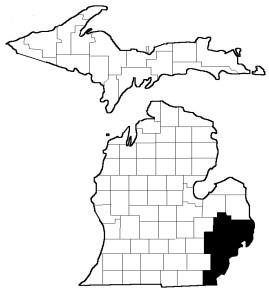
2012 Profile of HIV in the Detroit Metro Area

Summary of the HIV Epidemic in the Detroit Metro Area

Data from enhanced HIV/AIDS Reporting System (eHARS)

How many cases?



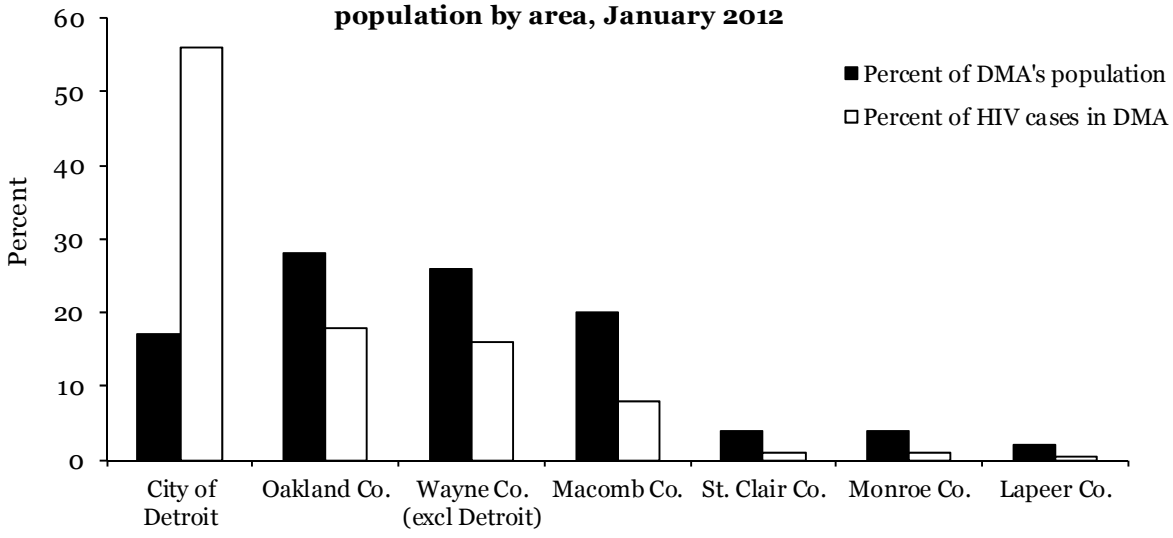
The Michigan Department of Community Health (MDCH) estimates that there are 13,040 persons currently living with HIV in the Detroit Metro Area (DMA), of whom 9,919 were reported as of January 1, 2012 (table 3, page 164). The DMA is the Detroit Metropolitan Statistical Area as defined by the US Census, composed of Lapeer, Macomb, Monroe, Oakland, St. Clair, and Wayne counties (including the City of Detroit). The number and rate of new HIV diagnoses remained stable in the DMA between 2006 and 2010, with an average of 803 new cases each year and an average rate of 8.1 cases per 100,000 population (See pages v-vi for information on *2012 Annual Review of HIV Trends in Michigan*). Despite a stable number of new diagnoses each year, there are more new diagnoses of HIV infection than deaths. As a result, the reported number of persons living with HIV infection in the DMA is increasing.

How are the cases geographically distributed?

HIV infections are distributed disproportionately, both in Michigan and in the DMA. Sixty-three percent of those living with HIV reside in the DMA (9,919 of the 15,753 cases currently living in Michigan), but the DMA has only 43 percent of the general population (table 8 of Statewide chapter, page 101). Figure 1 shows the distribution of reported cases and population by local health department (LHD) within the DMA. The City of Detroit experienced a population decline of 21 percent between the 2000 and 2010 Censuses and now holds only 17 percent of the DMA's population. However, 56 percent of all DMA HIV cases reside in Detroit. All other LHDs in the DMA have a greater proportion of the population than they do cases.

