

# 2012 Profile of HIV in Out-State Michigan

## Summary of HIV Epidemic in Out-State Michigan

Data from enhanced HIV/AIDS Reporting System (eHARS)

### How many cases?

The Michigan Department of Community Health (MDCH) estimates that there are 7,080 persons currently living with HIV in Out-State Michigan, of whom 5,389 were reported as of January 1, 2012 (table 3, page 211). Out-State Michigan is composed of the 77 counties outside of the six Detroit Metro Area (DMA) counties. The reported number of persons living with HIV infection in Out-State Michigan is increasing, because there are more new HIV diagnoses than deaths each year.

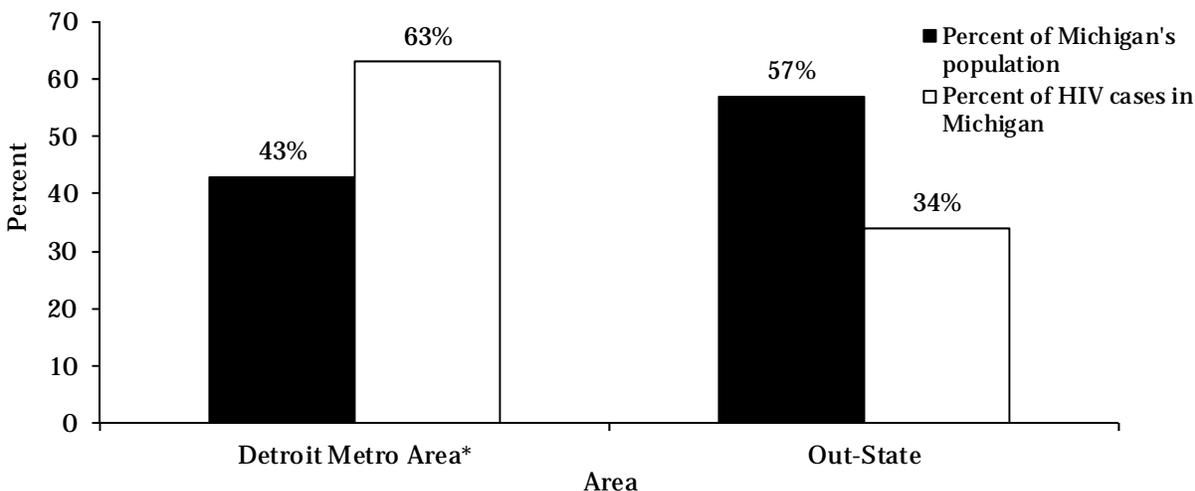


### How are the cases geographically distributed?

HIV infections are distributed disproportionately in Michigan. Thirty-four percent of those living with HIV reside in Out-State Michigan, but Out-State Michigan has 57 percent of the general population (figure 1). Thus, Out-State Michigan has fewer cases than would be expected based on its population. Kent County has the highest number and proportion of reported cases in Out-State Michigan (1,011 cases, 19 percent; table 4, pages 212-213). The 83 counties of Michigan are divided into 45 local health departments (LHDs), which are classified as high- or low-prevalence (please see page 17 of the statewide chapter for more information). In Out-State Michigan, Washtenaw, Kent, Ingham, Berrien, Kalamazoo, Genesee, Saginaw, Calhoun, Jackson, and Allegan counties are considered high-prevalence. Please see the last section of this chapter, "Focus on High-Prevalence Counties" (pages 207-210) for more information on the four highest-prevalence counties.

**Out-State Trends:** In the statewide and DMA chapters of this document, trends in new HIV diagnoses over time were evaluated by estimating the number of persons newly diagnosed with HIV each year and determining if there were statistically significant changes. Number of newly diagnosed cases in Out-State Michigan were insufficient to apply the estimation methodology used to evaluate trends. Therefore, figures in this chapter that present trends in new HIV diagnoses are created using unadjusted numbers. **Trends in the statewide and DMA chapters should not be compared with the numbers in the Out-State chapter.**

**Figure 1: Michigan living HIV infection cases and population by area, January 2012**



\*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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## 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 Out-State 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 on the overall epidemic. The percentage of cases for each behavioral group 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 57 percent of all reported cases of HIV currently living in Out-State Michigan (3,071 out of 5,389 cases; table 3, page 211). The MSM behavioral group continues to be the most affected behavioral group in this area.
- **Heterosexuals:** Heterosexual cases constitute 18 percent of the total number of reported cases (975 out of 5,389 cases) currently living in Out-State Michigan (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 known 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 percent of all heterosexual cases in Out-State Michigan are among females.
- **Injection drug users (IDU)\*:** Of all reported cases of HIV currently living in Out-State Michigan, 12 percent are IDU (670 out of 5,389 cases; table 3).

