0-12 years		13-19 years		20-24 years		25-49 years		50+ years		All Ages	
	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%
Male-Male Sex[#]	**0**	**0%**	**7**	**50%**	**24**	**48%**	**55**	**25%**	**2**	**20%**	**88**	**30%**
Injecting Drug Use[#]	**0**	**0%**	**1**	**7%**	**3**	**6%**	**49**	**22%**	**3**	**30%**	**56**	**19%**
IDU w/ heterosexual	*0*	*0%*	*1*	*7%*	*2*	*4%*	*32*	*14%*	*2*	*20%*	*37*	*12%*
IDU w/o heterosexual	*0*	*0%*	*0*	*0%*	*1*	*2%*	*17*	*8%*	*1*	*10%*	*19*	*6%*
Male-Male Sex/IDU[#]	**0**	**0%**	**2**	**14%**	**10**	**20%**	**33**	**15%**	**2**	**20%**	**47**	**16%**
Blood Recipients[#]	**0**	**0%**	**1**	**7%**	**1**	**2%**	**1**	**<1%**	**0**	**0%**	**3**	**1%**
Perinatal	**1**	**7%**	**0**	**0%**	**0**	**0%**	**0**	**0%**	**0**	**0%**	**1**	**<1%**
Heterosexual[#]	**0**	**0%**	**2**	**14%**	**4**	**8%**	**29**	**13%**	**1**	**10%**	**36**	**12%**
Partner IDU	*0*	*0%*	*0*	*0%*	*2*	*4%*	*17*	*8%*	*0*	*0%*	*19*	*6%*
Partner Blood Recipient	*0*	*0%*	*0*	*0%*	*0*	*0%*	*1*	*<1%*	*0*	*0%*	*1*	*<1%*
Partner HIV+	*0*	*0%*	*2*	*14%*	*2*	*4%*	*11*	*5%*	*1*	*10%*	*16*	*5%*
Total Known Risks	**1**	**7%**	**13**	**93%**	**42**	**84%**	**167**	**75%**	**8**	**80%**	**231**	**78%**
Unknown Risk[#]	**0**	**0%**	**1**	**7%**	**8**	**16%**	**55**	**25%**	**2**	**20%**	**66**	**22%**
Presumed Heterosexual	*0*	*0%*	*1*	*7%*	*7*	*14%*	*46*	*21%*	*2*	*20%*	*56*	*19%*
Other	*0*	*0%*	*0*	*0%*	*1*	*2%*	*9*	*4%*	*0*	*0%*	*10*	*3%*
Total All Cases	**1**	**0%**	**14**	**5%**	**50**	**17%**	**222**	**74%**	**10**	**3%**	**297**	**100%**

Female Only	0-12 years		13-19 years		20-24 years		25-49 years		50+ years		All Ages	
	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%
Injecting Drug Use[#]	**0**	**0%**	**0**	**0%**	**0**	**0%**	**7**	**70%**	**0**	**0%**	**7**	**54%**
IDU w/ heterosexual	*0*	*0%*	*0*	*0%*	*0*	*0%*	*5*	*50%*	*0*	*0%*	*5*	*38%*
IDU w/o heterosexual	*0*	*0%*	*0*	*0%*	*0*	*0%*	*2*	*20%*	*0*	*0%*	*2*	*15%*
Blood Recipients[#]	**0**	**0%**	**0**	**0%**	**0**	**0%**	**0**	**0%**	**0**	**0%**	**0**	**0%**
Perinatal	**0**	**0%**	**0**	**0%**	**0**	**0%**	**0**	**0%**	**0**	**0%**	**0**	**0%**
Heterosexual[#]	**0**	**0%**	**0**	**0%**	**1**	**50%**	**2**	**20%**	**1**	**100%**	**4**	**31%**
Partner IDU	*0*	*0%*	*0*	*0%*	*1*	*50%*	*0*	*0%*	*0*	*0%*	*1*	*8%*
Partner Bisexual	*0*	*0%*	*0*	*0%*	*0*	*0%*	*0*	*0%*	*1*	*100%*	*1*	*8%*
Partner Blood Recipient	*0*	*0%*	*0*	*0%*	*0*	*0%*	*0*	*0%*	*0*	*0%*	*0*	*0%*
Partner HIV+	*0*	*0%*	*0*	*0%*	*0*	*0%*	*2*	*20%*	*0*	*0%*	*2*	*15%*
Total Known Risks	**0**	**0%**	**0**	**0%**	**1**	**50%**	**9**	**90%**	**1**	**100%**	**11**	**85%**
Unknown Risk[#]	**0**	**0%**	**0**	**0%**	**1**	**50%**	**1**	**10%**	**0**	**0%**	**2**	**15%**
Presumed Heterosexual	*0*	*0%*	*0*	*0%*	*1*	*50%*	*1*	*10%*	*0*	*0%*	*2*	*15%*
Other	*0*	*0%*	*0*	*0%*	*0*	*0%*	*0*	*0%*	*0*	*0%*	*0*	*0%*
Total All Cases	**0**	**0%**	**0**	**0%**	**2**	**15%**	**10**	**77%**	**1**	**8%**	**13**	**100%**

