

# 2012 Profile of HIV in Michigan (Statewide)

## 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 203 individuals living with HIV in Michigan who were 0-12 years old at diagnosis. They comprise one percent of all reported HIV infection cases (table 8, page 101). Most 0-12 year olds (83 percent) were infected perinatally, i.e., before, during, or shortly after birth (table 13, page 107). Those infected after birth were infected via breastfeeding. Of the remaining individuals, seven percent were infected via exposures to HIV-infected blood products before 1985. Four individuals were infected through sexual assault. The majority of the remaining individuals (eight percent) have suspected perinatal exposures but were born in countries other than the U.S., and thus their risk cannot be confirmed (data not shown in tables).

### Race/ethnicity and sex:

Of the 203 individuals living in Michigan who were ages 0-12 when diagnosed with HIV, 58 percent are male and 42 percent are female. About two thirds are black (65 percent), 22 percent are white, and six percent are Hispanic. The remaining seven percent are of other or unknown race (table 12, page 106).

Of the 173 individuals with confirmed perinatal exposures, 56 percent are male and 44 percent are female. Sixty-nine percent are black, 16 percent are white, and 15 percent are Hispanic or other or unknown race (table 11, page 105). For all but one of these perinatally infected cases, the only information about the mother is that she was HIV-positive; no additional maternal risk information was available.

### Late HIV diagnoses:

Children make up less than one percent of persons living with stage 3, of whom 30 percent (23 cases) were diagnosed with stage 3 infection at the time of their initial HIV diagnoses (late HIV diagnoses). A slightly higher proportion of persons with a risk of perinatal transmission had late HIV diagnoses (38 percent) (table 8).

### Geographic distribution:

Seventy-one percent of the 203 children diagnosed with HIV between the ages of 0-12 years are currently residents of high prevalence counties (see figure 3, page 18 for high/low prevalence county classification). Twenty-eight percent reside in low prevalence counties, while one percent are currently in prison. Fifty-nine percent of HIV cases that were diagnosed as children are currently residents of the Detroit Metro Area (DMA) (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 Michigan, the proportion of children who become infected perinatally has dropped precipitously, from 29 percent prior to 1997 to six percent between 1997 and 2009. As of January 1, 2012, one of the 39 children born in Michigan in 2008 and three of the 40 children born in 2009 to HIV-positive females were diagnosed with HIV infection. None of the 70 children born in Michigan in 2010 or 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.

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Data from Michigan Birthing Hospital Assessment & enhanced HIV/AIDS Reporting System (eHARS)

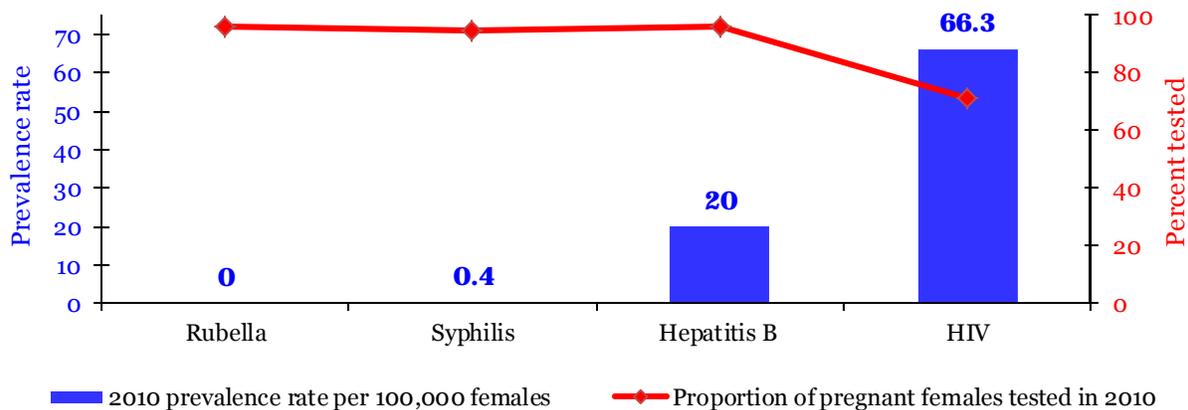
### Perinatal testing for HIV in Michigan:

The majority (83 percent) of persons diagnosed with HIV between the ages of 0-12 years were infected perinatally (table 13, 107). Of the 4,560 females estimated to be living with HIV in Michigan, approximately 730 (21 percent) are unaware of their HIV status. The predominant risk factor for females diagnosed with HIV during child-bearing age (15-49 years) is heterosexual contact (table 13). This HIV prevalence data, coupled with the fact that nearly 50 percent of pregnancies in the US are unplanned (Division of Reproductive Health, National Center for Chronic Disease Prevention and Health Promotion. <http://www.cdc.gov/reproductivehealth/unintendedpregnancy/>), underscore the importance of screening females for HIV during pregnancy.

