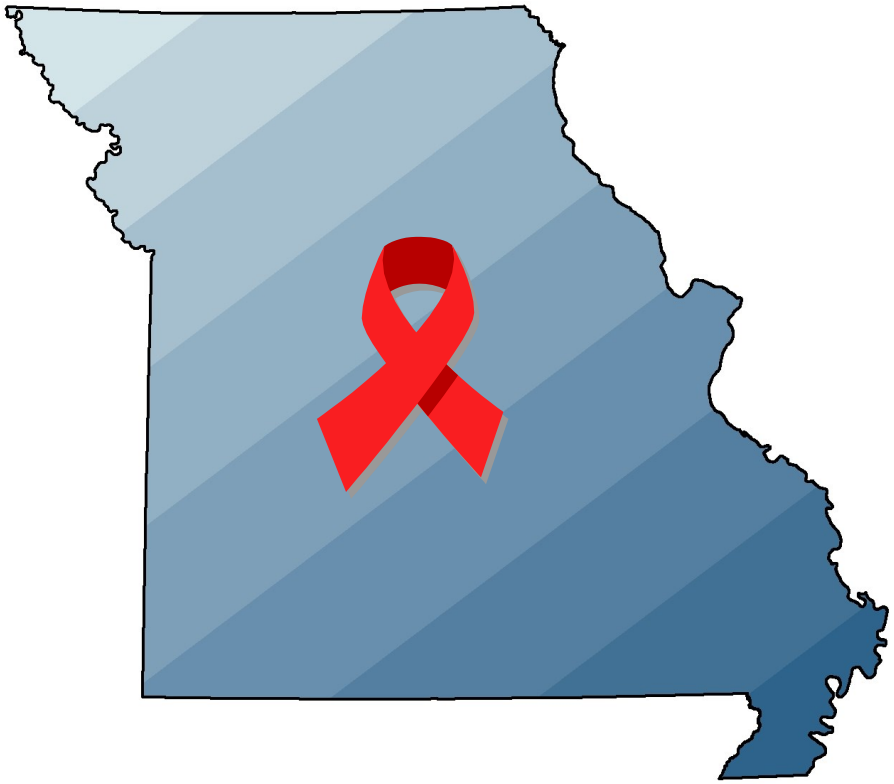
2014 Epidemiologic Profiles of HIV, STD, and Hepatitis in Missouri



Bureau of Reportable Disease Informatics
Division of Community and Public Health
Missouri Department of Health and Senior Services
1.866.628.9891
http://health.mo.gov/data/hivstdaids/

This page was intentionally left blank.

2014 Epidemiologic Profiles of HIV, STD, and Hepatitis in Missouri

TABLE OF CONTENTS

This page was intentionally left blank.

Background

The Division of HIV/AIDS Prevention at the Centers for Disease Control and Prevention (CDC) and the Health Resources and Services Administration (HRSA) released the revised *Integrated Guidance for Developing Epidemiologic Profiles* in 2014. These guidelines are meant to assist states in creating standardized profiles that meet the planning needs of HIV prevention and care programs, while allowing freedom to portray unique situations within the state. The epidemiologic profile is divided into two sections, within which four questions are addressed.

Profile Organization:

Section 1: Core Epidemiological Questions

This section deals with understanding the characteristics of the general population, the distribution of human immunodeficiency virus (HIV) disease and sexually transmitted diseases (STDs) in the state, and a description of the population at risk for HIV and STD infection. This section is organized around three key questions:

Question 1: What are the sociodemographic characteristics of the general population of Missouri?
Describes the overall demographic and socioeconomic characteristics of the general population of Missouri.

Question 2: What is the scope of the HIV disease epidemic in Missouri?
Describes the impact of the HIV disease epidemic in Missouri.

Question 3: What are the indicators of HIV disease risk in Missouri?
Provides an analysis of the high-risk populations. Both the direct and indirect measures of risk behaviors associated with HIV transmission and the indicators of high-risk behaviors are described in this section.

Section 2: Ryan White HIV/AIDS Care Act Special Questions and Considerations

This section focuses on the questions that pertain to the HRSA HIV/AIDS care planning groups. It describes access to, utilization of, and standards of care among persons in Missouri who are HIV infected. It is organized around one key question:

Question 4: What are the HIV service utilization patterns of individuals with HIV disease in Missouri?
Characterizes patterns in the use of services by the population living with HIV/AIDS in Missouri. Assesses the unmet need of persons who know they are HIV positive, but are not in care. Describes their service needs and perception of care.

General Information:

The 2014 *Profiles* provides a comprehensive update of all four questions in the *Profiles* including the sociodemographic characteristics of Missourians; epidemiology of HIV ,STDs, hepatitis, and unmet primary medical care needs among individuals living with HIV through 2014. Please refer to the data sources used in the *Profiles* on page ii and the technical notes on page v to develop a better understanding for interpreting the data presented. Additional sections of the *Profiles* are dedicated to providing data specific to each of the six HIV care regions to assist with regional level planning efforts.

Missouri Planning Cycle:

The statewide Missouri Comprehensive Prevention Planning Group (CPPG) usually operates on a five year planning cycle. The current comprehensive prevention plan was developed in 2010 and runs from 2011-2016. To best serve the CPPG planning process, updates to the epidemiologic profile are designed to coincide with the CPPG's planning cycle. As a result, a complete update of all four questions of the epidemiologic profile is completed every five years, coinciding with the development of the new comprehensive HIV prevention plan. In the other years, updates will only be made to selected questions of the *Profiles*. The current *Profiles* represents a comprehensive update to all questions in the *Profiles*. For data from the previous comprehensive *Profiles*, please refer to the *2009 Epidemiologic Profiles*, which can be accessed at http://health.mo.gov/data/hivstdaids/pdf/MOHIVSTD2009.pdf.

Data Sources

1. *Population Data*

American Community Survey, U.S. Census Bureau

The American Community Survey is a nationwide sample survey conducted every year by the U.S. Census Bureau. The survey provides population data regarding age, race, income, country of birth, languages spoken at home, education, employment, and many other areas. Single-year, three-year, and five-year estimates are currently available for the American Community survey. Single-year estimates are only available for geographic areas with a population of 65,000 or more. Three-year estimates are available for geographic areas with a population of 20,000 or more. Five-year estimates are available for all geographic areas. For more information, visit http://www.census.gov/acs/www/.

Migration Data Files, Internal Revenue Service (IRS)

State- and county-level migration estimates can be derived from changes in the tax filer's mailing address on domestic and foreign tax return forms between filing years. The IRS produces data files that are freely available. Migration patterns can be assessed by changes in the total number of exemptions reported between two filing years. There are some limitations associated with using tax return information to estimate migration patterns. First, the migration data file only includes tax returns filed through the 39th week of the year, which account for approximately 95% to 98% of all filed individuals returns. Second, differences exist in the likelihood of filing a tax return among various populations. Often the elderly and poor are less likely to file returns, and therefore would not be accurately represented in the migration data files. Third, the mailing address reported on the tax return may not reflect the true address of residence. Migration data are not available by demographic characteristics such as sex, age, and race/ethnicity. For more information, visit http://www.irs.gov/uac/SOI-Tax-Stats-Migration-Data.

Population Estimates, Missouri Department of Health and Senior Services (MDHSS), Bureau of Health Care Analysis and Data Dissemination and U.S. Census Bureau

MDHSS maintains population files for Missouri and its counties based on data provided by the U.S. Census Bureau in partnership with the Federal State Cooperative Program for Population Estimates. Census counts are produced every ten years, with the 2010 census representing the most recent census. Population estimates are produced for non-census years based on adjustments made to the most recent census counts. Due to the time required to compute the estimates, the most recent year's estimates are not available for use in the *Profiles*, and the 2013 population estimates are used instead. Beginning with the 2008 population estimates new race/ethnicity categories are being used, which include a separate estimate for persons identifying being of more than one race. This change reflects the current level of race/ethnicity detail that is captured for HIV surveillance data. As a result of the change, the population estimates from *Profiles* prior to 2009 will not be comparable with the current *Profiles*.

2. *HIV Epidemic Data*

HIV/stage 3 (AIDS) Surveillance Data, eHARS

Missouri's communicable disease reporting rule, 19 CSR 20-20.020, established reporting of stage 3 (AIDS) cases in 1983, named HIV cases in 1987, CD4 lymphocyte counts in 1991, and HIV viral load lab results in 2000. Demographic information, vital status, mode of exposure, laboratory results, and treatment and service referrals are collected on standardized case report forms and laboratory reports. The MDHSS, Bureau of Reportable Disease Informatics (BRDI) is responsible for managing the HIV/stage 3 (AIDS) surveillance data, stored in the enhanced HIV/AIDS Reporting System (eHARS). Evaluations have shown a high level of completeness of the surveillance system. However, the surveillance system primarily collects information only on individuals diagnosed with HIV disease in Missouri. Some information regarding those currently living with HIV in Missouri is maintained in eHARS, but is not complete. Therefore, the *Profiles* only includes data on those whose most recent diagnosis (HIV or stage 3 (AIDS)) occurred in Missouri. The data collected in the surveillance system is based on diagnosis date, and not the time of infection. The diagnosis can be made at any clinical stage of the disease. The characteristics associated with new diagnoses may not reflect characteristics associated with recent infection. The surveillance system only includes data on individuals that are tested confidentially and reported. Members of certain subpopulations may be more or less likely to be tested, and therefore different subpopulations could be over or under-represented among diagnosed and reported HIV cases.

3. *HIV-Related Indicators of Risk Data*

Behavioral Risk Factor Surveillance System (BRFSS) Survey, CDC

The BRFSS survey is an annual population-based, random-digit-dialed, telephone survey of the state's

civilian, non-institutionalized, adult population, 18 years of age and older. Cell phone surveys were first included in the release of the 2011 data set, meaning that data sets starting with 2011 cannot be compared to the BFRSS data sets prior to 2011. Interviewers ask questions related to health behaviors, health screening, quality of life, mental health, impairment, and access to health care and insurance. The results are weighted by demographic characteristics and by selection probability, and are used in planning, implementing, and evaluating health promotion and disease prevention programs. For participants 18 years of age and older, the interview includes questions regarding HIV/stage 3 (AIDS)-related behaviors and testing. The BRFSS does not always contain the same questions from one year to the next. For more information, visit http://www.cdc.gov/brfss/.

HIV Testing Database

CDC-funded prevention project areas, including Missouri, are required to collect information related to HIV tests performed at publicly funded HIV testing sites. The data collected include demographic information, behavioral risk information, and previous testing history, among other elements. Some data elements, such as previous testing history and behavioral risk, are typically only collected on persons testing positive and therefore data may be limited. The data are only representative of people who seek HIV testing at publicly funded testing sites. The data are collected for each testing experience, and multiple tests conducted on the same individual cannot be differentiated. Beginning in September 2007, MHDSS was funded by CDC to conduct expanding HIV testing initiatives in the state. This initiative was implemented to provide HIV testing in select urban facilities (including hospital emergency departments, private clinics, and public health clinics) with the intent to test all persons seeking care. Sites were selected in Kansas City and St. Louis, and testing began in early 2008. Beginning in 2012 an initiative was set in place to address the ongoing epidemic of HIV infection among black/African Americans in Missouri, existing testing sites were funded by CDC to enhance testing activities among black/African American youth, women, and men who have sex with men (MSM). Testing under this initiative began in 2014. The primary goal of these activities is to increase the proportion of black/African Americans who are aware of their HIV infection and to develop a seamless system that allows identifying HIV infected individuals, linking them to appropriate care, and re-engaging those who are lost to care.

Hepatitis Surveillance Data, MDHSS, WebSurv

Missouri's communicable disease reporting rule, 19 CSR 20-20.020, requires reporting of acute and chronic hepatitis B and C cases, perinatal hepatitis B, and prenatal hepatitis B within three days to the local health authority or MDHSS. Demographic information, vital status, laboratory results, and treatment information are collected on standardized report forms and laboratory reports. MDHSS BRDI is responsible for managing the hepatitis surveillance data, stored in the Missouri Health Surveillance Information Systems (WebSurv). Limitations of the data include incomplete race/ethnicity information and underreporting.

Hospitalization Discharge, Charges, and Days of Care, Missouri Information for Community Assessment (MICA)

The dataset includes hospital discharges among Missouri residents from non-federal and non-state acute care general and specialty hospitals. Discharges are classified into diagnosis categories based on the first of 23 possible diagnoses coded on the discharge record. Hospital charges represent the total amount billed, and may not reflect the costs associated with providing the service. Therefore, charge data should only be used to compare the impact between disease categories or geographic regions, and should not be used to produce a total cost associated with a specific disease. The data set also includes days of care, which is calculated as the difference between the admission and discharge dates. If admission and discharge occurred on the same day, days of care is set to one. For more information, visit http://health.mo.gov/data/mica/D_C_DofCMICA/Documentation.html.

National Survey of Substance Abuse Treatment Services (N-SSATS), Substance Abuse and Mental Health Services Administration (SAMHSA)

This national survey annually collects information from public and private facilities providing substance abuse treatment. The survey does not include information from treatment programs in jails or prisons. The survey collects information regarding the characteristics, services offered, and number of clients receiving treatment at the facilities. The survey response rate is typically very high (>95%). This survey is a point-prevalence survey, meaning that it captures a snapshot of the facility on a particular date. This survey does not represent the annual total of clients served, or necessarily the maximum capacity that a facility can handle. For more information, visit http://wwwdasis.samhsa.gov/dasis2/nssats.htm.

National Survey on Drug Use and Health, SAMHSA

This survey is a national, multi-stage probability sample regarding illicit drug, alcohol and tobacco use

among the noninstitutionalized population twelve years of age or greater. Information is collected on lifetime, annual, and past-month usage of various substances; substance abuse treatment history; the perceived need for treatment; mental health indicators; and core demographics. Survey results prior to 2002 should not be compared with more recent surveys due to changes in recruitment and weighting procedures. For more information, visit https://nsduhweb.rti.org/.

School Health Profiles, CDC

The School Health Profiles is derived from a sample survey of schools that serve students from sixth through twelfth grade in each state, territory, or city of interest. The survey is conducted in even years, and assesses school health policies and programs. Survey areas include school health education requirements, physical education requirements, health policies related to HIV/stage 3 (AIDS), tobacco-use prevention, nutrition, asthma management, and the coordination of school health with the family and community. In 2012, 45 states, 18 cities, four territories, and two tribal governments collected data and were included in the analysis. Surveys are sent from the state, local or territorial education or health agency to the principal. The principal and the school's lead health education teacher complete the appropriate survey responses. Results from the principal and teacher surveys are weighted. For more information, visit http://www.cdc.gov/healthyYouth/profiles/.

STD Surveillance Data, WebSurv

Missouri's communicable disease reporting rule, 19 CSR 20-20.020 requires reporting of chlamydia and gonorrhea cases within three days, and syphilis, including congenital syphilis, within one day to the local health authority or MDHSS. Demographic information, vital status, laboratory results, and treatment information are collected on standardized report forms and laboratory reports. MDHSS BRDI is responsible for managing all reportable STD surveillance data. STD data collected through 2011 were managed in the STD Management Information System (STD*MIS). Near the end of 2011, MDHSS BRDI began utilizing WebSurv to collect and manage STD surveillance data. The change in databases must be considered when assessing changes in STD cases reported since 2012 compared to prior years. Data in this system are presented based on the date of report to the health department and not the diagnosis date. The data represent only those individuals tested and reported, which underestimates the true burden of infection as many infected individuals do not seek care, often due to a lack of symptoms. In addition, many people receive treatment without being tested, again underestimating the true burden of infection. Since morbidity is frequently entered based on the receipt of laboratory reports at MDHSS, race and ethnicity information is often not available. Incomplete race and ethnicity reporting limits the interpretation of trends for these characteristics.

Treatment Episode Data Set (TEDS), SAMHSA

This data set collects national information regarding admissions to public and private providers of substance abuse treatment that receive public funding. At a minimum for all states, the data set includes demographic information, date of admission, number of prior treatment episodes, and information related to the substance abuse problem. TEDS does not include all admissions to substance abuse treatment; the completeness of client-level data included in the data set varies depending on state reporting practices and the availability of public funds. For more information, visit http://www.oas.samhsa.gov/2k2/TEDS/TEDS.cfm.

Youth Risk Behavior Surveillance System (YRBSS) Survey, CDC

The YRBSS survey is administered by the Missouri Department of Elementary and Secondary Education to monitor specific behaviors among high school students that contribute to the leading causes of morbidity and mortality. The survey is administered in the spring of odd-numbered years. Student participation is voluntary, and local parental permission procedures are followed. The students who participate in the survey constitute a valid sample of high school-age youth. The results may be used to make inferences about the health-risk behaviors of all Missouri public high school students. However, the results from the statewide survey cannot be used to provide estimates for smaller geographic areas than the state. The YRBSS does survey some large, urban school districts to obtain estimates for a smaller geographic area; no Missouri school district participated in the more area-specific survey. Data from the 2011 survey were not released due to small sample sizes. For more information, visit http://www.cdc.gov/healthyyouth/data/yrbs/index.htm.

Tuberculosis Disease Surveillance Data, WebSurv

Missouri's communicable disease reporting rule, 19 CSR 20-20.020, requires reporting of tuberculosis disease within one day to the local health authority or MDHSS. Demographic information, vital status, laboratory results, and treatment information are collected on standardized report forms and laboratory reports. MDHSS Bureau of Communicable Disease Control and Prevention is responsible for managing the tuberculosis surveillance data stored in WebSurv. Limitations of the data include incomplete race/ethnicity information and underreporting.

4. HIV Care Services Data

HIV Case Management Data, SCOUT

MDHSS participates in a cooperative agreement with HRSA for the provision of several programs funded by the Ryan White HIV Treatment Modernization Act. Data for persons served by these programs are collected and stored in the Securing Client Outcomes Using Technology (SCOUT) database. Data include key demographic and eligibility related variables for persons residing in Missouri, and portions of Illinois and Kansas. These data are used to monitor the level of need and the provision of services for individuals utilizing Ryan White funded services.

Technical Notes

Revised HIV Surveillance Case Definition: Case definitions are used for all national reportable conditions. Case definitions are a standardized set of requirements to determine whether an individual is counted as a case for a particular disease. Case definitions allow states to count cases in a standard fashion in order for data to be compared across the nation. When changes in testing technology and in the understanding of a disease occur, revisions to case definitions may occur. The HIV surveillance case definition was revised in 2014 in large part to account for the implementation of the new HIV testing algorithms that no longer required the western blot as the confirmatory test. A major change to remove the distinction between HIV cases and AIDS cases occurred in the 2014 revised surveillance case definition. All individuals infected with HIV disease are classified as HIV disease with progression of the disease classified as stages (0-3). For more information, visit http://www.cdc.gov/mmwr/preview/mmwrhtml/rr6303a1.htm.

Stage 3 (AIDS): Stage 3 (AIDS) represents an advanced stage of HIV infection when the CD4+T-lymphocyte values are usually persistently depressed. Stages are defined primarily based on the CD4+T-lymphocyte values and age. For additional information, visit http://www.cdc.gov/mmwr/preview/mmwrhtml/rr6303a1.htm.

HIV Disease, HIV Case, Stage 3 (AIDS) Case: HIV disease includes all individuals diagnosed with the HIV virus regardless of the stage of disease progression. All persons with HIV disease can be sub-classified as either a **stage 3** (**AIDS) case** (if they are in the later stages of the disease process and have met the case definition for stage 3 (AIDS)), or an **HIV case** (if they are in the earlier stages of the disease process and have not met the stage 3 (AIDS) case definition). In this report, the sub-classification of HIV or stage 3 (AIDS) is based on an individual's most severe stage of HIV disease progression as of December 31, 2014.

Date of Diagnosis: Represents the date an individual was first diagnosed with the HIV virus, regardless of the stage of disease progression. However, in many instances the initial diagnosis of infection does not occur until several years after the initial infection, so at best the trends in diagnosed HIV cases can only approximate actual trends in new HIV infections.

Reporting Delay: Delays exist between the time HIV infection is diagnosed and the time the infection is reported to MDHSS. As a result of reporting delays, case numbers for the most recent years of diagnosis may not be complete. Data from recent years should be considered provisional. The data presented in this report have not been adjusted for reporting delay. The data in this report represent all information reported to MDHSS through February 28, 2015.

Place of Residence: Data are presented based on an individual's residence at time of most recent diagnosis of HIV or stage 3 (AIDS). Only cases whose most recent diagnosis was Missouri are included in the analyses presented in the *Profiles.* This residence at time of most recent diagnosis may or may not correspond with the individual's residence at the time of initial infection, or to the current residence.

Vital Status: Cases are presumed to be alive unless MDHSS has received notification of death. Current vital status information for cases is ascertained through routine matches with Missouri death certificates, reports of death from other states' surveillance programs, and routine site visits with major reporting sites. When comparing *Profiles*, changes in the number of living cases in a select year between the *Profiles* is due to adjustments based on results of death matching activities. Revisions for the number of persons living at the end of the year for the past ten years can be found in Figure 14 of the 2014 *Profiles.*

Exposure Category: Despite possible existence of multiple methods through which HIV can be transmitted, cases are assigned a single most likely exposure category based on a hierarchy developed by the CDC. A limitation of the dataset is the large number of cases reported with an undetermined exposure category. Data on cases with missing exposure category information have been proportionately re-distributed into known exposure

categories in selected analyses.

Routine Interstate Duplicate Review (RIDR): The mobility of American citizens impacts the ability to accurately track individuals living with HIV/stage 3 (AIDS). Mobility may result in the same HIV infected person being counted in two or more different states. To help respond to potential duplication problems, the CDC initiated the Interstate Duplication Evaluation Project (IDEP), now called Routine Interstate Duplicate Review (RIDR) in 2002. RIDR compares patient records throughout the nation in order to identify duplicate cases. The states with duplicate cases contact one another to compare patient profiles in order to determine the state to which the case belongs, based on residence during the earliest date of diagnosis. Because of this process, the cumulative number of cases within Missouri may change, but the process has increased the accuracy of Missouri's data by reducing the chance that a case has been counted more than once nationally.

Small Numbers: Data release limitations are set to ensure that the information cannot be used to inadvertently identify an individual. It is difficult to make meaningful statements concerning trends in areas with low numbers of cases. Please interpret rates where the numerator is less than 20 cases with caution because of the low reliability of rates based on a small number of cases.

Glossary of Terms: A glossary of terms is located at the end of the profile. If the reader is unclear about any terms used in the *Profiles*, please feel free to contact MDHSS BRDI for additional information.

Race/Ethnicity: Race and ethnicity information has been collected under two different systems in the HIV/stage 3 (AIDS) reporting system. Since many cases were reported under the old classification system, the use of the race and ethnicity categories from the old classification system will be maintained in this report. All cases identified with a Hispanic ethnicity will be reported in the *Profiles* as Hispanic, regardless of reported race information. In the text of this document, whenever cases are being discussed, the term "white" means white, not Hispanic, and "black/African American" means black/African American, not Hispanic. The number of cases reported as "not Hispanic" may include individuals whose ethnicity was not reported. Individuals who reported multiple racial categories or whose race was unknown are included in the category "other/unknown" or "two or more races/unknown" depending on the table or figure.

Diagnoses in Correctional Facilities: For persons living in Missouri correctional facilities (which include state, county, and local facilities) at the time of their HIV/stage 3 (AIDS), chlamydia or gonorrhea diagnosis, the location of the correctional facility is considered the individual's residence at diagnosis. For persons living in Missouri correctional facilities at the time of their syphilis diagnosis, the residence at diagnosis is considered the individual's address prior to being incarcerated. Data for persons diagnosed in Missouri correctional facilities are included in the statewide data, since most of these individuals were likely Missouri residents prior to incarceration. However, diagnoses in Missouri correctional facilities are not included in the HIV/stage 3 (AIDS) data for the six HIV care regions of the state. This exclusion at the regional level is based on the fact that these individuals, especially those in the state prison system, are often incarcerated in a different location than where they were residing (and were likely infected) prior to imprisonment. If included among the cases from the area where imprisoned at the time of diagnosis, it would distort the picture of the epidemic in that area. Individuals diagnosed at federal correctional facilities in Missouri are not included in any data presented.

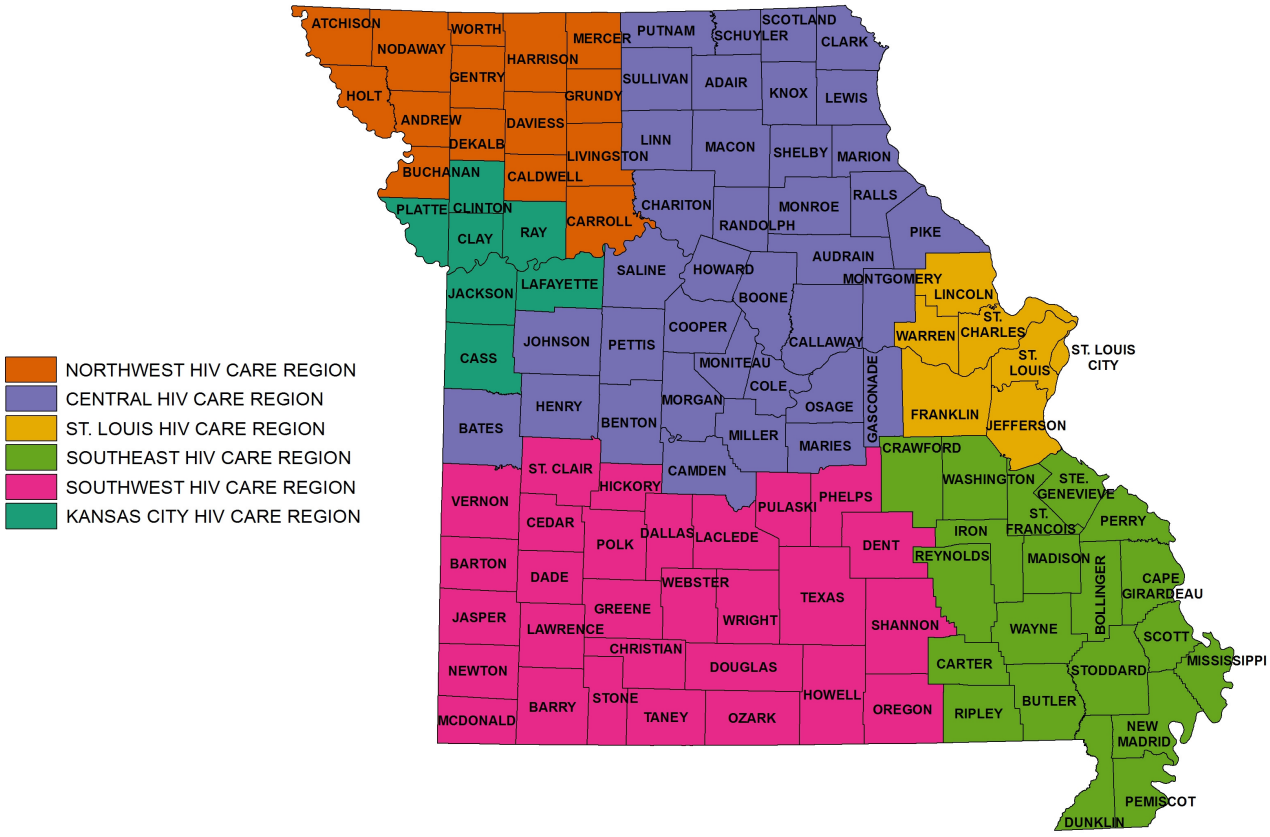
Anonymous Testing: The data do not include cases of HIV infection reported or diagnosed in persons anonymously tested at the state's four anonymous testing sites in St. Louis City, Kansas City, Springfield, and Columbia.

Geographic Area vs. HIV Care Region: When data are presented by geographic area, the St. Louis City represents individuals diagnosed in the St Louis City limits. St. Louis County represents individuals diagnosed in St. Louis County. Kansas City represents individuals diagnosed in the Kansas City limits. Outstate represents individuals diagnosed in all other areas. Refer to the map on the following page for the counties included when data are presented by HIV care region.

HIV Care Region vs. HIV Region: Previous *Profiles* divided the state into geographic regions known as HIV Regions using the HIV prevention planning regions. Based on guidance from the Bureau of HIV, STD, and Hepatitis (BHSH), the data in the 2014 *Profiles* is presented by HIV care regions in an effort to align with future goals to have a single definition for the geographic regions used for HIV planning. Beginning with the 2014 *Profiles*, the state was divided into geographic regions known as HIV care regions using the HIV medical case management (care) regions. The transition to care regions resulted in some changes. The North Central HIV Region is now known as the Central HIV Care Region. The remaining five regions maintained the same names. The counties comprising the St. Louis, Southeast, and Southwest HIV Care Regions remained the same. The Northwest HIV Care Region no longer contains Clinton County. Clinton County now belongs to the Kansas City

HIV Care Region. The Kansas City HIV Care Region no longer contains Johnson, Bates, Henry, and Benton Counties. These four counties now belong in the Central HIV Care Region. As a result of these changes regional data in the 2014 *Profiles* should not be compared to previous *Profiles*. Additionally, calculations for the past ten years were recalculated using the HIV care regions at the regional level in order to accurately display trends over time in the 2014 *Profiles*.

MISSOURI HIV CARE REGIONS



Abbreviations

AIDS=Acquired Immunodeficiency Syndrome

BHSH=Bureau of HIV, STD, and Hepatitis

BRDI=Bureau of Reportable Disease Informatics

BRFSS=Behavioral Risk Factor Surveillance System

CDC=Centers for Disease Control and Prevention

CPPG=Comprehensive Prevention Planning Group

eHARS=enhanced HIV/AIDS Reporting System

HIV=Human Immunodeficiency Virus

IDEP=Interstate Duplicate Evaluation Project

IDU=Injection drug use/Injection drug user

IRS=Internal Revenue Service

HRSA=Health Resources and Services Administration

MDHSS=Missouri Department of Health and Senior Services

MICA=Missouri Information for Community Assessment

MSM=Men who have sex with men

MSM/IDU=Men who have sex with men and inject drugs

NIR=No indicated risk

N-SSATS=National Survey of Substance Abuse Treatment Services

P&S=Primary and secondary

RIDR=Routine Interstate Duplicate Review

SAMSHA=Substance Abuse and Mental Health Services Administration

SCOUT=Securing Client Outcomes Using Technology

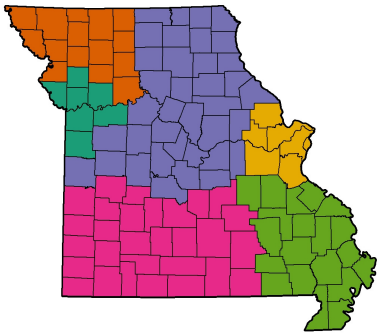
STD=Sexually Transmitted Disease

STD*MIS=Sexually Transmitted Disease Management Information System

TB=Tuberculosis

TEDS=Treatment Episode Data Set

YRBSS= Youth Risk Behavioral Surveillance System



MISSOURI STATE SUMMARY

Population Counts, by HIV Care Region, Missouri, 2013							
	St. Louis HIV Care Region	City HIV Care Region	Northwest HIV Care Region	Central HIV Care Region	Southwest HIV Care Region	Southeast HIV Care Region	Missouri Total
Sex							
Male	1,015,271	575,399	113,815	436,778	574,192	248,502	**2,963,957**
Female	1,088,155	605,574	112,424	441,226	581,311	251,524	**3,080,214**
Total	2,103,426	1,180,973	226,239	878,004	1,155,503	500,026	**6,044,171**
Race/Ethnicity							
White	1,537,801	858,813	204,543	777,366	1,034,716	446,906	**4,860,145**
Black/African American	408,695	183,015	8,169	43,260	23,335	31,647	**698,121**
Hispanic	57,627	84,464	7,433	25,705	47,763	9,955	**232,947**
Asian/Pacific Islander	59,400	22,791	1,943	12,769	15,289	2,749	**114,941**
American Indian/Alaskan Native	4,271	4,936	844	3,218	9,995	1,904	**25,168**
Two or More Races	35,632	26,954	3,307	15,686	24,405	6,865	**112,849**
Total	2,103,426	1,180,973	226,239	878,004	1,155,503	500,026	**6,044,171**
Race/Ethnicity-Males							
White Male	751,284	420,097	101,268	384,287	510,450	220,644	**2,388,030**
Black/African American Male	186,024	85,750	5,379	23,586	13,945	16,929	**331,613**
Hispanic Male	29,774	43,359	4,113	13,501	25,316	5,319	**121,382**
Asian/Pacific Islander Male	28,517	10,718	965	5,938	7,119	1,243	**54,500**
American Indian/Alaskan Native Male	2,123	2,437	427	1,698	5,084	930	**12,699**
Two or More Races Male	17,549	13,038	1,663	7,768	12,278	3,437	**55,733**
Total	1,015,271	575,399	113,815	436,778	574,192	248,502	**2,963,957**
Race/Ethnicity-Females							
White Female	786,517	438,716	103,275	393,079	524,266	226,262	**2,472,115**
Black/African American Female	222,671	97,265	2,790	19,674	9,390	14,718	**366,508**
Hispanic Female	27,853	41,105	3,320	12,204	22,447	4,636	**111,565**
Asian/Pacific Islander Female	30,883	12,073	978	6,831	8,170	1,506	**60,441**
American Indian/Alaskan Native Female	2,148	2,499	417	1,520	4,911	974	**12,469**
Two or More Races Female	18,083	13,916	1,644	7,918	12,127	3,428	**57,116**
Total	1,088,155	605,574	112,424	441,226	581,311	251,524	**3,080,214**
Age							
<2	51,399	31,378	5,384	20,668	28,779	12,105	**149,713**
2-12	292,412	177,005	30,582	118,503	163,095	70,358	**851,955**
13-18	166,383	93,570	17,162	67,060	91,687	38,443	**474,305**
19-24	163,050	87,695	21,843	95,332	109,135	40,161	**517,216**
25-44	548,237	320,032	53,970	208,522	277,403	119,902	**1,528,066**
45-64	582,177	312,709	59,475	229,051	296,033	135,694	**1,615,139**
65+	299,768	158,584	37,823	138,868	189,371	83,363	**907,777**
Total	2,103,426	1,180,973	226,239	878,004	1,155,503	500,026	**6,044,171**

Source: MDHSS, Bureau of Health Care Analysis and Data Dissemination

This page was intentionally left blank.

Key Highlights: What are the sociodemographic characteristics of the general population of Missouri?

General Trends

- Missouri's population was estimated to be 6,044,171 in 2013.
- Overall, Missouri's population increased by an estimated 1% between 2009 and 2013.

Where

- Thirty-four counties were classified as being part of a metropolitan statistical area in 2013. At least one metropolitan statistical area was located in each of the six HIV care regions in 2013.
- Based on IRS tax filer information, the Southwest HIV Care Region had the greatest number of counties with a net in-migration of 1% or more (2). The Northwest and Central HIV Care Regions had the greatest number of counties with a net out-migration of 1% or more (3).
- Large increases of more than 20% in the black/African American population between 2010 and 2013 were concentrated in counties located in the Southwest HIV Care Region.
- Counties with the highest percentages of poverty were concentrated in the Southeast HIV Care Region.

Who

Sex

- In 2013, females represented 51% of Missouri's population.
- The distribution of highest educational attainment level was similar between males and females; approximately 88% of both males and females have completed high school or a high school equivalency or higher.
- Overall, unemployment rates were similar between males and females. However, females with their own children under six years of age had a higher unemployment rate compared to males.

Race/Ethnicity

- In 2013, whites comprised 80% of Missouri's population; blacks/African Americans represented the second largest race/ethnicity category in Missouri (12%).
- The percent of population growth among race/ethnicity groups between 2009 and 2013 was greatest among persons of multiple races reported (36%); Asians/Pacific Islanders had the second greatest percent of population growth over the same time period (22%).
- The highest level of educational attainment tended to be lower for minorities compared to whites.
- Minorities under 65 years of age were less likely to report having health insurance than whites. Only 12% of whites less than 65 years of age reported no health insurance in 2011-2013, compared to 20% of blacks/African Americans, and 29% of Hispanics.
- Unemployment among persons sixteen years of age or older was higher for minorities compared to whites.

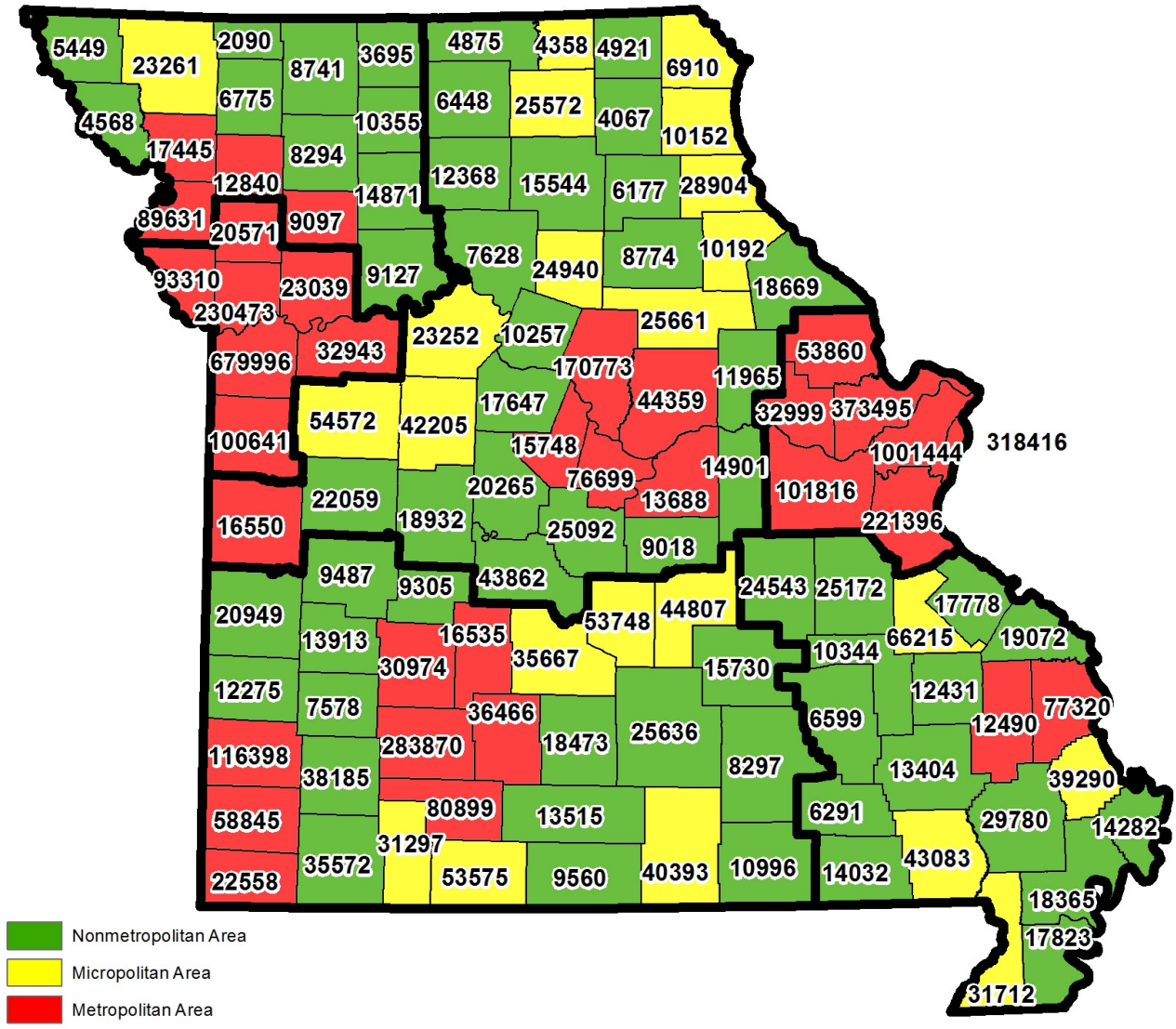
Age

- The median age in Missouri in 2013 was 38.1 years of age; Missouri's median age was slightly older than the U.S. median of 37.4 years old.
- Females is Missouri tended to be slightly older than males. The median age among females in Missouri in 2013 was 39.6 years old, compared to 36.7 years old among males.
- Unemployment rates between 2011 and 2013 tended to decrease with increasing age.

Foreign Born Population and Primary Language

- An estimated 4% of Missouri's population was born in a country outside of the U.S.
- Asia was the continent of birth for the largest number of foreign born Missouri residents. However, Mexico was the single country where the largest numbers of foreign born persons residing in Missouri were born.
- An estimated 94% of Missourians five years of age or older spoke only English at home. Following English, Spanish or Spanish Creole were the most common languages spoken at home (3%).
- An estimated 14% of persons of Hispanic origin reported speaking Spanish, and were not able to speak English well.

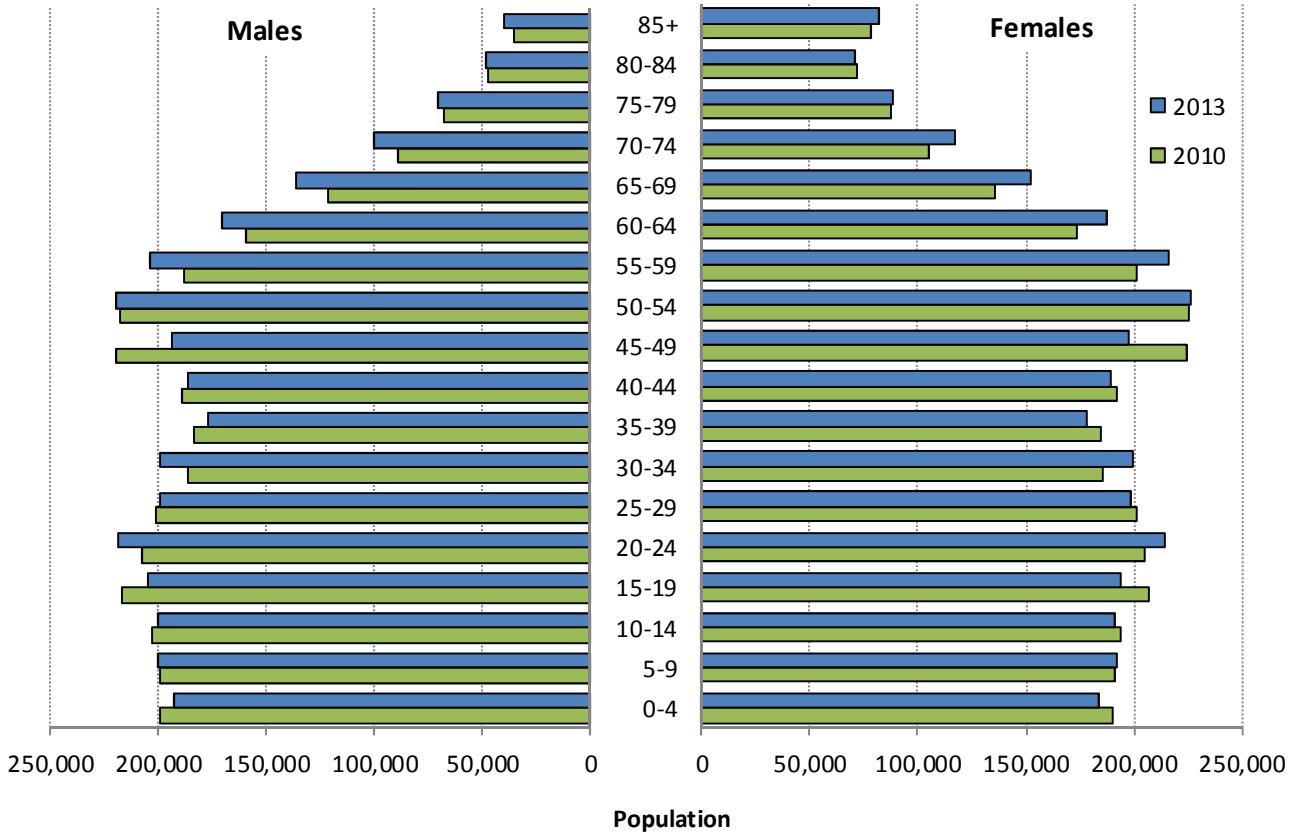
Figure 1. Population estimates and metropolitan statistical area classification, by county, Missouri, 2013



Sources: Sources: Missouri Census Data Center, MABLE/Geocorr12. 2013 Metropolitan Divisions

Missouri's population was estimated to be 6,044,171 in 2013 based on U.S. Census Bureau estimates. Missouri is comprised of 114 counties, plus the independent city of St. Louis. The U.S. Census Bureau defines groups of counties as metropolitan, micropolitan, or nonmetropolitan areas based on the population size of a core urban area. A metropolitan area contains a core urban area with a population of at least 50,000. It also includes adjacent counties that have a high degree of social and economic integration with the core urban area. A micropolitan area contains a core urban area with a population between 10,000-49,999. It also includes adjacent counties that have a high degree of social and economic integration with the core urban area. An area that does not meet the population requirements for the metropolitan or micropolitan area is referred to as a nonmetropolitan area. Figure 1 illustrates the classification of Missouri counties based on 2013 population estimates. In total, 34 counties were classified as part of a metropolitan statistical area in 2013; 22 counties were classified as part of a micropolitan statistical area; and 59 counties were classified as nonmetropolitan areas.

Figure 2. Population by age and by sex, Missouri, 2010 and 2013



Source: U.S. Census Bureau, Population Estimates, 2013

In 2013, the median age was 36.7 years old among Missouri males, and 39.6 years old among Missouri females. The median ages of males and females in Missouri were slightly higher than the median ages in the U.S. overall of 36.2 and 38.9 years of age for males and females, respectively. The distribution of the Missouri population by age among both males and females has shifted slightly between 2010 and 2013 (Figure 2). In both 2010 and 2013, there were a larger number of males between the ages of 0 and 29 compared to females. However, there tended to be a larger number of females 40 years of age or greater compared to males.

