2012 Profile of HIV in the Detroit Metro Area

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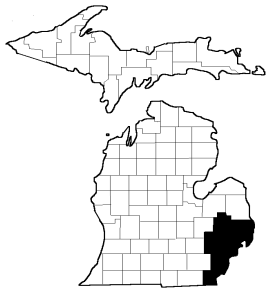
Summary of the HIV Epidemic in the Detroit Metro Area

Data from enhanced HIV/AIDS Reporting System (eHARS)

How many cases?



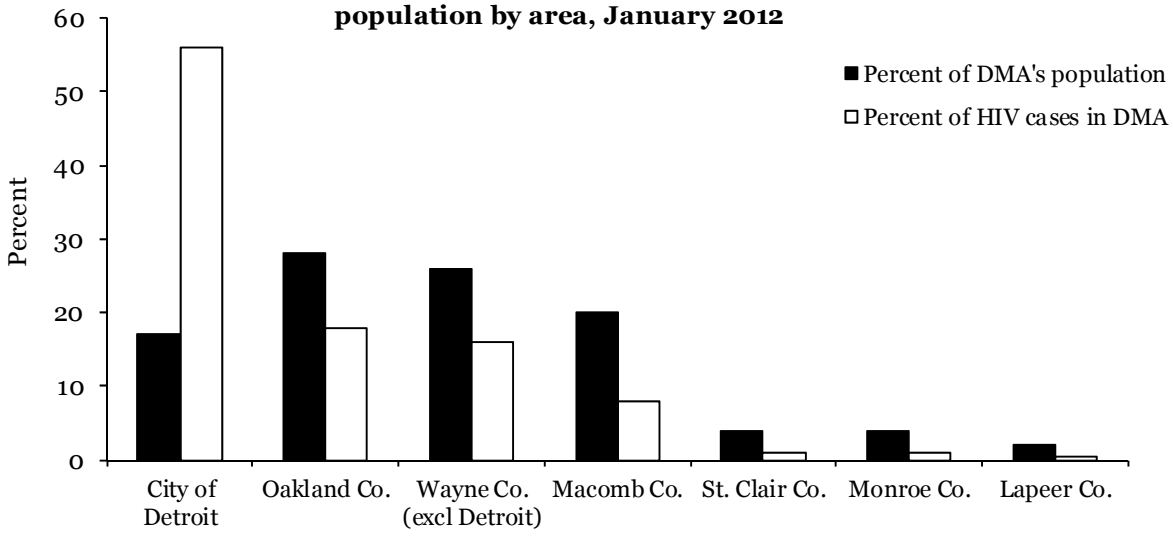
The Michigan Department of Community Health (MDCH) estimates that there are 13,040 persons currently living with HIV in the Detroit Metro Area (DMA), of whom 9,919 were reported as of January 1, 2012 (table 3, page 164). The DMA is the Detroit Metropolitan Statistical Area as defined by the US Census,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

How are the cases geographically distributed?

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

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

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



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Recommendations: Ranking of Behavioral Groups

Data from enhanced HIV/AIDS Reporting System (eHARS)

To assist in prioritizing prevention activities, the MDCH HIV/STD/VH/TB Epidemiology Section ranks the three behavioral groups most at risk for HIV infection in the Detroit Metro Area (DMA). The guiding question used in this process is, "In which populations can strategies prevent the most infections from occurring?" Effectively reducing transmission in populations where most of the HIV transmission is taking place will have the greatest impact on the overall epidemic. The percentage of cases for each behavioral group and trends over time were used to determine the ranked order of the following three behavioral groups: MSM, heterosexuals, and IDU.

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

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

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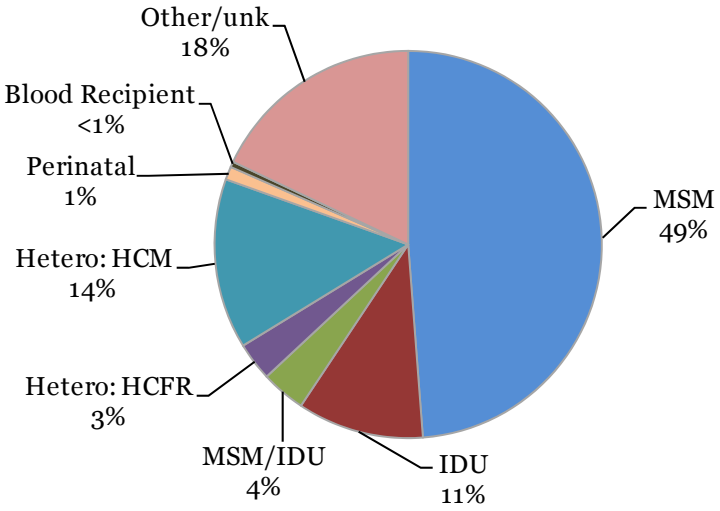
Distribution of Living HIV Cases by Risk Transmission Category

Data from enhanced HIV/AIDS Reporting System (eHARS)

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

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



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

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Distribution of Living HIV Cases by Exposure Category

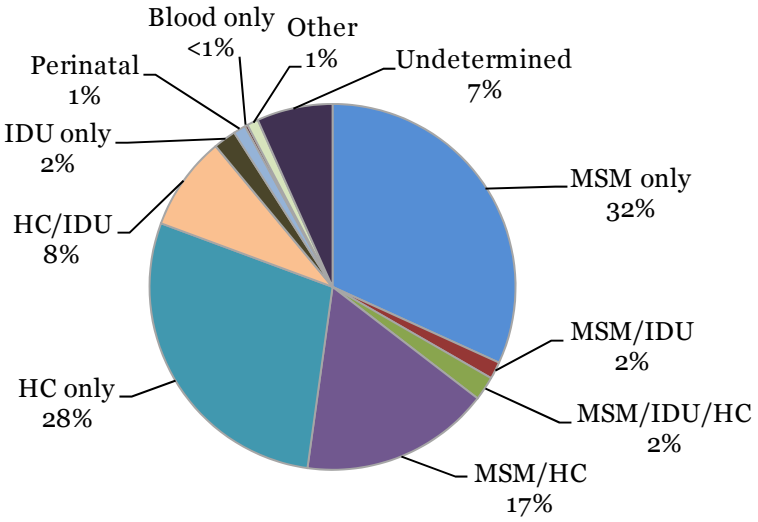
Data from enhanced HIV/AIDS Reporting System (eHARS)

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

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

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

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



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

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Distribution of Living HIV Cases by Race and Sex

Data from enhanced HIV/AIDS Reporting System (eHARS)

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

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

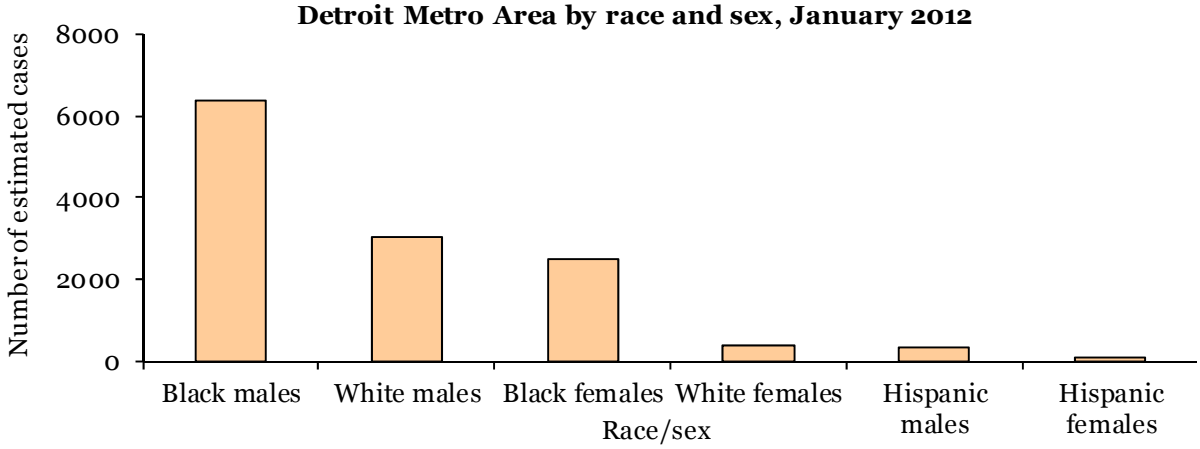
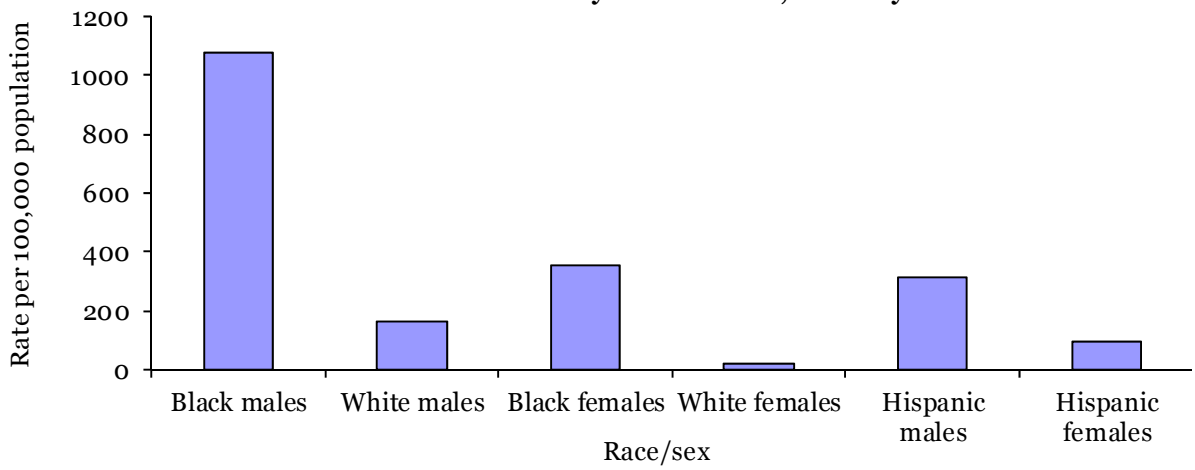


Figure 5: Reported prevalence rate of persons living with HIV in the Detroit Metro Area by race and sex, January 2012



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

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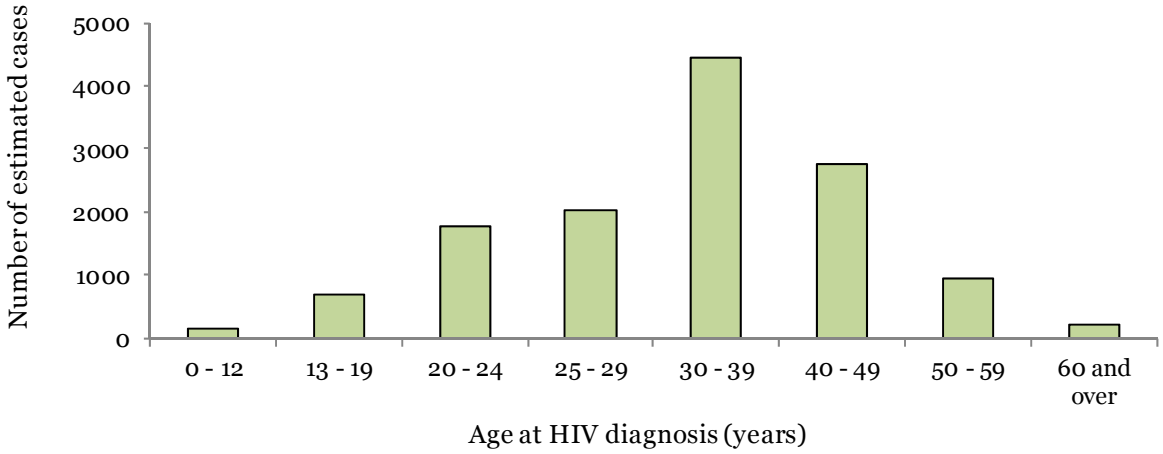
Distribution of Living HIV Cases by Age at HIV Diagnosis

Data from enhanced HIV/AIDS Reporting System (eHARS)

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

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



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

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Trends in HIV Data

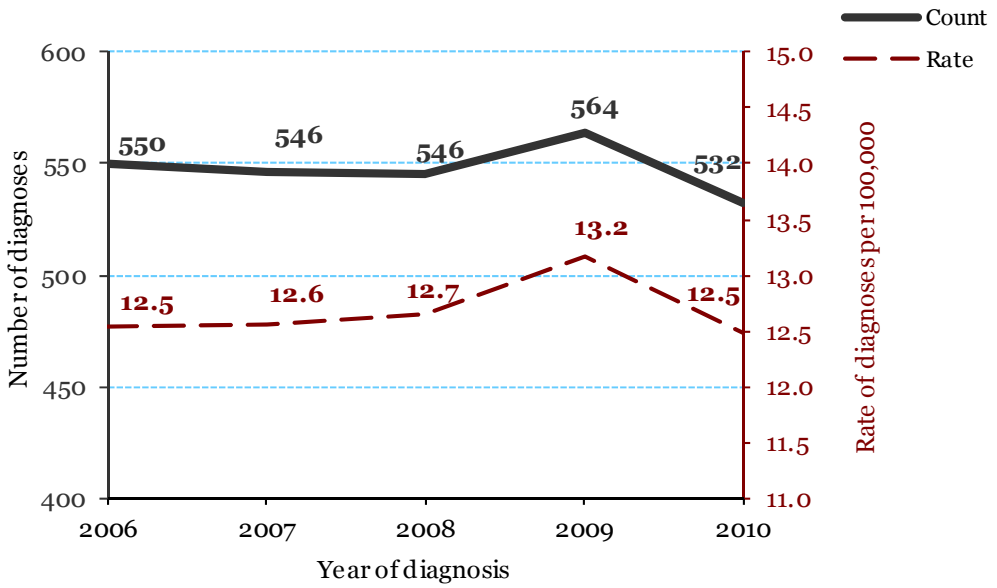
Data from enhanced HIV/AIDS Reporting System (eHARS)

To evaluate recent trends in new HIV diagnoses in the DMA, we estimated the number of persons newly diagnosed with HIV infection each year by adjusting the number of reported cases diagnosed between 2006 and 2010. This adjustment was applied to account for cases that may not have been reported to the health department by January 1, 2012. The adjustments were calculated by weighting the data. Please see the Forward (pages v-vi) for an in-depth description of the methods used to evaluate trends. The full Trends documents can be found by visiting the following link: http://www.michigan.gov/mdch/0,4612,7-132-2940_2955_2982_46000_46003-36304--,00.html.

New diagnoses of HIV, 2006-2010:

The number and rate of new HIV diagnoses remained stable in the DMA between 2006 and 2010, with an average of 548 new cases each year (12.7 cases per 100,000 population) (figure 7). This surpasses the statewide rate of 8.1 cases per 100,000.

