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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?

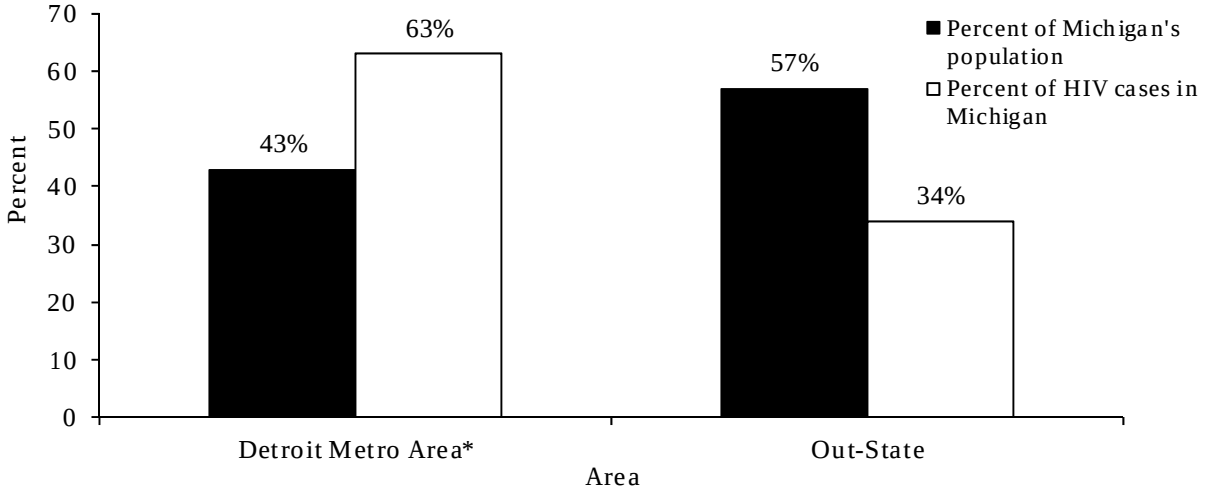
The Michigan Department of Community Health (MDCH) estimates that there are 7,080 persons currently living with HIV in Out-State Michigan, of whom 5,389 were reported as of January 1, 2012 (table 3, page 211). Out-State Michigan is composed of the 77 counties outside of the six Detroit Metro Area (DMA)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

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.

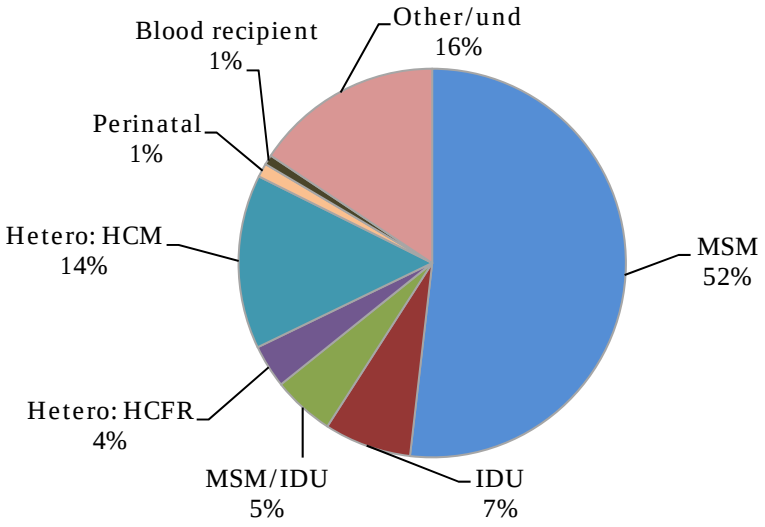
2012 Profile of HIV in Out-State Michigan

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.

Distribution of Living HIV Cases by Exposure Category

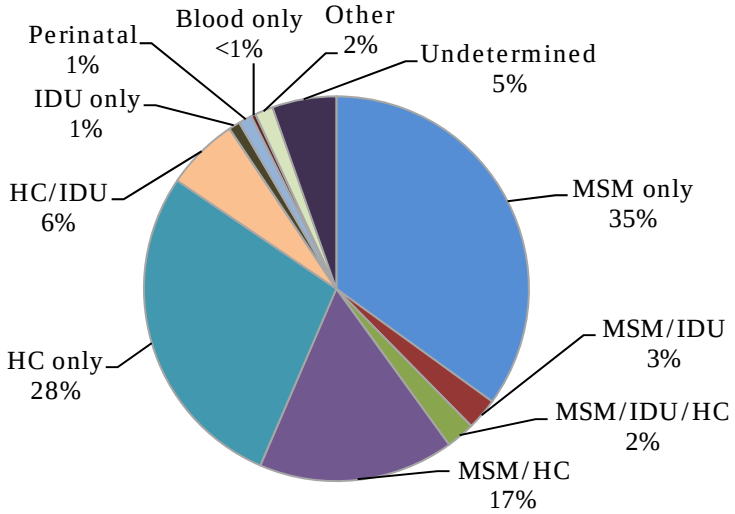
Data from enhanced HIV/AIDS Reporting System (eHARS)

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

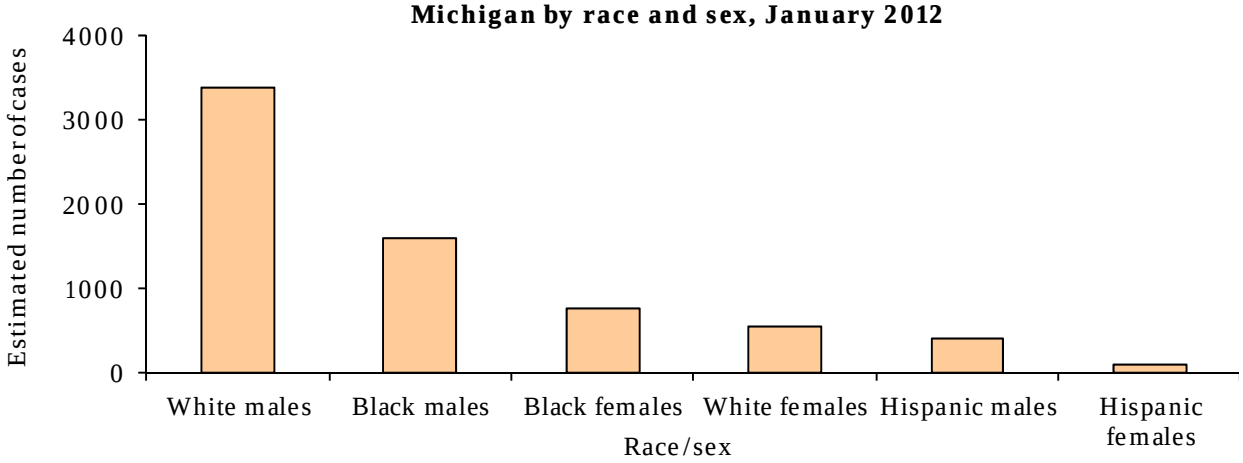
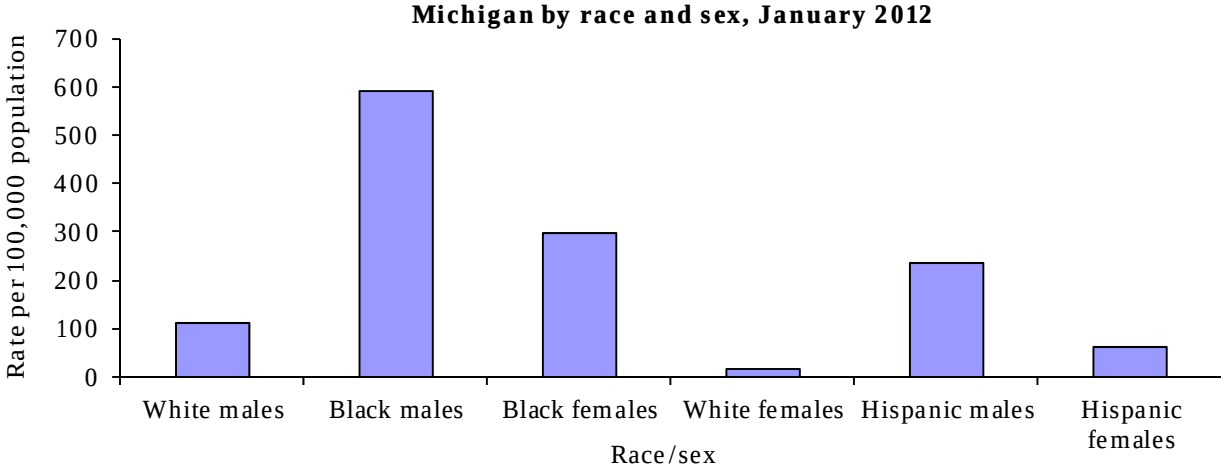


Figure 5: Reported prevalence rate of persons living with HIV in Out-State Michigan by race and sex, January 2012



- 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.

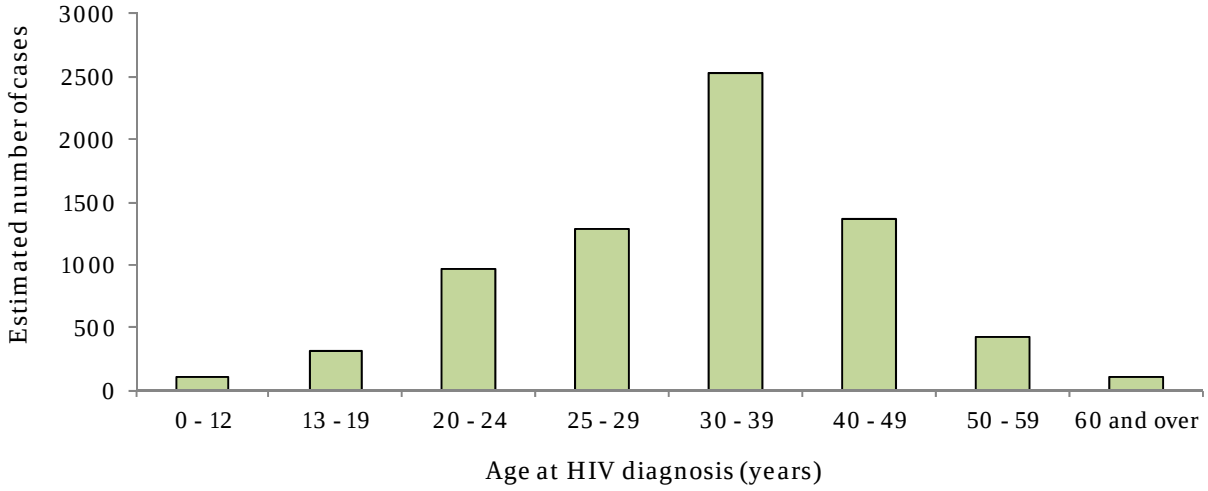
2012 Profile of HIV in Out-State Michigan

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.

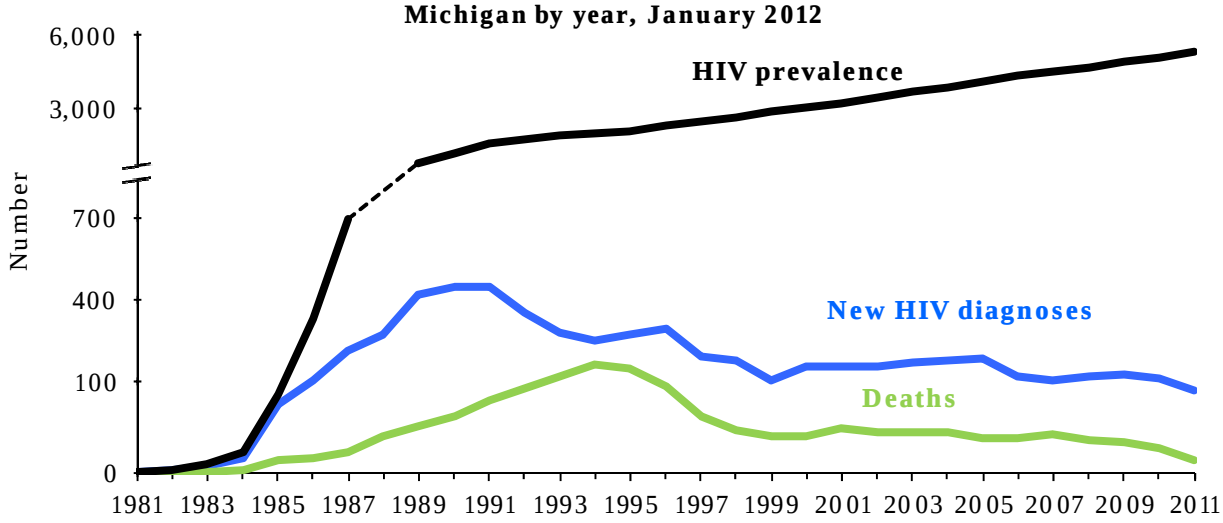
2012 Profile of HIV in Out-State Michigan

Trends in HIV Data

Data from enhanced HIV/AIDS Reporting System (eHARS)

New diagnoses, deaths and prevalence of HIV by year:
The unadjusted number of new HIV diagnoses, number of deaths among HIV-positive persons, and HIV prevalence in Out-State Michigan are presented in figure 7. The number of HIV diagnoses reflects reported cases. These data were not adjusted for reporting delay as they were in the statewide and Detroit Metro Area (DMA) chapters of this document, so the numbers should not be compared. The decreases in new diagnoses seen in the most recent years (3 percent between 2006 and 2010) will likely level out as more cases diagnosed during those years are reported. As new diagnoses of HIV remain relatively stable and the number of deaths among HIV-positive persons decrease, HIV prevalence continues to rise.

Figure 7: New diagnoses, deaths, and prevalence of HIV in Out-State Michigan by year, January 2012



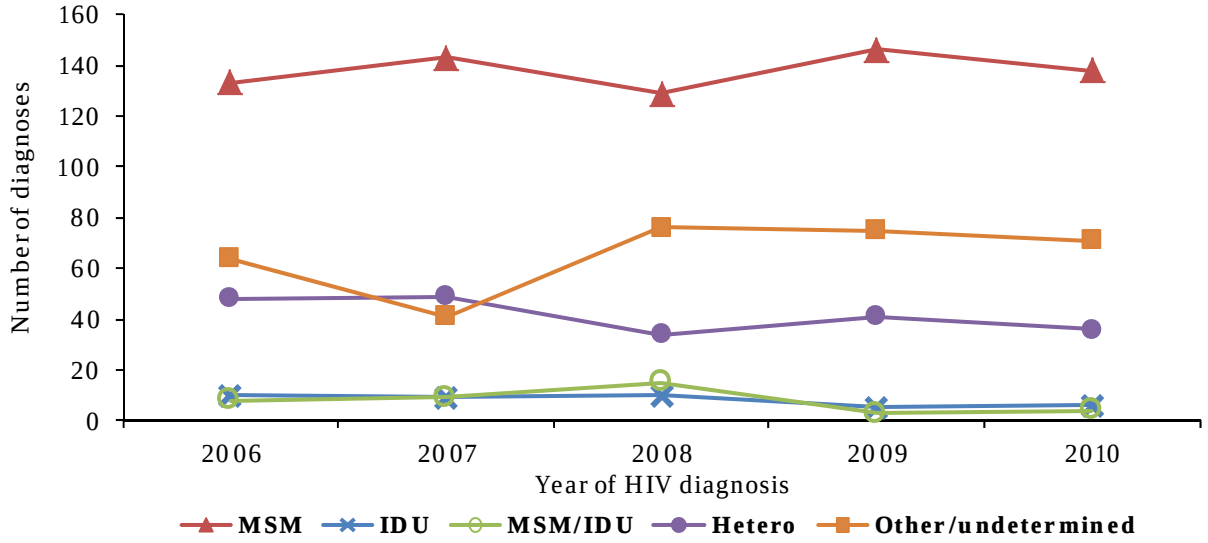
New diagnoses by risk, 2006-2010:
Figure 8 shows the number of persons newly diagnosed in Out-State Michigan by risk for 2006-2010. Men who have sex with men (MSM) make up the largest number of new diagnoses, and the number did not change appreciably between 2006 and 2010 (133 cases vs. 138 cases, respectively). During this same time period, cases among heterosexuals decreased from 48 to 36 cases (a 25 percent decrease). The number of injection drug users (IDU) and MSM/IDU are low in Out-State Michigan, but cases among these groups also decreased between 2006 and 2010. The other/undetermined risk category is mostly composed of persons for whom risk was not reported or has not yet been determined. This number is always highest for more recent years, as it takes time to gather complete information on risk behaviors.

It is important to note that, due to small numbers, these data could not be adjusted to account for reporting delay. Therefore, it is not possible to know if these decreases were statistically significant.

Trends in HIV Data

Data from enhanced HIV/AIDS Reporting System (eHARS)

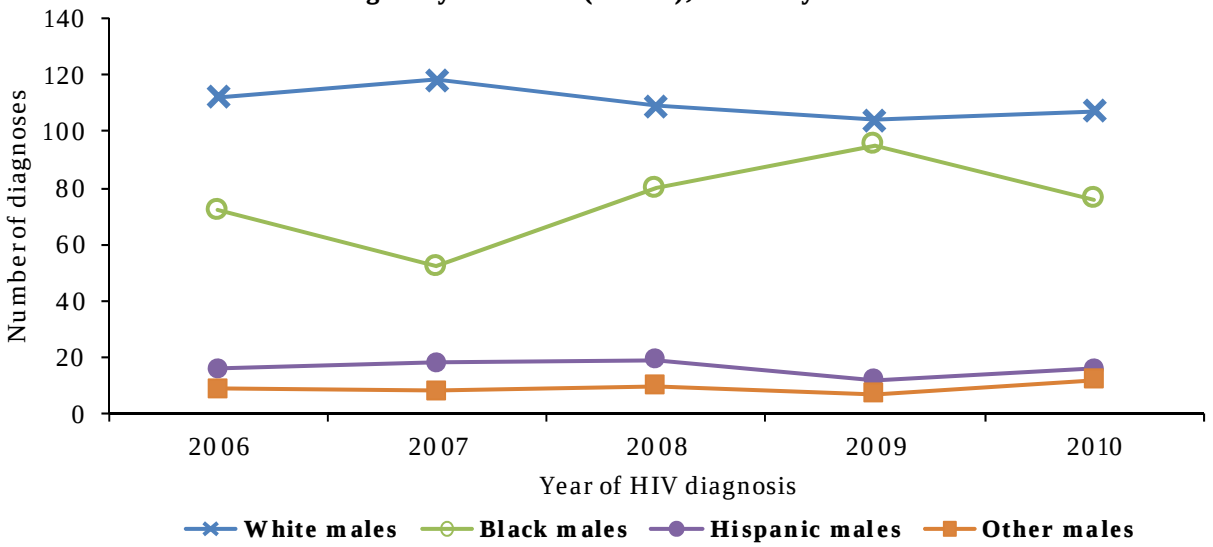
Figure 8: Number of new HIV diagnoses 2006-2010 in Out-State Michigan by risk transmission category, January 2012



New diagnoses by race and sex, 2006-2010:

Figures 9 and 10 show the number of new HIV diagnoses between 2006-2010 by race for males and females, respectively. The greatest number of new diagnoses are among white males (107 in 2010), followed by black males (76 in 2010). The number of diagnoses among black males has had the most variation of any male racial group, dropping from 72 new diagnoses in 2006 to 52 in 2007 (a 28 percent decrease) before rising to a high of 95 in 2009 (an increase of 45 percent). The number of new cases among Hispanic males and males of other race has had little variation, remaining below 20 new diagnoses a year.