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

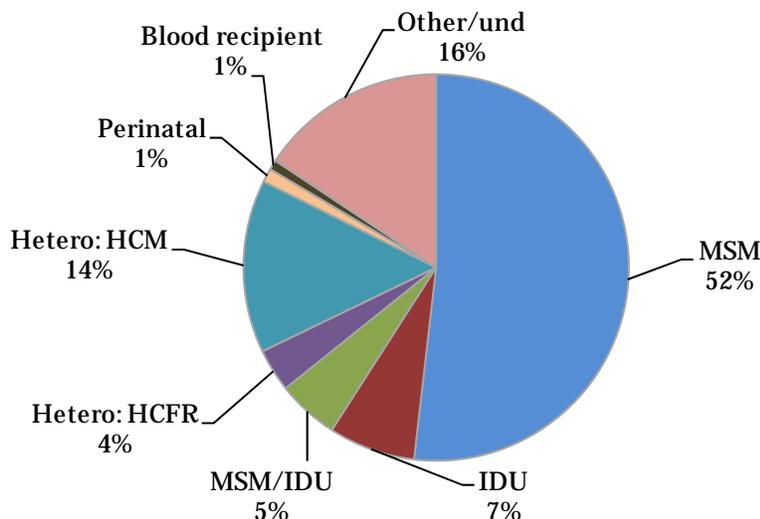
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## Distribution of Living HIV Cases by Risk Transmission Category

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, the Centers for Disease Control and Prevention created a risk hierarchy in the 1980s 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 Out-State Michigan as of January 2012 (also see tables 3 and 5, pages 211 and 214).

**Figure 2: HIV infection cases currently living in Out-State Michigan by risk transmission category, January 2012 (N = 5,389)**



- Over half (57 percent) of persons currently living with HIV in Out-State Michigan are men who have sex with men (MSM), including five percent who also inject drugs (MSM/IDU).
- Eighteen percent have a risk of heterosexual sex; 14 percent are females who had sex with males (HCM), and four percent of whom are males who had sex with females with known risk (HCFR).
- Twelve percent are injection drug users (IDU), including five percent who are also MSM (MSM/IDU).
- Two percent are other known risk, including perinatal transmission and receipt of HIV-infected blood products.
- Sixteen percent have other or undetermined risk, which includes males who had sex with females with unknown risk.

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## Distribution of Living HIV Cases by Exposure Category

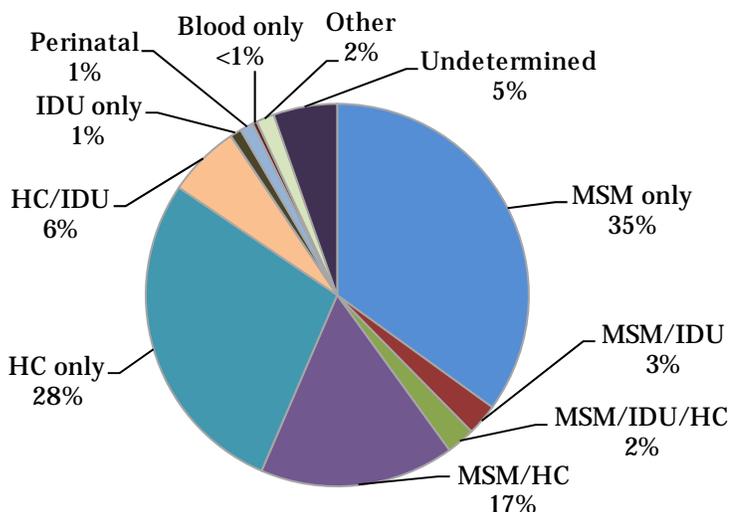
Data from enhanced HIV/AIDS Reporting System (eHARS)

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 the risk transmission categories, the exposure categories count males in the heterosexual contact (HC) category regardless of what is known about their female partners' risk behaviors or HIV status. This results in an increased proportion of heterosexual cases.

