

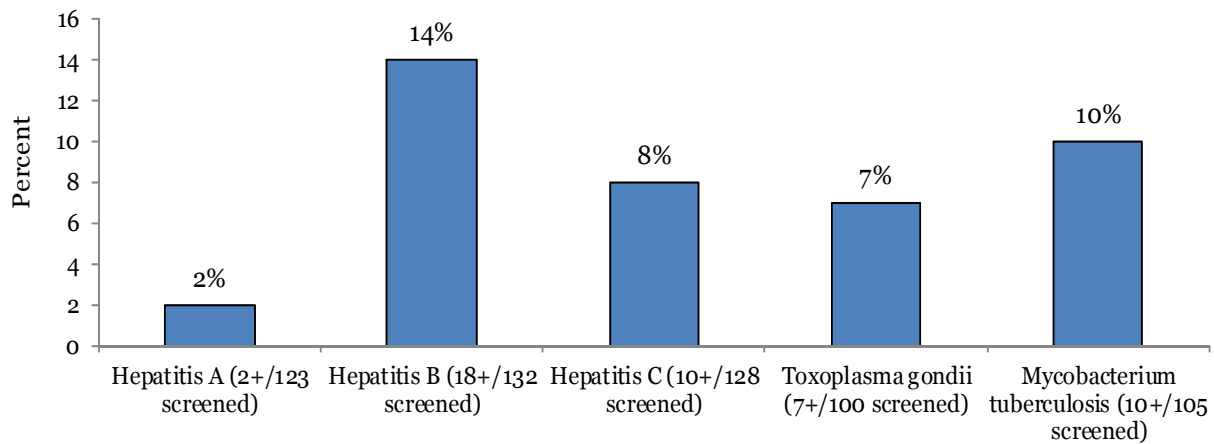
2012 Profile of HIV in Michigan (Statewide)

HIV and Other Infectious Diseases

Data from Medical Monitoring Project (MMP)

Recommendations for screening for other infectious diseases among HIV-positive persons vary based on patient characteristics. Test results presented here are broadly defined as having at least one laboratory test performed for the particular infectious disease. Figure 66 shows other infectious diseases MMP participants were screened for and the proportion who tested positive. The most common co-infection was Hepatitis B at 14 percent of those screened (18 positive tests of 132 screened). The next most common co-infection was mycobacterium tuberculosis (10 percent of those screened).

Figure 66: Diagnoses of other infectious diseases among HIV-positive persons in care with documentation of screening in medical record (MMP, 2009)*



*Screening was defined as having documentation of at least one type of laboratory test for the specified infection. Hepatitis A infection was defined as a positive anti-HAV IgM and a positive anti-HAV total (n=2); hepatitis B infection was defined as positive for HBsAg and/or positive for anti-HBc IgM, and/or a positive HBV DNA result (n=18); hepatitis C infection was defined as having a positive HCV RNA quantitative (PCR) and/or a positive HCV RNA qualitative (n=8), or if the person had specific documentation of hepatitis C infection from physician notes (n=2).

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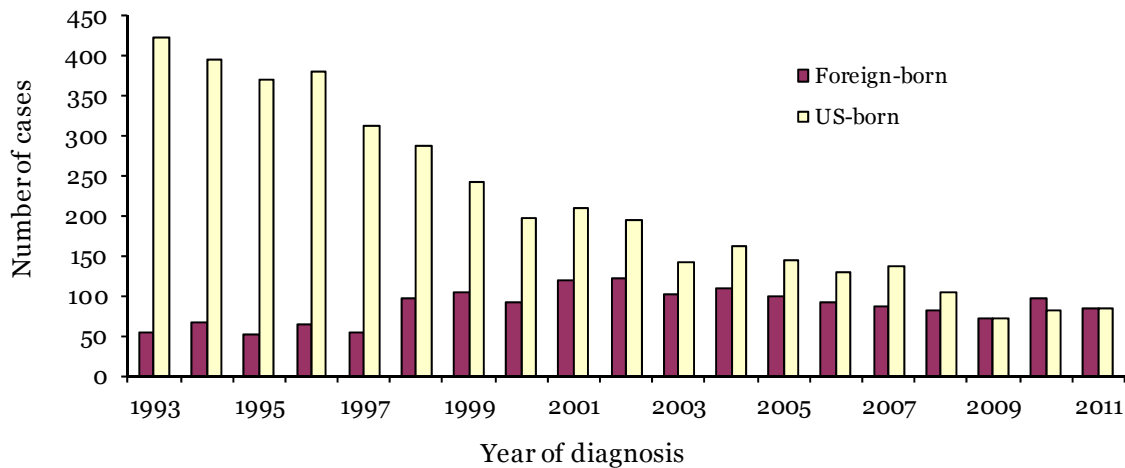
Tuberculosis