Figure 9: Number of new HIV diagnoses 2006-2010 in Out-State Michigan by race/sex (males), January 2012

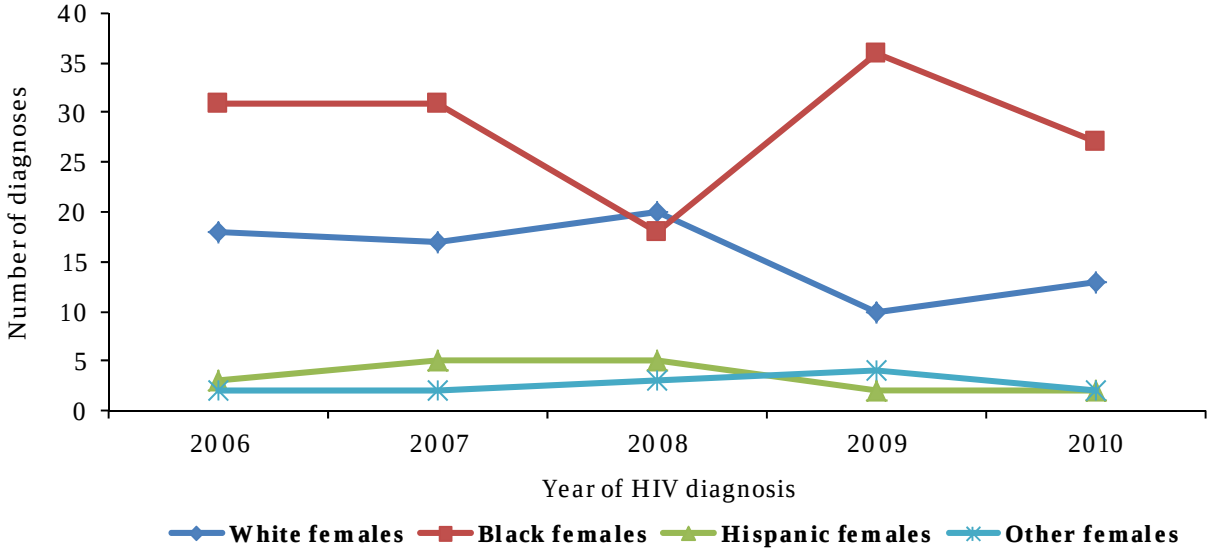


Trends in HIV Data

Data from enhanced HIV/AIDS Reporting System (eHARS)

Similar to males, the largest variation in the number of new diagnoses for females is among black females (figure 10). The number of diagnoses among this group dropped from 31 in 2006 to 18 in 2008, a decrease of 42 percent. The number then increased to 36, a 50 percent increase, in 2009 before coming back down to 27 in 2010. There was also some variability among white females, with the number decreasing 50 percent between 2008 and 2009 (20 vs. 10 diagnoses, respectively) before increasing slightly in 2010 (13 new diagnoses). The number of diagnoses among Hispanic females and females of other race are consistently five or less.

Figure 10: Number of new HIV diagnoses 2006-2010 in Out-State Michigan by race/sex (females), January 2012



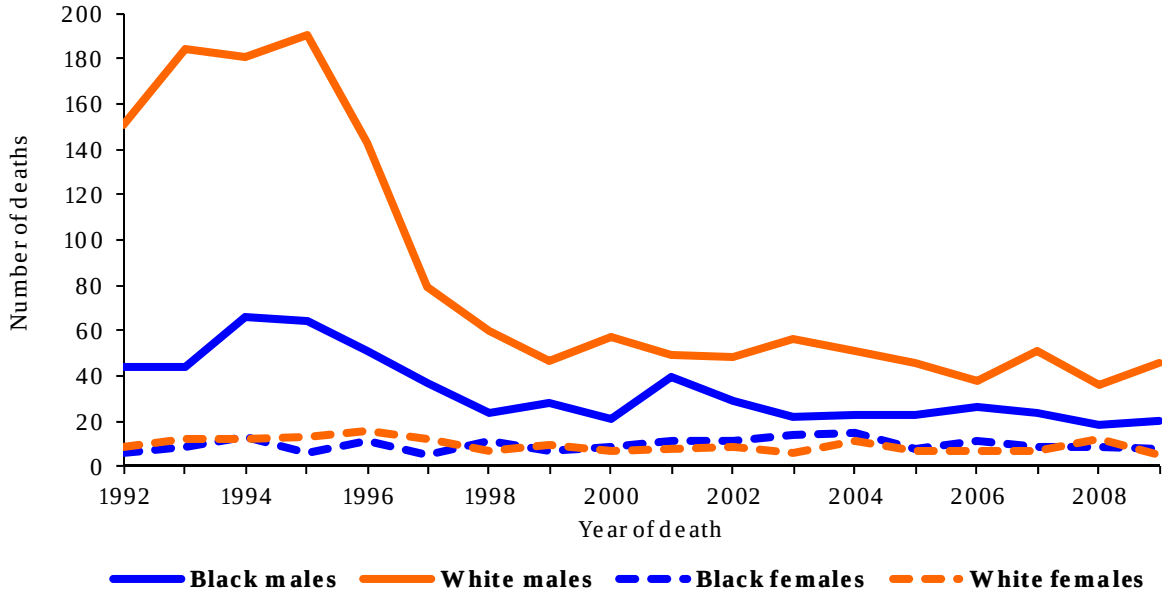
Deaths among HIV-positive persons by race and sex:

Figure 11 shows the number of HIV-positive Out-State Michigan residents reported as deceased by a local health department, the department of vital records (via a data match, death transcript, or death certificate), the National Death Index, or an alternate source. The number of deaths increased in all race/sex groups from the beginning of the epidemic through approximately 1994-1995 except among black females, who had zero percent change during that time period. The number of deaths then decreased markedly between 1995 and 1998 among all groups (except for black females) and then were relatively stable until 2001. It should be noted that the percent decrease in deaths among white males (74 percent) between 1995 and 2001 was more pronounced than the percent decrease among black males (38 percent). Additionally, there was a 38 percent decrease in deaths among white females compared to a 83 percent increase among black females. Number of deaths among HIV-positive females in Out-State Michigan are low, so these changes may be exaggerated. Between 2001 and 2009, the number of deaths fell among all groups. The percent decrease among black males (50 percent) was larger than the change among white males (6 percent). The change among black females (27 percent) was lower than the change among white females (38 percent; data not shown in tables).

Trends in HIV Data

Data from enhanced HIV/AIDS Reporting System (eHARS)

Figure 11: HIV deaths by race/sex in Out-State Michigan, January 2012



2012 Profile of HIV in Out-State Michigan

Ranked Behavioral Group: MSM

Data from enhanced HIV/AIDS Reporting System (eHARS)

Overview:
Men who have sex with men (MSM) are the number one ranked behavioral group in Out-State Michigan for HIV infection. MSM remain the single largest behavioral group affected by the epidemic and account for over half (57 percent) of all reported HIV-positive persons, including MSM/IDU. MDCH estimates that there are approximately 4,040 MSM living with HIV infection in Out-State Michigan. This includes an estimated 370 HIV-positive males whose risk is a combination of having sex with other males and injecting drugs (table 3, page 211).

Race/ethnicity:
MSM account for most HIV infections among males in Out-State Michigan for all racial and ethnic groups. When considering reported cases for MSM and MSM/IDU of all races (3,071 reported cases), white males comprise 69 percent of males in this combined category (2,115 cases); black males account for 22 percent (675 cases); and Hispanic males account for seven percent (208 cases; table 6, page 215).

Age at HIV diagnosis:
Among those reporting male-male sex (including MSM/IDU), the highest proportion of all living HIV infection cases were 30-39 years old at diagnosis (37 percent). MSM is the predominant mode of transmission for males ages 13 and up; male-male sex accounts for 71 percent and 75 percent of infections among males ages 13-19 years and 20-24 years at diagnosis, respectively (table 8, page 217).

Late diagnoses:
Of the 5,389 persons living with HIV infection in Out-State Michigan, 53 percent (2,877 cases) have progressed to stage 3 HIV infection. Of these, 1,213 (42 percent) were diagnosed with stage 3 infection at the time of their initial HIV diagnoses (late HIV diagnoses). MSM and MSM/IDU make up 59 percent (1,689 cases) of persons living with stage 3 infection, of whom 41 percent (695 cases) had late diagnoses (table 3). MSM are more likely than IDU to have late diagnoses. This suggests that MSM get tested for HIV later in the course of their infection.

Geographic distribution:
Just over one third (36 percent) of HIV-positive MSM statewide reside in Out-State Michigan, which is similar to the proportion of all cases that reside in Out-State Michigan. Within high prevalence counties (Allegan, Berrien, Calhoun, Genesee, Ingham, Jackson, Kalamazoo, Kent, Saginaw, and Washtenaw), MSM comprise 57 percent of persons living with HIV infection (including MSM/IDU). In low prevalence counties, MSM comprise 58 percent of all cases (data not shown in tables; see figure 3 on page 18 of the statewide chapter for high/low prevalence county classification).

Conclusions:
MSM continue to make up the majority of new diagnoses and prevalent HIV infection cases in Out-State Michigan. The average number of new HIV diagnoses among MSM between 2006 and 2010 was 138, and there was little change during this time period (figure 8). Data on new diagnoses was not adjusted for reporting delay.

2012 Profile of HIV in Out-State Michigan

Ranked Behavioral Group: Heterosexuals

Data from enhanced HIV/AIDS Reporting System (eHARS)

Overview:

Heterosexual risk is the second highest ranked behavioral group in Out-State Michigan. Persons with heterosexual risk account for 18 percent of reported HIV infection cases. MDCH estimates that 2,270 persons living with HIV infection in Out-State Michigan have a risk factor of heterosexual contact (HC). Heterosexual contact is comprised of heterosexual contact with female with known risk (HCFR) and heterosexual contact with male (HCM). HCFR is only applicable to males and constitutes persons who had sex with females with known risk factors for HIV, including IDU, recipients of HIV-infected blood products, and/or HIV-positive individuals with unknown risk. HCM is composed of all females whose only reported risk is sex with males, regardless of what is known about the male partners' risk factors. Currently there are an estimated 250 HIV-positive persons who are HCFR (males) and 1,030 persons who are HCM (females) (table 3, page 211).

Race/ethnicity and sex:

Among the 975 persons currently living with HIV infection in Out-State Michigan with a risk of heterosexual contact, 80 percent are females and 20 percent are males. While females account for 21 percent of all reported HIV infection cases in Out-State Michigan, they have consistently accounted for over three quarters of cases with heterosexual risk. The overall proportion of males with heterosexual risk is five percent (table 5). However, many males report heterosexual contact in addition to other risk factors, such as male-male sex (MSM) or injection drug use (IDU). See table 5, page 214 for data on exposure categories, which represent all reported modes of HIV exposure.

Over half of all heterosexual cases of HIV infection in Out-State Michigan are among black persons (52 percent), largely driven by the high number of black females with heterosexual risk. Sixty-seven percent of black female cases report heterosexual risk. Seventy percent of white female cases, 73 percent of Hispanic female cases, and 76 percent of female cases of other or unknown race have heterosexual risk. Although the proportion of HIV-positive males with heterosexual risk is low, eight percent of black and Hispanic males have heterosexual risk compared to two percent of white males (table 6, page 215).

Expanded risk:

Of the 975 reported HIV-positive persons with heterosexual risk currently living in Out-State Michigan, 16 percent report their heterosexual partners are injection drug users (81 percent female, 19 percent male); six percent have partners who are behaviorally bisexual males (this applies to females only); and two percent have partners who are persons infected with HIV through blood products (83 percent female, 17 percent male). Forty-nine percent of HIV-positive persons with heterosexual risk report having sex with HIV-positive persons (67 percent female, 33 percent male; expanded risk data not shown in tables). As the majority of cases with heterosexual risk are female, it is useful to examine this expanded risk among different female subgroups. Figures 12 and 13 show detailed risk information for black females and white females, respectively. While the risk distribution between black females and white females is similar, of note is that white females more frequently report having partners with known risks (such as IDU or HIV-positive persons). Black females have a higher proportion of heterosexual contact without specific risk factors indicated. They also have a higher proportion of undetermined risk (16 percent vs. 11 percent in white females).

Figure 12: Black females living with HIV infection in Out-State Michigan by expanded risk transmission category, January 2012 (N = 597)

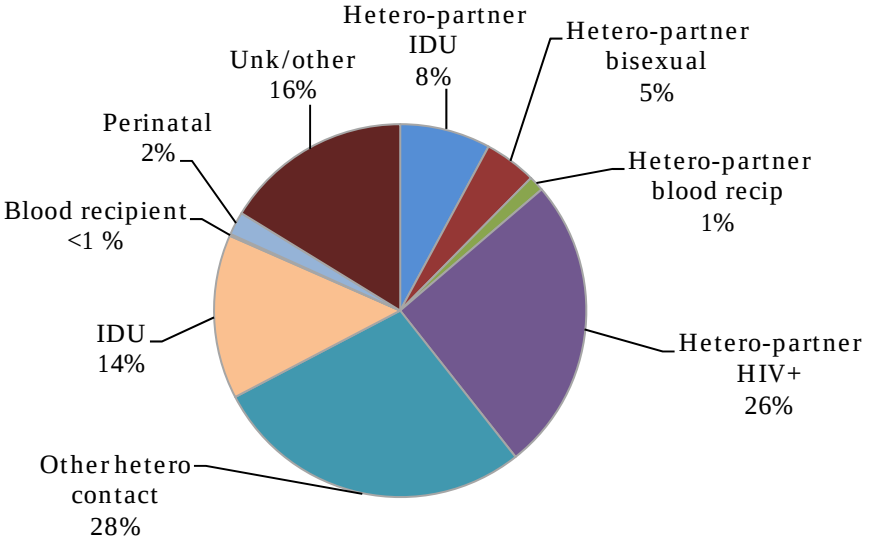
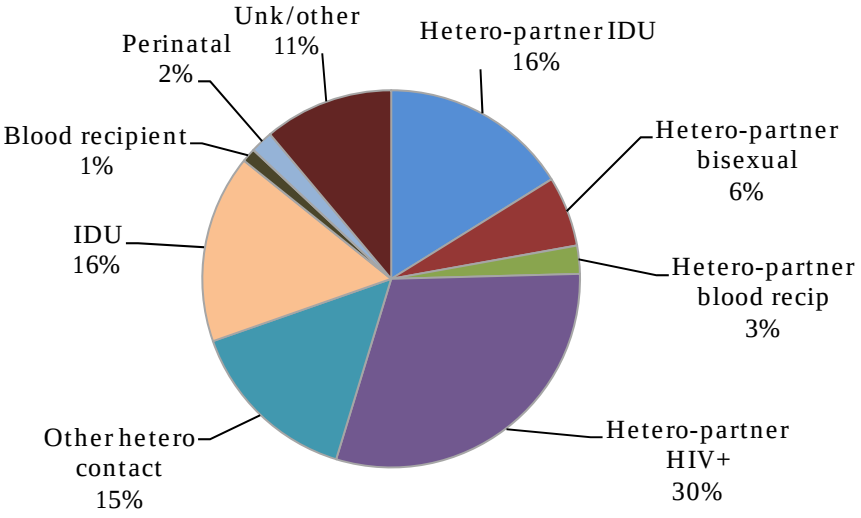


Figure 13: White females living with HIV infection in Out-State Michigan by expanded risk transmission category, January 2012 (N = 415)



2012 Profile of HIV in Out-State Michigan

Ranked Behavioral Group: Heterosexuals

Data from enhanced HIV/AIDS Reporting System (eHARS)

Age at HIV diagnosis:
Heterosexual contact is the predominant reported risk factor for females who were 13 years of age and older at the time of HIV diagnosis in Out-State Michigan. Over three-quarters (78 percent) of those 13-19 years at the time of diagnosis report heterosexual sex. As age increases, the proportion of HIV-positive females with heterosexual risk decreases, but it remains over four times as high as injection drug use (IDU) for all females 13 years and older at diagnosis (table 8, page 217).

Among HIV-positive males, the proportion with a risk factor of heterosexual sex is low overall (5 percent). This ranges from three percent among males 13-19 and 20-24 years at diagnosis to five percent among those 25-29, 30-39, and 50-59 years at diagnosis (table 8). It is important to note that for males to be classified as heterosexual risk, they must report female partners with known HIV risk factors (such as IDU) or who are known to be HIV-positive. When considering exposure categories, which represent all reported HIV exposures, 44 percent of HIV-positive males report heterosexual contact (with or without partners with known risk) (table 5, page 214).

Late diagnoses:
Of the 5,389 persons living with HIV in Out-State Michigan, 53 percent (2,877 cases) have progressed to stage 3 HIV infection. Of these, 1,213 (42 percent) were diagnosed with stage 3 infection at the time of their initial HIV diagnoses (late HIV diagnoses). Persons with a risk of heterosexual sex make up 16 percent (474 cases) of persons living with stage 3 infection, of whom 37 percent (175 cases) had late diagnoses. Overall, heterosexuals (including HCFR and HCM) are more likely than IDU and less likely than MSM to have late diagnoses (table 3, page 211).

Geographic distribution:
Heterosexual contact accounts for 19 percent of HIV infection cases in high prevalence counties and 17 percent in low prevalence counties (data not included in tables; see figure 3 on page 18 of the statewide chapter for high/low prevalence county classification).

Conclusions:
The majority of HIV-positive females in Out-State Michigan, regardless of race or age, have heterosexual risk. A small proportion of males have heterosexual risk, but a large proportion (44 percent) of males who have other risks, such as MSM, also had heterosexual contact (table 5, page 214). Cases with heterosexual risk have surpassed the proportion of cases attributed to IDU (table 3), and although decreasing, the number of new diagnoses each year among persons with heterosexual risk is almost three times that of IDU (figure 8). Data on new diagnoses was not adjusted for reporting delay.