Figure 7: Adjusted number and rate of new HIV diagnoses in the Detroit Metro Area, 2006-2010



New diagnoses by risk, 2006-2010:

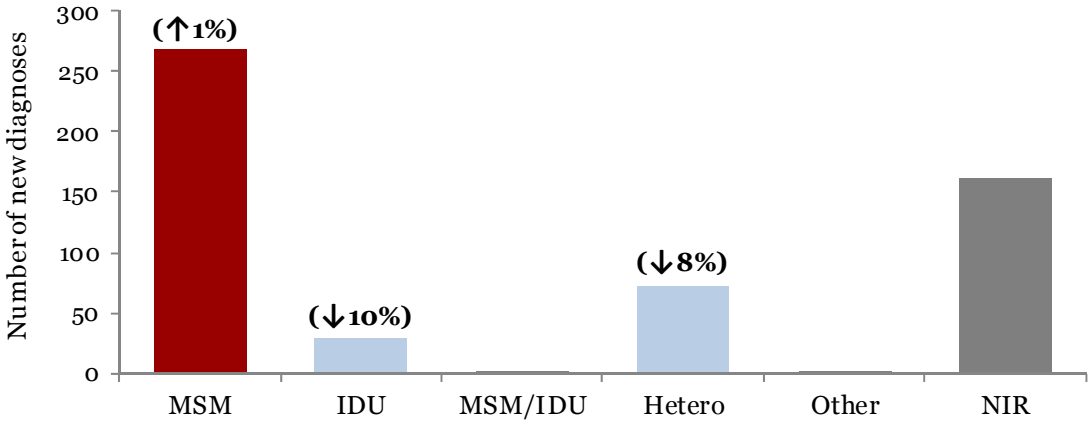
Between 2006 and 2010, the number of newly diagnosed persons who were men who have sex with men (MSM) increased by an average one percent per year (figure 8). The number of newly diagnosed persons who were injection drug users (IDU) decreased by an average of 10 percent per year, and the number of new diagnoses also decreased among persons with heterosexual risk by an average of eight percent per year. The decrease in new diagnoses among IDU has been seen for the past seven consecutive annual trend reports. Data from Michigan's HIV Behavioral Surveillance suggest reductions among IDU may be partly attributable to the success of harm reduction programs, such as needle exchanges. This is the third consecutive annual trend report to show decreases among persons with heterosexual risk. The "other known" risk category includes perinatal and blood product transmission. The numbers have been low in this group for many years due to programmatic successes in preventing perinatal and blood-borne transmissions.

Trends in HIV Data

Data from enhanced HIV/AIDS Reporting System (eHARS)

Newly diagnosed persons with no identified risk (NIR) includes males who reported sex with females of unknown risk/HIV status as their only risk and males and females for whom no risk has yet been reported. This group accounts for about 28 percent of new diagnoses each year (Trends) but only 18 percent of all persons currently living with HIV in the DMA (regardless of year of diagnosis) (table 3, page 163).

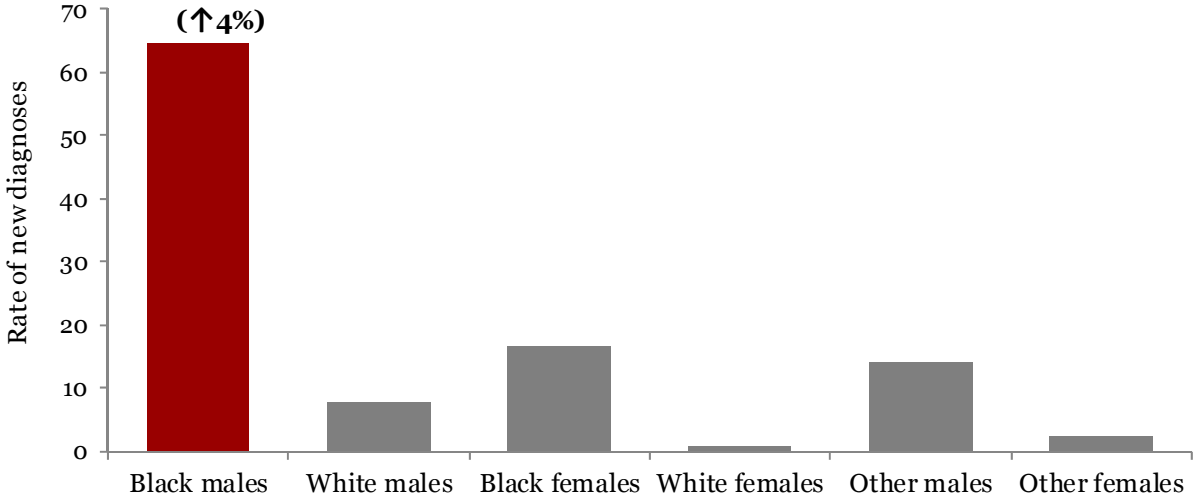
Figure 8: Adjusted number of new HIV diagnoses in the Detroit Metro Area in 2010 and trends between 2006-2010, by risk



New diagnoses by race and sex, 2006-2010:

The rate of new diagnoses increased among black males (average 4 percent per year) between 2006 and 2010 (figure 9). The rate also increased among all males by an average two percent per year, driven by the increase among black males. The rate among females overall decreased by an average six percent per year for the second annual consecutive trend report (Trends).

Figure 9: Adjusted rate of new HIV diagnoses in the Detroit Metro Area in 2010 and trends between 2006-2010, by race/sex



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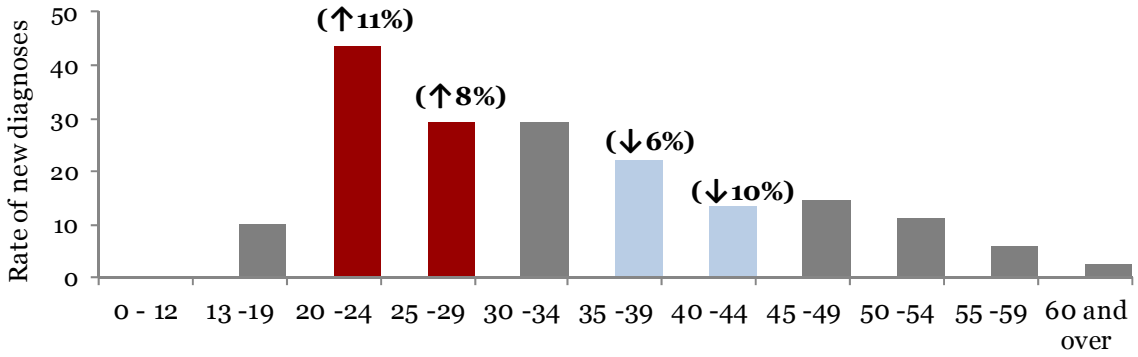
Trends in HIV Data

Data from enhanced HIV/AIDS Reporting System (eHARS)

New diagnoses by age at HIV diagnosis, 2006-2010:
The rate of new HIV diagnoses increased significantly among persons 20-24 years of age (an average 11 percent per year) and those 25-29 years of age at HIV diagnosis (an average eight percent per year) (figure 10). For the first time in six trend reports, the rate did not increase among those 13-19 years of age at diagnosis. This is the second consecutive report, however, showing increases among 20-24 and 25-29 year olds. Additionally, rates in older age groups (35-39 year olds and 40-44 year olds) decreased significantly by an average six percent per year and 10 percent per year, respectively. Twenty to twenty-four year olds now have the highest rate of diagnosis of any age group.

Figure 10: Adjusted rate of new HIV diagnoses in the Detroit Metro Area in 2010 and trends between 2006-2010, by age at diagnosis



New diagnoses by Detroit zip code, 2009-2010:
Figure 11 shows HIV infection cases diagnosed in 2009 and 2010 by zip code at diagnosis for the City of Detroit as well as Highland Park and Hamtramck. There were 587 new HIV diagnoses total, 303 in 2009 and 284 in 2010. Twenty-two of the cases were residents of Highland Park or Hamtramck, and the rest lived in the City of Detroit.

The map shows that the highest numbers of new diagnoses were in zip codes 48203 and 48205 (41-50 new diagnoses each), followed by zip codes 48219, 48227, and 48238 (31-40 new diagnoses each). All the rest of the zip codes had 30 or less new diagnoses.

Geocoding and mapping data to the zip code level may assist with more focused prevention activities in areas of high HIV burden. Understanding the specific areas of the city in which new HIV diagnoses occur allows for resources to be maximized in these areas, potentially reducing the risk of transmission and the overall prevalence of HIV.

It is important to note that this map shows the number of reported cases, which are not adjusted for reporting delay. It also does not take into account persons unaware of their infection. Thus, this map should be viewed as the minimum number of new diagnoses for the two year period.

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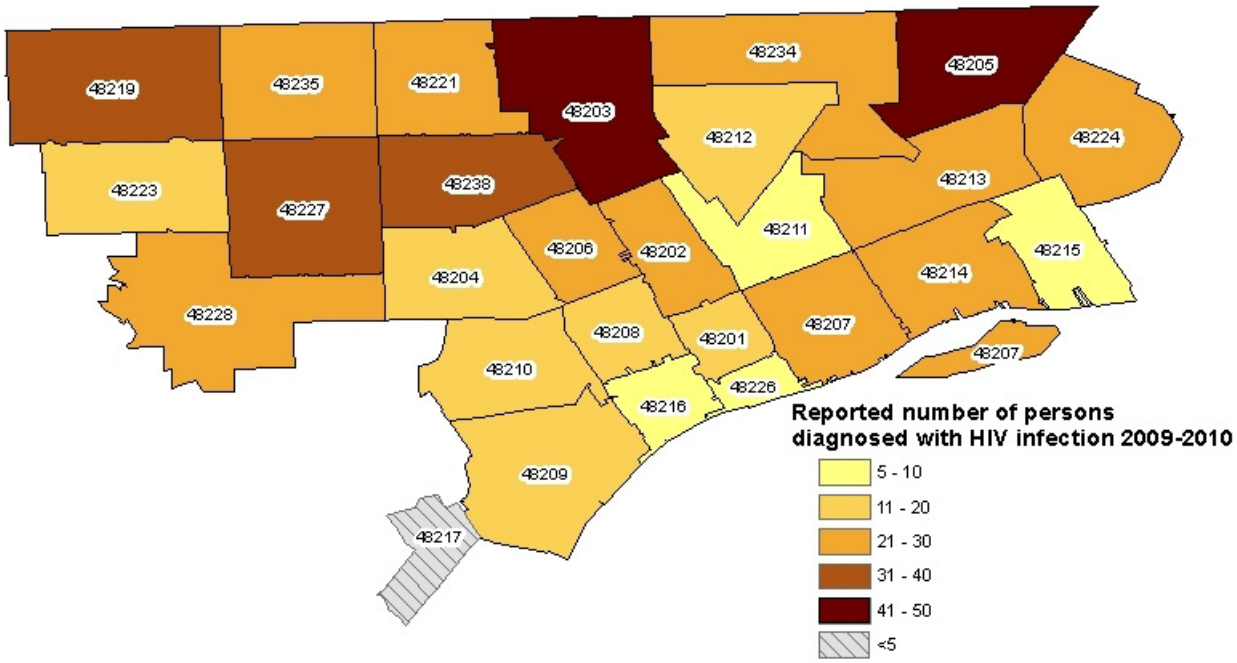
Trends in HIV Data

Data from enhanced HIV/AIDS Reporting System (eHARS)

Figure 11: Reported number of new HIV diagnoses in the City of Detroit, Highland Park, and Hamtramck by zip code, 2009-2010 (N=587*)



*Data were geocoded in 2010 for 2009 cases and 2011 for 2010 cases, and numbers should be viewed as minimum estimates due to reporting delay.

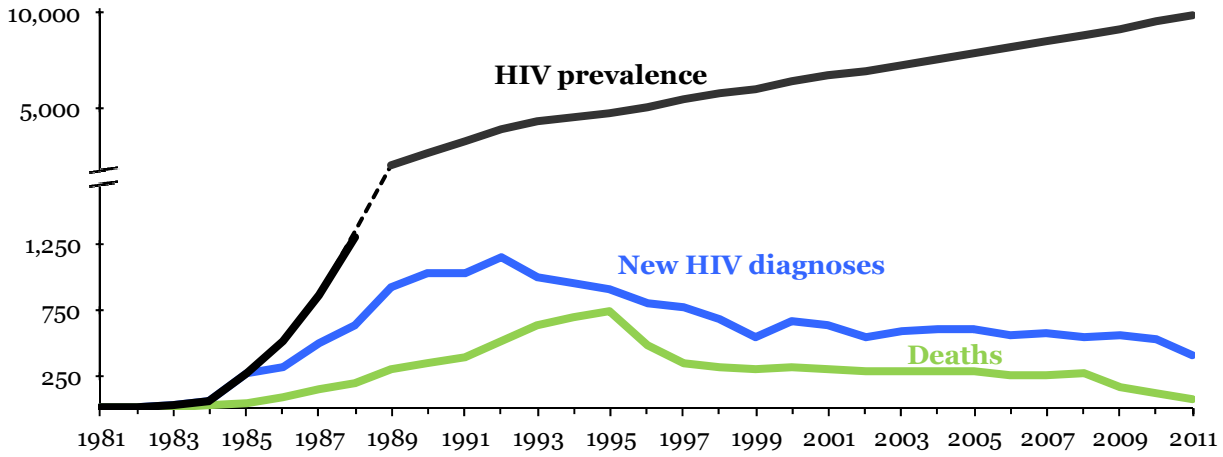
New diagnoses, deaths and prevalence of HIV by year:

The unadjusted number of new HIV diagnoses, number of deaths among HIV-positive persons, and HIV prevalence are presented in figure 12. The trend among new HIV diagnoses reflects reported cases. These data were not adjusted for reporting delay as they were in figures 7-10. Consequently, the decreases in new diagnoses seen in the most recent years will likely level out as more cases diagnosed during those years are reported. Although the number of deaths among HIV-positive persons is decreasing, the number of new HIV diagnoses is stable. As a result, HIV prevalence (the number of people currently living with HIV in Michigan) continues to rise.