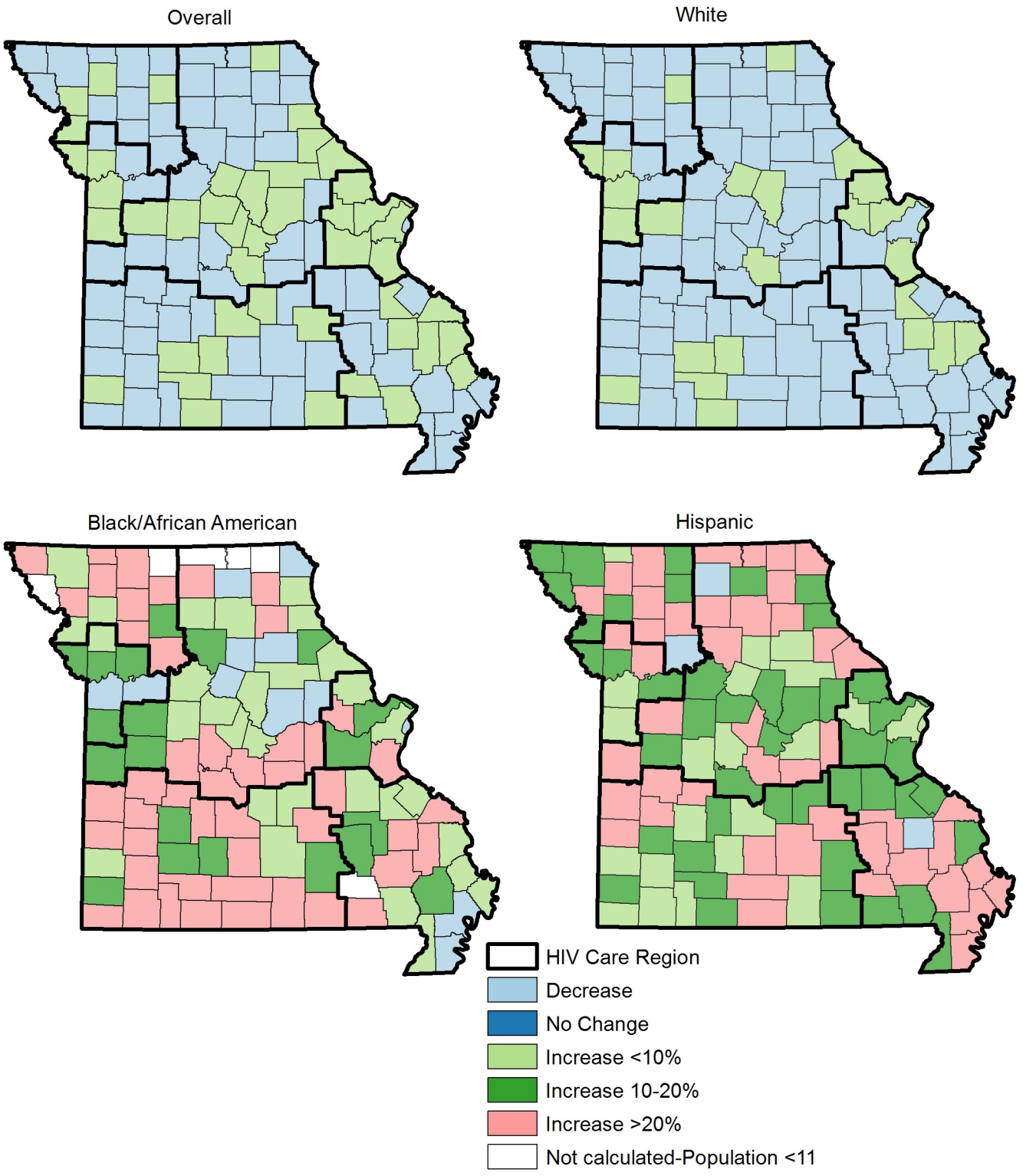
Table 1. Population change by race/ethnicity, Missouri, 2009-2013

Race/Ethnicity	2009	2010	2011	2012	2013	% Change 2009-2013
White	4,900,629	4,850,748	4,858,955	4,856,485	4,860,145	-0.8%
Black/African American	678,710	687,149	692,600	694,659	698,121	2.9%
Hispanic	203,907	212,470	221,155	225,314	232,947	14.2%
Asian/Pacific Islander	94,005	102,984	107,106	111,499	114,941	22.3%
American Indian/Alaskan Native	27,058	24,062	24,555	24,808	25,168	-7.0%
Two or More Races/Unknown	83,271	111,514	106,317	109,223	112,849	35.5%
Total	**5,987,580**	**5,988,927**	**6,010,688**	**6,021,988**	**6,044,171**	**0.9%**

Source: U.S. Census Bureau, Population Estimates, 2009, 2010, 2011, 2012, 2013

Whites represented the majority of the population in Missouri from 2009 to 2013. However, estimated population growth between 2009 and 2013 was greatest among persons of multiple races reported (Table 1). Asian/Pacific Islanders and Hispanics reported the second and third greatest percentage increase in population between 2009 and 2013, respectively. High rates of growth among particular populations may warrant attention when planning new disease prevention and outreach activities.

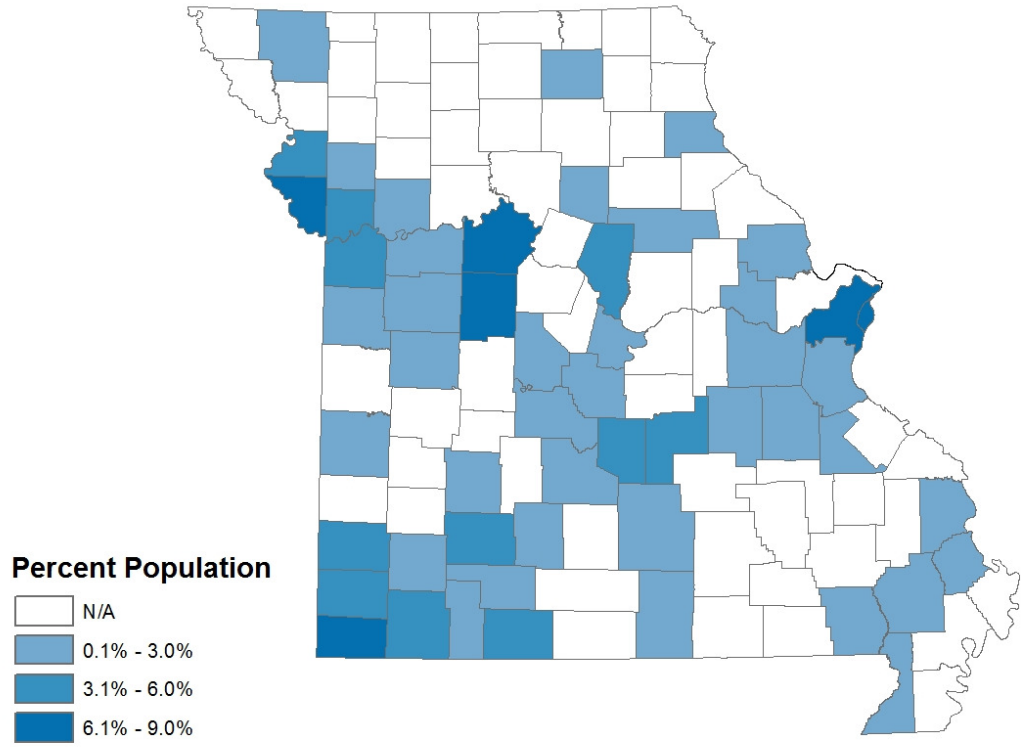
Figure 3. Percent population change* by county, overall and by race/ethnicity, Missouri, 2010-2013



Source: U.S. Census Bureau, Population Estimates, 2013
*Only calculated if the population was greater than 10 in both 2010 and 2013

There were zero counties in which the overall population increased by 10% or more between 2010 and 2013 (Figure 3). There were 70 counties where the overall estimated population decreased between 2010 and 2013. Population changes among whites tended to be similar to overall population changes. There were 47 counties where the black/African American population was estimated to increase by more than 20% between 2010 and 2013. Many of the counties experiencing the large increase were located in the Southwest HIV Care Region. Large increases in the Hispanic population were seen throughout the state with the exception of the St. Louis HIV Care Region, including 17 counties in the Central HIV Care Region.

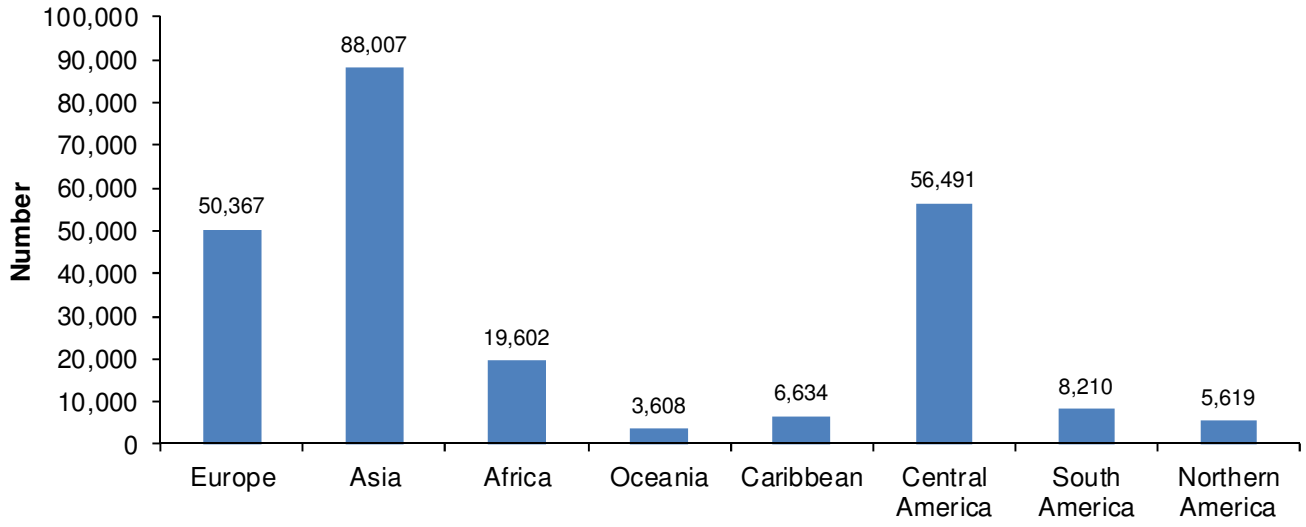
Figure 4. Estimated percent population born outside of the U.S., by selected county, Missouri, 2011-2013



Source: U.S. Census Bureau, American Community Survey, 2011-2013

Overall, 4% of Missouri's population was born in a country outside of the U.S., according to 2011-2013 American Community Survey estimates. Estimates of the percent of the population born outside of the U.S. by county were available only for selected counties. Estimates ranged from 0.3% of the population born outside of the U.S. in Randolph County to 9% in McDonald County (Figure 4).

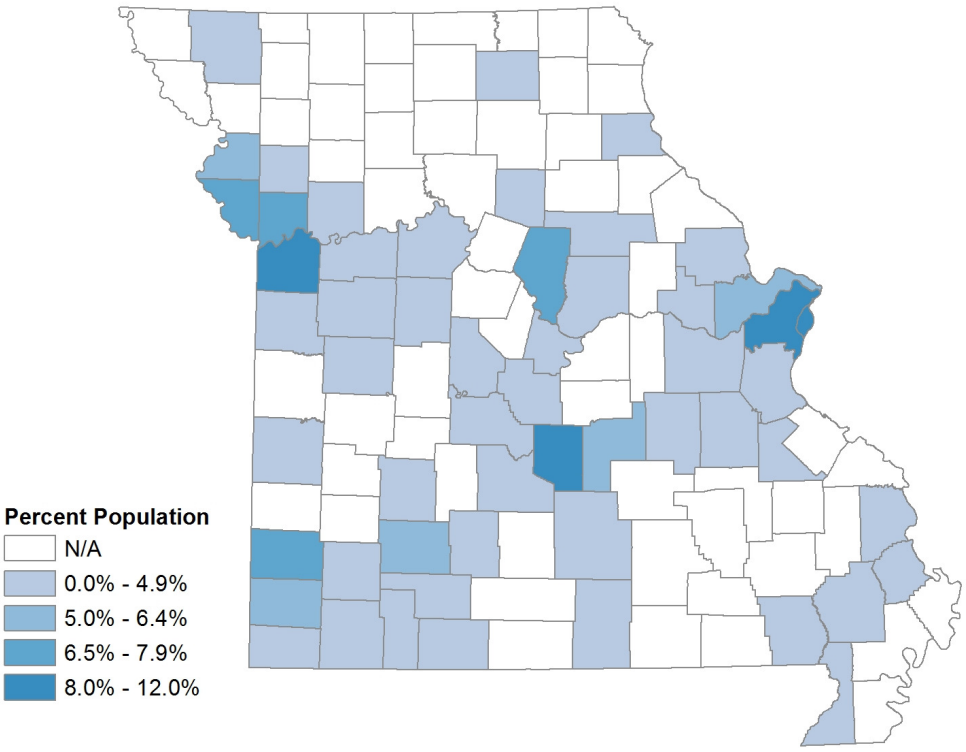
Figure 5. Region of birth among persons born outside of the U.S., Missouri, 2011-2013



Source: U.S. Census Bureau, American Community Survey, 2011-2013

Among persons born outside of the U.S. who now currently reside in Missouri, the largest numbers were born in Asia (Figure 5). The three countries representing the largest number of births among persons born in Asia included China (18,192), India (15,434), and Vietnam (10,486). Central America represented the second largest region of birth among persons residing in Missouri. The majority of these persons were born in Mexico (43,055).

Figure 6. Estimated percent population five years of age or older speaking a language other than English at home, by selected county, Missouri, 2011-2013



Source: U.S. Census Bureau, American Community Survey, 2011-2013

Among Missourians five years of age or older, an estimated 6% spoke a language other than English at home, according to 2011-2013 American Community Survey estimates. Estimates of the percent of the population speaking a language other than English at home by county were available only for a few selected counties. Estimates of persons five years of age or older speaking a language other than English ranged from 3% in Callaway and Jefferson County to 12% in Pulaski County (Figure 6).

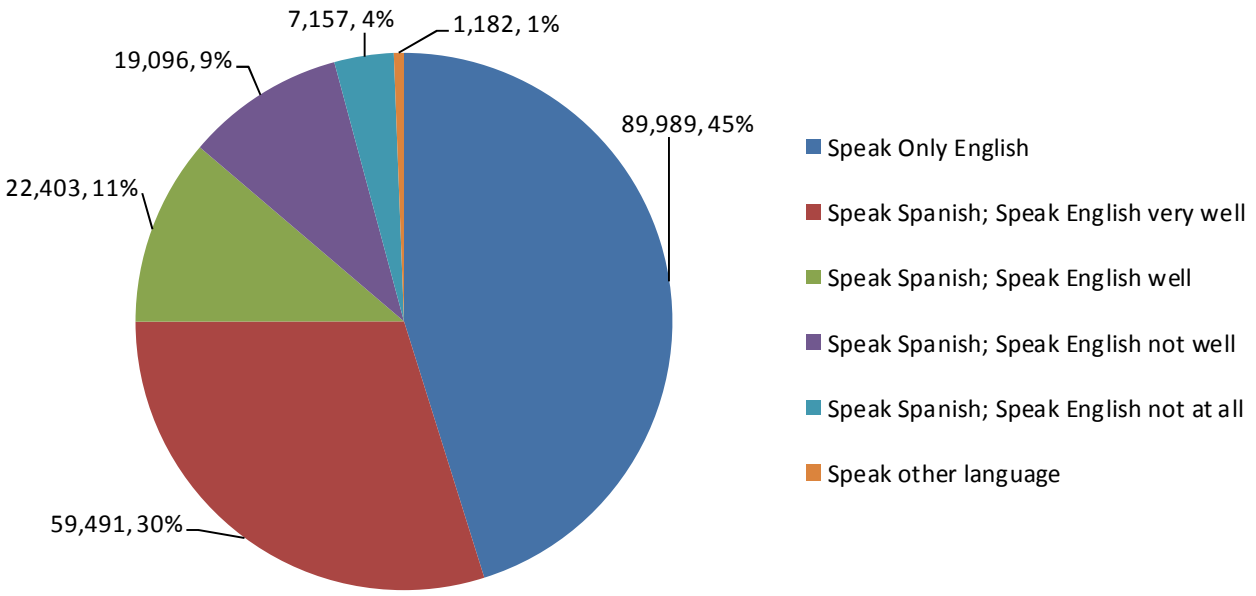
Table 2. Estimated population five years of age or older by the language spoken at home, Missouri, 2011-2013

Language	N	%
English Only	5,299,111	93.8%
Spanish or Spanish Creole	147,659	2.6%
French (including Patois, Creole, Cajun)	14,664	0.3%
German or other West Germanic languages	31,153	0.6%
Slavic languages	26,154	0.5%
Other Indo-European languages	31,961	0.6%
Korean	7,193	0.1%
Chinese	20,486	0.4%
Vietnamese	12,116	0.2%
Tagalog	7,818	0.1%
Other Asian or Pacific Island languages	21,778	0.4%
Other and unspecified languages	27,073	0.5%
MISSOURI TOTAL 5+ years of age	**5,647,166**	**100.0%**

Source: U.S. Census Bureau, American Community Survey, 2011-2013

The most common language spoken at home among Missourians five years of age or older, other than English, was Spanish or Spanish Creole (3%) (Table 2). Less than four percent of Missouri's population five years of age or older spoke a language other than English, Spanish, or Spanish Creole.

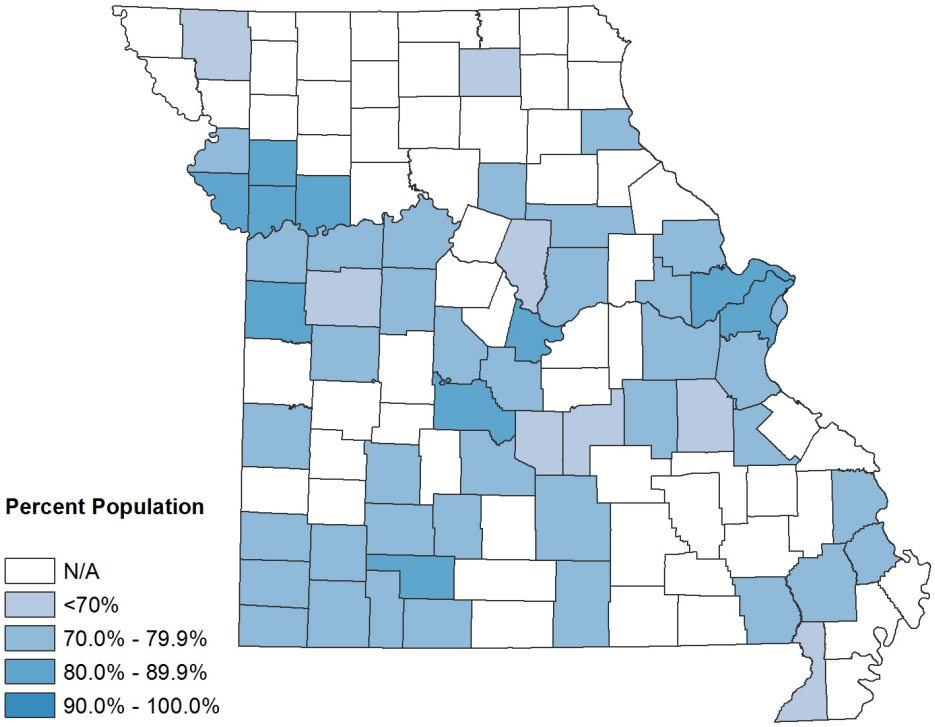
Figure 7. Estimated percent of Hispanic population five years of age or older, by language spoken at home and ability to speak English, , Missouri, 2011-2013



Source: U.S. Census Bureau, American Community Survey, 2011-2013

Among Missourians five years of age or older of Hispanic origin, an estimated 45% spoke only English at home; 1% spoke a language other than English or Spanish at home (Figure 7). Overall, an estimated 86% of persons of Hispanic origin identified being comfortable speaking English (i.e., spoke English well or better). An estimated 4% reported speaking Spanish at home, and were not able to speak English. An additional 9% spoke Spanish at home, and reported not being able to speak English well.

Figure 8. Estimated percent of population 25 years of age or older completing high school, high school equivalency, or higher, by selected county, Missouri, 2011-2013



Source: U.S. Census Bureau, American Community Survey, 2011-2013

An estimated 88% of Missourians 25 years of age or older have completed at least high school or a high school equivalency. Estimates by county were available only for selected counties. Estimates ranged from 58% of the population completing high school in Adair County to 85% in Platte County (Figure 8).

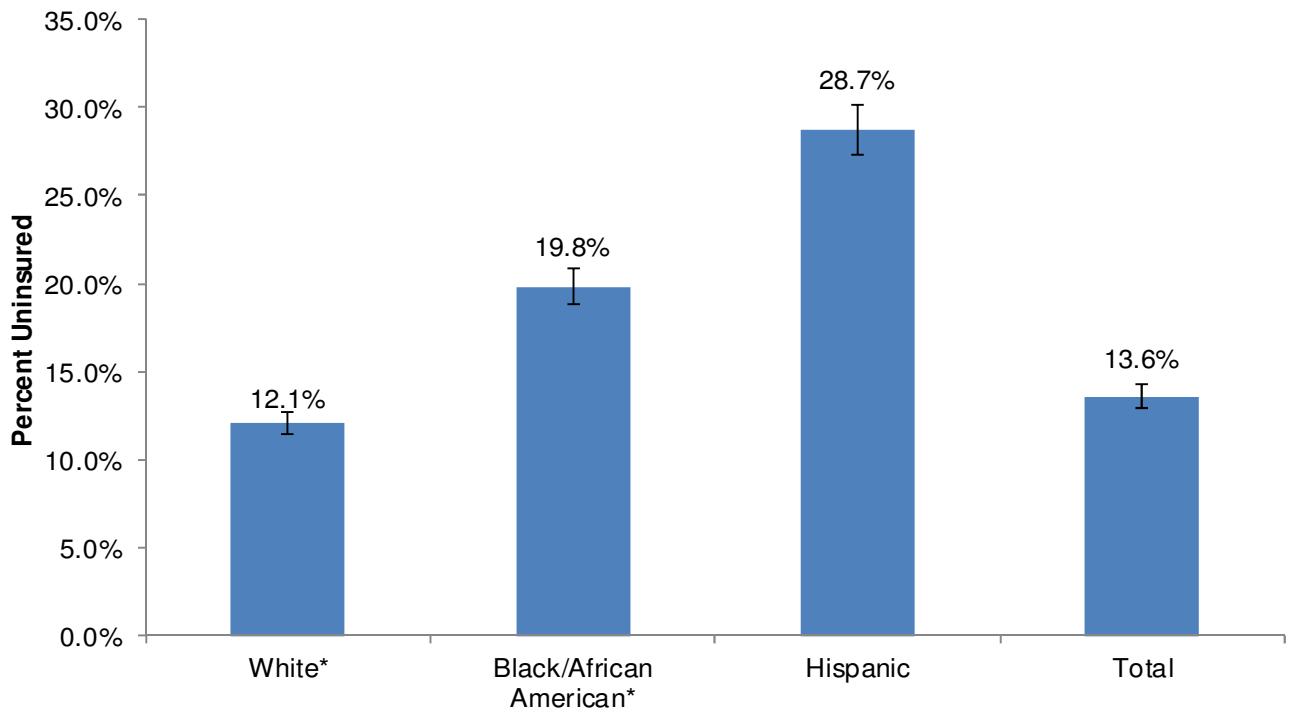
Table 3. Estimated highest educational attainment level, by sex, by race/ethnicity, Missouri, 2011-2013

Sex	Race/Ethnicity	Highest Educational Attainment Level: Less than high school diploma	High school graduate, GED, or alternative	Some college or associate's degree	Bachelor's degree or higher
Male	Total	12.4%	32.6%	28.7%	26.3%
	White*	11.2%	32.9%	28.4%	27.5%
	Black/African American*	18.6%	34.5%	33.2%	13.7%
	Hispanic	33.7%	25.4%	23.6%	17.2%
Female	Total	11.5%	30.5%	31.3%	26.6%
	White*	10.6%	31.3%	30.8%	27.3%
	Black/African American*	15.8%	27.8%	37.9%	18.6%
	Hispanic	29.3%	25.5%	27.2%	17.9%

Source: U.S. Census Bureau, American Community Survey, 2011-2013
*Includes persons of Hispanic origin

The distribution of the highest level of education attainment varied by race/ethnicity (Table 3). Greater proportions of white males and females completed a bachelor's degree or higher compared to black/African American males and females. The percentage of the population with less than a high school diploma was greatest among Hispanic males (34%) and lowest among white females (10.6%).

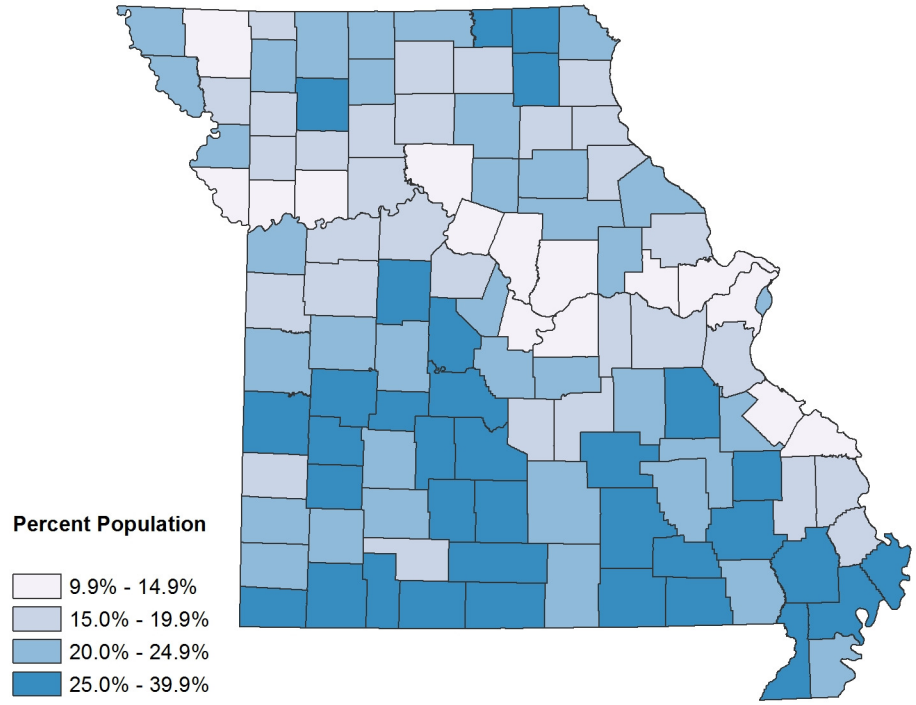
Figure 9. Estimated percent of population less than 65 years of age with no health insurance, by race/ethnicity, Missouri, 2011-2013



Source: U.S. Census Bureau, American Community Survey, 2011-2013

Overall, an estimated 14% of Missourians less than 65 years of age did not have health insurance in 2011-2013 (Figure 9). The percentage of the population that was uninsured varied by race/ethnicity. The percentage of the population that was uninsured was greatest among Hispanics (29%), and lowest among whites (12%).

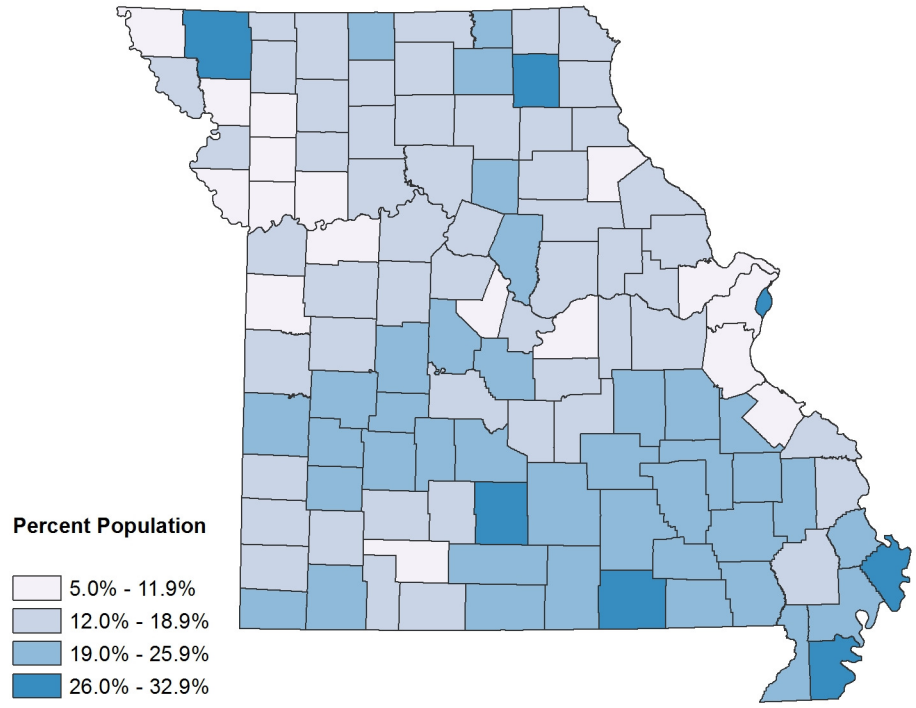
Figure 10. Estimated percent of population 18-64 years of age with no health insurance, by county, Missouri, 2009-2013



Source: U.S. Census Bureau, American Community Survey, 2009-2013

An estimated 18% of Missourians ages 18 to 64 were without health insurance in 2012. Estimates of the percent of population 18-64 years of age with no health insurance ranged from 10% in St. Charles County to 39% in Scotland County (Figure 10).

Figure 11. Estimated percent of population living in poverty, by county, Missouri, 2009-2013



Source: U.S. Census Bureau, American Community Survey, 2009-2013

An estimated 16% of Missourians were living in poverty in 2009 through 2013. Estimates of the percent of population living in poverty ranged from 6% in St. Charles County to 29% in Pemiscot County (Figure 11). Counties with the highest percentages of poverty were concentrated in the southeastern area of the state.

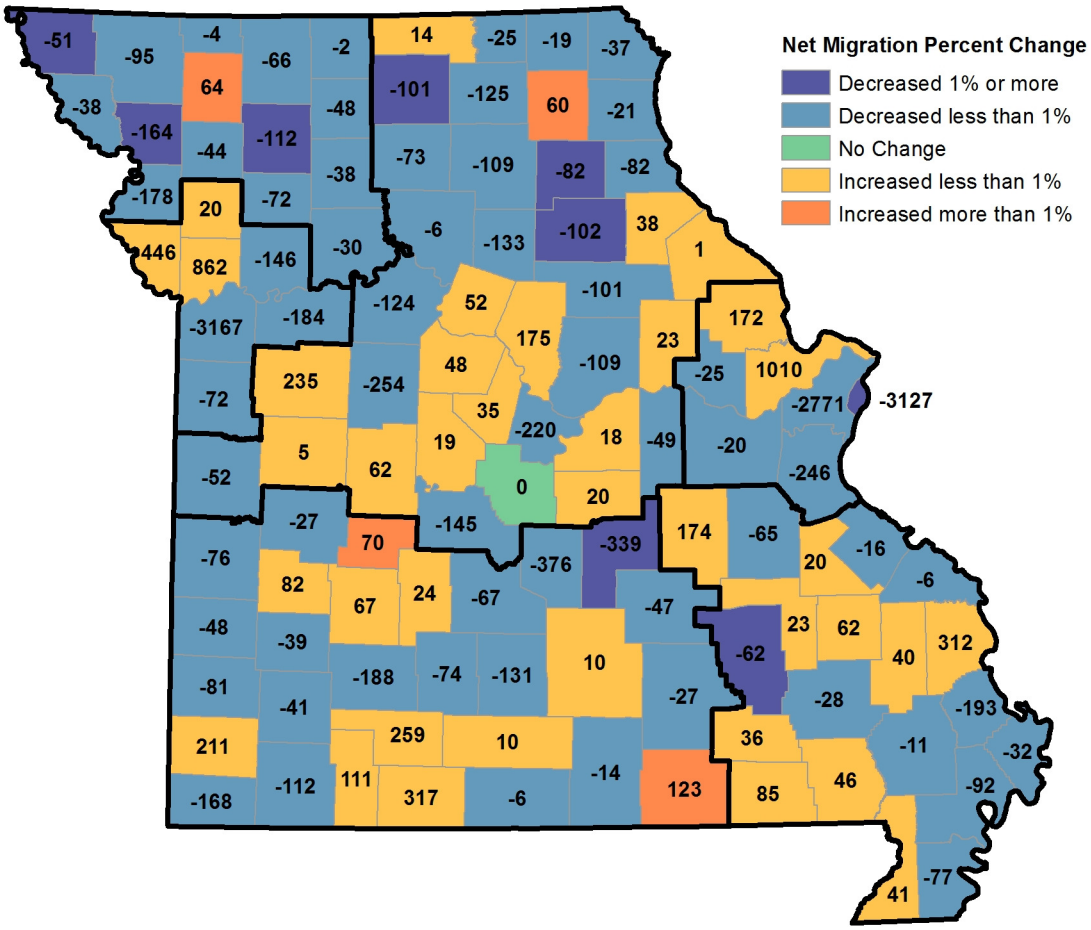
Table 4. Estimated unemployment rate by age, by race/ethnicity, by sex, by educational attainment, Missouri, 2011-2013

Ages Included in Measurement	Category	Unemployment rate	Margin of Error (+/-)
16+ years of age	**Total**	**8.5%**	**0.1**
	Age		
	16 to 19 years	23.8%	0.9
	20 to 24 years	13.5%	0.5
	25 to 44 years	7.9%	0.2
	45 to 54 years	6.5%	0.3
	55 to 64 years	6.0%	0.3
	65 to 74 years	5.0%	0.5
	75 years and over	5.5%	0.9
	Race/Ethnicity		
	White*	7.2%	0.1
	Black/African American*	17.7%	0.6
	Hispanic	9.9%	0.9
20-64 years of age	**Total**	**7.9%**	**0.1**
	Sex		
	Male	8.2%	0.2
	Female	7.5%	0.2
	Females with own children under 6 years	9.8%	0.6
25-64 years of age	**Total**	**7.1%**	**0.1**
	Educational Attainment		
	Less than high school graduate	16.0%	0.9
	High school graduate (or equivalency)	9.1%	0.3
	Some college or associate's degree	7.4%	0.3
	Bachelor's degree or higher	3.1%	0.2

Source: U.S. Census Bureau, American Community Survey, 2011-2013
*Includes persons of Hispanic origin

An estimated 9% of Missourians 16 years of age or older were unemployed, according to 2011-2013 American Community Survey estimates (Table 4). The unemployment rate generally decreased with increasing age. Among persons 20 to 64 years of age, the unemployment rate was similar between males and females. However, the unemployment rate was greater for females with their own children under the age of six. Unemployment rates decreased with increasing educational attainment among persons 25 to 64 years of age.

Figure 12. Net migration and percent change in migration based on IRS tax returns, by county, Missouri, 2010-2011



Note: The number in each county represents the total net migration in the county based on differences in tax filing addresses and total exemptions claimed between filing years. A positive value represents a net in-migration into the county. A negative value represents a net out-migration from the county.

Source: IRS Migration Files, 2010-2011

Overall in Missouri, there was a net increase in migration out of the state between 2010 and 2011 of 9,610 based on the number of exemptions filed on IRS returns. The increased out-migration from Missouri was due to both a net out-migration of Missouri residents to other U.S. states (-9,313) and to foreign countries (-297) between 2010 and 2011.

Among the counties in Missouri, 9 experienced a net out-migration of the population of 1% or more; 63 had a net out-migration less than 1%; one had no change in migration; 38 had a net in-migration of less than 1%; and 4 had a net in-migration of 1% or more (Figure 12). The Northwest and Central HIV care regions had the greatest number of counties with a net out-migration of 1% or more (3). The Southwest HIV care region had the greatest number of counties with a net in-migration of 1% or more (2).

This page was intentionally left blank.

Key Highlights: What is the scope of the HIV disease epidemic in Missouri?

Magnitude of the Problem and General Trends

- From 1982 to 2014, there have been a total of 19,878 persons diagnosed with HIV disease in Missouri and reported to MDHSS. Of these individuals, 13,450 (68%) were subcategorized as stage 3 (AIDS) cases, and the remaining 6,428 (32%) were subcategorized as HIV cases. Of the cumulative number of persons diagnosed with HIV disease, 11,984 (60%) were presumed to be living at the end of 2014.
- The number of new diagnoses has fluctuated slightly between 2005 and 2014, with no sustained upward or downward trend in new HIV diagnoses over this time period. However, the number of new cases in 2013 and 2014 was the lowest since 1986 (342 cases). In 2014, there were 485 persons newly diagnosed with HIV disease. However, this value has not been adjusted for reporting delays, and therefore is likely to change.
- The number of persons living with HIV disease continued to increase every year, from 8,787 persons in 2005 to 11,984 persons in 2014. The increase is primarily due to the fact that individuals are living longer with the disease as a result of improved treatment and medical care.

Where

- HIV disease disproportionately impacts the state's two major metropolitan areas (St. Louis and Kansas City). The highest rates of new diagnoses and persons living with HIV disease were found in these two areas.
- The rate of persons newly diagnosed who remained classified as HIV cases at the end of 2014 was highest in St. Louis City (23.9 per 100,000). The second highest rate was in Kansas City (13.9 per 100,000). The rate of persons newly diagnosed who were classified as stage 3 (AIDS) cases at the end of 2014 was highest in Kansas City (7.3 per 100,000).

Who

Sex

- Males represented the majority of persons newly diagnosed (83%) and living with (83%) HIV disease. The rates of new diagnoses and persons living with HIV disease were around five times as high among males compared to females.

Race/Ethnicity

- HIV disease continues to disproportionately impact minorities. The rate of newly diagnosed HIV disease cases among blacks/African Americans was 8.5 times as high as whites, and 2.0 times as high among Hispanics compared to whites. The disparity was even greater among black/African American females. While black/African American females represented only 12% of Missouri's female population, black/ African American females accounted for 63% of new female HIV disease diagnoses. It should be emphasized that race/ethnicity in itself is not a risk factor for HIV infection; however, among many racial/ ethnic minority populations, social, economic, and cultural factors are associated with high rates of HIV risk behavior. These factors also may be barriers to receiving HIV prevention information or accessing HIV testing, diagnosis, and treatment.

Age

- The age of individuals living with HIV disease has increased over time. In 2005, the largest numbers of persons living with HIV disease were 40-44 years of age, whereas in 2014 persons 50-54 years old represented the largest number of living cases.
- Although the age of persons living with the disease has increased over time, the age of new diagnoses has decreased. In 2014, the largest numbers of persons newly diagnosed with HIV disease were between 19-24 years of age, compared to 2005 when the largest numbers of new diagnoses were 35-39 years of age. The difference may be attributed to increased testing among younger individuals or due to a true increase in the number of new infections at a younger age.

Exposure Category

- The majority of new diagnoses continue to be attributed to men who have sex with men (MSM). Among females, heterosexual contact was the primary mode of transmission. In 2014, there were six people less than 13 years of age diagnosed with HIV disease. All six of these cases were among children born outside of the U.S.

Figure 13. HIV disease cases (living and deceased), by current HIV vs. stage 3 (AIDS) status, Missouri, 1982—2014

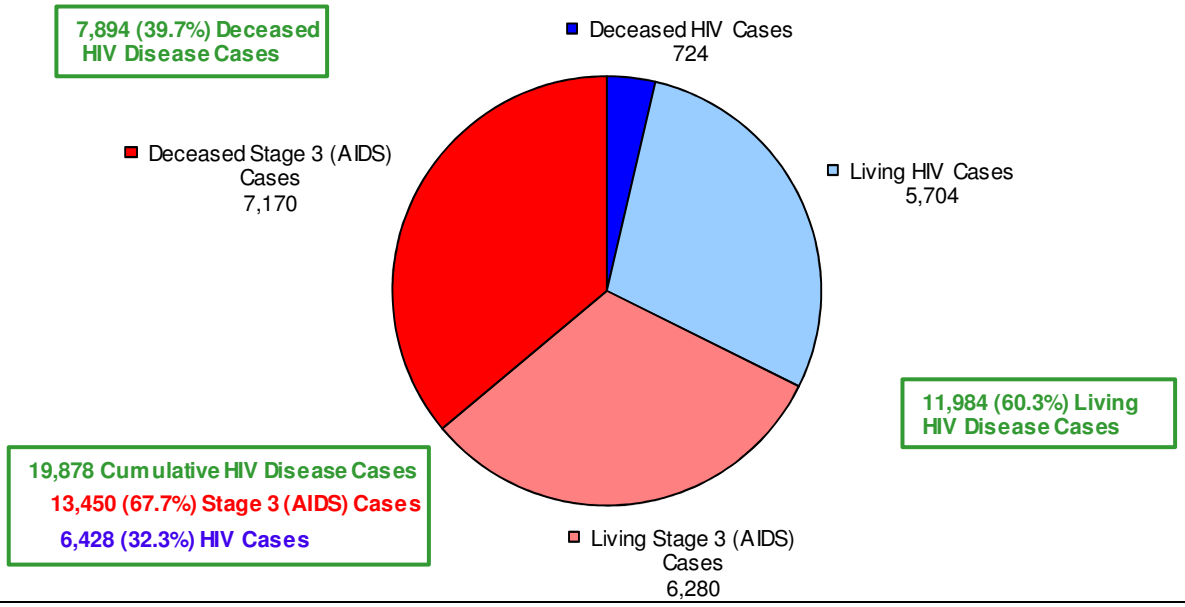
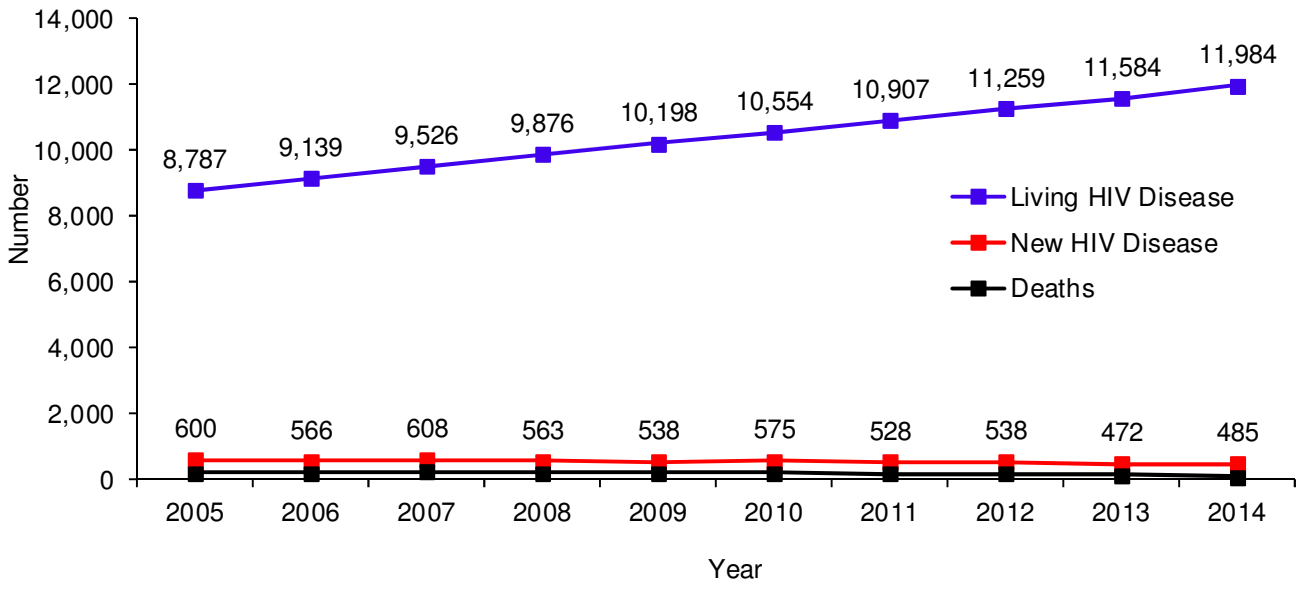


Figure 14. Living and new HIV disease cases and deaths by year*, Missouri, 2005—2014

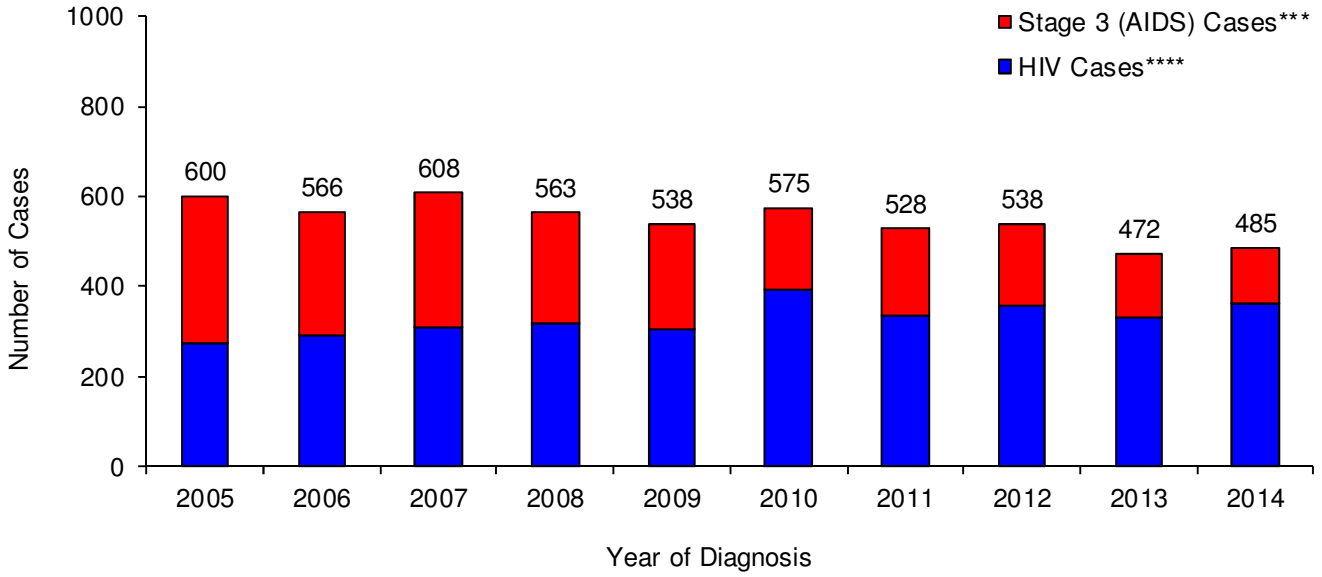


*For living HIV disease cases-the number of individuals living with HIV disease at the end of the year; For new HIV disease cases-the number of individuals newly diagnosed in the year; For HIV disease deaths-the number of individuals that died in the year.

From 1982 to 2014, there have been a total of 19,878 HIV disease cases diagnosed in Missouri and reported to MDHSS (Figure 13). Of the cumulative cases reported, 60% were still presumed to be living with HIV disease at the end of 2014. Among those living with HIV disease, 5,704 were classified as HIV cases at the end of 2014 and 7,894 were classified as stage 3 (AIDS) cases.

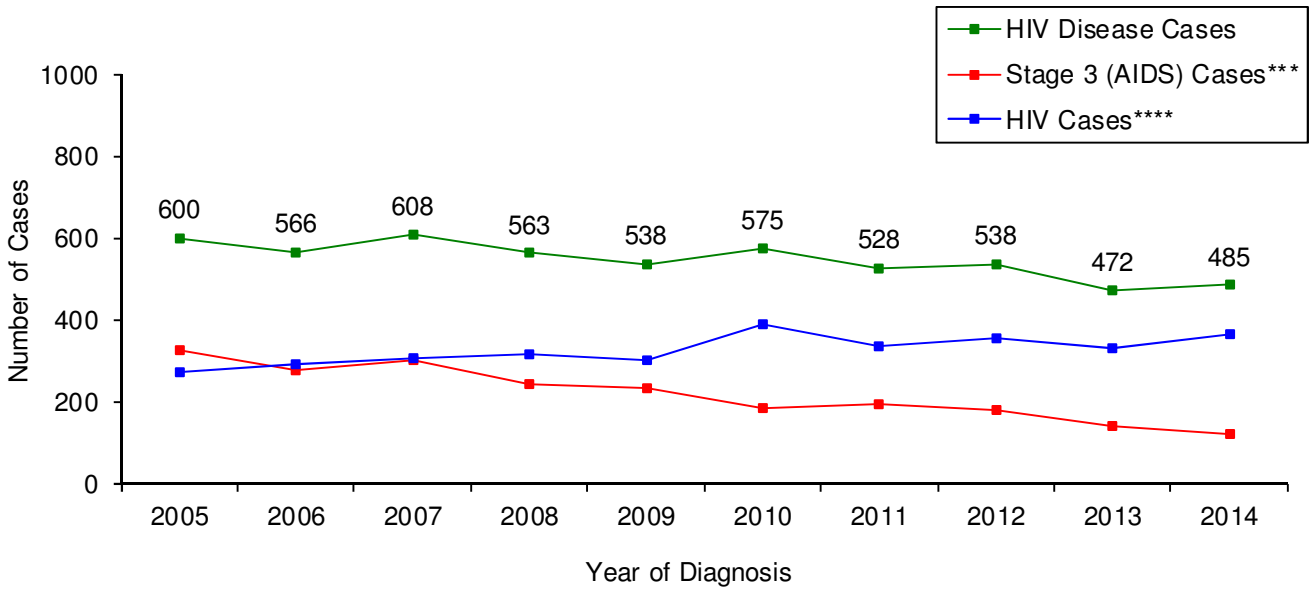
At the end of 2014, there were 11,984 persons living with HIV disease whose most recent diagnosis occurred in Missouri (Figure 14). The number of people living with HIV disease increased each year. There were 485 new HIV disease diagnoses in 2014. The number of new diagnoses from 2005 to 2014 has fluctuated; the number of new diagnoses ranged from 472 cases in 2013 to 608 cases in 2007. The number of deaths among persons with HIV disease each year has remained generally steady. The lower number of deaths in 2014 was likely due to delays in death reporting.