Figure 3 shows the distribution of exposures among HIV-positive persons currently living in Out-State Michigan as of January 2012 (also see table 5, page 214).

**Figure 3: HIV infection cases currently living in Out-State Michigan by exposure category, January 2012 (N = 5,389)**



- While over half of all prevalent HIV cases are classified as men who have sex with men (MSM) in the risk transmission hierarchy, 22 percent reported additional exposures. Nineteen percent were behaviorally bisexual, reporting sex with a female (MSM/HC and MSM/HC/IDU).
- Almost all injection drug users (IDU) reported additional risk behaviors, including six percent reporting heterosexual contact (HC/IDU) and two percent reporting both heterosexual contact and male-male sex (MSM/IDU/HC).
- 'Other' are other combinations of risk too numerous to be displayed (HC/Blood, HC/IDU/Blood, MSM/Blood, MSM/HC/Blood, MSM/IDU/HC/Blood, MSM/IDU/Blood, and IDU/Blood).

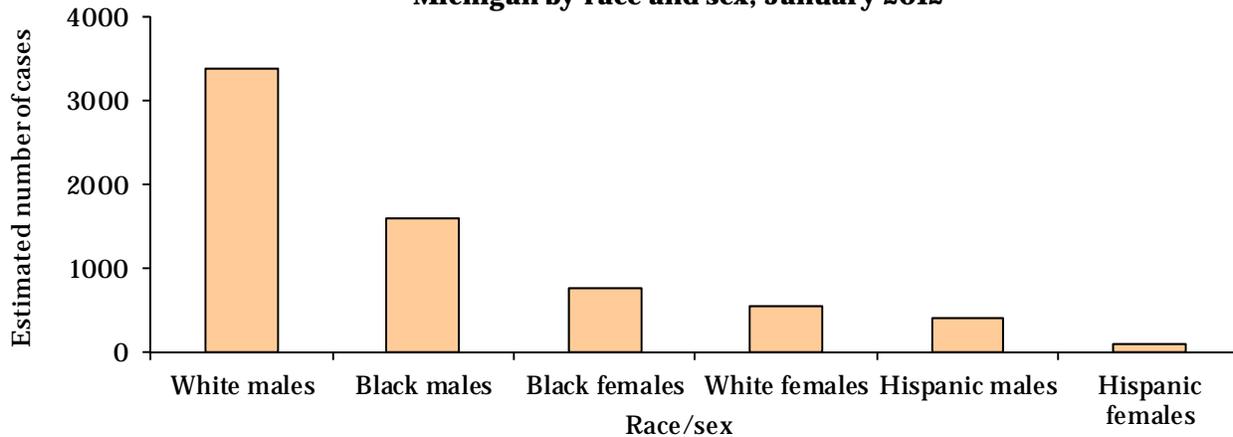
# 2012 Profile of HIV in Out-State Michigan

## Distribution of Living HIV Cases by Race and Sex

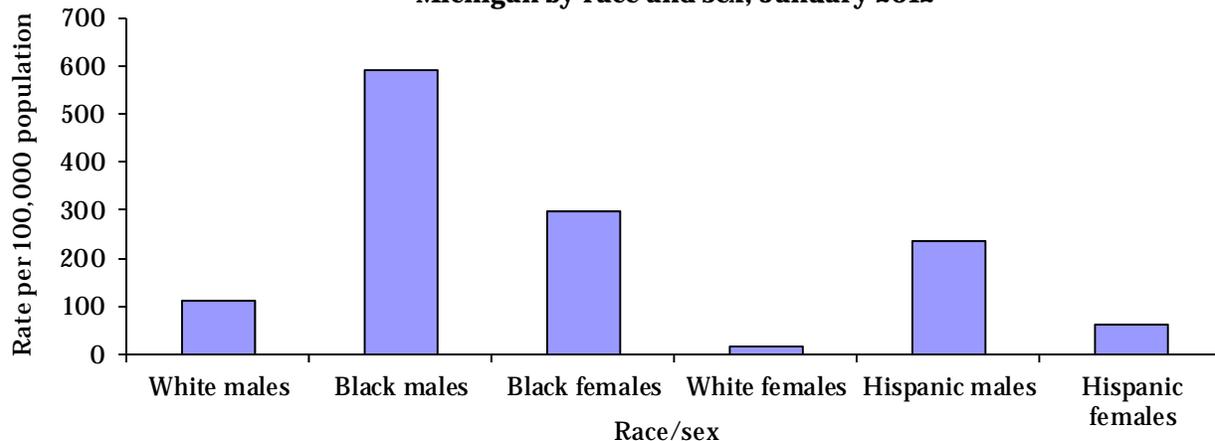
Data from enhanced HIV/AIDS Reporting System (eHARS)

