2012 Profile of HIV in Michigan

General Table of Contents

2012 Profile of HIV in Michigan

General Table of Contents

2012 Profile of HIV in Michigan

Summary

The HIV epidemic in Michigan:

At the end of 2011, 15,753 persons were known to be living with HIV in Michigan, over half (54 percent) of whom had progressed to stage 3 HIV infection (AIDS) (table 8, page 101) (based on current residence; see page iv for more information). Currently, there are persons living with HIV in all but one county of the state (table 9, pages 102-103). The statewide prevalence of HIV is distributed disproportionately. Most HIV cases are diagnosed and live in the Detroit Metropolitan Area, where 43 percent of the state's population lives but 63 percent of all persons living with HIV in Michigan reside (table 8).

The overall rate of new HIV diagnoses in Michigan remained stable between 2006 and 2010 (See page v-vi for information on *2012 Annual Review of HIV Trends in Michigan*). However, HIV continues to disproportionately impact certain racial and ethnic groups. Rates of new diagnoses among black males are 10 times higher than among white males, and rates among black females are 25 times higher than among white females (Trends). Black males and females make up 14 percent of the general population in Michigan but 56 percent of persons living with HIV (table 8).

The risk transmission category with the highest number of new diagnoses, as well as the majority of all prevalent cases, remains men who have sex with men (MSM). The number of diagnoses among injection drug users (IDU) has declined for the past several years, and persons with a risk of heterosexual sex represent an increasingly larger proportion of new diagnoses (Trends).

Although the highest rates and numbers of new diagnoses were among persons ages 30—44 years at diagnosis in past years, the epidemic continues to shift to a younger population. The rates among 20-24 year olds are now the highest of any age group. Nearly three quarters of all new cases among adolescents and young adults (13-24 year olds) are residents of the Detroit Metro Area at diagnosis (Trends).

Closer analyses of these data reveal that this trend is due to an increase in HIV among young black MSM. Teens newly diagnosed with HIV are more likely to be black MSM compared to adults 20 years and older (62 vs. 23 percent, respectively) (Trends). The section on young black MSM was updated for this publication (page 93). MDCH continues to monitor this change in the epidemic and aid in the development of targeted prevention and care programs.

HIV in the United States and world:

The most recent data show that in 2008, Michigan had the 13th highest number of persons living with HIV in the United States.[1] Nationally, the number of persons living with HIV increased 7.5 percent between 2007 and 2009 while rates of new diagnoses were stable (similar to trends seen in MI). At the end of 2009, an estimated 784,701 persons were living with HIV in the US. In 2010, the estimated national rate of new HIV diagnoses was 16.1 per 100,000 population. The reported number and rate of deaths per year among HIV-positive persons increased between 2007 and 2009 (Centers for Disease Control and Prevention. *HIV Surveillance Report 2010*, vol. 22. http://www.cdc.gov/hiv/surveillance/resources/reports/2010report/pdf/2010_HIV_Surveillance_Report_vol_22.pdf#Page=1).

According to the World Health Organization, an estimated 2.7 million new HIV diagnoses and 1.8 million HIV-related deaths occurred during 2010 worldwide, bringing the total number of persons living with HIV to 34 million. This translates to nearly 7,400 new HIV diagnoses each day. Almost 70 percent of new cases and 72 percent of HIV-related deaths were in sub-Saharan Africa, where transmission is predominately heterosexual (Joint United Nations Programme on HIV/AIDS, *Global HIV/AIDS Response: Epidemic update and health sector progress towards Universal Access: Progress Report 2011.* http://www.who.int/hiv/pubprogress_report2011/summary_en.pdf).

[1]National statistics in this section include the 46 states with confidential name-based HIV infection reporting as of January 2007.

2012 Profile of HIV in Michigan

Technical Information

Updates on new information:

Prior to the publication of this document, Epi Profile consumers were surveyed in order to solicit their comments and suggestions regarding the content of the Profile. Nearly 170 people completed the survey. Several changes were made based on the feedback received, including but not limited to the inclusion of data on transgender persons and monitored viral load. We hope to continue this practice in the future to ensure that data products we provide are as relevant to consumers as possible.

Michigan is at the forefront of national HIV surveillance and conducts multiple activities to supplement routine HIV surveillance. The 2012 Profile includes updated data from the Medical Monitoring Project (MMP), National HIV Behavioral Surveillance (NHBS), and HIV incidence estimates. HIV resistance data (VARHS) have required extensive analysis by the CDC. Recently, this analysis was completed, and Michigan has begun to investigate state-specific rates of HIV drug resistance and subtype variability. Results are not presented in this document, but please see the 'upcoming' portion of the data sources section to learn more about this data source (page xvi). In response to previous requests for data on sexual minorities, such as transgender persons, this year's Profile includes a new 'Special Populations' section on HIV-positive transgender persons (page 98). Included in the 2010 Profile and updated for this year's publication are sections on minority racial/ethnic groups, including Arab Americans, Asians/Native Hawaiians and other Pacific Islanders, American Indians/Alaska Natives, and foreign-born persons (pages 86-92).