Figure 15. HIV disease cases, by current status* and year of diagnosis, Missouri, 2005-2014**



*HIV case vs. stage 3 (AIDS) case
**Cases are indicated by year of initial diagnosis reported to MDHSS. (The year in which the first diagnosis of the person, whether as a HIV case or a stage 3 (AIDS) case, was documented by the Department).
***These cases were either: 1) initially reported as HIV cases and then later reclassified as stage 3 (AIDS) cases because they subsequently met the stage 3 (AIDS) case definition; or 2) initially reported as stage 3 (AIDS) cases.
****These cases were initially reported as HIV cases and have remained HIV cases. They have not met the case definition for stage 3 (AIDS) as of December 31, 2014.

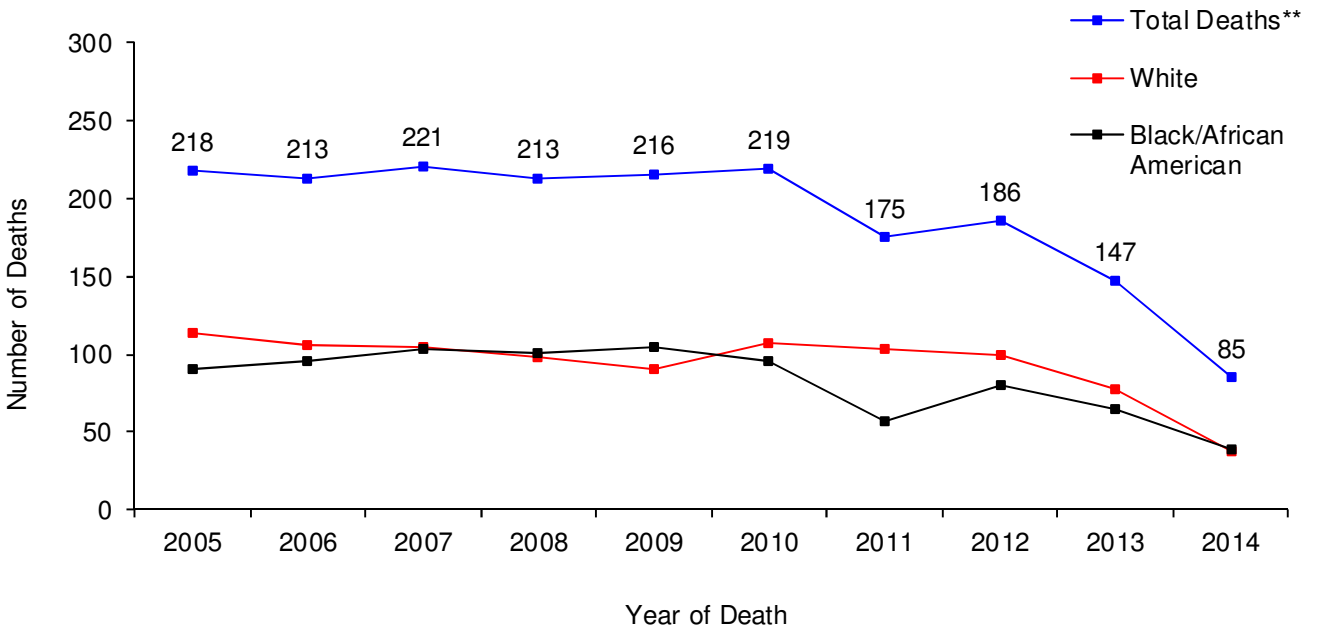
Figure 16. Reported HIV disease cases, by current status* and year of diagnosis, Missouri, 2005-2014**



*HIV case vs. stage 3 (AIDS) case
**Cases are indicated by year of initial diagnosis reported to MDHSS. (The year in which the first diagnosis of the person, whether as a HIV case or a stage 3 (AIDS) case, was documented by the Department).
***These cases were either: 1) initially reported as HIV cases and then later reclassified as stage 3 (AIDS) cases because they subsequently met the stage 3 (AIDS) case definition; or 2) initially reported as stage 3 (AIDS) cases.
****These cases were initially reported as HIV cases and have remained HIV cases. They have not met the case definition for stage 3 (AIDS) as of December 31, 2014.

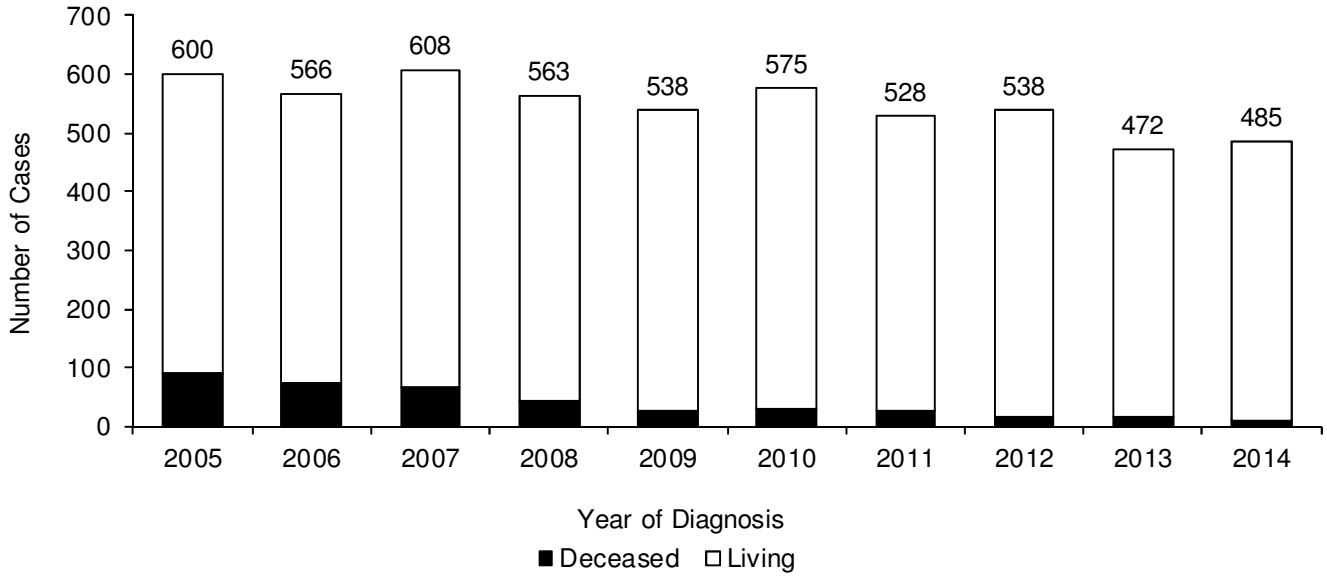
Between 2005 and 2014, the number of new HIV disease diagnoses has ranged from 472 cases in 2013, to 608 cases in 2007 (Figures 15 and 16). The number of new diagnoses has fluctuated slightly between 2005 and 2014, with no sustained upward or downward trend in new HIV diagnoses over this time period. However, the number of new cases in 2013 and 2014 was the lowest since 1986 (342 cases). Differences in the number of persons sub-classified as stage 3 (AIDS) cases each year are due to the progression of the disease over time. For those diagnosed with HIV disease in 2005, a larger number are currently classified as stage 3 (AIDS) cases compared to those diagnosed in 2014 because they have been living with the virus longer.

Figure 17. HIV disease deaths*, by selected race, by year of death, Missouri, 2005—2014†**



*Includes deaths that have occurred among those diagnosed with HIV disease in Missouri.
**Total deaths include persons of all races.
†Only includes deaths through December 31, 2014, and reported by February 28, 2015.

Figure 18. Persons diagnosed with HIV disease by current vital status* and year of diagnosis, Missouri, 2005—2014**



*Vital status on December 31, 2014.
**Cases are indicated by year of initial diagnosis reported to MDHSS. (The year in which the first diagnosis of the person, whether as a HIV case or a stage 3 (AIDS) case, was documented by the Department).

The number of deaths among persons with HIV disease was generally steady between 2005 and 2010 (Figure 17). The lower number of deaths in 2011 through 2014 is likely due to delays in death reporting. Of the 600 persons diagnosed with HIV disease in 2005, 91 (15%) were deceased by the end of 2014 (Figure 18). Among the 485 cases first diagnosed in 2014, 8 (2%) were deceased at the end of 2014. The difference in the proportion of cases that are deceased is due to the length of time individuals have been living with the disease.

Table 5. Living† HIV, stage 3 (AIDS), and HIV disease cases, by sex, by race/ethnicity, by race/ethnicity and sex, and by current age, Missouri, 2014

	HIV*			Stage 3 (AIDS)**			HIV Disease***		
	Cases	%	Rate****	Cases	%	Rate****	Cases	%	Rate****
Sex									
Male	4,672	81.9%	157.6	5,245	83.5%	177.0	9,917	82.8%	334.6
Female	1,032	18.1%	33.5	1,035	16.5%	33.6	2,067	17.2%	67.1
Total	5,704	100.0%	94.4	6,280	100.0%	103.9	11,984	100.0%	198.3
Race/Ethnicity									
White	2,787	48.9%	57.3	3,037	48.4%	62.5	5,824	48.6%	119.8
Black/African American	2,593	45.5%	371.4	2,877	45.8%	412.1	5,470	45.6%	783.5
Hispanic	235	4.1%	100.9	262	4.2%	112.5	497	4.1%	213.4
Asian/Pacific Islander	41	0.7%	35.7	35	0.6%	30.5	76	0.6%	66.1
American Indian/Alaskan Native	6	0.1%	23.8	6	0.1%	23.8	12	0.1%	47.7
Two or More Races/Unknown	42	0.7%	--	63	1.0%	--	105	0.9%	--
Total	5,704	100.0%	94.4	6,280	100.0%	103.9	11,984	100.0%	198.3
Race/Ethnicity-Males									
White Male	2,437	52.2%	102.1	2,728	52.0%	114.2	5,165	52.1%	216.3
Black/African American Male	1,973	42.2%	595.0	2,209	42.1%	666.1	4,182	42.2%	1261.1
Hispanic Male	191	4.1%	157.4	226	4.3%	186.2	417	4.2%	343.5
Asian/Pacific Islander Male	34	0.7%	62.4	26	0.5%	47.7	60	0.6%	110.1
American Indian/Alaskan Native Male	6	0.1%	47.2	6	0.1%	47.2	12	0.1%	94.5
Two or More Races/Unknown Male	31	0.7%	--	50	1.0%	--	81	0.8%	--
Total	4,672	100.0%	157.6	5,245	100.0%	177.0	9,917	100.0%	334.6
Race/Ethnicity-Females									
White Female	350	33.9%	14.2	309	29.9%	12.5	659	31.9%	26.7
Black/African American Female	620	60.1%	169.2	668	64.5%	182.3	1,288	62.3%	351.4
Hispanic Female	44	4.3%	39.4	36	3.5%	32.3	80	3.9%	71.7
Asian/Pacific Islander Female	7	0.7%	11.6	9	0.9%	14.9	16	0.8%	26.5
American Indian/Alaskan Native Female	0	0.0%	0.0	0	0.0%	0.0	0	0.0%	0.0
Two or More Races/Unknown Female	11	1.1%	--	13	1.3%	--	24	1.2%	--
Total	1,032	100.0%	33.5	1,035	100.0%	33.6	2,067	100.0%	67.1
Current Age‡									
<2	0	0.0%	0.0	0	0.0%	0.0	0	0.0%	0.0
2-12	25	0.4%	2.9	8	0.1%	0.9	33	0.3%	3.9
13-18	31	0.5%	6.5	9	0.1%	1.9	40	0.3%	8.4
19-24	421	7.4%	81.4	125	2.0%	24.2	546	4.6%	105.6
25-44	2,627	46.1%	171.9	1,954	31.1%	127.9	4,581	38.2%	299.8
45-64	2,376	41.7%	147.1	3,833	61.0%	237.3	6,209	51.8%	384.4
65+	224	3.9%	24.7	351	5.6%	38.7	575	4.8%	63.3
Total	5,704	100.0%	94.4	6,280	100.0%	103.9	11,984	100.0%	198.3

†Includes persons diagnosed with HIV disease in Missouri who are currently living, regardless of current residence. Includes persons diagnosed in Missouri correctional facilities.
*Cases which remained HIV cases at the end of 2014.
**Cases classified as stage 3 (AIDS) by December 31, 2014.
***The sum of HIV cases and stage 3 (AIDS) cases.
****Per 100,000 population based on 2013 MDHSS estimates.
‡Based on age as of December 31, 2014.
Note: Percentages may not total due to rounding.

Table 6. Diagnosed HIV, stage 3 (AIDS), and HIV disease cases, by sex, by race/ethnicity, by race/ethnicity and sex, and current age, Missouri, 2014

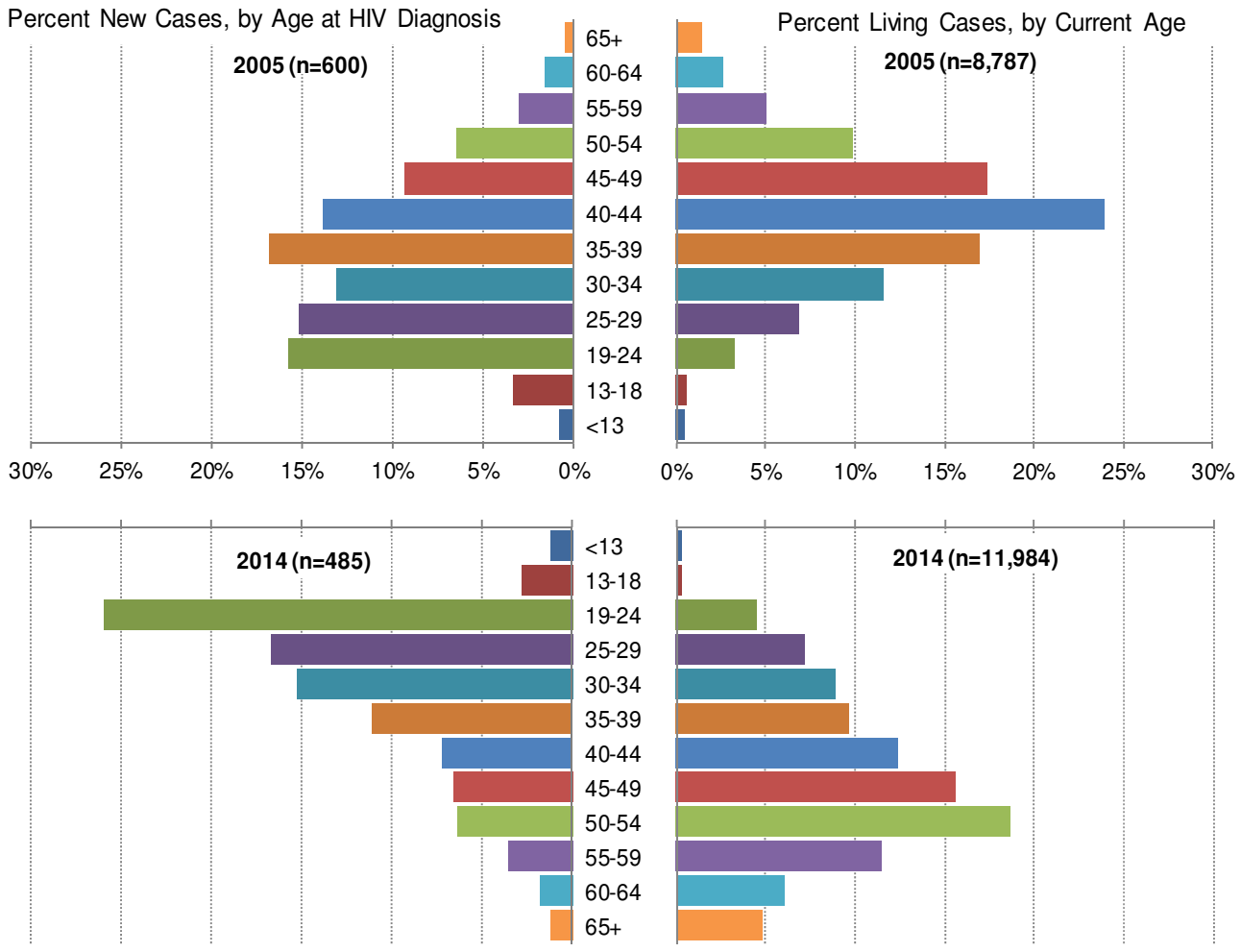
	HIV*			Stage 3 (AIDS)**			HIV Disease***		
	Cases	%	Rate****	Cases	%	Rate****	Cases	%	Rate****
Sex									
Male	303	83.5%	10.2	101	82.8%	3.4	404	83.3%	13.6
Female	60	16.5%	1.9	21	17.2%	0.7	81	16.7%	2.6
Total	363	100.0%	6.0	122	100.0%	2.0	485	100.0%	8.0
Race/Ethnicity									
White	144	39.7%	3.0	58	47.5%	1.2	202	41.6%	4.2
Black/African American	194	53.4%	27.8	54	44.3%	7.7	248	51.1%	35.5
Hispanic	16	4.4%	6.9	4	3.3%	1.7	20	4.1%	8.6
Asian/Pacific Islander	4	1.1%	3.5	3	2.5%	2.6	7	1.4%	6.1
American Indian/Alaskan Native	2	0.6%	7.9	0	0.0%	--	2	0.4%	7.9
Two or More Races/Unknown	3	0.8%	2.7	3	2.5%	2.7	6	1.2%	5.3
Total	363	100.0%	6.0	122	100.0%	2.0	485	100.0%	8.0
Race/Ethnicity-Males									
White Male	124	40.9%	5.2	53	52.5%	2.2	177	43.8%	7.4
Black/African American Male	157	51.8%	47.3	40	39.6%	12.1	197	48.8%	59.4
Hispanic Male	13	4.3%	10.7	3	3.0%	2.5	16	4.0%	13.2
Asian/Pacific Islander Male	4	1.3%	7.3	2	2.0%	3.7	6	1.5%	11.0
American Indian/Alaskan Native Male	2	0.7%	15.7	0	0.0%	--	2	0.5%	15.7
Two or More Races/Unknown Male	3	1.0%	5.4	3	3.0%	5.4	6	1.5%	10.8
Total	303	100.0%	10.2	101	100.0%	3.4	404	100.0%	13.6
Race/Ethnicity-Females									
White Female	20	33.3%	0.8	5	23.8%	0.2	25	30.9%	1.0
Black/African American Female	37	61.7%	10.1	14	66.7%	3.8	51	63.0%	13.9
Hispanic Female	3	5.0%	2.7	1	4.8%	0.9	4	4.9%	3.6
Asian/Pacific Islander Female	0	0.0%	--	1	4.8%	1.7	1	1.2%	1.7
American Indian/Alaskan Native Female	0	0.0%	--	0	0.0%	--	0	0.0%	--
Two or More Races/Unknown Female	0	0.0%	--	0	0.0%	--	0	0.0%	--
Total	60	100.0%	1.9	21	100.0%	0.7	81	100.0%	2.6
Current Age‡									
<2	0	0.0%	0.0	0	0.0%	--	0	0.0%	--
2-12	6	1.7%	0.7	0	0.0%	--	6	1.2%	0.7
13-18	8	2.2%	1.7	0	0.0%	--	8	1.6%	1.7
19-24	105	28.9%	20.3	14	11.5%	2.7	119	24.5%	23.0
25-44	196	54.0%	12.8	59	48.4%	3.9	255	52.6%	16.7
45-64	44	12.1%	2.7	46	37.7%	2.8	90	18.6%	5.6
65+	4	1.1%	0.4	3	2.5%	0.3	7	1.4%	0.8
Total	363	100.0%	6.0	122	100.0%	2.0	485	100.0%	8.0

*HIV cases diagnosed during 2014 which remained HIV cases at the end of the year. Includes persons diagnosed in Missouri correctional facilities.
**Stage 3 (AIDS) cases initially diagnosed in 2014.
***The sum of newly diagnosed HIV cases and newly diagnosed stage 3 (AIDS) cases. Does not include cases diagnosed prior to 2014 with HIV, which progressed to stage 3 (AIDS) in 2014.
****Per 100,000 population based on 2013 MDHSS estimates.
‡Based on age as of December 31, 2014.
Note: Percentages may not total due to rounding.

Of the 11,984 persons living with HIV at the end of 2014, 83% were males (Table 5). The rate of those living with HIV disease was 5.0 times as high among males compared to females. Although whites represented the largest proportion of living HIV disease cases (49%), the rate of those living with HIV disease was 6.5 times as high among blacks/African Americans compared to whites. The rate was 1.8 times as high among Hispanics compared to whites. Among males, the rate of living cases among blacks/African Americans was 5.8 times as high as the rate among whites, and 1.6 times as high among Hispanics compared to whites. Among females, the rate of those living with HIV disease among blacks/African Americans was 13.2 times as high as the rate among whites, and 2.7 times as high among Hispanics compared to whites.

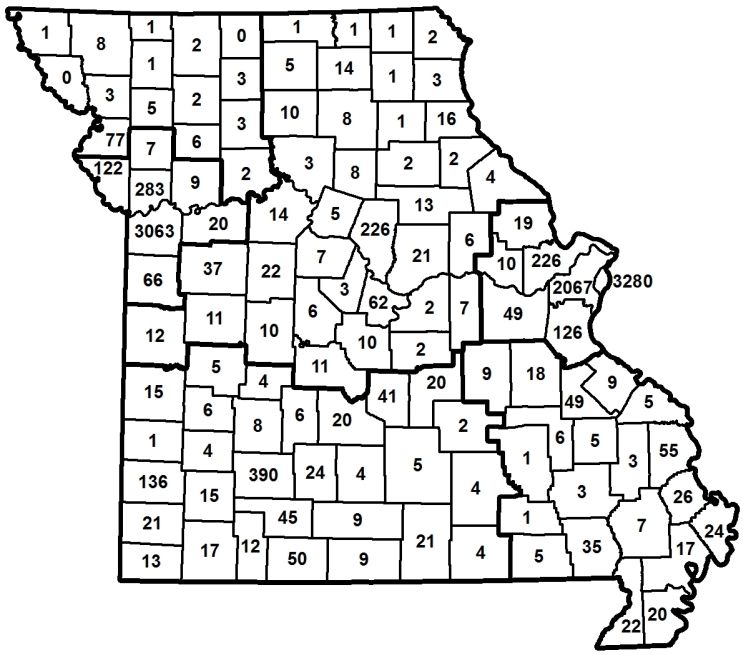
Of the 485 persons newly diagnosed with HIV disease in 2014, 25% were classified as stage 3 (AIDS) cases by the end of 2014 (Table 6). The rate of new HIV disease diagnoses was 5.2 times as high among males compared to females. The rate of new HIV disease cases was 8.5 times as high among blacks/African Americans compared to whites, and 2.0 times as high among Hispanics compared to whites. The rate of new HIV disease diagnoses was greatest among persons 19-24 years of age at the end of 2014 (23.0 per 100,000).

Figure 19. Distribution of new HIV disease cases by age at diagnosis and living HIV disease cases by current age in selected year, Missouri, 2005 and 2014



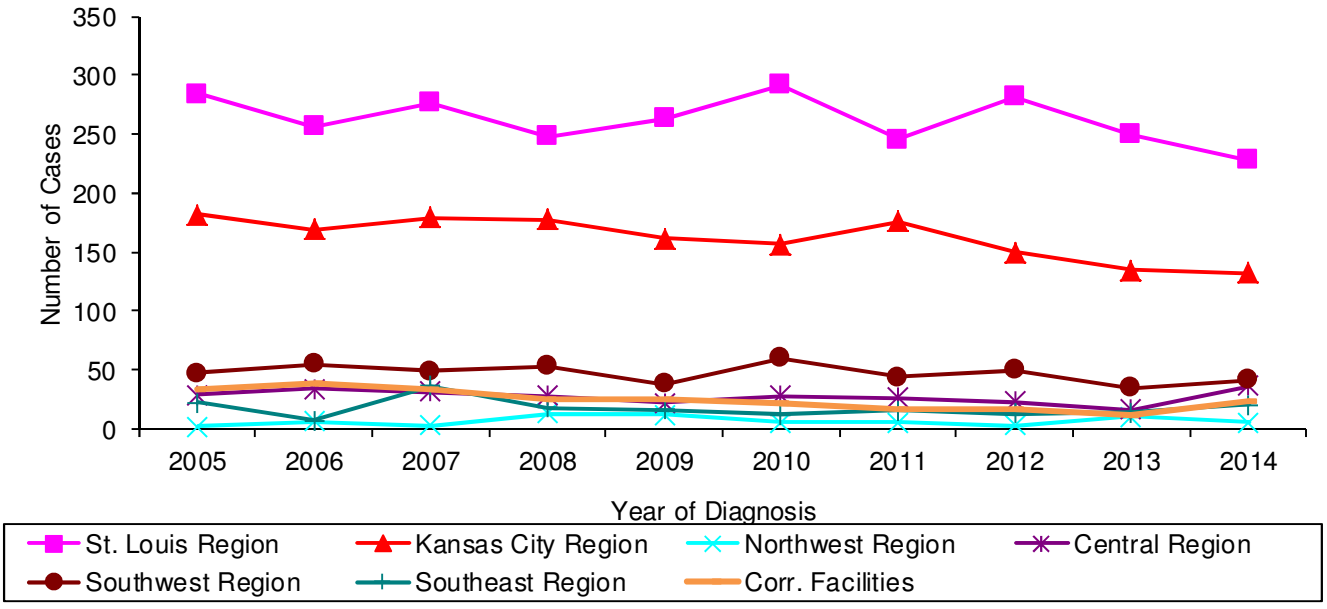
Changes have occurred in the distribution of the age at diagnosis among new HIV disease cases over time (Figure 19). In 2005, the greatest proportion of new diagnoses occurred among those ages 35-39 (17%) and 19-24 (16%). In 2014, the greatest proportion of new diagnoses occurred among those ages 19-24 (26%). Although the age of new diagnoses has decreased, the age of individuals living with HIV has increased over time. In 2005, the greatest proportion of living cases was among those ages 40-44 (24%). In 2014, the greatest proportion of living cases was between 50-54 years old (19%).

Figure 20. Number of persons living with HIV disease by county of residence* and HIV care region at time of diagnosis, Missouri, 1982-2014



*Based on residence at time of most recent diagnosis of HIV or stage 3 (AIDS). Excludes persons diagnosed in Missouri correctional facilities (n=723).

Figure 21. Persons diagnosed with HIV disease by HIV care region at time of diagnosis, Missouri, 2005-2014



The largest numbers of persons living with HIV disease in 2014 were most recently diagnosed in St. Louis City (3,280), Jackson County (3,063) and St. Louis County (2,067) (Figure 20). The St. Louis HIV Care Region has represented the largest number of new HIV disease diagnoses in each year from 2005-2014 (Figure 21). In the St. Louis HIV Care Region new diagnoses decreased from 250 cases in 2013 to 228 cases in 2014. The 2014 new case count in the St. Louis HIV Care Region represented the lowest number of new cases in a year since 1987.

The number of new diagnoses in the Kansas City Region, St. Louis Region, and the Southwest Region has been generally stable from 2005 to 2012 with a slight decrease in 2013 and 2014. In the remainder of the HIV care regions, the number of new diagnoses has been generally stable from 2005 to 2014, with slight fluctuations seen in select years.

Table 7. New and living HIV and stage 3 (AIDS) cases and rates, by geographic area, and by HIV care region, 2014

	HIV Cases						Stage 3 (AIDS) Cases					
	Diagnosed 2014*			Living with HIV			Diagnosed 2014**			Living with Stage 3 (AIDS)		
Location	Cases	%	Rate***	Cases	%	Rate***	Cases	%	Rate***	Cases	%	Rate***
Geograhic Area												
St. Louis City†	76	20.9%	23.9	1,589	27.9%	499.0	14	11.5%	4.4	1,691	26.9%	531.1
St. Louis County†	88	24.2%	8.8	1,065	18.7%	106.3	32	26.2%	3.2	1,002	16.0%	100.1
Kansas City†	65	17.9%	13.9	1,241	21.8%	265.7	34	27.9%	7.3	1,647	26.2%	352.7
Outstate†	111	30.6%	2.6	1,470	25.8%	34.5	42	34.4%	1.0	1,556	24.8%	36.5
Missouri Correctional Facilities††	23	6.3%	N/A	339	5.9%	N/A	0	0.0%	N/A	384	6.1%	N/A
Total	363	100.0%	6.0	5,704	100.0%	94.4	122	100.0%	2.0	6,280	100.0%	103.9
HIV Region												
St. Louis HIV Care Region†	176	48.5%	8.4	2,875	50.4%	136.7	52	42.6%	2.5	2,902	46.2%	138.0
Kansas City HIV Care Region†	86	23.7%	7.3	1,549	27.2%	131.2	46	37.7%	3.9	2,021	32.2%	171.1
Northwest HIV Care Region†	5	1.4%	2.2	52	0.9%	23.0	0	0.0%	0.0	62	1.0%	27.4
Central Care HIV Region†	32	8.8%	3.6	286	5.0%	32.6	4	3.3%	0.5	283	4.5%	32.2
Southwest HIV Care Region†	28	7.7%	2.4	459	8.0%	39.7	13	10.7%	1.1	452	7.2%	39.1
Southeast HIV Care Region†	13	3.6%	2.6	144	2.5%	28.8	7	5.7%	1.4	176	2.8%	35.2
Missouri Correctional Facilities††	23	6.3%	N/A	339	5.9%	N/A	0	0.0%	N/A	384	6.1%	N/A
MISSOURI	**363**	**100.0%**	**6.0**	**5,704**	**100.0%**	**94.4**	**122**	**100.0%**	**2.0**	**6,280**	**100.0%**	**103.9**

*HIV cases diagnosed and reported to the Department during 2014 which remained HIV cases at the end of the year.
**Does not include HIV cases diagnosed prior to 2014 that progressed to stage 3 (AIDS) in 2014.
***Per 100,000 population based on 2013 MDHSS estimates.
†Does not include persons diagnosed in Missouri correctional facilities.
††Includes persons diagnosed in Missouri correctional facilities.
Note: Percentages may not total due to rounding.

There were differences in the proportion of persons newly diagnosed with HIV disease that were either concurrently diagnosed with stage 3 (AIDS) or progressed to stage 3 (AIDS) at the end of 2014 by geographic area and HIV care region (Table 7). In Kansas City, 34% of newly diagnosed HIV disease cases progressed to stage 3 (AIDS) at the end of 2014. In comparison, the proportion was 27%, 27%, 16%, and 0% for Outstate, St. Louis County, St. Louis City, and Missouri correctional facilities, respectively. In the Southeast HIV Care Region and Kansas City HIV Care Region, 35% of newly diagnosed HIV disease cases progressed to stage 3 (AIDS) at the end of 2014, whereas the proportion was 32%, 23%, 11%, 0%, and 0% for the HIV care regions of Southwest, St. Louis, Central, Northwest, and Missouri correctional facilities, respectively. The variation in the proportion of newly diagnosed individuals that progressed to stage 3 (AIDS) by the end of 2014 among the geographic areas may be related to differences in when individuals were tested in the course of their disease progression, or differences in active surveillance techniques.

The rate of new stage 3 (AIDS) cases was greatest in Kansas City (Table 7). The rate of new and living HIV and living stage 3 (AIDS) cases were greatest in St. Louis City. The rate of new HIV case diagnoses in St. Louis City was 9.2 times as high as Outstate, and 5.3 times as high in Kansas City compared to Outstate. The rate of new stage 3 (AIDS) case diagnoses was 4.4 times as high in St. Louis City compared to Outstate and 7.3 times as high in Kansas City compared to Outstate. This demonstrates the disproportionate impact of HIV disease on the major metropolitan areas in Missouri.

Table 8. Diagnosed HIV cases and rates, by selected race/ethnicity, by geographic area, Missouri, 2014

Area	White			Black/African American			Hispanic			Total		
	Cases	%	Rate*	Cases	%	Rate*	Cases	%	Rate*	Cases**	%	Rate*
St. Louis City†	27	35.5%	19.5	48	63.2%	31.7	1	1.3%	8.4	76	100.0%	23.9
St. Louis County†	16	18.2%	2.3	68	77.3%	28.8	2	2.3%	7.5	88	100.0%	8.8
Kansas City†	20	30.8%	7.8	35	53.8%	25.8	9	13.8%	19.3	65	100.0%	13.9
Outstate Missouri†	71	64.0%	1.9	30	27.0%	17.1	4	3.6%	2.7	111	100.0%	2.6
Missouri Correctional Facilities††	10	43.5%	N/A	13	56.5%	N/A	0	0.0%	N/A	23	100.0%	N/A
MISSOURI TOTAL	**144**	**39.7%**	**3.0**	**194**	**53.4%**	**27.8**	**16**	**4.4%**	**6.9**	**363**	**100.0%**	**6.0**

*Per 100,000 population based on 2013 MDHSS estimates.
**Includes cases in persons whose race/ethnicity is either unknown or not listed.
†Does not include persons diagnosed in Missouri correctional facilities.
††Includes persons diagnosed in Missouri correctional facilities.
Note: Row percentages are shown. Percentages may not total due to rounding.

Table 9. Diagnosed HIV cases and rates, by selected race/ethnicity, by HIV care region, Missouri, 2014

Area	White			Black/African American			Hispanic			Total		
	Cases	%	Rate*	Cases	%	Rate*	Cases	%	Rate*	Cases**	%	Rate*
St. Louis HIV Care Region†	51	29.0%	3.3	120	68.2%	29.4	3	1.7%	5.2	176	100.0%	8.4
Kansas City HIV Care Region†	34	39.5%	4.0	40	46.5%	21.9	9	10.5%	10.7	86	100.0%	7.3
Northwest HIV Care Region†	3	60.0%	1.5	2	40.0%	24.5	0	0.0%	0.0	5	100.0%	2.2
Central HIV Care Region†	17	53.1%	2.2	12	37.5%	27.7	2	6.3%	7.8	32	100.0%	3.6
Southwest HIV Care Region†	22	78.6%	2.1	2	7.1%	8.6	2	7.1%	4.2	28	100.0%	2.4
Southeast HIV Care Region†	7	53.8%	1.6	5	38.5%	15.8	0	0.0%	0.0	13	100.0%	2.6
Missouri Correctional Facilities††	10	43.5%	N/A	13	56.5%	N/A	0	0.0%	N/A	23	100.0%	N/A
MISSOURI TOTAL	**144**	**39.7%**	**3.0**	**194**	**53.4%**	**27.8**	**16**	**4.4%**	**6.9**	**363**	**100.0%**	**6.0**

*Per 100,000 population based on 2013 MDHSS estimates.
**Includes cases in persons whose race/ethnicity is either unknown or not listed.
†Does not include persons diagnosed in Missouri correctional facilities.
††Includes persons diagnosed in Missouri correctional facilities.
Note: Row percentages are shown. Percentages may not total due to rounding.

The proportion of new HIV cases diagnosed in 2014 by race/ethnicity varied by geographic area (Table 8). Whites comprised 64% of new HIV case diagnoses in 2014 in Outstate, but only 18% of new HIV cases in St. Louis County. Differences in the general population distribution of each of these geographic areas likely explain some of the variation observed. The difference in the rate of new HIV case diagnoses by race/ethnicity also varied by geographic area. In Outstate, the rate of new HIV cases among blacks/African Americans was 9.0 times as high as the rate among whites, and 1.4 times as high among Hispanics compared to whites. In comparison, the rate of new HIV cases was 1.6 times as high in blacks/African Americans compared to whites, and the rate was lower for Hispanics compared to whites in St. Louis City.

Similar patterns observed for the geographic areas were also present by HIV care region (Table 9). In the Southwest HIV Care Region, whites represented 79% of new HIV case diagnoses, whereas blacks/African Americans represented the majority of cases in the St. Louis HIV Care Region (68%) and Missouri correctional facilities (57%).

Table 10. Newly diagnosed and living HIV and stage 3 (AIDS) cases in men who have sex with men, by selected race/ethnicity, Missouri, 2014

	HIV Cases*				Stage 3 (AIDS) Cases			
	Newly Diagnosed		Living		Newly Diagnosed**		Living	
Race/Ethnicity	Cases	%	Cases	%	Cases	%	Cases	%
White	91	39.6%	1,924	54.2%	34	47.9%	2,132	54.8%
Black/African American	121	52.6%	1,415	39.9%	32	45.1%	1,546	39.7%
Hispanic	12	5.2%	153	4.3%	0	0.0%	146	3.8%
Other/Unknown	6	2.6%	55	1.6%	5	7.0%	68	1.7%
MISSOURI TOTAL* **	**230**	**100.0%**	**3,547**	**100.0%**	**71**	**100.0%**	**3,892**	**100.0%**

*Remained HIV cases at the end of the year.
**Does not include HIV cases diagnosed prior to 2014 that progressed to stage 3 (AIDS) in 2014.
***Totals include persons diagnosed in Missouri correctional facilities.
Note: Percentages may not total due to rounding.

Table 11. Living HIV disease cases in men who have sex with men, by selected race/ethnicity, by current age group, Missouri, 2014

	White		Black/African American		Hispanic		Total*	
Age Group	Cases	%**	Cases	%**	Cases	%**	Cases	%**
13-18	1	0.0%	3	0.1%	0	0.0%	4	0.1%
19-24	53	1.3%	315	10.6%	8	2.7%	387	5.2%
25-44	1,235	30.4%	1,355	45.8%	146	48.8%	2,801	37.7%
45-64	2,501	61.7%	1,225	41.4%	134	44.8%	3,903	52.5%
65+	266	6.6%	63	2.1%	11	3.7%	344	4.6%
MISSOURI TOTAL	**4,056**	**100.0%**	**2,961**	**100.0%**	**299**	**100.0%**	**7,439**	**100.0%**

*Row totals and percentages include cases in persons whose race/ethnicity is either unknown or not listed. Totals include persons diagnosed in Missouri correctional facilities.
**Percentage of cases per age group.
Note: Percentages may not total due to rounding.

The data presented for each exposure category for Tables 10-23 have not been adjusted to redistribute individuals with missing exposure category information. Therefore these data only represent those individuals with an exposure category reported to MDHSS. The total number of individuals in each exposure category is likely underestimated, especially among those newly diagnosed in 2014. These data are subject to change.

There were a total of 301 new HIV disease diagnoses attributed to MSM in 2014 (Table 10). Although blacks/ African Americans represented 1.3 times as many new HIV cases compared to whites, whites represented 1.1 times as many new stage 3 (AIDS) cases compared to blacks/African Americans in 2014. Whites represented a larger proportion of MSM living with both HIV and stage 3 (AIDS) compared to blacks/African Americans and Hispanics. Of the newly diagnosed cases among MSM, 24% progressed to stage 3 (AIDS) by the end of 2014.

The distribution of living HIV disease cases by current age varied by race/ethnicity among MSM, with those who identify as non-white tending to be younger (Table 11). Among white MSM living with HIV disease, the majority (62%) were between 45-64 years of age at the end of 2014. However, only 41% of living black/African American MSM and 45% of living Hispanic MSM with HIV disease were in this age group. The greatest numbers of black/ African American and Hispanic MSM living with HIV disease were between 25-44, and black/African Americans represented the largest number of MSM under the age of 25 (318).

Table 12. Living HIV disease cases in men who have sex with men, by selected race/ethnicity, by geographic area, by HIV care region, Missouri, 2014

	White		Black/African American		Hispanic		Total*	
Geographic Area	**Cases**	**%****	**Cases**	**%****	**Cases**	**%****	**Cases**	**%*****
St. Louis City	1,041	48.4%	1,030	47.9%	43	2.0%	2,152	28.9%
St. Louis County	545	41.8%	696	53.4%	48	3.7%	1,303	17.5%
Kansas City	1,042	52.3%	787	39.5%	122	6.1%	1,994	26.8%
Outstate	1,328	79.9%	229	13.8%	78	4.7%	1,663	22.4%
Missouri Correctional Facilities	100	30.6%	219	67.0%	8	2.4%	327	4.4%
MISSOURI TOTAL	**4,056**	**54.5%**	**2,961**	**39.8%**	**299**	**4.0%**	**7,439**	**100.0%**
HIV Care Region								
St. Louis HIV Care Region	1,799	48.5%	1,761	47.5%	94	2.5%	3,709	49.9%
Kansas City HIV Care Region	1,350	56.0%	854	35.4%	152	6.3%	2,410	32.4%
Northwest HIV Care Region	57	90.5%	5	7.9%	1	1.6%	63	0.8%
Central HIV Care Region	213	74.7%	55	19.3%	15	5.3%	285	3.8%
Southwest HIV Care Region	429	85.5%	36	7.2%	26	5.2%	502	6.7%
Southeast HIV Care Region	108	75.5%	31	21.7%	3	2.1%	143	1.9%
Missouri Correctional Facilities	100	30.6%	219	67.0%	8	2.4%	327	4.4%
MISSOURI TOTAL	**4,056**	**54.5%**	**2,961**	**39.8%**	**299**	**4.0%**	**7,439**	**100.0%**

*Row totals and percentages include cases in persons whose race/ethnicity is either unknown or not listed. Missouri totals include persons diagnosed in Missouri correctional facilities.
**Percentage of race/ethnicity in each area/region.
***Percentage of cases per area/region.
Note: Percentages may not total due to rounding.

Of the 7,439 MSM living with HIV disease at the end of 2014, the largest proportion were diagnosed in St. Louis City (29%), followed by Kansas City (27%) (Table 12). There were differences in the proportion of living HIV disease cases among MSM diagnosed in each geographic area by race/ethnicity. In Outstate Missouri, 80% of persons living with HIV disease attributed to MSM were white, whereas only 31% of this group who were diagnosed in Missouri correctional facilities were white. The differences were likely due to variations in the general population of the geographic areas.

Similar patterns were also seen for the HIV care regions. The St. Louis HIV Care Region represented 50% of all living cases among MSM and the Kansas City HIV Care Region comprised 32%. The proportion of living cases among white MSM was highest in the Northwest HIV Care Region and lowest in Missouri correctional facilities.

Table 13. Newly diagnosed and living HIV and stage 3 (AIDS) cases in men who have sex with men and inject drugs, by selected race/ethnicity, Missouri, 2014

	HIV Cases*				Stage 3 (AIDS) Cases			
	Newly Diagnosed		Living		Newly Diagnosed**		Living	
Race/Ethnicity	Cases	%	Cases	%	Cases	%	Cases	%
White	8	53.3%	153	67.1%	4	100.0%	229	62.1%
Black/African American	6	40.0%	67	29.4%	0	0.0%	125	33.9%
Hispanic	0	0.0%	6	2.6%	0	0.0%	11	3.0%
Other/Unknown	1	6.7%	2	0.9%	0	0.0%	4	1.1%
MISSOURI TOTAL* **	**15**	**100.0%**	**228**	**100.0%**	**4**	**100.0%**	**369**	**100.0%**

*Remained HIV cases at the end of the year.
**Does not include HIV cases diagnosed prior to 2014 that progressed to stage 3 (AIDS) in 2014.
***Totals include persons diagnosed in Missouri correctional facilities.
Note: Percentages may not total due to rounding.

Table 14. Living HIV disease cases in men who have sex with men and inject drugs, by selected race/ethnicity, by current age group, Missouri, 2014

	White		Black/African American		Hispanic		Total*	
Age Group	Cases	%**	Cases	%**	Cases	%**	Cases	%**
13-18	0	0.0%	0	0.0%	0	0.0%	0	0.0%
19-24	7	1.8%	5	2.6%	0	0.0%	12	2.0%
25-44	115	30.1%	44	22.9%	9	52.9%	172	28.8%
45-64	244	63.9%	131	68.2%	8	47.1%	385	64.5%
65+	16	4.2%	12	6.3%	0	0.0%	28	4.7%
MISSOURI TOTAL	**382**	**100.0%**	**192**	**100.0%**	**17**	**100.0%**	**597**	**100.0%**

*Row totals and percentages include cases in persons whose race/ethnicity is either unknown or not listed. Totals include persons diagnosed in Missouri correctional facilities.
**Percentage of cases per age group.
Note: Percentages may not total due to rounding.

There were a total of 19 new HIV disease diagnoses attributed to men who have sex with men and inject drugs (MSM/IDU) in 2014 (Table 13). The small number of new cases diagnosed among MSM/IDU make patterns by race/ethnicity and sex difficult to interpret. Although based on a small number of cases, 21% of newly diagnosed cases progressed to stage 3 (AIDS) by the end of 2014. Whites represented the majority (53%) of new HIV cases among MSM/IDU. Among living HIV and stage 3 (AIDS) cases, whites represented the largest proportion of cases, 67% and 62%, respectively.

The distribution of living HIV disease cases by current age varied by race/ethnicity among MSM/IDU (Table 14). Among white and black/African American MSM/IDU living with HIV disease, the majority, 64% and 68%, were between 45-64 years of age at the end of 2014. In contrast, only 47% of living Hispanic MSM/IDU with HIV disease were between 45-64 years of age. The greatest proportion of Hispanic MSM/IDU living with HIV disease were between 25-44 years of age at the end of 2014.

Table 15. Living HIV disease cases in men who have sex with men and inject drugs, by selected race/ ethnicity, by geographic area, by HIV care region, Missouri, 2014

	White		Black/African American		Hispanic		Total*	
Geographic Area	**Cases**	**%****	**Cases**	**%****	**Cases**	**%****	**Cases**	**%*****
St. Louis City	45	40.2%	63	56.3%	3	2.7%	112	18.8%
St. Louis County	26	50.0%	26	50.0%	0	0.0%	52	8.7%
Kansas City	97	64.2%	40	26.5%	9	6.0%	151	25.3%
Outstate	173	89.6%	15	7.8%	5	2.6%	193	32.3%
Missouri Correctional Facilities	41	46.1%	48	53.9%	0	0.0%	89	14.9%
MISSOURI TOTAL	**382**	**64.0%**	**192**	**32.2%**	**17**	**2.8%**	**597**	**100.0%**
HIV Care Region								
St. Louis HIV Care Region	83	46.6%	90	50.6%	4	2.2%	178	29.8%
Kansas City HIV Care Region	134	70.2%	43	22.5%	9	4.7%	191	32.0%
Northwest HIV Care Region	8	100.0%	0	0.0%	0	0.0%	8	1.3%
Central HIV Care Region	27	79.4%	5	14.7%	2	5.9%	34	5.7%
Southwest HIV Care Region	73	93.6%	3	3.8%	2	2.6%	78	13.1%
Southeast HIV Care Region	16	84.2%	3	15.8%	0	0.0%	19	3.2%
Missouri Correctional Facilities	41	46.1%	48	53.9%	0	0.0%	89	14.9%
MISSOURI TOTAL	**382**	**64.0%**	**192**	**32.2%**	**17**	**2.8%**	**597**	**100.0%**

*Row totals and percentages include cases in persons whose race/ethnicity is either unknown or not listed. Missouri totals include persons diagnosed in Missouri correctional facilities.
**Percentage of race/ethnicity in each area/region.
***Percentage of cases per area/region.
Note: Percentages may not total due to rounding.

Of the 597 MSM/IDU living with HIV disease at the end of 2014, the largest proportion was diagnosed in Outstate Missouri (32%), followed by Kansas City (25%) (Table 15). There were differences in the proportion of living HIV disease cases among MSM/IDU diagnosed in each geographic area by race/ethnicity. In Outstate Missouri, 90% of living cases attributed to MSM/IDU were white, whereas only 40% of living cases diagnosed in St. Louis City among MSM/IDU were white.

The Kansas City HIV Care Region represented 32% of all living cases among MSM/IDU, and the St. Louis HIV Care Region comprised 30%. The proportion of white living cases among MSM/IDU was highest in the Northwest HIV Care Region (100%) and lowest in the St. Louis HIV Care Region (47%) and Missouri correctional facilities (46%).

Table 16. Newly diagnosed and living HIV and stage 3 (AIDS) cases in injecting drug users, by selected race/ethnicity and sex, Missouri, 2014

	HIV Cases*				Stage 3 (AIDS) Cases			
	Newly Diagnosed		Living		Newly Diagnosed**		Living	
Race/Ethnicity and Sex	Cases	%	Cases	%	Cases	%	Cases	%
White Male	5	55.6%	83	32.4%	4	66.7%	106	26.8%
Black/African American Male	0	0.0%	71	27.7%	0	0.0%	136	34.4%
Hispanic Male	1	11.1%	7	2.7%	0	0.0%	12	3.0%
White Female	2	22.2%	57	22.3%	1	16.7%	57	14.4%
Black/African American Female	0	0.0%	33	12.9%	1	16.7%	73	18.5%
Hispanic Female	1	11.1%	3	1.2%	0	0.0%	7	1.8%
MISSOURI TOTAL* **	**9**	**100.0%**	**256**	**100.0%**	**6**	**100.0%**	**395**	**100.0%**

*Remained HIV cases at the end of the year.
**Does not include HIV cases diagnosed prior to 2014 that progressed to stage 3 (AIDS) in 2014.
***Totals include cases in persons whose race/ethnicity is either unknown or not listed. Totals include persons diagnosed in Missouri correctional facilities.
Note: Percentages may not total due to rounding.