2012 Profile of HIV in Out-State Michigan

Ranked Behavioral Group: IDU

Data from enhanced HIV/AIDS Reporting System (eHARS)

Overview:
Injection drug users (IDU) are the third ranked behavioral group in Out-State Michigan and account for 12 percent (670 cases) of reported HIV-positive persons, including HIV-positive males who reported male-male sex and injecting drugs (MSM/IDU). MDCH estimates that there are 890 IDU currently living with HIV in Out-State Michigan, including 370 MSM/IDU (table 3, page 211).

Race/ethnicity and sex:
Of the 670 IDU and MSM/IDU living with HIV in Out-State Michigan, 75 percent are male (504 cases). White males make up the largest proportion of all IDU and MSM/IDU currently living with HIV in Out-State Michigan (41 percent), followed by black males (24 percent), black females (13 percent), white females (10 percent), and Hispanic males (7 percent). Over half of all IDU cases in Out-State Michigan (51 percent, 345 cases) are among white persons, and more than half of these are MSM/IDU (table 6, page 215).

Age at HIV diagnosis:
Among males diagnosed between the ages of 25 and 49 in Out-State Michigan, 13 to 14 percent are IDU (including MSM/IDU). As age at diagnosis increases, the proportion with a risk of IDU increases (as opposed to MSM, where the proportion decreases with age). This proportion peaks, however, with males 40-49 years at diagnosis and then begins to decrease (table 8, page 217).

Overall, IDU is the second most common risk for HIV-positive females. However, this is true only for females who were diagnosed at 20-24 years, 30-39 years, and 40-49 years. For females in all other age groups, IDU falls behind undetermined risk and becomes the third most common risk. When considering males and females together, there are few HIV infection cases with a risk of IDU or MSM/IDU among persons who were teens (13-19 years) at the time of HIV diagnosis (5 percent).

Late diagnoses:
Of the 5,389 persons living with HIV infection in Out-State Michigan, 53 percent (2,877 cases) have progressed to stage 3 infection. Of these, 1,213 (42 percent) were diagnosed with stage 3 infection at the time of their initial HIV diagnoses (late HIV diagnoses). IDU make up 13 percent (372 cases, including MSM/IDU) of persons living with stage 3 infection, of whom 32 percent (119 cases) had late diagnoses. These data indicate that IDU are less likely then either heterosexuals or MSM to get tested later in the progression of HIV infection (table 3).

Geographic distribution:
Within high prevalence counties of Out-State Michigan, 12 percent of reported cases are IDU (including MSM/IDU), while in the lower prevalence counties 13 percent of persons living with HIV infection are IDU (data not included in tables; see figure 3 on page 18 of the statewide chapter for high/low prevalence county classification).

Conclusions:
The majority of IDU and MSM/IDU cases in Out-State Michigan are among males, particularly white males. Over half of these white male cases are MSM/IDU. As age at diagnosis increases, IDU becomes a larger proportion of the risk for HIV-positive males. For females, however, the pattern is less clear, and IDU is the second most common risk for 20-24 and 30-49 year old HIV-positive females.

The number of new diagnoses that are IDU and MSM/IDU has remained low in recent years (figure 8), representing an average six percent of new diagnoses each year (data not adjusted for reporting delay).

2012 Profile of HIV in Out-State Michigan

Description of the Epidemic by Race and Sex

Data from enhanced HIV/AIDS Reporting System (eHARS) & 2010 Census

Overview:

The majority (56 percent) of persons living with HIV infection in Out-State Michigan are white. In contrast, 83 percent of the general population living in Out-State Michigan is white, indicating that the burden of HIV is lower than would be expected among this group. MDCH estimates that 3,930 white persons are living with HIV in Out-State Michigan. The reported prevalence rate among white persons is 64 cases per 100,000. The rate among white males is 111 per 100,000, and the rate among white females is 17 cases per 100,000. One out of 900 white males and one out of 5,720 white females are living with HIV in Out-State Michigan (table 3, page 211).

Black persons comprise 34 percent of persons living with HIV infection but just seven percent of the general population. MDCH estimates that 2,400 black persons are living with HIV in Out-State Michigan. Since these cases occur among a smaller overall population, they have a higher reported prevalence rate (446 cases per 100,000 persons) than white persons. One out of every 170 black males and one out of every 340 black females are known to be living with HIV in Out-State Michigan (table 3).

Hispanic persons comprise seven percent of HIV cases and five percent of the population in Out-State Michigan. MDCH estimates that 530 Hispanic persons are living with HIV infection in Out-State Michigan. The prevalence rate (151 per 100,000 persons) is higher than the rate among white persons, indicating a greater burden of HIV on a smaller overall population. One out of every 420 Hispanic males and one out of 1,610 Hispanic females are known to be living with HIV (table 3). See page 44 in the statewide chapter for a more in-depth analysis of Hispanic persons.

Other racial/ethnic minorities, including Asians/Native Hawaiians or Other Pacific Islanders, American Indians/Alaska Natives, and multiracial persons or persons of other race represent three percent of persons living with HIV in Out-State Michigan (169 reported cases; table 3). Data on minority groups living with HIV are discussed in-depth on pages 86-89 of the statewide chapter. Additionally, foreign-born persons are discussed on page 90 of the statewide chapter.

Most persons living with HIV infection in Out-State Michigan are male (79 percent). The majority of the 4,255 reported male cases are white (61 percent), 29 percent are black, eight percent are Hispanic, and three percent are other or unknown race. Conversely, the majority of the 1,134 females living with HIV infection in Out-State Michigan are black (53 percent), 37 percent are white, seven percent are Hispanic, and four percent are other or unknown race (table 6, page 215).

Racial and ethnic health disparities:

Despite the fact that the majorities of both the general and HIV-positive populations in Out-State Michigan are white, black persons are disproportionately affected by the epidemic. The HIV prevalence rate among black persons in Out-State Michigan is 446 cases per 100,000 persons, almost seven times higher than the rate among white persons (64 per 100,000). The prevalence rate of black males is over five times that of white males. This disparity is even greater among females. The rate among black females is 17 times higher than the rate among white females. Additionally, more black females were newly diagnosed with HIV between 2006 and 2010 than white females (143 vs. 78).

Description of the Epidemic by Race and Sex

Data from enhanced HIV/AIDS Reporting System (eHARS)

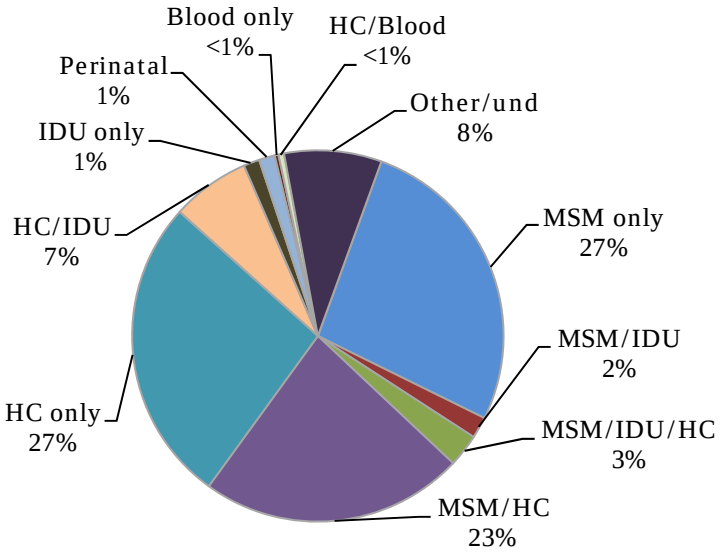
In addition to the black community, the Hispanic population of Out-State Michigan is also disproportionately impacted by HIV. While seven percent of reported cases occur among this group, they make up five percent of the Out-State population. Additionally, the prevalence rate among Hispanics is almost two-and-a-half times greater than white persons (151 vs. 64 cases per 100,000, respectively).

Racial and ethnic minorities represent a small proportion of the overall population of Out-State Michigan (17 percent), but they represent almost half of all prevalent HIV infection cases. Given the disproportionate impact on these groups, it is important to focus attention on these disparities.

Exposure:

Since the majority of HIV-positive males have a risk of male-male sex (MSM), it is useful to examine exposure categories, which represent all risk behaviors among males. Figures 14 and 15 show black and white male cases living in Out-State Michigan by exposure category. A smaller proportion of HIV-positive black males have an exposure of MSM only compared to white males (27 percent vs. 54 percent, respectively). Twenty-six percent of black male cases are behaviorally bisexual with risks of male-male sex as well as heterosexual contact (HC), including three percent who have risks of male-male sex, injection drug use, and heterosexual contact (MSM/IDU/HC). Twenty-seven percent of HIV-positive black males have heterosexual contact as their only exposure compared to eight percent of white male cases. A larger proportion of HIV-positive black males have a dual risk of injection drug use and heterosexual contact compared to white males (7 percent vs. 3 percent, respectively).

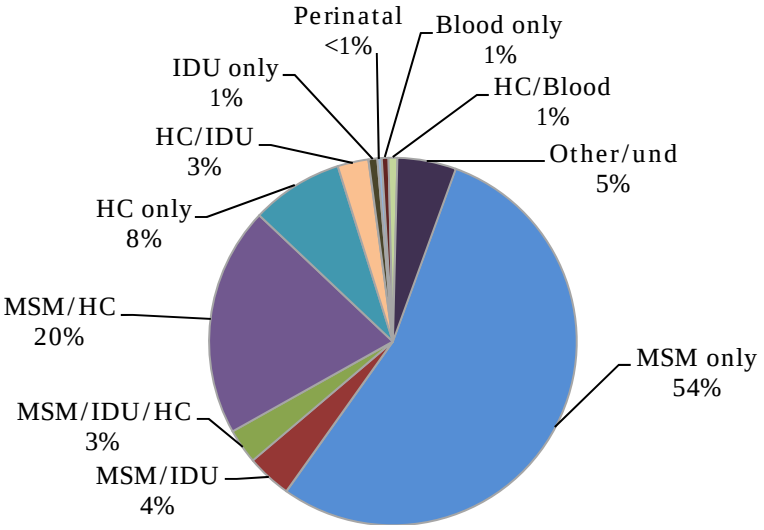
Figure 14: Black male HIV infection cases currently living in Out-State Michigan by exposure category, January 2012 (N = 1,227)



Description of the Epidemic by Race and Sex

Data from enhanced HIV/AIDS Reporting System (eHARS)

Figure 15: White male HIV infection cases currently living in Out-State Michigan by exposure category, January 2012 (N = 2,577)



See figures 12 and 13 on page 187 for expanded risk among black and white HIV-positive females in Out-State Michigan. For females, expanded risk transmission categories are examined as the majority of female cases have heterosexual risk. When examining exposure categories, an even larger proportion of females have heterosexual risk, since IDU masks this in the risk transmission categories (table 5, page 114). The large number of male cases who have both male-male sex and heterosexual contact is interesting, given that just five percent of females report sex with behaviorally bisexual males. This is likely an underestimate due to lack of completion of risk factor questions on the case report form or females being unaware of their male partners' risks (data not shown in tables).

Late diagnoses:

Of the 5,389 persons living with HIV infection in Out-State Michigan, 53 percent (2,877 cases) have progressed to stage 3 infection. Of these, 1,213 (42 percent) were diagnosed with stage 3 infection at the time of their initial HIV diagnoses (late HIV diagnoses). Males make up 82 percent of stage 3 cases, of whom 44 percent had late diagnoses. Females make up the remaining 18 percent of stage 3 cases, of whom 34 percent had late diagnoses.

Fifty-seven percent of stage 3 cases are among white persons, and 44 percent were diagnosed late in the course of their infection. Black persons make up 32 percent of stage 3 cases, and a smaller proportion had late diagnoses than among white persons (37 percent). Hispanic persons make up eight percent of stage 3 cases, of whom 51 percent had late diagnoses. Hispanics have the highest proportion of late diagnoses of any racial/ethnic group. Other minorities make up roughly three percent of stage 3 cases, and between 33 and 41 percent had late diagnoses (table 3, page 211). This suggests that Hispanics are tested later in the course of their infection than other racial/ethnic groups.

2012 Profile of HIV in Out-State Michigan

Description of the Epidemic by Race and Sex

Data from enhanced HIV/AIDS Reporting System (eHARS)

Geographic distribution:

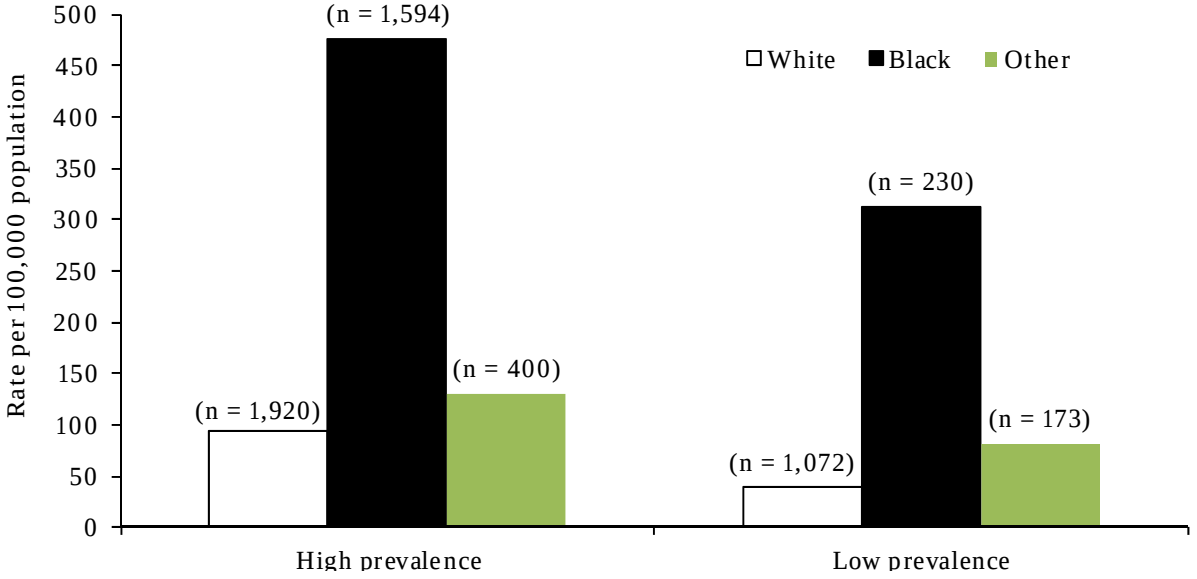
The distribution of various racial/ethnic groups differs throughout Out-State Michigan. Figure 16 shows that HIV prevalence rates in high prevalence counties in Out-State Michigan are at least one and a half times higher than those in low-prevalence areas for all racial/ethnic groups (see figure 3 on page 18 of the statewide chapter for high/low prevalence county classification).

The HIV infection prevalence rate among black persons is five times higher than white persons in high prevalence areas (476 vs. 95 cases per 100,000) and almost eight times higher than the rate among white persons in low prevalence areas (312 vs. 40 cases per 100,000). This disparity exists despite the fact that there are fewer cases among black persons in low prevalence areas. The HIV infection prevalence rates among persons of other races/ethnicities (including Hispanics, Asians/Native Hawaiians or Other Pacific Islanders, American Indians/Alaska Natives, and persons of other, multi-, or unknown race) are almost one and a half times higher than the rate among white persons in high prevalence areas (130 cases per 100,000) and twice as high as the rate among whites in low prevalence areas (81 cases per 100,000). This suggests that, in low prevalence areas of the state, racial and ethnic minorities are more impacted by HIV despite the actual number of cases being lower.

Conclusions:

The majority of HIV-positive persons living in Out-State Michigan are white males, but HIV prevalence rates remain highest among black persons of both sexes. Black females are particularly impacted, with the prevalence rate 17 times that of white females and a greater number of new diagnoses between 2006 and 2010 (table 3, page 211).

Figure 16: Rates of persons living with HIV infection in high and low prevalence areas in Out-State Michigan by race, January 2012



Description of the Epidemic by Age

Data from enhanced HIV/AIDS Reporting System (eHARS)

Age at diagnosis:

The majority of persons newly diagnosed with HIV in Out-State Michigan are between 30 and 39 years old, followed by persons 40-49 years of age (figure 17). The pattern changes when looking at age at stage 3 diagnosis in figure 18, where 40-49 year olds make up a higher proportion of new stage 3 diagnoses than all new HIV diagnoses (27 percent vs. 19 percent, respectively), and 20-24 and 25-29 year olds make up smaller proportions of stage 3 diagnoses than all new HIV diagnoses (19 percent vs. 32 percent, respectively). This is because many years may pass between HIV diagnosis and progression to stage 3 infection (data on age at HIV diagnosis found in table 3, page 211; data on age at stage 3 diagnoses not shown in tables).