Trends in HIV Data

Data from enhanced HIV/AIDS Reporting System (eHARS)

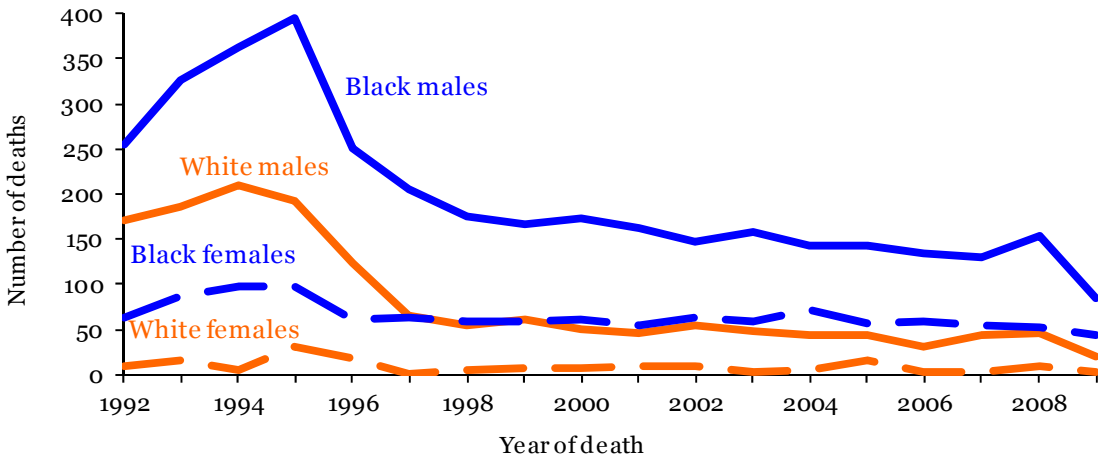
Figure 12: New diagnoses, deaths, and prevalence of HIV in the Detroit Metro Area by year, January 2012



Deaths among HIV-positive persons by race and sex:

Figure 12 shows the number of HIV-positive Detroit Metro Area (DMA) 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. The number of deaths decreased markedly between 1995 and 1998 and were relatively stable until 2001. It should be noted that the percent decrease in deaths among white males (76 percent) between 1995 and 2001 was more pronounced than the percent decrease among black males (59 percent), and the percent decrease among white females (68 percent) was larger than the percent decrease among black females (44 percent). Between 2001 and 2009, the number of deaths among all groups fell once again. The percent decrease among white males (54 percent) was again greater than the percent decrease in black males (48 percent). The number of deaths did not change as appreciably in black females (22 percent). Deaths among white females decreased by 60 percent between 2001 and 2009, but this decrease is exaggerated as there is a small number of deaths in this group (data not shown in tables).

Figure 13: Detroit Metro Area HIV deaths by race/sex, January 2012



2012 Profile of HIV in the Detroit Metro Area

Ranked Behavioral Group: MSM

Data from enhanced HIV/AIDS Reporting System (eHARS)

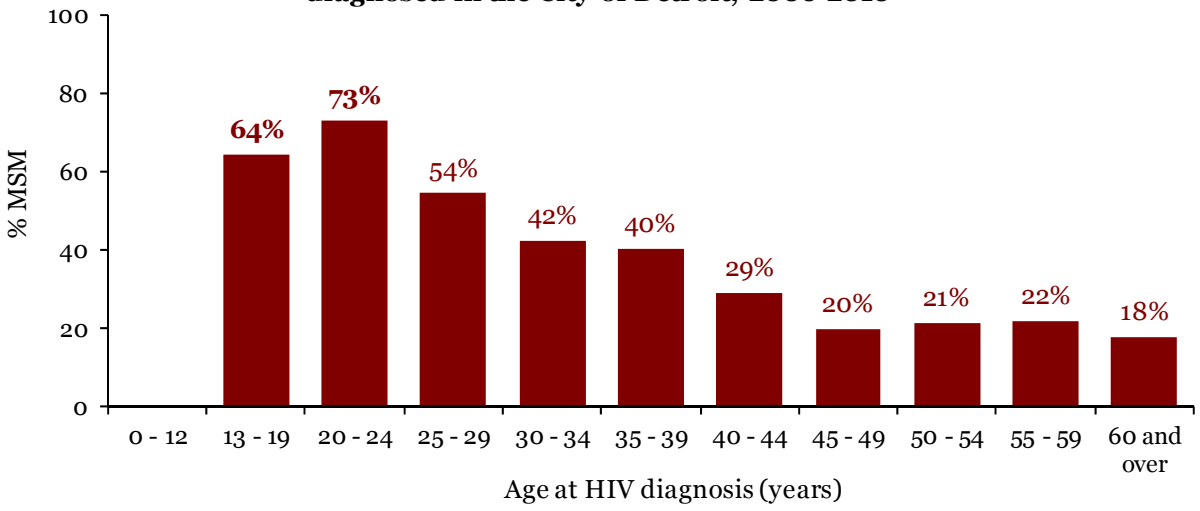
Overview:
Men who have sex with men (MSM) are the number one ranked behavioral group in the DMA for HIV infection. MSM remain the single largest behavioral group affected by the epidemic and account for over half (53 percent) of all reported HIV-positive persons, including MSM/IDU. MDCH estimates that there are approximately 6,840 MSM living with HIV infection in the DMA. This includes an estimated 480 HIV-positive males whose risk is a combination of having sex with other males and injecting drugs (table 3, page 163).

Race/ethnicity:
MSM account for most HIV infections among males in the DMA for all racial and ethnic groups. When considering reported cases for MSM and MSM/IDU of all races (5,207 reported cases), white males comprise 36 percent of males in this combined category (1,864 cases); black males account for well over half (59 percent, 3,062 cases); and Hispanic males account for three percent (156 cases) (table 5, page 164).

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 (35 percent). MSM is the predominant mode of transmission for males ages 13 and up; male-male sex accounts for 78 percent and 81 percent of infections among males ages 13-19 years and 20-29 years at diagnosis, respectively (table 7, page 167).

Among newly diagnosed cases in the City of Detroit, younger age groups are more likely to be MSM than those at older ages (Trends). Figure 13 shows that 73 percent of newly diagnosed 20-24 year olds and 64 percent of 13-19 year olds are MSM. The proportion who are MSM decreases as age at diagnosis increases, with MSM representing less than half of new diagnoses among persons 30 years and older. Additionally, 61 percent of newly diagnosed teens (13-19 year olds) are black MSM, compared to 38 percent of persons who are 20 years and older (Trends).

Figure 14: Percent MSM by age at HIV diagnosis among persons diagnosed in the City of Detroit, 2006-2010



2012 Profile of HIV in the Detroit Metro Area

Ranked Behavioral Group: MSM

Data from enhanced HIV/AIDS Reporting System (eHARS)

Late diagnoses:
Of the 9,919 persons living with HIV infection in the DMA, 55 percent (5,466 cases) have progressed to stage 3 HIV infection. Of these, 2,325 (43 percent) were diagnosed with stage 3 infection at the time of their initial HIV diagnoses (late HIV diagnoses). MSM and MSM/IDU make up 53 percent (2,936 cases) of persons living with stage 3 infection, of whom 42 percent (1,238 cases) had late HIV diagnoses (table 3, page 163). This suggests that MSM get tested for HIV later in the course of their infections than persons in other risk groups.

Geographic distribution:
About two thirds (61 percent) of HIV-positive MSM statewide reside in the DMA, which is similar to the proportion of all cases that reside in the DMA. Within high prevalence counties (City of Detroit, Macomb, Oakland, and Wayne), MSM comprise 52 percent of persons living with HIV infection, while in the lower prevalence counties (Lapeer, Monroe, and St. Clair), 61 percent of reported persons living with HIV infection are MSM (data not shown in tables; see figure 3 on page 18 of the statewide chapter for high/low prevalence county classification). The majority of HIV-positive MSM and MSM/IDU in the DMA live in the city of Detroit (49 percent).

Behaviorally bisexual males:
Case reporting data are collected statewide but have only limited information on male bisexual behavior. Case reports are completed by health care providers and surveillance staff reviewing medical records rather than through interviews with HIV-positive persons. Only 55 percent of all completed case reports among persons currently living in the DMA have complete 'yes' or 'no' answers to both of the following: "Before the 1st positive HIV test/AIDS diagnosis, patient had: Sex with male" and "Before the 1st positive HIV test/AIDS diagnosis, patient had: Sex with female." Based on these complete forms, 58 percent of all HIV-positive MSM (including MSM/IDU) reported also having sex with females. These more complete forms also show that three percent of females report having sex with behaviorally bisexual males. These data should be viewed as minimum estimates of these behaviors as 45 percent of case reports did not have the two questions answered completely (data not shown in tables).

Trends and conclusions:
The estimated number of new HIV infections among men who have sex with men (MSM) in the Detroit Metro Area increased from 2006 to 2010 by an average one percent per year. The estimated number of new HIV infections among MSM who were also IDU (MSM/IDU) did not change. MSM and MSM/IDU together constituted 51 percent of all new diagnoses in the DMA in 2010 (Trends). Additional information on MSM from National HIV Behavioral Surveillance (NHBS) and the Medical Monitoring Project (MMP) focuses largely on the Detroit Metro Area and can be found on pages 31-33 in the Statewide chapter of this document.

2012 Profile of HIV in the Detroit Metro Area

Ranked Behavioral Group: Heterosexuals

Data from enhanced HIV/AIDS Reporting System (eHARS)

Overview:
Heterosexual risk is the second highest ranked behavioral group in the Detroit Metro Area (DMA). Persons with heterosexual risk account for 17 percent of reported HIV infection cases. MDCH estimates that 2,270 persons living with HIV infection in the DMA have a risk factor of heterosexual contact (HC). Heterosexual contact is comprised of heterosexual contact with a 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 420 HIV-positive persons who are HCFR (males) and 1,850 persons who are HCM (females) (table 3, page 163).

Race/ethnicity and sex:
Among the 1,727 persons currently living with HIV infection in the DMA with a risk of heterosexual contact, 82 percent are females and 18 percent are males. While females account for 23 percent of all reported HIV infection cases in the DMA, they have consistently accounted for over three quarters of cases with heterosexual risk. The overall proportion of males with heterosexual risk is four percent (table 5, page 165). 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 4, page 164 for data on exposure categories, which represent all reported modes of HIV exposure.

Most heterosexual cases of HIV infection are among black persons (81 percent), largely driven by the high number of black females with heterosexual risk. Sixty-six percent of all black female cases report heterosexual risk (61 percent). Fifty-eight percent of white female cases, 66 percent of Hispanic female cases, and 61 percent of female cases of other or unknown race have heterosexual risk (table 5).

Expanded risk:
Of the 1,727 HIV-positive persons with heterosexual risk currently living in the DMA, 17 percent report their heterosexual partners are injection drug users (74 percent female, 26 percent male); three 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 (71 percent female, 29 percent male). Forty-three percent of HIV-positive persons with heterosexual risk report having sex with HIV-positive persons (68 percent female, 32 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 15 and 16 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 behaviorally bisexual males). Black females have a higher proportion of heterosexual contact without specific risk factors indicated.

Ranked Behavioral Group: Heterosexuals

Data from enhanced HIV/AIDS Reporting System (eHARS)

Figure 15: Black females living with HIV infection in the Detroit Metro Area by expanded risk transmission category, January 2012 (N = 1,883)

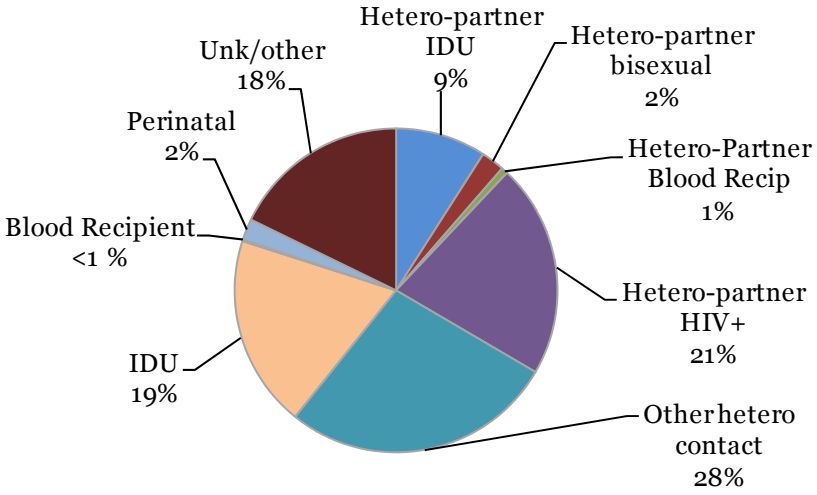
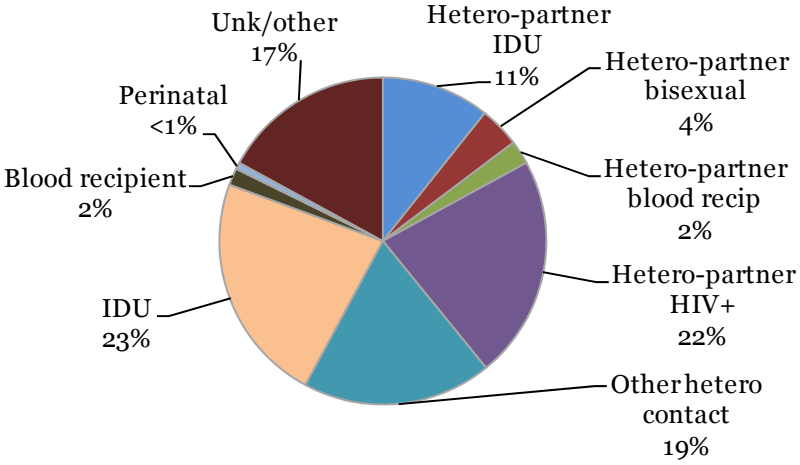


Figure 16: White females living with HIV infection in the Detroit Metro Area by expanded risk transmission category, January 2012 (N = 299)



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. Over three-quarters (78 percent) of those 13-19 years at the time of diagnosis have heterosexual risk. As age increases, the proportion of HIV-positive females with hetero-sexual risk decreases, but it remains at least twice as high as injection drug use (IDU) for all females 13 years and older at diagnosis (table 7, page 167).

2012 Profile of HIV in the Detroit Metro Area

Ranked Behavioral Group: Heterosexuals

Data from enhanced HIV/AIDS Reporting System (eHARS)

Among HIV-positive males, the proportion with a risk factor of heterosexual sex is low overall (4 percent). However, as age at diagnosis increases, heterosexual contact becomes a larger proportion of the overall risk (with 8 percent of males 60 years and over at diagnosis reporting a risk of heterosexual contact) (table 7). 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). When considering exposure categories, which represent all reported modes of HIV exposure, 47 percent of HIV-positive males report heterosexual contact (with or without partners with known risk) (table 4, page 164).

Late diagnoses:
Of the 9,919 persons living with HIV in the Detroit Metro Area (DMA), 55 percent (5,466 cases) have progressed to stage 3 HIV infection. Of these, 2,325 (43 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 17 percent (939 cases) of persons living with stage 3 infection, of whom 38 percent (356 cases) had late HIV diagnoses. Overall, heterosexuals are more likely than IDU and less likely than MSM to have late diagnoses (table 3, page 163).

Geographic distribution:
Heterosexual contact accounts for roughly the same proportion of cases in both high and low prevalence counties of the DMA, representing 17 percent in high prevalence counties and 16 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).

Trends and conclusions:
Between 2006 and 2010, the number of new HIV diagnoses among persons with heterosexual risk decreased by an average of eight percent per year (Trends). The majority of HIV-positive females in the DMA, regardless of race or age, have heterosexual risk. A small proportion of males have heterosexual risk, but a large proportion (47 percent) of males who have other risks, such as MSM, also had heterosexual contact (table 4). Cases with heterosexual risk have surpassed the proportion of cases attributed to IDU (table 3), and the number of new cases each year among persons with heterosexual risk is over three times that of IDU (Trends). Additional information on heterosexuals from National HIV Behavioral Surveillance (NHBS) focuses largely on the Detroit Metro Area and can be found on pages 36-37 in the Statewide chapter of this document.