Table 17. Living HIV disease cases in injecting drug users, by selected race/ethnicity and sex, by current age group, Missouri, 2014

	White Males		Black/African American Males		White Females		Black/African American Females		Total*	
Age Group	Cases	%**	Cases	%**	Cases	%**	Cases	%**	Cases	%**
13-18	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
19-24	1	0.5%	3	1.4%	1	0.9%	0	0.0%	5	0.8%
25-44	45	23.8%	39	18.8%	45	39.5%	32	30.2%	173	26.6%
45-64	137	72.5%	149	72.0%	67	58.8%	69	65.1%	439	67.4%
65+	6	3.2%	16	7.7%	1	0.9%	5	4.7%	34	5.2%
MISSOURI TOTAL	**189**	**100.0%**	**207**	**100.0%**	**114**	**100.0%**	**106**	**100.0%**	**651**	**100.0%**

*Row totals and percentages include cases in persons whose race/ethnicity is either unknown or not listed. Totals include persons diagnosed in Missouri correctional facilities.
**Percentage of cases per age group.
Note: Percentages may not total due to rounding.

There were a total of 15 new HIV disease diagnoses attributed to injection drug use (IDU) in 2014 (Table 16). The small number of new cases diagnosed among IDU make patterns by race/ethnicity and sex difficult to interpret. Of the newly diagnosed cases among IDU, 40% progressed to stage 3 (AIDS) by the end of 2014. Males represented approximately 64% of all living HIV disease cases among IDU.

Among IDU living with HIV disease, a smaller proportion of white males and white females had progressed to stage 3 (AIDS) by the end of 2014 compared to non-white males and females. There were differences in the distribution of living cases by race/ethnicity and sex among IDU between those classified as HIV cases compared to those classified as stage 3 (AIDS) cases. For example, white males represented the largest proportion of living HIV cases (32%) while black/African American males represented the largest proportion (34%) of living stage 3 (AIDS) cases among IDU.

The greatest numbers of persons living with HIV disease in each race/ethnicity and sex category presented among IDU were 45 to 64 years of age at the end of 2014 (Table 17). The proportion of living HIV disease cases between the ages of 25 and 44 was greatest among white females.

Table 18. Living HIV disease cases in injecting drug users, by selected race/ethnicity, by geographic area, by HIV care region, Missouri, 2014

	White		Black/African American		Hispanic		Total*	
Geographic Area	**Cases**	**%****	**Cases**	**%****	**Cases**	**%****	**Cases**	**%*****
St. Louis City	22	16.8%	107	81.7%	1	0.8%	131	20.1%
St. Louis County	20	37.0%	32	59.3%	1	1.9%	54	8.3%
Kansas City	46	31.1%	87	58.8%	13	8.8%	148	22.7%
Outstate	166	81.0%	29	14.1%	10	4.9%	205	31.5%
Missouri Correctional Facilities	49	43.4%	58	51.3%	4	3.5%	113	17.4%
MISSOURI TOTAL	**303**	**46.5%**	**313**	**48.1%**	**29**	**4.5%**	**651**	**100.0%**
HIV Care Region								
St. Louis HIV Care Region	69	32.5%	139	65.6%	2	0.9%	212	32.6%
Kansas City HIV Care Region	78	41.9%	90	48.4%	16	8.6%	186	28.6%
Northwest HIV Care Region	6	75.0%	1	12.5%	1	12.5%	8	1.2%
Central HIV Care Region	27	71.1%	9	23.7%	2	5.3%	38	5.8%
Southwest HIV Care Region	60	83.3%	9	12.5%	3	4.2%	72	11.1%
Southeast HIV Care Region	14	63.6%	7	31.8%	1	4.5%	22	3.4%
Missouri Correctional Facilities	49	43.4%	58	51.3%	4	3.5%	113	17.4%
MISSOURI TOTAL	**303**	**46.5%**	**313**	**48.1%**	**29**	**4.5%**	**651**	**100.0%**

*Row totals and percentages include cases in persons whose race/ethnicity is either unknown or not listed. Missouri totals include persons diagnosed in Missouri correctional facilities.
**Percentage of race/ethnicity in each area/region.
***Percentage of cases per area/region.
Note: Percentages may not total due to rounding.

Of the 651 IDU living with HIV disease at the end of 2014, the largest proportion was diagnosed in Outstate Missouri (32%), followed by Kansas City (23%) (Table 18). There were differences in the proportion of living HIV disease cases among IDU diagnosed in each geographic area by race/ethnicity. In Outstate Missouri, 81% of living cases attributed to IDU were white, whereas only 17% of living cases diagnosed in St. Louis City among IDU were white. The differences are likely due to variations in the general population of the geographic areas.

The St. Louis HIV Care Region represented 33% of all living cases among IDU, and the Kansas City HIV Care Region comprised 29%. The proportion of white living cases among IDU was highest in the Southwest HIV Care Region (83%) and lowest in the St. Louis HIV Care Region (33%) while the reverse was true of black/African American living cases among IDU (13% and 66%). Though proportions of Hispanic living cases among IDU by HIV care region are difficult to interpret due to small numbers of individuals in this population, the highest number of these cases are in the Kansas City Region (16).

Table 19. Newly diagnosed and living HIV and stage 3 (AIDS) cases in heterosexual contacts, by selected race/ethnicity and sex, Missouri, 2014

	HIV Cases*				Stage 3 (AIDS) Cases			
	Newly Diagnosed		Living		Newly Diagnosed**		Living	
Race/Ethnicity and Sex	Cases	%	Cases	%	Cases	%	Cases	%
White Male	1	2.2%	56	7.1%	2	12.5%	53	6.0%
Black/African American Male	8	17.4%	111	14.1%	5	31.3%	178	20.2%
Hispanic Male	0	0.0%	3	0.4%	0	0.0%	11	1.2%
White Female	12	26.1%	216	27.5%	1	6.3%	198	22.4%
Black/African American Female	24	52.2%	364	46.3%	7	43.8%	408	46.2%
Hispanic Female	1	2.2%	23	2.9%	0	0.0%	20	2.3%
MISSOURI TOTAL* **	**46**	**100.0%**	**786**	**100.0%**	**16**	**100.0%**	**883**	**100.0%**

*Remained HIV cases at the end of the year.
**Does not include HIV cases diagnosed prior to 2014 that progressed to stage 3 (AIDS) in 2014.
***Total includes cases in persons whose race/ethnicity is either unknown or not listed. Totals include persons diagnosed in Missouri correctional facilities.
Note: Percentages may not total due to rounding.

Table 20. Living HIV disease cases in heterosexual contacts, by selected race/ethnicity and sex, by current age group, Missouri, 2014

	White Males		Black/African American Males		White Females		Black/African American Females		Total*	
Age Group	Cases	%**	Cases	%**	Cases	%**	Cases	%**	Cases	%**
13-18	0	0.0%	1	0.3%	0	0.0%	3	0.4%	4	0.2%
19-24	0	0.0%	11	3.8%	7	1.7%	28	3.6%	48	2.9%
25-44	19	17.4%	117	40.5%	168	40.6%	394	51.0%	742	44.5%
45-64	73	67.0%	143	49.5%	206	49.8%	325	42.1%	782	46.9%
65+	17	15.6%	17	5.9%	33	8.0%	22	2.8%	93	5.6%
MISSOURI TOTAL	**109**	**100.0%**	**289**	**100.0%**	**414**	**100.0%**	**772**	**100.0%**	**1,669**	**100.0%**

*Row totals and percentages include cases in persons whose race/ethnicity is either unknown or not listed. Totals include persons diagnosed in Missouri correctional facilities.
**Percentage of cases per age group.
Note: Percentages may not total due to rounding.

There were a total of 62 new HIV disease diagnoses attributed to heterosexual contact in 2014 (Table 19). The small number of new cases diagnosed among heterosexuals make patterns by race/ethnicity and sex difficult to interpret. Though based on small numbers, black/African American females represented the largest number of new HIV disease diagnoses among heterosexuals. Black/African American females were more likely to have progressed to stage 3 (AIDS) by the end of 2014 than white females (23% vs. 8%). Overall, 26% of newly diagnosed cases attributed to heterosexual contact progressed to stage 3 (AIDS) by the end of 2014.

Females represented 77% of living HIV cases and 71% of living stage 3 (AIDS) cases among heterosexual contact cases. Among heterosexual contact cases, the greatest proportion of living cases was between 45-64 years of age in white males, black/African American males, and white females and 25-44 years of age in black/ African American females (Table 20).

Table 21. Living HIV disease cases in heterosexual contacts, by selected race/ethnicity, by geographic area, by HIV care region, Missouri, 2014

	White		Black/African American		Hispanic		Total*	
Geographic Area	**Cases**	**%****	**Cases**	**%****	**Cases**	**%****	**Cases**	**%*****
St. Louis City	72	14.6%	406	82.4%	12	2.4%	493	29.5%
St. Louis County	66	18.9%	264	75.6%	12	3.4%	349	20.9%
Kansas City	59	23.0%	180	70.0%	12	4.7%	257	15.4%
Outstate	306	65.5%	130	27.8%	20	4.3%	467	28.0%
Missouri Correctional Facilities	20	19.4%	81	78.6%	1	1.0%	103	6.2%
MISSOURI TOTAL	**523**	**31.3%**	**1,061**	**63.6%**	**57**	**3.4%**	**1,669**	**100.0%**
HIV Care Region								
St. Louis HIV Care Region	180	20.0%	681	75.8%	26	2.9%	899	53.9%
Kansas City HIV Care Region	106	32.7%	190	58.6%	20	6.2%	324	19.4%
Northwest HIV Care Region	11	64.7%	6	35.3%	0	0.0%	17	1.0%
Central HIV Care Region	67	60.9%	37	33.6%	3	2.7%	110	6.6%
Southwest HIV Care Region	93	71.0%	28	21.4%	6	4.6%	131	7.8%
Southeast HIV Care Region	46	54.1%	38	44.7%	1	1.2%	85	5.1%
Missouri Correctional Facilities	20	19.4%	81	78.6%	1	1.0%	103	6.2%
MISSOURI TOTAL	**523**	**31.3%**	**1,061**	**63.6%**	**57**	**3.4%**	**1,669**	**100.0%**

*Row totals and percentages include cases in persons whose race/ethnicity is either unknown or not listed. Missouri totals include persons diagnosed in Missouri correctional facilities.
**Percentage of race in each area/region.
***Percentage of cases per area/region.
Note: Percentages may not total due to rounding.

Of the 1,669 living cases among heterosexual contacts at the end of 2014, the largest proportion was diagnosed in St. Louis City (30%); the next highest was Outstate Missouri (28%) (Table 21). There were differences in the proportion of living HIV disease cases among heterosexuals diagnosed in each geographic area by race/ethnicity. In Outstate, 66% of living cases attributed to heterosexual contact were white, whereas only 15% of living cases diagnosed in St. Louis City among heterosexual contact cases were white. The differences are likely due to variations in the general population of the geographic areas. Blacks/African Americans represented a larger proportion of living HIV disease cases among heterosexual contact cases (64%) compared to all other exposure categories.

The St. Louis HIV Care Region represented 54% of all living cases among heterosexuals, and the Kansas City HIV Care Region comprised 19%. The proportion of white living cases among heterosexuals was highest in the Southwest HIV Care Region (71%) and lowest in Missouri correctional facilities (19%). The proportion of black/African American living cases was highest in Missouri correctional facilities (79%) and lowest in the Southwest HIV Care Region (21%).

Table 22. Deaths* among HIV cases, by mode of transmission, by selected race and sex, Missouri, 1982—2014

	White Males		Black/African American Males		White Females		Black/African American Females		Total**	
Mode of Transmission	**Cases**	**%**	**Cases**	**%**	**Cases**	**%**	**Cases**	**%**	**Cases**	**%**
MSM	216	63.5%	142	56.6%	0	0.0%	0	0.0%	374	51.7%
MSM/IDU	42	12.4%	16	6.4%	0	0.0%	0	0.0%	62	8.6%
IDU	30	8.8%	29	11.6%	8	22.9%	19	31.7%	93	12.8%
Heterosexual Contact	8	2.4%	22	8.8%	17	48.6%	29	48.3%	79	10.9%
No Indicated Risk (NIR)	36	10.6%	41	16.3%	10	28.6%	11	18.3%	106	14.6%
MISSOURI TOTAL* **	**340**	**100.0%**	**251**	**100.0%**	**35**	**100.0%**	**60**	**100.0%**	**724**	**100.0%**

*May or may not be due to HIV-related illnesses.
**Totals include cases in persons whose race/ethnicity is either unknown or not listed.
***Total (numbers and percentages) include 10 cases (1.4%) with a mode of transmission not indicated on the table, such as hemophilia/ coagulation disorder, blood transfusion or tissue recipient, etc. Totals include persons diagnosed in Missouri correctional facilities.
Note: Percentages may not total due to rounding.

Table 23. Deaths* among stage 3 (AIDS) cases, by mode of transmission, by selected race and sex, Missouri, 1982—2014

	White Males		Black/African American Males		White Females		Black/African American Females		Total**	
Mode of Transmission	**Cases**	**%**	**Cases**	**%**	**Cases**	**%**	**Cases**	**%**	**Cases**	**%**
MSM	3,301	77.8%	1,290	68.0%	0	0.0%	0	0.0%	4,795	66.9%
MSM/IDU	431	10.2%	201	10.6%	0	0.0%	0	0.0%	658	9.2%
IDU	176	4.1%	187	9.9%	80	28.0%	107	25.4%	587	8.2%
Heterosexual Contact	65	1.5%	90	4.7%	150	52.4%	253	60.1%	579	8.1%
No Indicated Risk (NIR)	116	2.7%	109	5.7%	28	9.8%	38	9.0%	317	4.4%
MISSOURI TOTAL* **	**4,241**	**100.0%**	**1,898**	**100.0%**	**286**	**100.0%**	**421**	**100.0%**	**7,170**	**100.0%**

*May or may not be due to stage 3 (AIDS)-related illnesses.
**Totals include cases in persons whose race/ethnicity is either unknown or not listed.
***Total (numbers and percentages) include 234 cases (3.3%) with a mode of transmission not indicated on the table, such as hemophilia/ coagulation disorder, blood transfusion or tissue recipient, etc. Totals include persons diagnosed in Missouri correctional facilities.
Note: Percentages may not total due to rounding.

The number of deaths that have occurred among persons still classified as HIV cases at the time of death was small (724) in comparison to the number of deaths among persons classified as stage 3 (AIDS) (7,170) (Tables 22 and 23). The greatest proportion of deaths among HIV cases has occurred among white males (47%) (Table 22).

There were differences in the distribution of deaths among HIV cases by mode of transmission among the race/ ethnicity and sex categories. Among males, the majority of deaths occurred among cases attributed to MSM. Among female HIV cases, the largest number of deaths occurred among cases attributed to heterosexual contact. Similar patterns were observed for deaths among male stage 3 (AIDS) cases (Table 23). Among both white and black/African American female stage 3 (AIDS) cases, cases attributed to heterosexual contact represented the majority of deaths. The proportion of deaths among those with no indicated risk among stage 3 (AIDS) cases was smaller than that among HIV cases, likely because there was more time to obtain exposure category information.

Table 24. Newly diagnosed and living HIV and stage 3 (AIDS) cases with exposure category assignments for Missouri, 2014

Exposure category	HIV cases				Stage 3 (AIDS) cases			
	2014*		Living		2014**		Living	
Adult/Adolescent								
Men who have sex with men	266	74.5%	4,003	70.8%	84	68.9%	4,228	67.9%
Men who have sex with men and inject drugs	17	4.8%	255	4.5%	5	4.1%	399	6.4%
Injecting drug use	12	3.4%	310	5.5%	10	8.2%	458	7.4%
Heterosexual contact	62	17.4%	1,069	18.9%	23	18.9%	1,099	17.6%
Hemophilia/coagulation disorder	0	0.0%	9	0.2%	0	0.0%	34	0.5%
Blood transfusion or tissue recipient	0	0.0%	3	0.1%	0	0.0%	8	0.1%
No indicated risk (NIR)	-----	-------	-----	-------	-----	-------	-----	-------
ADULT/ADOLESCENT SUBTOTAL	**357**	**100.0%**	**5,651**	**† 100.0%**	**122**	**100.0%**	**6,227**	**† 100.0%**
Pediatric (<13 years old)								
PEDIATRIC SUBTOTAL	**6**	**100.0%**	**53**	**100.0%**	**0**	**0.0%**	**53**	**100.0%**

*HIV cases reported during 2014 which remained HIV cases at the end of the year.
**Does not include HIV cases diagnosed prior to 2014 that progressed to stage 3 (AIDS) in 2014.
†Includes 2 cases with a confirmed "other" exposure category among persons living with HIV and one case among persons living with stage 3 (AIDS).
Note: Percentages may not total due to rounding.

The data in Table 24 have been adjusted to proportionately re-distribute individuals with no indicated risk factor based on sex and race/ethnicity to known exposure categories. These data do not reflect the true counts of persons reported in each exposure category. Among both new and living HIV and stage 3 (AIDS) cases, MSM represented the greatest proportion of cases. The proportion of MSM cases was greater for new HIV and stage 3 (AIDS) cases compared to the proportion among their respective living cases. This proportion may indicate changes in how individuals are being infected over time. However, the observed pattern may also be related to the method used to re-distribute those with unknown risks. The method used to re-distribute new cases may weight those with no indicated risk more heavily than the MSM category. There were six new HIV cases diagnosed among children less than 13 years of age in 2014. All six of these cases were among children born outside of the U.S.

The majority of HIV disease cases diagnosed in 2014 (89%) and those living with HIV disease (93%) were residents of a metropolitan area at the time of diagnosis (Table 25). The proportion of new HIV diagnoses in nonmetropolitan areas was slightly higher in 2014 compared to previous years. For a list of counties that were classified as a metropolitan area refer to the Appendix. There were differences in the proportion of living HIV disease cases by sex based on the population of the area of residence. The proportion of males living with HIV disease decreased as the population of the area of residence decreased. Whereas 83% of living HIV disease cases in metropolitan areas occurred among males, only 71% of living cases in nonmetropolitan areas were among males. There were differences in the distribution of living HIV disease cases by race/ethnicity based on the population of the area of residence. As the population of the area of residence became smaller, the proportion of living cases that occurred among whites increased. For example, only 48% of living HIV disease diagnoses were among whites in metropolitan areas compared to 78% in nonmetropolitan areas. There were also differences based on the population of area of residence in the distribution of living HIV disease cases by exposure category. As the population of the area of residence decreased, the proportion of cases attributed to MSM generally decreased. Among those living with HIV disease, the proportion of cases diagnosed between 45-64 years of age increased as the population of the area of residence decreased.

Table 25. Newly diagnosed and living HIV disease* cases, by population of area of residence at time of diagnosis, by sex, by race/ethnicity, by exposure category and age at diagnosis, Missouri, 2014†

	Newly Diagnosed						Living					
	Metropolitan Area**		Micropolitan Area***		Nonmetropolitan Area****		Metropolitan Area**		Micropolitan Area***		Nonmetropolitan Area****	
	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%
Sex												
Male	344	83.7%	18	72.0%	21	80.8%	8,705	83.2%	319	73.2%	257	71.4%
Female	67	16.3%	7	28.0%	5	19.2%	1,760	16.8%	117	26.8%	103	28.6%
Total	411	100.0%	25	100.0%	26	100.0%	10,465	100.0%	436	100.0%	360	100.0%
Race/Ethnicity												
White	156	38.0%	15	60.0%	21	80.8%	4,998	47.8%	312	71.6%	282	78.3%
Black/African American	225	54.7%	8	32.0%	2	7.7%	4,837	46.2%	101	23.2%	60	16.7%
Hispanic	17	4.1%	1	4.0%	2	7.7%	449	4.3%	17	3.9%	16	4.4%
Other/Unknown	13	3.2%	1	4.0%	1	3.8%	181	1.7%	6	1.4%	2	0.6%
Total	411	100.0%	25	100.0%	26	100.0%	10,465	100.0%	436	100.0%	360	100.0%
Exposure Category												
Men who have sex with men	271	65.9%	10	40.0%	13	50.0%	6,753	64.5%	193	44.3%	166	46.1%
Men who have sex with men and inject drugs	13	3.2%	2	8.0%	0	0.0%	459	4.4%	31	7.1%	18	5.0%
Injecting drug use	10	2.4%	1	4.0%	2	7.7%	477	4.6%	32	7.3%	29	8.1%
Heterosexual contact	52	12.7%	4	16.0%	5	19.2%	1,380	13.2%	97	22.2%	89	24.7%
No Indicated Risk (NIR)	61	14.8%	6	24.0%	6	23.1%	1,268	12.1%	70	16.1%	46	12.8%
Other	0	0.0%	0	0.0%	0	0.0%	44	0.4%	3	0.7%	4	1.1%
Pediatric	4	1.0%	2	8.0%	0	0.0%	84	0.8%	10	2.3%	8	2.2%
Total	411	100.0%	25	100.0%	26	100.0%	10,465	100.0%	436	100.0%	360	100.0%
Age at Diagnosis												
<2	0	0.0%	0	0.0%	0	0.0%	43	0.4%	4	0.9%	3	0.8%
2-12	4	1.0%	2	8.0%	0	0.0%	35	0.3%	6	1.4%	5	1.4%
13-18	13	3.2%	0	0.0%	0	0.0%	280	2.7%	8	1.8%	10	2.8%
19-24	107	26.0%	7	28.0%	3	11.5%	1,603	15.3%	56	12.8%	34	9.4%
25-44	207	50.4%	14	56.0%	12	46.2%	6,745	64.5%	281	64.4%	206	57.2%
45-64	76	18.5%	1	4.0%	10	38.5%	1,702	16.3%	78	17.9%	100	27.8%
65+	4	1.0%	1	4.0%	1	3.8%	57	0.5%	3	0.7%	2	0.6%
Total	411	100.0%	25	100.0%	26	100.0%	10,465	100.0%	436	100.0%	360	100.0%

*Includes all individuals diagnosed with the HIV virus, regardless of current status (i.e., HIV or stage 3 (AIDS))
†Does not include persons diagnosed in Missouri correctional facilities.
**A metropolitan area contains a core urban area with a population of at least 50,000. It also includes adjacent counties that have a high degree of social and economic integration with the core urban area. Based on 2013 US Census estimates. See Appendix for map of included counties.
***A micropolitan area contains a core urban area with a population between 10,000-49,999. It also includes adjacent counties that have a high degree of social and economic integration with the core urban area. Based on 2013 US Census estimates. See Appendix for map of included counties.
****An area that does not meet the population requirements for the metropolitan or micropolitan area. Based on 2013 US Census estimates. See Appendix for map of included counties.
Note: Percentages may not total due to rounding.

Figure 22. Length of time between HIV and stage 3 (AIDS) diagnosis, by race/ethnicity, Missouri, 2005-2013

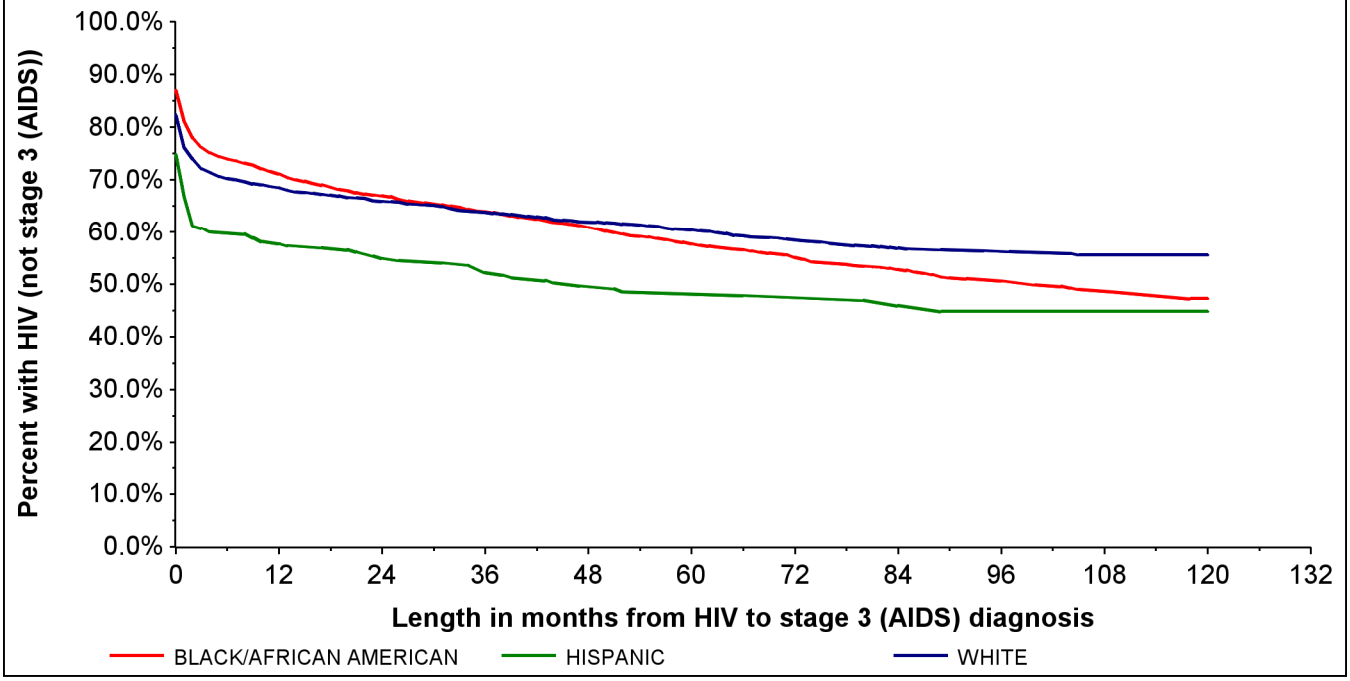
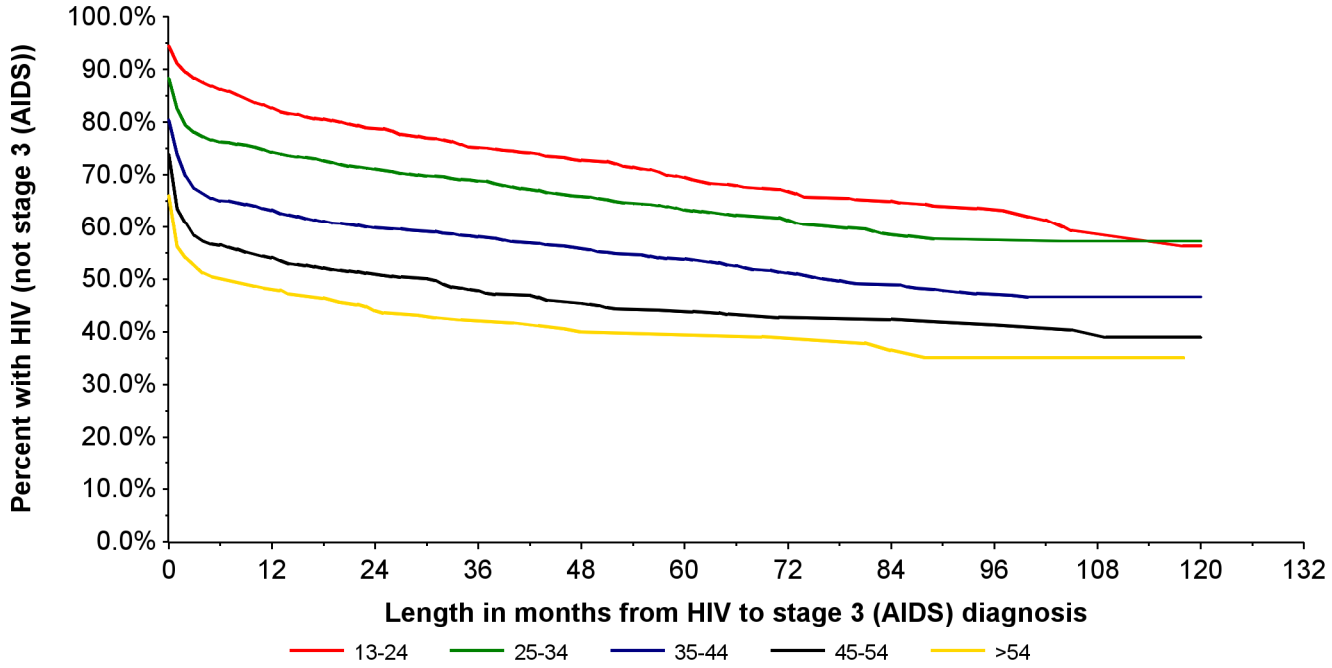


Figure 23. Length of time between HIV and stage 3 (AIDS) diagnosis, by age at diagnosis*, Missouri, 2005-2013



*Age at earliest diagnosis of HIV disease, regardless of disease progression.

A greater proportion of Hispanics progressed from HIV to stage 3 (AIDS) within 12 months of their HIV diagnosis compared to whites and blacks/African Americans (Figure 22). It is important to note that for all curves displayed, data in the later months should be interpreted with caution as they are based on small numbers.

Younger age was associated with slower progression from HIV to stage 3 (AIDS); the proportion of individuals progressing to stage 3 (AIDS) increased as age at diagnosis increased (Figure 23). Over time, the proportion of cases that progressed to stage 3 (AIDS) remained higher as the age at initial HIV diagnosis increased.

Figure 24. Length of time between HIV and stage 3 (AIDS) diagnosis, by mode of transmission, Missouri, 2005-2013

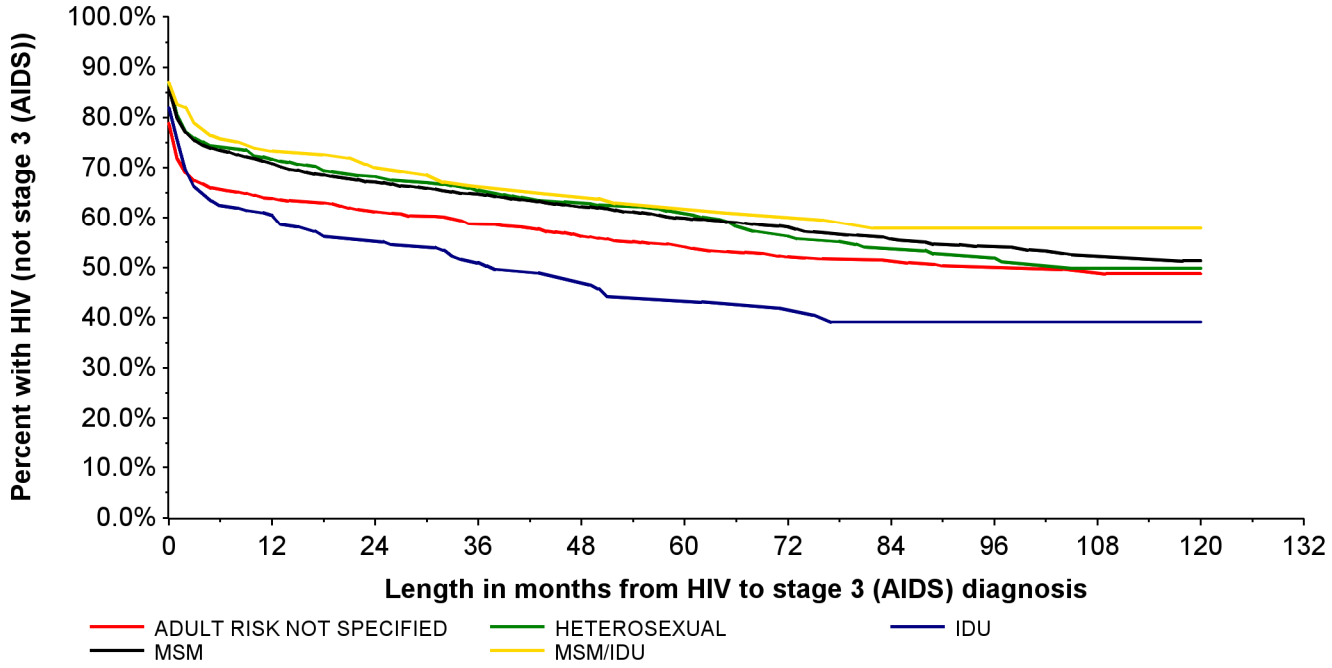
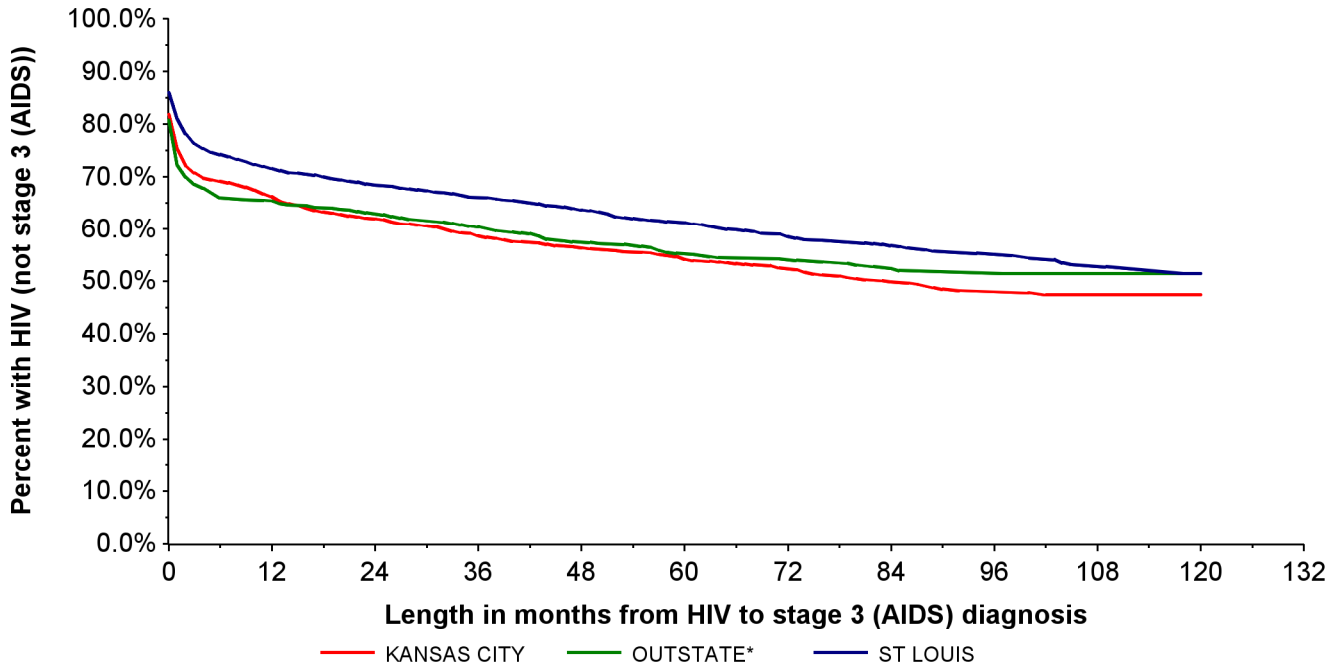


Figure 25. Length of time between HIV and stage 3 (AIDS) diagnosis, by HIV care region*, Missouri, 2005-2013



*Outstate includes the Central, Northwest, Southeast, and Southwest HIV Care Regions

A greater proportion of IDU progressed from HIV to stage 3 (AIDS) within 12 months of their HIV diagnosis compared to individuals from all other exposure categories (Figure 24). At 96 months after the initial HIV diagnosis, the proportion of cases that progressed to stage 3 (AIDS) remained higher for IDU compared with other exposure categories.

There were differences in the progression from HIV to stage 3 (AIDS) by HIV care region (Figure 25). The proportion of individuals that progressed to stage 3 (AIDS) over time was generally greater for the Kansas City HIV Care Region and all Outstate HIV Care Regions combined compared to the St. Louis HIV Care Region. Differences observed among the regions may be attributed in part to differences in the routine monitoring and reporting of CD4 counts and other active surveillance techniques.

Figure 26. Length of time between HIV diagnosis and death, by race/ethnicity, Missouri, 2005-2013

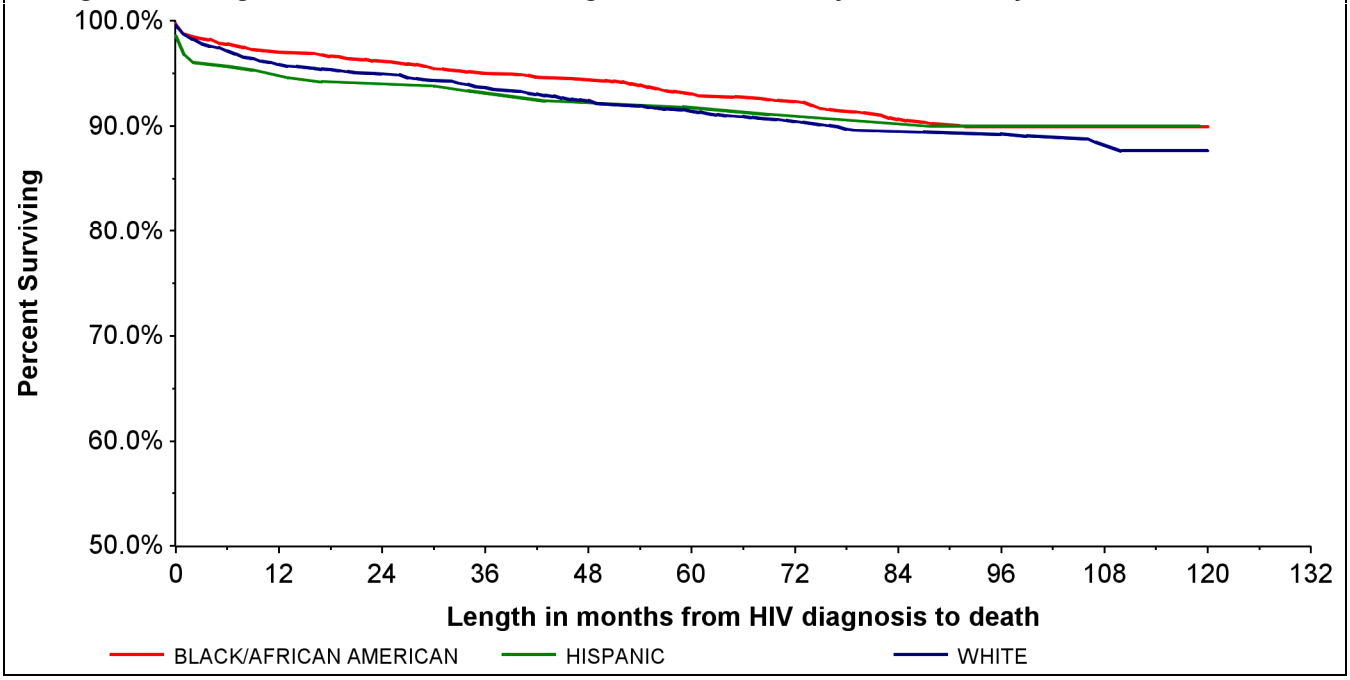
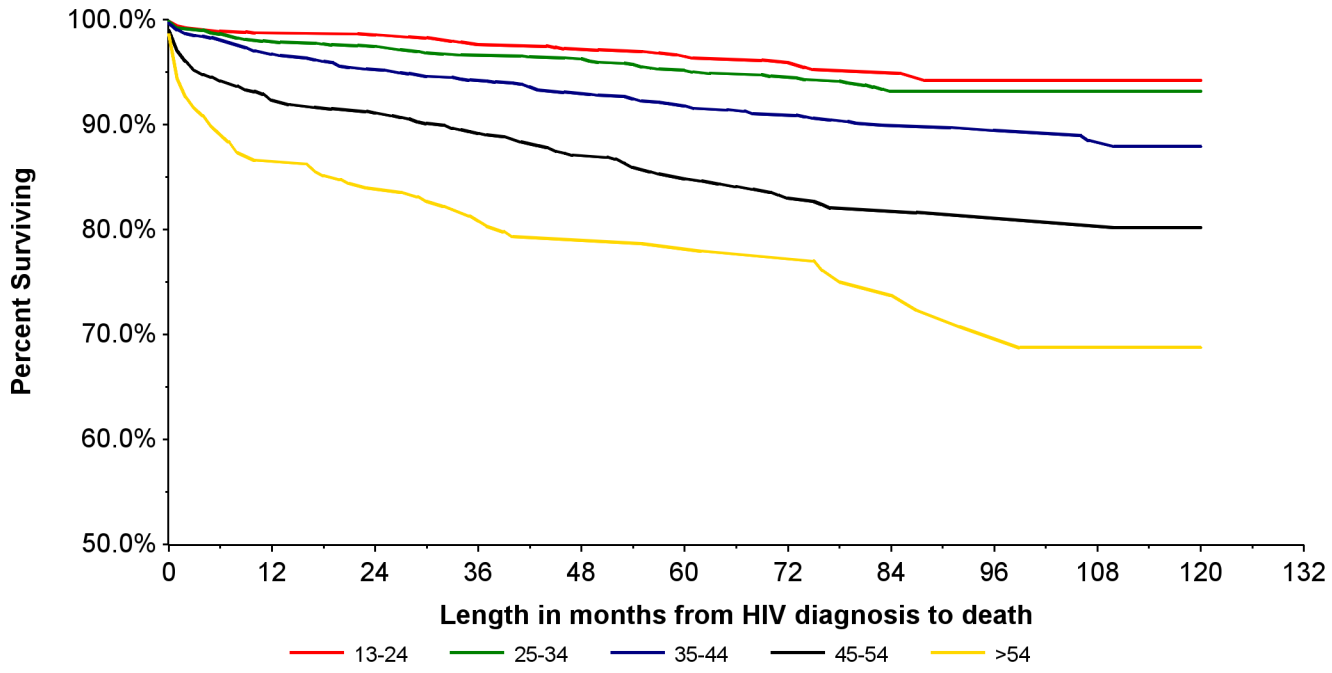


Figure 27. Length of time between HIV diagnosis and death, by age at diagnosis*, Missouri, 2005-2013



*Age at earliest diagnosis of HIV disease, regardless of disease progression.

The length of time between the initial HIV diagnosis and reported death was similar by race/ethnicity (Figure 26). Five years following the initial HIV diagnosis, 89% of all individuals were still living.

Over time, the proportion of cases that were deceased was higher as the age at initial HIV diagnosis increased (Figure 27). For example, 72 months following the initial diagnosis, 96% of individuals diagnosed between 13-24 years of age were still living, compared to only 77% of individuals diagnosed at greater than 54 years of age.

Figure 28. Length of time between HIV diagnosis and death, by mode of transmission, Missouri, 2005-2013

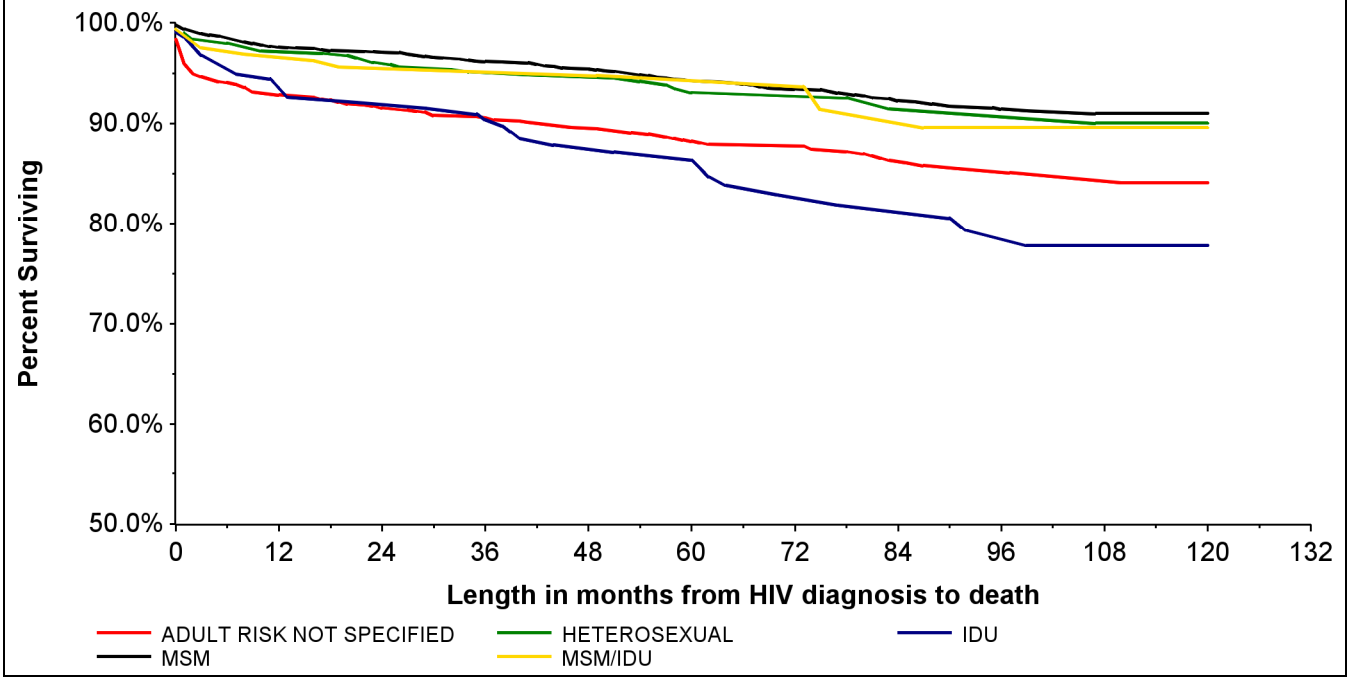
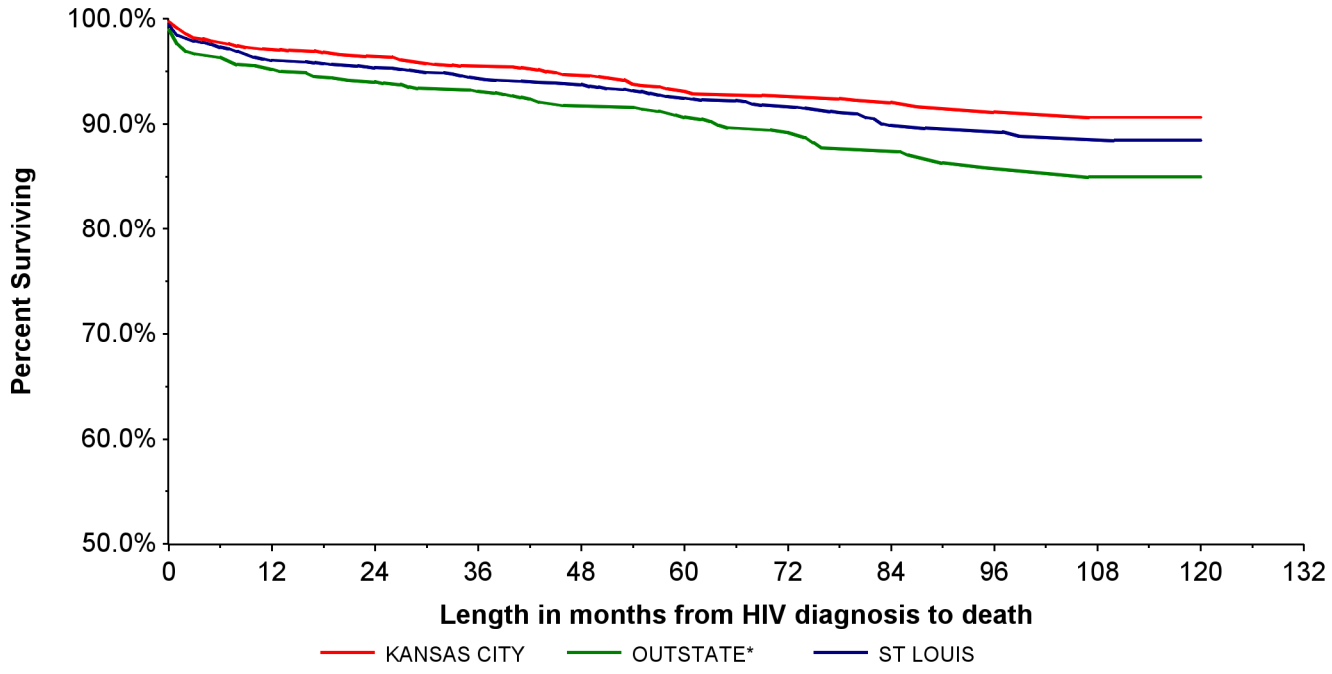


Figure 29. Length of time between HIV diagnosis and death, by HIV care region*, Missouri, 2005-2013



*Outstate includes the Central, Northwest, Southeast, and Southwest HIV Care Regions

A greater proportion of IDU and those with no reported risk were deceased within 36 months of their HIV diagnosis compared to individuals from all other exposure categories (Figure 28). Differences in survival persisted over time.