Figure 17: Age at HIV diagnosis for persons living with HIV infection in Out-State Michigan, January 2012

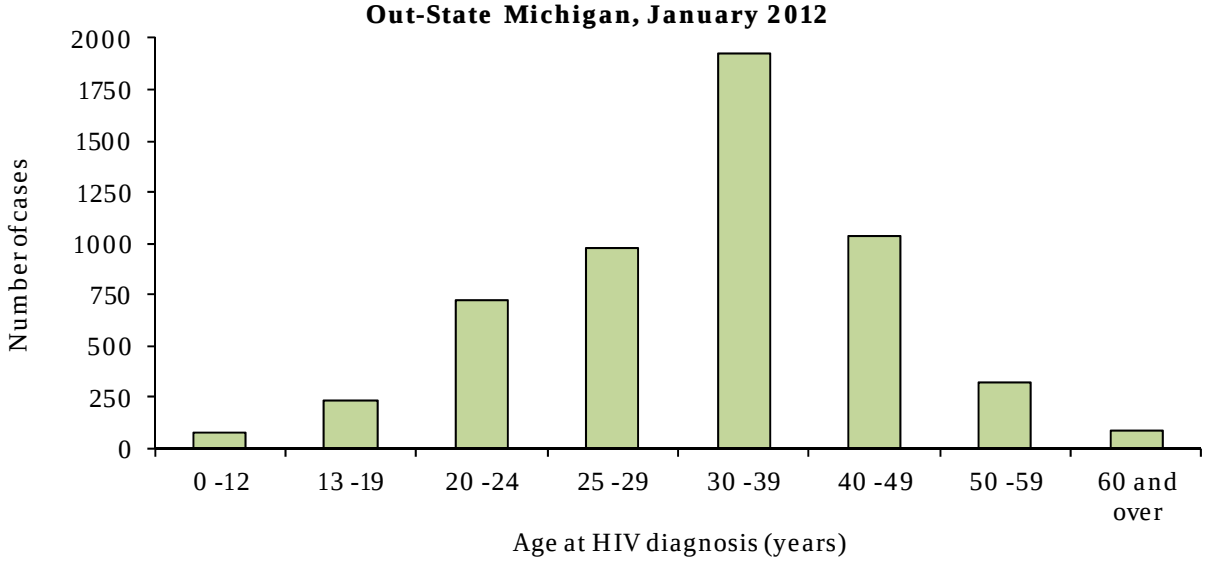
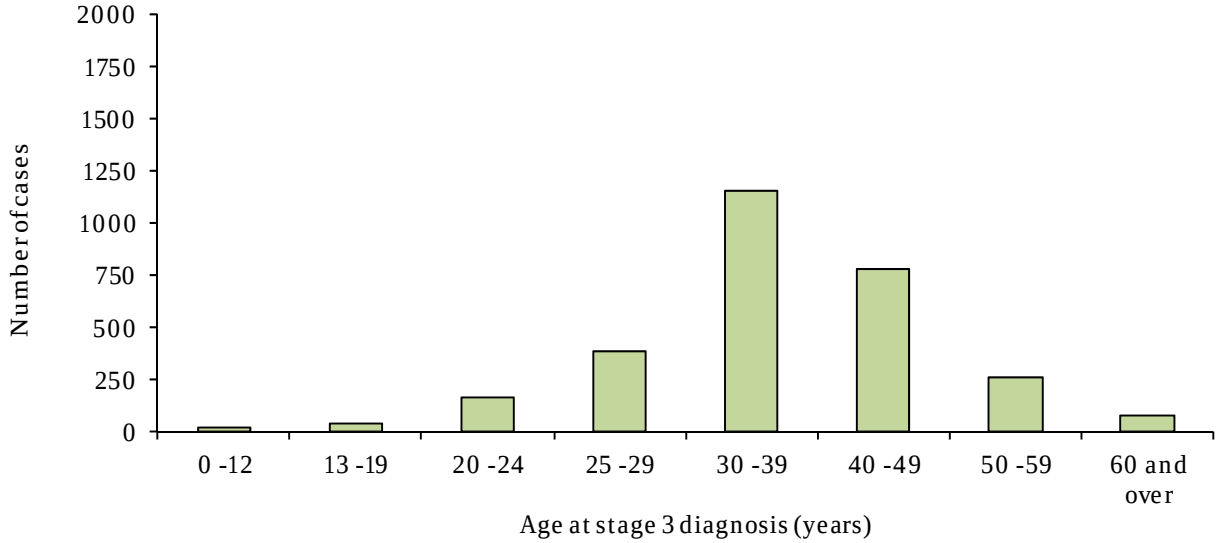


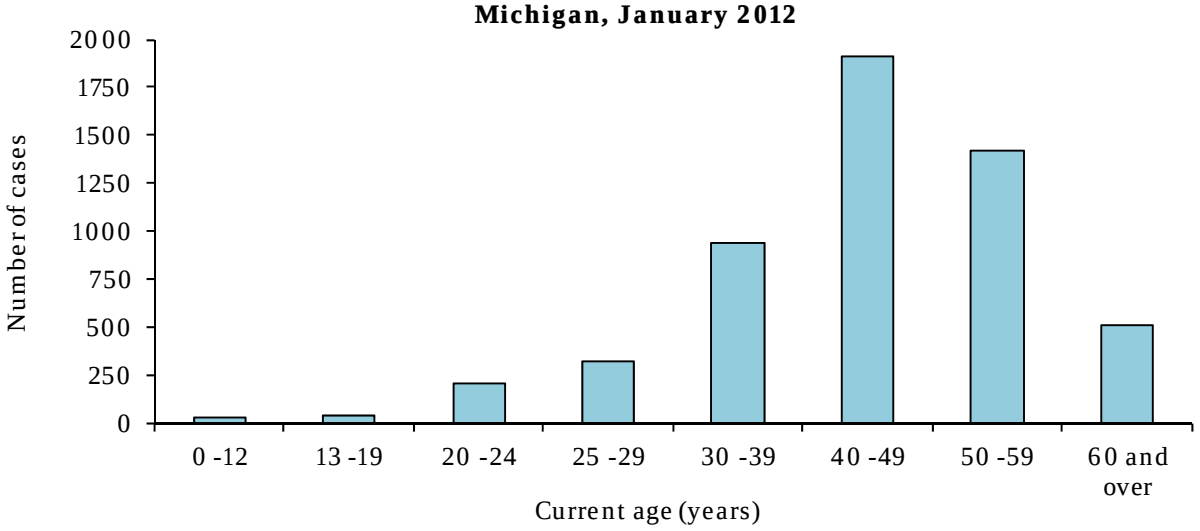
Figure 18: Age at stage 3 diagnosis for persons living with HIV infection in Out-State Michigan, January 2012



Description of the Epidemic by Age

Data from enhanced HIV/AIDS Reporting System (eHARS)

Figure 19: Current age of persons living with HIV infection in Out-State Michigan, January 2012



Current age:
Since use of Highly Active Anti-Retroviral Therapy (HAART) became widespread in 1996, HIV-positive persons have been living longer. This is evident in figure 19, which shows the current age of persons living with HIV in Out-State Michigan as of January 1, 2012. Those currently in their forties make up the largest proportion of persons living with HIV (35 percent). While persons who were 50 years and older at the time of HIV diagnosis represent only eight percent of newly diagnosed cases, they make up over one third (36 percent) of persons living with HIV when considering current age (data on current age not shown in tables).

Late diagnoses:
Of the 5,389 persons living with HIV infection in Out-State Michigan, 53 percent (2,877 cases) have progressed to stage 3 infection. Of these, 1,213 (42 percent) were diagnosed with stage 3 infection at the time of their initial HIV diagnoses (late HIV diagnoses). When examining persons living with stage 3 infection by age at HIV diagnosis, the proportion of cases with late diagnoses increases as age increases (except for persons 0-12 years at diagnosis, 35 percent of whom had late diagnoses). Among persons 60 years and older at stage 3 diagnosis, 73 percent were diagnosed late in the course of their infection (table 3, page 211).

Conclusions:
The majority of all prevalent cases were 30-39 years old at the time of diagnosis, followed by those 40-49 years old at diagnosis (table 3). When considering current age, however, persons 40-49 years, followed by persons 50-59 years, make up the largest proportion of persons living with HIV infection. This aging HIV-positive population raises new issues surrounding prevention and care.

2012 Profile of HIV in Out-State Michigan

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

Data from enhanced HIV/AIDS Reporting System (eHARS)

Overview:

As of January 2012, there were 82 persons living with HIV in Out-State Michigan who were 0-12 years old at diagnosis. They comprise two percent of all reported HIV infection cases (table 3, page 211). Most 0-12 year olds (74 percent) were infected perinatally, i.e., before, during, or shortly after birth. Those infected after birth were infected via breastfeeding. Of the remaining individuals, 10 percent were infected via exposures to HIV-infected blood products before 1985 (table 8, page 217). The remaining 16 percent have unknown or other risk (including one child infected via sexual assault). Many of those with unknown risk are suspected perinatal transmission cases but were born outside the United States (data not included in tables).

Race/ethnicity and sex:

Of the 82 persons living in Out-State Michigan who were ages 0-12 at HIV diagnosis, 56 percent are male and 44 percent are female. Forty-nine percent are black, 33 percent are white, 11 percent are Hispanic, and the remaining seven percent are of other or unknown race/ethnicity (table 7, page 216).

Of the 62 persons with confirmed perinatal exposures, 53 percent are male and 47 percent are female. Forty-seven percent are black, 29 percent are white, 15 percent are Hispanic, and 10 percent are other/unknown race (table 6, page 215). For all of these perinatally-infected cases, the only information about the mother is that she was HIV-positive; no additional maternal risk information was available.

Late diagnoses:

Of the 5,389 persons living with HIV infection in Out-State Michigan, 53 percent (2,877 cases) have progressed to stage 3 infection. Of these, 1,213 (42 percent) were diagnosed with stage 3 infection at the time of their initial HIV diagnoses (late HIV diagnoses). Children (0-12 year olds) make up one percent of persons living with stage 3, of whom 35 percent (9 cases) had late diagnoses (table 3).

Geographic distribution:

Slightly over half (55 percent) of the 82 persons diagnosed with HIV between the ages of 0-12 years are currently residents of high prevalence counties in Out-State Michigan (see figure 3, page 18 of the statewide chapter for high/low prevalence county classification). This group makes up a larger proportion of cases in low prevalence counties, however (2.5 percent vs. 1 percent; data not shown in tables).

Trends and conclusions:

Among the best measurable successes in reducing HIV transmission has been prevention of mother to child (perinatal) transmission. Without Zidovudine (ZDV) prophylaxis, about 25 percent of children born to HIV-positive females could expect to become HIV-positive themselves. In Out-State Michigan, the proportion of children who become infected perinatally has dropped precipitously, from 31 percent prior to 1997 to seven percent from 1997-2009. As of January 1, 2012, none of the 11 children born in Out-State Michigan in 2008 and one of the 16 children born in 2009 to HIV-positive females were diagnosed with HIV infection. None of the 19 children born in Out-State Michigan in 2010 and 2011 to HIV-positive females have been diagnosed with HIV, although data are not complete at this time (data not shown in tables). NOTE: numbers in this paragraph are based on residence at *birth*, NOT current residence.

2012 Profile of HIV in Out-State Michigan

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

Data from enhanced HIV/AIDS Reporting System (eHARS)

Overview:

As of January 2012, there were 966 persons living in Out-State Michigan who were 13-24 years old at HIV diagnosis. They comprise 18 percent of all persons reported with HIV infection in Out-State (4 percent ages 13-19 years; 14 percent ages 20-24 years; table 3, page 211).

Risk-teens (13-19 years):

In the 1980s, most HIV-positive teenagers were recipients of HIV-infected blood or blood products. Since screening of all blood products began in 1985, however, this proportion has steadily declined. Figures 20 and 21 show risk for males and females who were 13-19 years at diagnosis, respectively. Among the 238 persons living with HIV in Out-State Michigan who were 13-19 at the time of HIV diagnosis, 157 (66 percent) are male (figure 20). Among these male cases, 74 percent are males who have sex with males (MSM), including three percent who also inject drugs (MSM/IDU). Seven percent were recipients of HIV-infected blood products before 1985, and four percent are injection drug users (including MSM/IDU). Three percent had heterosexual contact with females with known risk (HCFR). Fifteen percent of 13-19 year old HIV-positive males had undetermined risk.

Figure 20: Males ages 13-19 at diagnosis currently living with HIV infection in Out-State Michigan, by risk transmission category (n = 157)

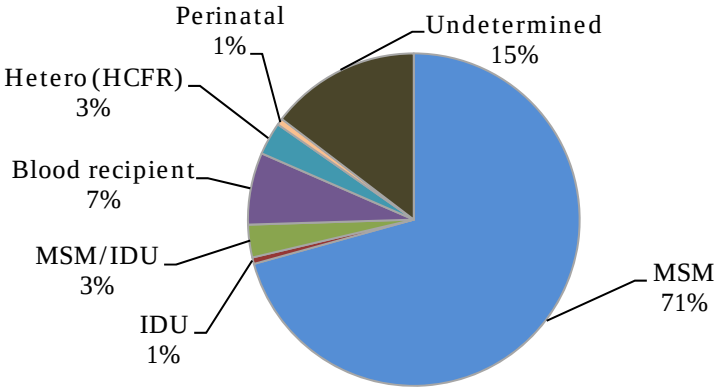
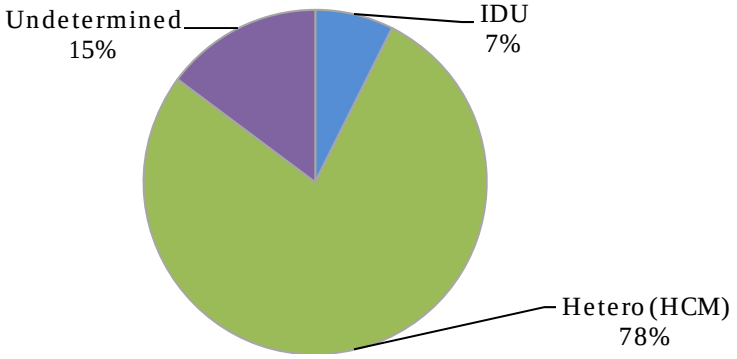


Figure 21: Females ages 13-19 at diagnosis currently living with HIV infection in Out-State Michigan, by risk transmission category (n = 81)



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

Data from enhanced HIV/AIDS Reporting System (eHARS)

Females make up the remaining 81 persons in this age group (34 percent; figure 21). Seventy-eight percent have a risk of heterosexual contact (HCM). Seven percent are injection drug users (IDU), and 15 percent have undetermined risk.

Risk-young adults (20-24 years):
Figures 22 and 23 show risks among persons who were 20-24 years at the time of HIV diagnosis. Among the 728 persons living with HIV in Out-State Michigan in this age group, 72 percent are male. Eighty-three percent of male young adults reported sex with other males, including eight percent who are MSM/IDU. Eleven percent had undetermined risk, and 10 percent reported IDU (including MSM/IDU). Three percent had heterosexual risk (HCFR), one percent received HIV-infected blood products.

Figure 23 shows that, among the 203 females living with HIV who were ages 20-24 at the time of diagnosis, 76 percent had heterosexual risk (HCM). Thirteen percent were IDU, and 10 percent had undetermined risk. Less than one percent were recipients of HIV-infected blood products.

Figure 22: Males ages 20-24 at diagnosis currently living with HIV infection in Out-State Michigan, by risk transmission category (n = 525)

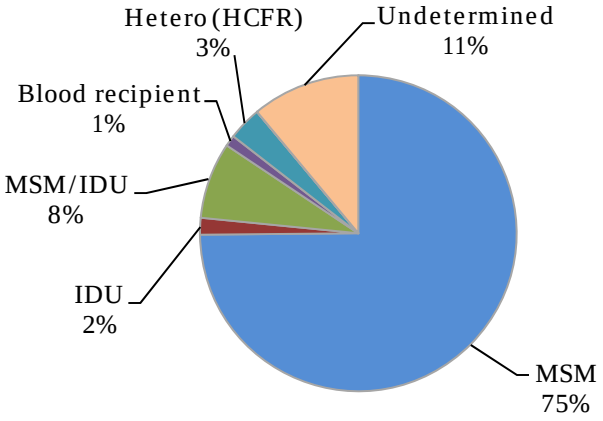
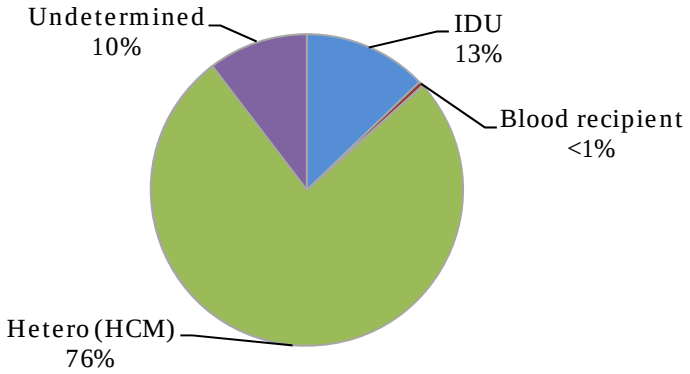


Figure 23: Females ages 20-24 at diagnosis currently living with HIV infection in Out-State Michigan, by risk transmission category (n = 203)



2012 Profile of HIV in Out-State Michigan

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

Data from enhanced HIV/AIDS Reporting System (eHARS), Michigan Disease Surveillance System (MDSS), & Vital Records

Race/ethnicity:
Fifty-seven percent of persons currently living in Out-State Michigan who were 13-19 years old at the time of HIV diagnosis are black, 33 percent are white, five percent are Hispanic, and five percent are of other or unknown race. Conversely, the majority of persons 20-24 years old at HIV diagnosis are white (49 percent), 40 percent are black, seven percent are Hispanic, and four percent are of other or unknown race.

STDs:
STD rates are highest in teens and young adults (15-24 year olds; table 9, page 218). In persons 20-24 years, the rate of chlamydia is over five times higher and the rate of gonorrhea is nearly five times higher than the rate among the general population. Although those ages 15-24 make up only 15 percent of the population, they represent 65 percent of gonorrhea cases and 75 percent of chlamydia cases.

Teen pregnancy:
Aside from Wayne County, which is in the Detroit Metro Area (DMA), Out-State Michigan counties have the highest rates of teen (ages 15-19) pregnancies in the state. Clare, followed by Oceana, have the second and third highest rates (69 and 68 pregnancies per 1,000 females, respectively). Lake, Genesee, and Calhoun counties also have rates above the statewide average of 63.5 pregnancies per 1,000 females (data not shown in tables).

Geographic distribution:
Over three quarters (76 percent) of persons 13-24 years old at diagnosis currently living in Out-State Michigan live in high prevalence counties (see figure 3 on page 17 of the statewide chapter for high/low prevalence county classification). Teens and young adults make up 19 percent of all HIV-positive persons in high prevalence counties and 16 percent of cases in low prevalence counties (data not shown in tables).

Conclusions:
Teens and young adults (persons who were 13-24 years at HIV diagnosis) represent 18 percent of all prevalent HIV infection cases in Out-State Michigan). Teens are one of only two age groups who are more likely to be black than white, suggesting racial disparities in persons diagnosed at a young age (table 7). The most frequently reported risk among male teen and young adult cases is male-male sex (MSM), while the most frequently reported risk among female teen and young adult cases is heterosexual contact (HCM) (table 8, page 217).

2012 Profile of HIV in Out-State Michigan

Description of the Epidemic by Age: 50 years and older

Data from enhanced HIV/AIDS Reporting System (eHARS)

Overview:

As of January 2012, there were 405 persons living with HIV infection in Out-State Michigan who were 50 years and older at the time of diagnosis (table 3, page 211). They comprise eight percent of all reported HIV-positive persons, and 81 percent are male. Sixty-five percent are white, 27 percent are black, six percent are Hispanic, and one percent are other/unknown race (table 7, page 216).

Risk-males:

When examining risk, those who were in their fifties at the time of HIV diagnosis have a different risk profile than those who were ages 60 and older. Therefore, the risks of these two populations are discussed separately.

As of January 2012, there were 256 males currently living with HIV in Out-State Michigan who were diagnosed in their 50s (80 percent of all persons 50-59 years at diagnosis; table 7). Of all persons 60 and over at HIV diagnosis, 71 are male (83 percent). Figures 24 and 25 show the risk profiles of males diagnosed in their 50s and at 60 and older, respectively.