As with the 2010 Profile, the HIV/STD/VH/TB Epidemiology Section is providing prevention and care planning groups with the epidemiologic profiles for the State of Michigan, the Detroit Metropolitan Area, and Out-State Michigan (including the upper peninsula and the remainder of the lower peninsula).

HIV terminology:

As of January 2012, MDCH began using new terminology to describe late stage HIV infection, with "stage 3 HIV infection" replacing the term "AIDS". Additionally, cases previously called "concurrent diagnoses" (receiving an AIDS diagnosis within 30 days of initial HIV diagnosis) are now referred to as "late HIV diagnoses". This new language is in line with language used by the CDC in several recent publications. Please refer to the glossary in appendix A (page 223) for definitions of terms.

Use of current residence vs. residence at diagnosis:

The HIV/STD/VH/TB Epidemiology Section creates the Epi Profile every other year; however, statewide and some county statistical analyses are created and disseminated on a quarterly basis. When reading either of these documents, keep in mind that they are based on two different populations. The HIV Surveillance Quarterly Analyses (statewide and county) use cases of HIV whose **residence at diagnosis** was Michigan (cases that were diagnosed in Michigan can presently be living elsewhere). This method is the standard set by the CDC. The Epidemiologic Profile of HIV in Michigan uses cases of HIV that are **currently living in** Michigan. There are 1,038 more persons included when using the HIV-positive population **currently living in** Michigan, regardless of where they were living when diagnosed with HIV. Different populations are used in order to satisfy questions on both populations. Therefore, there may be differences in numbers, percentages, and rates when comparing the two types of documents.

NOTE: There are limitations to current address data. We use the most recent address data available for this Profile, but some patient addresses are greater than ten years old. Therefore, persons who moved within the state of Michigan or to/from another state since that address was obtained may not be accu-

2012 Profile of HIV in Michigan

Technical Information

rately counted in the correct geographic area. Efforts are underway to improve current address data.

Computation of prevalence estimates:

HIV prevalence estimates in this report are based on adding the following three components and rounding to the nearest 100: 1) the number of reported cases currently living with HIV infection in Michigan; 2) the number of diagnosed HIV infection cases not yet reported, estimated at 10 percent of the reported cases living with HIV infection; and 3) the number of HIV infection cases not yet tested, estimated at 21 percent of the total cases living with HIV infection (identical to the CDC estimate). The prevalence estimate for all HIV-positive persons currently living in Michigan is 20,600 cases. Please note that this calculation is based on the number of reported HIV-positive persons *currently living in* Michigan, not those living in Michigan at the time of diagnosis as in the quarterly HIV statistics.

HIV prevalence estimates for each subgroup are calculated by multiplying the proportion of total cases in that group by 20,600 (the current total prevalence estimate). For example, 78 percent of reported HIV infections are among males. Therefore, the number of males currently living with HIV in Michigan is estimated to be 16,040 (77.88% x 20,600 rounded to the nearest 10; extra decimals provided for calculation purposes). Since the estimates are rounded, totals may not equal 20,600. The minimum estimate is 10.

Prison estimates of HIV infection are not calculated, because all prisoners are tested for HIV upon entry to prison; therefore, there is no need to account for unreported and untested cases. The prison prevalence estimate is the reported number of persons living with HIV infection and diagnosed in prison rounded to the nearest 10.

County estimates of HIV infection are calculated similarly to the subgroup estimates described above; however, for county calculations the proportion of cases in a particular county is multiplied by the statewide estimate minus the prison estimate (20,600 - 370 = 20,230). For example, 12 percent of HIV infection cases (not including cases in prison) are currently living in Oakland County. Therefore, the number of HIV-positive persons currently living in Oakland County is estimated to be 2,400 (11.84% x 20,230; extra decimals provided for calculation purposes). Since the estimates are rounded to the nearest 10, the county totals may not equal 20,230. The method of calculating prevalence estimates for counties was revised as of April 2008; thus, county estimates presented prior to this date may differ from current and future estimates.

Use of date of *diagnosis:*

The date of HIV *diagnosis* does not tell us when persons were first *infected*, because their HIV diagnosis may take place months or years after infection. In order to measure prevention achievements, the number of persons who become newly infected would ideally be followed over time. Methods for measuring new infections (incidence estimates) continue to improve, and new data are presented in this report. Trends continue to be analyzed based on new diagnoses, however. Due to methodological constraints and the relative newness of incidence data, new diagnoses remain the best current measure of how fast the epidemic is spreading among different populations.

Methods to assess trends over time:

To evaluate trends in new HIV diagnoses in Michigan over time, we estimated the number of persons newly diagnosed with HIV infection between 2006 and 2010 by adjusting the number of reported cases to account for those who may not have been reported to the health department by January 1, 2012.

2012 Profile of HIV in Michigan

Technical Information

These adjustments were made by weighting the data.