There were not significant differences in survival following HIV diagnosis by HIV care region (Figure 29). At 24 months following the initial HIV diagnosis, the proportion still living was 96% for the Kansas City HIV Care Region, 95% for the St. Louis HIV Care Region, and 94% for all other Outstate HIV Care Regions combined.

Table 26. Initial CD4 and viral load values† among adults and adolescents newly diagnosed with HIV disease, Missouri, 2012-2013

Viral Load (copies/mL)	CD4 Count (cells/µL)											
	No Test		<200		200-350		351-500		>500		Total	
	N	%*	N	%*	N	%*	N	%*	N	%*	N	%**
No Test	104	10.4%	10	1.0%	7	0.7%	5	0.5%	9	0.9%	135	13.5%
0-10,000	26	2.6%	27	2.7%	28	2.8%	48	4.8%	83	8.3%	212	21.2%
10,001-100,000	32	3.2%	50	5.0%	85	8.5%	66	6.6%	97	9.7%	330	32.9%
>100,000	15	1.5%	162	16.2%	59	5.9%	44	4.4%	45	4.5%	325	32.4%
Total	177	17.7%	249	24.9%	179	17.9%	163	16.3%	234	23.4%	1,002	100.0%

†Within 12 months of the initial HIV diagnosis
* % of table total
**% of column total

Of persons newly diagnosed with HIV disease between 2012 and 2013, 10% did not have a CD4 or a viral load laboratory result reported to MDHSS within 12 months of diagnosis (Table 26). Nearly 25% of persons diagnosed between 2012 and 2013 had an initial CD4 count of less than 200 cells/µL. This proportion indicates that a sizable proportion of individuals were being diagnosed at a later stage of disease progression and likely were unaware of their infection for at least several years. This proportion suggests greater emphasis is needed to establish routine HIV testing, so individuals are diagnosed within a shorter time period after becoming infected.

Table 27. Percent of adults and adolescents receiving at least one CD4 within 12 months of their HIV diagnosis and the median initial CD4 count, Missouri, 2012-2013

	Number	% with CD4 within 12 months of HIV diagnosis	Median of initial CD4 counts (cells/ µL)
HIV Status			
HIV (not AIDS)	681	75.3%	476
Concurrent HIV and stage 3 (AIDS) diagnosis	229	99.6%	82
Stage 3 (AIDS) >1 month after HIV diagnosis	92	91.3%	158
Sex			
Male	842	81.4%	340
Female	160	87.5%	351
Race/Ethnicity			
White	400	88.0%	345
Black/African American	536	76.9%	340
Hispanic	45	93.3%	366
Other/Unknown	21	90.5%	239
Exposure Category			
MSM	636	81.3%	348
MSM/IDU	27	88.9%	341
IDU	45	93.3%	326
HRH	116	86.2%	388
Other	0	--	--
NIR	178	79.8%	268
Age at HIV Diagnosis			
13-18	35	71.4%	444
19-24	258	74.0%	391
25-44	481	84.8%	328
45-64	216	88.4%	266
65+	12	83.3%	123

The percent of adults and adolescents receiving at least one CD4 within 12 months of their HIV diagnosis and the median initial CD4 count varied by sex, race/ethnicity, exposure category, and age at HIV diagnosis (Table 27). Of adults and adolescents newly diagnosed between 2012 and 2013, a greater proportion of females had a CD4 within 12 months of diagnosis (88%) compared to males (81%). The initial median CD4 count tended to be greater for females (351 cells/µL) compared to males (340 cells/µL). A greater proportion of Hispanics and whites tended to have a CD4 count within 12 months of diagnosis compared to blacks/African Americans, with Hispanics having the highest proportion (93%). Among those with a CD4 count within 12 months of diagnosis, the initial median CD4 count tended to be lower among blacks/African Americans (340 cells/µL). Among exposure categories, MSM and heterosexual contact cases had a lower proportion of adults and adolescents receiving an initial CD4 within 12 months of diagnosis compared to persons with other known exposure categories. The initial median CD4 tended to be lowest for persons with no indicated risk compared to all other exposure categories. The median initial CD4 count tended to decrease as the age at HIV diagnosis increased. These data may be beneficial when determining groups that should be targeted for new testing initiatives to identify individuals earlier in their disease progression.

This page was intentionally left blank.

Key Highlights: What are the indicators of HIV disease infection risk in Missouri?

Primary and Secondary (P&S) Syphilis

- The number of reported P&S syphilis cases increased from 251 cases in 2013 to 352 cases in 2014. The increase observed was due to increases in the St. Louis, Kansas City, Central, and Southwest HIV Care Regions.
- The rate of reported cases was highest in St. Louis City (26 per 100,000).
- Blacks/African Americans were disproportionately impacted, with a case rate 8.7 times as high as the rate among whites.

Early Latent Syphilis

- The number of early latent syphilis cases increased from 2013 (220 cases) to 2014 (240 cases). The increase was seen in the St. Louis, Kansas City, and Central HIV Care Regions.
- The number of reported cases in 2014 was highest in Jackson County (78).
- Males represented the majority (87%) of reported early latent syphilis cases.
- The case rate was 7.9 times as high among blacks/African Americans compared to whites.

Gonorrhea

- The number of reported gonorrhea cases decreased from 2013 (7,546 cases) to 2014 (7,387 cases). The number of reported gonorrhea cases was lower in 2014 compared to 2013 in all HIV care regions except the Southwest and Central HIV Care Regions.
- St. Louis City had the highest rate of reported gonorrhea cases at 486 per 100,000 persons.
- A larger proportion of reported gonorrhea cases was diagnosed between 15 and 19 years of age among black/African American females (35%) compared to white females (18%), black/African American males (17%), and white males (10%).

Chlamydia

- The number of reported chlamydia cases increased from 27,328 in 2013 to 27,981 in 2014. An increase in the number of reported chlamydia cases was observed in all HIV care regions.
- St. Louis City had the highest chlamydia rate in 2014 (1,255 per 100,000). Jackson County reported the second highest case rate of chlamydia (746 per 100,000).
- A larger proportion of reported chlamydia cases was diagnosed between 15 and 19 years old among black/African American females (37%) compared to white females (33%), black/African American males (24%) and white males (18%).

Hepatitis B

- The number of reported hepatitis B cases in Missouri increased by 9 cases from 2013 (597) to 2014 (606).
- St. Louis County had the greatest number of reported hepatitis B cases with 126 cases.
- Among females, the largest numbers of cases were 30-39 years of age, while among males the largest numbers of cases were among persons 50-59 years of age.

Hepatitis C

- The number of reported hepatitis C cases in Missouri increased by 1,403 cases from 2013 (4,881) to 2014 (6,284). This large increase in hepatitis C cases was likely the result of the expansion of screening recommendations in 2012, increased knowledge and awareness among individuals at risk, and increased testing.
- St. Louis City had the greatest number of reported hepatitis C cases with 902 cases.
- Among both males and females, the largest numbers of cases were 50-59 years of age.

HIV, STD, Hepatitis, and Tuberculosis (TB) disease Co-infections

- There were 555 persons living with HIV who were reported with an STD in 2014.
- Of the 592 early syphilis cases reported in 2014, 35% were among individuals living with HIV. Only 3% of gonorrhea cases and less than 1% of chlamydia cases reported in 2014 were among individuals living with HIV.
- St. Louis residents represented 73% of all living HIV cases reported with multiple STD co-morbidities in 2014, 73% of those with a chlamydia co-morbidity, 50% of those with an early syphilis co-morbidity, and 67% of those with a gonorrhea co-morbidity.
- Although blacks/African Americans represented only 46% of living HIV disease cases, they represented 63% of individuals diagnosed with an STD co-morbidity.
- Of the 11,984 individuals living with HIV disease, 83 were reported with a hepatitis co-morbidity in 2014.
- Three percent of chronic hepatitis B cases and 1% of chronic hepatitis C cases reported in 2014 were among persons living with HIV disease.
- Of the 11,984 individuals living with HIV disease, four were reported with TB disease in 2014.

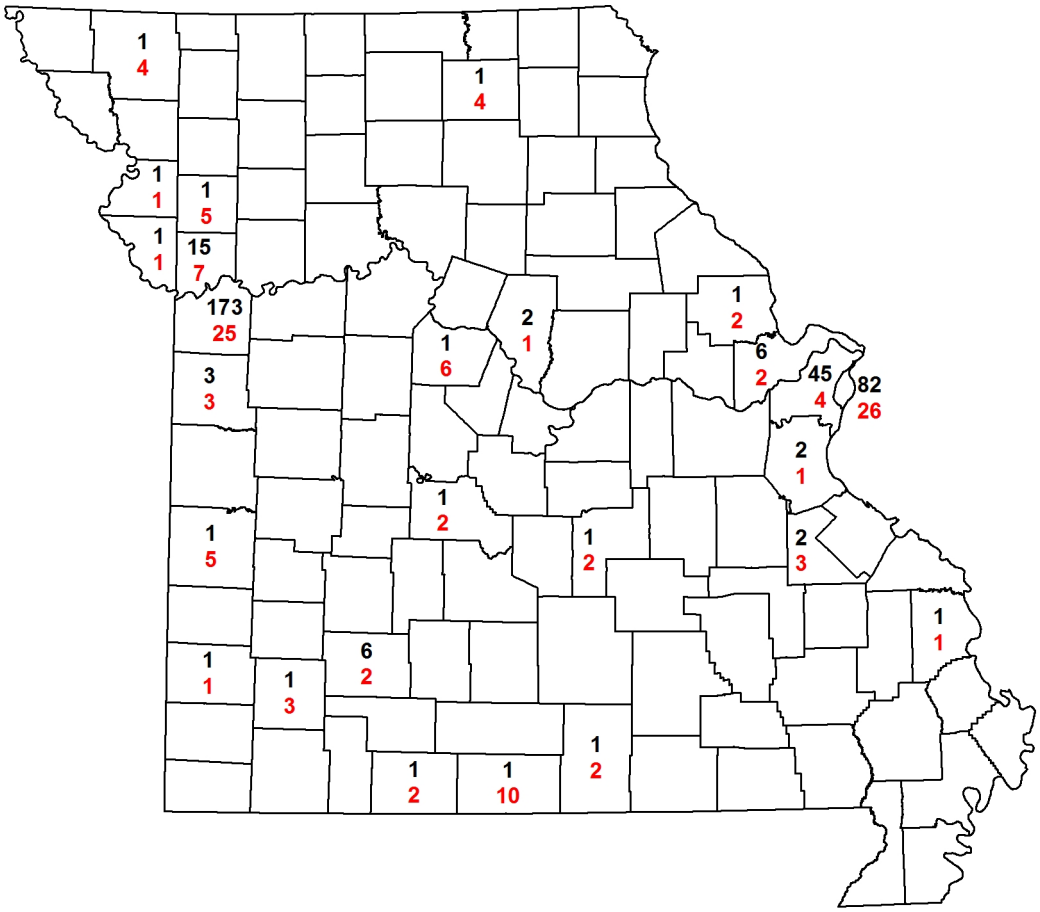
Table 28. Reported P&S syphilis cases and rates, by race*, by HIV care region, by sex, Missouri, 2014

	Male			Female			Total	
	Cases	%	Rate**	Cases	%	Rate**	Cases	Rate**
Missouri								
White	137	43.1%	5.7	6	17.6%	0.2	143	2.9
Black/African American	150	47.2%	45.2	25	73.5%	6.8	175	25.1
Other/Unknown*	31	9.7%	--	3	8.8%	--	34	--
Total Cases	**318**	100.0%	10.7	**34**	100.0%	1.1	**352**	5.8
St. Louis HIV Care Region								
White	52	43.0%	6.9	2	13.3%	0.3	54	3.5
Black/African American	57	47.1%	30.6	12	80.0%	5.4	69	16.9
Other/Unknown*	12	9.9%	--	1	6.7%	--	13	--
Total Cases	**121**	100.0%	11.9	**15**	100.0%	1.4	**136**	6.5
Kansas City HIV Care Region								
White	67	38.3%	15.9	3	16.7%	0.7	70	8.2
Black/African American	91	52.0%	106.1	13	72.2%	13.4	104	56.8
Other/Unknown*	17	9.7%	--	2	11.1%	--	19	--
Total Cases	**175**	100.0%	30.4	**18**	100.0%	3.0	**193**	16.3
Northwest HIV Care Region								
White	1	50.0%	1.0	0	--	0.0	1	0.5
Black/African American	1	50.0%	18.6	0	--	0.0	1	12.2
Other/Unknown*	0	0.0%	--	0	--	--	0	--
Total Cases	**2**	100.0%	1.8	**0**	--	0.0	**2**	0.9
Central HIV Care Region								
White	4	100.0%	1.0	1	100.0%	0.3	5	0.6
Black/African American	0	0.0%	0.0	0	0.0%	0.0	0	0.0
Other/Unknown*	0	0.0%	--	0	0.0%	--	0	--
Total Cases	**4**	100.0%	0.9	**1**	100.0%	0.2	**5**	0.6
Southwest HIV Care Region								
White	10	76.9%	2.0	0	--	0.0	10	1.0
Black/African American	1	7.7%	7.2	0	--	0.0	1	4.3
Other/Unknown*	2	15.4%	--	0	--	--	2	--
Total Cases	**13**	100.0%	2.3	**0**	--	0.0	**13**	1.1
Southeast HIV Care Region								
White	3	100.0%	1.4	0	--	0.0	3	0.7
Black/African American	0	0.0%	0.0	0	--	0.0	0	0.0
Other/Unknown*	0	0.0%	--	0	--	--	0	--
Total Cases	**3**	100.0%	1.2	**0**	--	0.0	**3**	0.6

*Includes cases identified with Hispanic ethnicity.
**Per 100,000 population based on 2013 MDHSS population estimates.

There were a total of 352 P&S syphilis cases reported in 2014 (Table 28). This number represented an increase from the 251 P&S syphilis cases reported in 2013. The majority of cases (90%) were reported among males. The rate of P&S syphilis cases among males was highest in the Kansas City HIV Care Region (30.4), followed by the St. Louis HIV Care Region (11.9). Fifty-five percent of all P&S syphilis cases were reported in the Kansas City HIV Care Region and 39% were reported in the St. Louis HIV Care Region. The rate of reported P&S syphilis cases was higher for blacks/African Americans compared to whites in all regions that reported P&S syphilis cases among blacks/African Americans.

Figure 30. Reported P&S syphilis cases* and rates, by county, Missouri, 2014**



*Case counts are in black.
**Case rates are in red, per 100,000 population based on 2013 MDHSS population estimates.

P&S syphilis cases were concentrated in metropolitan areas (Figure 30). There were 89 counties that did not report any P&S syphilis cases in 2014. St. Louis City had the highest rate of reported P&S syphilis cases at 26 per 100,000 persons. This rate means that for every 100,000 persons living in St. Louis City, there were 26 reported with P&S syphilis in 2014.

Figure 31. Reported P&S syphilis cases, by race and sex, by age group at diagnosis, Missouri, 2014

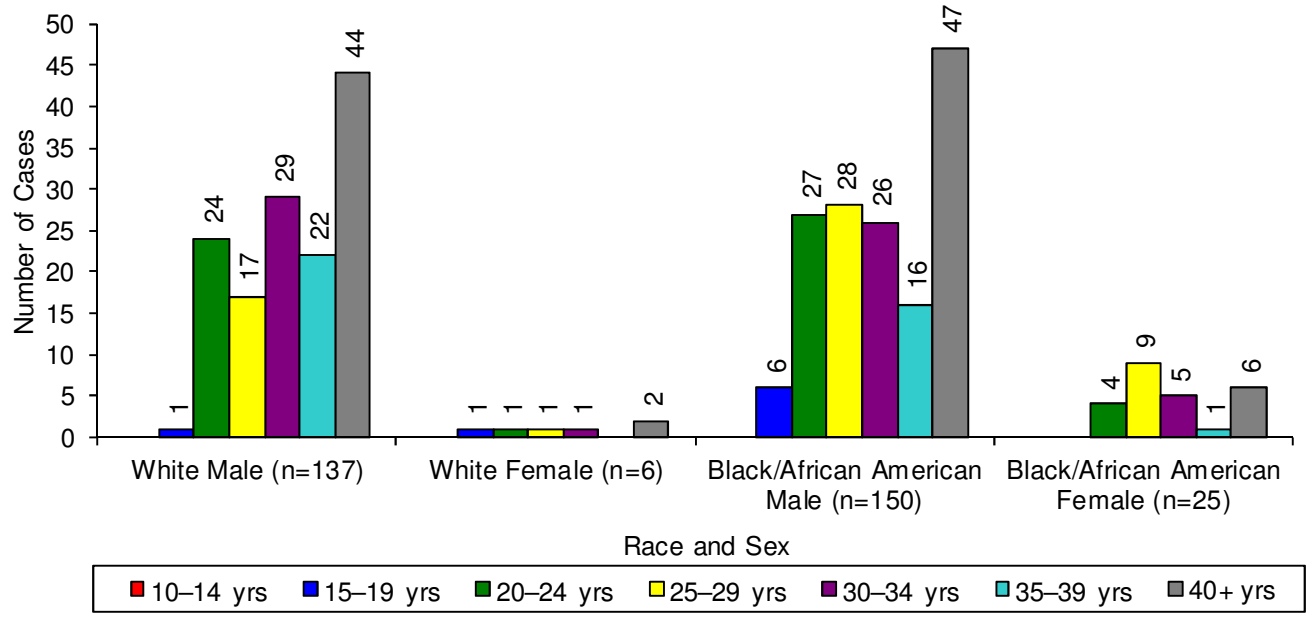
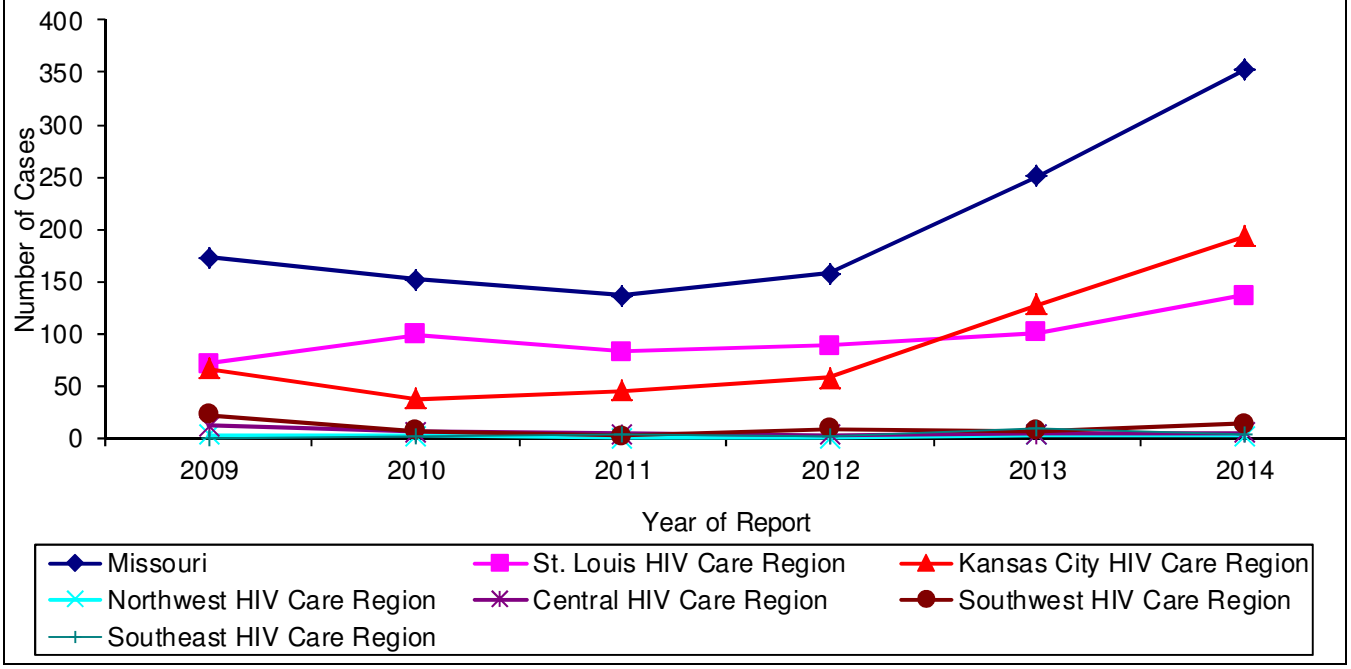


Figure 32. Reported P&S syphilis cases by HIV care region and year of report, Missouri, 2009-2014



The largest numbers of P&S syphilis cases were reported among black/African American males (150) and white males (137) (Figure 31). The number of reported cases increased from 2013 to 2014 among all other race/ethnicity and sex categories presented. There were differences in the distribution of reported cases by age at diagnosis among the race/ethnicity and sex categories. Among white males, black/African American males, and white females, the largest number of cases was reported among individuals 40 or more years of age at the time of diagnosis. Among black/African American females, cases were greatest among those 25-29 years of age .

The number of reported P&S syphilis cases in Missouri decreased from 2007 to 2011 and then increased through 2014 (Figure 32). The number of reported P&S syphilis cases increased from 2013 to 2014 in the St. Louis HIV Care Region (101 to 136), the Kansas City HIV Care Region (128 to 193), the Central HIV Care Region (4 to 5), and the Southwest HIV Care Region (7 to 13). The number of reported P&S syphilis cases decreased from 2013 to 2014 in the remaining HIV regions.

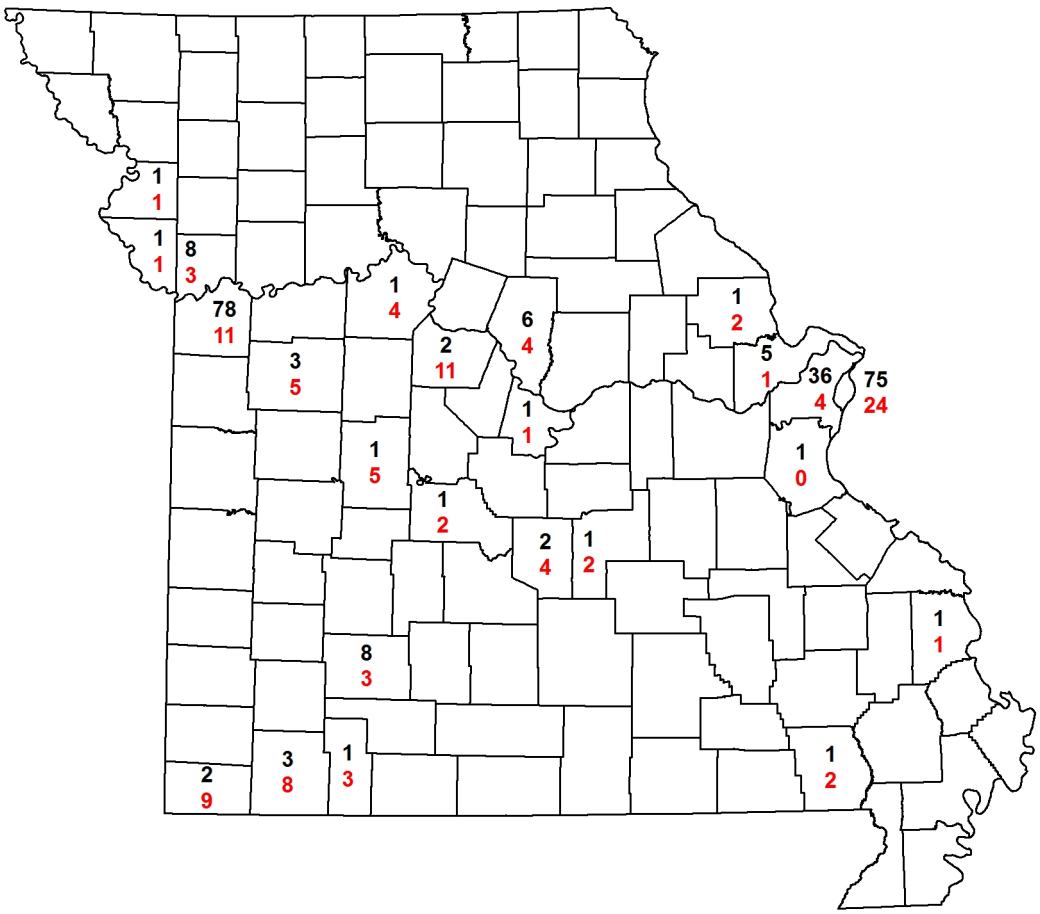
Table 29. Reported early latent syphilis cases and rates, by race*, by HIV care region, by sex, Missouri, 2014

	Male			Female			Total	
	Cases	%	Rate**	Cases	%	Rate**	Cases	Rate**
Missouri								
White	92	44.4%	3.9	12	36.4%	0.5	104	2.1
Black/African American	99	47.8%	29.9	16	48.5%	4.4	115	16.5
Other/Unknown*	16	7.7%	--	5	15.2%	--	21	--
Total Cases	**207**	100.0%	7.0	**33**	100.0%	1.1	**240**	4.0
St. Louis HIV Care Region								
White	43	38.7%	5.7	1	14.3%	0.1	44	2.9
Black/African American	60	54.1%	32.3	6	85.7%	2.7	66	16.1
Other/Unknown*	8	7.2%	--	0	0.0%	--	8	--
Total Cases	**111**	100.0%	10.9	**7**	100.0%	0.6	**118**	5.6
Kansas City HIV Care Region								
White	28	40.0%	6.7	9	52.9%	2.1	37	4.3
Black/African American	38	54.3%	44.3	6	35.3%	6.2	44	24.0
Other/Unknown*	4	5.7%	--	2	11.8%	--	6	--
Total Cases	**70**	100.0%	12.2	**17**	100.0%	2.8	**87**	7.4
Northwest HIV Care Region								
White	1	100.0%	1.0	0	--	0.0	1	0.5
Black/African American	0	0.0%	0.0	0	--	0.0	0	0.0
Other/Unknown*	0	0.0%	--	0	--	--	0	--
Total Cases	**1**	100.0%	0.9	**0**	--	0.0	**1**	0.4
Central HIV Care Region								
White	7	87.5%	1.8	1	14.3%	0.3	8	1.0
Black/African American	1	12.5%	4.2	4	57.1%	20.3	5	11.6
Other/Unknown*	0	0.0%	--	2	28.6%	--	2	--
Total Cases	**8**	100.0%	1.8	**7**	100.0%	1.6	**15**	1.7
Southwest HIV Care Region								
White	11	73.3%	2.2	1	50.0%	0.2	12	1.2
Black/African American	0	0.0%	0.0	0	0.0%	0.0	0	0.0
Other/Unknown*	4	26.7%	--	1	50.0%	--	5	--
Total Cases	**15**	100.0%	2.6	**2**	100.0%	0.3	**17**	1.5
Southeast HIV Care Region								
White	2	100.0%	0.9	0	--	0.0	2	0.4
Black/African American	0	0.0%	0.0	0	--	0.0	0	0.0
Other/Unknown*	0	0.0%	--	0	--	--	0	--
Total Cases	**2**	**100.0%**	**0.8**	**0**	**--**	0.0	**2**	0.4

*Includes cases identified with Hispanic ethnicity.
**Per 100,000 population based on 2013 MDHSS population estimates.

There were a total of 240 early latent syphilis cases reported in 2014, compared to 220 cases reported in 2013 (Table 29). The majority of cases (86%) were reported among males. The rate of early latent syphilis cases among all cases was highest in the Kansas City HIV Care Region (7.4), followed by the St. Louis HIV Care Region (5.6). Forty-nine percent (49%) of all early latent syphilis cases were reported in the St. Louis HIV Care Region and 36% were reported in the Kansas City HIV Care Region. The Southwest HIV Care Region had the third largest number of early latent syphilis cases reported. The rate of reported early latent syphilis cases was higher for blacks/African Americans compared to whites in all regions that reported cases among blacks/African Americans.

Figure 33. Reported early latent syphilis cases* and rates, by county, Missouri, 2014**



*Case counts are in black.
**Case rates are in red, per 100,000 population based on 2013 MDHSS population estimates.

Early latent syphilis cases were concentrated in metropolitan areas (Figure 33). There were 91 counties that did not report any early latent syphilis cases in 2014. Jackson County had the highest number of reported early latent syphilis cases (78).

Figure 34. Reported early latent syphilis cases, by race and sex, by age group at diagnosis, Missouri, 2014

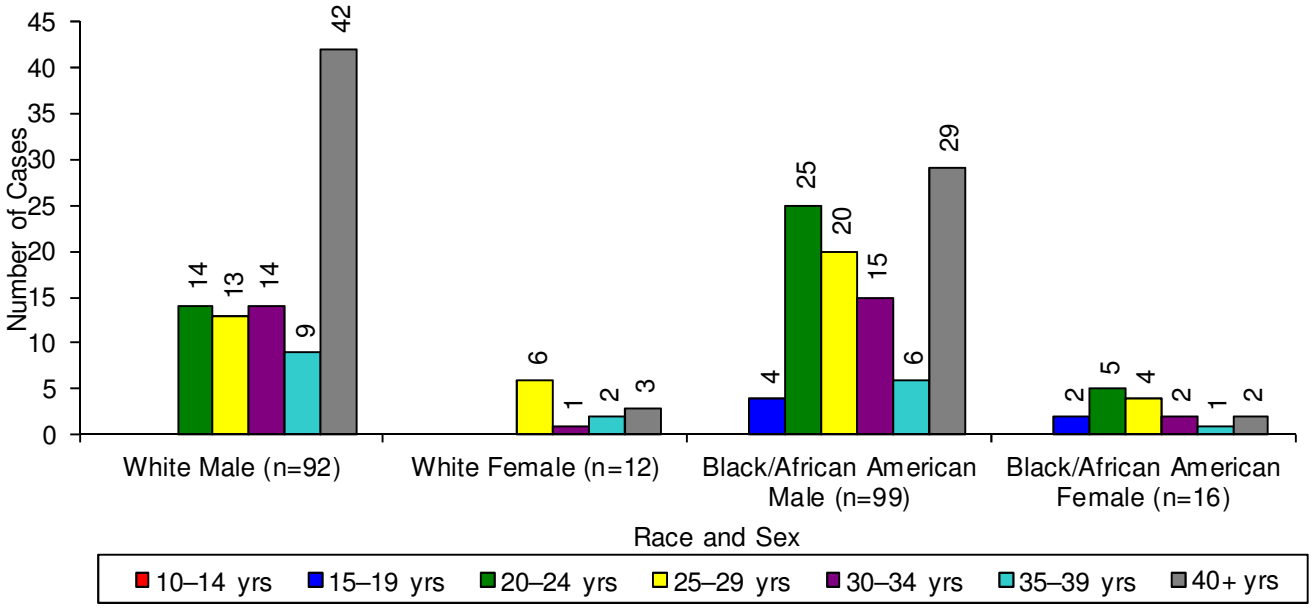
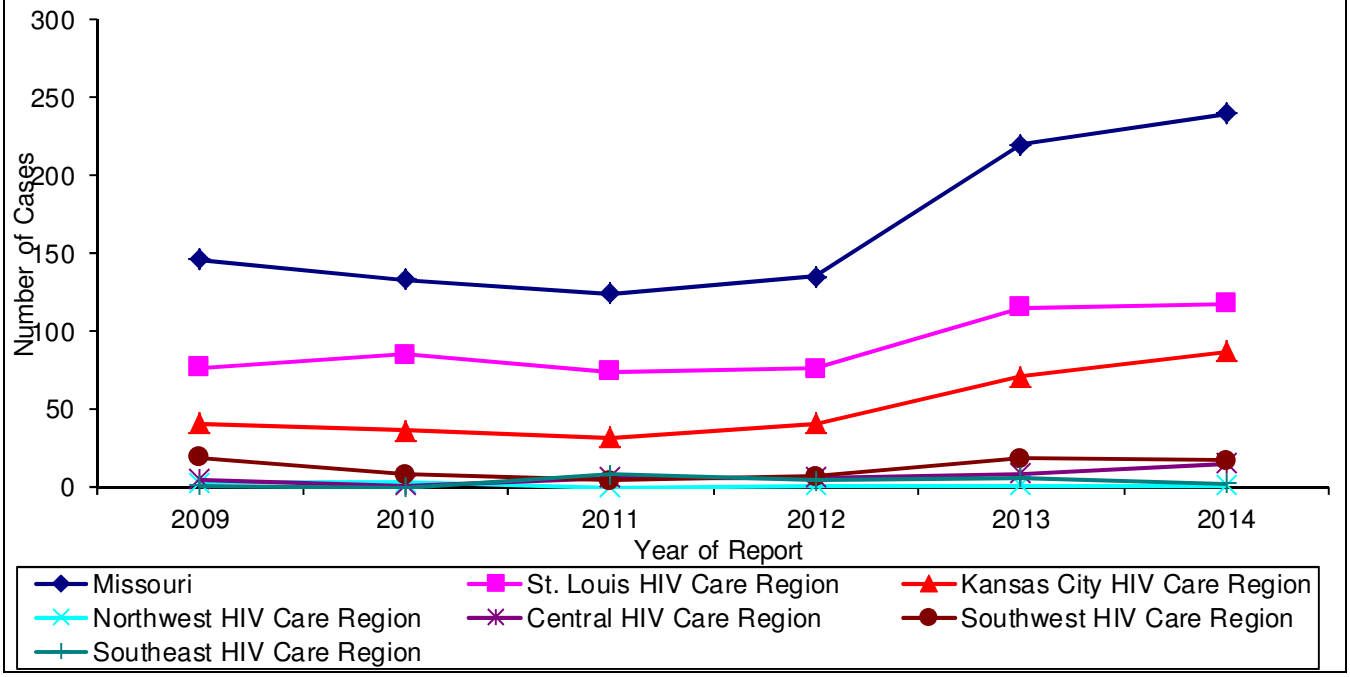


Figure 35. Reported early latent syphilis cases by HIV care region and year of report, Missouri, 2009-2014



The largest numbers of early latent syphilis cases were reported among black/African American males (99) and white males (92) (Figure 34). The number of reported cases increased from 2013 to 2014 among white males and white females. The number of reported cases decreased among black/African American males and remained the same among black/African American females. Among white males and black/African American males, the largest number of cases was reported among individuals 40 or more years of age at the time of diagnosis.

The number of reported early latent syphilis cases in Missouri fluctuated from 2009 to 2014 (Figure 35). The number of reported early latent syphilis cases generally increased from 2007 to 2010, decreased through 2011, and then increased through 2014 in the St. Louis HIV Care Region. In the Kansas City HIV Care Region, reported early latent syphilis cases decreased from 2008 to 2011, then increased through 2014. The number of reported early latent syphilis cases decreased or remained the same from 2013 to 2014 in the Northwest HIV Care Region, Southwest HIV Care Region, and Southeast HIV Care Region.

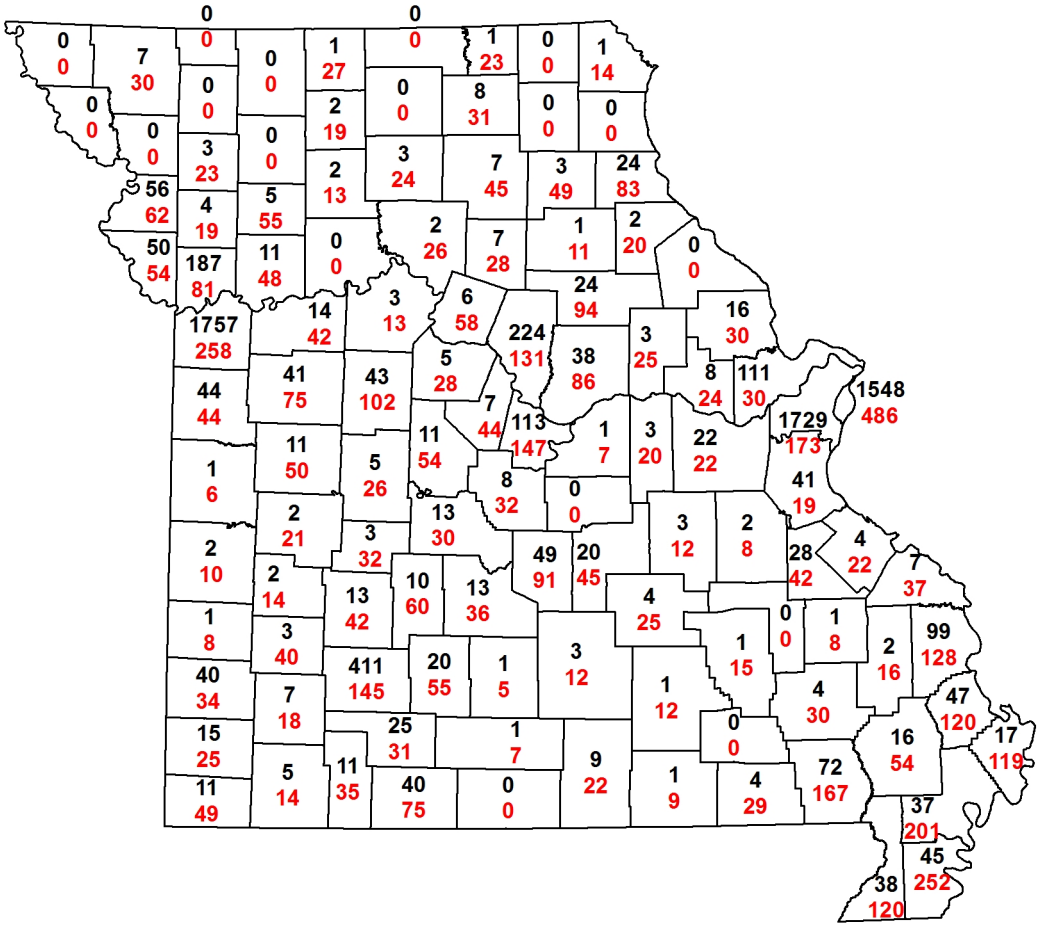
Table 30. Reported gonorrhea cases and rates, by race*, by HIV care region, by sex, Missouri, 2014

	Male			Female			Total	
	Cases	%	Rate**	Cases	%	Rate**	Cases	Rate**
Missouri								
White	933	24.8%	39.1	996	27.5%	40.3	1,929	39.7
Black/African American	2,308	61.3%	696.0	2,157	59.6%	588.5	4,465	639.6
Other/Unknown*	526	14.0%	--	467	12.9%	--	993	--
Total Cases	**3,767**	100.0%	127.1	**3,620**	100.0%	117.5	**7,387**	122.2
St. Louis HIV Care Region								
White	211	11.4%	28.1	132	8.1%	16.8	343	22.3
Black/African American	1,377	74.4%	740.2	1,279	78.8%	574.4	2,656	649.9
Other/Unknown*	264	14.3%	--	212	13.1%	--	476	--
Total Cases	**1,852**	100.0%	182.4	**1,623**	100.0%	149.2	**3,475**	165.2
Kansas City HIV Care Region								
White	296	29.0%	70.5	284	27.1%	64.7	580	67.5
Black/African American	600	58.9%	699.7	658	62.8%	676.5	1,258	687.4
Other/Unknown*	123	12.1%	--	106	10.1%	--	229	--
Total Cases	**1,019**	100.0%	177.1	**1,048**	100.0%	173.1	**2,067**	175.0
Northwest HIV Care Region								
White	22	57.9%	21.7	29	76.3%	28.1	51	24.9
Black/African American	9	23.7%	167.3	5	13.2%	179.2	14	171.4
Other/Unknown*	7	18.4%	--	4	10.5%	--	11	--
Total Cases	**38**	100.0%	33.4	**38**	100.0%	33.8	**76**	33.6
Central HIV Care Region								
White	115	39.7%	29.9	180	54.7%	45.8	295	37.9
Black/African American	121	41.7%	513.0	90	27.4%	457.5	211	487.7
Other/Unknown*	54	18.6%	--	59	17.9%	--	113	--
Total Cases	**290**	100.0%	66.4	**329**	100.0%	74.6	**619**	70.5
Southwest HIV Care Region								
White	227	62.0%	44.5	268	75.1%	51.1	495	47.8
Black/African American	84	23.0%	602.4	35	9.8%	372.7	119	510.0
Other/Unknown*	55	15.0%	--	54	15.1%	--	109	--
Total Cases	**366**	100.0%	63.7	**357**	100.0%	61.4	**723**	62.6
Southeast HIV Care Region								
White	62	30.7%	28.1	103	45.8%	45.5	165	36.9
Black/African American	117	57.9%	691.1	90	40.0%	611.5	207	654.1
Other/Unknown*	23	11.4%	--	32	14.2%	--	55	--
Total Cases	**202**	100.0%	81.3	**225**	100.0%	89.5	**427**	85.4

*Includes cases identified with Hispanic ethnicity.
**Per 100,000 population based on 2013 MDHSS population estimates.

There were a total of 7,387 gonorrhea cases reported in 2014 (Table 30). This count represented a 2% decrease in the number of reported cases compared to 2013. The majority of cases (51%) were reported among males. The proportion of gonorrhea cases reported among males varied by HIV care region. The Central and Southeast HIV Care Regions reported the lowest proportion of male cases (47%), followed by the Kansas City (49%), Northwest (50%), Southwest (51%), and St. Louis (53%) HIV Care Regions. The rate of gonorrhea cases among males was highest in the St. Louis HIV Care Region (182.4), followed by the Kansas City HIV Care Region (177.1). Forty-seven percent (47%) of all gonorrhea cases were reported in the St. Louis HIV Care Region and 28% were reported in the Kansas City HIV Care Region. The Southwest HIV Care Region had the third largest number of gonorrhea cases reported. The rate of reported gonorrhea cases was higher for blacks/African Americans compared to whites in all regions.

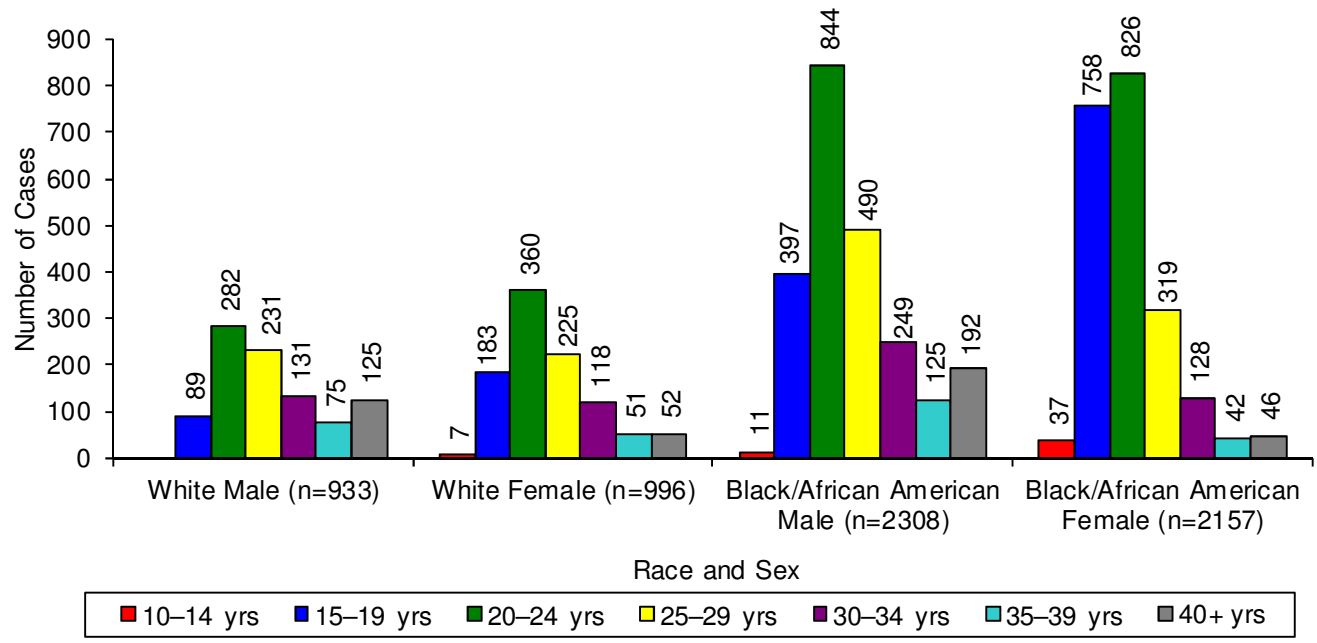
Figure 36. Reported gonorrhea cases* and rates, by county, Missouri, 2014**



*Case counts are in black.
**Case rates are in red, per 100,000 population based on 2013 MDHSS population estimates.

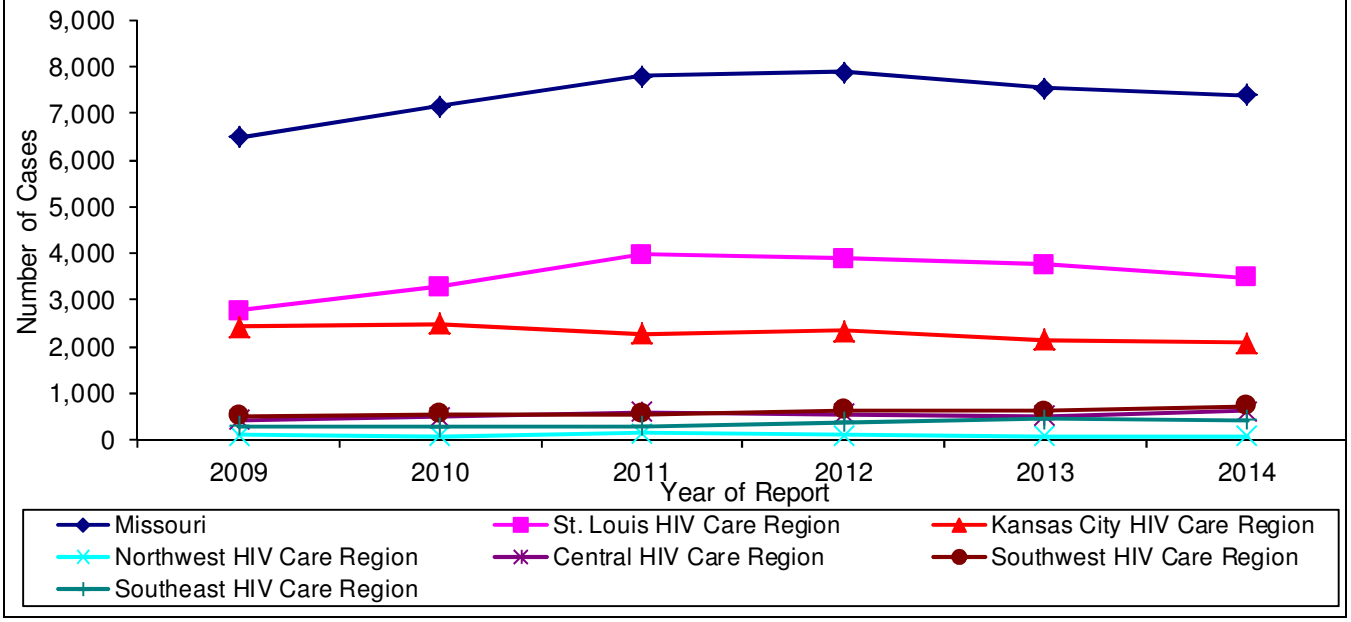
Gonorrhea cases reported in St. Louis City, St. Louis County, and Jackson County represented 68% of all reported cases in 2014 (Figure 36). There were 18 counties that did not report any gonorrhea cases in 2014. St. Louis City had the highest rate of reported gonorrhea cases at 486 per 100,000 persons. This rate means that for every 100,000 persons living in St. Louis City, there were 486 reported with gonorrhea in 2014.