In August 2010, MDCH updated its Guidelines for Testing and Reporting Perinatal Human Immunodeficiency Virus (HIV), Hepatitis B and Syphilis to include routinized third trimester HIV testing. All pregnant females in Michigan are to be tested as early as possible at diagnoses of pregnancy and again at 26-28 weeks gestation, regardless of perceived risk and/or whether they had a previous negative test result. It is recommended that females who are considered high-risk be tested again at 36 weeks gestation or at delivery. The addition of third trimester testing as a best practice guideline in Michigan is consistent with MDCH's commitment to being a part of the national effort to eliminate maternal to child transmission of HIV. The Michigan Statewide Perinatal Prevention Working Group (PPWG) works to ensure that there is provider compliance with Public Health Code 333.5123, requiring prenatal HIV testing unless a woman refuses to consent or testing is medically inadvisable.

Despite these recommendations and requirements, HIV is tested for less frequently than other infectious diseases (figure 40). Data from surveillance and the Michigan Birthing Hospital Assessment show that the prevalence rate of disease among females is inversely proportional to the proportion of pregnant females tested for it. In 2010, the HIV prevalence rate per 100,000 females was 66.3 (3,370 cases), the hepatitis B rate was 20 (1,017 cases), the syphilis rate was 0.4 (20 cases), and there were no cases of rubella. Only 71 percent of pregnant females had a documented HIV test in their hospital chart compared to 95-96 percent of all pregnant females for the other three infections.

**Figure 40: Testing and prevalence rates of select STDs and other infections among females in Michigan, 2010**



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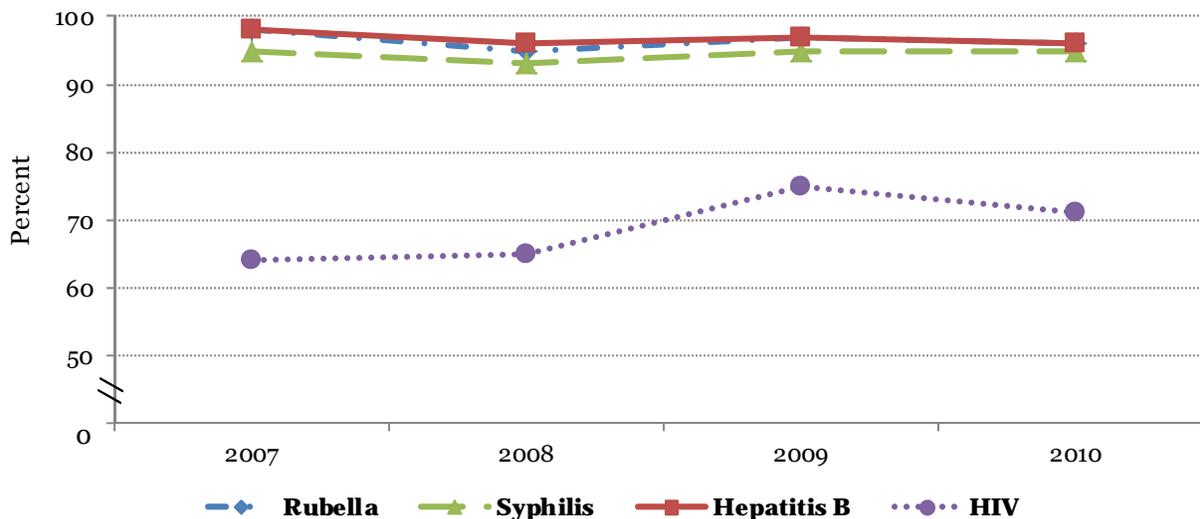
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### Data from Michigan Birthing Hospital Assessment

Data also show that only 63 percent of Michigan birthing hospitals had written policies (WP) or standing orders (SO) in place to verify a mother's HIV testing upon admission. While this represents an increase from 43 percent in 2007, the number of hospitals with WP/SO for HIV testing continues to be less than those with WP/SO in place for hepatitis B and syphilis screening (83 percent and 73 percent, respectively).

These differences are reflected in testing practices, as evidenced by paired maternal-infant chart reviews. From 2007-2010, an average 97 percent of charts reviewed included documentation of maternal screening for hepatitis B and rubella, and 95 percent had documented syphilis test results (figure 41). Only 69 percent of charts reviewed documented a maternal HIV test result. While there was an apparent increase in testing for HIV between 2007 and 2010, the levels are still well below the levels for other infectious diseases, even though HIV is more prevalent in this population than other diseases (see 2010 Epi Profile for 2003 perinatal testing data). The differences in documentation of maternal test results in the infant's chart were even more striking, with 80 percent of infant charts having the mother's hepatitis B test documented, 64 percent having the syphilis test, and 43 percent having the HIV test documented.

**Figure 41: Proportion of pregnant females tested for select STDs and other infections in Michigan, 2007-2010**



In recent years, MDCH has become aware of several cases of late perinatal HIV diagnosis. These were cases in which the mother tested negative in early pregnancy, and the infant (prompted by the presence of AIDS-defining illnesses) was later tested and diagnosed HIV-positive. Four such cases, referred to the Children's Hospital of Michigan/Wayne State University Pediatric HIV Clinic, are examined in an article in the May 2012 edition of the Journal of the International Association of Physicians in AIDS Care by doctors Faghiih and Secord. None of the four mothers met any of the indicators for high HIV risk, emphasizing the importance of both first trimester and 26-28 week screening of all pregnant females for HIV.