Figure 24: Males ages 50-59 at diagnosis currently living with HIV infection in Out-State Michigan, by risk transmission category (n = 256)

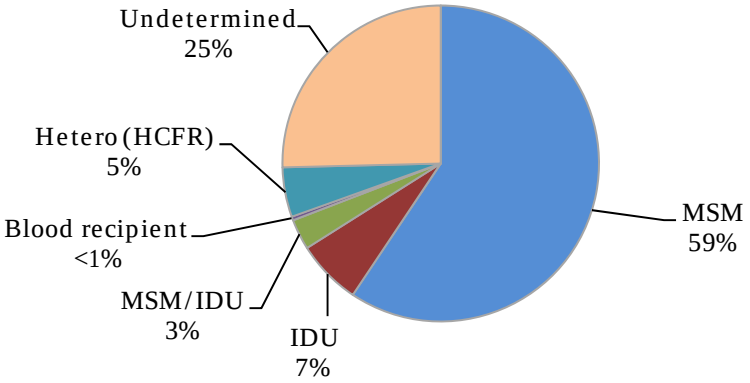
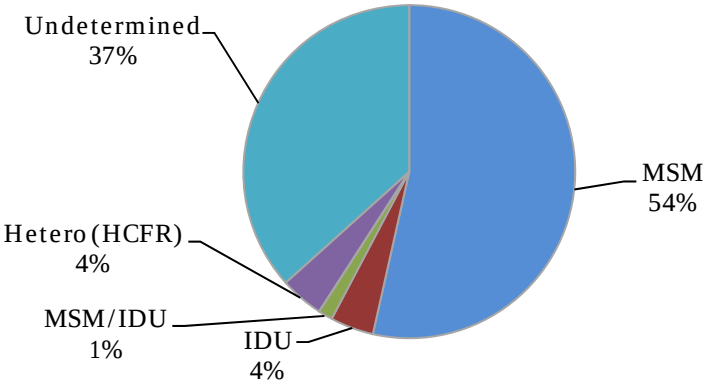


Figure 25: Males ages 60 and older at diagnosis currently living with HIV infection in Out-State Michigan, by risk transmission category (n = 71)



Description of the Epidemic by Age: 50 years and older

Data from enhanced HIV/AIDS Reporting System (eHARS)

As with males in all other age groups (excluding 0-12 year olds), male-male sex (MSM) is the most common risk (including those who also inject drugs, or MSM/IDU). However, the proportion who are MSM decreases with increasing age. Both males 50-59 years old and 60 years and older at HIV diagnosis have higher proportions of undetermined risk than males diagnosed at younger ages (25 and 37 percent, respectively). Males who were in their 50s at HIV diagnosis are more likely to be injection drug users (IDU) compared to males 60 years and older (10 percent vs. 5 percent, respectively). This includes males with a dual risk of male-male sex and IDU (MSM/IDU). Five percent of 50-59 year old HIV-positive males and four percent of males 60 and older have heterosexual risk (HCFR)

Risk-females:

Overall, females who were in their 50s at HIV diagnosis have similar risks to females who were 60 years and older at diagnosis (figures 26 and 27). As with HIV-positive females in other age groups, the most common risk is heterosexual contact (HC) (68 percent and 53 percent, respectively). Seven percent of females 60 years and older at diagnosis were recipients of HIV-infected blood products (compared to three in those 50-59 years at diagnosis), and females in their 50s at diagnosis are more likely to be injection drug users (IDU) (19 percent vs. 13 percent, respectively).

Figure 26: Females ages 50-59 at diagnosis currently living with HIV infection in Out-State Michigan, by risk transmission category (n = 63)

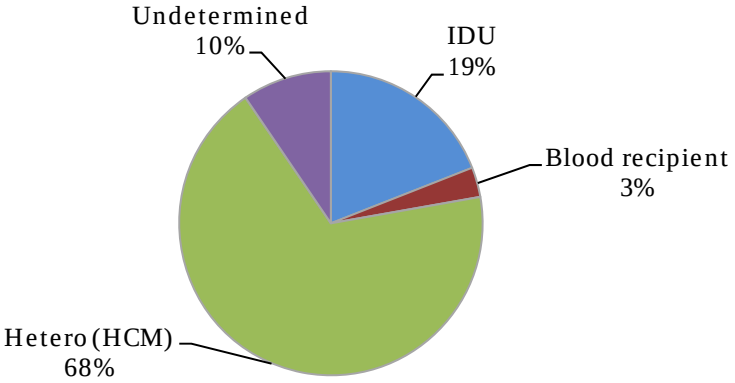
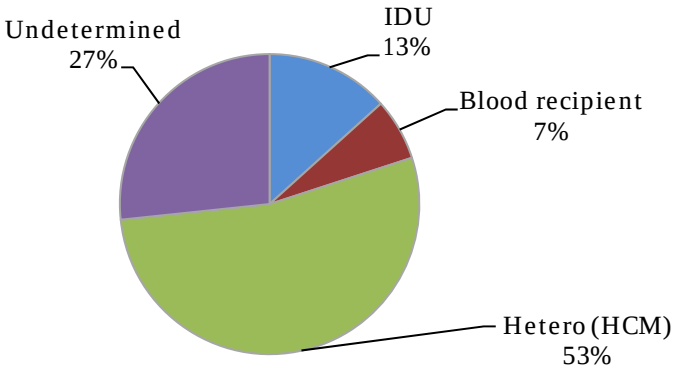


Figure 27: Females ages 60 and older at diagnosis currently living with HIV infection in Out-State Michigan, by risk transmission category (n = 15)



2012 Profile of HIV in Out-State Michigan

Description of the Epidemic by Age: 50 years and older

Data from enhanced HIV/AIDS Reporting System (eHARS) &
Michigan Disease Surveillance System (MDSS)

STDs:
Gonorrhea and chlamydia are epidemics largely affecting young people in Out-State Michigan, with less than one percent of chlamydia cases and not quite three percent of gonorrhea cases being over 50 years old. Of the gonorrhea cases in this age group, 68 percent are male. In contrast, 18 percent of primary and secondary syphilis cases are over the age of 50. These individuals are more likely to be male (100 percent versus 92 percent) and more likely to be white (93 percent vs. 68 percent) than other syphilis cases (age/sex/race breakdown not shown in tables).

Late diagnoses:
Of the 5,389 persons living with HIV infection in Out-State Michigan, 53 percent (2,877 cases) have progressed to stage 3 infection. Of these, 1,213 (42 percent) were diagnosed with stage 3 infection at the time of their initial HIV diagnoses (late HIV diagnoses). Persons who were in their fifties at HIV diagnosis make up seven percent (195 cases) of persons living with stage 3 infection, of whom 66 percent had late diagnoses. Those who were 60 years and older at diagnosis make up two percent of persons living with stage 3 infection (56 cases), of whom 73 percent had late diagnoses. These two age groups have the highest proportion of late diagnoses of all age groups, suggesting later or less frequent testing in this group (table 3, page 211).

Conclusions:
Although persons 50 years and older represent just eight percent of all prevalent cases, it is important to understand the specific challenges faced by older Michiganders and to ensure that they receive information and services to help protect them from infection. Their advanced age also may mean they face unique health challenges not encountered by HIV-positive persons in younger age groups.

2012 Profile of HIV in Out-State Michigan

Service Utilization of HIV-Positive Persons in Care

Data from Uniform Reporting System (URS) & enhanced HIV/AIDS Reporting System (eHARS)

Table 1: Characteristics of Ryan White clients who received services in 2011 compared to all HIV infection cases living in Out-State Michigan, January 2012

Characteristic	RY clients	Cases
White	48%	56%
Black	35%	34%
Hispanic	8%	7%
Other	8%	3%
Unknown*	1%	N/A
Male	76%	79%
White male	*40%*	*48%*
Black male	*24%*	*23%*
Hispanic male	*6%*	*6%*
Other male	*6%*	*2%*
Unknown male	*1%*	*N/A*
Female	24%	21%
White female	*7%*	*8%*
Black female	*11%*	*11%*
Hispanic female	*1%*	*2%*
Other female	*2%*	*1%*
Unknown female	*<1%*	*N/A*
0-12 years†	<1%	1%
13-19 years†	1%	1%
20-24 years†	6%	4%
25-44 years†	47%	39%
45+ years†	46%	56%
Infants: 0-1 years†	<1%	0%
Children: 2-12 years†	<1%	1%
Youth: 13-24 years†	5%	5%
Women 25+ years†	18%	20%
Total	**100% (N = 3,194)**	**100% (N = 5,389)**

*"Unknown" included in "Other" category for surveillance.

†"Years" within this table refers to current age, not age at diagnosis.

Overview:

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

There are several client-level data systems in Michigan that collect URS data. Demographic and service data from all these systems were extracted into a standard format, and these data were then combined and unduplicated to produce a URS dataset for analysis. The Out-State Michigan dataset is a subset of the unduplicated statewide dataset from all Ryan White funded programs, including ADAP. Clients are included in this dataset if they reside in any of the counties outside of the Detroit Metropolitan Area (DMA) and received at least one service from a Ryan White funded provider between January 1, 2011 and December 31, 2011.

Comparing services to cases:

Table 1 compares the demographic distribution of the 3,194 HIV-positive residents of Out-State Michigan who were served by Ryan White-funded programs in 2011 to that of the 5,389 persons known to be living with HIV in the same area at the end of 2011. The comparison shows that persons receiving Ryan White services were similar to the reported population, but they were less likely to be white and more likely to be of “other” race/ethnicity than the prevalent cases. They were also more likely to be between 25 and 44 years old and less likely to be 45 years and older.

Service Utilization of HIV-Positive Persons in Care

Data from Uniform Reporting System (URS)

Core services:

Table 2 gives additional details about core services delivered to HIV-positive Out-State Michigan residents by Ryan White programs in 2011, which include outpatient medical care, oral health care, mental health care, medical case management, and medication assistance. The service counts in the table are visits, not units of time. Only one "visit" per day is counted for any service category in this URS summary data.

Outpatient medical care services in this table are for outpatient ambulatory medical care visits, which range from a complete physical with a physician to a brief or repeat visit with a physician or nurse practitioner. They include adherence counseling with a medical practitioner. The annual average of 5.7 visits per client, with a median of four, is consistent with HIV care standards that recommend monitoring of health status every three to four months. The total number of Ryan White clients who lived in Out-State Michigan and received outpatient medical care in 2011 was 54 percent (table 2). These clients received services within the Ryan White CAREWare Network.

Table 2: Core services received by Ryan White clients in Out-State Michigan, 2011 (N=3,194)

	Outpatient medical care	Oral health care	Mental health care	Medical case management	ADAP (medication assistance)
No. of unduplicated clients served*	1,724	265	387	1,572	1,373
Percent receiving service	54%	8%	12%	49%	43%
Total days of service†	9,788	1,276	1,467	22,265	38,252
Average no. of visits per client	5.7	3.1	3.5	13.5	35.6
Median no. of visits per client	4	3	2	9	29
Range of visits per client	1-47	1-13	1-26	1-109	231

*Clients are unduplicated for a particular service across all providers but 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.

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 or may simply be for biannual or more frequent prophylaxis. The annual average of 3.1 visits per client is consistent with an initial exam to plan the care needed and one or more treatment visits following approval of the care plan. Oral health care was provided to eight percent of Out-State clients in 2011 (table 2).

Mental health services encompass mental health assessments, individual counseling, and group sessions for HIV-positive clients with a mental health diagnosis and must be conducted by a licensed mental health professional. Mental health services do not include substance abuse treatment. In 2011, 12 percent of Out-State clients received mental health services at an average of 3.5 visits per year (table 2).

Service Utilization of HIV-Positive Persons in Care

Data from Uniform Reporting System (URS)

Medical case management visits include intake, assessments, care planning, medication adherence counseling, and monitoring of medical status and may be conducted in person, by phone, or by mail. The goal is to link HIV-positive clients to health care services and assist them with remaining in care. In 2011, 49 percent of Out-State clients received medical case management services at an average of 13.5 visits each (table 2).

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-positive clients throughout Michigan. ADAP covers all HIV medications and many other medications, in addition to CD4 and viral load tests. The unit of service reported in table 2 for ADAP is each prescription filled rather than a day of service. In 2011, 43 percent of Out-State clients received ADAP services at an average of 35.6 prescriptions filled per year (table 2).

2012 Profile of HIV in Out-State Michigan

Sexually Transmitted Diseases

Data from Michigan Disease Surveillance System (MDSS)

Overview:
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 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 2011 alone, there were over 23,000 cases of chlamydia and nearly 4,000 cases of gonorrhea reported in Out-State Michigan (table 9, page 218). For both gonorrhea and chlamydia, the highest rates of infection are among persons ages 20-24. This age group comprises seven percent of the Out-State population but accounted for 35 percent of gonorrhea and 39 percent of chlamydia cases. The rates of chlamydia and gonorrhea among black persons were much higher than among white persons. Even though 23 percent of gonorrhea cases and 28 percent of chlamydia cases were missing race information, the rates among black among remain higher even if all unknown cases were white. The rate for gonorrhea among black persons is 25 times the rate among white persons, and the chlamydia rate is 11 times the rate among white persons. Sixty-two percent of gonorrhea cases were female and approximately 74 percent of reported chlamydia cases were female. This is because chlamydia screening targets females.

Syphilis:
In 2011, Out-State Michigan contributed 29 percent of primary and secondary syphilis cases statewide. Since 2006, primary and secondary syphilis cases in Out-State Michigan have increased substantially (from 35 in 2006 to 79 to 2011). Twenty-five percent of Out-State Michigan primary and secondary cases were under the age of 25. Thirty-eight percent of cases were 25-39, and 34 percent were over the age of 40, representing an older at-risk population than gonorrhea or chlamydia (table 9). Syphilis cases reported in 2011 were more likely to be white (68 percent) and male (92 percent); however the rate of syphilis was still higher among black persons.

Sexual orientation:
Nationwide, there have been increases in STD cases among self-identified men who have sex with men (MSM). Michigan collects data on sexual orientation for syphilis cases but not all gonorrhea or chlamydia cases. Of male primary and secondary syphilis cases in 2011, 75 percent of males were MSM. The male to female syphilis ratio in 2009 in Out-State Michigan was 4.5:1, but it increased to 12:1 in 2011. Forty-one percent of males with syphilis are co-infected with HIV (data not shown in tables).

2012 Profile of HIV in Out-State Michigan

Focus on High-Prevalence Counties: Washtenaw

Data from enhanced HIV/AIDS Reporting System (eHARS)

Overview and risk:

Washtenaw County has the highest HIV infection prevalence rate in Out-State Michigan at 181 cases per 100,000 population. This is an increase from 157 cases per 100,000 in 2010, when it had the third highest rate in Out-State Michigan.Statewide, this is the second highest rate after the City of Detroit (778 cases per 100,000). An estimated 820 persons are living with HIV in Washtenaw County as of January 1, 2012 (table 4, pages 212-213).

Of the 623 persons reported to be living with HIV in Washtenaw County, 64 percent are men who have sex with men (MSM), including MSM who also inject drugs (MSM/IDU). This is compared to 53 percent statewide. Twelve percent of persons living with HIV in Washtenaw County are IDU (including MSM/IDU) compared to 14 percent statewide. However, a higher proportion of females in Washtenaw County have a risk of IDU compared to the proportion statewide (21 percent vs. 18 percent, respectively). Fifteen percent of those living with HIV in Washtenaw County have heterosexual risk (12 percent female, 3 percent male) compared to 17 percent statewide (14 percent female, 4 percent male; see table 10, page 219 for Washtenaw County data and table 3, page 101 of the statewide chapter for statewide data). MSM therefore make up a greater proportion of the risk among HIV-positive persons in Washtenaw County than they do statewide, and IDU and heterosexual contact are less prominent.

Race/ethnicity and sex:

Persons living with HIV in Washtenaw County are 49 percent white and 42 percent black (table 10). However, the rate among black persons is almost five times higher than the rate among white persons (605 cases per 100,000 vs. 124 cases per 100,000, respectively; data not shown in tables). Statewide, a larger proportion of cases are black than are white (56 percent vs. 36 percent, respectively). The rate among black persons for the entire state is 8.5 times the rate among white persons (642 per 100,000 vs. 75 per 100,000, respectively; table 3 of statewide chapter). Six percent of persons living with HIV in Washtenaw County are Hispanic compared to five percent statewide (table 10). The prevalence rate among Hispanics in Washtenaw is twice that of white persons (253 vs. 124 per 100,000, respectively; data not shown in tables). The statewide rate among Hispanics is comparable at 207 cases per 100,000 population (table 3 of statewide chapter).

Of the 623 persons living with HIV in Washtenaw County, 82 percent are male and 18 percent are female (table 10). This is a slightly higher proportion of males when compared to the entire state (78 percent male and 22 percent female; table 3 of statewide chapter).

Foreign-born persons:

Statewide, there are 880 persons living with HIV who were born in a country other than the US (figure 87, page 90). Of these, 56 persons (6 percent) are currently living in Washtenaw County. Forty-one percent were born in Africa, the same as the statewide distribution. Thirty-nine percent were born in South and Central America (including Mexico), compared to 35 percent statewide. Nine percent of the foreign-born individuals living with HIV in Washtenaw County were born in Asia, compared to 11 percent statewide. Eleven percent were born in countries outside of Africa, South and Central America, or Asia compared to 13 percent statewide (see figure 87 on page 90 for statewide foreign-born distribution; Washtenaw County data not shown in tables).

2012 Profile of HIV in Out-State Michigan

Focus on High-Prevalence Counties: Kent

Data from enhanced HIV/AIDS Reporting System (eHARS)

Overview and risk:

Kent County has the second highest HIV infection prevalence rate in Out-State Michigan at 168 cases per 100,000 population. Statewide, this is the third highest rate. Kent has the highest estimated number of cases in Out-State Michigan at 1,330 persons as of January 1, 2012 (table 4, pages 212-213).

Of the 1,011 persons reported to be living with HIV in Kent County, 57 percent are men who have sex with men (MSM), including MSM who also inject drugs (MSM/IDU). This is compared to 53 percent statewide. The proportion who are MSM differs by race, however, with 89 percent of white males reporting MSM or MSM/IDU compared to just 52 percent among black males. Twelve percent of persons living with HIV in Kent County are IDU (including MSM/IDU) compared to 14 percent statewide. Twenty-two percent of those living with HIV in Kent County have heterosexual risk (18 percent female, 4 percent male) compared to 17 percent statewide (14 percent female, 4 percent male; see table 11, page 220 for Kent County data and table 3, page 101 of the statewide chapter for statewide data). Heterosexuals and MSM therefore make up a greater proportion of the risk among HIV-positive persons in Kent County than they do statewide, and IDU are less prominent.