2012 Profile of HIV in the Detroit Metro Area

Ranked Behavioral Group: IDU

Data from enhanced HIV/AIDS Reporting System (eHARS)

Overview:
Injection drug users (IDU) are the third ranked behavioral group in the Detroit Metro Area (DMA) and account for 14 percent (1,415 cases) of reported HIV-positive persons (including MSM/IDU). MDCH estimates that there are 1,860 IDU currently living with HIV in the DMA, including 480 HIV-positive males who reported male-male sex and injecting drugs (MSM/IDU) (table 3, page 163).

Race/ethnicity and sex:
Of the 1,415 IDU and MSM/IDU living with HIV, 68 percent are male (957 cases). Black males make up the largest proportion of all IDU and MSM/IDU currently living with HIV in the DMA (49 percent), followed by black females (26 percent), white males (14 percent), white females (5 percent), and Hispanic males (3 percent). In total, three quarters (74 percent, 1,052 cases) of all IDU and MSM/IDU HIV infection cases occur among black persons (table 5, page 165).

Age at HIV diagnosis:
Among males diagnosed in their 30s and 40s, IDU (including MSM/IDU) is nearly tied with undetermined risk for the second most common risk (17 percent vs. 19 percent, respectively). 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 7, page 167).

Overall, IDU is the second most common risk for females. However, this is true only for females between 30 and 49 years old at the time of HIV diagnosis (23 to 29 percent). 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 (3 percent).

Late diagnoses:
Of the 9,919 persons living with HIV infection in the DMA, 55 percent (5,466 cases) have progressed to stage 3 infection. Of these, 2,325 (43 percent) were diagnosed with stage 3 infection at the time of their initial HIV diagnoses (late HIV diagnoses). IDU make up 16 percent (890 cases) of persons living with stage 3 infection, of whom 34 percent (301 cases) had late diagnoses. These data indicate that IDU are more likely then heterosexuals and MSM to get tested earlier in the course of HIV infection (table 3).

Geographic distribution:
The majority (63 percent) of IDU and MSM/IDU currently living with HIV infection in Michigan live in the DMA. Within high prevalence counties of the DMA, 14 percent of reported cases are IDU (including MSM/IDU), while in the lower prevalence counties 12 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).

Trends and conclusions:
Between 2006 and 2010, the proportion of persons diagnosed in the DMA who were injection drug users (IDU) decreased by an average of 10 percent per year (Trends). This a continuation of the decreasing trend seen in the past seven trend analyses. Data from Michigan's HIV Behavioral Surveillance suggest reductions among IDU may be partly attributable to the success of harm reduction programs, such as needle exchange. The majority of IDU are black males (table 5). Additional information on IDU from National HIV Behavioral Surveillance (NHBS) and the Medical Monitoring Project (MMP) focuses largely on the Detroit Metro Area and can be found on pages 38-40 of the Statewide chapter of this document.

2012 Profile of HIV in the Detroit Metro Area

Description of the Epidemic by Race and Sex

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

Overview:
Black persons comprise the majority of those living with HIV infection in the DMA. They make up 23 percent of the DMA's population yet over two thirds (68 percent) of the persons living with HIV. MDCH estimates that 8,840 black persons are living with HIV in the DMA. The reported prevalence rate among black persons is 689 cases per 100,000, (1,076 among black males and 358 among black females). One out of 90 black males and one out of 280 black females in the DMA are known to be living with HIV (table 3, page 164).

White persons comprise 26 percent of reported HIV infection cases and 68 percent of the DMA's population. MDCH estimates 3,410 white persons are living with HIV in the DMA. Since these cases occur among a larger overall population, they have a lower reported prevalence rate (90 per 100,000 persons) than black or Hispanic persons. One out of every 620 white males and one out of 4,910 white females are known to be living with HIV in the DMA (table 3).

Hispanic persons make up four percent of HIV cases and four percent of the DMA population. MDCH estimates that 1,000 Hispanic persons are living with HIV infection in the DMA. The prevalence rate (206 per 100,000 persons) is higher than that among white persons as a result of a smaller overall population. One out of 320 Hispanic males and one out of 1,010 Hispanic females are known to be living with HIV (table 3). See page 44 of the Statewide chapter for a more in-depth analysis of Hispanic persons.

Arab, Asian/Native Hawaiian or Other Pacific Islander, and American Indian/Alaska Native persons living with HIV in Michigan are discussed further on pages 86-89 of the Statewide chapter.

Most persons living with HIV infection in the DMA are male (77 percent). The majority of the 7,593 male cases are black (64 percent), 30 percent are white, four percent are Hispanic, and three percent are other or unknown race. The majority of the 2,326 female HIV cases are also black (81 percent), 13 percent are white, four percent are Hispanic, and three percent are other or unknown race (table 3).

Racial and ethnic health disparities:
The DMA is similar to the state of Michigan as a whole in that large racial and ethnic disparities are seen in HIV prevalence rates and rates of new diagnoses. The epidemic disproportionately impacts black persons. The HIV prevalence rate among black persons in the DMA is 689 cases per 100,000 persons, almost eight times higher than the rate among white persons (90 per 100,000) (table 3). Black persons are also disproportionately represented in new diagnoses. Between 2006 and 2010, the rate of new diagnoses among black males was over nine times that of white males, and the rate among black females was 22 times that of white females. Overall, black persons are diagnosed with HIV at over 10 times the rate of white persons (Trends). In addition to the black community, the Hispanic population is also disproportionately impacted. While only four percent of reported cases occur among this group, the prevalence rate is over twice that of the white population (table 3).

Three quarters of all persons living with HIV in the DMA are a racial or ethnic minority (table 3). Given that HIV disproportionately impacts minorities, and the DMA has the highest burden of HIV in the state, it is important to focus attention on these disparities.

2012 Profile of HIV in the Detroit Metro Area

Description of the Epidemic by Race and Sex

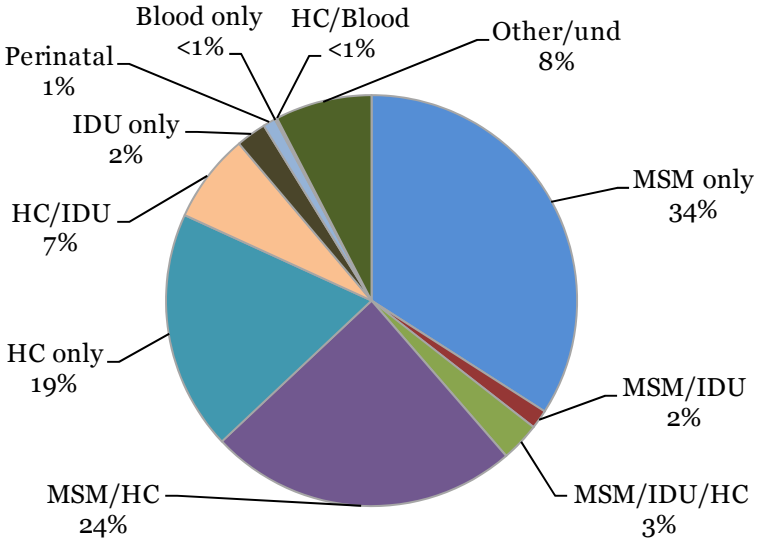
Data from enhanced HIV/AIDS Reporting System (eHARS)

Exposure:

Since the majority of HIV-positive males have a risk of male-male sex (MSM), it is particularly useful to examine exposure categories (as many other exposures may be masked if the person is MSM). Figures 17 and 18 show black and white male cases living in the Detroit Metro Area (DMA) by exposure category. A smaller proportion of HIV-positive black males have an exposure of MSM only compared to white males (34 percent vs. 58 percent, respectively). Twenty-seven percent of black male cases reporting male-male sex are behaviorally bisexual, also reporting heterosexual contact (HC), including three percent who report male-male sex, injection drug use, and heterosexual contact (MSM/IDU/HC). Nineteen percent of black males report heterosexual contact as their only exposure, compared to eight percent of white male cases. A larger proportion of HIV-positive black males report a dual risk of injection drug use and heterosexual contact compared to white males (7 percent vs. 2 percent, respectively).

See figures 15 and 16 on page 142 for expanded risk among black and white HIV-positive females in the DMA. For females, expanded risk transmission categories are examined since the majority of female cases have heterosexual risk. The large number of male cases who report both MSM and heterosexual contact is interesting, given that just three 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 (data not shown in tables).

Figure 17: Black male HIV infection cases currently living in the Detroit Metro Area by exposure category, January 2012 (N = 4,838)

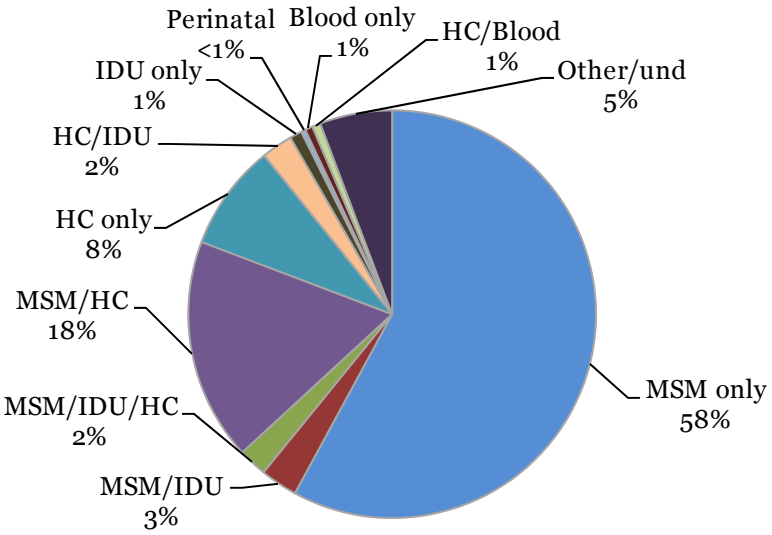


2012 Profile of HIV in the Detroit Metro Area

Description of the Epidemic by Race and Sex

Data from enhanced HIV/AIDS Reporting System (eHARS)

Figure 18: White male HIV infection cases currently living in the Detroit Metro Area by exposure category, January 2012 (N = 2,298)



Late Diagnoses:
Of the 9,919 persons living with HIV infection in the DMA, 55 percent (5,466 cases) have progressed to stage 3 infection. Of these, 2,325 (43 percent) were diagnosed with stage 3 infection at the time of their initial HIV diagnoses (late HIV diagnoses). Males make up 78 percent of stage 3 cases, of whom 44 percent had late HIV diagnoses. Females make up the remaining 22 percent of stage 3 cases, of whom 38 percent had late diagnoses (table 3, page 163).

Although black persons make up a larger proportion of persons living with stage 3 compared to white persons (67 vs. 26 percent, respectively), a larger proportion of white persons living with stage 3 infection had late diagnoses than did black persons (47 vs. 41 percent). Hispanic persons make up three percent of stage 3 cases, of whom 46 percent had late HIV diagnoses. Other minorities make up roughly three percent of stage 3 cases, but Asians/Native Hawaiians or Other Pacific Islanders have the highest proportion of stage 3 cases that were late diagnoses (63 percent). Statewide, only 55 percent of stage 3 cases among Asians/Native Hawaiians or Other Pacific Islanders were late diagnoses (which is similar to the proportion of late diagnoses among other racial/ethnic groups (table 3).

Geographic distribution:
The distribution of HIV among various racial/ethnic groups differs throughout the DMA. When examining the rates of different racial/ethnic groups in high and low prevalence areas, it becomes apparent that the impact of the epidemic is greater in high prevalence areas than in low prevalence areas (see figure 3 on page 18 of the statewide chapter for high/low prevalence county classification).

2012 Profile of HIV in the Detroit Metro Area

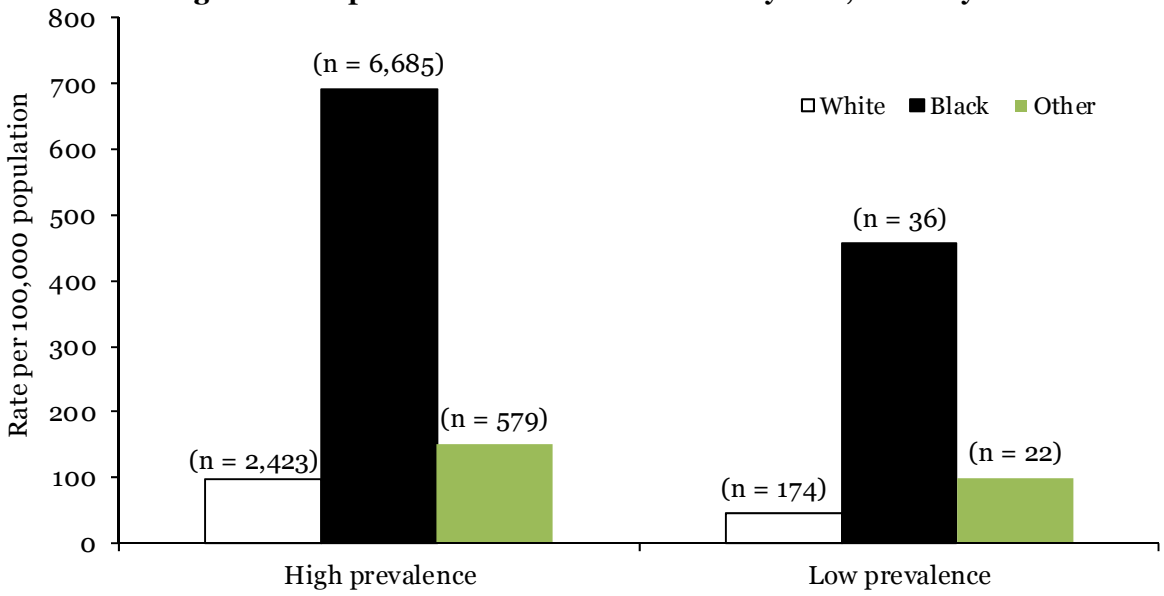
Description of the Epidemic by Race and Sex

Data from enhanced HIV/AIDS Reporting System (eHARS)

Figure 18 shows that HIV prevalence rates in high prevalence areas of the DMA are at least one and a half times as high as those in low-prevalence areas for all racial/ethnic groups. Additionally, the HIV infection prevalence rate among black persons is over seven times higher than white persons in high prevalence areas and almost ten times higher than the rate among white persons in low prevalence areas. This disparity exists despite the fact that black persons make up a smaller proportion of HIV infection cases in low prevalence areas than they do in high prevalence areas (16 percent vs. 69 percent, respectively).

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 one and a half times as high as the rate among white persons in high prevalence areas and twice as high as the rate among whites in low prevalence areas.

Figure 19: Prevalence rates of persons living with HIV infection in high and low prevalence areas of the DMA by race, January 2012



Trends and conclusions:

The rate of new HIV diagnoses in the Detroit Metro Area (DMA) increased among males (average 1percent per year) between 2006 and 2010 while the rate among females decreased by six percent per year for the third consecutive trend report (Trends). Diagnosis and prevalence rates remain highest among black persons of both sexes compared to all other race/sex groups (table 3, page 163).