Data from Michigan Disease Surveillance System (MDSS)

Overview:

The incidence rate for tuberculosis (TB) in 2011 was 1.7 cases per 100,000. While Michigan has a low incidence of TB, the demographic distribution of TB cases warrant some attention. Sixty-three percent of the 170 reported TB cases reside in the Detroit Metro Area (DMA). Of these, thirty percent (53 cases) are residents of the City of Detroit. The Detroit Department of Health and Wellness Promotion (DDHWP) manages and reports all TB cases that are residents of Detroit and its surrounding areas. The remaining cases in the DMA are residents of the following counties: Wayne County (excluding Detroit) (14 percent, 24 cases), Oakland County (13 percent, 22 cases), and Macomb County (5 percent, 8 cases).

Figure 67: Number of TB cases in US-born vs. foreign-born persons in MI, 1993-2011

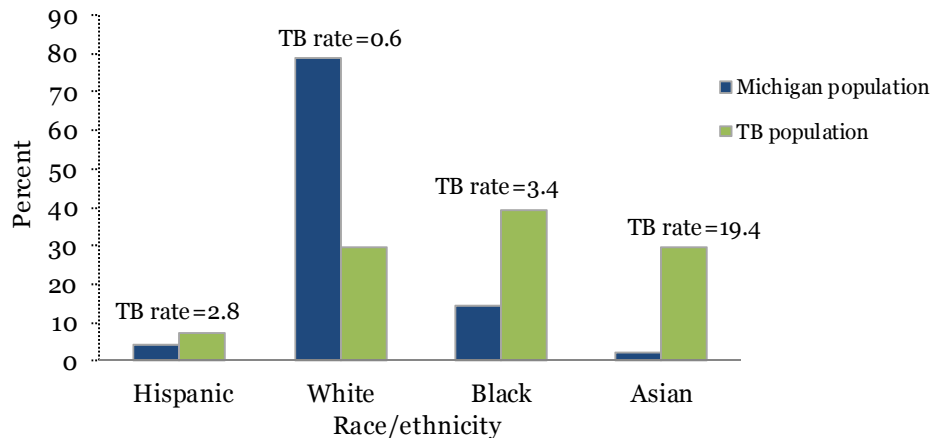


Since 1993, an increasingly larger proportion of TB cases are found among persons born outside the US. In 2011, 51 percent of Michigan cases were born in the US and 49 percent were foreign-born (figure 67). It is expected that the number of foreign-born cases will continue to increase.

Racial disparities:

TB disproportionately impacts certain racial/ethnic groups in Michigan (figure 68). The rate of TB disease among white persons is 0.6 cases per 100,000 population. The rate among black persons is higher (3.4 per 100,000), and the highest rate is

Figure 68: Racial distribution of TB cases living in Michigan compared to the general MI population, 2011



2012 Profile of HIV in Michigan (Statewide)

TB/HIV Co-infection

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

among Asians/Native Hawaiians or Other Pacific Islanders (19.4 per 100,000). This group comprises 30 percent of TB cases but only two percent of the general population. While black persons make up only 14 percent of the general population, they represent 39 percent of the TB population. These data demonstrate a need for targeted intervention and education among disproportionately affected groups. Data on other racial/ethnic minorities is not shown due to small numbers.

Overview:

As the HIV epidemic continues to grow, there are indications of a correlation between those infected with HIV and TB, although the number of TB cases have been declining in Michigan since the early 1990s. As of January 2012, there were 168 persons known to be living in Michigan and co-infected with HIV and TB (data for this section not shown in tables).

Race/ethnicity and sex:

Seventy-four percent of co-infected cases are male and 26 percent are female. The majority are black (67 percent), 15 percent are white, 12 percent are Hispanic, four percent are Asian/Native Hawaiian or Other Pacific Islander, and the remaining two percent are persons of other or unknown race.