All LHDs in Michigan are classified as high or low prevalence based on the HIV prevalence rate (see page 17 of the Statewide chapter for further explanation). The City of Detroit and Macomb, Oakland, and Wayne counties are considered high prevalence and hold 98 percent of the DMA's HIV cases. Lapeer, Monroe, and St. Clair counties are considered low prevalence.

Figure 1: Detroit Metro Area prevalent HIV infection cases and population by area, January 2012



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Recommendations: Ranking of Behavioral Groups

Data from enhanced HIV/AIDS Reporting System (eHARS)

To assist in prioritizing prevention activities, the MDCH HIV/STD/VH/TB Epidemiology Section ranks the three behavioral groups most at risk for HIV infection in the Detroit Metro Area (DMA). 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 on the overall epidemic. The percentage of cases for each behavioral group and trends over time were used to determine the ranked order of the following three behavioral groups: MSM, heterosexuals, and IDU.

- **Men who have sex with men (MSM)*:** MSM make up 53 percent of all reported cases of HIV currently living in the DMA, including MSM/IDU (5,207 out of 9,919 cases) (table 3, page 164). The MSM behavioral group continues to be the most affected behavioral group in this area. Between 2006 and 2010, there was an average of 261 new cases among MSM each year. The number of new MSM cases increased by an average of one percent per year (Trends).
- **Heterosexuals**: Heterosexual cases constitute 17 percent of the total number of reported cases (1,727 out of 9,919 cases) currently living in the DMA (table 3). This behavioral group is comprised of males who had sex with females known to be at risk for HIV (heterosexual contact with female with risk, HCFR) and females who had sex with males, regardless of what is known about the male partners' risk behaviors (heterosexual contact with male, HCM). HCFR is more completely defined as males who had sex with females known to be IDU, recipients of HIV-infected blood products, or HIV-positive persons. See the glossary in appendix A, page 223, for further description of the heterosexual risk transmission category. Eighty-two percent of all heterosexual cases in the DMA are among females. The number of new HIV diagnoses among persons with heterosexual risk decreased by eight percent between 2006 and 2010. This is the third consecutive trend analysis showing a decrease in new diagnoses among persons with heterosexual risk in the DMA (Trends).
- **Injection drug users (IDU)*:** Of all reported cases of HIV currently living in the DMA, 15 percent are IDU, including MSM/IDU (1,415 out of 9,919 cases) (table 3). The number of new HIV diagnoses among IDU decreased between 2006 and 2010 by an average of 10 percent per year. This is the seventh consecutive trend analysis showing significant decreases in new HIV diagnoses among IDU in the DMA (Trends).

*Both MSM and IDU numbers and percentages include persons with a dual risk of MSM/IDU.

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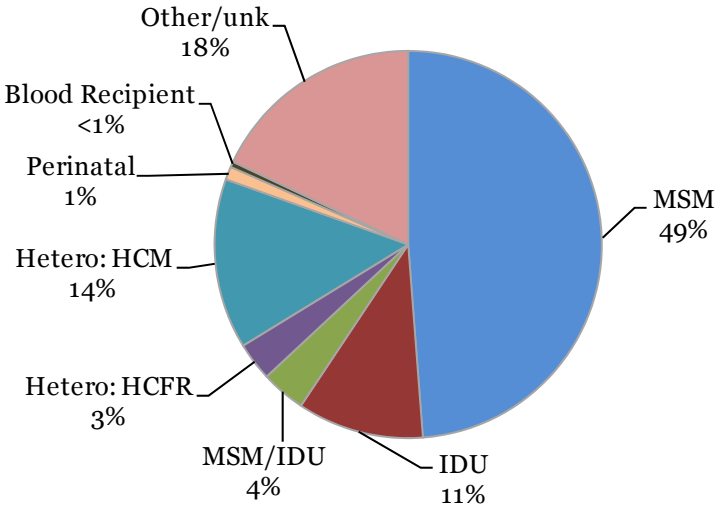
Distribution of Living HIV Cases by Risk Transmission Category

Data from enhanced HIV/AIDS Reporting System (eHARS)