2012 Profile of HIV in the Detroit Metro Area

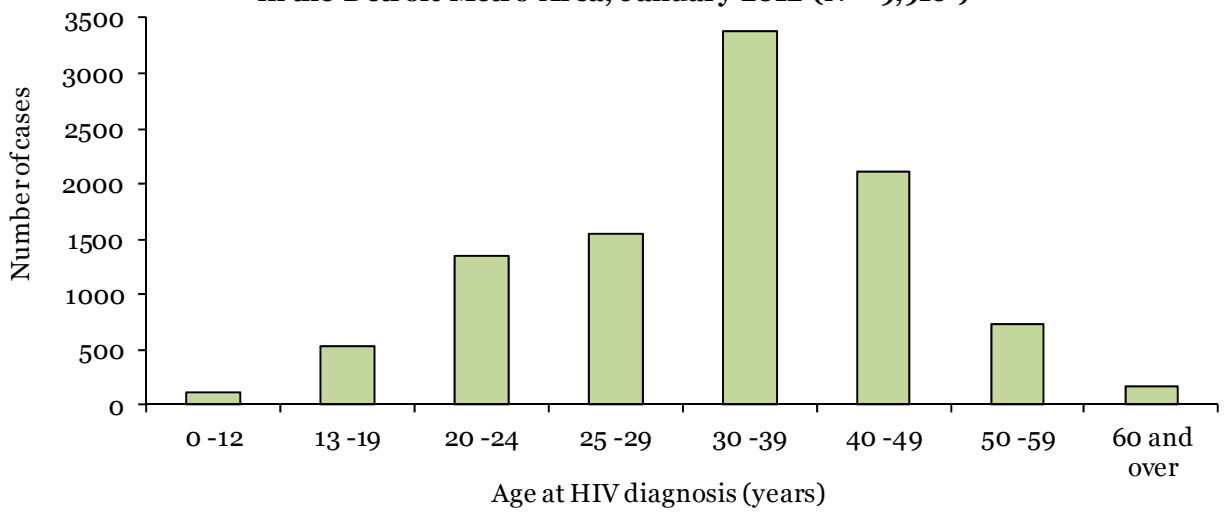
Description of the Epidemic by Age

Data from enhanced HIV/AIDS Reporting System (eHARS)

Age at diagnosis:

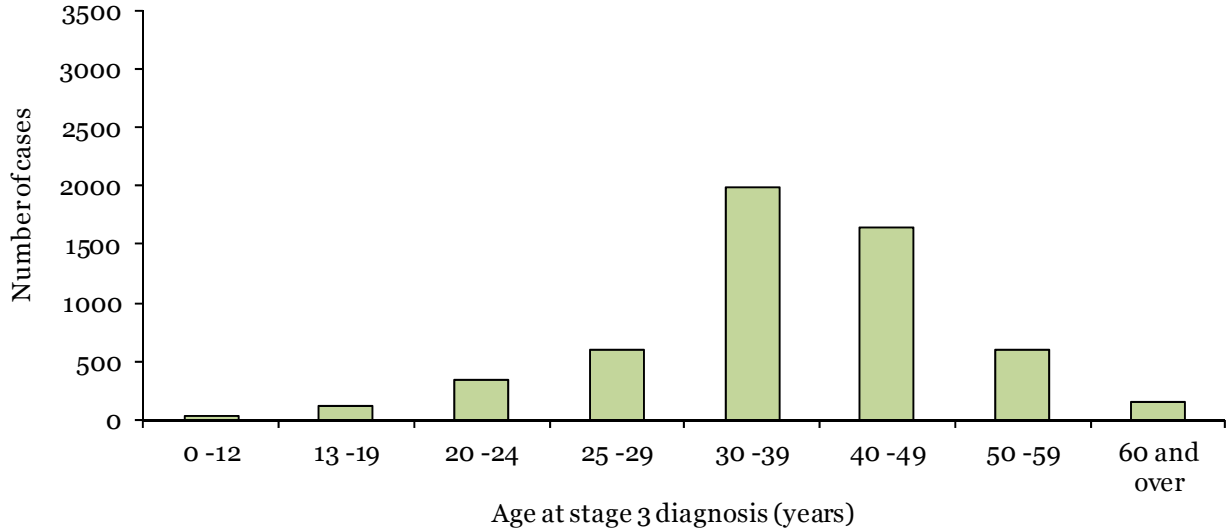
The majority of persons newly diagnosed with HIV in the DMA are between 30 and 39 years old, followed by persons 40-49 years of age (figure 20). The pattern changes when looking at age at stage 3 diagnosis in figure 21, where 40-49 year olds make up a higher proportion of new stage 3 diagnoses than new HIV diagnoses (30 percent vs. 21 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 163; data on age at stage 3 diagnoses not shown in tables).

Figure 20: Age at HIV diagnosis for persons living with HIV infection in the Detroit Metro Area, January 2012 (N = 9,916*)



*Not included are 3 HIV infection cases with missing date of birth/age information.

Figure 21: Age at stage 3 diagnosis for persons living with HIV infection in the Detroit Metro Area, January 2012 (N = 5,466)

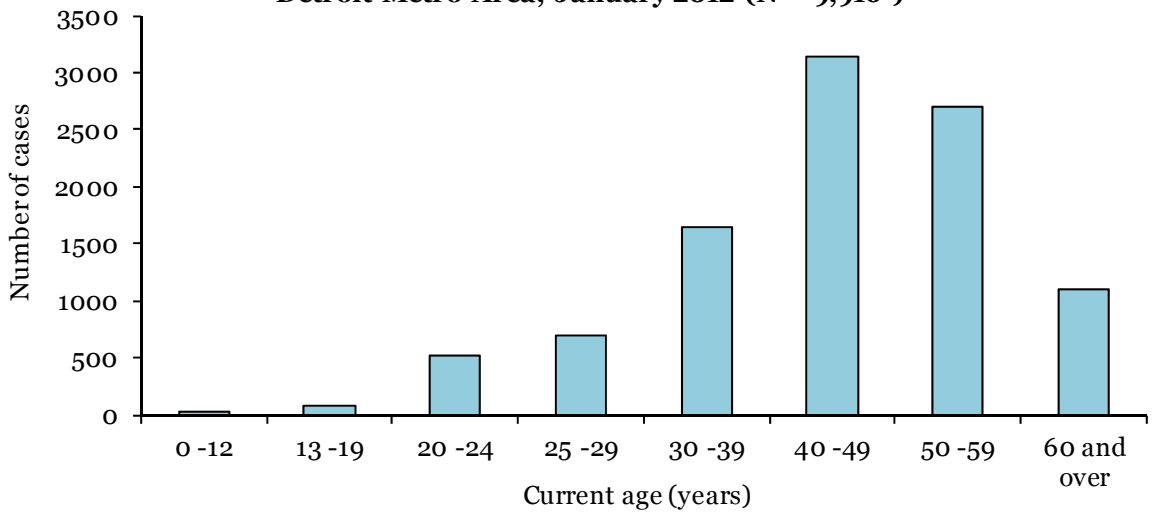


2012 Profile of HIV in the Detroit Metro Area

Description of the Epidemic by Age

Data from enhanced HIV/AIDS Reporting System (eHARS)

Figure 22: Current age of persons living with HIV infection in the Detroit Metro Area, January 2012 (N = 9,916*)



*Not included are 3 HIV infection cases with missing date of birth/age information.

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 22, which shows the current age of persons living with HIV in the Detroit Metro Area (DMA) as of January 1, 2012. Those currently in their forties make up the largest proportion of persons living with HIV (32 percent). While persons who were 50 years and older at the time of HIV diagnosis represent only nine percent of newly diagnosed cases, they make up over one third (38 percent) of persons living with HIV when considering current age (data on current age not shown in tables).

Late diagnoses:

Of the 9,919 persons living with HIV infection in the DMA, 55 percent (5,466 cases) have progressed to stage 3 infection. Of these, 2,325 (43 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. Among persons 60 years and older at stage 3 diagnosis, 69 percent had late diagnoses (table 3, page 163).

Trends and conclusions:

For the first time in seven annual trend reports, the rate of new diagnoses among 13-19 year olds in the DMA did not increase. The rate did increase, however, among persons 20-24 and 25-29 years (11 percent and 8 percent per year, respectively). This is the second consecutive report showing increases among 20-24 year olds. Rates among 35-39 year olds and 40-44 year olds decreased by an average six percent per year and 10 percent per year, respectively. Twenty to twenty-four year olds now have the highest *rate* of new diagnoses of any age group (figure 10, page 136). The largest *number* of new diagnoses and highest prevalence, however, remains among persons 30-39 years old at the time of diagnosis (Trends, table 3). When considering current age, persons 40-49 years, followed by persons 50-59 years, make up the largest proportion of persons living with HIV infection.

2012 Profile of HIV in the Detroit Metro Area

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 119 individuals living with HIV in the DMA who were 0-12 years old at diagnosis. They comprise one percent of all reported HIV infection cases (table 3, page 163). Most 0-12 year olds (89 percent) were infected perinatally, i.e., before, during, or shortly after birth. Those infected after birth were infected via breastfeeding. Five percent were infected through exposures to HIV-infected blood products before 1985, and the remaining six percent were infected through sexual assault or had unknown risk. Many with unknown risk had suspected perinatal exposures but were born outside of the U.S., and risk information could not be confirmed (table 7, page 167).

Race/ethnicity and sex:
Of the 119 individuals living in the DMA who were ages 0-12 when diagnosed with HIV, 59 percent are male and 41 percent are female. Three quarters are black (76 percent), 14 percent are white, and the remaining 10 percent are of other or unknown race/ethnicity (including Hispanic) (table 6, page 166).

Of the 106 individuals with confirmed perinatal exposures, 57 percent are male and 43 percent are female. Eighty-one percent are black, nine percent are white, and 10 percent are Hispanic or other/unknown race (table 5, page 165). For all but one of these perinatally infected cases, whose mother was a documented injection drug user (IDU), the only information about the mother is that she was HIV-positive; no additional maternal risk information was available (data not shown in tables).

Late diagnoses:
Of the 9,919 persons living with HIV infection in the DMA, 55 percent (5,466 cases) have progressed to stage 3 infection. Of these, 2,325 (43 percent) were diagnosed with stage 3 infection at the time of their initial HIV diagnoses (late HIV diagnoses). Children make up one percent of persons living with stage 3, of whom 29 percent (14 cases) had late HIV diagnoses (table 3, page 163).

Geographic distribution:
Almost all (97 percent) of the 119 children diagnosed with HIV between the ages of 0-12 years are currently residents of high prevalence counties in the DMA (see figure 3, page 18 of the statewide chapter for high/low prevalence county classification). Sixty-three percent (75 cases) currently live in the City of Detroit, while 13 percent reside in Macomb County and 13 percent in Oakland County. The remaining 10 percent live in Monroe, St. Clair, and Wayne Counties (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 the DMA, the proportion of children who become infected perinatally has dropped precipitously, from 28 percent prior to 1997 to five percent between 1997-2009. As of January 1, 2012, one of the 28 children born in the DMA in 2008 and two of the 23 children born in the DMA in 2009 to HIV-positive females were diagnosed with HIV infection. None of the 51 children born in the DMA in 2010-2011 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 the Detroit Metro Area

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 1,874 persons living in the Detroit Metro Area (DMA) who were ages 13 -24 years old at HIV diagnosis. They comprise 19 percent of all persons reported with HIV infection in the DMA (5 percent ages 13-19 years; 14 percent ages 20-24 years). The number of prevalent cases among persons ages 13-24 years at diagnosis is now higher than the number of prevalent cases among persons ages 25-29 years at diagnosis (table 3, page 163).

Risk-teens (13-19 years):

In the 1980s, most HIV-positive teenagers were recipients of HIV-infected blood or blood products. However, since screening of all blood products began in 1985, this proportion has steadily declined. Among the 527 persons living with HIV in the DMA who were ages 13-19 at the time of HIV diagnosis, 402 (76 percent) are male (table 6, page 166). Among these male cases, over three quarters are males who have sex with males (MSM) (79 percent), including those who also inject drugs (MSM/IDU) (figure 23). Two percent were recipients of HIV-infected blood products before 1985, and another two percent are injection drug users (including MSM/IDU). One percent had heterosexual contact with females of known risk (HCFR). Fifteen percent of 13-19 year old males had undetermined risk.

Figure 23: Males ages 13-19 at diagnosis currently living with HIV infection in the Detroit Metro Area, by risk transmission category (n = 402)

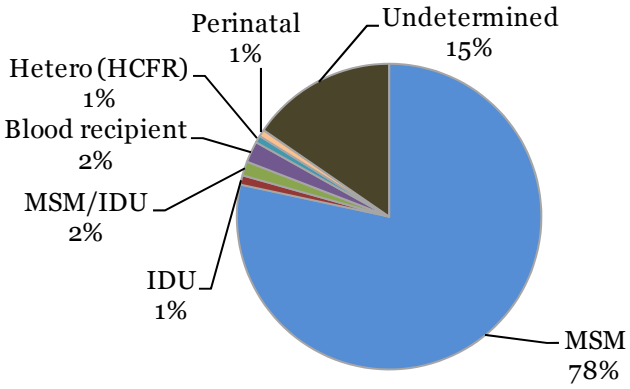
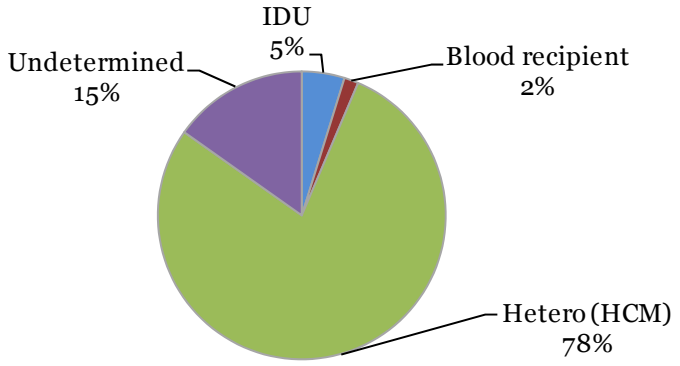


Figure 24: Females ages 13-19 at diagnosis currently living with HIV infection in the Detroit Metro Area, by risk transmission category (n = 125)



2012 Profile of HIV in the Detroit Metro Area

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 125 persons living with HIV in the DMA who were ages 13-19 at the time of diagnosis (24 percent) (table 6). Of females who were 13-19 years at the time of diagnosis, over three quarters (78 percent) have a risk of heterosexual contact (HCM) (figure 24). Five percent are injection drug users (IDU), and 15 percent have undetermined risk. Two percent were recipients of HIV-infected blood products before 1985.