Unless otherwise noted, numbers cited include persons living with all stages of HIV infection. We used regression modeling on the adjusted data to assess significant changes in annual rates of new diagnoses overall and by race, sex, and age. Rates for race and sex subgroups were calculated using intercensal annual population estimates released by the Census Bureau in 2010 and based on the 2010 census, the most recent year for which 2006-2010 data were available. Rates for age at diagnosis were calculated using the 2010 Bridged-Race Population Estimates produced by the Population Estimates Program of the U.S. Census Bureau in collaboration with the National Center for Health Statistics. For risk groups, we analyzed annual counts as there are no reliable denominator data available for rate calculation. Trends overall and in subgroups are described using average annual percent changes in rates (or counts) of new diagnoses. Only significant trends and their corresponding percent changes are shown. "Significant" indicates statistical significance assessed at $p < 0.05$.

Numbers of reported HIV cases in Out-State Michigan were insufficient to apply this methodology. Since trends cannot be reported for Out-State Michigan, the chapter dedicated to this geographic area presents figures created using raw rather than adjusted data. Consequently, comparisons between adjusted numbers in the Statewide or Detroit Metro Area chapters and raw numbers in the Out-State chapter are not valid. For the complete Trends reports, please visit the following link: http://www.michigan.gov/mdch/0,4612,7-132-2940_2955_2982_46000_46003-36304--,00.html.

Presentation of risk and exposure categories:
Although case reporting includes ascertainment of multiple behaviors associated with HIV transmission, current surveillance methods cannot distinguish the specific route of HIV transmission in persons who have engaged in more than one risk behavior. For the purposes of analysis and interpretation, the Centers for Disease Control and Prevention created a risk hierarchy to classify people into risk transmission categories. When the transmission categories were created, the order from top to bottom was meant to represent the most likely route through which HIV was transmitted. The hierarchy was established 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 that individual was infected. Please see the glossary in appendix A (page 223) for more detailed definitions of risk transmission and exposure categories.
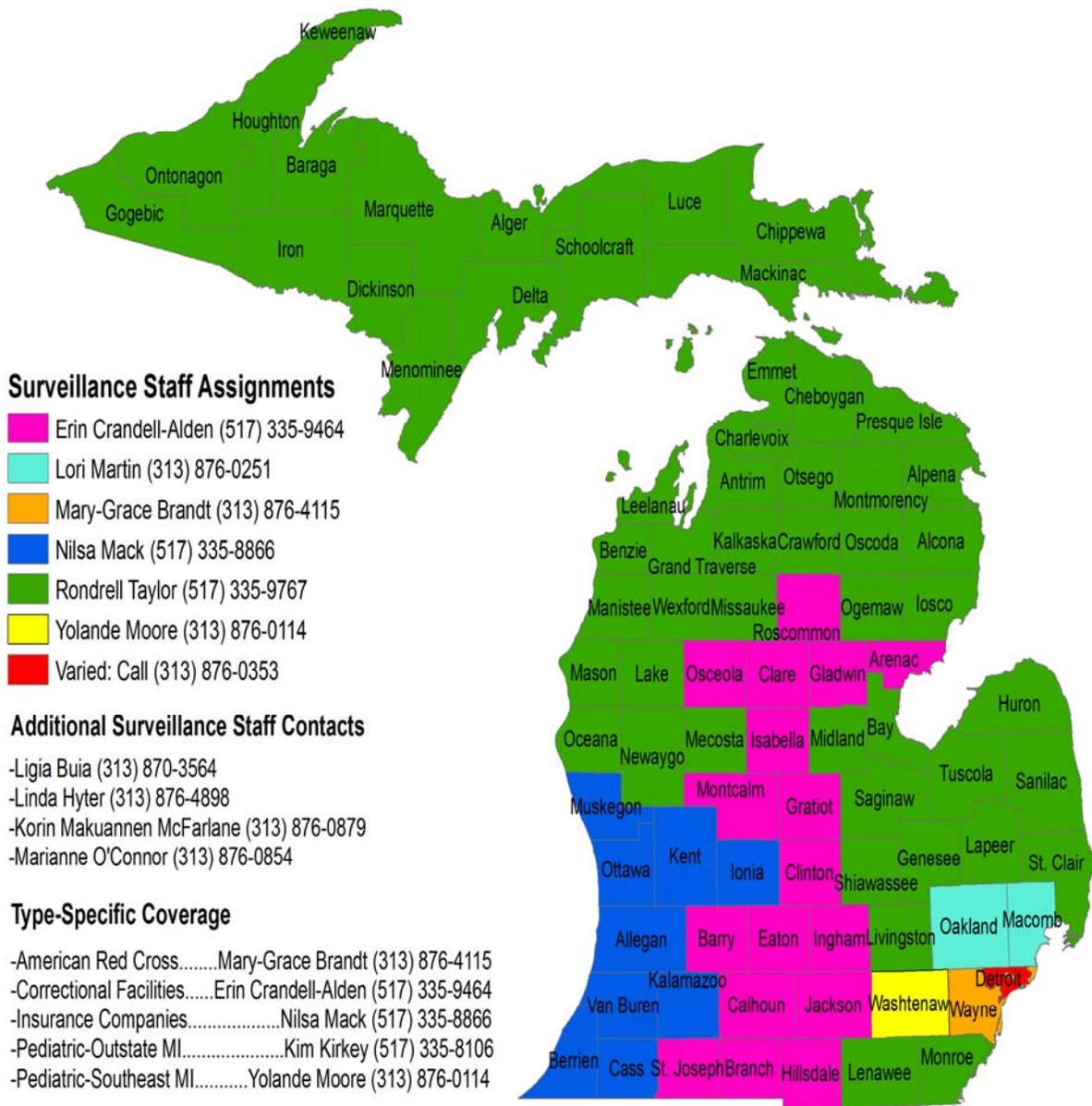
Ranking of behavioral groups:
A simplified method is used to rank the priority of behavioral groups for prevention and planning purposes. This rank is based on the proportion of total reported HIV infection cases and trends over time for each risk transmission category. Ranking is done separately for each geographic area.

