2) HIV/AIDS Epidemiology

(a) Table

The HIV/AIDS Epidemiology Table is **Attachment 4**.

(b) Narrative

The MDCH Bureau of Epidemiology calculates trends in HIV and AIDS cases annually. The most recent analysis, *Annual Review of HIV Trends in Michigan (2006-2010), February 2012*, is available on MDCH's website at http://www.michigan.gov/mdch/0,4612,7-132-2940_2955_2982_46000_46003-36304--,00.html. These trends were based upon the reported number of persons diagnosed with HIV infection between 2006 and 2010, adjusted to account for reporting delay. These trends show that the overall number and rate of persons diagnosed with HIV infection (including AIDS) in Michigan remained stable between 2006 and 2010, at an average of 803 new cases per year and an average rate of 8.1 cases per 100,000 population. This is the second consecutive trends report to show a stable number and rate of new HIV diagnoses in Michigan.

Michigan residents with HIV infection continue to be predominantly men who have sex with men (MSM), black persons, persons aged 20-44 years at the time of HIV diagnosis, and/or residents of the Detroit Metro Area (DMA)[1]. MSM were 48% of all new diagnoses between 2006 and 2010. Of these newly diagnosed MSM, 55% are black while 37% are white. The number of new HIV diagnoses per year decreased significantly between 2006 and 2010 among injection drug users (IDU) for the seventh consecutive trend report and among MSM/IDU for the second consecutive report. The number of new diagnoses also decreased among persons with heterosexual risk for the third consecutive report. The proportion with heterosexual risk is now greater than the proportion of IDU. This is the first report in six reports that the rate of new diagnoses did not increase among persons aged 13-19 years at the time of HIV diagnosis. The rate of new diagnoses increased among persons 20-24 and 25-29 years at diagnosis and decreased among those 35-39 and 40-44 years at diagnosis.

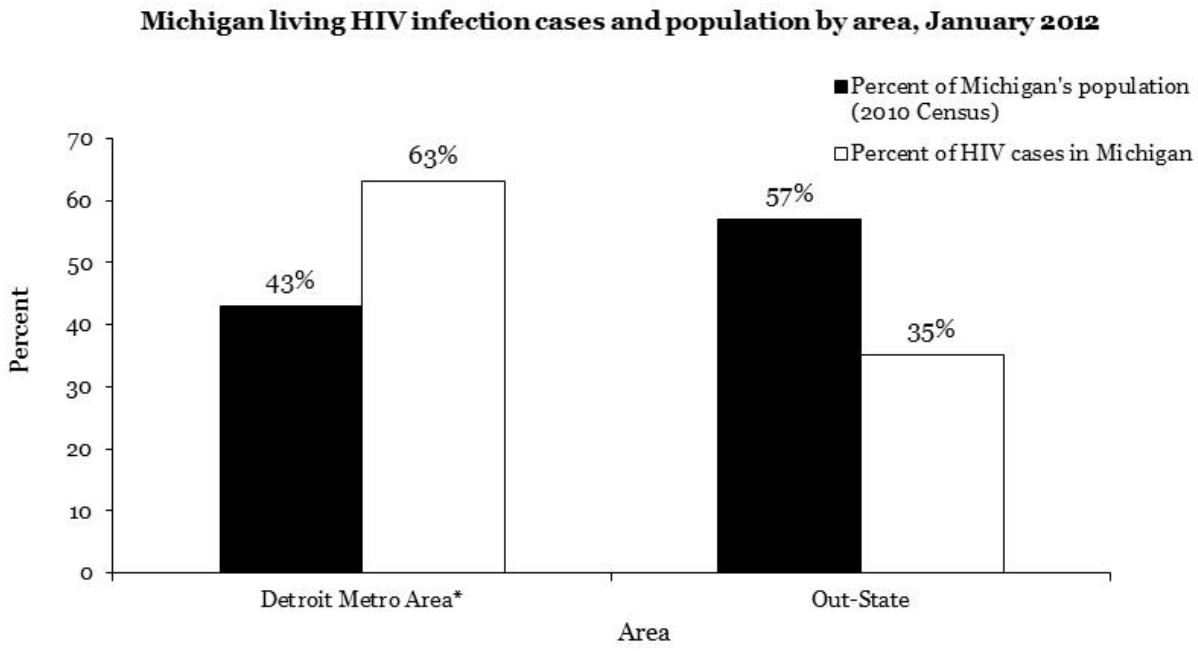
Finally, the rate of new diagnoses increased among males (average 1% per year) and decreased among black females (average 5% per year), females of other race (average

[1] The Detroit Metro Area (DMA) consists of Lapeer, Macomb, Monroe, Oakland, St. Clair, and Wayne Counties, including the City of Detroit.

15% per year), and females overall (6% per year).The rate of new diagnoses remained stable among all other race/sex groups.

From 2006-2010, the proportion of persons diagnosed with HIV and AIDS concurrently (AIDS within 30 days of initial HIV diagnosis) decreased significantly from 27% in 2006 to 22% in 2010. Similarly, there were significant decreases in the proportions of concurrent diagnoses among black males, white females, females of other race, males overall, and black persons overall.

As of January 2012, there are 8,366 people currently living with AIDS in Michigan, and 7,168 people currently living with HIV, not AIDS. HIV infection is distributed disproportionately in Michigan. Sixty-three percent of those persons currently living with HIV (including AIDS) in Michigan reside in the DMA (9,742 of the 15,534 cases statewide), but only 43 percent of the general population resides in the DMA. The rest of the state, referred to as “Out-state,” has fewer cases compared with the general population distribution.