Race/ethnicity and sex:

Persons living with HIV in Kent County are 48 percent white and 36 percent black (table 11). However, the rate among black persons is six times higher than the rate among white persons (644 cases per 100,000 vs. 106 cases per 100,000, respectively; data not shown in tables). Statewide, a larger proportion of cases are black than are white (56 percent vs. 36 percent, respectively). The rate among black persons for the entire state is 8.5 times the rate among white persons (642 per 100,000 vs. 75 per 100,000, respectively; table 3 of statewide chapter). Thirteen percent of persons living with HIV in Kent County are Hispanic compared to five percent statewide (table 11). The prevalence rate among Hispanics in Kent is over twice that of white persons (228 vs. 107 per 100,000, respectively; data not shown in tables). The statewide rate among Hispanics is comparable at 207 cases per 100,000 population (table 3 of statewide chapter).

Of the 1,011 persons living with HIV in Kent County, 77 percent are male and 23 percent are female (table 11). This is similar to the distribution statewide (78 percent male and 22 percent female; table 3 of statewide chapter).

Foreign-born persons:

Statewide, there are 880 persons living with HIV who were born in a country other than the US (figure 87, page 90). Of these, 191 persons (22 percent) are currently living in Kent County. This is the highest proportion of foreign-born persons in any county of the state, including the City of Detroit. Forty-nine percent were born in Africa compared to 41 percent of the foreign-born persons statewide. Forty percent were born in South and Central America (including Mexico), compared to 35 percent statewide. Three percent of the foreign-born individuals living with HIV in Kent County were born in Asia compared to 11 percent statewide. Eight percent were born in countries outside of Africa, South and Central America, or Asia compared to 13 percent statewide (see figure 87 on page 90 for statewide foreign-born distribution; Kent County data not shown in tables).

2012 Profile of HIV in Out-State Michigan

Focus on High-Prevalence Counties: Ingham

Data from enhanced HIV/AIDS Reporting System (eHARS)

Overview and risk:

Ingham County has the third highest HIV infection prevalence rate in Out-State Michigan at 163 cases per 100,000 population. Statewide, this is the fourth highest rate. An estimated 600 persons were living with HIV in Ingham county as of January 1, 2012 (table 4, pages 212-213).

Of the 458 persons reported to be living with HIV in Ingham County, 60 percent are men who have sex with men (MSM), including MSM who also inject drugs (MSM/IDU). This is compared to 53 percent statewide. Ingham County has a higher proportion of MSM/IDU cases than statewide (8 percent vs. 4 percent, respectively). Fifteen percent of persons living with HIV in Ingham County are IDU (including MSM/IDU) compared to 14 percent statewide. Eighteen percent have heterosexual risk (16 percent female, 3 percent male) compared to 17 percent statewide (14 percent female, 4 percent male; see table 12, page 221 for Ingham County data and table 3, page 101 of the statewide chapter for statewide data). MSM, particularly MSM/IDU therefore make up a greater proportion of the risk among HIV-positive persons in Ingham County than they do statewide.

Race/ethnicity and sex:

Persons living with HIV in Ingham County are 53 percent white and 35 percent black (table 12). However, the rate among black persons is over four times higher than the rate among white persons (504 cases per 100,000 vs. 119 cases per 100,000, respectively; data not shown in tables). Statewide, a larger proportion of cases are black than are white (56 percent vs. 36 percent, respectively). The rate among black persons for the entire state is 8.5 times the rate among white persons (642 per 100,000 vs. 75 per 100,000, respectively; table 3 of statewide chapter). Seven percent of persons living with HIV in Ingham County are Hispanic compared to five percent statewide (table 12). The prevalence rate among Hispanics in Ingham is 151 cases per 100,000 (data not shown in tables). This is lower than the statewide rate among Hispanics of 207 cases per 100,000 population (table 3 of statewide chapter).

Of the 458 persons living with HIV in Ingham County, 79 percent are male and 21 percent are female (table 12). This is similar to the distribution statewide (78 percent male and 22 percent female; table 3 of statewide chapter).

Foreign-born persons:

Statewide, there are 880 persons living with HIV who were born in a country other than the US (figure 87, page 90). Of these, 48 persons (5 percent) are currently living in Ingham County. Fifty-eight percent of the foreign-born persons living in Ingham County were born in Africa compared to 41 percent of the foreign-born persons statewide. Fifteen percent were born in South and Central America (including Mexico), compared to 35 percent statewide. Another 15 percent of the foreign-born individuals living with HIV in Ingham County were born in Asia compared to 11 percent statewide. Thirteen percent were born in countries outside of Africa, South and Central America, or Asia compared to 13 percent statewide (see figure 87 on page 90 for statewide foreign-born distribution; Ingham County data not shown in tables).

2012 Profile of HIV in Out-State Michigan

Focus on High-Prevalence Counties: Berrien

Data from enhanced HIV/AIDS Reporting System (eHARS)

Overview and risk:

Berrien County has the fourth highest HIV infection prevalence rate in Out-State Michigan at 161 cases per 100,000 population. Statewide, this is the fifth highest rate. An estimated 330 persons were living with HIV in Berrien county as of January 1, 2012 (table 4, pages 212-213).

Of the 253 persons reported to be living with HIV in Berrien County, 40 percent are men who have sex with men (MSM), including MSM who also inject drugs (MSM/IDU). This is lower than the statewide prevalence of 53 percent and is largely attributable to the differing proportions of MSM and MSM/IDU by race. While 86 percent of white males are MSM or MSM/IDU, only 44 percent of black males and 40 percent of Hispanic males report MSM or MSM/IDU. Black and Hispanic males have higher proportions of undetermined risk (32 percent and 47 percent, respectively). Twelve percent of persons living with HIV in Berrien County are IDU (including MSM/IDU) compared to 14 percent statewide. Twenty-eight percent of those living with HIV in Berrien County have heterosexual risk (22 percent female, 7 percent male) compared to 17 percent statewide (14 percent female, 4 percent male; see table 13, page 222 for Berrien County data and table 3, page 101 of the statewide chapter for statewide data). Heterosexuals therefore make up a greater proportion of the risk among HIV-positive persons in Berrien County than they do statewide, and MSM and MSM/IDU are less prominent.

Race/ethnicity and sex:

Persons living with HIV in Berrien County are 34 percent white and 58 percent black (table 13). The rate among black persons is almost nine times higher than the rate among white persons (623 cases per 100,000 vs. 71 cases per 100,000, respectively; data not shown in tables). This racial distribution is more similar to that found statewide than to other Out-State counties (56 percent black and 36 percent white statewide). The rate among black persons for the entire state is 8.5 times the rate among white persons (642 per 100,000 vs. 75 per 100,000, respectively; table 3 of statewide chapter). Seven percent of persons living with HIV in Berrien County are Hispanic compared to five percent statewide (table 13). The prevalence rate among Hispanics in Berrien is over three times that of white persons (241 vs. 71 per 100,000, respectively; data not shown in tables). The statewide rate among Hispanics is slightly lower at 207 cases per 100,000 population (table 3 of statewide chapter).

Of the 253 persons living with HIV in Berrien County, 68 percent are male and 32 percent are female (table 13). This is a larger proportion of females than is seen statewide (78 percent male and 22 percent female; table 3 of statewide chapter).

Foreign-born persons:

Statewide, there are 880 persons living with HIV who were born in a country other than the US (figure 87, page 90). Of these, 59 persons (7 percent) are currently living in Berrien County. Seventy-five percent were born in Africa compared to 41 percent of the foreign-born persons statewide. Seventeen percent were born in South and Central America (including Mexico), compared to 35 percent statewide. None of the foreign-born individuals living with HIV in Berrien County were born in Asia compared to 11 percent statewide. Eight percent were born in countries outside of Africa, South and Central America, or Asia compared to 13 percent statewide (see figure 87 on page 90 for statewide foreign-born distribution; Berrien County data not shown in tables).

Table 3: Demographic information on HIV infection cases currently living in Out-State Michigan, 2012

	REPORTED HIV INFECTION PREVALENCE											
	EST PREV*	HIV, non-stage 3		HIV, stage 3 (AIDS)		TOTAL			Late HIV diagnosis		CENSUS 2010¶	
	Num	Num	Percent	Num	Percent	Num	Percent	Rate per 100,000	Num	Percent of stage 3 cases	Num	Percent
RACE/ ETHNICITY§												
White	3,930	1,352	54%	1,640	57%	2,992	56%	64	718	44%	4,685,699	83%
Black	2,400	903	36%	921	32%	1,824	34%	446	345	37%	408,699	7%
Hispanic	530	173	7%	231	8%	404	7%	151	118	51%	267,086	5%
Asian/NH/OPI	60	24	1%	22	1%	46	1%	47	9	41%	97,933	2%
AI/AN	30	15	1%	9	<1%	24	<1%	57	3	33%	42,415	1%
Multi/other/unk	130	45	2%	54	2%	99	2%	N/A	20	37%	114,504	2%
SEX & RACE												
Male	5,590	1,886	75%	2,369	82%	4,255	79%	153	1,040	44%	2,781,585	50%
White male	*3,390*	*1,126*	*45%*	*1,451*	*50%*	*2,577*	*48%*	111	*654*	*45%*	*2,313,461*	*41%*
Black male	*1,610*	*573*	*23%*	*654*	*23%*	*1,227*	*23%*	591	*252*	*39%*	*207,582*	*4%*
Hispanic male	*420*	*128*	*5%*	*195*	*7%*	*323*	*6%*	237	*107*	*55%*	*136,338*	*2%*
Other male	*170*	*59*	*2%*	*69*	*2%*	*128*	*2%*	103	*27*	*39%*	*124,204*	*2%*
Female	1,490	626	25%	508	18%	1,134	21%	40	173	34%	2,834,751	50%
White female	*550*	*226*	*9%*	*189*	*7%*	*415*	*8%*	17	*64*	*34%*	*2,372,238*	*42%*
Black female	*780*	*330*	*13%*	*267*	*9%*	*597*	*11%*	297	*93*	*35%*	*201,117*	*4%*
Hispanic female	*110*	*45*	*2%*	*36*	*1%*	*81*	*2%*	62	*11*	*31%*	*130,748*	*2%*
Other female	*50*	*25*	*1%*	*16*	*1%*	*41*	*1%*	31	*5*	*31%*	*130,648*	*2%*
RISK†												
Male-male sex (MSM)	3,670	1,249	50%	1,544	54%	2,793	52%	--	655	42%	--	--
Injection drug use (IDU)	520	165	7%	227	8%	392	7%	--	79	35%	--	--
MSM/IDU	370	133	5%	145	5%	278	5%	--	40	28%	--	--
Blood products	60	15	1%	29	1%	44	1%	--	5	17%	--	--
Heterosexual contact (HC)	1,280	501	20%	474	16%	975	18%	--	175	37%	--	--
HCRF (male)	*250*	*82*	*3%*	*112*	*4%*	*194*	*4%*	--	*51*	*46%*	--	--
HCM (female)	*1,030*	*419*	*17%*	*362*	*13%*	*781*	*14%*	--	*124*	*34%*	--	--
Perinatal	80	42	2%	20	1%	62	1%	--	9	45%	--	--
Undetermined	1,110	407	16%	438	15%	845	16%	--	250	57%	--	--
AGE AT HIV DIAGNOSIS												
0 - 12 years	110	56	2%	26	1%	82	2%	--	9	35%	--	--
13 - 19 years	310	147	6%	91	3%	238	4%	--	12	13%	--	--
20 - 24 years	960	389	15%	339	12%	728	14%	--	60	18%	--	--
25 - 29 years	1,280	466	19%	510	18%	976	18%	--	150	29%	--	--
30 - 39 years	2,530	836	33%	1,086	38%	1,922	36%	--	467	43%	--	--
40 - 49 years	1,360	464	18%	574	20%	1,038	19%	--	346	60%	--	--
50 - 59 years	420	124	5%	195	7%	319	6%	--	128	66%	--	--
60 years and over	110	30	1%	56	2%	86	2%	--	41	73%	--	--
Unspecified	10	0	0%	0	0%	0	0%	--	--	--	--	--
Out-State Total	***7,080***	***2,512***	***100%***	***2,877***	***100%***	***5,389***	***100%***	**96**	***1,213***	***42%***	***5,616,336***	***100%***

**See pages iv-v for descriptions of prevalence estimate calculations. NOTE: prevalence estimates throughout this document are based on the number of people currently living with HIV in Michigan as of January 2012. Prevalence estimates in other MDCH documents are based on the number of people living with HIV who were diagnosed in MI.*

† See page vi of the Forward and Appendix 2 for risk category groupings. Risk categories used in Michigan are redefined as of January 2012. NOTE: Heterosexual contact for males includes only males whose sexual partners are known to be HIV infected or at high risk for HIV (HCFR). Heterosexual contact for females includes all females who have had sex with a male regardless of what is known about the male's HIV status or behaviors (HCM).

§ In this report, persons described as white, black, Asian/Native Hawaiian or Other Pacific Islander (Asian/NH/OPI), or American Indian/Alaskan Native (AI/AN) are all non-Hispanic; persons described as Hispanic may be of any race.

¶ Rates are not reported for risk categories and age at diagnosis because no reliable denominator data exist for these groups.

Table 4: HIV infection cases currently living in Out-State Michigan by local health department jurisdiction, 2012

	EST PREV*	REPORTED HIV INFECTION PREVALENCE									CENSUS 2010	
		HIV, non-stage 3		HIV, stage 3 (AIDS)		TOTAL			Late HIV diagnosis			
	Num	Num	Percent	Num	Percent	Num	Percent	Rate per 100,000	Num	Percent of stage 3 cases	Num	Percent
CURRENT RESIDENCE (by LHD jurisdiction)												
Allegan Co.	140	38	2%	72	3%	110	2%	99	27	38%	111,408	2%
Barry/Eaton Co.	160	53	2%	69	2%	122	2%	73	21	30%	166,932	3%
Barry Co.	*30*	*6*	*<1%*	*18*	*1%*	*24*	*<1%*	*41*	*10*	*56%*	*59,173*	*1%*
Eaton Co.	*130*	*47*	*2%*	*51*	*2%*	*98*	*2%*	*91*	*11*	*22%*	*107,759*	*2%*
Bay Co.	100	36	1%	39	1%	75	1%	70	15	38%	107,771	2%
Benzie/Leelanau	20	6	<1%	10	<1%	16	<1%	41	5	50%	39,233	1%
Benzie Co.	*10*	*3*	*<1%*	*4*	*<1%*	*7*	*<1%*	*40*	*1*	*25%*	*17,525*	*<1%*
Leelanau Co.	*10*	*3*	*<1%*	*6*	*<1%*	*9*	*<1%*	*41*	*4*	*67%*	*21,708*	*<1%*
Berrien Co.	330	105	4%	148	5%	253	5%	161	61	41%	156,813	3%
Branch/Hillsdale/St. Joseph	70	23	1%	31	1%	54	1%	35	15	48%	153,231	3%
Branch Co.	*20*	*8*	*<1%*	*4*	*<1%*	*12*	*<1%*	*27*	*2*	*50%*	*45,248*	*1%*
Hillsdale Co.	*10*	*2*	*<1%*	*7*	*<1%*	*9*	*<1%*	*19*	*4*	*57%*	*46,688*	*1%*
St. Joseph Co.	*40*	*13*	*1%*	*20*	*1%*	*33*	*1%*	*54*	*9*	*45%*	*61,295*	*1%*
Calhoun Co.	220	80	3%	84	3%	164	3%	120	21	25%	136,146	2%
Cass-Van Buren	140	51	2%	51	2%	102	2%	79	19	37%	128,551	2%
Cass Co.	*40*	*15*	*1%*	*18*	*1%*	*33*	*1%*	*63*	*7*	*39%*	*52,293*	*1%*
Van Buren Co.	*90*	*36*	*1%*	*33*	*1%*	*69*	*1%*	*90*	*12*	*36%*	*76,258*	*1%*
Central Michigan District	150	44	2%	68	2%	112	2%	59	30	44%	190,805	3%
Arenac Co.	*10*	*3*	*<1%*	*4*	*<1%*	*7*	*<1%*	*44*	*2*	*50%*	*15,899*	*<1%*
Clare Co.	*40*	*10*	*<1%*	*17*	*1%*	*27*	*1%*	*87*	*7*	*41%*	*30,926*	*1%*
Gladwin Co.	*10*	*2*	*<1%*	*2*	*<1%*	*4*	*<1%*	*16*	*2*	*100%*	*25,692*	*<1%*
Isabella Co.	*70*	*22*	*1%*	*28*	*1%*	*50*	*1%*	*71*	*10*	*36%*	*70,311*	*1%*
Osceola Co.	*10*	*2*	*<1%*	*5*	*<1%*	*7*	*<1%*	*30*	*2*	*40%*	*23,528*	*<1%*
Roscommon Co.	*20*	*5*	*<1%*	*12*	*<1%*	*17*	*<1%*	*70*	*7*	*58%*	*24,449*	*<1%*
Chippewa Co.	20	11	<1%	8	<1%	19	<1%	49	3	38%	38,520	1%
Delta-Menominee	30	14	1%	9	<1%	23	<1%	38	3	33%	61,098	1%
Delta Co.	*20*	*10*	*<1%*	*8*	*<1%*	*18*	*<1%*	*49*	*2*	*25%*	*37,069*	*1%*
Menominee Co.	*10*	*4*	*<1%*	*1*	*<1%*	*5*	*<1%*	*21*	*1*	*100%*	*24,029*	*<1%*
Dickinson-Iron	10	2	<1%	6	<1%	8	<1%	21	4	67%	37,985	1%
Dickson Co.	*10*	*1*	*<1%*	*5*	*<1%*	*6*	*<1%*	*23*	*3*	*60%*	*26168*	*<1%*
Iron Co.	*10*	*1*	*<1%*	*1*	*<1%*	*2*	*<1%*	*17*	*1*	*100%*	*11,817*	*<1%*
District #2	20	8	<1%	6	<1%	14	<1%	21	2	33%	67,168	1%
Alcona Co.	*10*	*0*	*0%*	*1*	*<1%*	*1*	*<1%*	*9*	*1*	*100%*	*10,942*	*<1%*
Iosco Co.	*10*	*5*	*<1%*	*2*	*<1%*	*7*	*<1%*	*27*	*0*	*0%*	*25,887*	*<1%*
Ogemaw Co.	*10*	*1*	*<1%*	*2*	*<1%*	*3*	*<1%*	*14*	*1*	*50%*	*21,699*	*<1%*
Oscoda Co.	*10*	*2*	*<1%*	*1*	*<1%*	*3*	*<1%*	*35*	*0*	*0%*	*8,640*	*<1%*
District #10	140	46	2%	58	2%	104	2%	40	26	45%	261,616	5%
Crawford Co.	*10*	*3*	*<1%*	*4*	*<1%*	*7*	*<1%*	*50*	*3*	*75%*	*14,074*	*<1%*
Kalkaska Co.	*10*	*3*	*<1%*	*0*	*0%*	*3*	*<1%*	*17*	--	--	*17,153*	*<1%*
Lake Co.	*20*	*5*	*<1%*	*7*	*<1%*	*12*	*<1%*	*104*	*4*	*57%*	*11,539*	*<1%*
Manistee Co.	*10*	*4*	*<1%*	*7*	*<1%*	*11*	*<1%*	*44*	*3*	*43%*	*24,733*	*<1%*
Mason Co.	*20*	*6*	*<1%*	*10*	*<1%*	*16*	*<1%*	*56*	*6*	*60%*	*28,705*	*1%*
Mecosta Co.	*20*	*7*	*<1%*	*8*	*<1%*	*15*	*<1%*	*35*	*4*	*50%*	*42,798*	*1%*
Missaukee Co.	*10*	*4*	*<1%*	*3*	*<1%*	*7*	*<1%*	*47*	*2*	*67%*	*14,849*	*<1%*
Newaygo Co.	*20*	*5*	*<1%*	*9*	*<1%*	*14*	*<1%*	*29*	*1*	*11%*	*48,460*	*1%*
Oceana Co.	*10*	*5*	*<1%*	*2*	*<1%*	*7*	*<1%*	*26*	*1*	*50%*	*26,570*	*<1%*
Wexford Co.	*20*	*4*	*<1%*	*8*	*<1%*	*12*	*<1%*	*37*	*2*	*25%*	*32,735*	*1%*