2012 Profile of HIV in Michigan

HIV Surveillance Staff Contacts

Contact information:

Staff from the MDCH HIV/STD/VH/TB Epidemiology Section are available to assist in interpretation of this Profile as well as to provide additional analyses. Presentation-friendly versions of the data are also available upon request. Questions or comments about this document should be directed to your county contact. General questions may be directed to Danielle Smith (517-335-8165). With the cooperation of reporting sites, surveillance data will continue to guide HIV prevention strategies and resource allocation for prevention and care services in Michigan.

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2012 Profile of HIV in Michigan

Strengths and Limitations

When making planning decisions, it is important to consider the overall strengths and limitations of this document. Although the Epi Profile is comprehensive and draws from a number of data sources, there are many things that the Profile cannot explain.

Although eHARS (the enhanced HIV/AIDS Reporting System, the HIV data management system used nationally and in Michigan) is extensive, it is based on data for persons who have been confidentially reported (i.e., by name). Consequently, HIV-positive persons who have not been tested, have tested anonymously, or have tested by name but were not reported, are not included in these analyses. Therefore, HIV infections are under-detected and underreported. However, HIV surveillance data are considered to be among the most complete compared with other notifiable diseases and infections. In order to compensate for undocumented infections, estimates of HIV infection are provided in several tables.

The data presented in this report do not necessarily represent the characteristics of persons who have been recently infected with HIV, nor do they provide a true measure of HIV incidence. Persons are tested at differing times after they become infected, and many persons are not tested until HIV infection has progressed to stage 3 (late diagnoses). The most extensive population-based incidence estimates (new infections) available to date are included in this document, but incidence estimates are not available for several populations. For this reason, data in all other sections and tables of this document are based on new diagnoses.

Analyses of many different data sets are presented to provide robust representations of particular subpopulations. However, demographic and geographic subpopulations are not equally as sensitive to differences and changes in access to health care, HIV testing patterns, and specific prevention programs and services. All of these issues must be carefully considered when interpreting HIV data. Therefore, it is important to make comparisons across data sources to get the most complete picture of the epidemic.

The most current analysis available is presented for each source of data; however, the date of the most recent data differ from one source to another. For example, the most recent data available for Outreach, Prevention, and Care Services for Young African American MSM (YMSM) are from 2009, whereas some data (such as the Michigan Profile for Healthy Youth (MiPHY)) were collected in 2012. Strengths and limitations for each individual data set are further discussed in the Data Sources section (page ix).

2012 Profile of HIV in Michigan

Data Sources

Data were compiled from a variety of sources to provide the most complete picture of HIV in Michigan as possible. When interpreting data, keep in mind that each of data source has strengths and limitations. A brief description of each data source follows. Throughout this document, the data source(s) is listed at the top of each page. Wherever possible, readers are directed to the appropriate table or figure where data are presented. Please note that the majority of data from external sources (non-surveillance data) are not presented in tables.

Core HIV Surveillance

Enhanced HIV/AIDS Surveillance System (eHARS): HIV Surveillance Data (1983—present)

In 1983, the Michigan Department of Community Health (MDCH) established a surveillance system to track newly diagnosed cases of AIDS. This surveillance system is managed by the HIV/STD/VH/TB Epidemiology Section and was expanded in 1989 to include confidential name-based HIV reporting. In 2005, laboratory reporting was added to the surveillance system, and in 2011 HIV cases were reportable in the Michigan Disease Surveillance System (MDSS) as electronic case reports (ECRs). Standardized case report forms and laboratory reports are used to collect sociodemographic information, exposure data, laboratory and clinical information, vital status (i.e., living or dead), and referrals for treatment or services. These data are obtained from medical record abstractions. Patients are not interviewed as a part of routine core surveillance. HIV surveillance data may underestimate the number of recently infected persons, because some HIV-positive persons have not been tested or have been tested but not yet reported to MDCH. Persons who test positive at anonymous test sites and have not sought medical care (where they would likely be re-tested and reported by name) are not included in HIV surveillance statistics, because cases without names cannot be de-duplicated. Therefore, HIV infection data provide minimum estimates of the number of persons who are HIV-positive and living in Michigan. In addition, newly diagnosed cases may be reported to the health department at any point along the clinical spectrum of disease. Consequently, HIV infection data do not necessarily represent characteristics of persons who have been recently infected.