Although case reporting includes ascertainment of multiple behaviors associated with HIV transmission, current surveillance methods cannot determine the specific route of HIV transmission in persons who have engaged in more than one risk behavior. For the purposes of analysis and interpretation, in the 1980s the Centers for Disease Control and Prevention created a risk hierarchy to classify people into risk transmission categories. The hierarchy is intended to account for the efficiency of HIV transmission associated with each behavior, along with the probability of exposure to a HIV-positive person within the population. The adult/adolescent categories, in order, are as follows: (1) men who have sex with men (MSM); (2) injection drug users (IDU); (3) men who have sex with men and inject drugs (MSM/IDU); (4) hemophilia/coagulation disorders; (5) heterosexual contact (HC); (6) receipt of HIV-infected blood or blood components; and (7) no identified risk (NIR). Figure 2 shows the distribution of risk for all persons currently living with HIV in the DMA as of January 2012 (data also found on tables 3 and 4, pages 163-164).

Figure 2: HIV infection cases currently living in the Detroit Metro Area by risk transmission category, January 2012 (N = 9,919)



- Over half (53 percent) of persons currently living with HIV in the DMA are men who have sex with men (MSM), including four percent who also inject drugs (MSM/IDU).
- Seventeen percent have a risk of heterosexual sex, 14 percent of whom are females who had sex with males (HCM) and three percent of whom are males who had sex with females of known risk (HCFR).
- Fifteen percent are injection drug users (IDU), including four percent who are also MSM (MSM/IDU).
- Two percent are other known risk, including perinatal transmission and receipt of HIV-infected blood products.
- Eighteen percent have unknown risk, which includes males who had sex with females of unknown risk.

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Distribution of Living HIV Cases by Exposure Category

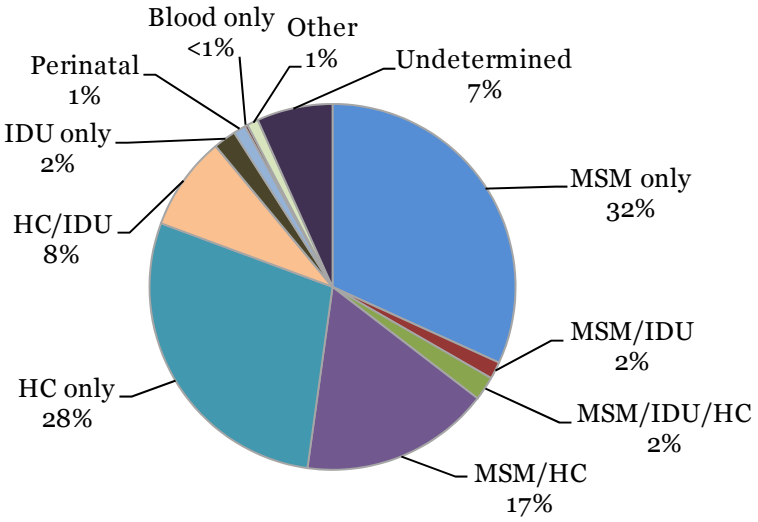
Data from enhanced HIV/AIDS Reporting System (eHARS)

When the risk transmission categories were created, the hierarchy was based on what was known at the beginning of the epidemic about how HIV was transmitted, when almost all cases were among males and there was little documented heterosexual transmission. Since then, the hierarchy has not changed, even though our understanding of the most efficient HIV transmission routes has. Additionally, concerns have been raised that use of hierarchical categories masks the identification of multiple risks that a person may have. For this reason, Michigan also presents exposure categories, which convey all known modes of HIV exposure. Like the traditional risk transmission categories, the exposure categories are mutually exclusive, meaning that each case is included in only one category. Exposure categories, however, allow readers to see all the reported ways in which a person may have been exposed to HIV without stating definitively how the individual was infected. Please see the glossary in appendix A (page 223) for more detailed definitions of exposure categories.

It is important to note that, unlike in the risk transmission categories, males are counted in the heterosexual contact (HC) exposure category regardless of what is known about their female partners' risk behaviors. This results in an increased proportion of persons in the heterosexual category.

Figure 3 shows the distribution of exposures among HIV-positive persons currently living in the Detroit Metro Area (DMA) as of January 2012 (data also found in table 4, page 164).

