2012 Profile of HIV in Michigan (Statewide)

Trends in HIV Data

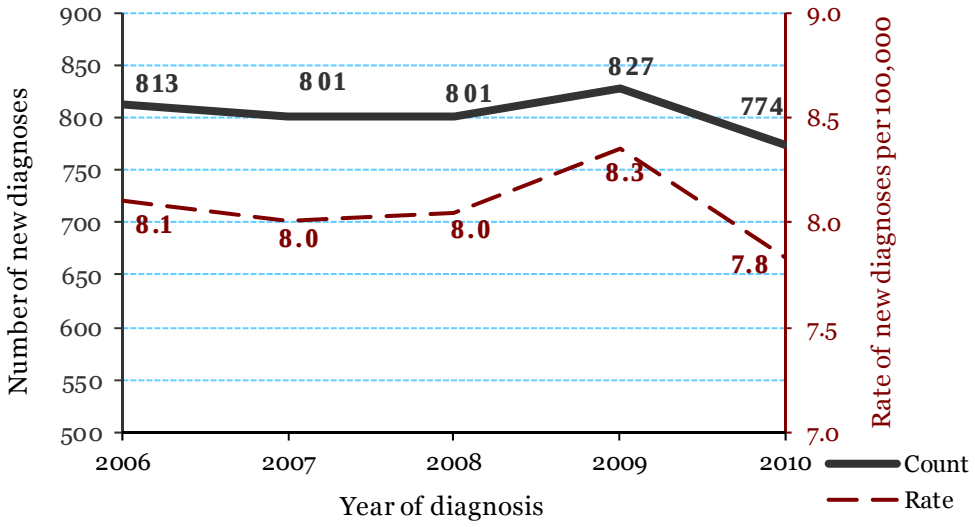
Data from enhanced HIV/AIDS Reporting System (eHARS)

To evaluate recent trends in new HIV diagnoses in Michigan, 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 Michigan between 2006 and 2010, with an average of 803 new cases each year (8.1 cases per 100,000 population) (figure 9).

Figure 9: Adjusted number and rate of new HIV diagnoses in Michigan, 2006-2010



New diagnoses by risk, 2006-2010:

Between 2006 and 2010, the number of newly diagnosed persons who were injection drug users (IDU) decreased by an average of 12 percent per year, and the number who were both men who have sex with men and injection drug users (MSM/IDU) decreased by 17 percent per year (figure 10). The decrease in new diagnoses among IDU has been seen for the past seven consecutive annual trend reports and the decrease among MSM/IDU for the past two 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. The number of new diagnoses also decreased among persons with heterosexual risk by an average of eight percent per year. This is the third consecutive trend report to show decreases among persons with heterosexual risk. This is likely due to decreases among black females, who make up the majority of heterosexual infections. The number of new diagnoses among MSM remained stable.

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.

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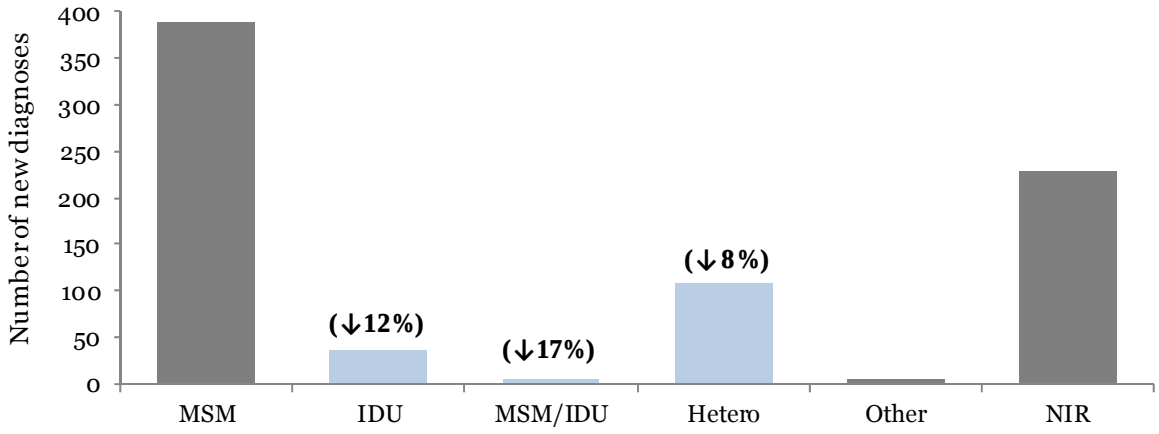
Newly diagnosed persons with no identified risk (NIR) includes males who reported sex with females of unknown risk/HIV status as their only risk and males and females for whom no risk has yet been reported. This group accounts for about 28 percent of new diagnoses each year (Trends) but only 17 percent of all persons currently living with HIV in Michigan (regardless of year of diagnosis) (table 8, page 101).