Serologic Testing Algorithm for Recent HIV Seroconversion (STARHS) - Incidence Data (2006—2009)

Michigan participates in STARHS (Serologic Testing Algorithm for Recent HIV Seroconversion), a CDC-funded initiative to incorporate HIV incidence testing into routine surveillance nationwide. The goal of STARHS is to produce incidence rates (rates of recent infection in the last six months) for HIV. HIV incidence data have important public health implications for evaluating HIV intervention and prevention programs for effectiveness, for targeting prevention efforts associated with ongoing transmission, and for allocating resources to populations in greatest need of prevention efforts. STARHS generates population-based estimates of HIV incidence based on the results of an incidence test (BED Assay) and testing and treatment history questions answered by the infected person. The STARHS incidence test is performed automatically on leftover serum from the diagnostic, confirmed positive specimen. The remnant serum is sent, without name, to the New York State STARHS Lab for the incidence test. If the original diagnostic specimen is not available, a subsequent serum or plasma specimen obtained within three months of diagnosis is acceptable for testing. The BED Assay classifies each infection as recent or

2012 Profile of HIV in Michigan

Data Sources

long-standing based on the amount of HIV antibody present. At a population level, these results can help estimate the number of new HIV infections occurring each year in a population.

Supplements to HIV Surveillance

Medical Monitoring Project (MMP) (2009)

The Medical Monitoring Project is an ongoing population-based surveillance project designed to assess clinical outcomes and behaviors of HIV-positive persons receiving care in the U.S. The MMP collects information on both behavioral and clinical data from confidential in-person interviews and medical record abstraction (MRA). There were 164 patients interviewed and 149 medical record abstractions during the 2009 MMP data cycle. For MMP, the surveillance period is defined as the 12 months preceding the interview, and the medical history period is defined as the time between first entry into HIV care and the start of the surveillance period. Due to lower than anticipated response rates, the 2009 MMP data were not weighted to provide a representative sample of the whole state, and the results may not be generalizable to the entire HIV-positive population in Michigan. For more about MMP, please visit www.michigan.gov/mmp.

Communicable Disease Surveillance

Michigan Disease Surveillance System (MDSS): TB Data (1992—present)

The MDCH HIV/STD/VH/TB Epidemiology Section conducts statewide surveillance of cases of tuberculosis. All TB cases reported in the State of Michigan are reported using the CDC Report of a Verified Case of Tuberculosis (RVCT) form. Until December 2007, surveillance information and laboratory reports on active and suspect TB cases were maintained and reported to CDC in the Tuberculosis Information Management System (TIMS) database. Starting in January, 2008, data have been managed in the Michigan Disease Surveillance System (MDSS). Surveillance data are analyzed to monitor statewide tuberculosis trends, including HIV/TB co-infection, as well as to determine appropriate treatment regimen, drug susceptibility results, and completion of TB therapy status. Each year, the TB registry is matched to the HIV surveillance database. Outcomes from the match include documenting progression from HIV to stage 3 infection (AIDS), completing TB infections reported directly to HIV surveillance, and, occasionally, identifying new HIV cases.

Michigan Disease Surveillance System (MDSS): STD Data (2004—present)

The MDCH Division of Health Wellness and Disease Control conducts statewide surveillance of sexually transmitted diseases (STDs) to determine the number of reported cases, monitor trends in new diagnoses, and provide partner counseling and referral services for examination and treatment. All of these objectives aim at reducing the spread of STDs in the community. In Michigan, gonorrhea, chlamydia, syphilis, lymphogranuloma venerum, chancroid, and granuloma inguinale are reportable by physicians and laboratories. Chlamydia is the most frequently reported reportable communicable disease in Michigan, and gonorrhea is the second most frequently reported. Michigan STD data has some limitations. There are significant variations in the completeness of data from public vs. private providers. Approximately 88 percent of female cases and 73 percent of male cases come from private providers. Among public providers, only 16 percent of race data is missing; however, 42 percent of race data is missing in reports from private providers. Michigan does not collect standardized sexual orientation or sexual risk

2012 Profile of HIV in Michigan

Data Sources

behavior data for gonorrhea or chlamydia cases. However, these data are collected for syphilis cases. For more Michigan STD data, please refer to http://www.mdch.state.mi.us/pha/osr/Index.asp?Id=12.

Michigan Disease Surveillance System (MDSS): Hepatitis C Data (1992—present)

The MDCH Division of Communicable Diseases requires physicians, health care professionals, and laboratories to report cases of communicable diseases, including acute and chronic hepatitis C, in accordance with Michigan's Communicable Disease Rules. Cases of hepatitis C are reported to MDCH via the Michigan Disease Surveillance System (MDSS), a web-based communicable disease reporting system developed for the state of Michigan. MDSS collects basic demographic data on each case, as well as additional information such as laboratory test results, clinical information and exposure history. Completeness of this additional information varies. Since acute and chronic hepatitis C infections are often asymptomatic and can remain undetected and unreported for years, the number of reported cases is less than the actual number of hepatitis C cases in Michigan.