Figure 3: HIV infection cases currently living in the Detroit Metro Area by exposure category, January 2012 (N = 9,919)



- While over half of all prevalent HIV cases are classified as men who have sex with men (MSM) in the risk transmission hierarchy, over 20 percent reported additional exposures. Nineteen percent were also behaviorally bisexual, reporting sex with a female (MSM/HC and MSM/HC/IDU).
- Almost all injection drug users (IDU) reported additional risk behaviors, including eight percent reporting heterosexual contact (HC/IDU) and two percent reporting both heterosexual contact and male-male sex (MSM/IDU/HC).
- 'Other' includes the following combinations of risks: HC/Blood, HC/IDU/Blood, MSM/Blood, MSM/HC/Blood, MSM/IDU/HC/Blood, and MSM/IDU/Blood.

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Distribution of Living HIV Cases by Race and Sex

Data from enhanced HIV/AIDS Reporting System (eHARS)

Figures 4 and 5 show the impact of the HIV epidemic on six race/sex groups in the DMA.

Figure 4: Estimated prevalence of persons living with HIV in the Detroit Metro Area by race and sex, January 2012

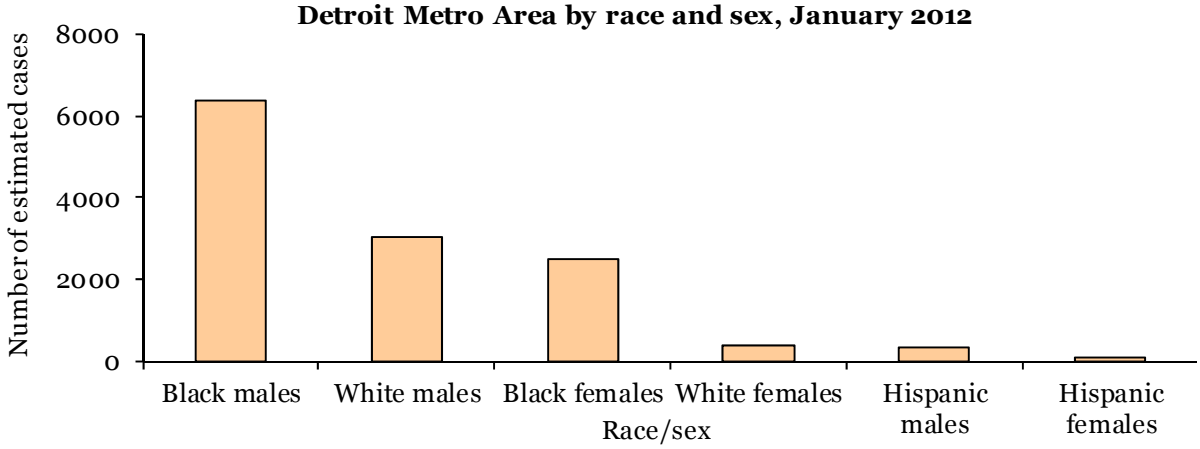
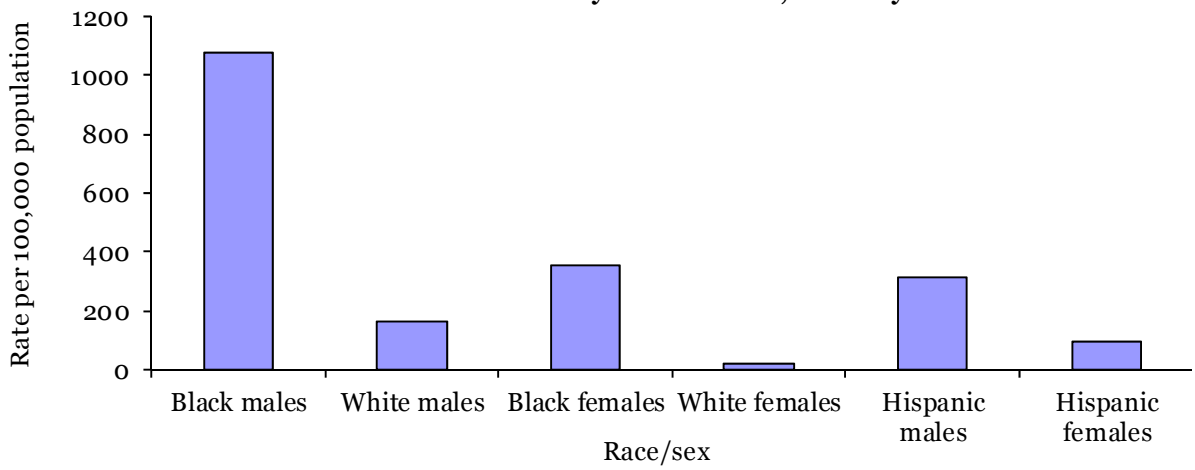