Risk-young adults:

Among the 1,347 persons living with HIV in the DMA who were ages 20-24 at the time of HIV diagnosis, over three quarters (80 percent) are male (table 6, page 166). Eighty-four percent of male young adults reported sex with other males (including MSM/IDU); 13 percent had undetermined risk; and four percent reported IDU (including MSM/IDU). One percent had heterosexual risk (HCFR), and less than one percent received HIV-infected blood products (figure 25).

Figure 25: Males ages 20-24 at diagnosis currently living with HIV infection in the Detroit Metro Area, by risk transmission category (n = 1,072)

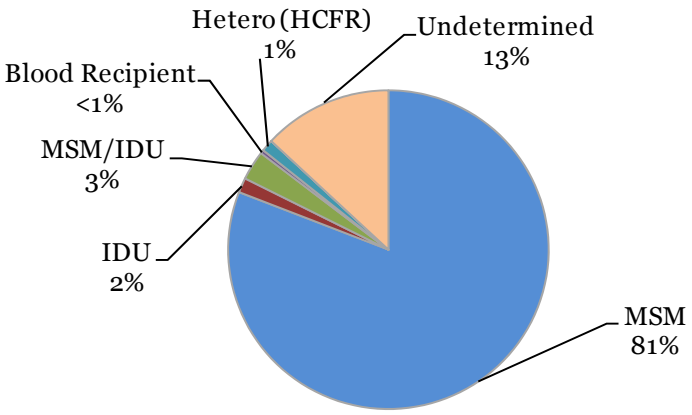
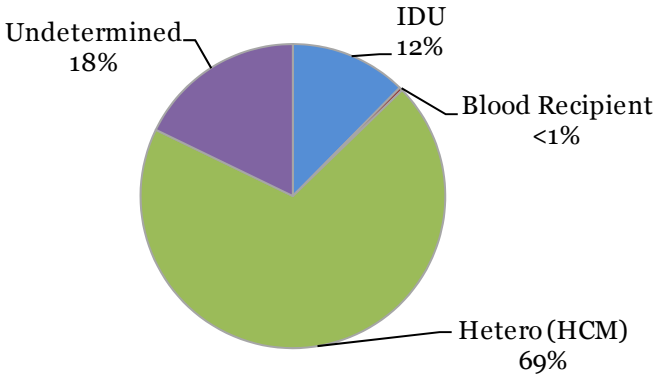


Figure 26: Females ages 20-24 at diagnosis currently living with HIV infection in the Detroit Metro Area, by risk transmission category (n = 275)



2012 Profile of HIV in the Detroit Metro Area

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

Figure 26 shows that, among the 275 females living with HIV who were ages 20-24 at the time of diagnosis, 69 percent had heterosexual risk (HCM). Eighteen percent of HIV-positive females in this age group had undetermined risk, and 12 percent were IDU. Less than one percent received HIV-infected blood products.

Race/ethnicity:
Eighty-five percent of persons currently living in the Detroit Metro Area (DMA) and were 13-19 at the time of HIV diagnosis are black, 10 percent are white, four percent are Hispanic, and two percent are of other or unknown race. Seventy-eight percent of persons ages 20-24 at the time of HIV diagnosis are black, 17 percent are white, three percent are Hispanic, and two percent are of other or unknown race. Comparing these proportions with the racial/ethnic breakdown of those over 24 years at diagnosis (65 percent black, 29 percent white, four percent Hispanic, and three percent other or unknown race) shows that HIV-positive youth are disproportionately black (table 6, page 166).

STDs:
STD rates are highest in teens and young adults (15-24 year olds) (table 8, page 168). Among persons ages 20-24 years, the rate of chlamydia is six times higher and the rate of gonorrhea is nearly six times higher than the rate among the general DMA population. Although those 15-24 years make up only 13 percent of the population, they represent 67 percent of gonorrhea cases and 77 percent of chlamydia cases. In 2011, 29 percent of DMA primary and secondary syphilis cases were under the age of 25, representing a younger at risk-group than in previous years.

Teen pregnancy:
In the DMA, the 2010 teen pregnancy rate ranged from 30 pregnancies per 1,000 females ages 15-19 in Oakland County to 76 pregnancies per 1,000 females ages 15-19 in Wayne County, which was the highest rate of all counties in Michigan (data not shown in tables).

Geographic distribution:
Almost all (98 percent) of persons 13-24 years old at diagnosis currently living in the DMA live in high prevalence counties (see figure 3, page 18 of the statewide chapter for high/low prevalence county classification), which is the same as the distribution for all HIV-positive persons. Sixty-two percent of HIV-positive persons diagnosed as teens or young adults live in the City of Detroit, followed by 15 percent in Oakland County and 13 percent in Wayne County (excluding Detroit) (data not shown in tables).

Trends and conclusions:
The rate of new diagnoses remained stable among persons 13-19 years of age in the DMA between 2006 and 2010. This is the first time in seven consecutive annual trend analyses that there was not a significant increase in the rate of new diagnoses in this group. However, the rate of new diagnoses among 20-24 year olds increased for the second consecutive trend report. Decreasing rates among 35-39 year and 40-44 year olds have resulted in 13-24 year olds representing a larger proportion of new diagnoses and prevalent cases (Trends). 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 7, page 167). The majority of HIV-positive persons diagnosed in these age groups are black and live in the City of Detroit (data not shown in tables).

2012 Profile of HIV in the Detroit Metro Area

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 894 persons living with HIV infection in the Detroit Metro Area (DMA) who were 50 years and older at the time of diagnosis. They comprise nine percent of all reported HIV-positive persons, and three quarters (75 percent) are male. Sixty-six percent are black, 27 percent are white, and seven percent are Hispanic or other/unknown race (table 6, page 166).

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 541 males currently living with HIV in the DMA who were diagnosed in their 50s (74 percent of all persons 50-59 years at diagnosis) (table 7, page 167). Of all persons 60 and over at HIV diagnosis, 126 are males (75 percent). Figures 27 and 28 show the risk profiles of males diagnosed in their 50s and at 60 and older, respectively.

Figure 27: Males ages 50-59 at diagnosis currently living with HIV infection in the Detroit Metro Area, by risk transmission category (n = 541)

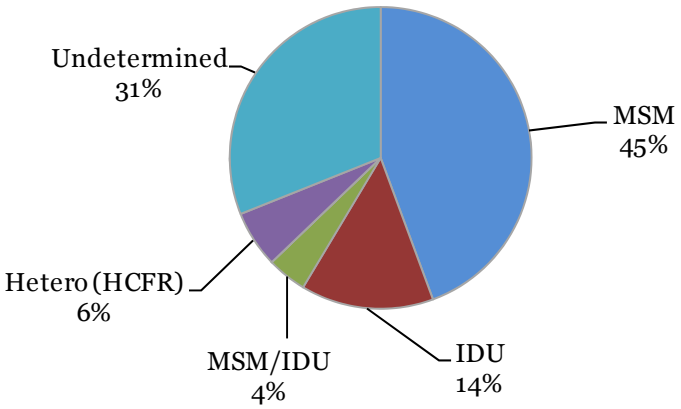
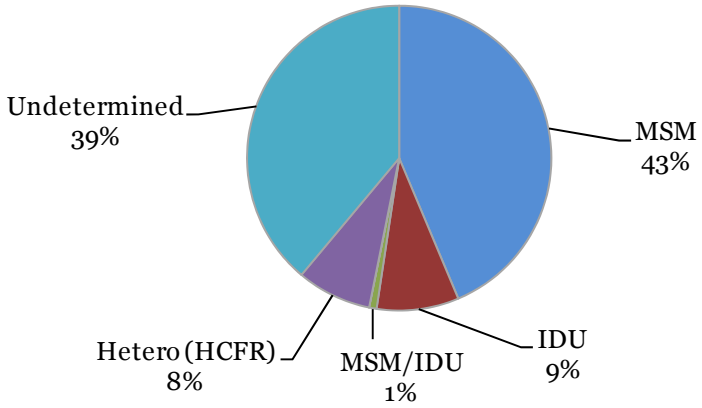


Figure 28: Males ages 60 and older at diagnosis currently living with HIV infection in the Detroit Metro Area, by risk transmission category (n = 126)



2012 Profile of HIV in the Detroit Metro Area

Description of the Epidemic by Age: 50 years and older

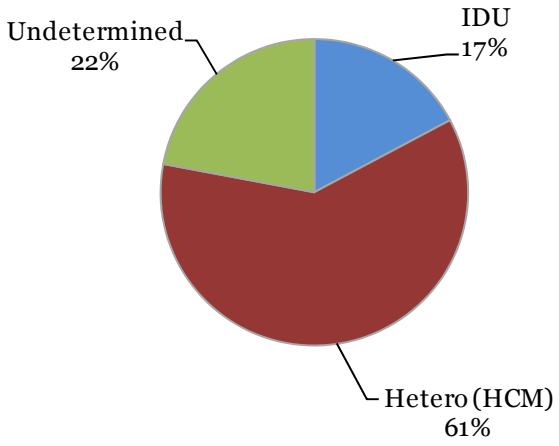
Data from enhanced HIV/AIDS Reporting System (eHARS)

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 (31 and 39 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 (18 percent vs. 10 percent, respectively). This includes males with a dual risk of male-male sex and IDU (MSM/IDU). The proportion of males reporting heterosexual risk (HCFR) increases with age, representing six percent of males who were 50-59 years old at HIV diagnosis and eight percent of males 60 and older at diagnosis.

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 29 and 30). As with HIV-positive females in other age groups, the most common risk is heterosexual contact (HC) (61 percent and 58 percent, respectively). Five percent of females 60 years and older at diagnosis were recipients of HIV-infected blood products (compared to none in those 50-59 years at diagnosis), and females in their 50s at diagnosis are more likely to be injection drug users (17 percent vs. 15 percent, respectively).

Figure 29: Females ages 50-59 at diagnosis currently living with HIV infection in the Detroit Metro Area, by risk transmission category (n = 186)

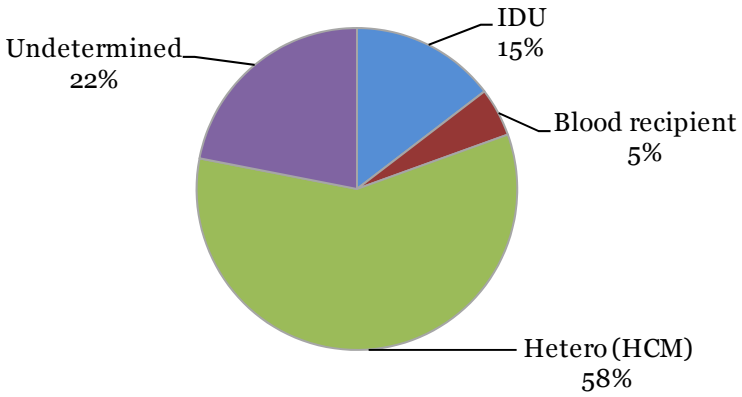


2012 Profile of HIV in the Detroit Metro Area

Description of the Epidemic by Age: 50 years and older

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

Figure 30: Females ages 60 and older at diagnosis currently living with HIV infection in the Detroit Metro Area, by risk transmission category (n = 41)



STDs:
Gonorrhea and chlamydia are epidemics that largely affect young people in the Detroit Metro Area (DMA), with less than one percent of chlamydia cases and just over two percent of gonorrhea cases occurring among persons over 50 years of age at diagnosis. In contrast, seven percent of primary and secondary syphilis cases are over the age of 50 at diagnosis. These individuals are more likely to be male (100 percent vs. 90 percent, respectively) and more likely to be white than black (43 percent vs. 20 percent, respectively) than the rest of persons diagnosed with syphilis in the DMA (age/race/sex breakdown not shown in tables).

Late diagnoses:
Of the 9,919 persons living with HIV infection in the Detroit Metro Area (DMA), 55 percent (5,466 cases) have progressed to stage 3 infection. Of these, 2,325 (43 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 eight percent (420 cases) of persons living with stage 3 infection, of whom 60 percent had late HIV diagnoses. Those who were 60 years and older at diagnosis make up two percent of persons living with stage 3 infection (101 cases), of whom 69 percent had late diagnoses. These two age groups have the highest proportion of late diagnoses of all age groups (table 3, page 163).

Trends and conclusions:
In the DMA, the rate of persons who were 50 years and older at the time of HIV diagnosis remained level between 2006 and 2010 (Trends). Although persons 50 years and older have the lowest rates of new diagnoses (except for those 0-12 years), 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.

Although it is still low, males who were 50-55 years and 65 years and older at HIV diagnosis have the highest proportion of heterosexual risk of males in any age group (6 percent and 8 percent, respectively) (table 7, page 167). This is an important distinction when preparing targeting prevention and interventions.

2012 Profile of HIV in the Detroit Metro Area

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 the Detroit Metro Area, January 2012

Characteristic	RY clients	Cases
White	21%	26%
Black	69%	68%
Hispanic	4%	4%
Other	1%	3%
Unknown*	3%	N/A
Male	75%	77%
White male	*18%*	*23%*
Black male	*49%*	*49%*
Hispanic male	*3%*	*3%*
Other male	*4%*	*2%*
Unknown male	*1%*	*N/A*
Female	25%	23%
White female	*3%*	*3%*
Black female	*21%*	*19%*
Hispanic female	*1%*	*1%*
Other female	*1%*	*1%*
Unknown female	*<1%*	*N/A*
0-12 years†	1%	<1%
13-19 years†	3%	1%
20-24 years†	7%	5%
25-44 years†	43%	38%
45+ years†	46%	56%
Unknown age†	N/A	<1%
Infants: 0-1 years†	<1%	0%
Children: 2-12 years†	1%	<1%
Youth: 13-24 years†	10%	6%
Women 25+ years†	18%	22%
Total	**100% (N = 3,495)**	**100% (N = 9,919)**

*"Unknown" race is 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 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 four client-level CAREWare 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 de-duplicated to produce a URS dataset for analysis. The Detroit Metro Area (DMA) dataset is a subset of the de-duplicated statewide dataset from all Ryan White funded programs, including ADAP. Clients are included in this dataset if they reside in the DMA and received at least one service from a Ryan White-funded provider between January 1, 2011 and December 31, 2011. DMA clients may receive services from providers that are not located in the DMA.

Comparing services to cases:

Table 1 compares the demographic distribution of the 3,495 HIV-positive residents of the DMA who were served by Ryan White-funded programs in 2011 to that of the 9,919 persons known to be living with HIV in that same area at the end of 2011. The comparison shows that persons receiving Ryan White services were less likely than the reported HIV-positive population to be white (particularly white males) and less likely to be over 45 years old. Persons receiving Ryan White services were more

Service Utilization of HIV-Positive Persons in Care

Data from Uniform Reporting System (URS)

likely than the reported HIV-positive population to be females and 13-44 years of age.

Core services:
Table 2 gives additional detail about the core services of outpatient medical care, oral health care, mental health care, medical case management, and ADAP utilization among HIV-positive DMA residents by Ryan White programs in 2011. 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 ranging from a complete physical with a physician to a brief or repeat visit with a physician or nurse practitioner. They may include medication adherence counseling with a medical practitioner. The average of four visits per client, with a median of three, is consistent with HIV care standards that recommend monitoring of health status every three to four months. A total of 89 percent of the DMA clients received outpatient ambulatory medical care in 2011 (table 2).