Behavioral Surveys

National HIV Behavioral Surveillance (NHBS) (2005—present)

The National HIV Behavioral Surveillance program is a CDC funded project that monitors risk behaviors and access to HIV prevention services among three identified risk groups at a national and local level. Data collection is implemented in annual cycles with each cycle focusing on one risk group, i.e., men who have sex with men (MSM), injection drug users (IDU), and heterosexuals (HET) living in targeted areas. This project is different from all other HIV surveillance activities in that it collects data from people based on behavioral and/or residential characteristics and not their HIV status; thus, most interviewees are uninfected. In 2005, Michigan's HIV Surveillance Program participated in the IDU cycle of NHBS Round 1, interviewing IDUs in the City of Detroit. A pilot for the HET cycle was also performed in 2005, with the full HET cycle 1 being performed in the Detroit Metro Area in 2006. At this time, a supplementary Partner Study was also performed in which information was gathered from participants' partners. These data were analyzed to determine the degree of risk that females perceive for themselves compared to the actual behaviors reported by their male partners. The 2nd round of NHBS was started in 2008, in which the MSM2 cycle was implemented in Wayne County. Injection drug users (IDU2) and heterosexuals at increased risk for HIV (HET2) were completed in 2009 and 2010, respectively. NHBS Round 3 was implemented in 2011 beginning with men who have sex with men (MSM3) followed by injection drug users (IDU3) in 2012, followed by heterosexuals at increased risk for HIV (HET3) in 2013. Completed NHBS data reports are posted on the MDCH HIV/STD/Hepatitis website: www.michigan.gov/hivstd.

Michigan Birthing Hospital Assessment (2007-2010)

From 2007-2010, MDCH's Perinatal Hepatitis B Prevention Program (PHBPP) conducted an assessment of hepatitis B, syphilis, and HIV screening in Michigan birthing hospitals. The assessment, funded through the Centers for Disease Control and Prevention (CDC), included a survey of Michigan's 91 birthing hospitals in 2007; a follow-up survey of Michigan's 81 birthing hospitals in 2010; and review of 5,711 paired maternal-infant medical records from 91 birthing hospitals across the state.

2012 Profile of HIV in Michigan

Data Sources

Youth Risk Behavior Survey (YRBS) (2011)

The Youth Risk Behavior Survey (YRBS) is conducted every other year in Michigan by the Department of Education and assesses a broad range of health practices among a representative sample of the state's students in grades nine through 12. Data are weighted so that survey results can be generalized to all high school students in the state. Michigan is one of only a few states with high enough response rates on eight consecutive YRBS survey administrations (1997, 1999, 2001, 2003, 2005, 2007, 2009, 2011) to have scientific trend data spanning 14 years. The YRBS collects information on six categories of behaviors related to the leading causes of mortality and morbidity among both youth and adults. Sexual behaviors that contribute to unintended pregnancies and STDs, including HIV infection, constitute one of the six categories. Questions in this category ask about HIV prevention education, sexual activity (age at initiation, number of partners, condom use, past drug or alcohol use, forced sex, sex of sexual partner), and contraceptive use. The YRBS is a standardized questionnaire, so comparisons can be made between states, participating cities, and the nation on core questions. States and cities may also add questions of local interest. Michigan has added three questions to the sexual behavior section: parent-child communication, age of first sexual partner, and sex of sexual partner (new in 2011). Because the YRBS relies upon self-reported information, sensitive behavioral information may be under-reported or over-reported. Also, because the YRBS questionnaire is administered in schools, the data are representative only of adolescents who are enrolled in school and cannot be generalized to all adolescents. For example, students at highest risk, who may be more likely to be absent from school or to drop out of school, may be underrepresented in this survey, especially those in upper grades. The Michigan questionnaire does not currently include a question about sexual orientation. For more about the Michigan YRBS, go to www.michigan.gov/yrbs.

Michigan Profile for Healthy Youth (MiPHY) (2012)

The Michigan Profile for Healthy Youth (MiPHY) is an online student survey developed by the Michigan Department of Education and available at no cost to school districts interested in assessing student risk behaviors and protective factors for students in grades seven, nine, and 11. The MiPHY was developed in 2006 to provide districts with a local mechanism for data collection that could be used to assess needs, plan and implement programs, and access resources. The MiPHY instrument parallels the YRBS questionnaire but also includes risk and protective factor questions that are most predictive of substance use and violence. As questions are added or dropped from the state YRBS survey, the same is done for the MiPHY questionnaire. The survey is available to school districts every other year (in off years from the YRBS). Districts have the option of implementing the full MiPHY or the MiPHY basic, which doesn't include the questions related to sexual behavior and suicide. The online survey typically takes one class hour, and districts have almost immediate access to data reports after survey completion. Districts receive school- and district-specific reports. Aggregated county reports are available with school identity suppressed for counties with two or more participating districts. The MiPHY results apply to those students who took the survey and cannot be generalized to the entire student body or to the high school population in Michigan. The state and national YRBS results are often used as benchmarks for local districts reviewing MiPHY results. Districts that have participated in multiple cycles of MiPHY can also look at trends. To learn more about the MiPHY system and access county reports, go to www.michigan.gov/miphy.

2012 Profile of HIV in Michigan

Data Sources

Evaluation of the AIDS Partnership Michigan Community Re-entry Program (December 2011)

In 2011, the state commissioned an evaluation of its centralized prison intake re-entry program, which is designed to facilitate linkage to care for HIV-positive prisoners who are about to be released from prison. The evaluation used data from a variety of sources to determine how well the ex-offenders who had used the program were faring three or more years later. The evaluation focused on health status in 2011 of 190 ex-offenders who were released from prison between May of 2003 and May of 2008. The evaluation used a variety of data sources, including CAREWare data, vital records, and face-to-face interviews with 60 HIV-positive ex-offenders throughout the state.