Figure 5: Reported prevalence rate of persons living with HIV in the Detroit Metro Area by race and sex, January 2012



- Black males have both the highest rate per 100,000 (1,076) and the highest estimated number (6,360) of HIV cases. This high rate means the impact of the epidemic is greatest on this demographic group.
- Black females have the second highest rate (358) and the third highest estimated number (2,480) of cases of HIV.
- Hispanic males have the third highest rate (311) and the fifth highest estimated number (350) of cases. This indicates the impact of the epidemic is high on a relatively small demographic group.
- White males have the fourth highest rate (162) and the second highest estimated number (3,020) of cases.
- Hispanic females have the fifth highest rate (99) and the second lowest estimated number (110) of HIV cases.
- White females have the lowest rate (20) and the lowest estimated number (390) of HIV cases.
- Data can also be found in table 3, page 163.

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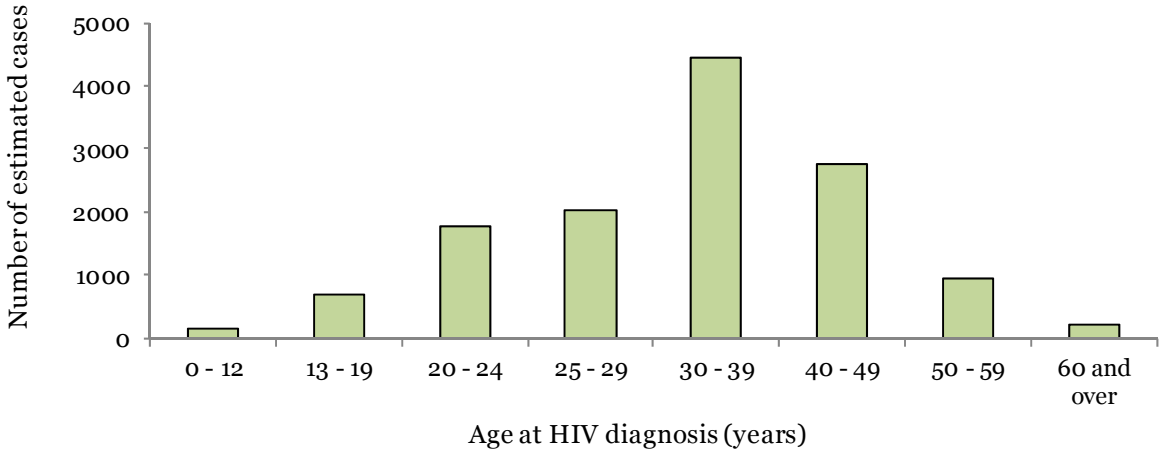
Distribution of Living HIV Cases by Age at HIV Diagnosis

Data from enhanced HIV/AIDS Reporting System (eHARS)

Figure 6 shows the breakdown of prevalent cases in the Detroit Metro Area (DMA) by age at HIV diagnosis.

Figure 6: Estimated prevalence of persons living with HIV in the Detroit Metro Area by age at diagnosis, January 2012



- The majority of all prevalent cases (an estimated 4,440) were 30-39 years old at the time of diagnosis.
- The next highest number of estimated cases is among persons 40-49 years at diagnosis, followed closely by 25-29 year olds (2,760 vs. 2,040, respectively).
- The smallest number of estimated cases is among individuals diagnosed at 60 years and older, followed by individuals diagnosed between the ages of 0 and 12 years.
- There were an estimated 10 cases with unknown age at diagnosis not included in this figure.
- Data also found on table 3, page 163.