Figure 37. Reported gonorrhea cases, by race and sex, by age group at diagnosis, Missouri, 2014



Note: Totals include persons diagnosed at <10 years of age or whose age at diagnosis is unknown.

Figure 38. Reported gonorrhea cases by HIV care region and year of report, Missouri, 2009-2014



The largest numbers of gonorrhea cases were reported among black/African American females (2,157) and black/African American males (2,308) (Figure 37). The number of reported cases decreased from 2013 to 2014 among all race/ethnicity and sex categories presented except for white males which increased from 776 to 933 cases. Among all race/ethnicity and sex categories presented, the largest number of cases was reported among individuals 20-24 years of age at the time of diagnosis. A greater proportion of gonorrhea cases among white males (13%) and black/African American males (8%) was diagnosed among individuals 40 or more years of age compared to white females and black/African American females presented.

The number of reported gonorrhea cases in Missouri increased from 2009 through 2012, and decreased in 2013 and 2014 (Figure 38). The numbers of reported gonorrhea cases were lower in 2014 than 2013 in all HIV care regions except the Central and Southwest HIV Care Regions. The number of reported gonorrhea cases was higher in 2014 compared to 2009 in all HIV care regions, except for the Kansas City and Northwest HIV Care Regions.

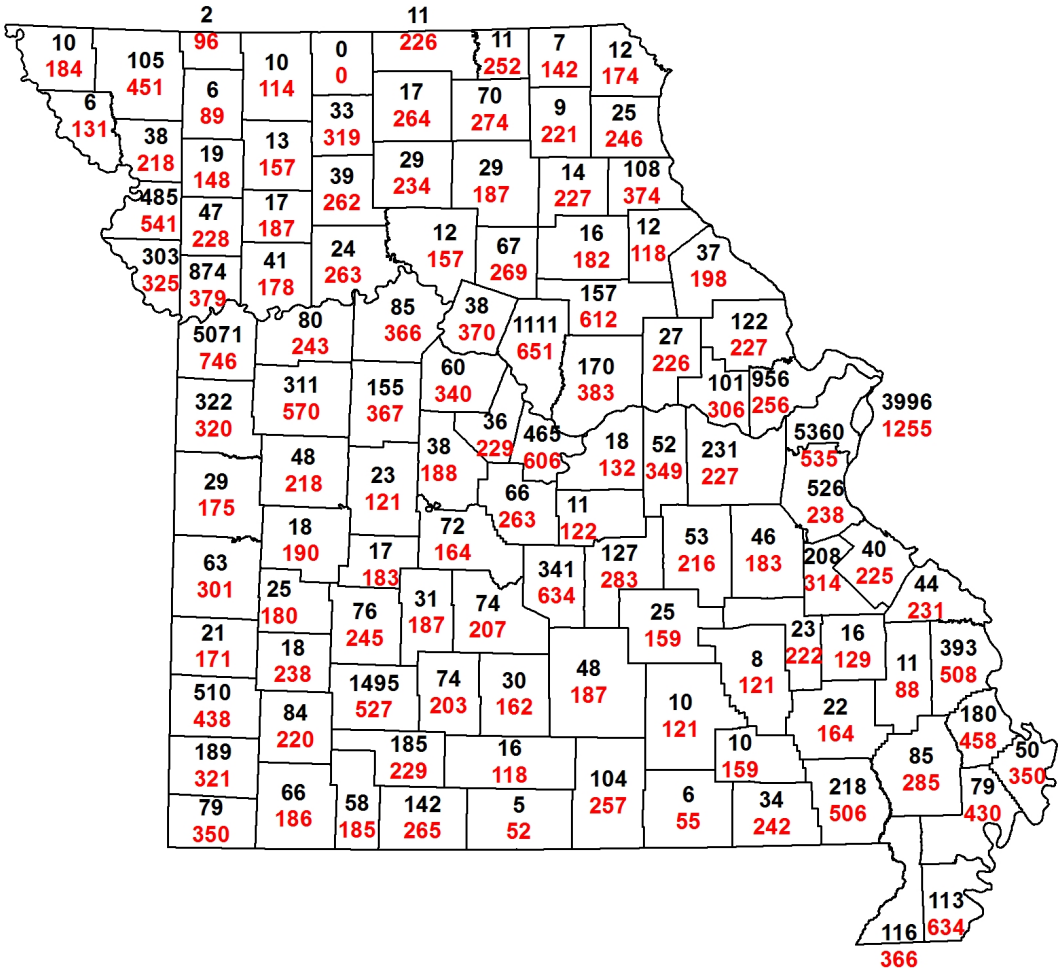
Table 31. Reported chlamydia cases and rates, by race*, by HIV care region, by sex, Missouri, 2014

	Male			Female			Total	
	Cases	%	Rate**	Cases	%	Rate**	Cases	Rate**
Missouri								
White	2,889	34.3%	121.0	8,086	41.4%	327.1	10,975	225.8
Black/African American	3,895	46.2%	1174.6	7,191	36.8%	1962.0	11,086	1588.0
Other/Unknown*	1,648	19.5%	--	4,272	21.9%	--	5,920	--
Total Cases	**8,432**	100.0%	284.5	**19,549**	100.0%	634.7	**27,981**	462.9
St. Louis HIV Care Region								
White	622	17.9%	82.8	1,609	20.6%	204.6	2,231	145.1
Black/African American	2,157	62.1%	1159.5	4,232	54.1%	1900.6	6,389	1563.3
Other/Unknown*	696	20.0%	--	1,976	25.3%	--	2,672	--
Total Cases	**3,475**	100.0%	342.3	**7,817**	100.0%	718.4	**11,292**	536.8
Kansas City HIV Care Region								
White	579	27.5%	137.8	1,619	35.0%	369.0	2,198	255.9
Black/African American	1,092	51.8%	1273.5	2,007	43.3%	2063.4	3,099	1693.3
Other/Unknown*	436	20.7%	--	1,005	21.7%	--	1,441	--
Total Cases	**2,107**	100.0%	366.2	**4,631**	100.0%	764.7	**6,738**	570.5
Northwest HIV Care Region								
White	136	64.5%	134.3	441	74.0%	427.0	577	282.1
Black/African American	42	19.9%	780.8	63	10.6%	2258.1	105	1285.3
Other/Unknown*	33	15.6%	--	92	15.4%	--	125	--
Total Cases	**211**	100.0%	185.4	**596**	100.0%	530.1	**807**	356.7
Central HIV Care Region								
White	520	51.4%	135.3	1,543	63.1%	392.5	2,063	265.4
Black/African American	288	28.5%	1221.1	454	18.6%	2307.6	742	1715.2
Other/Unknown*	204	20.2%	--	449	18.4%	--	653	--
Total Cases	**1,012**	100.0%	231.7	**2,446**	100.0%	554.4	**3,458**	393.8
Southwest HIV Care Region								
White	830	70.8%	162.6	2,088	75.5%	398.3	2,918	282.0
Black/African American	153	13.0%	1097.2	138	5.0%	1469.6	291	1247.1
Other/Unknown*	190	16.2%	--	538	19.5%	--	728	--
Total Cases	**1,173**	100.0%	204.3	**2,764**	100.0%	475.5	**3,937**	340.7
Southeast HIV Care Region								
White	202	44.5%	91.6	786	60.7%	347.4	988	221.1
Black/African American	163	35.9%	962.8	297	22.9%	2017.9	460	1453.5
Other/Unknown*	89	19.6%	--	212	16.4%	--	301	--
Total Cases	**454**	100.0%	182.7	**1,295**	100.0%	514.9	**1,749**	349.8

*Includes cases identified with Hispanic ethnicity.
**Per 100,000 population based on 2013 MDHSS population estimates.

There were a total of 27,981 chlamydia cases reported in 2014 (Table 31). The majority of cases (70%) were reported among females. The proportion of chlamydia cases reported among females varied by HIV care region. The Southeast and Northwest HIV Care Regions reported the highest proportion of female cases (74%), followed by the Central (71%), Southwest (70%), and both Kansas City (69%) and St. Louis (69%) HIV Care Regions. The rate of chlamydia cases among females was highest in the Kansas City HIV Care Region (764.7), followed by the St. Louis HIV Care Region (718.4). Forty percent (40%) of all chlamydia cases were reported in the St. Louis HIV Care Region and 24% were reported in the Kansas City HIV Care Region. The Southwest HIV Region had the third largest number of chlamydia cases reported. The rate of reported chlamydia cases was higher for blacks/African Americans compared to whites in all regions.

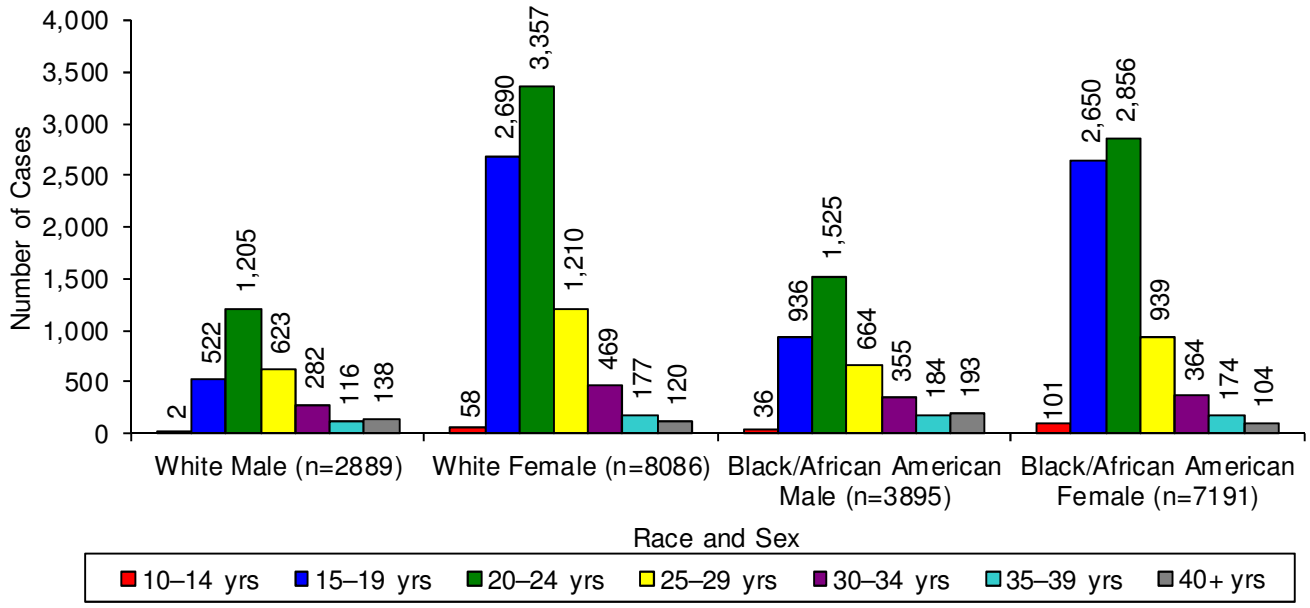
Figure 39. Reported chlamydia cases* and rates, by county, Missouri, 2014**



*Case counts are in black.
**Case rates are in red, per 100,000 population based on 2013 MDHSS population estimates.

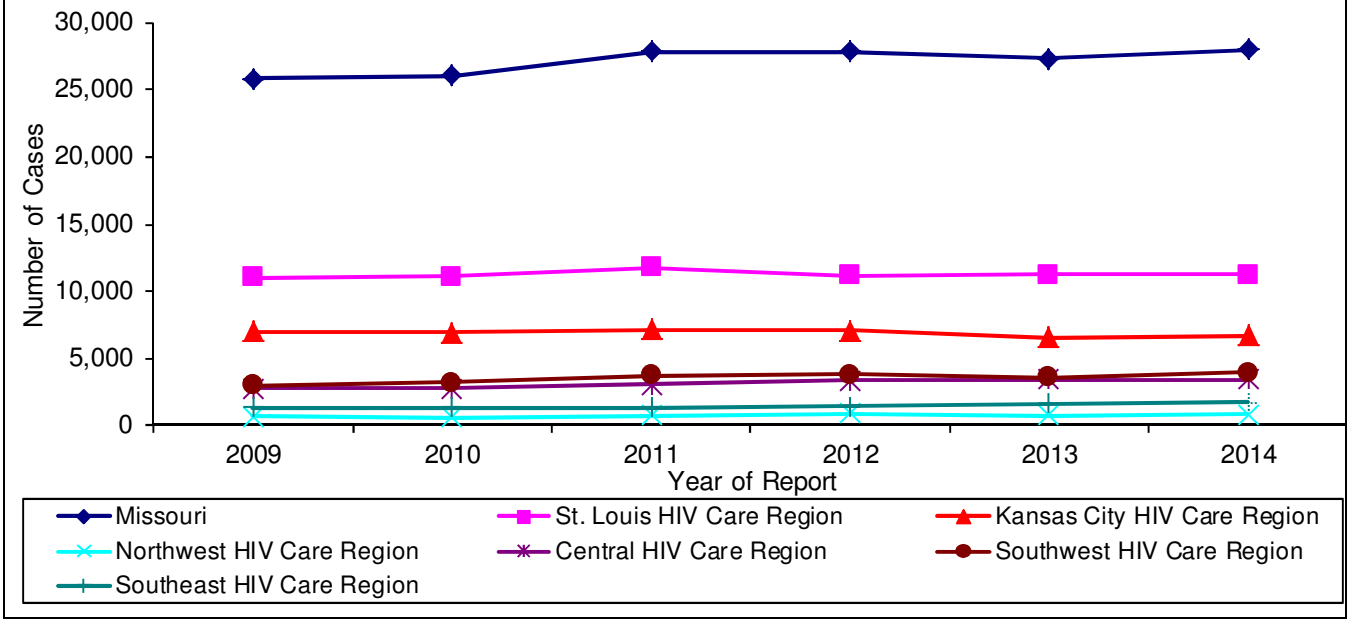
Chlamydia cases reported in St. Louis City, St. Louis County, and Jackson County represented 52% of all reported cases in 2014 (Figure 39), although these areas represent only 33% of Missouri's general population. All counties with one exception, Mercer County, reported more than one chlamydia case in 2014. St. Louis City had the highest rate of reported chlamydia cases at 1,255 per 100,000 persons. This rate means that for every 100,000 persons living in St. Louis City, there were 1,255 reported with chlamydia in 2014.

Figure 40. Reported chlamydia cases, by race and sex, by age group at diagnosis, Missouri, 2014



Note: Totals include persons diagnosed at <10 years of age or whose age at diagnosis is unknown.

Figure 41. Reported chlamydia cases by HIV care region and year of report, Missouri, 2009-2014



The largest numbers of chlamydia cases were reported among white females (8,086) and black/African American females (7,191) (Figure 40). The number of reported cases decreased from 2013 to 2014 among black/African American males and black/African American females. The number of reported cases increased from 2013 to 2014 among white males and white females. The total number of reported chlamydia cases in Missouri increased slightly from 2013 to 2014. Among all race/ethnicity and sex categories presented the largest number of cases was reported among individuals 20-24 years of age at the time of diagnosis.

The number of reported chlamydia cases in Missouri increased from 2009 to 2011, then decreased slightly through 2013, then increased through 2014 (Figure 41). All HIV care regions reported an increased number of chlamydia cases from 2013 to 2014.

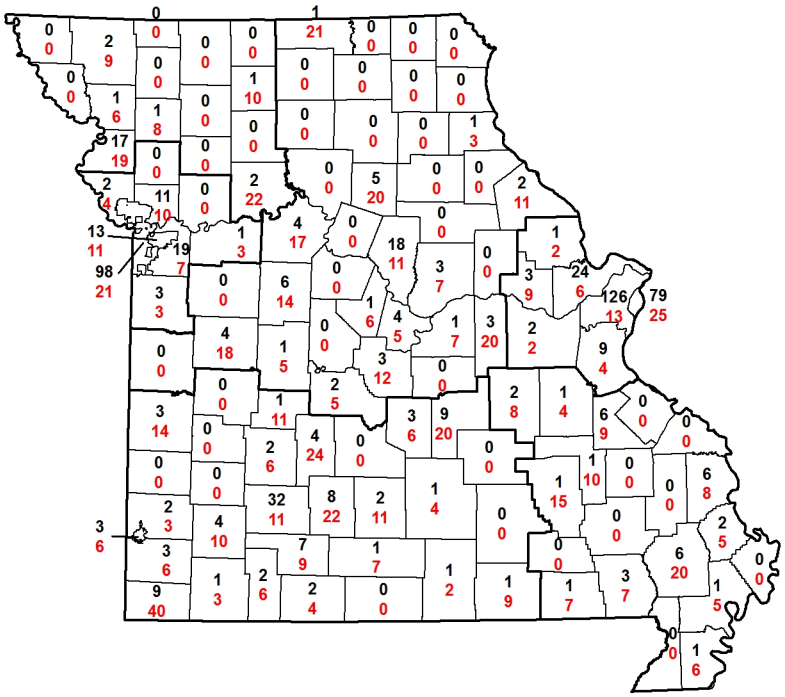
Table 32. Reported hepatitis B† cases and rates, by race*, by HIV care region, by sex, Missouri, 2014

	Male			Female			Total	
	Cases	%	Rate**	Cases	%	Rate**	Cases	Rate**
Missouri								
White	96	35.6%	4.0	71	21.1%	2.9	167	3.4
Black	58	21.5%	17.5	64	19.0%	17.5	122	17.5
Other/Unknown*	116	43.0%	--	201	59.8%	--	317	--
Total Cases	**270**	100.0%	9.1	**336**	100.0%	10.9	**606**	10.0
St. Louis HIV Care Region								
White	29	30.2%	3.9	18	12.2%	2.3	47	3.1
Black	22	22.9%	11.8	42	28.4%	18.9	64	15.7
Other/Unknown*	45	46.9%	--	88	59.5%	--	133	--
Total Cases	**96**	100.0%	9.5	**148**	100.0%	13.6	**244**	11.6
Kansas City HIV Care Region								
White	10	14.3%	2.4	11	14.3%	2.5	21	2.4
Black	24	34.3%	28.0	16	20.8%	16.4	40	21.9
Other/Unknown*	36	51.4%	--	50	64.9%	--	86	--
Total Cases	**70**	100.0%	12.2	**77**	100.0%	12.7	**147**	12.4
Northwest HIV Care Region								
White	8	66.7%	7.9	5	41.7%	4.8	13	6.4
Black	0	0.0%	0.0	0	0.0%	0.0	0	0.0
Other/Unknown*	4	33.3%	--	7	58.3%	--	11	--
Total Cases	**12**	100.0%	10.5	**12**	100.0%	10.7	**24**	10.6
Central HIV Care Region								
White	12	42.9%	3.1	8	25.8%	2.0	20	2.6
Black	5	17.9%	21.2	4	12.9%	20.3	9	20.8
Other/Unknown*	11	39.3%	--	19	61.3%	--	30	--
Total Cases	**28**	100.0%	6.4	**31**	100.0%	7.0	**59**	6.7
Southwest HIV Care Region								
White	26	57.8%	5.1	22	39.3%	4.2	48	4.6
Black	5	11.1%	35.9	0	0.0%	0.0	5	21.4
Other/Unknown*	14	31.1%	--	34	60.7%	--	48	--
Total Cases	**45**	100.0%	7.8	**56**	100.0%	9.6	**101**	8.7
Southeast HIV Care Region								
White	11	57.9%	5.0	7	58.3%	3.1	18	4.0
Black	2	10.5%	11.8	2	16.7%	13.6	4	12.6
Other/Unknown*	6	31.6%	--	3	25.0%	--	9	--
Total Cases	**19**	100.0%	7.6	**12**	100.0%	4.8	**31**	6.2

†Includes confirmed and probable case classifications of hepatitis B acute, hepatitis B chronic, hepatitis B prenatal, and hepatitis B perinatal.
*Includes cases identified with Hispanic ethnicity.
**Per 100,000 population based on 2013 MDHSS population estimates.

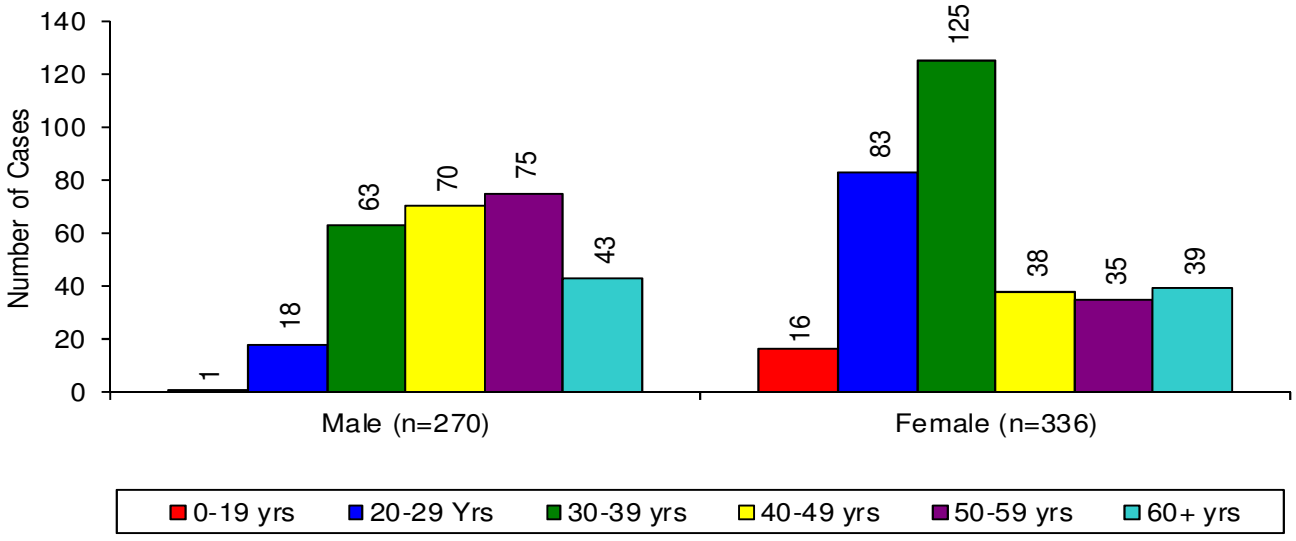
Of the 606 hepatitis B cases reported in 2014, 31 were reported with acute hepatitis B, 431 with chronic hepatitis B, 142 with prenatal hepatitis B, and 2 perinatal hepatitis B. The number of reported hepatitis B cases in Missouri increased by 9 cases from 2013 (597) to 2014 (606) (Table 32). Overall, the rate of reported hepatitis B cases was highest in the Kansas City HIV Care Region (12.4 per 100,000). Overall, 55% of reported cases were females, although variation in the ratio of male to female cases existed among the HIV care regions. The large proportion of cases with unknown race/ethnicity information makes it difficult to interpret differences in reported infections by race/ethnicity.

Figure 42. Reported hepatitis B cases* and rates, by jurisdiction, Missouri, 2014**



*Case counts are in black.
**Case rates are in red, per 100,000 population based on 2013 MDHSS population estimates.

Figure 43. Reported hepatitis B cases, by sex and by age group at diagnosis, Missouri, 2014



Note: Totals include persons whose age at diagnosis is unknown.

St. Louis County had the greatest number of reported hepatitis B cases (126), followed by Kansas City (98) (Figure 42). There were 48 jurisdictions that did not report any hepatitis B cases in 2014.

There were differences in the age distribution of reported hepatitis B cases by sex (Figure 43). Among males, the largest numbers of reported cases were among persons 50-59 years of age. The largest numbers of cases were 30-39 years of age at diagnosis among females.

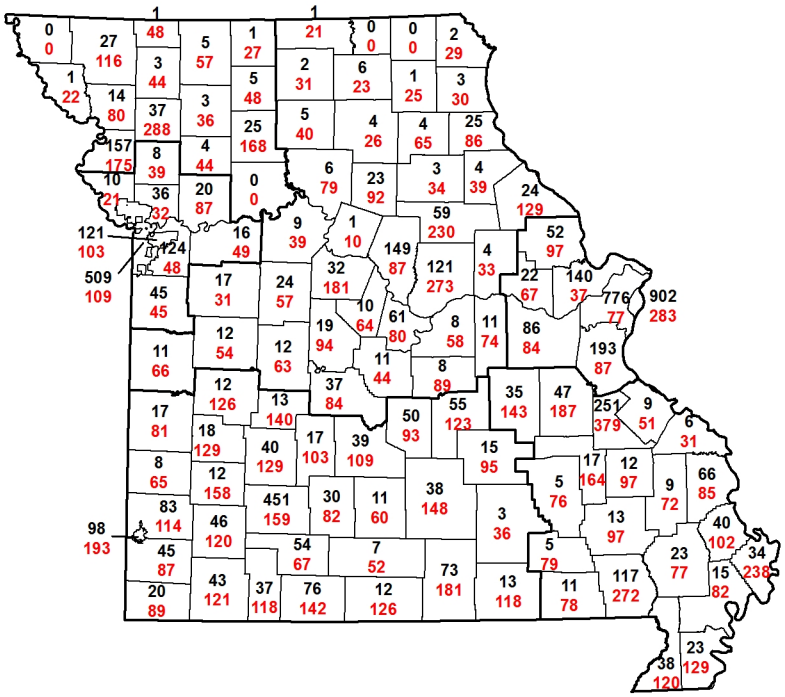
Table 33. Reported hepatitis C† cases and rates, by race*, by HIV care region, by sex, Missouri, 2014

	Male			Female			Total‡	
	Cases	%	Rate**	Cases	%	Rate**	Cases	Rate**
Missouri								
White	1,594	40.9%	66.7	1,090	45.8%	44.1	2,684	55.2
Black	502	12.9%	151.4	196	8.2%	53.5	698	100.0
Other/Unknown*	1,802	46.2%	--	1,096	46.0%	--	2,902	--
Total Cases	**3,898**	100.0%	131.5	**2,382**	100.0%	77.3	**6,284**	104.0
St. Louis HIV Care Region								
White	348	25.8%	46.3	284	34.5%	36.1	632	41.1
Black	341	25.3%	183.3	145	17.6%	65.1	486	118.9
Other/Unknown*	658	48.8%	--	394	47.9%	--	1053	--
Total Cases	**1,347**	100.0%	132.7	**823**	100.0%	75.6	**2,171**	103.2
Kansas City HIV Care Region								
White	150	26.4%	35.7	89	27.7%	20.3	239	27.8
Black	55	9.7%	64.1	31	9.7%	31.9	86	47.0
Other/Unknown*	363	63.9%	--	201	62.6%	--	564	--
Total Cases	**568**	100.0%	98.7	**321**	100.0%	53.0	**889**	75.3
Northwest HIV Care Region								
White	121	61.1%	119.5	52	61.2%	50.4	173	84.6
Black	8	4.0%	148.7	1	1.2%	35.8	9	110.2
Other/Unknown*	69	34.8%	--	32	37.6%	--	101	--
Total Cases	**198**	100.0%	174.0	**85**	100.0%	75.6	**283**	125.1
Central HIV Care Region								
White	277	57.6%	72.1	142	57.3%	36.1	419	53.9
Black	33	6.9%	139.9	8	3.2%	40.7	41	94.8
Other/Unknown*	171	35.6%	--	98	39.5%	--	269	--
Total Cases	**481**	100.0%	110.1	**248**	100.0%	56.2	**729**	83.0
Southwest HIV Care Region								
White	446	54.4%	87.4	365	59.4%	69.6	811	78.4
Black	21	2.6%	150.6	5	0.8%	53.2	26	111.4
Other/Unknown*	353	43.0%	--	244	39.7%	--	599	--
Total Cases	**820**	100.0%	142.8	**614**	100.0%	105.6	**1,436**	124.3
Southeast HIV Care Region								
White	252	52.1%	114.2	158	54.3%	69.8	410	91.7
Black	44	9.1%	259.9	6	2.1%	40.8	50	158.0
Other/Unknown*	188	38.8%	--	127	43.6%	--	316	--
Total Cases	**484**	100.0%	194.8	**291**	100.0%	115.7	**776**	155.2

†Includes confirmed and probable case classifications of hepatitis C acute and hepatitis C chronic.
*Includes cases identified with Hispanic ethnicity.
‡Includes persons with unknown or other sex.
**Per 100,000 population based on 2013 MDHSS population estimates.

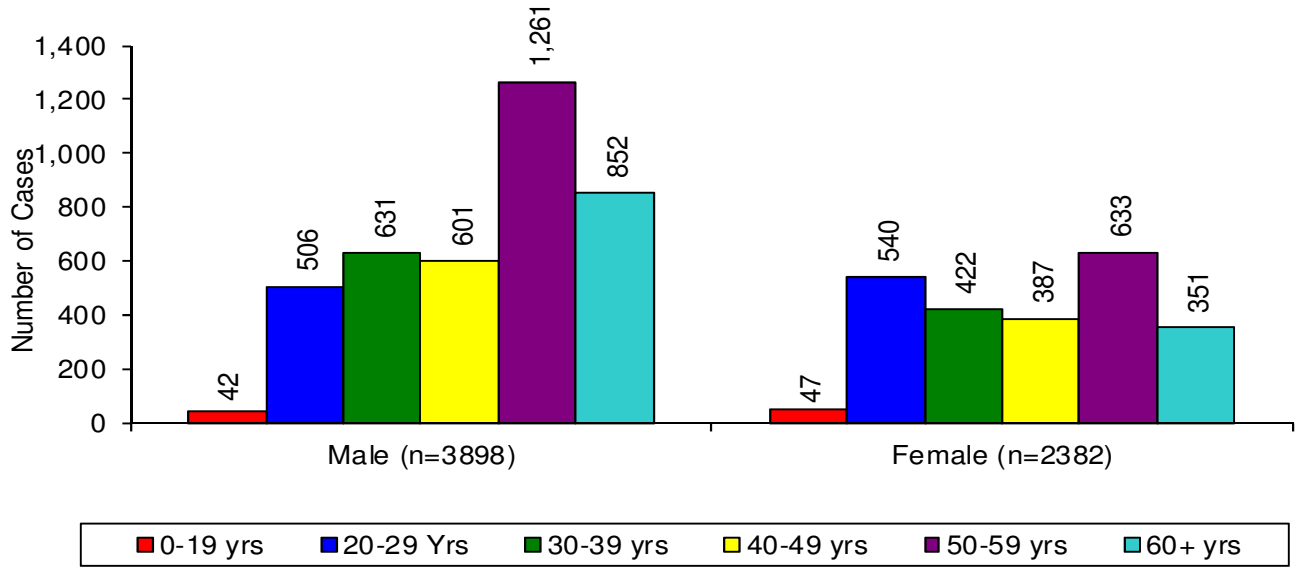
Of the 6,284 hepatitis C cases reported in 2014, six were reported with acute hepatitis C and 6,278 with chronic hepatitis C (Table 33). The number of reported hepatitis C cases in Missouri increased by 1,403 cases from 2013 (4,881) to 2014 (6,284). This large increase in hepatitis C cases was likely the result of the expansion of screening recommendations in 2012, increased knowledge and awareness among individuals at risk, and increased testing. Overall, the rate of reported hepatitis C cases was highest in the Southeast HIV Care Region (155.2 per 100,000). In Missouri overall, 62% of the reported cases were males. The large proportion of cases with unknown race/ethnicity information makes it difficult to analyze.

Figure 44. Reported hepatitis C cases* and rates, by jurisdiction, Missouri, 2014**



*Case counts are in black.
**Case rates are in red, per 100,000 population based on 2013 MDHSS population estimates.

Figure 45. Reported hepatitis C cases, by sex and by age group at diagnosis, Missouri, 2014



Note: Totals include persons whose age at diagnosis is unknown.

St. Louis City had the greatest number of reported hepatitis C cases with 902 cases (Figure 44). The second largest number of hepatitis C cases occurred in St. Louis County (776). There were four jurisdictions which did not report a hepatitis C case in 2014.

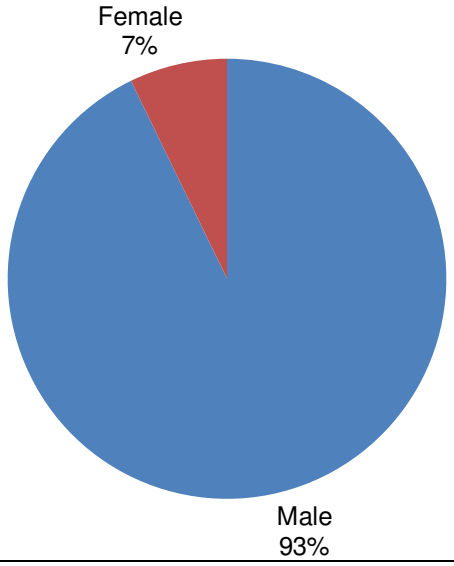
Among both males and females, the largest numbers of reported hepatitis C cases were between 50-59 years (Figure 45).

Table 34. HIV and STD co-infections, Missouri, 2014

Co-infection	Diagnosed with HIV Prior to 2014		Diagnosed with HIV in 2014		Total	
	N	%	N	%	N	%
Chlamydia	109	24.0%	21	21.0%	130	23.4%
Gonorrhea	128	28.1%	22	22.0%	150	27.0%
Syphilis*	141	31.0%	26	26.0%	167	30.1%
Chlamydia and Gonorrhea	47	10.3%	21	21.0%	68	12.3%
Chlamydia and Syphilis*	8	1.8%	4	4.0%	12	2.2%
Gonorrhea and Syphilis*	13	2.9%	4	4.0%	17	3.1%
Chlamydia, Gonorrhea, and Syphilis*	9	2.0%	2	2.0%	11	2.0%
Total	**455**	**100.0%**	**100**	**100.0%**	**555**	**100.0%**

*Only includes diagnoses of primary, secondary, and early latent syphilis.

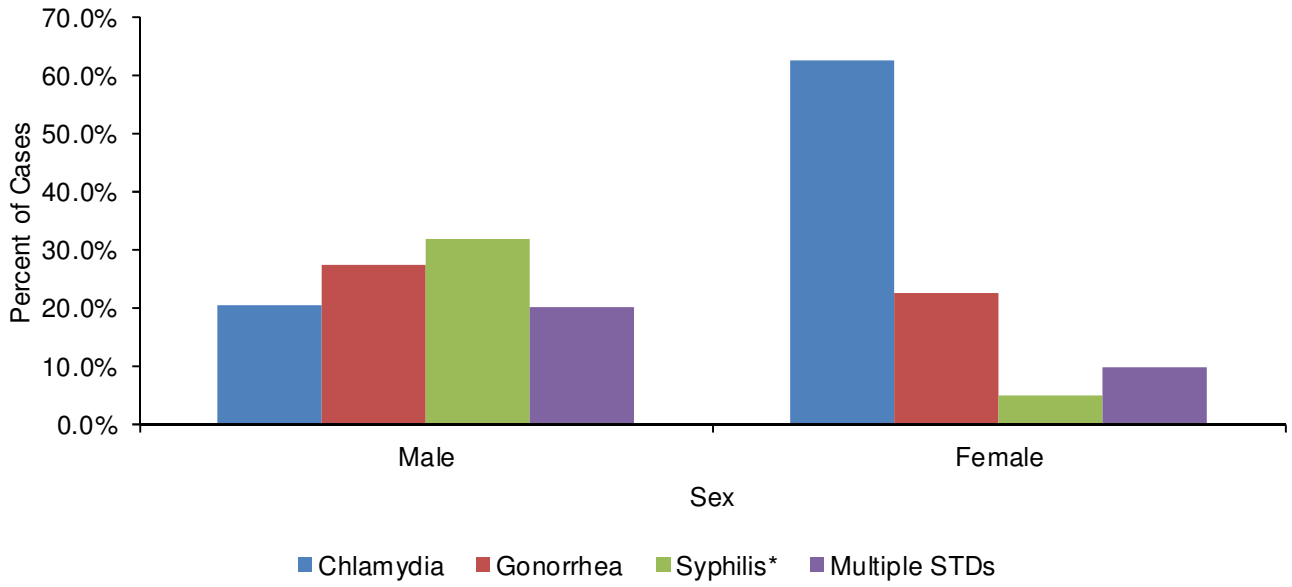
Figure 46. HIV and STD co-infections by sex, Missouri, 2014



Of the 11,984 individuals living with HIV disease, 555 were reported with an STD co-morbidity in 2014 (Table 34). The majority of those reported with an STD co-morbidity were diagnosed with HIV prior to 2014 (82%). There were not significant differences in the type of STD co-morbidity diagnosed based on when the individual was diagnosed with HIV. The largest numbers of HIV co-morbidities were with early syphilis and gonorrhea alone. The proportion of reported STD infections in 2014 that were living with HIV varied by infection type. Of the 592 early syphilis cases reported in 2014, 35% were among individuals living with HIV. Only 3% of gonorrhea cases and less than 1% of chlamydia cases reported in 2014 were among individuals living with HIV.

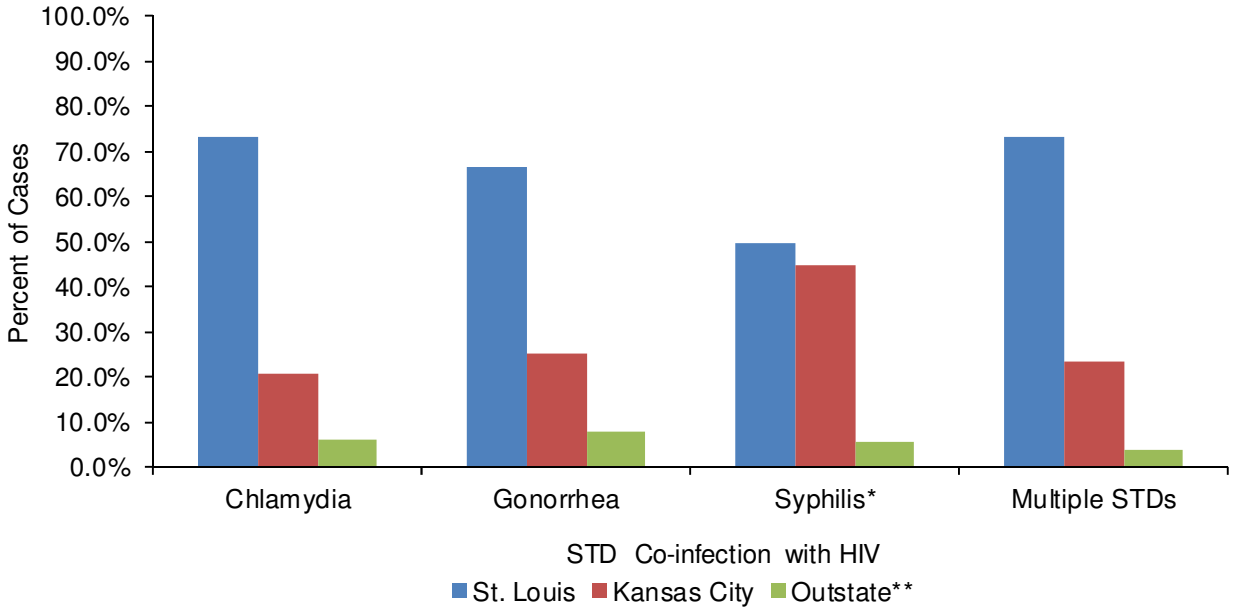
Of the 555 reported STD co-morbidity cases, 93% were among males (Figure 46). Males represented a higher proportion of the STD co-morbidity cases (93%) compared to all males living with HIV disease (83%).

Figure 47. HIV and STD co-infections by sex and type of co-infection, Missouri, 2014



*Only includes diagnoses of primary, secondary, and early latent syphilis.

Figure 48. HIV and STD co-infections by HIV care region of STD diagnosis, Missouri, 2014

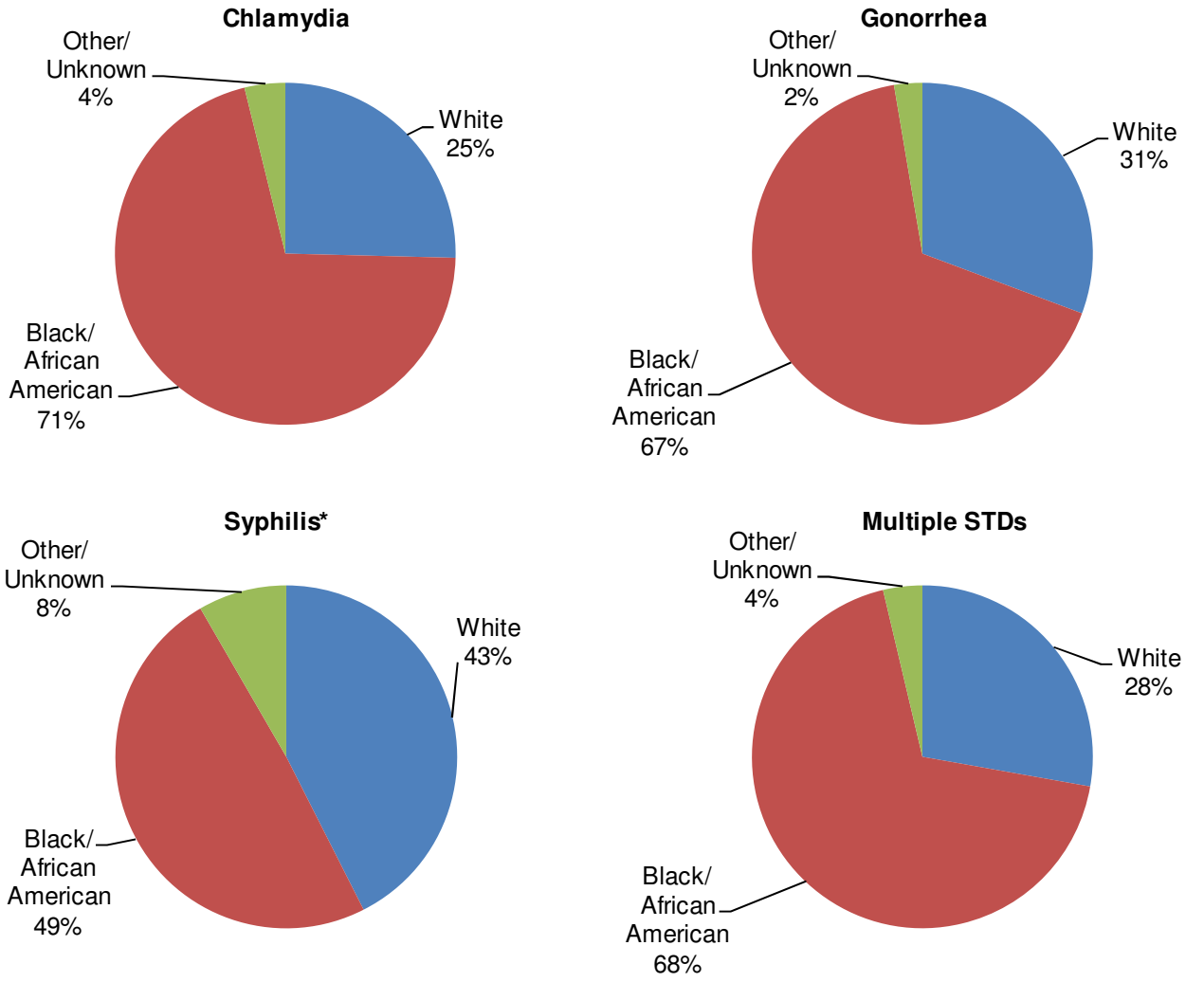


*Only includes diagnoses of primary, secondary, and early latent syphilis.
**Includes those diagnosed in the Central, Northwest, Southeast, and Southwest HIV Care Regions.
Note: Percentages may not total due to rounding.

There were differences in the distribution of STD co-morbidity types by sex (Figure 47). Among females living with HIV that were reported with an STD co-morbidity in 2014, 63% were co-infected with chlamydia, 23% with gonorrhea, 10% with multiple STDs, and 5% with early syphilis. In contrast, among males living with HIV reported with an STD co-morbidity in 2014, only 20% were co-infected with chlamydia, 27% with gonorrhea, 20% with multiple STDs, and 32% with early syphilis. Due to rounding, the proportion may not total to 100%.

Among all HIV and STD co-morbidity types, the greatest proportion of cases was diagnosed in the St. Louis HIV Care Region (Figure 48). Among those living with HIV that were reported with chlamydia in 2014, 73% were residents of the St. Louis HIV Care Region when diagnosed with chlamydia. The St. Louis HIV Care Region represented 67% of all living HIV cases reported with gonorrhea in 2014, 50% of those with early syphilis, and 73% of those with multiple STD co-morbidities. In St. Louis and Outstate, STD co-morbidity with HIV was highest for gonorrhea, while in Kansas City, STD co-morbidity with HIV was highest for early syphilis.

Figure 49. HIV and STD co-infections by race/ethnicity and type of co-infection, Missouri, 2014



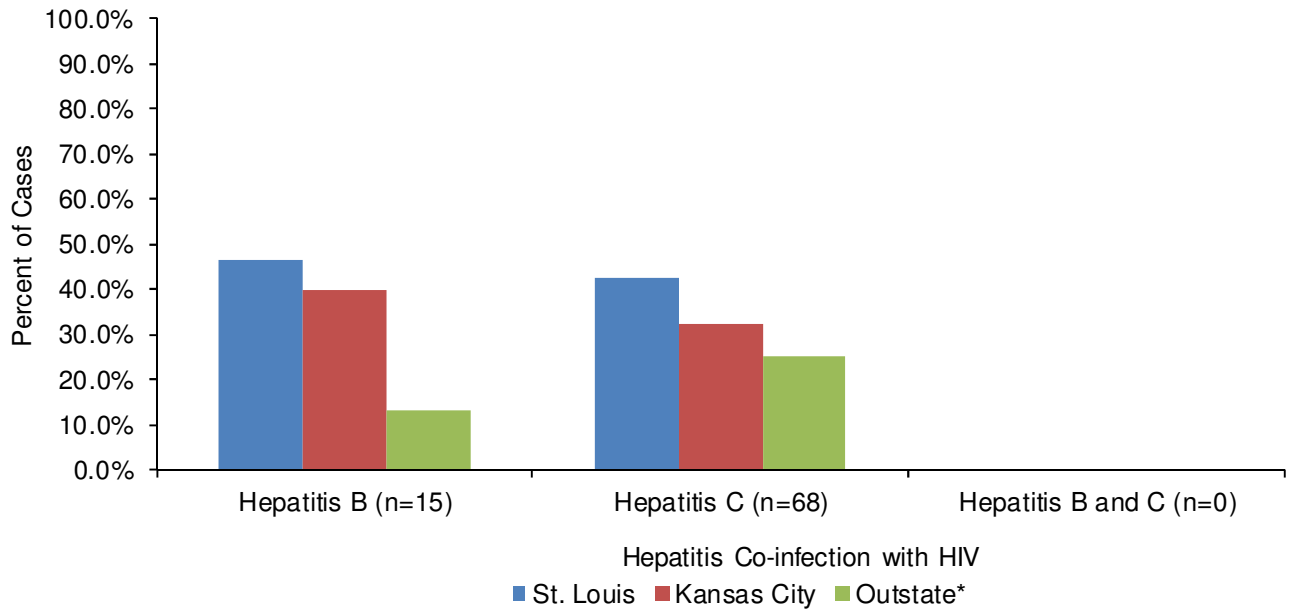
*Only includes diagnoses of primary, secondary, and early latent syphilis.

There were differences in the distribution of race/ethnicity among HIV and STD co-morbidities depending on the type of STD diagnosed (Figure 49). The proportion of co-morbidity cases attributed to blacks/African Americans was highest among those co-infected with chlamydia (71%), followed by those co-infected with multiple STDs (68%). In all instances, minorities were disproportionately represented in the proportion of co-morbidities that were reported. Although blacks/African Americans represented only 46% of living HIV disease cases, they represented 63% of individuals diagnosed with an STD co-morbidity.