Age at HIV diagnosis:

The largest proportion of co-infected cases were in their thirties at HIV diagnosis (41 percent), followed by those in their forties (20 percent). Teens (13-19 years at HIV diagnosis) make up two percent and young adults (20-24 years at HIV diagnosis) make up eight percent of co-infected cases.

Birth country:

Twenty-nine percent of co-infected persons were born outside of the United States. Country of birth is missing or unknown for 17 percent of cases, and the remaining 54 percent were born in the US.

Other information:

Of the 168 HIV cases currently living in Michigan who were co-infected with TB, 131 (78 percent) had pulmonary tuberculosis and 37 (22 percent) had extra-pulmonary tuberculosis (outside of the lung).

As of January 2012, a total of 661 co-infected cases have been definitively diagnosed with HIV and TB, of whom 493 (75 percent) have died. Tuberculosis is one of the opportunistic illnesses (OIs) that defines a person as stage 3 HIV infection, so all persons with a TB diagnosis are stage 3 cases.

Conclusions:

Data on HIV/TB co-infection are gleaned by matching the HIV surveillance data to the TB surveillance data, but these data could still be underreported. The HIV status of 18 percent of active Michigan TB cases tested in 2011 is unknown. Of these, 19 percent refused an HIV test, 71 percent were never offered the test, and 10 percent were reported with an unknown HIV status. This demonstrates a need for education, not only for patients regarding their risk for HIV infection but also for health care practitioners on the need to test for HIV in this population.

2012 Profile of HIV in Michigan (Statewide)

Sexually Transmitted Diseases

Data from Michigan Disease Surveillance System (MDSS)

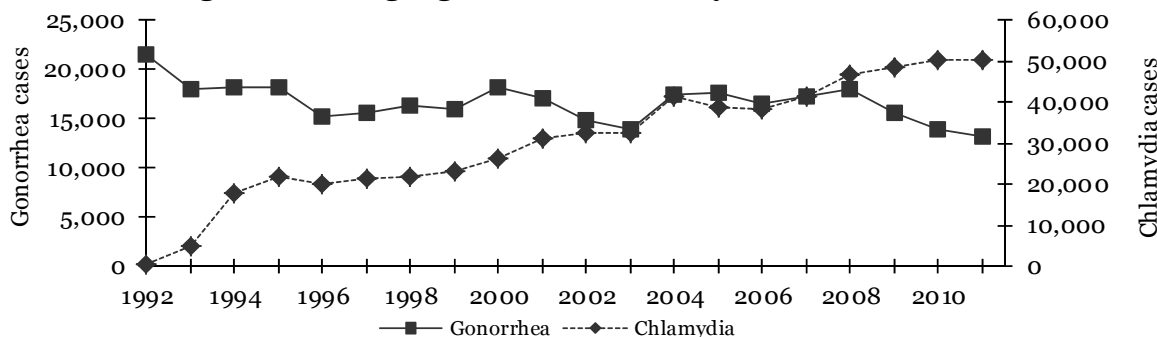
Overview:

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 may help to reduce the rate of new HIV infections.

Gonorrhea and chlamydia:

During 2011, there were over 50,000 cases of chlamydia and over 13,000 cases of gonorrhea reported in Michigan (figure 69). For both diseases, the highest rates of infection were among persons ages 20-24. This age group comprises 6.7 percent of the Michigan population but accounted for 34 percent of gonorrhea and 38 percent of chlamydia cases. For chlamydia, the rate among 15-19 year olds is comparable to the 20-24 year old rate. The rates of chlamydia and gonorrhea among black persons were much higher than among white persons (461 vs. 19 cases per 100,000 population for gonorrhea and 1,294 vs. 144 cases per 100,000 for chlamydia). Even though 38 percent of gonorrhea cases and 39 percent of chlamydia cases were missing race information, the rates among black persons remain higher even if all unknown cases were among white persons. Forty-one percent of gonorrhea cases were male; however, approximately 73 percent of reported chlamydia cases were female (table 17, page 111). This is because chlamydia screening specifically targets females (and if more males were screened, we would expect the number of cases detected to increase proportionally).