Table 4: HIV infection cases currently living in Out-State Michigan by local health department jurisdiction, 2012

	EST PREV*	REPORTED HIV INFECTION PREVALENCE									CENSUS 2010	
		HIV, non-stage 3		HIV, stage 3 (AIDS)		TOTAL			Late HIV diagnosis			
	Num	Num	Percent	Num	Percent	Num	Percent	Rate per 100,000	Num	Percent of stage 3 cases	Num	Percent
CURRENT RESIDENCE (by LHD Jurisdiction)												
District #4	30	5	<1%	20	1%	25	<1%	32	7	35%	78,891	1%
Alpena Co.	*10*	*1*	*<1%*	*9*	*<1%*	*10*	*<1%*	*34*	*2*	*22%*	*29,598*	*1%*
Cheboygan Co.	*10*	*4*	*<1%*	*6*	*<1%*	*10*	*<1%*	*38*	*1*	*17%*	*26,152*	*<1%*
Montmorency Co.	*10*	*0*	*0%*	*3*	*<1%*	*3*	*<1%*	*31*	*3*	*100%*	*9,765*	*<1%*
Presque Isle Co.	*10*	*0*	*0%*	*2*	*<1%*	*2*	*<1%*	*15*	*1*	*50%*	*13,376*	*<1%*
Genesee Co.	720	261	10%	286	10%	547	10%	128	113	40%	425,790	8%
Grand Traverse Co.	100	35	1%	39	1%	74	1%	85	20	51%	86,986	2%
Huron Co.	10	3	<1%	2	<1%	5	<1%	15	1	50%	33,118	1%
Ingham Co.	600	227	9%	231	8%	458	8%	163	95	41%	280,895	5%
Ionia Co.	50	21	1%	18	1%	39	1%	61	7	39%	63,905	1%
Jackson Co.	230	82	3%	96	3%	178	3%	111	35	36%	160,248	3%
Kalamazoo Co.	430	161	6%	169	6%	330	6%	132	57	34%	250,331	4%
Kent Co.	1,330	452	18%	559	19%	1,011	19%	168	250	45%	602,622	11%
Lenawee Co.	90	35	1%	30	1%	65	1%	65	16	53%	99,892	2%
Livingston Co.	90	28	1%	39	1%	67	1%	37	17	44%	180,967	3%
LMAS District	20	6	<1%	6	<1%	12	<1%	33	0	0%	35,830	1%
Alger Co.	*10*	*1*	*<1%*	*4*	*<1%*	*5*	*<1%*	*52*	*0*	*0%*	*9,601*	*<1%*
Luce Co.	*10*	*1*	*<1%*	*1*	*<1%*	*2*	*<1%*	*30*	*0*	*0%*	*6,631*	*<1%*
Mackinac Co.	*10*	*3*	*<1%*	*1*	*<1%*	*4*	*<1%*	*36*	*0*	*0%*	*11,113*	*<1%*
Schoolcraft Co.	*10*	*1*	*<1%*	*0*	*0%*	*1*	*<1%*	*12*	*--*	*--*	*8,485*	*<1%*
Marquette Co.	50	11	<1%	24	1%	35	1%	52	14	58%	67,077	1%
Mid-Michigan District	130	45	2%	51	2%	96	2%	53	25	49%	181,200	3%
Clinton Co.	*70*	*26*	*1%*	*29*	*1%*	*55*	*1%*	*73*	*13*	*45%*	*75,382*	*1%*
Gratiot Co.	*20*	*10*	*<1%*	*9*	*<1%*	*19*	*<1%*	*45*	*5*	*56%*	*42,476*	*1%*
Montcalm Co.	*30*	*9*	*<1%*	*13*	*<1%*	*22*	*<1%*	*35*	*7*	*54%*	*63,342*	*1%*
Midland Co.	30	12	<1%	14	<1%	26	<1%	31	9	64%	83,629	1%
Muskegon Co.	200	79	3%	72	3%	151	3%	88	34	47%	172,188	3%
Northwest Michigan Dist.	60	19	1%	28	1%	47	1%	44	15	54%	106,387	2%
Antrim Co.	*10*	*6*	*<1%*	*5*	*<1%*	*11*	*<1%*	*47*	*3*	*60%*	*23,580*	*<1%*
Charlevoix Co.	*10*	*4*	*<1%*	*7*	*<1%*	*11*	*<1%*	*42*	*3*	*43%*	*25,949*	*<1%*
Emmet Co.	*20*	*5*	*<1%*	*7*	*<1%*	*12*	*<1%*	*37*	*4*	*57%*	*32,694*	*1%*
Otsego Co.	*20*	*4*	*<1%*	*9*	*<1%*	*13*	*<1%*	*54*	*5*	*56%*	*24,164*	*<1%*
Ottawa Co.	140	45	2%	62	2%	107	2%	41	34	55%	263,801	5%
Saginaw Co.	320	119	5%	121	4%	240	4%	120	47	39%	200,169	4%
Sanilac Co.	20	10	<1%	8	<1%	18	<1%	42	6	75%	43,114	1%
Shiawassee Co.	40	11	<1%	16	1%	27	1%	38	9	56%	70,648	1%
Tuscola Co.	10	5	<1%	4	<1%	9	<1%	16	3	75%	55,729	1%
Washtenaw Co.	820	313	12%	310	11%	623	12%	181	139	45%	344,791	6%
Western Upper Pen. Dist.	30	10	<1%	13	<1%	23	<1%	32	8	62%	70,851	1%
Baraga Co.	*10*	*1*	*<1%*	*4*	*<1%*	*5*	*<1%*	*56*	*3*	*75%*	*8,860*	*<1%*
Gogebic Co.	*10*	*2*	*<1%*	*2*	*<1%*	*4*	*<1%*	*24*	*1*	*50%*	*16,427*	*<1%*
Houghton Co.	*10*	*7*	*<1%*	*4*	*<1%*	*11*	*<1%*	*30*	*2*	*50%*	*36,628*	*1%*
Keweenaw Co.	*10*	*0*	*0%*	*0*	*0%*	*0*	*0%*	*0*	*--*	*--*	*2,156*	*<1%*
Ontonagon Co.	*10*	*0*	*0%*	*3*	*<1%*	*3*	*<1%*	*44*	*2*	*67%*	*6,780*	*<1%*
Out-State Total	***7,080***	***2,512***	***100%***	***2,877***	***100%***	***5,389***	***100%***	***96***	***1,213***	***42%***	***5,616,336***	***100%***

TABLE 5. Risk transmission and exposure categories for HIV infection cases currently living in Out-State Michigan by sex, 2012

	REPORTED HIV INFECTION PREVALENCE					
	Male		Female		Overall	
	Num	Percent	Num	Percent	Num	Percent
RISK TRANSMISSION CATEGORIES (CDC Hierarchy)*§						
(Mutually Exclusive: one case is represented in ONLY one category)						
Male-male sex (MSM)	2,793	66%	N/A	--	2,793	52%
Injection drug use (IDU)	226	5%	166	15%	392	7%
MSM/IDU	278	7%	N/A	--	278	5%
Blood products	38	1%	6	1%	44	1%
Heterosexual contact (HC)	194	5%	781	69%	975	18%
HCFR (male)	*194*	*5%*	*N/A*	*--*	*194*	*4%*
HCM (female)	*N/A*	*--*	*781*	*69%*	*781*	*14%*
Perinatal	33	1%	29	3%	62	1%
Undetermined	693	16%	152	13%	845	16%
EXPOSURE CATEGORIES *†						
(Mutually Exclusive: one case is represented in ONLY one category)						
Male-male sex only	1,885	44%	N/A	--	1,885	35%
MSM & HC	885	21%	N/A	--	885	16%
MSM & IDU	143	3%	N/A	--	143	3%
MSM & blood products	12	<1%	N/A	--	12	<1%
MSM & HC & IDU	130	3%	N/A	--	130	2%
MSM & HC & blood products	11	<1%	N/A	--	11	<1%
MSM & IDU & blood products	1	<1%	N/A	--	1	<1%
MSM & HC & IDU & blood products	4	<1%	N/A	--	4	<1%
Heterosexual contact only	648	15%	863	76%	1,511	28%
HC & IDU	179	4%	151	13%	330	6%
HC & blood products	26	1%	17	1%	43	1%
HC & IDU & blood products	6	<1%	4	<1%	10	<1%
Injection drug use only	40	1%	11	1%	51	1%
IDU & blood products	1	<1%	0	0%	1	<1%
Perinatal exposure	33	1%	29	3%	62	1%
Exposure to blood products only	19	<1%	1	<1%	20	<1%
Undetermined	232	5%	58	5%	290	5%
TOTAL	**4,255**	**100%**	**1,134**	**100%**	**5,389**	**100%**
SUMMARIZED EXPOSURE CATEGORIES¥						
(NOT Mutually Exclusive: one case may be represented in multiple categories)						
Any MSM	3,071	72%	N/A	--	3,071	57%
Behaviorally bisexual men	1,030	24%	N/A	--	1,030	19%
Any heterosexual contact	1,889	44%	1,035	91%	2,924	54%
Any IDU	504	12%	166	15%	670	12%

**See page ii for descriptions of risk transmission and exposure categories.*

§ Risk transmission categories are grouped based on hierarchical categories determined by the CDC. Any one person with multiple risks is only represented in the highest category, with the exception of MSM/IDU (based on the hierarchical algorithm).

† Exposure categories are mutually exclusive and grouped to allow all possible combinations of exposures that any one person may have. NOTE: Heterosexual contact (HC) in exposure categories includes males and females who had heterosexual contact, regardless of what is known about their partners' risk or HIV status.

¥ Summarized exposure categories are NOT mutually exclusive, i.e. a case may be represented in multiple categories. These summarized categories are meant to give a broader picture of exposure and will NOT add up to the total number of persons living with HIV infection.

Table 6: Sex, race, and risk among HIV infection cases currently living in Out-State Michigan, 2012

MALE	White		Black		Hispanic		Other or unknown		All male	
	Num	Percent	Num	Percent	Num	Percent	Num	Percent	Num	Percent
Male-male sex (MSM)	1,931	75%	616	50%	181	56%	65	51%	2,793	66%
Injection drug use (IDU)	94	4%	104	8%	22	7%	6	5%	226	5%
MSM/IDU	184	7%	59	5%	27	8%	8	6%	278	7%
Blood products	30	1%	8	1%	0	0%	0	0%	38	1%
Heterosexual contact (HCFR)	58	2%	102	8%	25	8%	9	7%	194	5%
Perinatal	10	<1%	17	1%	2	1%	4	3%	33	1%
Undetermined	270	10%	321	26%	66	20%	36	28%	693	16%
Male Subtotal	**2,577**	**61%**	**1,227**	**29%**	**323**	**8%**	**128**	**3%**	**4,255**	**100%**

FEMALE	White		Black		Hispanic		Other or unknown		All female	
	Num	Percent	Num	Percent	Num	Percent	Num	Percent	Num	Percent
Injection drug use (IDU)	67	16%	85	14%	11	14%	3	7%	166	15%
Blood products	5	1%	1	<1%	0	0%	0	0%	6	1%
Heterosexual contact (HCM)	289	70%	402	67%	59	73%	31	76%	781	69%
Perinatal	8	2%	12	2%	7	9%	2	5%	29	3%
Undetermined	46	11%	97	16%	4	5%	5	12%	152	13%
Female Subtotal	**415**	**37%**	**597**	**53%**	**81**	**7%**	**41**	**4%**	**1,134**	**100%**

ALL	White		Black		Hispanic		Other or unknown		Risk all	
	Num	Percent	Num	Percent	Num	Percent	Num	Percent	Num	Percent
Male-male sex (MSM)	1,931	65%	616	34%	181	45%	65	38%	2,793	52%
Injection drug use (IDU)	161	5%	189	10%	33	8%	9	5%	392	7%
MSM/IDU	184	6%	59	3%	27	7%	8	5%	278	5%
Blood products	35	1%	9	<1%	0	0%	0	0%	44	1%
Heterosexual contact (HC)	347	12%	504	28%	84	21%	40	24%	975	18%
HCFR (male)	*58*	*2%*	*102*	*6%*	*25*	*6%*	*9*	*5%*	*194*	*4%*
HCM (female)	*289*	*10%*	*402*	*22%*	*59*	*15%*	*31*	*18%*	*781*	*14%*
Perinatal	18	1%	29	2%	9	2%	6	4%	62	1%
Undetermined	316	11%	418	23%	70	17%	41	24%	845	16%
RACE ALL	***2,992***	***56%***	***1,824***	***34%***	***404***	***7%***	***169***	***3%***	***5,389***	***100%***

Table 7: Sex, race, and age at HIV diagnosis among HIV infection cases Ccurrently living in Out-State Michigan, 2012

MALE	White		Black		Hispanic		Other or unknown		All male	
	Num	Percent	Num	Percent	Num	Percent	Num	Percent	Num	Percent
0 - 12 years	18	1%	22	2%	2	1%	4	3%	46	1%
13 - 19 years	48	2%	92	7%	8	2%	9	7%	157	4%
20 - 24 years	268	10%	199	16%	39	12%	19	15%	525	12%
25 - 29 years	444	17%	217	18%	72	22%	28	22%	761	18%
30 - 39 years	997	39%	409	33%	121	37%	47	37%	1,574	37%
40 - 49 years	568	22%	221	18%	58	18%	18	14%	865	20%
50 - 59 years	180	7%	56	5%	17	5%	3	2%	256	6%
60 years and over	54	2%	11	1%	6	2%	0	0%	71	2%
Unknown	0	0%	0	0%	0	0%	0	0%	0	0%
Male Subtotal	**2,577**	**61%**	**1,227**	**29%**	**323**	**8%**	**128**	**3%**	**4,255**	**100%**

FEMALE	White		Black		Hispanic		Other or unknown		All female	
	Num	Percent	Num	Percent	Num	Percent	Num	Percent	Num	Percent
0 - 12 years	9	2%	18	3%	7	9%	2	5%	36	3%
13 - 19 years	31	7%	43	7%	5	6%	2	5%	81	7%
20 - 24 years	91	22%	91	15%	13	16%	8	20%	203	18%
25 - 29 years	78	19%	109	18%	21	26%	7	17%	215	19%
30 - 39 years	128	31%	182	30%	22	27%	16	39%	348	31%
40 - 49 years	49	12%	111	19%	10	12%	3	7%	173	15%
50 - 59 years	25	6%	32	5%	3	4%	3	7%	63	6%
60 years and over	4	1%	11	2%	0	0%	0	0%	15	1%
Unknown	0	0%	0	0%	0	0%	0	0%	0	0%
Female Subtotal	**415**	**37%**	**597**	**53%**	**81**	**7%**	**41**	**4%**	**1,134**	**100%**

ALL	White		Black		Hispanic		Other or unknown		Age all	
	Num	Percent	Num	Percent	Num	Percent	Num	Percent	Num	Percent
0 - 12 years	27	1%	40	2%	9	2%	6	4%	82	2%
13 - 19 years	79	3%	135	7%	13	3%	11	7%	238	4%
20 - 24 years	359	12%	290	16%	52	13%	27	16%	728	14%
25 - 29 years	522	17%	326	18%	93	23%	35	21%	976	18%
30 - 39 years	1,125	38%	591	32%	143	35%	63	37%	1,922	36%
40 - 49 years	617	21%	332	18%	68	17%	21	12%	1,038	19%
50 - 59 years	205	7%	88	5%	20	5%	6	4%	319	6%
60 years and over	58	2%	22	1%	6	1%	0	0%	86	2%
Unknown	0	0%	0	0%	0	0%	0	0%	0	0%
RACE ALL	***2,992***	***56%***	***1,824***	***34%***	***404***	***7%***	***169***	***3%***	***5,389***	***100%***

Table 8: Sex, Risk and Age at HIV Diagnosis Among HIV Infection Cases Currently Living in Out-State Michigan, 2012

MALE	0 - 12 years		13 - 19 years		20 - 24 years		25 - 29 years		30 - 39 years		40 - 49 years		50 - 59 years		60 years and over		All male	
	Num	Percent	Num	Percent	Num	Percent	Num	Percent	Num	Percent	Num	Percent	Num	Percent	Num	Percent	Num	Percent
Male-male sex	0	0%	111	71%	393	75%	535	70%	1,035	66%	529	61%	152	59%	38	54%	2,793	66%
Injection drug use	0	0%	1	1%	9	2%	40	5%	87	6%	69	8%	17	7%	3	4%	226	5%
MSM/IDU	0	0%	5	3%	41	8%	59	8%	115	7%	49	6%	8	3%	1	1%	278	7%
Blood products	8	17%	11	7%	6	1%	6	1%	5	<1%	1	<1%	1	<1%	0	0%	38	1%
Heterosexual contact (HCFR)	0	0%	5	3%	18	3%	38	5%	79	5%	38	4%	13	5%	3	4%	194	5%
Perinatal	32	70%	1	1%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	33	1%
Undetermined	6	13%	23	15%	58	11%	83	11%	253	16%	179	21%	65	25%	26	37%	693	16%
Male Subtotal	**46**	**1%**	**157**	**4%**	**525**	**12%**	**761**	**18%**	**1,574**	**37%**	**865**	**20%**	**256**	**6%**	**71**	**2%**	**4,255**	**100%**