Figures 4 and 5 show the impact of the HIV epidemic on six race/sex groups in Out-State Michigan.

**Figure 4: Estimated prevalence of persons living with HIV in Out-State Michigan by race and sex, January 2012**



**Figure 5: Reported prevalence rate of persons living with HIV in Out-State Michigan by race and sex, January 2012**



- Black males have the highest rate of HIV per 100,000 (591) and the second highest estimated number (1,610) of cases. This high rate - over five times higher than the rate among white males - means the impact of the epidemic is greatest on this demographic group.
- Black females have the second highest rate (297 per 100,000) and the third highest estimated number (780) of cases of HIV. The rate is 17 times that of white females.
- Hispanic males have the third highest rate (237) and the fifth highest estimated number (420) of cases. This indicates the impact of the epidemic is high on a relatively small demographic group.
- White males have the fourth highest rate (111) but the highest estimated number (3,390) of cases.
- Hispanic females have the fifth highest rate (62) and the lowest estimated number (110) of HIV cases.
- White females have the lowest rate (17) and the fourth highest estimated number (550) of HIV cases.
- These data can also be found on table 3, page 211.

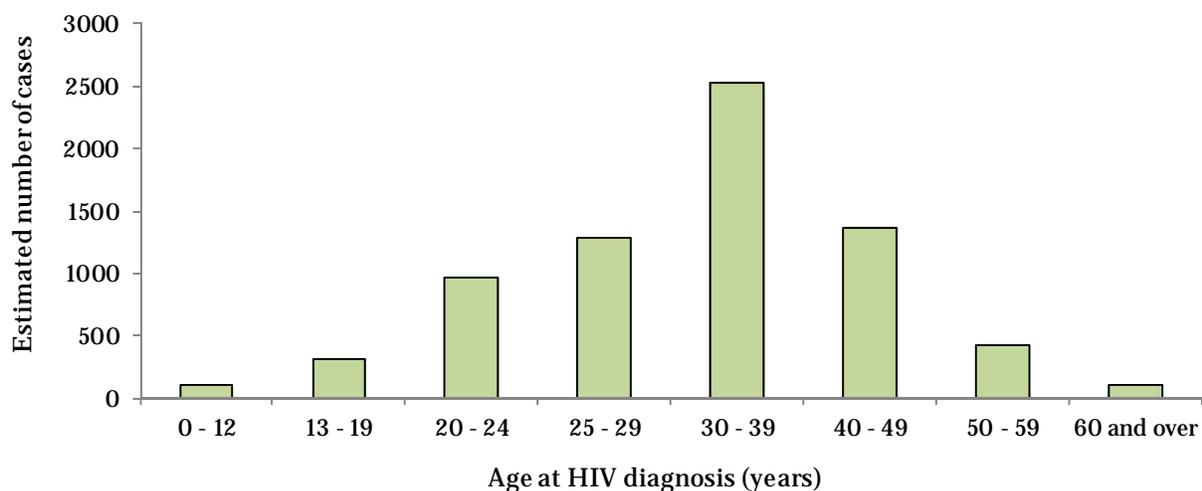
# 2012 Profile of HIV in Out-State Michigan

## 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 Out-State Michigan by age at HIV diagnosis.

**Figure 6: Estimated prevalence of persons living with HIV in Out-State Michigan by age at diagnosis, January 2012**



- The majority of all persons living with HIV (an estimated 2,530) 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 (1,360 vs. 1,280, respectively).
- The smallest number of estimated cases is among persons diagnosed at 60 years and older and those diagnosed between the ages of 0 and 12 years (110 estimated cases each).
- There were an estimated 10 cases with unknown age at diagnosis not included in this figure.
- Data can also be found on table 3, page 211.