Figure 69: Michigan gonorrhea and chlamydia cases, 1992-2011



Syphilis:

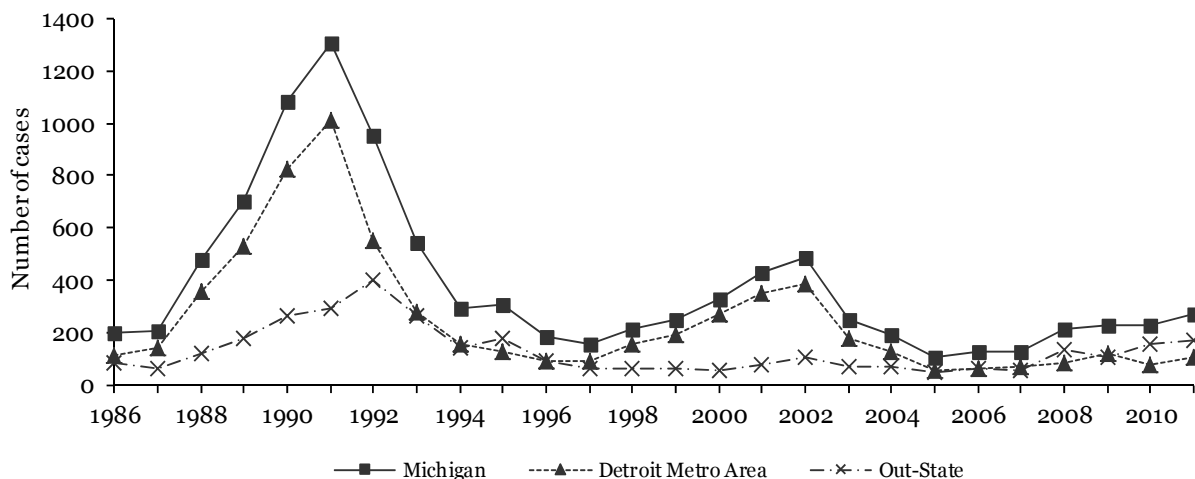
Figure 70 shows that primary and secondary syphilis were diagnosed less frequently than gonorrhea and chlamydia (273 primary and secondary syphilis cases) in 2011. Syphilis in Michigan and nationally has followed a cyclical trend, increasing every ten years. Major outbreaks occurred in 1991 then decreased until 1997. Reported syphilis cases increased each year in Michigan from 1997 to 2002, peaking at 486 cases. There was a statistically significant downward trend in reported cases during 2002 and 2003, resulting in a nearly 50 percent decrease in reported cases compared to 2002. However, syphilis cases have increased since that time due to general increases in cases among men who have sex with men (MSM), many of whom are HIV-positive, and because of an outbreak in Genesee County in 2008. Approximately 28 percent of cases were reported in those younger than 25 years, representing a trend towards younger syphilis cases. However, an equal percentage of cases (29 percent) are still over the age of 40, representing an older at-risk population as compared to the at-risk population for gonorrhea or chlamydia. Syphilis cases reported in 2011 were 62 percent black and 90 percent male (table 17, page 111).

2012 Profile of HIV in Michigan (Statewide)

Sexually Transmitted Diseases

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

Figure 70: Michigan primary and secondary syphilis cases by region, 1986-2011



Sexual orientation:

Nationwide, there have been increases in STD cases among self-identified MSM. Michigan does not collect data on sexual orientation for all gonorrhea or chlamydia cases. Sexual orientation data are collected for syphilis cases. Of primary and secondary syphilis cases in 2011, approximately 73 percent of male syphilis cases in Detroit and 81 percent of male syphilis cases in the rest of the state were among MSM. Seventy-one percent of Detroit MSM cases were HIV-positive, as were 52 percent of cases outside of Detroit. Between 2001 and 2004, the syphilis epidemic in Detroit was largely heterosexual with the male to female ratio being closer to 1:1, while MSM transmission was prevalent in most other areas. In 2005, the male to female ratio was 3.1:1 in the Detroit area and 6.3:1 in Out-State Michigan. In 2011, the male to female ratio was over 8:1 in Detroit and over 10:1 in Out-State Michigan, showing an increase in the number of male cases compared to female cases. This is a trend that is mirrored nationally and is the focus of prevention efforts around the country (data not shown in tables).