3) Unmet Need

(a) Provide an updated or refined estimate of unmet need in your jurisdiction…
The Unmet Need Framework is **Attachment 6** to Michigan’s application.

(b) Describe the process for updating the Unmet Need estimate.

(c) Provide a narrative description of the following:

(1) <u>Estimation methods</u>: The methods used to develop the unmet need estimates…

The Division used eHARS (enhanced HIV/AIDS Reporting System) to produce the numbers in the Unmet Need Framework. eHARS is the surveillance database that contains information on all reported cases of HIV/AIDS in Michigan. Both HIV and AIDS are notifiable conditions in Michigan, so both are included in eHARS. eHARS also contains all labs performed on HIV-positive persons in Michigan. Michigan implemented mandatory laboratory reporting on April 1, 2005 for positive HIV diagnostic tests and on July 1, 2005 for all HIV viral load (VL) and CD4 tests. These laboratory results are imported into eHARS by the HIV Surveillance Program with roughly a two-week lag. Primary Medical Care (PMC) was defined as having a laboratory result for a CD4 count and/or percent or a VL measure during a 12-month time period (October 1, 2011 through September 30, 2012) among patients in eHARS. Use of anti-retroviral therapy was not included in the definition of care because HIV Surveillance does not have a reliable way to collect this information. However, the HIV Surveillance program is working with Care staff to implement a routine match of surveillance data with AIDS Drug Assistance Program (ADAP) data in order to obtain information on use of anti-retroviral therapy and use it for the unmet need estimate in the future.

Laboratory results are used to determine each patient's most recent CD4 count, CD4 percent, and/or VL test date. Persons diagnosed on or after October 1, 2011 were excluded from analysis to eliminate the possibility of including those who were very recently diagnosed and had not yet obtained care. Unmet need was calculated by determining the number of persons in eHARS who were diagnosed before October 1, 2011 and had not received a VL or CD4 test between October 1, 2011 and September 30, 2012 and were aware of their infection. Persons were considered "aware" if they met any of the following criteria:

1) 'Yes' to any one of the following questions on the HIV adult case report form (ACRF):

    a. "Patient informed of their infection?"

    b. "Is patient receiving or been referred for: HIV related medical services?"

    c. "Is patient receiving or been referred for: Substance Abuse treatment services?"

    d. "Has patient received PCP prophylaxis?"

    e. "Currently using ARV?"

Or

2) Person had a CD4 count or percent or a viral load test documented in eHARS (at any point in time)

Or

3) Person diagnosed with AIDS

While the combination of laboratory and surveillance data offers an ideal way to measure unmet need, there are some limitations to the data that should be noted. Persons who move out of state will automatically be counted as unmet need cases if Michigan's HIV Surveillance Program is not notified of the change in residency. The Surveillance Program participates in Routine Interstate Duplicate Review (RIDR), in which Michigan collaborates with other states under the guidance of the Centers for Disease Control and Prevention (CDC) to assess and resolve potential case matches between states. This effort minimizes the effect of changes in residency on unmet need. Similarly, if a person died and Surveillance was not notified, that person would be counted as an unmet need case. Michigan's HIV Surveillance Program also conducts death matches with multiple databases annually to prevent this from happening. Finally, there inevitably is room for error in eHARS. For example, labs can potentially be falsely matched or non-matched to the surveillance database. Overall, however, the matching algorithm is strong and checks are in place to ensure the quality of those data.

(2) <u>Assessment of unmet need</u>: Any activities your State/Territory has carried out or is planning to address regarding unmet need… Include the following:

i) The demographics and location of people who know their HIV/AIDS status but are not in care;

Of the 4,916 persons with unmet need, 79% are male and 21% are female. This distribution by sex is roughly the same among persons with met need and among all persons with HIV/AIDS, so there does not appear to be a disproportionate level of unmet need by sex. As of November 2012, both sexes report about the same percentage of unmet need (33% among males and 32% among females).

The majority of persons with HIV/AIDS in Michigan, whether with met need or unmet need, are Black, non-Hispanic (55%) or White, non-Hispanic (36%). Hispanic persons represent only 5% of all persons living with HIV/AIDS in Michigan, but they have the highest proportion of unmet need (47%) when looking at race/ethnicity.

Individuals living with HIV-not AIDS in Michigan continue to be more likely to have unmet need than people living with AIDS. Forty percent of people living with HIV-not AIDS have unmet need, while only 28% of people living with AIDS have unmet need.

Persons with unmet need are very similar to persons with met need when comparing age at HIV diagnosis. PLWH/A who were young adults (ages 20-24) at HIV diagnosis have a higher proportion of unmet need when compared to other age groups (38%), followed by adults ages 25-29 (37%). In general, unmet need is higher among the younger age groups than among those aged 35 or more. By risk behavior, injection drug users have the highest percentage of unmet need (41%), while only 32% of MSM are in the unmet need group.

In terms of geography, those living in Out-State Michigan have the same proportion of unmet need as those living in the DMA (33%). When looking at individual Metropolitan Statistical Areas (MSAs), the areas with the highest percentage of unmet need are the Benton Harbor MSA (41%), the Saginaw-Bay City MSA (40%), the Flint MSA (39%), and the Kalamazoo-Battle Creek MSA (35%), all of which have seen slight reductions in unmet need since 2011.

ii) Describe the trends associated with the past 5 years regarding Unmet Need.

Unmet Need has remained relatively consistent over the past five years, although the proportion of those living in Out-state Michigan with unmet need is now the same as the percentage of unmet need among those living in the DMA. Previously, unmet need was greater in Out-State Michigan.