Table 35. Reported hepatitis B and C infections among persons living with HIV disease, Missouri, 2014

Co-infection	Diagnosed with HIV Prior to 2014 N	Diagnosed with HIV in 2014 N	Total Co-infections N
Acute Hepatitis B	0	0	0
Chronic Hepatitis B	15	0	15
Prenatal Hepatitis B	0	0	0
Perinatal Hepatitis B	0	0	0
Acute Hepatitis C	0	0	0
Chronic Hepatitis C	61	7	68
Chronic Hepatitis B & C	0	0	0
Total	**76**	**7**	**83**

Figure 50. HIV and hepatitis co-infections by HIV care region of hepatitis diagnosis, Missouri, 2014

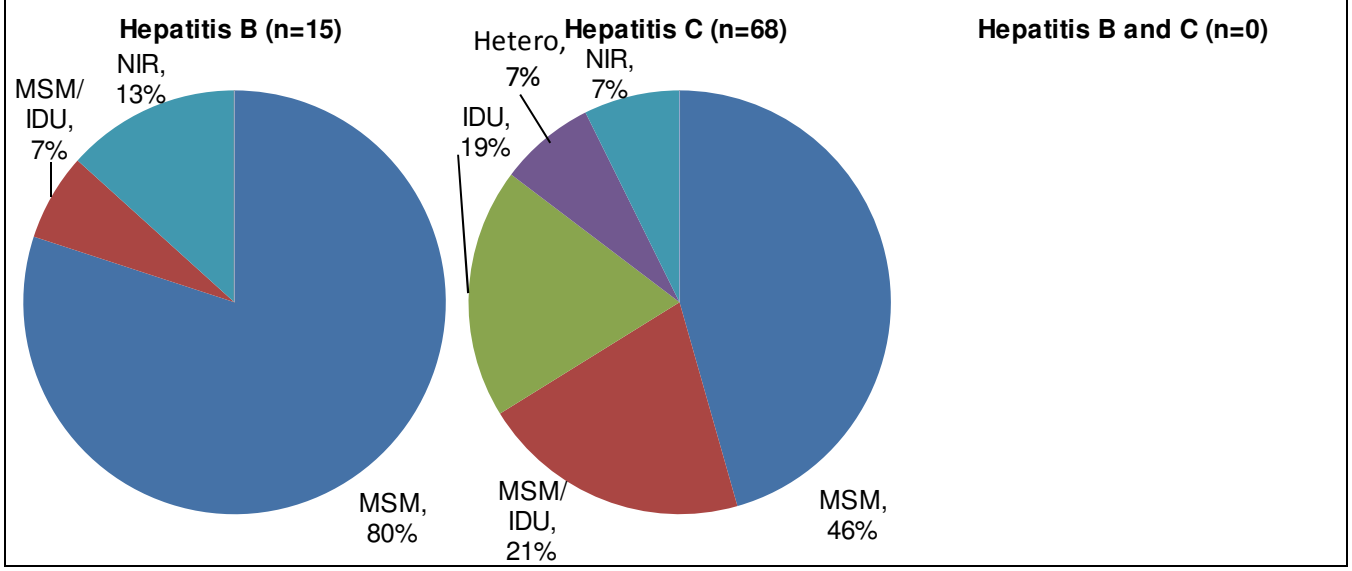


*Includes those diagnosed in the Central, Northwest, Southeast, and Southwest HIV Care Regions.

Of the 11,984 individuals living with HIV disease, 83 were reported with a hepatitis co-morbidity in 2014 (Table 35). The majority of those reported with a hepatitis co-morbidity were diagnosed with HIV prior to 2014 (92%). The largest number of HIV co-morbidities was with chronic hepatitis C. The proportion of reported hepatitis infections in 2014 that were living with HIV varied by infection type. Of the 431 chronic hepatitis B cases reported in 2014, 3% were among individuals living with HIV. Only 1% of chronic hepatitis C cases reported in 2014 were among individuals living with HIV.

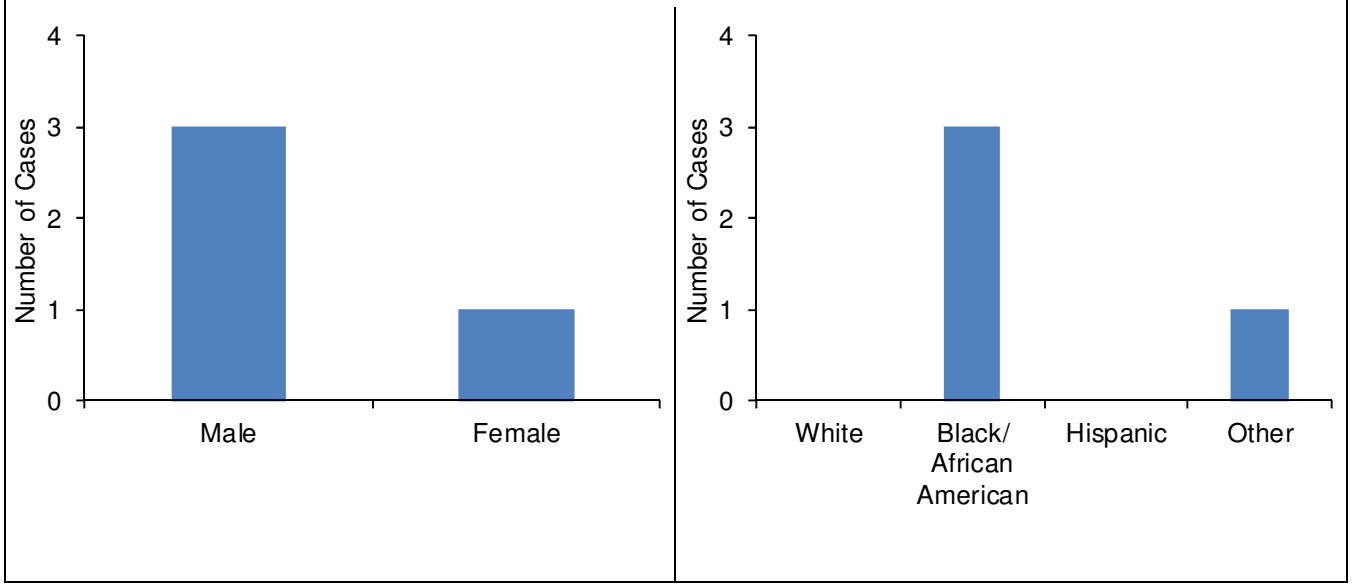
Among persons living with HIV disease that were reported with only a hepatitis B infection in 2014, the greatest proportion were residing in the St. Louis HIV Care Region (47%) at the time of the hepatitis diagnosis (Figure 50). Among HIV-positive persons reported with only a hepatitis C infection in 2014, the greatest proportion were residing in the St. Louis HIV Care Region (43%) at the time of the hepatitis diagnosis.

Figure 51. HIV and hepatitis co-infections by HIV exposure category and type of co-infection, Missouri, 2014



Among persons living with HIV disease and reported with only a hepatitis B infection in 2014, 80% were among MSM (Figure 51). Among hepatitis C co-morbidity cases, 46% were attributed to MSM, and 21% were attributed to both IDU and MSM.

Figure 52. HIV and TB disease co-infections by sex, by race, Missouri, 2014



Among the 11,984 persons living with HIV disease, four were reported to be diagnosed with TB disease in 2014. Of those co-infected with TB disease in 2014, two of the four co-infections were among persons diagnosed with HIV disease during 2014. Co-infections were reported among persons <13, 25-34, 45-54, and 55-64 years of age at the end of 2014. Three of the co-infections were among males, and three of the co-infections were among blacks/African Americans (Figure 52).

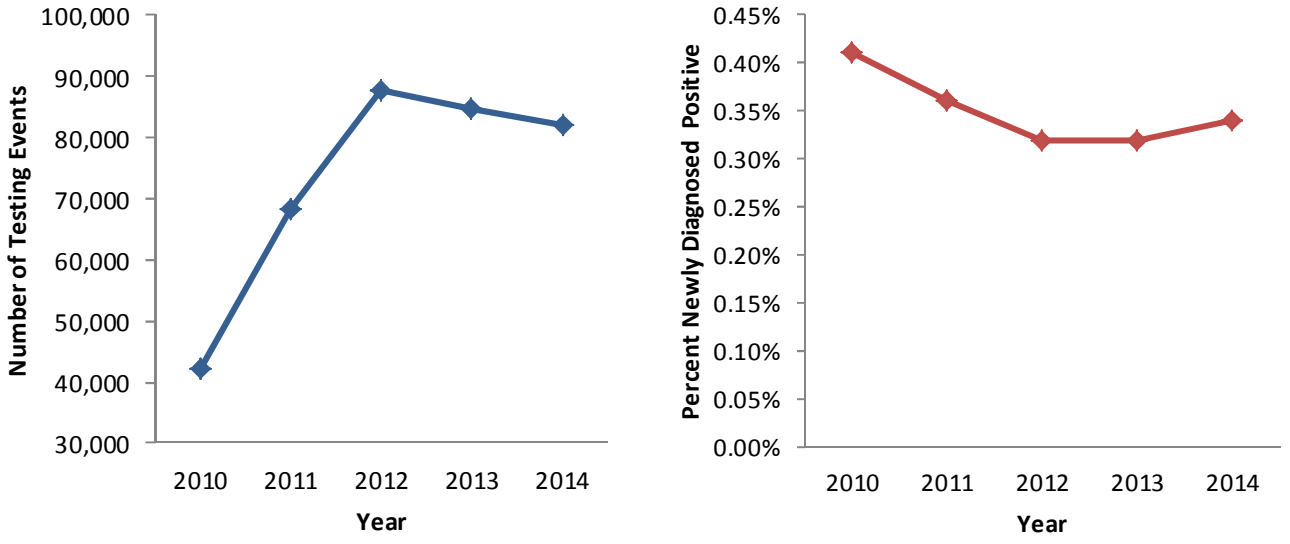
Table 36. Number of HIV testing events* and newly diagnosed positives among HIV testing sites, by current gender, race/ ethnicity, age, exposure category***, and test method¥, Missouri, 2014**

	Testing Events*	Newly Diagnosed Positives**	
	N	N	%
Total	82,005	276	0.3%
Current Gender			
Male	37,677	220	0.6%
Female	42,256	50	0.1%
Transgender	48	1	2.1%
Unknown	2,024	5	0.3%
Race/Ethnicity			
White	31,245	105	0.3%
Black	40,715	151	0.4%
Hispanic	4,480	7	0.2%
Other/Unknown	5,565	13	0.2%
Age at Test			
<13	43	2	4.7%
13-18	5,698	10	0.2%
19-24	25,032	92	0.4%
25-44	37,636	130	0.4%
45-64	12,087	37	0.3%
65+	1,427	5	0.4%
Unknown	82	0	0.0%
Exposure Category* **			
MSM	2,708	143	5.3%
MSM/IDU	93	14	15.1%
IDU	544	6	1.1%
High Risk Heterosexual Contact†	471	17	3.6%
Other††	11,776	37	0.3%
Unknown	66,413	59	0.1%
Test Method¥			
Rapid	32,520	96	0.3%
Conventional	49,485	180	0.4%
Unknown	0	0	0.0%

*A testing event is a single test or series of tests conducted to determine an individual's HIV status. For example, a preliminary positive rapid test with a confirmatory conventional test is one testing event.
**Includes only tests where the individual did not self-report a previously positive HIV test and the individual did not have an existing HIV diagnosis in the HIV reporting system (enhanced HIV/AIDS Reporting System, eHARS).
***Exposure information is typically only collected for positive testing events, therefore the percent of positive tests among specific exposure category is likely biased and should be interpreted with extreme caution.
†Includes males and females who reported no injection drug use and reported high risk heterosexual behaviors with the opposite gender; corresponds with the CDC definition of high risk heterosexual contact.
††Includes any gender, including unknown, who reported risk factors that do not meet the criteria of the above exposure categories.
¥A rapid test method indicates a testing event where the initial test was conducted using rapid HIV testing technology but any subsequent testing within the event to confirm positive rapid results may have been done using conventional test technology. A conventional test method is a testing event where no rapid HIV testing technology was used in the event.
Source: HIV Testing Database

There were a total of 82,005 HIV testing events performed at all sites using DHSS funds to conduct HIV testing in 2014. The total number of HIV testing events performed includes the 276 HIV tests for individuals who were previously diagnosed with HIV. Table 36 presents testing characteristics only among those tests where the results were available; there were 82,005 testing events that met these criteria. Overall, less than one percent of tests were newly positive for HIV disease. The positivity among transgender persons (2%) should be interpreted with caution due to the small number of tests performed among this group. The positivity among individuals less than the age of 13 (5%) should be interpreted with caution due to the small number of tests preformed among this age group.

Figure 53. Number of HIV testing events and percent newly diagnosed positives at Missouri HIV testing sites, 2010-2014



NOTE: Trend analysis of HIV testing data should be interpreted with extreme caution. Data collection mechanisms and procedures changed drastically in 2012 and therefore, HIV testing data from 2012 to date is not comparable to data prior to 2012. In 2012, DHSS developed more advanced collection mechanisms and processes that allowed collection of HIV testing data conducted by all sites using DHSS funds to conduct HIV testing. These sites using DHSS funds to conduct HIV testing includes sites who are contracted by DHSS to perform targeted HIV testing, sites contracted to perform HIV screening, and also sites who are not contracted by DHSS but who utilize DHSS funds by submitting HIV tests to the Missouri State Public Health Laboratory. Prior to 2012, DHSS was not capable of collecting data from all sites utilizing DHSS funds for HIV testing. Therefore, from 2010 to 2012 it appears there was a large influx of testing events conducted and a decrease in positivity percentages, which is not actually the case. This large influx is merely a reflection of better collection and reporting procedures and mechanisms.

From 2012 to 2014 the number of testing events decreased while the percent of newly diagnosed positive individuals remained generally stable (Figure 53).

Table 37. Number of HIV tests and newly diagnosed positives at HIV testing sites, by test method*, by site type, Missouri, 2014**

	Healthcare Settings**			Non-Healthcare Settings**			Total		
	Total Tests	Newly Diagnosed Positives		Total Tests	Newly Diagnosed Positives		Total Tests	Newly Diagnosed Positives	
Test Method*	N	N	%	N	N	%	N	N	%
Rapid	28,866	61	0.2%	3,654	35	1.0%	32,520	96	0.3%
Conventional	47,748	160	0.3%	1,737	20	1.2%	49,485	180	0.4%
Total	76,614	221	0.3%	5,391	55	1.0%	82,005	276	0.3%

*A rapid test method indicates a testing event where the initial test was conducted using rapid HIV testing technology but any subsequent testing within the event to confirm positive rapid results may have been done using conventional test technology. A conventional test method is a testing event where no rapid HIV testing technology was used in the event.
**A healthcare setting is one that provides both medical diagnostic and treatment services (e.g., inpatient facilities, outpatient facilities, and emergency departments). A non-healthcare setting is one that does not provide both medical diagnostic and treatment services (e.g., HIV counseling and testing sites and community settings).
Source: HIV Testing Database

Non-healthcare settings had a larger proportion of newly diagnosed positives (1%) compared to healthcare settings (<1%) (Table 37). Sites conducting testing at non-healthcare settings focus on populations at high risk for infection. In 2014, there were a total of 82,005 HIV tests performed. Of all tests performed, 93% were performed at HIV testing sites in healthcare settings. Of all tests performed the majority (60%) were conventional rather than rapid.

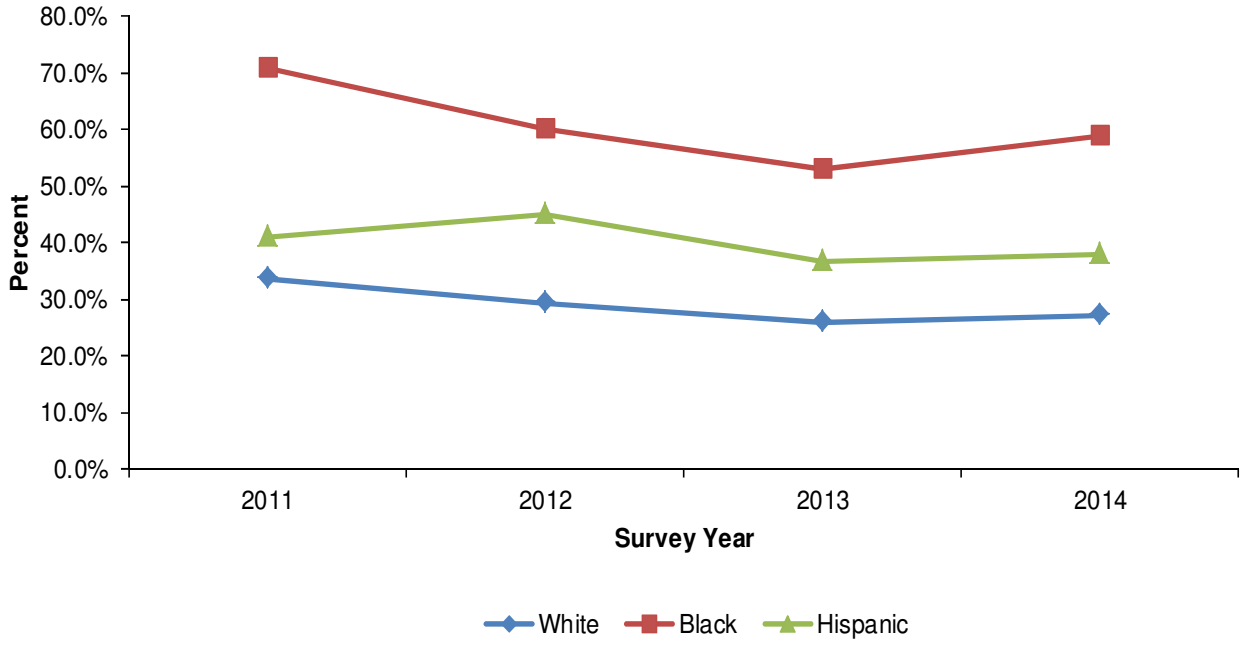
Table 38. Percent of adults 18 years of age and older ever tested for HIV, by sex, by race/ethnicity, by age, by income, by educational attainment, Missouri, 2014

		Crude Prevalence		
	N	%	95% Lower CI	95% Upper CI
Total	1,653	31.1%	29.3%	32.9%
Sex				
Male	673	30.5%	27.8%	33.2%
Female	980	31.7%	29.4%	34.1%
Race/Ethnicity				
White	1,110	27.2%	25.4%	29.0%
Black/African American	399	58.8%	52.7%	64.9%
Hispanic	41	45.5%	30.6%	51.9%
Age				
18-24	70	24.5%	18.4%	30.6%
25-34	258	50.3%	45.0%	55.6%
35-44	343	51.8%	46.9%	56.7%
45-54	355	33.8%	29.9%	37.7%
55-64	358	21.7%	18.8%	24.3%
65+	256	8.9%	7.3%	10.5%
Income				
<$15,000	240	45.0%	38.7%	51.3%
$15-24,999	284	33.6%	28.9%	38.3%
$25-34,999	175	33.1%	27.6%	38.6%
$35-49,999	212	28.6%	23.9%	33.3%
$50-74,999	214	30.1%	25.6%	34.6%
$75,000+	353	31.8%	28.1%	35.5%
Highest Education				
Did not graduate High School	133	29.5%	23.4%	35.6%
Graduated High School	425	25.7%	35.6%	28.6%
Attended College or Technical School	537	34.9%	31.6%	38.2%
Graduated from College or Technical School	557	33.9%	30.8%	37.0%

Source: BRFSS

An estimated 31% of Missouri adults 18 years of age and older have ever been tested for HIV by 2014 (Table 38). There was not a significant difference in the percent of adults ever tested for HIV by sex. A significantly greater percent of blacks/African Americans reported ever being tested for HIV (59%) compared to whites (27%) and Hispanics (46%). Persons 25 to 34 and 35 to 44 years of age were significantly more likely to have ever been tested for HIV (50% and 52%, respectively) compared to other age groups. The percent of adults ever tested for HIV disease was greatest among person reporting an income of less than $15,000 (45%). The percent ever tested for HIV was similar for all of the other income levels. There was not a significant difference in the percent of adults ever tested for HIV by educational attainment.

Figure 54. Percent of adults 18 years of age and older ever tested for HIV, Missouri, 2011-2014



Source: BRFSS

The percent of adults that were ever tested for HIV has remained generally steady between 2011 and 2014 for whites and Hispanics (Figure 54). The percent of adults that were ever tested for HIV generally decreased between 2011 and 2014 for blacks/African Americans. There was a decrease in the percent of adults ever tested for HIV in 2013 among all race/ethnicities. These data indicate that more work is needed to achieve the CDC recommendation that all adults 18 to 64 years of age receive routine HIV testing, especially among white adults.

Table 39. Years since last HIV test among adults 18 years of age and older who have ever been tested for HIV, by sex, by race/ethnicity, by age, by income, by educational attainment, Missouri, 2014

	21+ Years Ago			16-20 Years Ago			11-15 Years Ago			6-10 Years Ago			1-5 Years Ago			Less Than One Year Ago		
	N	%	C.I. (95%)	N	%	C.I. (95%)	N	%	C.I. (95%)	N	%	C.I. (95%)	N	%	C.I. (95%)	N	%	C.I. (95%)
Total	44	1.7	0.9-2.5	84	5.3	3.7-6.9	103	5.8	4.4-7.2	178	14.6	11.9-17.3	623	54.7	50.6-58.8	179	17.9	14.4-21.4
Sex																		
Male	22	2.3	0.9-3.7	31	4.8	2.4-7.2	29	4.1	1.9-6.3	85	15.8	11.5-20.1	259	54.9	48.6-61.2	81	18.0	12.5-23.5
Female	22	1.2	0.6-1.8	53	5.7	3.5-7.9	74	7.4	5.2-9.6	93	13.5	10.0-17.0	364	54.5	49.2-59.8	98	17.7	13.0-22.4
Race/Ethnicity																		
White	37	2.2	1.2-3.2	69	6.5	4.3-8.7	76	6.6	4.8-8.4	145	18.2	14.5-21.9	379	52.3	47.6-57.0	96	14.3	10.6-18.0
Black/Arican American	3	0.5	0.0-1.1	11	2.7	0.3-5.1	16	2.5	0.7-4.3	22	4.6	1.3-7.9	187	63.2	53.4-73.0	62	26.6	16.8-36.4
Age																		
18-24	--	--	--	--	--	--	--	--	--	--	--	--	40	63.8	48.5-79.1	22	36.2	20.9-51.5
25-34	--	--	--	--	--	--	4	1.0	0.0-2.2	24	11.5	6.4-16.6	143	68.1	59.7-76.5	34	19.4	11.8-27.0
35-44	--	--	--	18	7.6	3.3-11.9	36	11.0	6.7-15.3	51	21.7	14.8-28.6	142	48.5	40.9-56.1	32	11.3	6.4-16.2
45-54	13	4.3	1.2-7.4	25	9.6	4.7-14.5	30	8.6	4.7-12.5	44	18.0	11.5-24.5	116	42.5	34.1-50.9	34	17.0	9.9-24.1
55-64	19	6.8	2.7-10.9	20	9.0	4.3-13.7	21	5.9	3.0-8.8	43	17.4	10.9-23.9	104	49.0	40.0-58.0	35	12.0	6.7-17.3
65+	12	6.3	1.6-11.0	20	10.1	4.8-15.4	11	9.9	2.3-17.5	16	14.4	6.0-22.8	72	48.1	36.7-59.5	20	11.2	3.0-19.4
Income																		
< $15,000	2	0.2	0.0-0.4	3	1.2	0.0-3.2	13	4.8	1.1-8.5	18	11.0	3.7-18.3	93	55.3	42.6-68.0	38	27.5	15.0-40.0
$15-24,999	3	0.8	0.0-2.0	13	4.9	0.2-9.6	17	5.3	2.4-8.2	15	3.8	1.3-6.3	118	66.1	56.7-75.5	35	19.1	11.3-26.9
$25-34999	7	1.0	0.0-2.0	16	8.7	3.2-14.2	14	4.8	1.1-8.5	21	14.3	6.1-22.5	65	63.0	52.4-73.6	17	8.2	2.9-13.5
$35-49,999	6	1.3	0.1-2.5	9	2.4	0.4-4.4	13	5.1	2.0-8.2	26	18.2	9.8-26.6	82	54.0	42.8-65.2	20	19.0	8.8-29.2
$50-74,999	3	1.3	0.0-2.9	10	4.4	0.3-8.5	10	3.9	1.0-6.8	34	27.6	17.2-38.0	78	46.6	35.8-57.4	21	16.2	7.8-24.6
$75,000+	18	4.0	1.5-6.5	26	7.8	3.9-11.7	29	8.8	4.7-12.9	47	15.0	9.7-20.3	139	55.1	46.9-63.3	21	9.3	3.2-15.4
Highest Education																		
Did not graduate High School	2	0.4	0.0-1.2	3	4.3	0.0-10.6	7	6.7	1.4-12.0	10	15.9	3.9-27.9	50	44.8	30.1-59.5	24	27.9	13.8-42.0
Graduated High School	9	1.5	0.3-2.7	17	4.0	1.5-6.5	31	5.5	3.0-8.0	42	13.1	8.2-18.0	162	57.8	50.0-65.6	53	18.1	11.4-24.8
Attended College or Technical School	12	1.4	0.0-2.8	15	3.2	1.0-5.4	27	4.6	2.2-7.0	62	13.7	9.4-18.0	208	58.8	51.5-66.1	55	18.3	11.8-24.8
Graduated from College or Technical School	21	2.9	1.1-4.7	49	9.6	5.9-13.3	38	7.3	4.4-10.2	64	16.8	11.7-21.9	202	50.2	43.5-56.9	47	13.2	8.3-18.1

Source: BRFSS
-- Number of responses less than 50 and not sufficient to report.
All other race populations were not included in this table as a result of responses less than 50 and not sufficient to report.
Note: Some groups may not equal the total due to missing data.

Among Missouri adults 18 years of age and older who had ever been tested for HIV, the length of time between their last HIV test and the survey was calculated. The length of time since last HIV test does **not** represent the interval length between HIV testing episodes, but the length of time since an individual's last HIV test to a given point in time. Overall among individuals ever tested for HIV, the greatest percentage of individuals had their last HIV test between one to five years ago (Table 39). The greatest percentage of males and females had their last HIV test one to five years ago (55%). Blacks/African Americans tended to report a more recent HIV test (27% during the last year) compared to whites (14% with during the last year). A greater proportion of persons 18 to 24 years of age tested during the last year (36%) compared to the other age groups represented. A greater proportion of persons earning less than $15,000 tested during the last year (28%) compared to other income groups presented. A greater proportion of persons who did not graduate high school tested during the last year (28%) compared to all other education levels presented.

Table 40. Location of last HIV test among adults 18 years of age and older who have ever been tested for HIV, by sex, by race/ethnicity, by age, by income, by educational attainment, Missouri, 2014

	Private Doctor or HMO		Counseling and Testing Site		Hospital or Clinic Emergency Room		Correction Facility		Home or Somewhere Else		Drug Treatment Facility	
	%	C.I. (95%)	%	C.I. (95%)	%	C.I. (95%)	%	C.I. (95%)	%	C.I. (95%)	%	C.I. (95%)
Total	44.8	41.3-48.3	4.0	2.4-5.6	32.7	29.4-36.0	1.9	0.7-3.1	0.8	0.2-1.4	15.9	13.4-18.4
Sex												
Male	36.6	31.1-42.1	4.9	2.4-7.4	32.4	27.3-37.5	3.6	1.2-6.0	1.4	0.0-2.8	21.0	16.7-25.3
Female	52.1	47.4-56.8	3.1	1.3-4.9	33.0	28.7-37.3	0.4	0.0-0.8	0.2	0.0-0.6	11.2	8.3-14.1
Race/Ethnicity												
White	45.2	41.1-49.3	4.5	02.5-06.5	29.1	25.4-32.8	2.6	1.0-4.2	1.0	0.2-1.8	17.6	14.5-20.7
Black/African American	42.0	33.6-50.4	1.5	0.5-2.5	43.6	35.0-52.2	0.3	0.0-0.7	--	--	12.6	6.1-19.1
Age												
18-24	37.3	23.6-51.0	9.8	1.2-18.4	37.2	22.3-52.1	1.9	0.0-5.6	--	--	13.7	4.1-23.3
25-34	41.8	34.2-49.4	5.7	2.2-9.2	34.3	27.2-41.4	3.5	0.2-6.8	2.4	0.2-4.6	12.3	7.2-17.4
35-44	52.4	45.3-59.5	2.4	0.0-4.8	26.2	20.5-31.9	1.3	0.1-2.5	--	--	17.7	12.0-23.4
45-54	46.1	38.8-53.4	1.8	0.0-3.6	33.8	27.1-40.5	1.3	0.0-2.7	0.1	0.0-0.3	16.9	11.2-22.6
55-64	41.2	33.6-48.8	3.6	0.5-6.7	36.7	29.3-44.1	0.9	0.0-2.3	0.7	0.0-1.9	16.9	11.8-22.0
65+	38.0	29.4-46.6	0.6	0.0-1.4	35.8	27.4-44.2	1.4	0.0-3.6	0.3	0.0-0.9	23.8	16.0-31.6
Income												
<$15,000	29.4	20.6-38.2	1.8	0.0-4.0	52.4	42.0-62.8	3.4	0.0-6.9	1.8	0.0-5.1	11.2	4.1-18.3
$15 - 24,999	44.5	35.3-53.7	4.1	0.8-7.4	39.0	30.0-48.0	1.4	0.0-3.0	2.0	0.0-4.5	9.0	4.9-13.1
$25 - 34,999	52.8	42.2-63.4	3.9	0.0-9.2	30.2	20.2-40.2	3.7	0.0-7.8	--	--	9.5	4.4-14.6
$35 - 49,999	45.6	35.6-55.6	2.5	0.0-5.6	32.4	23.8-41.0	4.0	0.0-10.1	0.5	0.0-1.5	15.0	7.4-22.6
$50 - 74,999	42.0	32.6-51.4	7.7	1.4-14.0	26.2	18.6-33.8	0.1	0.0-0.3	0.9	0.0-2.7	23.1	15.1-31.1
$75,000+	52.2	44.8-59.6	2.4	0.0-4.9	21.2	15.7-26.7	0.7	0.0-1.9	0.3	0.0-0.9	23.2	17.1-29.3
Highest Education												
Did not graduate High School	40.5	27.8-53.2	--	--	42.1	29.4-54.8	6.2	0.0-14.0	0.6	0.0-1.8	10.6	1.2-20.0
Graduated High School	37.7	31.0-44.4	5.1	1.4-8.8	39.5	32.8-46.2	2.1	0.3-3.9	2.5	0.1-4.9	13.2	8.5-17.9
Attended College or Technical School	49.8	43.5-56.1	4.8	1.9-7.7	28.5	22.8-34.2	1.2	0.2-2.2	--	--	15.6	11.3-19.9
Graduated from College or Technical School	46.5	40.6-52.4	3.3	1.3-5.3	28.0	22.7-33.3	1.0	0.0-2.2	0.3	0.0-0.9	20.9	16.2-25.6

-- Number of responses less than 50 and not sufficient to report.
All other race populations were not included in this table as a result of responses less than 50 and not sufficient to report.
Source: BRFSS

Among Missouri adults 18 years of age and older ever tested for HIV, the most common location of last HIV testing was a private doctor or HMO (45%, Table 40). A greater percent of males tended to test at a drug treatment facility (21%) compared to females (11%). A greater percent of persons earning less than $15,000 a year were last tested at the hospital or clinic emergency room (52%) compared to persons earning over $75,000 a year (21%). As the level of education increased the percentage of persons last tested at a hospital or clinic emergency room decreased.

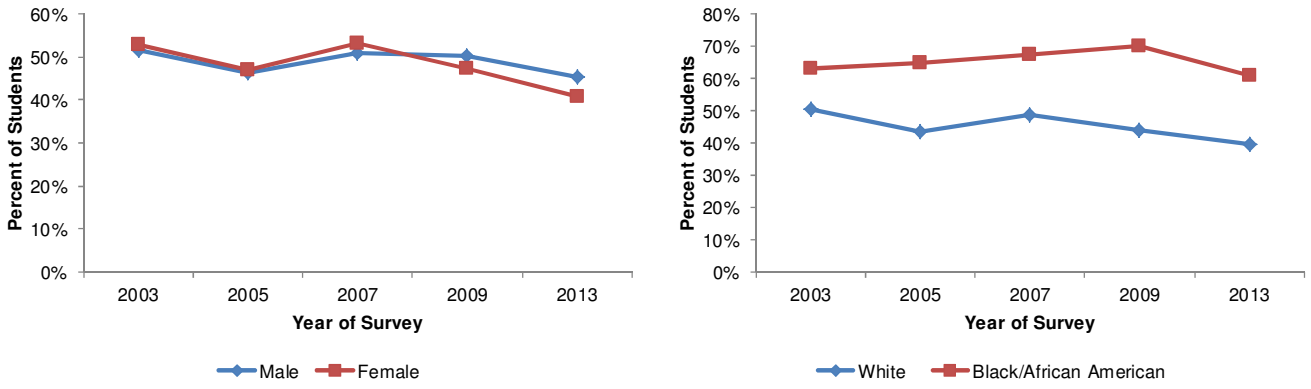
Table 41. Percent of adults who had four drinks or five or more drinks* on a single occasion when drinking in the past 30 days, by sex, by race/ethnicity, by age, by income, by educational attainment, Missouri, 2014

	Four Drinks			Five or More Drinks		
	N	%	C.I. (95%)	N	%	C.I. (95%)
Total	131	7.2	5.6-8.8	216	10.9	9.1-12.7
Sex						
Male	83	9.1	6.6-11.6	165	16.0	13.1-18.9
Female	48	5.1	3.1-7.1	51	5.0	3.2-6.8
Race/Ethnicity						
White	111	7.6	5.6-9.6	180	10.9	8.9-12.9
Black/African American	14	7.4	1.9-12.9	15	5.9	1.4-10.4
Age						
18-24	12	10.6	4.1-17.1	33	23.3	15.3-31.3
25-34	22	9.7	5.2-14.2	41	11.8	7.9-15.7
35-44	28	9.7	5.0-14.4	30	8.0	4.7-11.3
45-54	26	8.1	4.2-12.0	45	13.2	8.7-17.7
55-64	21	2.5	1.1-3.9	40	6.8	4.1-9.5
65+	20	2.2	1.0-3.4	24	3.7	1.7-5.7
Income						
< $15,000	8	6.1	0.8-11.4	22	15.5	7.5-23.5
$15-24,999	20	8.9	4.2-13.6	28	15.6	8.9-22.3
$25-34,999	13	7.1	2.0-12.2	25	8.5	4.2-12.8
$35-49,999	24	10.8	5.5-16.1	25	8.2	4.3-12.1
$50-74,999	22	8.6	3.3-13.9	39	12.4	7.5-17.3
$75,000+	34	5.9	3.4-8.4	48	8.1	5.6-10.6
Highest Education						
Did not graduate High School	8	9.6	0.6-18.6	16	14.0	6.0-22.0
Graduated High School	46	8.7	5.4-12.0	83	14.5	10.8-18.2
Attended College or Technical School	43	8.4	5.1-11.7	63	11.5	8.2-14.8
Graduated from College or Technical School	34	4.2	2.4-6.0	53	6.3	4.3-8.3

*Binge drinking is measured as five or more drinks on one or more occasions for males and as four or more drinks on one or more occasions for females in the past 30 days.
All other race populations were not included in this table as a result of responses less than 50 and not sufficient to report.
Source: BRFSS

Based on BRFSS survey data, an estimated 10% of Missouri adult females and 16% of Missouri adult males engaged in binge drinking of alcohol in 2014 (Table 41). Binge drinking was measured as five or more drinks on one or more occasions for males and as four or more drinks on one or more occasions for females. There was not a significant difference in the percent of adults reporting drinking on one or more occasions four drinks by race/ethnicity. The percent of adults engaging in drinking five or more drinks on one or more occasions tended to decrease with increasing age; among adults 18 to 24 years of age 23% reported drinking five or more drinks on one or more occasions in the past 30 days, compared to 4% of adults 65 years of age and older. The percent of adults engaging in drinking four drinks on one or more occasions in the past 30 days did not vary significantly by income level or by educational attainment. The percent of adults engaging in drinking five or more drinks on one or more occasions in the past 30 days did not vary significantly by income level.

Figure 55. Percent of students who ever had sexual intercourse, by sec, by race/ethnicity, Missouri, 2003-2013

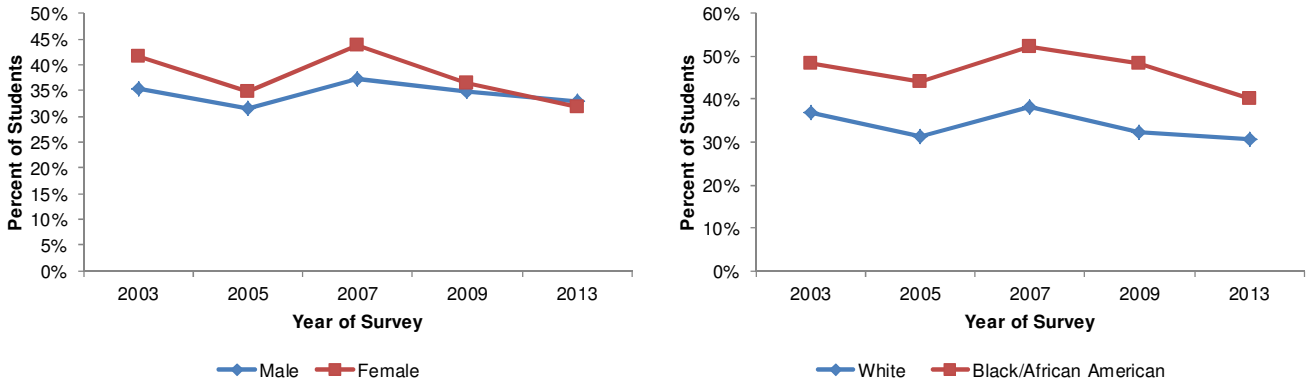


Source: YRBSS

Data presented based on results from the YRBSS survey represent the estimated prevalence of a certain behavior in the high school population. These point estimates are subject to some uncertainty since they were derived from a probability sample of public and private school students, and not from the entire population of high school students. As a result, although the point estimates presented in the figures may appear to be different, refer to the text for details as to whether the observed point estimates are in fact different based on the comparison of statistical confidence intervals, or whether the observed point estimates only appear to be different due to uncertainty associated with the estimates. The data collected during the 2011 survey period was not disseminated by the CDC.

The percent of Missouri high school students who reported ever having sex in their lifetime remained generally steady between the survey periods of 2003 and 2013 (Figure 55). In 2013, 43% of all Missouri high school students reported ever having sex in their lifetime. There was not a significant difference in the percent of students who reported ever having sex between male and female students. A greater percentage of black students reported ever having sex compared to whites in all study periods between 2003 and 2013.

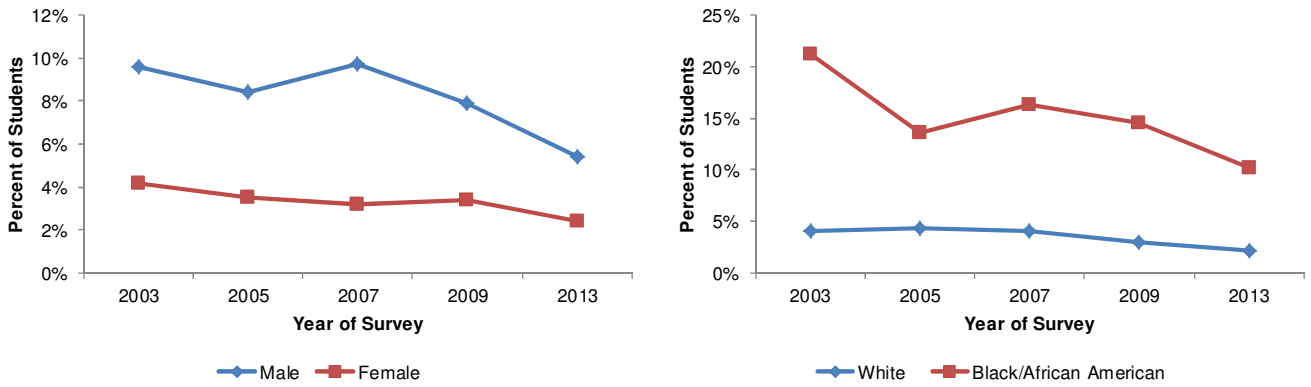
Figure 56. Percent of students who had sexual intercourse with at least one persons during the three months before the survey, by sex, by race/ethnicity, Missouri, 2003-2013



Source: YRBSS

The percent of Missouri high school students reporting sexual intercourse with at least one person within three months of the survey (i.e., recent sexual activity) remained generally steady with some fluctuations between the 2003 and 2013 survey periods among both males and females (Figure 56). There were not significant differences in the percent of students reporting recent sexual activity between males and females over the survey periods from 2003 to 2013. The percent of black/African American students reporting recent sexual activity tended to be higher than white students over the survey periods from 2003 to 2013, although the differences were not statistically significant.

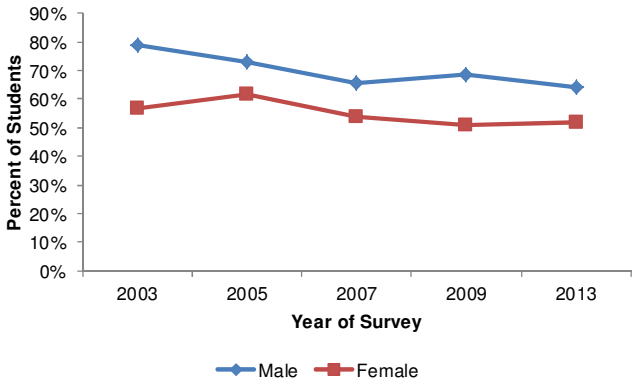
Figure 57. Percent of students who had sexual intercourse before age 13 years, by sex, by race/ethnicity, Missouri, 2003-2013



Source: YRBSS

The percent of Missouri high school students who had sexual intercourse before 13 years of age generally decreased with some fluctuations over the surveys conducted between 2003 and 2013 (Figure 57). A greater percentage of males tended to reported first having sex before 13 years of age compared to all females. A greater percentage of blacks/African Americans reported first having sex before 13 years of age compared to whites in all survey years between 2003 and 2013. The fluctuation in the percent of blacks reporting first having sex before 13 years of age over the survey years of 2003 to 2013 should be interpreted with caution, as the differences may solely be due to chance alone.

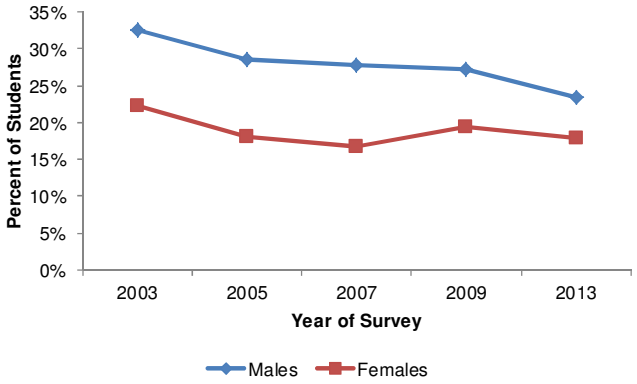
Figure 58. Percent of students who reported either they or their partner used a condom during last sexual intercourse among students who were currently sexually active, by sex, Missouri, 2003-2013



Source: YRBSS

Among Missouri high school students who were currently sexually active at the time of the survey, the percent that reported using a condom during their most recent sexual intercourse remained generally stable over the surveys from 2003 to 2013 (Figure 58). Although the estimated percent of sexually active students that used a condom tended to be higher for males compared to females, the differences were generally not significant in each of the survey years from 2003 to 2013. Due to the small sample size of black high school students who were currently sexually active, estimates of condom use among black/African American students were not produced for the surveys in 2003, 2005, and 2013. In the remaining survey years, there were not significant differences in condom use at last sexual intercourse between whites and blacks/African Americans. Overall in 2013, 58% of currently sexually active high school students used a condom during their last sexual intercourse.

Figure 59. Percent of students who drank alcohol or used drugs before last sexual intercourse among students who were currently sexually active, by sex, by race/ethnicity, Missouri, 2003-2013



Source: YRBSS

The percent of currently sexually active Missouri high school students who drank alcohol or used drugs before their last sexual intercourse remained generally stable over the survey periods from 2003 to 2013 (Figure 59). A greater percentage of sexually active males tended to report substance use prior to sexual intercourse compared to females. Due to the small sample size of black/African American high school students who were currently sexually active, estimates of alcohol and drug use before last sexual intercourse among black/African American students were not produced for the surveys in 2003, 2005, and 2013. In the other survey years where estimates were available for both whites and blacks/African Americans, the differences were not significant between whites and blacks/African Americans. Overall in 2013, 21% of currently sexually active Missouri high school students used alcohol or drugs prior to their last sexual intercourse.

Table 42. Percent of schools with policy and curriculum regarding HIV, STD, and pregnancy prevention, Missouri and 43 U.S. states, 2011-2012 school year

Grades Levels	Topic taught in a required course	% Missouri Schools	Median % among Schools in 43 States
6,7, or 8	The differences between HIV and AIDS	74.0	73.5
	How HIV and other STDs are transmitted	77.8	76.3
	The relationship among HIV, other STDs, and pregnancy	71.0	67.7
	The relationship between alcohol and other drug use and risk for HIV, other STDs, and pregnancy	71.6	71.6
	How HIV and other STDs are diagnosed and treated	67.9	67.9
	The health consequences of HIV, other STDs, and pregnancy	74.7	72.5
	The benefits of being sexually abstinent	80.9	75.8
	How to prevent HIV, other STDs, and pregnancy	75.9	74.2
	How to access valid and reliable information, products, and services related to HIV, other STDs, and pregnancy	61.3	62.1
	The influences of media, family, and social and cultural norms on sexual behavior	66.7	69.4
	Communication and negotiation skills related to eliminating or reducing risk for HIV, other STDs, and pregnancy	63.6	68.4
	Efficacy of condoms (how well they work and don't work)	41.9	47.0
	Importance of using condoms consistently and correctly	31.0	40.4
	How to obtain condoms	11.8	22.2
	How to correctly use a condom	7.3	16.5
9, 10, 11, or 12	The differences between HIV and AIDS	95.6	94.2
	How HIV and other STDs are transmitted	96.7	95.3
	The relationship among HIV, other STDs, and pregnancy	93.6	92.6
	The relationship between alcohol and other drug use and risk for HIV, other STDs, and pregnancy	95.9	93.3
	How HIV and other STDs are diagnosed and treated	93.1	92.0
	The health consequences of HIV, other STDs, and pregnancy	94.2	94.3
	The benefits of being sexually abstinent	96.8	94.8
	How to prevent HIV, other STDs, and pregnancy	95.6	94.9
	How to access valid and reliable information, products, and services related to HIV, other STDs, and pregnancy	89.1	90.7
	The influences of media, family, and social and cultural norms on sexual behavior	91.1	91.8
	Communication and negotiation skills related to eliminating or reducing risk for HIV, other STDs, and pregnancy	87.8	89.9
	Efficacy of condoms (how well they work and don't work)	76.7	80.2
	Importance of using condoms consistently and correctly	65.4	70.9
	How to obtain condoms	44.3	52.9
	How to correctly use a condom	33.2	45.1

Source: School Health Profiles

Among the topics assessed at the sixth, seventh, and eighth grades, teaching topics related to how to access valid and reliable information, products, and services related to HIV, other STDs, and pregnancy; the influences of media, family, and social and cultural norms on sexual behavior; communication and negotiation skills related to eliminating or reducing risk for HIV, other STDs, and pregnancy; efficacy of condoms (how well they work and don't work); importance of using condoms consistently and correctly; how to obtain condoms; and how to correctly use a condom tended to be lower among Missouri schools compared to the survey median (Table 42). Of the other topics listed in the table regarding STD topics the percent of Missouri schools teaching those topics at the middle school level tended to be higher than the median percent of all 43 states surveyed.