FEMALE	0 - 12 years		13 - 19 years		20 - 24 years		25 - 29 years		30 - 39 years		40 - 49 years		50 - 59 years		60 years and over		All female	
	Num	Percent	Num	Percent	Num	Percent	Num	Percent	Num	Percent	Num	Percent	Num	Percent	Num	Percent	Num	Percent
Injection drug use	0	0%	6	7%	26	13%	30	14%	62	18%	28	16%	12	19%	2	13%	166	15%
Blood products	0	0%	0	0%	1	<1%	0	0%	2	1%	0	0%	2	3%	1	7%	6	1%
Heterosexual contact (HCM)	0	0%	63	78%	155	76%	151	70%	237	68%	124	72%	43	68%	8	53%	781	69%
Perinatal	29	81%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	29	3%
Undetermined	7	19%	12	15%	21	10%	34	16%	47	14%	21	12%	6	10%	4	27%	152	13%
Female Subtotal	**36**	**3%**	**81**	**7%**	**203**	**18%**	**215**	**19%**	**348**	**31%**	**173**	**15%**	**63**	**6%**	**15**	**1%**	**1,134**	**100%**

TOTAL	0 - 12 years		13 - 19 years		20 - 24 years		25 - 29 years		30 - 39 years		40 - 49 years		50 - 59 years		60 years and over		Risk all	
	Num	Percent	Num	Percent	Num	Percent	Num	Percent	Num	Percent	Num	Percent	Num	Percent	Num	Percent	Num	Percent
Male-male sex	0	0%	111	47%	393	54%	535	55%	1,035	54%	529	51%	152	48%	38	44%	2,793	52%
Injection drug use	0	0%	7	3%	35	5%	70	7%	149	8%	97	9%	29	9%	5	6%	392	7%
MSM/IDU	0	0%	5	2%	41	6%	59	6%	115	6%	49	5%	8	3%	1	1%	278	5%
Blood products	8	10%	11	5%	7	1%	6	1%	7	<1%	1	<1%	3	1%	1	1%	44	1%
Heterosexual contact (HC)	0	0%	68	29%	173	24%	189	19%	316	16%	162	16%	56	18%	11	13%	975	18%
HCFR (male)	*0*	*0%*	*5*	*2%*	*18*	*2%*	*38*	*4%*	*79*	*4%*	*38*	*4%*	*13*	*4%*	*3*	*3%*	*194*	*4%*
HCM (female)	*0*	*0%*	*63*	*26%*	*155*	*21%*	*151*	*15%*	*237*	*12%*	*124*	*12%*	*43*	*13%*	*8*	*9%*	*781*	*14%*
Perinatal	61	74%	1	<1%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	62	1%
Undetermined	13	16%	35	15%	79	11%	117	12%	300	16%	200	19%	71	22%	30	35%	845	16%
AGE TOTAL	***82***	***2%***	***238***	***4%***	***728***	***14%***	***976***	***18%***	***1,922***	***36%***	***1,038***	***19%***	***319***	***6%***	***86***	***2%***	***5,389***	***100%***

Table 9: Gonorrhea, syphilis, and chlamydia cases by sex, race and age group, Out-State Michigan, 2011

	Gonorrhea			P&S syphilis*			Chlamydia			Census 2010	
	Num	Percent	Rate^	Num	Percent	Rate^	Num	Percent	Rate^	Num	Percent
RACE/ ETHNICITY											
White	887	23%	18.9	54	68%	1.2	7,889	34%	168.4	4,685,699	83%
Black	1,968	50%	481.5	22	28%	5.4	7,593	33%	1857.8	408,699	7%
Hispanic	90	2%	33.7	1	1%	0.4	788	3%	295.0	267,086	5%
Other/multi	99	3%	38.8	2	3%	0.8	594	3%	233.1	254,852	5%
Unknown race	893	23%	N/A	0	0%	N/A	6,461	28%	N/A	N/A	N/A
SEX & RACE											
Male	1,473	37%	53.0	73	92%	2.6	6,105	26%	219.5	2,781,585	50%
White male	*245*	*6%*	*10.6*	*50*	*63%*	*2.2*	*1,716*	*7%*	*74.2*	*2,313,461*	*41%*
Black male	*821*	*21%*	*395.5*	*20*	*25%*	*9.6*	*2,288*	*10%*	*1102.2*	*207,582*	*4%*
Hispanic male	*22*	*1%*	*16.1*	*1*	*1%*	*0.7*	*207*	*1%*	*151.8*	*136,338*	*2%*
Other male	*27*	*1%*	*21.7*	*2*	*3%*	*1.6*	*147*	*1%*	*118.4*	*124,204*	*2%*
Unknown male	*358*	*9%*	*N/A*	*0*	*0%*	*N/A*	*1,747*	*7%*	*N/A*	*N/A*	*N/A*
Female	2,459	62%	86.7	6	8%	0.2	17,180	74%	606.0	2,834,751	50%
White female	*642*	*16%*	*27.1*	*4*	*5%*	*0.2*	*6,166*	*26%*	*259.9*	*2,372,238*	*42%*
Black female	*1,146*	*29%*	*569.8*	*2*	*3%*	*1.0*	*5,302*	*23%*	*2636.3*	*201,117*	*4%*
Hispanic female	*68*	*2%*	*52.0*	*0*	*0%*	*0.0*	*579*	*2%*	*442.8*	*130,748*	*2%*
Other female	*72*	*2%*	*55.1*	*0*	*0%*	*0.0*	*446*	*2%*	*341.4*	*130,648*	*2%*
Unknown female	*531*	*13%*	*N/A*	*0*	*0%*	*N/A*	*4,687*	*20%*	*N/A*	*N/A*	*N/A*
Unknown sex - all races	5	<1%	N/A	0	0%	N/A	40	<1%	N/A	N/A	N/A
Age											
0-4 years	2	<1%	0.6	0	0%	0.0	3	<1%	0.9	337,908	6%
5-9 years	0	0%	0.0	0	0%	0.0	3	<1%	0.8	357,740	6%
10-14 years	35	1%	9.3	0	0%	0.0	250	1%	66.6	375,357	7%
15-19 years	1,180	30%	276.4	5	6%	1.2	8,396	36%	1966.4	426,980	8%
20-24 years	1,393	35%	336.1	15	19%	3.6	9,199	39%	2219.6	414,450	7%
25-29 years	607	15%	179.4	13	16%	3.8	3,093	13%	914.2	338,347	6%
30-34 years	318	8%	99.2	10	13%	3.1	1,297	6%	404.7	320,454	6%
35-39 years	150	4%	45.5	7	9%	2.1	537	2%	163.0	329,534	6%
40-44 years	105	3%	29.1	5	6%	1.4	250	1%	69.2	361,127	6%
45-54 years	95	2%	11.3	15	19%	1.8	197	1%	23.4	842,006	15%
55-64 years	38	1%	5.3	7	9%	1.0	49	<1%	6.8	716,752	13%
65 and over	8	<1%	1.0	0	0%	0.0	14	<1%	1.8	795,681	14%
Unknown age	6	<1%	N/A	0	0%	N/A	37	<1%	N/A	N/A	N/A
Total	***3,937***	***100%***	***70.1***	***79***	***100%***	***1.4***	***23,325***	***100%***	***415.3***	***5,616,336***	***100%***

* P&S: Primary and secondary syphilis.

^ Rate per 100,000 population.

Table 10: Sex, race, and risk among HIV infection cases currently living in Washtenaw County, Michigan, 2012

MALE	White		Black		Hispanic		Other or unknown		All male	
	Num	Percent	Num	Percent	Num	Percent	Num	Percent	Num	Percent
Male-male sex (MSM)	221	80%	116	61%	23	77%	11	85%	371	73%
Injection drug use (IDU)	11	4%	15	8%	<5	**	0	0%	27	5%
MSM/IDU	18	6%	7	4%	<5	**	0	0%	26	5%
Blood Products	<5	**	0	0%	0	0%	0	0%	<5	**
Heterosexual contact (HCFR)	<5	**	12	6%	<5	**	0	0%	18	4%
Perinatal	0	0%	<5	**	<5	**	0	0%	<5	**
Undetermined	20	7%	39	21%	<5	**	<5	**	63	12%
Male Subtotal	**277**	**54%**	**190**	**37%**	**30**	**6%**	**13**	**3%**	**510**	**100%**

FEMALE	White		Black		Hispanic		Other or unknown		All female	
	Num	Percent	Num	Percent	Num	Percent	Num	Percent	Num	Percent
Injection drug use (IDU)	9	29%	15	21%	0	0%	0	0%	24	21%
Blood products	<5	**	0	0%	0	0%	0	0%	<5	**
Heterosexual contact (HCM)	18	58%	48	68%	<5	**	6	100%	76	67%
Perinatal	0	0%	<5	**	<5	**	0	0%	<5	**
Undetermined	<5	**	7	10%	0	0%	0	0%	10	9%
Female Subtotal	**31**	**27%**	**71**	**63%**	**5**	**4%**	**6**	**5%**	**113**	**100%**

ALL	White		Black		Hispanic		Other or unknown		Risk all	
	Num	Percent	Num	Percent	Num	Percent	Num	Percent	Num	Percent
Male-male sex (MSM)	221	72%	116	44%	23	66%	11	58%	371	60%
Injection drug use (IDU)	20	6%	30	11%	<5	**	0	0%	51	8%
MSM/IDU	18	6%	7	3%	<5	**	0	0%	26	4%
Blood products	<5	**	0	0%	0	0%	0	0%	<5	**
Heterosexual contact (HC)	22	7%	60	23%	6	17%	6	32%	94	15%
HCFR (male)	*<5*	***	*12*	*5%*	*<5*	***	*0*	*0%*	*18*	*3%*
HCM (female)	*18*	*6%*	*48*	*18%*	*<5*	***	*6*	*32%*	*76*	*12%*
Perinatal	0	0%	<5	**	<5	**	0	0%	<5	**
Undetermined	23	7%	46	18%	<5	**	<5	**	73	12%
RACE ALL	***308***	***49%***	***261***	***42%***	***35***	***6%***	***19***	***3%***	***623***	***100%***

<5 and '' = 1, 2, 3, or 4 cases.*

Table 11: Sex, race, and risk among HIV infection cases currently living in Kent County, Michigan, 2012

MALE	White		Black		Hispanic		Other or unknown		All male	
	Num	Percent	Num	Percent	Num	Percent	Num	Percent	Num	Percent
Male-male sex (MSM)	358	82%	97	45%	54	50%	13	59%	522	67%
Injection drug use (IDU)	7	2%	23	11%	8	7%	0	0%	38	5%
MSM/IDU	30	7%	15	7%	9	8%	<5	**	56	7%
Blood products	<5	**	0	0%	0	0%	0	0%	<5	**
Heterosexual contact (HCFR)	9	2%	22	10%	8	7%	<5	**	42	5%
Perinatal	<5	**	5	2%	0	0%	0	0%	7	1%
Undetermined	30	7%	53	25%	28	26%	<5	**	115	15%
Male Subtotal	**438**	**56%**	**215**	**27%**	**107**	**14%**	**22**	**3%**	**782**	**100%**

FEMALE	White		Black		Hispanic		Other or unknown		All female	
	Num	Percent	Num	Percent	Num	Percent	Num	Percent	Num	Percent
Injection drug use (IDU)	5	10%	14	9%	<5	**	0	0%	23	10%
Blood products	0	0%	0	0%	0	0%	0	0%	0	0%
Heterosexual contact (HCM)	38	79%	113	76%	19	73%	7	100%	177	77%
Perinatal	0	0%	<5	**	<5	**	0	0%	6	3%
Undetermined	5	10%	18	12%	0	0%	0	0%	23	10%
Female Subtotal	**48**	**21%**	**148**	**65%**	**26**	**11%**	**7**	**3%**	**229**	**100%**

ALL	White		Black		Hispanic		Other or unknown		Risk all	
	Num	Percent	Num	Percent	Num	Percent	Num	Percent	Num	Percent
Male-Male sex (MSM)	358	74%	97	27%	54	41%	13	45%	522	52%
Injection drug use (IDU)	12	2%	37	10%	12	9%	0	0%	61	6%
MSM/IDU	30	6%	15	4%	9	7%	<5	**	56	6%
Blood products	<5	**	0	0%	0	0%	0	0%	<5	**
Heterosexual contact (HC)	47	10%	135	37%	27	20%	10	34%	219	22%
HCFR (male)	*9*	*2%*	*22*	*6%*	*8*	*6%*	*<5*	***	*42*	*4%*
HCM (female)	*38*	*8%*	*113*	*31%*	*19*	*14%*	*7*	*24%*	*177*	*18%*
Perinatal	<5	**	8	2%	<5	**	0	0%	13	1%
Undetermined	35	7%	71	20%	28	21%	<5	**	138	14%
RACE ALL	***486***	***48%***	***363***	***36%***	***133***	***13%***	***29***	***3%***	***1011***	***100%***

<5 and '' = 1, 2, 3, or 4 cases.*

Table 12: Sex, race, and risk among HIV infection cases currently living in Ingham County, Michigan, 2012

MALE	White		Black		Hispanic		Other or unknown		All male	
	Num	Percent	Num	Percent	Num	Percent	Num	Percent	Num	Percent
Male-male sex (MSM)	168	78%	50	52%	18	67%	9	43%	245	68%
Injection drug use (IDU)	7	3%	7	7%	<5	**	<5	**	20	6%
MSM/IDU	20	9%	8	8%	<5	**	<5	**	31	9%
Blood products	<5	**	<5	**	0	0%	0	0%	6	2%
Heterosexual contact (HCFR)	<5	**	9	9%	0	0%	<5	**	12	3%
Perinatal	0	0%	0	0%	0	0%	0	0%	0	0%
Undetermined	15	7%	21	22%	<5	**	6	29%	46	13%
Male Subtotal	**215**	**60%**	**97**	**27%**	**27**	**8%**	**21**	**6%**	**360**	**100%**

FEMALE	White		Black		Hispanic		Other or unknown		All female	
	Num	Percent	Num	Percent	Num	Percent	Num	Percent	Num	Percent
Injection drug use (IDU)	<5	**	9	14%	<5	**	0	0%	15	15%
Blood products	0	0%	0	0%	0	0%	0	0%	0	0%
Heterosexual contact (HCM)	21	78%	46	72%	<5	**	<5	**	71	72%
Perinatal	0	0%	<5	**	0	0%	0	0%	<5	**
Undetermined	<5	**	8	13%	0	0%	<5	**	11	11%
Female Subtotal	**27**	**28%**	**64**	**65%**	**<5**	******	**<5**	******	**98**	**100%**

ALL	White		Black		Hispanic		Other or unknown		Risk all	
	Num	Percent	Num	Percent	Num	Percent	Num	Percent	Num	Percent
Male-male sex (MSM)	168	69%	50	31%	18	58%	9	38%	245	53%
Injection drug use (IDU)	11	5%	16	10%	6	19%	<5	**	35	8%
MSM/IDU	20	8%	8	5%	<5	**	<5	**	31	7%
Blood products	<5	**	<5	**	0	0%	0	0%	6	1%
Heterosexual contact (HC)	22	9%	55	34%	<5	**	<5	**	83	18%
HCFR (male)	*<5*	***	*9*	*6%*	*0*	*0%*	*<5*	***	*12*	*3%*
HCM (female)	*21*	*9%*	*46*	*29%*	*<5*	***	*<5*	***	*71*	*16%*
Perinatal	0	0%	<5	**	0	0%	0	0%	<5	**
Undetermined	17	7%	29	18%	<5	**	7	29%	57	12%
RACE ALL	***242***	***53%***	***161***	***35%***	***31***	***7%***	***24***	***5%***	***458***	***100%***

<5 and '' = 1, 2, 3, or 4 cases.*

Table 13: Sex, race, and risk among HIV infection cases currently living in Berrien County, Michigan, 2012

MALE	White		Black		Hispanic		Other or unknown		All male	
	Num	Percent	Num	Percent	Num	Percent	Num	Percent	Num	Percent
Male-male sex (MSM)	53	77%	34	39%	5	33%	0	0%	92	53%
Injection drug use (IDU)	<5	**	7	8%	<5	**	0	0%	11	6%
MSM/IDU	6	9%	<5	**	<5	**	0	0%	11	6%
Blood products	<5	**	<5	**	0	0%	0	0%	<5	**
Heterosexual contact (HCFR)	<5	**	12	14%	<5	**	<5	**	17	10%
Perinatal	0	0%	<5	**	0	0%	0	0%	<5	**
Undetermined	<5	**	28	32%	7	47%	0	0%	38	22%
Male Subtotal	**69**	**40%**	**87**	**51%**	**15**	**9%**	**<5**	******	**172**	**100%**

FEMALE	White		Black		Hispanic		Other or unknown		All female	
	Num	Percent	Num	Percent	Num	Percent	Num	Percent	Num	Percent
Injection drug use (IDU)	<5	**	6	10%	<5	**	<5	**	10	12%
Blood products	0	0%	0	0%	0	0%	0	0%	0	0%
Heterosexual contact (HCM)	11	69%	42	69%	<5	**	<5	**	55	68%
Perinatal	0	0%	0	0%	0	0%	0	0%	0	0%
Undetermined	<5	**	13	21%	0	0%	0	0%	16	20%
Female Subtotal	**16**	**20%**	**61**	**75%**	**<5**	******	**<5**	******	**81**	**100%**

ALL	White		Black		Hispanic		Other or unknown		Risk all	
	Num	Percent	Num	Percent	Num	Percent	Num	Percent	Num	Percent
Male-male sex (MSM)	53	62%	34	23%	5	29%	0	0%	92	36%
Injection drug use (IDU)	5	6%	13	9%	<5	**	<5	**	21	8%
MSM/IDU	6	7%	<5	**	<5	**	0	0%	11	4%
Blood products	<5	**	<5	**	0	0%	0	0%	<5	**
Heterosexual contact (HC)	14	16%	54	36%	<5	**	<5	**	72	28%
HCFR (male)	*<5*	****	*12*	*8%*	*<5*	****	*<5*	****	*17*	*7%*
HCM (female)	*11*	*13%*	*42*	*28%*	*<5*	****	*<5*	****	*55*	*22%*
Perinatal	0	0%	<5	**	0	0%	0	0%	<5	**
Undetermined	6	7%	41	28%	7	41%	0	0%	54	21%
RACE ALL	***85***	***34%***	***148***	***58%***	***17***	***7%***	***<5***	********	***253***	***100%***

<5 and '' = 1, 2, 3, or 4 cases.*