Oral health care services reported in the URS are provided primarily through the statewide Michigan Dental Program, administered by the Division of Health, Wellness and Disease Control of MDCH. The University of Detroit-Mercy Dental School delivers many of these oral health care services in the Detroit area. Dental services for clients may be extensive and require multiple visits, but they may also be for annual or more frequent prophylaxis. The annual average of three visits per client is consistent with an initial exam to plan the care needed and one or more treatment visits following approval of the care plan (table 2).

Mental health care 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 DMA clients received mental health services at an average of 5.3 visits a year (table 2).

Table 2: Core services received by Ryan White clients in the Detroit Metro Area in 2011 (N=3,495)

	Outpatient medical care	Oral health care	Mental health care	Medical case management	ADAP (medication assistance)
No. of unduplicated clients served*	3,119	437	412	1,278	2,139
Percent receiving service	89%	13%	12%	36%	61%
Total days of service (visits)†	13,433	2,498	2,184	30,170	39,083
Average no. of visits per client	4.3	4.4	5.3	23.6	30.2
Median no. of visits per client	3	3	3	13	23
Range of visits per client	1-47	1-45	1-51	1-286	1-195

*Clients are de-duplicated 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.

2012 Profile of HIV in the Detroit Metro Area

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, with the goal of linking HIV-positive clients to health care services and assisting them to remain in care. In 2011, 36 percent of DMA clients received medical case management services at an average of 23 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. DMA residents were 61 percent of the total number of ADAP clients served in 2011. Sixty-one percent of all DMA Ryan White clients utilized ADAP in 2011 at an average of 30.2 prescriptions filled for the year (table 2).

2012 Profile of HIV in the Detroit Metro Area

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 26,000 cases of chlamydia and over 9,000 cases of gonorrhea reported in the Detroit Metro Area (table 8, page 168). For gonorrhea and chlamydia, the highest rates of infection were among persons ages 20-24. This age group accounted for six percent of the DMA population but 34 percent of gonorrhea and 36 percent of chlamydia cases. The rates of chlamydia and gonorrhea among black persons were much higher than among white persons. Even though 45 percent of gonorrhea cases and 48 percent of chlamydia cases were missing race information, the rates among black persons remain higher even if all unknown cases were white. The rate for gonorrhea in the DMA among black persons is 26 times the rate for white persons, and the rate for chlamydia is 10 times the white rate. Forty-two percent of gonorrhea cases were male; however, approximately 73 percent of reported chlamydia cases were female. This is because chlamydia screening targets females.

Syphilis:
Reported primary and secondary syphilis cases increased each year in Michigan from 1997 to a high of 486 cases in 2002. There was a steady and statistically significant downward trend in reported cases during the 2002 and 2003 calendar years, resulting in a nearly 50 percent decrease in reported cases in 2003 compared to 2002. However, syphilis cases have increased slightly since 2005 due to increases in syphilis among MSM, many of whom are HIV-positive. The DMA reported 71 percent of the state's primary and secondary syphilis cases in 2011 and 69 percent of total syphilis cases to date (data not shown in tables). Approximately 29 percent of cases were reported in those younger than 25 years, representing a trend towards younger syphilis cases. However, 45 percent are between the ages of 25 and 39 and 26 percent are 40 and over, representing an older at-risk population than gonorrhea or chlamydia. Primary and secondary syphilis cases reported in 2011 in the DMA were 76 percent black and 90 percent male. The rate among black persons was almost eleven times higher than the rate among white persons.

Sexual orientation:
Nationwide, there have been increases in STD cases among self-identified men who have sex with men (MSM). Michigan does not collect data on sexual orientation or sexual risk behaviors for all gonorrhea or chlamydia cases. Sexual orientation and risk behavior data are collected for syphilis cases. Of male primary and secondary syphilis cases in 2011, 78 percent of males were MSM. The male to female syphilis ratio in 2011 in the DMA was nearly 9:1. Fifty-five percent of males with syphilis are co-infected with HIV, compared to five percent of the 20 females (data not shown in tables).

Hepatitis C

Data from Michigan Disease Surveillance System (MDSS)

Acute hepatitis C:
In 2011, eight cases of acute hepatitis C were reported in the Detroit Metro Area (DMA) (table 9, page 169). Sixty-three percent of acute cases were among males, while 38 percent were among females. Ethnicity is not consistently collected for hepatitis C cases; therefore, we cannot provide a measure of infection among Hispanic or non-Hispanic persons. Three quarters (75 percent) of acute hepatitis C cases reported in 2011 are white, and the other 25 percent are black. Due to small numbers, rates are unavailable for cases of acute hepatitis C in 2011.

Chronic hepatitis C:
In 2011, 3,452 cases of chronic hepatitis C were reported in the DMA (table 9), a rate of 81 cases of chronic hepatitis C per 100,000 DMA residents. Sixty-two percent of chronic cases were among males while 37 percent were among females. The rate of chronic hepatitis C in the DMA was highest among persons of other race (101 cases per 100,000 population) and black persons (89 cases per 100,000), compared to 32 per 100,000 in white persons. However, these rates must be viewed with caution as the race/ethnicity of the client was unknown in 44 percent of reported chronic cases. The highest rate of chronic hepatitis C was found among persons 55-59 years of age (306 cases per 100,000). The lowest rates, excluding those with insufficient numbers to calculate rates, were among persons 15-19 years and 35-39 years.

Please note that chronic hepatitis C data must be interpreted with caution. These data do not represent the incidence or prevalence of chronic hepatitis C in the DMA; rather, the data represent an aggregate of newly diagnosed cases reported to local health departments by laboratories and healthcare providers. Although these cases were newly diagnosed in 2011, the patient may have been chronically infected with hepatitis C for years but remained undiagnosed until 2011.

Limitations of the data:
Since acute and chronic hepatitis C infections are often asymptomatic and can remain undetected and unreported for years, the official number of reported cases is much lower than the actual number of cases. An estimated 3.2 million persons in the United States have chronic hepatitis C virus infection. Most people do not know they are infected because they don't look or feel sick.

Table 3: Demographic information on HIV infection cases currently living in the Detroit Metro Area, 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
RACE/ ETHNICITY§												
White	3,410	1,154	26%	1,443	26%	2,597	26%	90	683	47%	2,884,240	68%
Black	8,840	3,033	68%	3,688	67%	6,721	68%	689	1,506	41%	975,057	23%
Hispanic	460	158	4%	191	3%	349	4%	206	87	46%	169,272	4%
Asian/NH/OPI	60	21	<1%	27	<1%	48	<1%	34	17	63%	140,727	3%
AI/AN	20	11	<1%	5	<1%	16	<1%	131	1	20%	12,250	<1%
Multi/other/unk	250	76	2%	112	2%	188	2%	N/A	31	28%	85,758	2%
SEX & RACE												
Male	9,980	3,352	75%	4,241	78%	7,593	77%	367	1,858	44%	2,066,529	48%
White male	*3,020*	*998*	*22%*	*1,300*	*24%*	*2,298*	*23%*	*162*	*631*	*49%*	1,415,046	*33%*
Black male	*6,360*	*2,152*	*48%*	*2,686*	*49%*	*4,838*	*49%*	*1076*	*1,120*	*42%*	449,599	*11%*
Hispanic male	*350*	*124*	*3%*	*142*	*3%*	*266*	*3%*	*311*	*66*	*46%*	85,575	*2%*
Other male	*250*	*78*	*2%*	*113*	*2%*	*191*	*2%*	*164*	*41*	*36%*	116,309	*3%*
Female	3,060	1,101	25%	1,225	22%	2,326	23%	106	467	38%	2,200,775	52%
White female	*390*	*156*	*4%*	*143*	*3%*	*299*	*3%*	*20*	*52*	*36%*	1,469,194	*34%*
Black female	*2,480*	*881*	*20%*	*1,002*	*18%*	*1,883*	*19%*	*358*	*386*	*39%*	525,458	*12%*
Hispanic female	*110*	*34*	*1%*	*49*	*1%*	*83*	*1%*	*99*	*21*	*43%*	83,697	*2%*
Other female	*80*	*30*	*1%*	*31*	*1%*	*61*	*1%*	*50*	*8*	*26%*	122,426	*3%*
RISK†												
Male-male Sex (MSM)	6,360	2,132	48%	2,707	50%	4,839	49%	--	1,162	43%	--	--
Injection drug use (IDU)	1,380	386	9%	661	12%	1,047	11%	--	225	34%	--	--
MSM/IDU	480	139	3%	229	4%	368	4%	--	76	33%	--	--
Blood products	60	15	<1%	31	1%	46	<1%	--	11	35%	--	--
Heterosexual contact (HC)	2,270	788	18%	939	17%	1,727	17%	--	356	38%	--	--
HCFR (male)	*420*	*134*	*3%*	*184*	*3%*	*318*	*3%*	*--*	*70*	*38%*	--	--
HCM (female)	*1,850*	*654*	*15%*	*755*	*14%*	*1,409*	*14%*	*--*	*286*	*38%*	--	--
Perinatal	140	65	1%	44	1%	109	1%	--	16	36%	--	--
Undetermined	2,340	928	21%	855	16%	1,783	18%	--	479	56%	--	--
AGE AT HIV DIAGNOSIS												
0 - 12 years	160	70	2%	49	1%	119	1%	--	14	29%	--	--
13 - 19 years	690	318	7%	209	4%	527	5%	--	45	22%	--	--
20 - 24 years	1,770	781	18%	566	10%	1,347	14%	--	133	23%	--	--
25 - 29 years	2,040	753	17%	799	15%	1,552	16%	--	242	30%	--	--
30 - 39 years	4,440	1,347	30%	2,027	37%	3,374	34%	--	850	42%	--	--
40 - 49 years	2,760	808	18%	1,295	24%	2,103	21%	--	717	55%	--	--
50 - 59 years	960	307	7%	420	8%	727	7%	--	254	60%	--	--
60 years and over	220	66	1%	101	2%	167	2%	--	70	69%	--	--
Unspecified	10	3	<1%	0	0%	3	<1%	--	0	0%	--	--
CURRENT RESIDENCE												
Lapeer Co.	50	17	<1%	24	<1%	41	<1%	46	10	42%	88,319	2%
Macomb Co.	990	365	8%	391	(7%)	756	8%	90	189	48%	840,978	20%
Monroe Co.	100	37	1%	42	(1%)	79	1%	52	22	52%	152,021	4%
Oakland Co.	2,400	865	19%	958	(18%)	1,823	18%	152	402	42%	1,202,362	28%
St Clair Co.	150	51	1%	61	(1%)	112	1%	69	29	48%	163,040	4%
Wayne Co. Total	9,340	3,118	70%	3,990	(73%)	7,108	72%	390	1,673	42%	1,820,584	43%
Wayne Co. (excl. Detroit)	*2,040*	*672*	*15%*	*882*	*(16%)*	*1,554*	*16%*	*140*	*385*	*44%*	*1,106,807*	*26%*
City of Detroit	*7,300*	*2,446*	*55%*	*3,108*	*(57%)*	*5,554*	*56%*	*778*	*1,288*	*41%*	*713,777*	*17%*
Detroit Metro Area Total	***13,040***	***4,453***	***100%***	***5,466***	***100%***	***9,919***	***100%***	***232***	***2,325***	***43%***	***4,267,304***	***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: Risk transmission and exposure categories for HIV infection cases currently living in the Detroit Metro Area 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)	4,839	64%	N/A	--	4,839	49%
Injection drug use (IDU)	589	8%	458	20%	1,047	11%
MSM/IDU	368	5%	N/A	--	368	4%
Blood products	37	<1%	9	<1%	46	<1%
Heterosexual contact (HC)	318	4%	1,409	61%	1,727	17%
HCFR (male)	*318*	*4%*	*N/A*	*--*	*318*	*3%*
HCM (female)	*N/A*	*--*	*1,409*	*61%*	*1,409*	*14%*
Perinatal	62	1%	47	2%	109	1%
Undetermined	1,380	18%	403	17%	1,783	18%
***EXPOSURE CATEGORIES*[*†]**						
(Mutually Exclusive: one case is represented in ONLY one category)						
Male-male sex only	3,154	42%	N/A	--	3,154	32%
MSM & HC	1,663	22%	N/A	--	1,663	17%
MSM & IDU	150	2%	N/A	--	150	2%
MSM & blood products	12	<1%	N/A	--	12	<1%
MSM & HC & IDU	210	3%	N/A	--	210	2%
MSM & HC & blood products	10	<1%	N/A	--	10	<1%
MSM & IDU & blood products	3	<1%	N/A	--	3	<1%
MSM & HC & IDU & blood products	5	<1%	N/A	--	5	<1%
Heterosexual contact only	1,192	16%	1,631	70%	2,823	28%
HC & IDU	431	6%	394	17%	825	8%
HC & blood products	21	<1%	23	1%	44	<1%
HC & IDU & blood products	11	<1%	13	1%	24	<1%
Injection drug use only	147	2%	51	2%	198	2%
IDU & blood products	0	0%	0	0%	0	0%
Perinatal exposure	62	1%	47	2%	109	1%
Exposure to blood products only	21	<1%	3	<1%	24	<1%
Undetermined	501	7%	164	7%	665	7%
TOTAL	***7,593***	***100%***	***2,326***	***100%***	***9,919***	***100%***
***SUMMARIZED EXPOSURE CATEGORIES*[¥]**						
(NOT Mutually Exclusive: one case may be represented in multiple categories)						
Any MSM	5,207	69%	N/A	--	5,207	52%
Behaviorally bisexual men	1,888	25%	N/A	--	1,888	19%
Any heterosexual contact	3,543	47%	2,061	89%	5,604	56%
Any IDU	957	13%	458	20%	1,415	14%

**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 5: Sex, race, and risk among HIV infection cases currently living in the Detroit Metro Area, 2012

MALE	**White**		**Black**		**Hispanic**		**Other or unknown**		**All male**	
	Num	**Percent**	**Num**	**Percent**	**Num**	**Percent**	**Num**	**Percent**	**Num**	**Percent**
Male-male sex (MSM)	1,743	76%	2,836	59%	149	56%	111	58%	4,839	64%
Injection drug use (IDU)	79	3%	465	10%	30	11%	15	8%	589	8%
MSM/IDU	121	5%	226	5%	7	3%	14	7%	368	5%
Blood products	27	1%	6	<1%	2	1%	2	1%	37	<1%
Heterosexual contact (HCFR)	47	2%	252	5%	14	5%	5	3%	318	4%
Perinatal	8	<1%	48	1%	2	1%	4	2%	62	1%
Undetermined	273	12%	1,005	21%	62	23%	40	21%	1,380	18%
Male Subtotal	**2,298**	**30%**	**4,838**	**64%**	**266**	**4%**	**191**	**3%**	**7,593**	**100%**