Geographic distribution:

There are several areas in Michigan that consistently report high rates of STDs. For gonorrhea, the highest rates are in the City of Detroit (914), Genesee County (206), Berrien County (143), and Kalamazoo County (140). For chlamydia, the highest rates are in the City of Detroit (3,000), Saginaw County (778), Genesee County (750), and Muskegon County (708). For primary and secondary syphilis, the highest rates are in the City of Detroit (14), Kalamazoo County (6), Delta/Menominee counties (5), and Washtenaw County (3) (table 18, page 112).

HIV/gonorrhea:

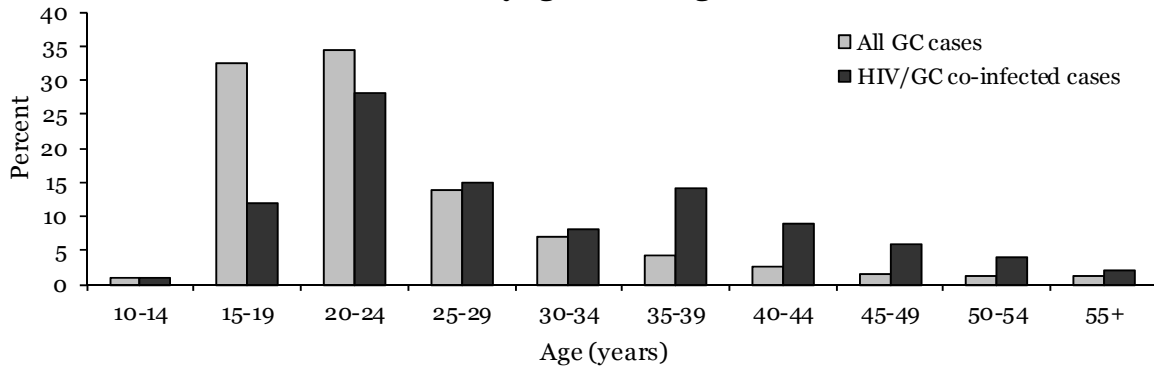
In 2011, 259 of the 13,070 gonorrhea cases were co-infected with HIV (2 percent). More than half of these cases resided in the City of Detroit (60 percent); however, cases were also found in Oakland (15 percent) and Wayne (excluding Detroit) counties (6 percent). Sixty percent of the cases were black and the majority were male (86 percent). The majority of male cases were MSM (77 percent) and diagnosed with HIV prior to 2011 (82 percent); 18 percent were diagnosed with gonorrhea and HIV in the same year. Of the cases diagnosed with both in 2011, 76 percent resided in either the City of Detroit or Oakland County. The age distribution of all gonorrhea cases compared to co-infected cases is shown in figure 71 (data on co-infections not shown in tables).