Among the topics assessed at the ninth, tenth, eleventh, and twelfth grade levels, teaching topics related to how to access valid and reliable information, products, and services related to HIV, other STDs, and pregnancy; communication and negotiation skills related to eliminating or reducing risk for HIV, other STDs, and pregnancy; efficacy of condoms (how well they work and don't work); importance of using condoms consistently and correctly; how to obtain condoms; and how to correctly use a condom tended to be lower among Missouri schools compared to the survey median. Of the other topics listed in the table regarding STD topics the percent of Missouri schools teaching those topics at the high school level tended to be higher than the median percent of all 43 states surveyed.

Table 43. Substance abuse treatment admissions by primary substance of abuse, by sex, by age at admission, by race, and by ethnicity, Missouri, 2013

		PRIMARY SUBSTANCE															
		Total	Alcohol only	Alcohol with secondary drug	Cocaine (smoked)	Cocaine (other route)	Marijuana	Heroin	Other opiates	PCP	Hallucinogens	Amphetamines	Other stimulants	Tranquilizers	Sedatives	Inhalants	Other/Unknown
Total	**No.**	**38,215**	**7,694**	**6,378**	**1,417**	**370**	**8,235**	**4,247**	**2,677**	**229**	**63**	**6,146**	**22**	**308**	**40**	**43**	**346**
	%	100	20.1	16.7	3.7	1	21.5	11.1	7	0.6	0.2	16.1	0.1	0.8	0.1	0.1	0.9
Sex																	
Male	%	65.1	74.8	74.4	58.6	68.4	70.6	57	50.8	70.3	57.1	50.7	59.1	42.5	47.5	62.8	53.2
Female	%	34.9	25.2	25.6	41.4	31.6	29.4	43	49.2	29.7	42.9	49.3	40.9	57.5	52.5	37.2	46.8
Total	%	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Age at Admission																	
0-11 years	%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12-17 years	%	6.3	0.6	2.7	0.4	2.2	22.7	0.6	2	0	28.6	2	18.2	5.8	7.5	30.2	18.5
18-20 years	%	4.3	1.3	3	0.4	2.7	8.5	4	4.5	0.9	3.2	4.7	4.5	7.8	5	4.7	9
21-25 years	%	15.4	8.5	12.4	2.8	12.2	20.8	20.6	20.5	11.8	12.7	17.4	22.7	19.2	12.5	11.6	18.2
26-30 years	%	17.4	12.1	16.7	5.4	12.7	16.7	23.5	24.9	26.6	23.8	21	13.6	17.2	10	9.3	17.3
31-35 years	%	15.9	13.1	15.6	7.9	13.8	12.3	20.7	19.1	27.9	12.7	21.7	13.6	15.6	25	14	13.9
36-40 years	%	10.6	10.7	11.5	10.9	13	7	11.9	10.8	17.5	7.9	13	13.6	12	15	11.6	9
41-45 years	%	9.3	13.5	11.6	18.5	11.9	5	6.4	5.9	7	1.6	9.2	4.5	6.8	10	2.3	5.5
46-50 years	%	8.9	15	11.8	23.9	17.3	3.8	4	5.8	4.4	6.3	6.2	0	6.5	7.5	11.6	3.5
51-55 years	%	6.8	13.3	9.6	18.8	10	2.1	3.5	3.4	3.1	1.6	3.3	9.1	5.5	5	4.7	4
56-60 years	%	3.3	7.1	3.7	8.3	2.4	0.9	2.9	2.1	0.9	1.6	1.2	0	3.2	0	0	0.9
61-65 years	%	1.2	2.9	1.2	2.1	1.4	0.2	1.4	0.7	0	0	0.2	0	0.3	0	0	0.3
66 years and over	%	0.5	1.8	0.2	0.6	0.5	0.1	0.5	0.2	0	0	0.1	0	0	2.5	0	0
Total	%	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Race																	
White	%	76.2	84.5	78.7	20.1	44.3	66.3	62.6	91.3	3.1	76.2	94.8	95.5	94.5	87.5	90.7	86.7
Black/African American	%	19.5	11	17	75.1	50	27.9	33.8	5.9	94.3	22.2	1.9	4.5	1.3	7.5	0	7.5
American Indian or Alaskan	%	0.2	0.3	0.3	0.4	0	0.3	0.1	0	0	0	0.2	0	0	0	0	0.6
Asian or Native Hawaiian or Other Pacific Islander	%	0.2	0.4	0.1	0.1	1.1	0.3	0.1	0	0	0	0.1	0	0.3	0	0	0.6
Other	%	1.2	1.7	1.3	0.7	2.2	1.6	0.7	0.6	0.4	0	0.7	0	1.3	0	0	0.3
Unknown	%	2.7	2	2.5	3.6	2.4	3.6	2.7	2.1	2.2	1.6	2.3	0	2.6	5	9.3	4.3
Total	%	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Ethnicity																	
Hispanic	%	2.1	2.4	2.3	1.6	2.2	2.6	1.2	1.5	0.9	1.6	2.1	0	2.6	0	4.7	1.7
Not Hispanic	%	97.9	97.6	97.7	98.4	97.8	97.4	98.8	98.5	99.1	98.4	97.9	100	97.4	100	95.3	98.3
Total	%	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Source: TEDS

In 2013, 38,215 admissions to substance abuse treatment centers in Missouri receiving public funding were recorded (Table 43). The most common primary substance of abuse among treatment center admissions was marijuana (22%); alcohol use only was the second most common primary substance of abuse (20%). The majority of the total admissions were among males (65%). Females represented a greater proportion of admissions compared to males among persons admitted with a primary substance of abuse of tranquilizers or sedatives. Although persons 12-17 years of age comprised 6% of the total admissions, this age group comprised 30% of the admissions where inhalants were the primary substance of abuse. Although persons 31 to 35 years of age comprised 16% of the total admissions, these age groups represented 28% of the admissions where PCP was the primary substance of abuse. Persons 46 to 50 years of age disproportionately represented treatment admissions related to smoked cocaine use. Whites, regardless of ethnicity, represented the majority of total treatment admissions (76%). However, blacks/African Americans, of any ethnicity, represented the majority of treatment admissions among persons admitted for smoked cocaine use and PCP use (75% and 94%, respectively).

Table 44. Select services provided by substance abuse treatment facilities, Missouri, 2011

	N	%
Total Facilities	**289**	**--**
Methadone therapy	18	6.2
HIV Testing	39	13.5
TB screening	68	23.5
Hepatitis B screening	45	15.6
Hepatitis C screening	47	16.3
STD testing	32	11.1
HIV/stage 3 (AIDS) education, counseling, or support	146	50.5
Early intervention for HIV	36	12.5
Program specifically for person living with HIV/stage 3 (AIDS)	11	3.8

Source: SAMSHA, National Survey of Substance Abuse Treatment Services

There were 289 substance abuse treatment facilities in Missouri that responded to the National Survey of Substance Abuse Treatment Services (N-SSATS) in 2011 (Table 44). Of responding facilities, only 11% offered STD testing; 14% offered HIV testing; 16% offered Hepatitis B screening; 16% offered Hepatitis C screening, and 24% offered TB screening. Although testing for HIV was not common among the facilities (14%), 51% of facilities offered HIV/stage 3 (AIDS) education, counseling or support. However, only 4% of facilities had a program designed specifically for persons living with HIV/stage 3 (AIDS). Given the strong body of evidence linking substance abuse with risky sexual behaviors, more widespread screening of STDs, hepatitis B and C, and HIV may be an important recommendation to substance abuse treatment facilities.

Table 45. Select drug and alcohol use, by age, Missouri, 2012-2013

Measure	Age 12-17 N	12-17 %*	18-25 N	18-25 %*	26+ N	26+ %*
Illicit Drugs						
Past Month Illicit Drug Use[1]	45	9.5	147	22.4	252	6.5
Past Year Marjuana Use	65	13.8	210	32.0	307	7.9
Past Month Marijuana Use	34	7.1	132	20.2	189	4.9
Past Month Use of Illicit Drugs Other Than Marijuana[1]	16	3.4	46	7.0	94	2.4
Past Year Cocaine Use	2	0.4	18	2.8	33	0.9
Past Year Nonmedical Pain Reliever Use	25	5.3	72	11.0	139	3.6
Alcohol						
Past Month Alcohol Use	59	12.4	398	60.7	2,127	55.0
Past Month Binge Alchol Use[2]	35	7.5	267	40.7	916	23.7
Perception of Great Risk of Drinking Five or More Drinks Once or Twice a Week	178	37.6	203	31.0	1,408	36.4
Past Year Dependence, Abuse and Treatment						
Illicit Drug Dependence[1]	9	2.0	39	6.0	49	1.3
Illicit Drug Dependence or Abuse[1]	17	3.6	51	7.9	65	1.7
Alcohol Dependence	5	1.1	35	5.4	116	3.0
Alcohol Dependence or Abuse[1]	17	3.6	90	13.7	227	5.9
Alcohol or Illicit Drug Dependence or Abuse	27	5.8	118	18.1	273	7.1
Needing But Not Receiving Treatment for Illicit Drug Use[1,3]	14	2.9	47	7.2	51	1.3
Needing But Not Receiving Treatment for Alcohol Use[4]	16	3.3	87	13.2	222	5.7
Past Year Mental Health Issues						
Having at Least One Major Depressive Episode[5]	47	9.9	61	9.4	271	7.0
Serious Mental Illness[6]	--	--	31	4.7	180	4.7
Any Mental Illness[6]	--	--	124	19.0	739	19.1
Had Serious Thoughts of Suicide	--	--	45	6.8	139	3.6

*Percent of population within the age group with the measure of interest
[1] Includes marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics not used for medical reasons.
[2] Drinking five or more drinks on the same occasion (i.e., at the same time or within a couple of hours of each other) on at least 1 day in the past 30 days.
[3] Respondents classified as needing treatment for illicit drugs, but not receiving treatment for an illicit drug problem at a specialty facility (i.e., drug and alcohol rehabilitation facilities [inpatient or outpatient], hospitals [inpatient only], and mental health centers).
[4] Respondents classified as needing treatment for alcohol, but not receiving treatment for an alcohol problem at a specialty facility (i.e., drug and alcohol rehabilitation facilities [inpatient or outpatient], hospitals [inpatient only], and mental health centers).
[5] Defined as in the 4th edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV), which specifies a period of at least 2 weeks when a person experienced a depressed mood or loss of interest or pleasure in daily activities and had a majority of specified depression symptoms.
[6] Mental Illness is defined as having a diagnosable mental, behavioral, or emotional disorder, other than a developmental or substance use disorder, assessed by the Mental Health Surveillance Study (MHSS), which is based on the 4th edition of DSM-VI where mental illness is divided into three categories, including mild mental illness, moderate mental illness, and serious mental illness (SMI). Any mental illness (AMI) includes individuals in any of the three categories.
Source: SAMHSA, National Survey on Drug Use and Health

A greater proportion of the population 18 to 25 years of age reported various illicit drug use and alcohol use compared to persons 12 to 17 years of age and persons 26 years of age or older (Table 45). Past year dependence and abuse of illicit drugs and alcohol was also greater among persons 18 to 25 years of age compared to the other age groups. The percent of persons 12 to 17 years of age using various illicit drugs tended to be higher than the percent among persons 26 years of age or older. These findings suggest that prevention efforts regarding the relationship between substance use and risky sexual behaviors should target persons 18 to 25 years of age. The greatest numbers of new HIV diagnoses in recent years have been among persons in this age range.

This page was intentionally left blank.

Key Highlights: What are the HIV service utilization patterns of individuals with HIV disease in Missouri?

Magnitude of the Problem

- Overall, 68% of Missourians living with HIV disease had their primary care medical needs met (i.e., evidence of a CD4 lymphocyte or viral load test or diagnosis with an opportunistic infection in 2014).
- Persons enrolled in HIV medical case management were significantly more likely to have their primary care medical needs met. Of the 11,984 persons living with HIV disease in Missouri, 4,969 (42%) were enrolled in medical case management at some point in 2014. Ninety-six percent (96%) of individuals in case management had their primary care medical needs met in 2014.
- Persons living with HIV who were subcategorized as stage 3 (AIDS) cases in 2014 were more likely to have their medical needs met (75%) compared to persons subcategorized as HIV cases (61%). Similar patterns were seen regardless of whether the individuals were enrolled in HIV medical case management.
- Enrollment in HIV medical case management and current diagnostic status (i.e., HIV or stage 3 (AIDS)) were important factors influencing unmet need.

Where

- Overall, the proportion of individuals with a met need was greatest in the Southeast and Northwest HIV Care Regions (70%), and lowest in the Central HIV Care Region (62%).
- Among those enrolled in HIV medical case management, the proportion with a met need ranged from 90% in the Northwest HIV Care Region to 98% in the Southwest HIV Care Regions.
- For those not enrolled in HIV medical case management, the proportion with a met need ranged from 37% in the Central HIV Care Region to 60% in the Northwest HIV Care Region.

Who

Sex

- Overall, there were no differences observed in unmet need by sex, after controlling for factors such as enrollment in HIV medical case management, and current diagnostic status (i.e., HIV or stage 3 (AIDS)).

Race/Ethnicity

- Unmet need tended to be greater among minority populations, although factors such as case management and diagnostic status influenced the relationship between race and unmet need.
- Among persons diagnosed in 2011-2013, the likelihood of entering care was lower for blacks/African Americans than other races.

Age

- There were differences in unmet need by current age among individuals enrolled in HIV medical case management. Unmet need was greatest among individuals 19-24 years of age (10%).
- There were differences in unmet need by current age among individuals not enrolled in HIV medical case management. Unmet need was greatest among individuals 13-18 years of age (57%).

Exposure Category

- Unmet need by exposure category varied depending upon enrollment in medical case management and current diagnosis status.

Table 46. Hospital charges and days of care, by viral infection type, by sex, by race*, and by pay source, Missouri, 2012

	Number of Discharges			Hospital Days of Care Total (Per Discharge)			Hospital Charges Total (Per Day Hospitalized)		
	HIV Infection	Hepatitis	Other Viral Infection	HIV Infection	Hepatitis	Other Viral Infection	HIV Infection	Hepatitis	Other Viral Infection
Total	**491**	**1,074**	**1,573**	**3,896**	**5,353**	**5,105**	**$25,807,759**	**$39,713,939**	**$28,038,561**
				(7.9)	**(5.0)**	**(3.2)**	**($6,624)**	**($7,419)**	**($5,492)**
Sex									
Male	385	615	751	3,055	3,221	2,366	$19,165,402	$26,067,164	$13,681,204
				(7.9)	(5.2)	(3.2)	($6,273)	($8,093)	($5,782)
Female	106	459	822	841	2,132	2,739	$6,642,357	$13,646,775	$14,357,357
				(7.9)	(4.6)	(3.3)	($7,898)	($6,401)	($5,242)
Race*									
White	176	815	1,252	1,373	3,982	4,091	$7,848,551	$29,805,231	$22,478,883
				(7.8)	(4.9)	(3.3)	($5,716)	($7,485)	($5,495)
Black/African American	296	214	244	2,274	1,072	773	$16,702,265	$8,916,396	$4,160,486
				(7.7)	(5.0)	(3.2)	($7,345)	($8,318)	($5,382)
Pay Source									
Medicare	137	403	491	839	2,115	2,079	$5,515,446	$16,131,278	$12,233,096
				(6.1)	(5.2)	(4.2)	($6,574)	($7,627)	($5,884)
Medicaid	178	350	357	1,441	1,760	917	$9,689,114	$10,353,020	$4,367,594
				(8.1)	(5.0)	(2.6)	($6,724)	($5,882)	($4,763)
Other Government	1	11	24	28	57	48	$195,665	$444,503	$260,298
				(28.0)	(5.2)	(2.0)	($6,988)	($7,798)	($5,423)
Self pay/No Charge	70	97	119	564	362	318	$3,461,693	$2,468,550	$1,713,195
				(8.1)	(3.7)	(2.7)	($6,138)	($6,819)	($5,387)
Commercial	104	200	552	1,018	1,008	1,627	$6,945,841	$10,199,902	$9,162,164
				(9.8)	(5.0)	(2.9)	($6,823)	($10,119)	($5,631)
Other	0	6	12	0	16	43	$0	$116,686	$283,197
				--	(2.7)	(3.6)	$0	($7,293)	($6,586)
Unknown	1	7	16	6	35	67	$0	$0	$0
				(6.0)	(5.0)	(4.2)	($0)	($0)	($0)

*Includes persons of Hispanic origin
Source: DHSS MICA

Data regarding hospital discharges, days of care, and hospital charges billed in 2012 among Missouri residents whose primary reason for admission was related to a viral infection are displayed in Table 46. Viral infections other than HIV and hepatitis comprised the majority of all hospitalizations (50%). Among persons whose primary reason for admission was related to HIV infection, 64% of the hospitalizations were paid for by Medicare or Medicaid, compared to 70% and 54% of the hospitalizations among persons whose admissions were primarily related to hepatitis and other viral infections, respectively. Although hospital admissions related to HIV infection represented only 16% of all discharges among persons with viral infections, 27% of all days of hospitalization were attributed to HIV infection related admissions. Data regarding the length of hospitalization per discharge should be interpreted with some caution as the data were not adjusted for outliers. Among persons admitted for hepatitis and other viral infection, the length of hospitalization per discharge tended to be slightly longer for males compared to females. This difference between males and females was not observed among persons admitted for HIV infection. The total hospital charges billed was greatest among patients admitted for hepatitis. Assessing the hospitalization charges per day hospitalized should be interpreted with some caution as the data were not adjusted for outliers. Overall, the billed hospitalization cost per day of hospitalization was greatest for persons admitted for hepatitis ($7,419). However, among females, the hospitalization cost per day tended to be slightly higher among women with HIV infection as the primary reason for admission ($7,898) compared to women whose admission were related to hepatitis ($6,401).

Table 47. The impact of HIV case management on access to primary medical care by HIV care region* and race/ethnicity among individuals living with HIV disease as of December 31, 2014

HIV Care Region	Total HIV Population		Enrolled in Case Management		Not Enrolled in Case Management	
	Met Need** N (%)	Unmet Need*** N (%)	Met Need** N (%)	Unmet Need*** N (%)	Met Need** N (%)	Unmet Need*** N (%)
St. Louis Region						
White	1,577 (66.9%)	780 (33.1%)	650 (95.2%)	33 (4.8%)	927 (55.4%)	747 (44.6%)
Black/African American	2,247 (70.7%)	933 (29.3%)	1,541 (95.5%)	73 (4.5%)	706 (45.1%)	860 (54.9%)
Hispanic	93 (59.2%)	64 (40.8%)	57 (98.3%)	1 (1.7%)	36 (36.4%)	63 (63.6%)
Other/Unk.	57 (68.7%)	26 (31.3%)	38 (97.4%)	1 (2.6%)	19 (43.2%)	25 (56.8%)
Total	**3,974 (68.8%)**	**1,803 (31.2%)**	**2,286 (95.5%)**	**108 (4.5%)**	**1,688 (49.9%)**	**1,695 (50.1%)**
Kansas City Region						
White	1,196 (66.3%)	607 (33.7%)	562 (97.4%)	15 (2.6%)	634 (51.7%)	592 (48.3%)
Black/African American	971 (66.8%)	482 (33.2%)	687 (95.0%)	36 (5.0%)	284 (38.9%)	446 (61.1%)
Hispanic	128 (54.7%)	106 (45.3%)	75 (92.6%)	6 (7.4%)	53 (34.6%)	100 (65.4%)
Other/Unk.	58 (72.5%)	22 (27.5%)	26 (92.9%)	2 (7.1%)	32 (61.5%)	20 (38.5%)
Total	**2,353 (65.9%)**	**1,217 (34.1%)**	**1,350 (95.8%)**	**59 (4.2%)**	**1,003 (46.4%)**	**1,158 (53.6%)**
Northwest Region						
White	70 (76.1%)	22 (23.9%)	31 (91.2%)	3 (8.8%)	39 (67.2%)	19 (32.8%)
Black/African American	10 (55.6%)	8 (44.4%)	4 (100.0%)	0 (0.0%)	6 (42.9%)	8 (57.1%)
Hispanic	0 (0.0%)	4 (100.0%)	0 (0.0%)	1 (100.0%)	0 (0.0%)	3 (100.0%)
Other/Unk.	0 (N/A)	0 (N/A)	0 (N/A)	0 (N/A)	0 (N/A)	0 (N/A)
Total	**80 (70.2%)**	**34 (29.8%)**	**35 (89.7%)**	**4 (10.3%)**	**45 (60.0%)**	**30 (40.0%)**
Central Region						
White	254 (66.7%)	127 (33.3%)	158 (94.6%)	9 (5.4%)	96 (44.9%)	118 (55.1%)
Black/African American	75 (50.0%)	75 (50.0%)	56 (90.3%)	6 (9.7%)	19 (21.6%)	69 (78.4%)
Hispanic	18 (56.3%)	14 (43.8%)	16 (94.1%)	1 (5.9%)	2 (13.3%)	13 (86.7%)
Other/Unk.	4 (66.7%)	2 (33.3%)	2 (100.0%)	0 (0.0%)	2 (50.0%)	2 (50.0%)
Total	**351 (61.7%)**	**218 (38.3%)**	**232 (93.5%)**	**16 (6.5%)**	**119 (37.1%)**	**202 (62.9%)**
Southwest Region						
White	534 (71.8%)	210 (28.2%)	365 (97.6%)	9 (2.4%)	169 (45.7%)	201 (54.3%)
Black/African American	54 (54.5%)	45 (45.5%)	35 (97.2%)	1 (2.8%)	19 (30.2%)	44 (69.8%)
Hispanic	32 (64.0%)	18 (36.0%)	22 (95.7%)	1 (4.3%)	10 (37.0%)	17 (63.0%)
Other/Unk.	10 (55.6%)	8 (44.4%)	8 (100.0%)	0 (0.0%)	2 (20.0%)	8 (80.0%)
Total	**630 (69.2%)**	**281 (30.8%)**	**430 (97.5%)**	**11 (2.5%)**	**200 (42.6%)**	**270 (57.4%)**
Southeast Region						
White	163 (75.8%)	52 (24.2%)	101 (93.5%)	7 (6.5%)	62 (57.9%)	45 (42.1%)
Black/African American	57 (58.2%)	41 (41.8%)	34 (94.4%)	2 (5.6%)	23 (37.1%)	39 (62.9%)
Hispanic	3 (60.0%)	2 (40.0%)	2 (100.0%)	0 (0.0%)	1 (33.3%)	2 (66.7%)
Other/Unk.	1 (50.0%)	1 (50.0%)	1 (100.0%)	0 (0.0%)	0 (0.0%)	1 (100.0%)
Total	**224 (70.0%)**	**96 (30.0%)**	**138 (93.9%)**	**9 (6.1%)**	**86 (49.7%)**	**87 (50.3%)**
Statewide (MO)**						
White	3,958 (68.0%)	1,866 (32.0%)	1,954 (96.1%)	79 (3.9%)	2,004 (52.9%)	1,787 (47.1%)
Black/African American	3,757 (68.7%)	1,713 (31.3%)	2,541 (95.2%)	129 (4.8%)	1,216 (43.4%)	1,584 (56.6%)
Hispanic	280 (56.3%)	217 (43.7%)	174 (94.6%)	10 (5.4%)	106 (33.9%)	207 (66.1%)
Other/Unk.	133 (68.9%)	60 (31.1%)	78 (95.1%)	4 (4.9%)	55 (49.5%)	56 (50.5%)
Total	**8,128 (67.8%)**	**3,856 (32.2%)**	**4,747 (95.5%)**	**222 (4.5%)**	**3,381 (48.2%)**	**3,634 (51.8%)**

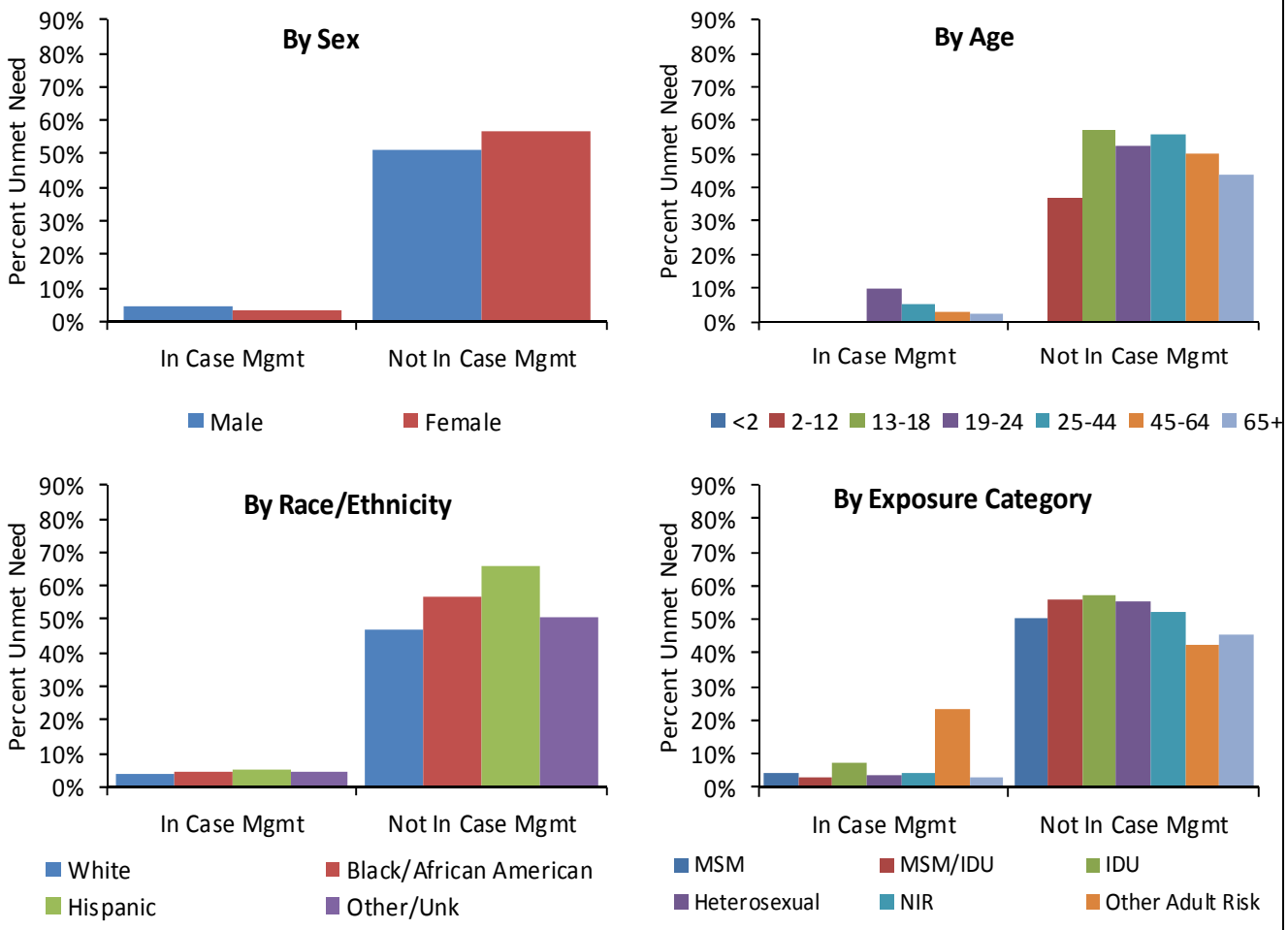
*Includes all individuals still living whose most recent diagnosis (i.e., HIV or stage 3 (AIDS)) occurred in the region. Does not reflect the number of individuals currently living in the region.
**Evidence of a CD4+ T-lymphocyte or viral load laboratory test result or diagnosis with an opportunistic infection in the current year.
*** No evidence of a CD4+ T-lymphocyte or viral load laboratory test result or diagnosis with an opportunistic infection in the current year.
****Statewide figures include living individuals whose most recent diagnosis occurred in a correctional facility or is unknown.
Note: Percentages may not total to 100% due to rounding.

Of the 11,984 persons living with HIV at the end of 2014, 68% had evidence of met primary care medical needs (i.e., met need) in 2014 (Table 47). The primary care medical need was considered to be met if an individual had a CD4 lymphocyte or viral load laboratory test; or diagnosis of an opportunistic infection in 2014 that was reported to MDHSS. There were differences in the proportion of individuals with met needs depending on whether the individual was enrolled in HIV medical case management in 2014. A significantly greater proportion of those enrolled in HIV medical case management had a met need (96%) in 2014 compared to those not enrolled (48%). Several factors may contribute to the differences observed. First, case management assists clients to locate and access medical care by referral. Second, case management clients receive health education and counseling to understand the nature of routine medical care. Third, case management assists clients in identifying appropriate payer sources to fund routine medical care. Finally, it is possible that those not enrolled in case management were less likely to be currently living in Missouri, and therefore indicators of primary medical care would not be reported to MDHSS. The data were presented based on individuals whose most recent diagnosis occurred in Missouri, not those known to be currently living in Missouri, as accurate data on current residence are difficult to collect.

There were differences in the proportion of individuals with a met need by HIV care region. It is important to note that data presented by HIV care region represent those who currently have a met need that were most recently diagnosed with HIV or stage 3 (AIDS) in the selected HIV care region. It does not necessarily reflect where individuals are currently living and receiving care. Overall, the proportion of individuals with a met need was greatest in the Northwest and Southeast HIV Care Regions (70%), and lowest in the Central HIV Care Region (62%). The pattern was slightly different between the regions depending on whether individuals were enrolled in HIV medical case management. For those not enrolled in HIV medical case management, the proportion with a met need ranged from 37% in the Central HIV Care Region to 60% in the Northwest HIV Care Region.

There were differences in the proportion of persons with a met need by race/ethnicity. Overall statewide, met need was lower among Hispanics (56%) compared to all other race/ethnicity groups presented. Within each region and depending on whether the individuals were enrolled in HIV medical case management, the patterns by race/ethnicity varied slightly. Among individuals not enrolled in case management, the proportion of blacks/ African Americans with a met need was lower in all HIV care regions compared to whites, and the proportion of Hispanics with a met need was lower in all HIV care regions compared to whites.

Figure 60. Percent of individuals living with HIV having an unmet* primary medical care need in 2014 by enrollment in HIV case management and selected characteristics



*No evidence of a CD4+ T-lymphocyte or viral load laboratory test result or diagnosis with an opportunistic infection in the current year.

Figure 60 examines the proportion of cases with unmet need depending on whether the individuals were enrolled in HIV medical case management for selected characteristics. There were no differences in the proportion of individuals with unmet needs between the sexes, regardless of whether enrolled in HIV medical case management. There were differences in the proportion of individuals with unmet needs by current age among those not enrolled in case management. Unmet need was greatest among individuals 13-18 years of age (57%). Those 2-12 years old had the lowest proportions of unmet need. There were differences in the proportion of individuals with unmet needs by current age among those enrolled in case management. Unmet need was greatest among 19-24 year olds (10%). There were differences in the proportion of individuals with unmet needs by race/ethnicity among those not enrolled in case management. Among those not enrolled in case management, unmet need was greatest among Hispanics (66%) and lowest among whites (47%). There were not significant differences in the proportion of individuals with unmet need for individuals enrolled in case management by race/ethnicity There were differences in the proportion of individuals with unmet need by exposure category regardless of whether enrolled in HIV medical case management. The denominator in the proportion of individuals enrolled in case management with an exposure category of other adult risk was small and unstable, causing the percent of unmet need for other adult risk to be interpreted with extreme caution. Unmet need was greatest among individuals enrolled in case management and among individuals not enrolled in case management for those who indicated IDU as an exposure category (7% for individuals enrolled in case management, 57% for individuals not enrolled in case management).

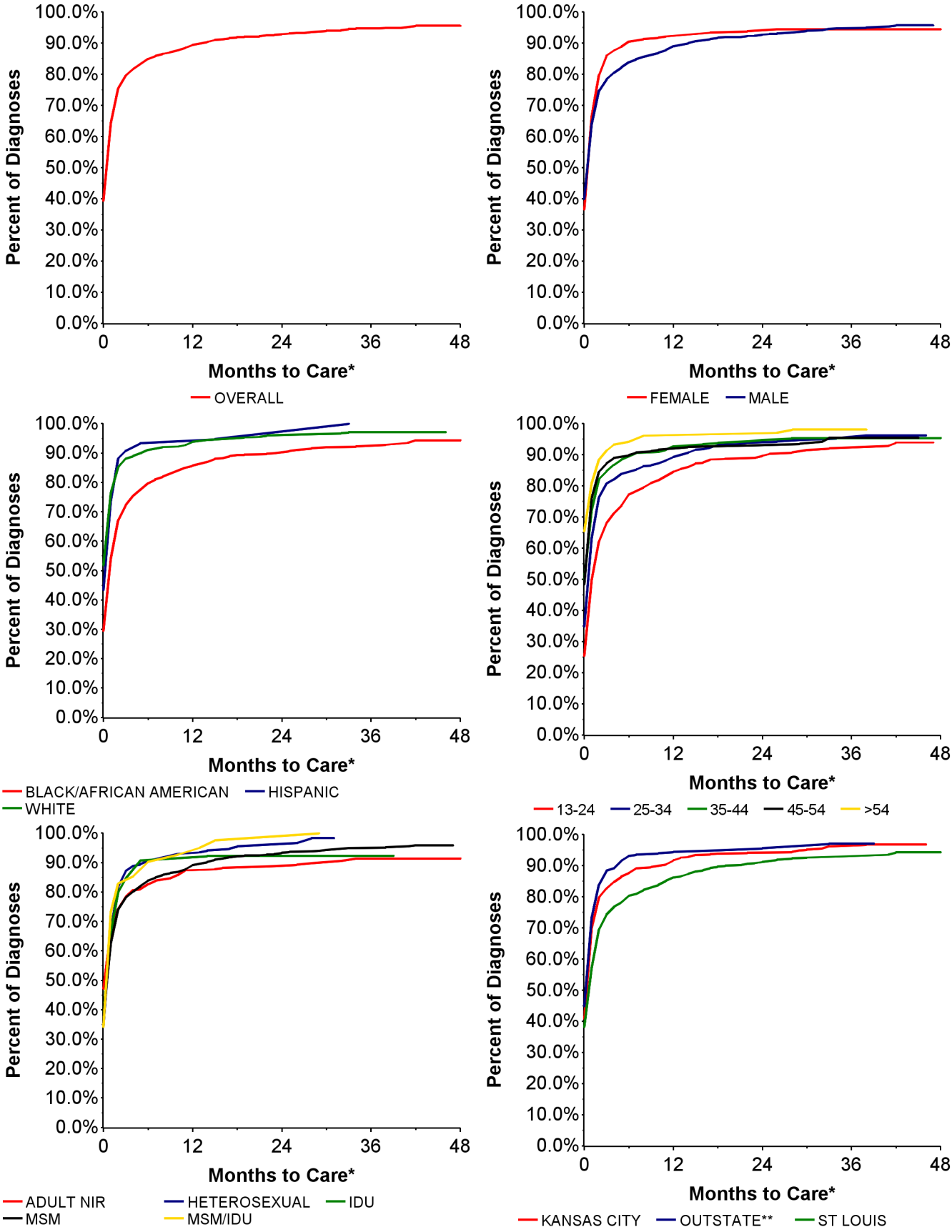
Table 48 examines the proportion of cases reported with unmet need based on current status (i.e., HIV or stage 3 (AIDS)) and selected characteristics. Overall, the proportion of those with an unmet need was greater for those classified as HIV cases compared to stage 3 (AIDS) cases. The same trend was observed regardless of whether individuals were enrolled in HIV medical case management.

Table 48. Percent of individuals living with HIV having an unmet* primary medical care need in 2014 by current status, enrollment in HIV case management, and selected characteristics**

	Total Population		Enrolled in Case Management		Not Enrolled in Case Management	
	HIV Cases with Unmet Need* % (N)	Stage 3 (AIDS) Cases with Unmet Need* % (N)	HIV Cases with Unmet Need* % (N)	Stage 3 (AIDS) Cases with Unmet Need* % (N)	HIV Cases with Unmet Need* % (N)	Stage 3 (AIDS) Cases with Unmet Need* % (N)
Sex						
Male	40.1% (1,872)	26.2% (1,374)	6.2% (104)	3.6% (81)	59.2% (1,768)	42.8% (1,293)
Female	36.9% (381)	22.1% (229)	5.9% (29)	1.4% (8)	65.3% (352)	47.1% (221)
Race/Ethnicity						
White	37.8% (1,054)	26.7% (812)	6.0% (54)	2.2% (25)	53.0% (1,000)	41.3% (787)
Black/African American	40.2% (1,043)	23.3% (670)	6.2% (72)	3.8% (57)	67.9% (971)	44.7% (613)
Hispanic	48.5% (114)	39.3% (103)	7.0% (6)	4.1% (4)	72.5% (108)	60.4% (99)
Other/Unknown	47.2% (42)	17.3% (18)	3.4% (1)	5.7% (3)	68.3% (41)	29.4% (15)
Current Age‡						
<2	-- (0)	-- (0)	-- (0)	-- (0)	-- (0)	-- (0)
2-12	32.0% (8)	25.0% (2)	0.0% (0)	0.0% (0)	40.0% (8)	28.6% (2)
13-18	41.9% (13)	33.3% (3)	0.0% (0)	0.0% (0)	65.0% (13)	37.5% (3)
19-24	26.6% (112)	14.4% (18)	11.2% (31)	4.7% (4)	56.6% (81)	35.9% (14)
25-44	37.3% (979)	25.7% (503)	6.4% (75)	4.1% (40)	62.5% (904)	46.8% (463)
45-64	43.2% (1,027)	25.8% (988)	3.8% (26)	2.6% (43)	58.9% (1,001)	43.2% (945)
65+	50.9% (114)	25.4% (89)	3.7% (1)	2.2% (2)	57.4% (113)	33.3% (87)
Exposure Category						
Men who have sex with men	38.1% (1,352)	26.0% (1,012)	6.3% (86)	2.8% (47)	58.0% (1,266)	43.2% (965)
Men who have sex with men and inject drugs	35.5% (81)	28.2% (104)	1.0% (1)	4.5% (8)	64.0% (80)	50.5% (96)
Injecting drug use	44.9% (115)	27.6% (109)	7.7% (7)	7.3% (15)	65.5% (108)	49.7% (94)
Heterosexual contact	38.9% (306)	23.6% (208)	6.1% (22)	2.1% (9)	66.5% (284)	44.6% (199)
No indicated risk (NIR)	44.8% (368)	22.6% (146)	6.5% (16)	2.5% (7)	61.0% (352)	38.1% (139)
Other Adult Risk	66.7% (8)	29.3% (12)	50.0% (1)	18.2% (2)	70.0% (7)	33.3% (10)
Pediatric	43.4% (23)	22.6% (12)	0.0% (0)	5.9% (1)	59.0% (23)	30.6% (11)
Total	**39.5%(2,253)**	**25.5%(1,603)**	**6.1%(133)**	**3.2%(89)**	**60.1%(2,120)**	**43.4%(1,514)**

*No evidence of a CD4+ T-lymphocyte or viral load laboratory test result or diagnosis with an opportunistic infection in the current year.
**HIV case vs. stage 3 (AIDS) case.
‡Based on age as of December 31, 2014.
Note: Rows with the percent marked '- -' indicates that there were no living persons in the selected category.

Figure 61. Length of time in months to enter care* after initial HIV diagnosis among persons diagnosed between 2011 and 2013, by selected characteristics, Missouri



*Defined as first reported CD4 lymphocyte or viral load lab result reported to MDHSS.
**Outstate includes the Central, Northwest, Southeast, and Southwest HIV Care Regions.
Source: eHARS

Figure 61 examines the length of time until first entry into care among persons newly diagnosed with HIV disease between 2011 and 2013. Entry into care was measured as the receipt of a CD4 lymphocyte or viral load laboratory result by MDHSS. Overall, 90% of persons recently diagnosed had entered care by one year after diagnosis. Within four years of initial diagnosis, 94% had entered care. There was not a significant difference in the proportion of new diagnoses entering care between males and females. There were differences in the proportion of new diagnoses entering care by race/ethnicity. Over time, a significantly lower proportion of blacks/African Americans entered care compared to whites and Hispanics. At one year after diagnosis, only 86% of blacks/African Americans had entered care, compared to 94% of Hispanics and 94% of whites. There were differences in the proportion of new diagnoses entering care by age at diagnosis. Of persons diagnosed between the ages of 13 and 24, only 85% entered care within one year of diagnosis, compared to 96% of persons 55 years of age or older at the time of diagnosis. There were not significant differences over time in likelihood to enter care by exposure category. Differences in entry to care following diagnosis varied by HIV care region of diagnosis. Persons diagnosed in the St. Louis HIV Care Region were significantly less likely to enter into care over time. At one year after diagnosis, 92% of persons diagnosed in the Kansas City HIV Care Region, 94% of persons diagnosed in Outstate, and 86% of persons diagnosed in the St. Louis HIV Care Region entered care. Entry into care remained lower among those recently diagnosed in the St. Louis HIV Care Region over time. These data can be used to target populations for outreach efforts to assist with entry into HIV medical care among persons recently diagnosed.

Glossary

Case rate
The frequency of a defined event in a specified population for a given time period, usually expressed as the number of cases per 100,000 people in a population. Case rate is calculated by dividing the number of cases in the population of interest by the total number of people in the population. Then multiplying by 100,000 to get the rate per 100,000.

Case definition for stage 3 (AIDS)
All HIV-infected people six years and older who have fewer than 200 $CD4^+$ T cells per cubic millimeter of blood, all HIV-infected people between the ages of one to five who have fewer than 500 $CD4^+$ T cells per cubic millimeter of blood, and HIV-infected individuals under the age of one who have less than 750 $CD4^+$ T cells per cubic millimeter of blood (healthy adults usually have 800 to 1,200, with 1,000 the average). In addition, the definition includes 26 clinical conditions that affect people with advanced HIV disease. Most of these conditions are opportunistic infections that generally do not affect healthy people. For additional information, visit http://www.cdc.gov/mmwr/preview/mmwrhtml/rr6303a1.htm?s_cid=rr6303a1_e.

$CD4^+$ T cells
This is a white blood cell with CD4 molecules on its surface. These cells play an important role in the human immune system. Sometimes referred to as "helper" cells, they orchestrate the body's response to certain microorganisms such as viruses. HIV virus particles attack and utilize these cells to multiply.

Cumulative number of cases
The number of all cases diagnosed with a particular condition including living and deceased individuals in a specified area.

Date of diagnosis
The date a laboratory makes a diagnosis based on the chemical analysis of a specimen.

Epidemic
The "occurrence in a community or region of cases of an illness, specified health-related behavior, or other health-related events clearly in excess of normal expectancy."

Highly active antiretroviral therapy (HAART)
This is a treatment protocol using a combination of antiretroviral drugs to suppress the HIV virus. These drugs consist of four basic classes depending on their method of suppression: reverse transcriptase (RT) inhibitors, protease inhibitors (PI), fusion inhibitors, entry inhibitors, and integrase inhibitors.

HIV case
It refer to an individual who has been infected with the human immunodeficiency virus (HIV) that is in the early stages of the disease process and has not met the case definition for stage 3 (AIDS).

HIV disease case
This includes all individuals who have been infected with the human immunodeficiency virus (HIV). Cases can be sub-classified into either HIV cases or stage 3 (AIDS) cases.

Incidence
The number of new cases of a specified condition diagnosed within a given time. The calendar year is used in the *Profiles* to calculate incidence.

Incidence rate
The number of new cases diagnosed in a specified population for a given time period, usually expressed as the number of cases per 100,000 people in a population. Incidence rate is calculated by dividing the number of new cases in the population of interest by the total number of people in that population. Then multiplying by 100,000 to get the rate per 100,000.

Modes of transmission
Also referred to as **exposure categories**, this term refers to the way in which an individual acquired the HIV virus. The most common modes of transmission are: men who have sex with men (MSM), heterosexual contact, injection drug users (IDUs), men who have sex with men and practice injection drug use (MSM/IDUs), hemophilia/coagulation disorder, and blood transfusion or tissue recipients.

Point prevalence
This refers to the number of persons living with a specified condition at a given point in time. December 31st, is used for the *Profiles* to calculate the number of persons living with HIV or stage 3 (AIDS) for each year.

Prevalence rate
The number of individuals living with the specified condition in a specified population for a given time period, usually expressed as the number of cases per 100,000 people in a population. A prevalence rate is calculated by dividing the number of living cases in the population of interest by the total number of people in that population. Then multiplying by 100,000 to get the rate per 100,000.

Sexually Transmitted Infections
Sexually transmitted infections (STIs), commonly called **sexually transmitted diseases (STDs)** and once called venereal diseases, are among the most common infectious diseases in the United States today. They are a group of infections that are predominantly transmitted through sexual activity.

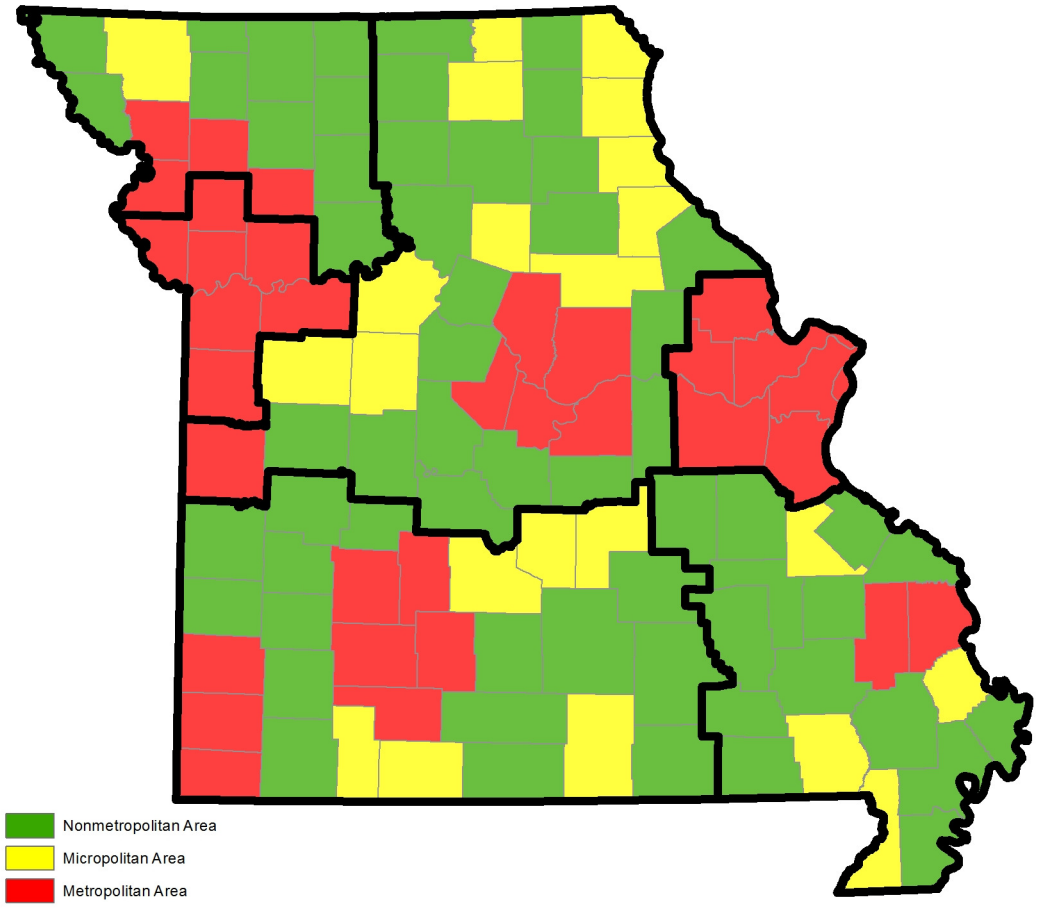
Sexually Transmitted Infections and the Organisms Responsible

Disease	Organism(s)
Acquired Immunodeficiency Syndrome (AIDS)	Human immunodeficiency virus
Chlamydial infections	Chlamydia trachomatis
Gonorrhea	Neisseria gonorrhoeae
Syphilis	Treponema pallidum

Stage 3 (AIDS) case
This refers to an individual who has been infected with human immunodeficiency virus (HIV) that is in the later stages of the disease process and has met the case definition for acquired immunodeficiency syndrome (AIDS).

Appendix

Metropolitan, Micropolitan, and Nonmetropolitan Areas by County



Source: Missouri Census Data Center, MABLE/Geocorr12. 2013 Metropolitan Divisions.