Male and Female	0-12 years		13-19 years		20-24 years		25-49 years		50+ years		All Ages	
	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%
Male-Male Sex[#]	**0**	**0%**	**7**	**50%**	**24**	**46%**	**55**	**24%**	**2**	**18%**	**88**	**28%**
Injecting Drug Use[#]	**0**	**0%**	**1**	**7%**	**3**	**6%**	**56**	**24%**	**3**	**27%**	**63**	**20%**
IDU w/ heterosexual	*0*	*0%*	*1*	*7%*	*2*	*4%*	*37*	*16%*	*2*	*18%*	*42*	*14%*
IDU w/o heterosexual	*0*	*0%*	*0*	*0%*	*1*	*2%*	*19*	*8%*	*1*	*9%*	*21*	*7%*
Male-Male Sex/IDU[#]	**0**	**0%**	**2**	**14%**	**10**	**19%**	**33**	**14%**	**2**	**18%**	**47**	**15%**
Blood Recipients[#]	**0**	**0%**	**1**	**7%**	**1**	**2%**	**1**	**<1%**	**0**	**0%**	**3**	**1%**
Perinatal	**1**	**7%**	**0**	**0%**	**0**	**0%**	**0**	**0%**	**0**	**0%**	**1**	**<1%**
Heterosexual[#]	**0**	**0%**	**2**	**14%**	**5**	**10%**	**31**	**13%**	**2**	**18%**	**40**	**13%**
Partner IDU	*0*	*0%*	*0*	*0%*	*3*	*6%*	*17*	*7%*	*0*	*0%*	*20*	*6%*
Partner Bisexual	*0*	*0%*	*0*	*0%*	*0*	*0%*	*0*	*0%*	*1*	*9%*	*1*	*<1%*
Partner Blood Recipient	*0*	*0%*	*0*	*0%*	*0*	*0%*	*1*	*<1%*	*0*	*0%*	*1*	*<1%*
Partner HIV+	*0*	*0%*	*2*	*14%*	*2*	*4%*	*13*	*6%*	*1*	*9%*	*18*	*6%*
Total Known Risks	**1**	**7%**	**13**	**93%**	**43**	**83%**	**176**	**76%**	**9**	**82%**	**242**	**78%**
Unknown Risk[#]	**0**	**0%**	**1**	**7%**	**9**	**17%**	**56**	**24%**	**2**	**18%**	**68**	**22%**
Presumed Heterosexual	*0*	*0%*	*1*	*7%*	*8*	*15%*	*47*	*20%*	*2*	*18%*	*58*	*19%*
Other	*0*	*0%*	*0*	*0%*	*1*	*2%*	*9*	*4%*	*0*	*0%*	*10*	*3%*
Total All Cases	**1**	**0%**	**14**	**5%**	**52**	**17%**	**232**	**75%**	**11**	**4%**	**310**	**100%**

See page 3-63 for footnotes