2012 Profile of HIV in Michigan (Statewide)

STD/HIV Co-infection

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

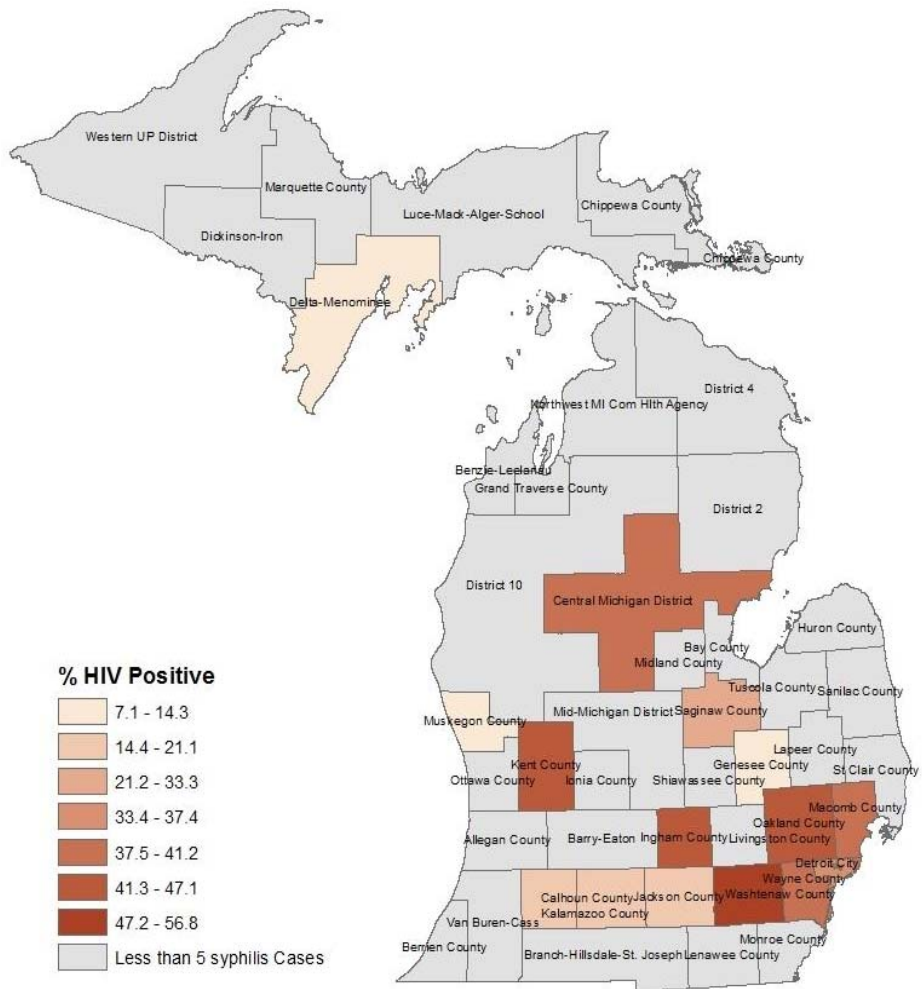
Figure 71: Proportion of gonorrhea (GC) cases and HIV/GC co-infected cases by age at GC diagnosis, 2011



HIV/syphilis:

In 2011, 38 percent of all syphilis cases (including non-infectious cases) were co-infected with HIV, and 47 percent of male syphilis cases were co-infected (compared to 30 percent of all cases and 40 percent of male cases in 2009). Of the co-infected cases in 2011, 48 percent had primary and secondary syphilis. Seventy-two percent were residents of the DMA. Seventy percent were black, 28 percent were white, and two percent were Hispanic. Thirty-five percent were between 20-29 years old. The distribution of co-infected cases by selected county is shown in figure 72. Syphilis infections increase the likelihood of acquiring and spreading HIV infection two to five fold.

Figure 72: Proportion of 2011 syphilis cases that are HIV-positive by local health department jurisdiction



2012 Profile of HIV in Michigan (Statewide)

Hepatitis C

Data from Michigan Disease Surveillance System (MDSS)

Overview:

Hepatitis C is a disease of the liver caused by infection with the hepatitis C virus (HCV), in which the acute (or newly acquired) infection can progress to a chronic, long-term infection. Hepatitis C is the most common bloodborne infection in the United States and is the leading indicator for liver transplantation.

Fifteen to 25 percent of those acutely infected will resolve the infection on their own. However, the majority of infected people (75 to 85 percent) will develop chronic infection. Disease progression in those chronically infected is variable but can advance from fibrosis to cirrhosis to end-stage liver disease and death. An estimated 60 to 70 percent of hepatitis C-infected individuals are unaware of their infection.

HCV is transmitted primarily through exposure to infected blood through non-intact skin, which can result from sharing infected equipment during injection-drug use, needle-stick injuries, receipt of blood or blood products before the availability of a standard screening test in 1992, and inadequate infection control in health care settings. Much less often, HCV transmission occurs as a result of sexual contact with an HCV-infected partner and among infants born to HCV-infected mothers. No vaccine for hepatitis C exists, but major advancements have recently been made in the treatment of HCV, leading to a nationwide push to increase HCV testing in those individuals born between 1945 and 1965 and others at risk for infection.

Acute hepatitis C:

In 2011, 31 cases of acute hepatitis C were reported statewide in Michigan (table 19, page 113). Fifty-two percent of acute cases were among males, while 48 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. Additionally, the race/ethnicity of the client was unknown in 19 percent of reported acute cases. Due to small numbers, rates are unavailable for cases of acute hepatitis C in 2011.

Chronic hepatitis C:

In 2011, 6,991 cases of chronic hepatitis C were reported statewide in Michigan (table 19), a rate of 71 cases of chronic hepatitis C per 100,000 Michigan residents. Sixty-three percent of chronic cases were among males while 36 percent were among females. The rate of chronic hepatitis C in Michigan was the highest among multiracial persons (99 per 100,000) and black persons (98 per 100,000), compared to 35 per 100,000 in white persons (figure 73). However, these rates must be viewed with caution as the race/ethnicity of the client was unknown in 36 percent of reported chronic cases.