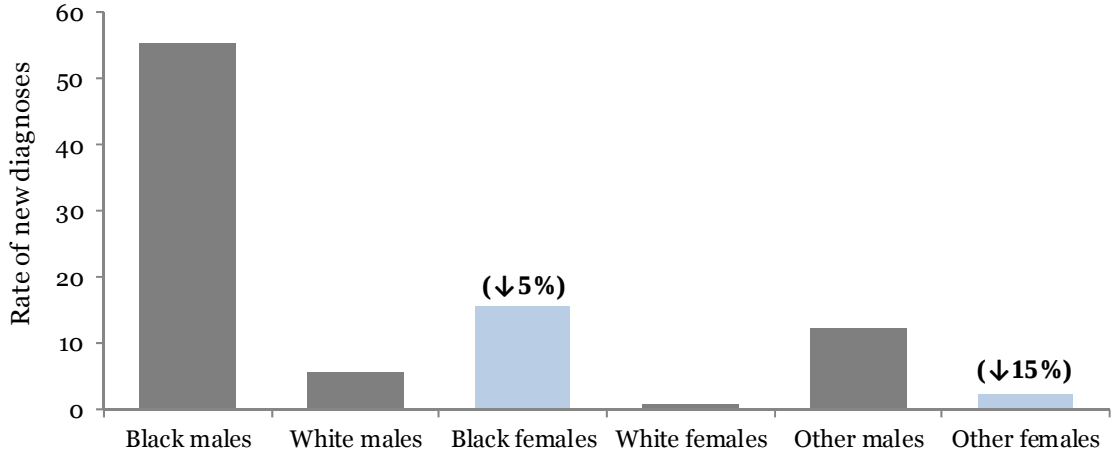
Figure 10: Adjusted number of new HIV diagnoses in Michigan in 2010 and trends between 2006-2010, by risk transmission category



New diagnoses by race and sex, 2006-2010:

The rate of new diagnoses decreased among black females (average 5 percent per year) between 2006 and 2010 (figure 11). This is the third consecutive trend report showing decreases in this group. The rate also decreased among females of other race (average 15 percent per year) and among females overall (6 percent per year). The rate increased among all males by an average one percent per year. Rates among all other race/sex groups were stable.

Figure 11: Adjusted rate of new HIV diagnoses in Michigan in 2010 and trends between 2006-2010, by race/sex



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New diagnoses by age at HIV diagnosis, 2006-2010:
The rate of new HIV diagnoses increased significantly among persons 20-24 years of age at diagnosis (an average 12 percent per year) and among those 25-29 years of age (average 7 percent per year) (figure 12). For the first time in six annual 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 year olds. Additionally, rates in older age groups (35-39 year olds and 40-44 year olds) decreased significantly by an average seven percent per year and 12 percent per year, respectively. Although the majority of prevalent cases are still among persons 30-39 years at diagnosis (figure 8, page 23), twenty to twenty-four year olds now have the highest rate of new diagnoses of any age group.

Figure 12: Adjusted rate of new HIV diagnoses in Michigan in 2010 and trends between 2006-2010, by age at diagnosis