Outreach, Prevention, and Care Services for Young African American MSM (YMSM) — January 2009

Brothers Saving Brothers (BSB) was a Health Resources and Services Administration (HRSA) Special Project of National Significance (SPNS) implemented by the Horizons Project from 2004 to 2009. It involved encouraging African American young men who have sex with men (YMSM) to learn their HIV status and sought to obtain information on possible barriers to HIV counseling and testing (HIV C&T). A motivation-based intervention (motivational interviewing, MI) was implemented along with field outreach to encourage African American YMSM in the Detroit Metropolitan Area to know their HIV status (i.e., receive HIV C&T and return for test results). BSB compared two forms of interventions for effectiveness: Field Outreach plus MI vs. Field Outreach Alone. A web-based survey was also sent to African American YMSM in the Detroit Metropolitan Area to assess sexual behaviors among online African American YMSM and to determine possible barriers to HIV C&T for this population. Data from both the field outreach and web survey are included in this publication.

The Young Men's Health Study: A Statewide Needs Assessment of Young Black MSM (October 2009)

In 2009, Michigan State University conducted a statewide needs assessment of young black men who have sex with men (YBMSM). The needs assessment was designed and conducted in collaboration with six YBMSM from around the state. Using a variety of recruitment methods, 180 young men completed semi-structured face-to-face interviews that lasted, on average, 70 minutes. Young men were asked about a wide variety of topics, including family, community, religion, social support, health care utilization, mental health, substance use, violence, sex, and sexual relationships.

Community Health Awareness Group/Michigan AIDS Coalition Focus Groups - Young Transgender Women of Color (March 2012)

Between March and May 2012, Community Health Awareness Group (CHAG), in collaboration with the Michigan AIDS Coalition (MAC), conducted a series of focus groups targeting young transgender women of color. The purpose of these groups was to gather additional information to further inform the implementation of the agency's new Centers for Disease Control and Prevention (CDC)-funded project. The women were brought together to talk about those behaviors that place them at risk for HIV and the hepatitis C virus (HCV) and to discuss their experiences and expectations of health care accessed in the Detroit Metro Area.

2012 Profile of HIV in Michigan

Data Sources

Service Utilization Data

Ryan White HIV/AIDS Program: The State of Michigan Uniform Reporting System (URS) Data Collection Process (2011)

The Ryan White Comprehensive AIDS Resources Emergency (CARE) Act was first enacted in 1990 to provide federal funds to help communities and states increase the availability of health care and supportive services for people living with HIV/AIDS (PLWH/A). In 2006, the CARE Act was replaced by the Ryan White HIV/AIDS Treatment Modernization Act (Ryan White), which was reauthorized in 2009 as the Ryan White Treatment Extension Act. Under this legislation, Part A funds are allocated to Eligible Metropolitan Areas heavily impacted by the epidemic (e.g., Detroit), while Part B, including the AIDS Drug Assistance Program (ADAP) earmark, provides resources to States and U.S. Territories. Ryan White Part C resources fund outpatient HIV early intervention services at local health care facilities and clinics. Part D is used to coordinate and enhance services for women, infants, children and youth. Ryan White HIV/AIDS Program resources are funds of last resort.

The services supported by Ryan White funds vary by jurisdiction but include health care services such as out-patient ambulatory medical care, medications, medical case management, mental health services, and supportive services that link PLWH/A to care (e.g., transportation). The Michigan Department of Community Health (MDCH), Division of Health, Wellness and Disease Control (DHWDC), HIV/AIDS Prevention & Intervention Section (HAPIS), is the Grantee for the Part B, ADAP, and Part D resources allocated to Michigan. The City of Detroit Department of Health and Wellness Promotion (DHWP) is the Part A Grantee designee. There were four Part C funded programs in Michigan in 2011: Wayne State University's Adult HIV/AIDS Clinic at the Detroit Medical Center, the Detroit Community Health Connection, the University of Michigan's HIV/AIDS Treatment Program in Ann Arbor, and Saint Mary's Health Care Special Immunology Services in Grand Rapids.

The Uniform Reporting System (URS) is a statewide client-level data standard designed to consistently document the quantity and types of services provided by agencies receiving Ryan White funds and describe the populations receiving services. The URS standards were originally developed by the Health Resources Services Administration (HRSA) and were implemented in Michigan beginning in 1994 as a demonstration project.

CAREWare, the software program developed by HRSA to collect and report URS data, is the program used by all Ryan White programs in Michigan. There are currently four separate CAREWare databases. The MDCH CAREWare system includes all the Part B- and Part D-funded programs, as well as data from two Part C-funded programs and from programs funded through the Michigan Health Initiative (MHI). DHWP maintains another CAREWare database for Part A-funded programs. MCDH and DHWP each implemented CAREWare as a centralized database accessed by service providers through a secure internet portal. Two Part C programs, the University of Michigan and the Detroit Community Health Connection each maintain their own individual CAREWare systems. Clients and services from ADAP and the Michigan Dental Program (MDP) are imported into the MDCH CAREWare database from other data systems on a regular basis.