The highest rate of chronic hepatitis C was found in the 55-64 year age group (figure 74). The lowest rates were among persons 15-19 years and those 65 years and over.

2012 Profile of HIV in Michigan (Statewide)

Hepatitis C

Data from Michigan Disease Surveillance System (MDSS)

Figure 73: Rates of chronic hepatitis C among Michigan residents by race/ethnicity, 2011

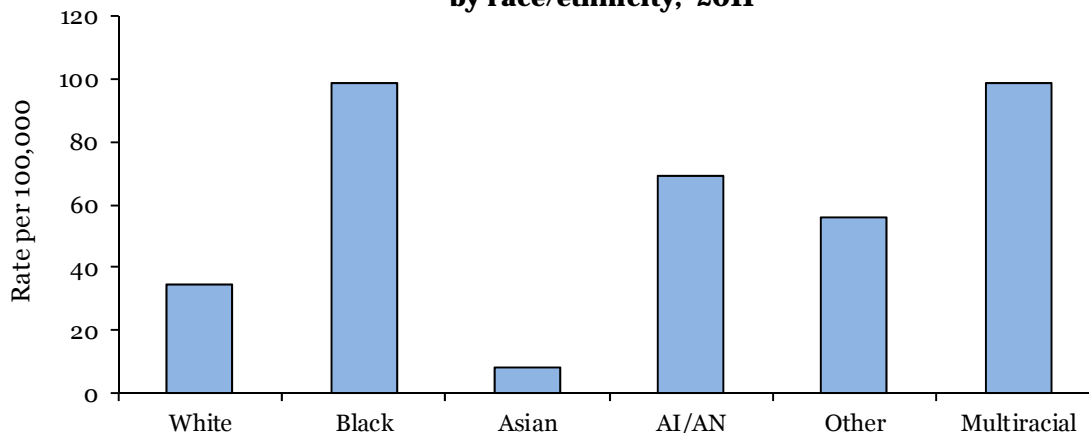
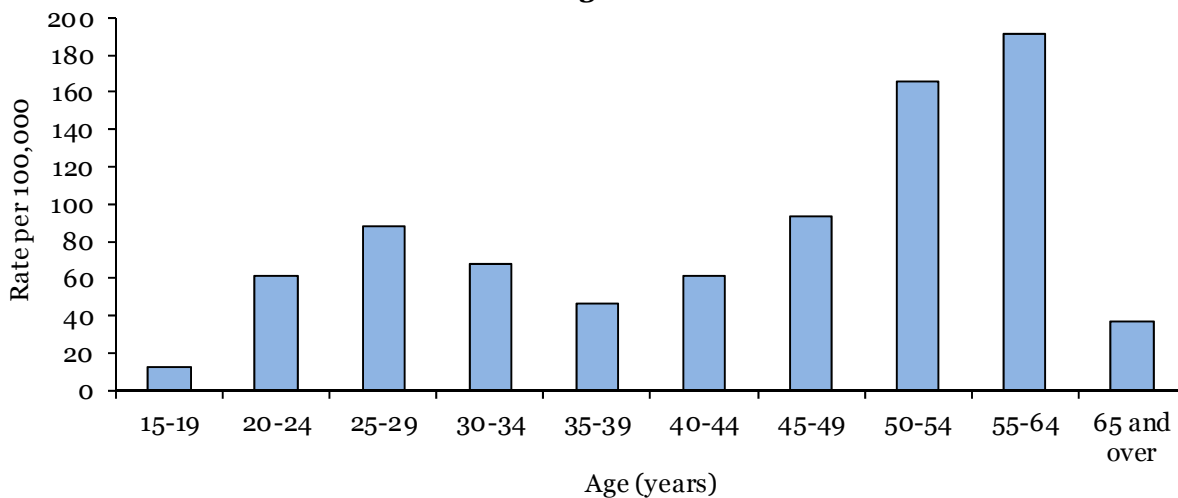


Figure 74: Rate of chronic hepatitis C among Michigan residents by age, 2011



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 Michigan; 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 do not look or feel sick.