FEMALE	**White**		**Black**		**Hispanic**		**Other or unknown**		**All female**	
	Num	**Percent**	**Num**	**Percent**	**Num**	**Percent**	**Num**	**Percent**	**Num**	**Percent**
Injection drug use (IDU)	68	23%	361	19%	18	22%	11	18%	458	20%
Blood products	5	2%	3	<1%	1	1%	0	0%	9	<1%
Heterosexual contact (HCM)	173	58%	1,144	61%	55	66%	37	61%	1,409	61%
Perinatal	2	1%	40	2%	2	2%	3	5%	47	2%
Undetermined	51	17%	335	18%	7	8%	10	16%	403	17%
Female Subtotal	**299**	**13%**	**1,883**	**81%**	**83**	**4%**	**61**	**3%**	**2,326**	**100%**

ALL	**White**		**Black**		**Hispanic**		**Other or unknown**		**Risk all**	
	Num	**Percent**	**Num**	**Percent**	**Num**	**Percent**	**Num**	**Percent**	**Num**	**Percent**
Male-male sex (MSM)	1,743	67%	2,836	42%	149	43%	111	44%	4,839	49%
Injection drug use (IDU)	147	6%	826	12%	48	14%	26	10%	1,047	11%
MSM/IDU	121	5%	226	3%	7	2%	14	6%	368	4%
Blood products	32	1%	9	<1%	3	1%	2	1%	46	<1%
Heterosexual contact (HC)	220	8%	1,396	21%	69	20%	42	17%	1,727	17%
HCFR (male)	*47*	*2%*	*252*	*4%*	*14*	*4%*	*5*	*2%*	*318*	*3%*
HCM (female)	*173*	*7%*	*1,144*	*17%*	*55*	*16%*	*37*	*15%*	*1,409*	*14%*
Perinatal	10	<1%	88	1%	4	1%	7	3%	109	1%
Undetermined	324	12%	1,340	20%	69	20%	50	20%	1,783	18%
RACE ALL	***2,597***	***26%***	***6,721***	***68%***	***349***	***4%***	***252***	***3%***	***9,919***	***100%***

Table 6: Sex, race, and age at HIV diagnosis among HIV infection cases currently living in the Detroit Metro Area, 2012

MALE	White		Black		Hispanic		Other or unknown		All male	
	Num	Percent	Num	Percent	Num	Percent	Num	Percent	Num	Percent
0 - 12 years	14	1%	49	1%	2	1%	5	3%	70	1%
13 - 19 years	36	2%	346	7%	13	5%	7	4%	402	5%
20 - 24 years	188	8%	825	17%	35	13%	24	13%	1,072	14%
25 - 29 years	365	16%	737	15%	48	18%	37	19%	1,187	16%
30 - 39 years	904	39%	1,507	31%	93	35%	65	34%	2,569	34%
40 - 49 years	575	25%	966	20%	46	17%	37	19%	1,624	21%
50 - 59 years	172	7%	340	7%	16	6%	13	7%	541	7%
60 years and over	44	2%	66	1%	13	5%	3	2%	126	2%
Unknown	0	0%	2	<1%	0	0%	0	0%	2	<1%
Male Subtotal	**2,298**	**30%**	**4,838**	**64%**	**266**	**4%**	**191**	**3%**	**7,593**	**100%**

FEMALE	White		Black		Hispanic		Other or unknown		All female	
	Num	Percent	Num	Percent	Num	Percent	Num	Percent	Num	Percent
0 - 12 years	3	1%	41	2%	2	2%	3	5%	49	2%
13 - 19 years	16	5%	101	5%	7	8%	1	2%	125	5%
20 - 24 years	38	13%	221	12%	11	13%	5	8%	275	12%
25 - 29 years	59	20%	288	15%	9	11%	9	15%	365	16%
30 - 39 years	96	32%	649	34%	33	40%	27	44%	805	35%
40 - 49 years	59	20%	397	21%	12	14%	11	18%	479	21%
50 - 59 years	22	7%	153	8%	6	7%	5	8%	186	8%
60 years and over	5	2%	33	2%	3	4%	0	0%	41	2%
Unknown	1	<1%	0	0%	0	0%	0	0%	1	<1%
Female Subtotal	**299**	**13%**	**1,883**	**81%**	**83**	**4%**	**61**	**3%**	**2,326**	**100%**

ALL	White		Black		Hispanic		Other or unknown		Age all	
	Num	Percent	Num	Percent	Num	Percent	Num	Percent	Num	Percent
0 - 12 years	17	1%	90	1%	4	1%	8	3%	119	1%
13 - 19 years	52	2%	447	7%	20	6%	8	3%	527	5%
20 - 24 years	226	9%	1,046	16%	46	13%	29	12%	1,347	14%
25 - 29 years	424	16%	1,025	15%	57	16%	46	18%	1,552	16%
30 - 39 years	1,000	39%	2,156	32%	126	36%	92	37%	3,374	34%
40 - 49 years	634	24%	1,363	20%	58	17%	48	19%	2,103	21%
50 - 59 years	194	7%	493	7%	22	6%	18	7%	727	7%
60 years and over	49	2%	99	1%	16	5%	3	1%	167	2%
Unknown	1	<1%	2	<1%	0	0%	0	0%	3	<1%
RACE ALL	***2,597***	***26%***	***6,721***	***68%***	***349***	***4%***	***252***	***3%***	***9,919***	***100%***

Table 7: Sex, risk, and age at HIV dDiagnosis among HIV infection cases currently living in the Detroit Metro Area, 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%	315	78%	867	81%	868	73%	1,660	65%	834	51%	240	44%	55	44%	4,839	64%
Injection drug use	0	0%	4	1%	16	1%	36	3%	203	8%	241	15%	77	14%	11	9%	588	8%
MSM/IDU	0	0%	6	1%	32	3%	56	5%	159	6%	91	6%	23	4%	1	1%	368	5%
Blood products	6	9%	9	2%	4	<1%	5	<1%	10	<1%	3	<1%	0	0%	0	0%	37	<1%
Heterosexual contact (HCFR)	0	0%	3	1%	13	1%	46	4%	133	5%	80	5%	33	6%	10	8%	318	4%
Perinatal	59	84%	3	1%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	62	1%
Undetermined	5	7%	62	15%	140	13%	176	15%	404	16%	375	23%	168	31%	49	39%	1,379	18%
Male Subtotal*	**70**	**1%**	**402**	**5%**	**1,072**	**14%**	**1,187**	**16%**	**2,569**	**34%**	**1,624**	**21%**	**541**	**7%**	**126**	**2%**	**7,591**	**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	5%	34	12%	56	15%	187	23%	137	29%	32	17%	6	15%	458	20%
Blood products	0	0%	2	2%	1	<1%	0	0%	2	<1%	2	<1%	0	0%	2	5%	9	<1%
Heterosexual contact (HCM)	0	0%	98	78%	191	69%	242	66%	478	59%	263	55%	113	61%	24	59%	1,409	61%
Perinatal	47	96%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	47	2%
Undetermined	2	4%	19	15%	49	18%	67	18%	138	17%	77	16%	41	22%	9	22%	402	17%
Female Subtotal*	**49**	**2%**	**125**	**5%**	**275**	**12%**	**365**	**16%**	**805**	**35%**	**479**	**21%**	**186**	**8%**	**41**	**2%**	**2,325**	**100%**

ALL	**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%	315	60%	867	64%	868	56%	1,660	49%	834	40%	240	33%	55	33%	4,839	49%
Injection drug use	0	0%	10	2%	50	4%	92	6%	390	12%	378	18%	109	15%	17	10%	1,046	11%
MSM/IDU	0	0%	6	1%	32	2%	56	4%	159	5%	91	4%	23	3%	1	1%	368	4%
Blood products	6	5%	11	2%	5	<1%	5	<1%	12	<1%	5	<1%	0	0%	2	1%	46	<1%
Heterosexual contact (HC)	0	0%	101	19%	204	15%	288	19%	611	18%	343	16%	146	20%	34	20%	1,727	17%
HCFR (male)	*0*	*0%*	*3*	*1%*	*13*	*1%*	*46*	*3%*	*133*	*4%*	*80*	*4%*	*33*	*5%*	*10*	*6%*	*318*	*3%*
HCM (female)	*0*	*0%*	*98*	*19%*	*191*	*14%*	*242*	*16%*	*478*	*14%*	*263*	*13%*	*113*	*16%*	*24*	*14%*	*1,409*	*14%*
Perinatal	106	89%	3	1%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	109	1%
Undetermined	7	6%	81	15%	189	14%	243	16%	542	16%	452	21%	209	29%	58	35%	1,781	18%
AGE TOTAL*	***119***	***1%***	***527***	***5%***	***1,347***	***14%***	***1,552***	***16%***	***3,374***	***34%***	***2,103***	***21%***	***727***	***7%***	***167***	***2%***	***9,916***	***100%***

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

Table 8: Gonorrhea, syphilis, and chlamydia cases by sex, race, and age group, Detroit Metro Area, 2011

	Gonorrhea			P&S syphilis*			Chlamydia			Census 2010	
	Num	Percent	Rate^	Num	Percent	Rate^	Num	Percent	Rate^	Num	Percent
RACE/ ETHNICITY											
White	506	6%	17.5	39	20%	1.4	2,978	11%	103.3	2,884,240	68%
Black	4,414	48%	452.7	148	76%	15.2	10,319	39%	1058.3	975,057	23%
Hispanic	56	1%	33.1	3	2%	1.8	281	1%	166.0	169,272	4%
Other/multi	61	1%	25.6	1	1%	0.4	299	1%	125.2	238,735	6%
Unknown race	4,095	45%	N/A	4	2%	N/A	12,861	48%	N/A	N/A	N/A
SEX & RACE											
Male	3,869	42%	187.2	175	90%	8.5	7,116	27%	344.3	2,066,529	48%
White male	*167*	*2%*	*11.8*	*38*	*19%*	*2.7*	*775*	*3%*	*54.8*	*1,415,046*	*33%*
Black male	*2,154*	*24%*	*479.1*	*130*	*67%*	*28.9*	*3,209*	*12%*	*713.7*	*449,599*	*11%*
Hispanic male	*17*	*<1%*	*19.9*	*3*	*2%*	*3.5*	*80*	*<1%*	*93.5*	*85,575*	*2%*
Other male	*32*	*<1%*	*27.5*	*1*	*1%*	*0.9*	*77*	*<1%*	*66.2*	*116,309*	*3%*
Unknown male	*1,499*	*16%*	*N/A*	*3*	*2%*	*N/A*	*2,975*	*11%*	*N/A*	*N/A*	*N/A*
Female	5,247	57%	238.4	20	10%	0.9	19,552	73%	888.4	2,200,775	52%
White female	*339*	*4%*	*23.1*	*1*	*1%*	*0.1*	*2,198*	*8%*	*149.6*	*1,469,194*	*34%*
Black female	*2,260*	*25%*	*430.1*	*18*	*9%*	*3.4*	*7,105*	*27%*	*1352.2*	*525,458*	*12%*
Hispanic female	*39*	*<1%*	*46.6*	*0*	*0%*	*0.0*	*200*	*1%*	*239.0*	*83,697*	*2%*
Other female	*29*	*<1%*	*23.7*	*0*	*0%*	*0.0*	*221*	*1%*	*180.5*	*122,426*	*3%*
Unknown female	*2,580*	*28%*	*N/A*	*1*	*1%*	*N/A*	*9,828*	*37%*	*N/A*	*N/A*	*N/A*
Unknown sex - all races	16	<1%	N/A	0	0%	N/A	70	<1%	N/A	N/A	N/A
Age											
0-4 years	8	<1%	3.1	0	0%	0.0	8	<1%	3.1	258,378	6%
5-9 years	3	<1%	1.1	0	0%	0.0	7	<1%	2.5	280,044	7%
10-14 years	113	1%	37.7	0	0%	0.0	412	2%	137.4	299,859	7%
15-19 years	3,069	34%	981.7	9	5%	2.9	11,030	41%	3528.3	312,619	7%
20-24 years	3,080	34%	1209.6	48	25%	18.9	9,678	36%	3800.9	254,622	6%
25-29 years	1,199	13%	477.2	31	16%	12.3	2,933	11%	1167.4	251,236	6%
30-34 years	607	7%	238.9	24	12%	9.4	1,259	5%	495.5	254,112	6%
35-39 years	400	4%	141.4	33	17%	11.7	648	2%	229.0	282,959	7%
40-44 years	243	3%	79.8	23	12%	7.6	333	1%	109.4	304,354	7%
45-54 years	273	3%	40.9	20	10%	3.0	253	1%	37.9	668,027	16%
55-64 years	75	1%	14.0	6	3%	1.1	58	<1%	10.8	535,245	13%
65 and over	17	<1%	3.0	1	1%	0.2	16	<1%	2.8	565,849	13%
Unknown age	46	1%	N/A	0	0%	N/A	103	<1%	N/A	N/A	N/A
Total	***9,132***	***100%***	***214.0***	***195***	***100%***	***4.6***	***26,738***	***100%***	***626.6***	***4,267,304***	***100%***

* P&S: Primary and secondary syphilis.

^ Rate per 100,000 population.

Table 9: Reported cases of acute and chronic hepatitis C by sex, race, and age group, Detroit Metro Area, 2011

	Acute hepatitis C		Chronic hepatitis C			Census 2010
	Num	Percent	Num	Percent	Rate*	Num
SEX						
Male	5	63%	2,145	62%	104	2,066,529
Female	3	38%	1,293	37%	59	2,200,775
Unknown	0	0%	14	<1%	N/A	N/A
RACE †						
White	6	75%	952	28%	32	2,979,700
Black	2	25%	872	25%	89	982,879
Asian	0	0%	9	<1%	--	140,734
Native Hawaiian/Other Pacific Islander	0	0%	3	<1%	--	901
American Indian/Alaska Native	0	0%	4	<1%	--	14,612
Other	0	0%	54	2%	101	53,428
Unknown race	0	0%	1,535	44%	N/A	N/A
Multiracial	0	0%	23	1%	24	95,050
AGE						
0-4 years	0	0%	2	<1%	--	258,378
5-9 years	0	0%	1	<1%	--	280,044
10-14 years	0	0%	1	<1%	--	299,859
15-19 years	0	0%	34	1%	11	312,619
20-24 years	2	25%	175	5%	69	254,622
25-29 years	1	13%	174	5%	69	251,236
30-34 years	3	38%	123	4%	48	254,112
35-39 years	0	0%	95	3%	34	282,959
40-44 years	0	0%	152	4%	50	304,354
45-54 years	2	25%	904	26%	135	668,027
55-59 years	0	0%	899	26%	306	293,490
60-64 years	0	0%	539	16%	223	241,755
65 and over	0	0%	338	10%	60	565,849
Unknown age	0	0%	15	<1%	N/A	N/A
TOTAL	**8**	**100%**	**3,452**	**99%**	**81**	**4,267,304**

* *Rates are not displayed for <10 cases.*

† *Hispanic ethnicity is not categorized due to incomplete data. Each race category includes both Hispanic and non-Hispanic persons.*