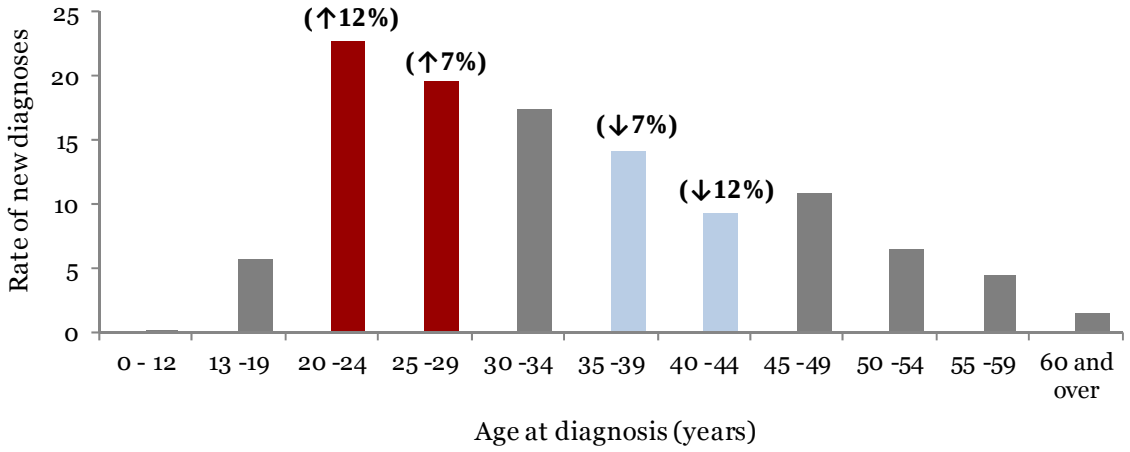
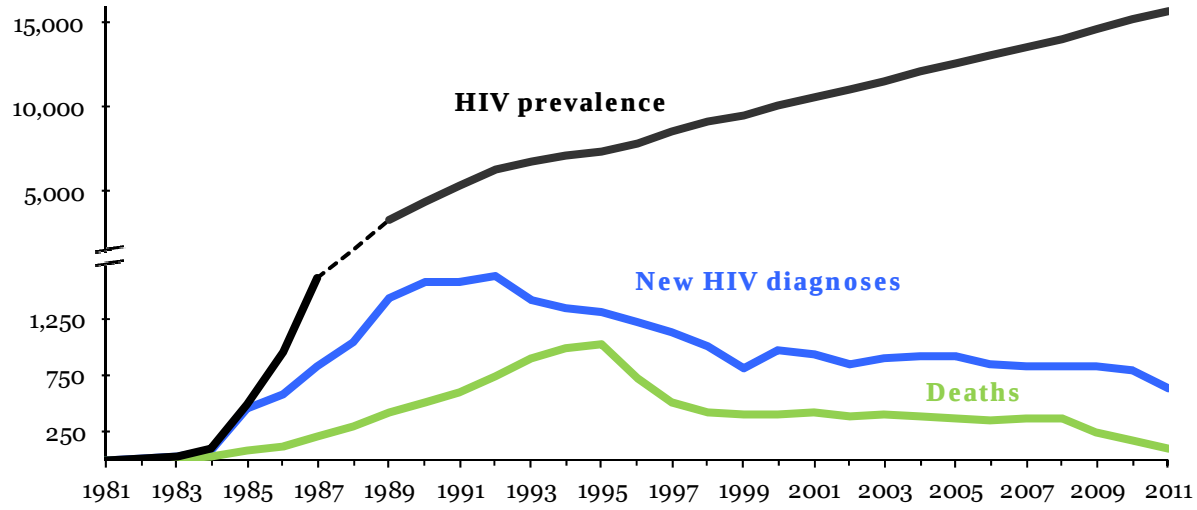


Figure 13: New diagnoses, deaths, and prevalence of HIV in Michigan by year, January 2012



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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 13. The trend among new HIV diagnoses reflects reported cases. These data were not adjusted for reporting delay as they were in figures 9-12. 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.

Deaths among HIV-positive persons by race and sex:
Figure 14 shows the number of HIV-positive Michigan residents reported as deceased by a local health department, the department of vital records (via a data match, death transcript, or death certificate), the National Death Index, or an alternate source. The number of deaths increased in all race/sex groups from the beginning of the epidemic through approximately 1994-1995. The number of deaths decreased markedly between 1995 and 1998 due to the availability of much more effective treatment and were relatively stable until 2001. It should be noted that the percent decrease in deaths among white males (75 percent) between 1995 and 2001 was more pronounced than the percent decrease among black males (54 percent), and the percent decrease among white females (59 percent) was larger than the percent decrease among black females (37 percent). Encouragingly, the number of deaths in black males fell substantially between 2001 and 2009 (50 percent). The number of deaths among white males did not change as appreciably (29 percent), nor did the number of deaths among black females (23 percent). Deaths among white females decreased by 50 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 14: Michigan HIV deaths by race/sex, January 2012