For this profile, the URS data from these various CAREWare databases were extracted into a standard format and combined into a single database. The client records were then de-duplicated by means of

2012 Profile of HIV in Michigan

Data Sources

the standard confidential URS client identifier. This produced a single record for each client with a combined total of services received across all agencies and Ryan White Parts. The clients in the URS database for this report are HIV-positive and have received at least one service during the calendar year 2011. Clients identifying as transgender have been excluded at this time due to small numbers and lack of comparability with surveillance data.

Vital Statistics Data

Birth and Death Data

The National Center for Health Statistics receives information on births and deaths in the United States through a program of voluntary cooperation with state government agencies (i.e., state departments of health, state offices of vital statistics) called the Vital Statistics Cooperative Program. States use standard forms to collect birth and death data. The birth certificate form includes demographic information on the newborn and the parents, insurance status, prenatal care, prenatal risk factors, maternal morbidity, mode of delivery, pregnancy history, and clinical characteristics of the newborn. Death certificates include demographics, underlying causes of death, and contributions of selected factors to the death (i.e., smoking, accident, or injury) of all deceased persons. Reporting is virtually 100 percent complete for births and deaths. Therefore, inferences can be made concerning the number of live births in a service area. The data can also be used to determine the effect of deaths related to HIV infection in a service area. Birth certificate data are obtained from patient medical records (i.e., smoking history, morbidity), which may be incomplete. In addition, deaths resulting from HIV, or whose underlying cause was HIV infection, may be underreported on death certificates. Clinical information related to HIV infection may be missing.

Population Data

U.S. Bureau of the Census (Census Bureau) (2010)

The Census Bureau collects and provides timely information about the people and economy of the United States every 10 years. The Census Bureau's recently updated Web site (http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml) includes data on demographic characteristics (e.g., age, race, Hispanic ethnicity, sex) of the population, family structure, educational attainment, income level/employment status, housing status, and the proportion of persons who live at or below the Federal Poverty Level (FPL). Summaries of the most requested information for states and counties are provided, as well as analytical reports on population changes, age, race, family structure, and apportionment. State- and county-specific data are easily accessible, and links to other web sites with census information are included. All Michigan-specific census data used in this document are data that were collected during the 2010 census unless otherwise noted.

2012 Profile of HIV in Michigan

Historical and Upcoming Data Sources

Historical Data Sources - Removed in 2012

This year, the following data sources were removed from the Epidemiologic Profile of HIV in Michigan due to their age and/or a lack of updated data:

- Adult/Adolescent Spectrum of HIV Disease (ASD) Project;

- Supplement to HIV/AIDS Surveillance (SHAS) Project;

- Bureau of Juvenile Justice Youth Risk Behavior Survey (BJJ YRBS);

- HIV/AIDS and Health Related Needs Among Commercial Sex Workers in Michigan;

- HIV/AIDS and Health Related Needs and Risk Perceptions Among African-American Men who Have Sex with Men in Michigan;

- Assessment of HIV and Other Recommended Perinatal Screening Tests Project;

- HIV/AIDS and Health-Related Needs Among Homeless Persons in Michigan; and

- HIV/AIDS and Health-Related Needs of Formerly Incarcerated Persons in Michigan.

Wherever possible, we found data to fill the gaps left by these sources. We continue to work with our partners and to seek new data to include in these profiles. Most data and products from removed sources are available on the web. Data from surveillance projects can be found by going to www.michigan.gov/hivstd —> HIV/AIDS —> Statistics and Reports, or clicking on the following link: http://www.michigan.gov/mdch/0,4612,7-132-2940_2955_2982_46000_46003---,00.html. Data from needs assessments are available at http://www.michigan.gov/mdch/0,4612,7-132-2940_2955_2982_46000_46001-280667--,00.html.

Upcoming Data Sources - Not included in this publication

Michigan's HIV Surveillance Program is at the forefront of HIV surveillance in the country. This program has been able to incorporate many supplements to routine surveillance. However, not all programs have data available for this publication. Below is a description of the HIV resistance surveillance project not included in this document.

VARHS (Variant, Atypical and Resistant HIV Surveillance) Data (2004—present)

VARHS is a CDC-funded surveillance initiative that incorporates HIV drug-resistant genotype testing (specifically sequencing the reverse transcriptase (RT) and protease regions of the *pol* gene of HIV) into routine diagnostic HIV testing protocols. Beginning in 2004 and continuing until mid-2010, all individuals who had their first confidential HIV diagnosis identified through MDCH's laboratory system or a cooperating private/public laboratory, and who are not known to have taken antiretroviral therapy, were provided with a clinically useful genotype and assessment of drug resistance and HIV subtype. Beginning in 2010 and in line with new recommendations that advocate physician-initiated baseline genotype testing for newly diagnosed HIV-positive individuals, private and commercial labs that conduct HIV genotyping are required to report nucleotide sequence data to MDCH so that statewide trends in HIV drug resistance and subtype can continue to be accurately and comprehensively monitored. Results from VARHS surveillance should be available for dissemination by the end of 2012.