

**2012 Epidemiologic Profiles
of HIV, STD, and Hepatitis in Missouri**



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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 *Integrated Guidelines for Developing Epidemiologic Profiles* in 2004. 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 five 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/acquired immunodeficiency syndrome (AIDS) epidemic in Missouri?

Describes the impact of the HIV/AIDS epidemic in Missouri.

Question 3: What are the indicators of HIV/AIDS infection 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 two key questions:

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.

Question 5: What are the number and characteristics of the individuals who know they are HIV positive but who are not in care?

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 2012 *Profiles* provides a selective update of the questions in the *Profiles* including the epidemiology of HIV, STDs, hepatitis, and unmet primary medical care needs among individuals living with HIV through 2012 (Questions #2, #3, and #5). Please refer to the data sources used in the *Profiles* on page ii and the technical notes on page iii 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 planning regions to assist with regional level planning efforts.

Missouri Planning Cycle:

The statewide Missouri Comprehensive Prevention Planning Group (CPPG) operates on a five year planning cycle. The current comprehensive prevention plan was developed in 2010, and runs from 2011-2015. 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 five 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 selective update to all questions in the *Profiles*. For data from the most recent 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*

Population Estimates, Missouri Department of Health and Senior Services (MDHSS), Bureau of Health Informatics 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 2011 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/AIDS Surveillance Data, eHARS

Missouri's communicable disease reporting rule, 19 CSR 20-20.020, established reporting of 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 HIV, STD, and Hepatitis (BHS) is responsible for managing the HIV/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 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*

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 BHS 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.

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 BHS 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 BHS began utilizing Websurv to collect and manage STD surveillance data. The change in databases must be considered when assessing changes in STD cases between 2012 and 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.

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

HIV Disease, HIV case, 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 an **AIDS case** (if they are in the later stages of the disease process and have met the case definition for AIDS), or an **HIV case** (if they are in the earlier stages of the disease process and have not met the AIDS case definition). In this report, the sub-classification of HIV or AIDS is based on an individual's status of disease progression as of December 31, 2012.

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, 2013.

Place of Residence: Data are presented based on an individual's residence at time of most recent diagnosis of HIV or AIDS. Only cases whose most recent diagnosis was Missouri are included in the analyses presented in the *Profiles*. This 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 2 of the 2011 *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/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,

Epi Profiles Summary: Introduction

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 BSHS for additional information.

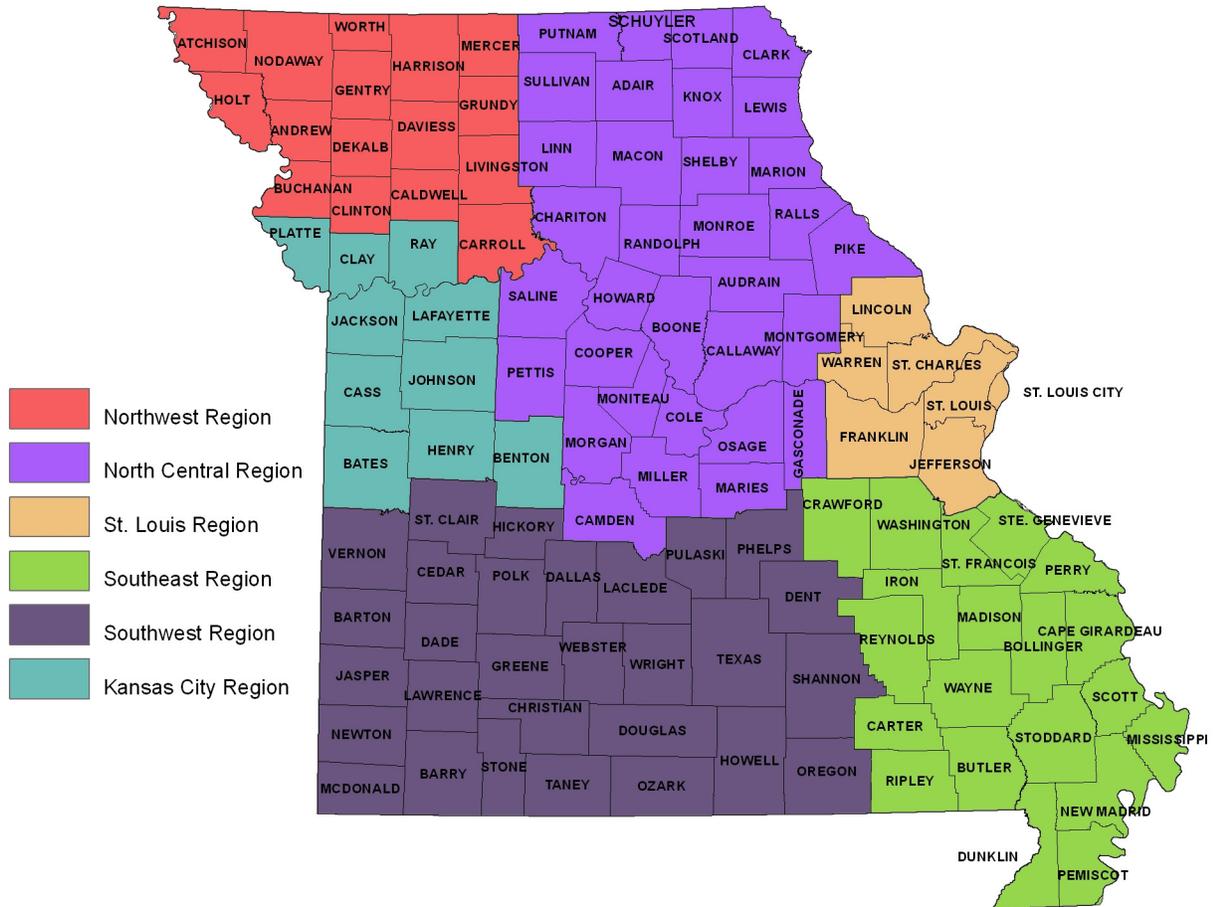
Race/Ethnicity: Race and ethnicity information has been collected under two different systems in the HIV/AIDS reporting system. Since many cases were reported under the old classification system, the use of the race and ethnicity categories from the old classification system will be maintained in this 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/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/AIDS data for the six HIV regions of the state. This 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 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 region.

Missouri HIV Regions



Abbreviations

AIDS=Acquired Immunodeficiency Syndrome

BHSH=Bureau of HIV, STD, and Hepatitis

CDC=Centers for Disease Control and Prevention

CPPG=Comprehensive Prevention Planning Group

eHARS=enhanced HIV/AIDS Reporting System

HCV=Hepatitis C Virus

HIV=Human Immunodeficiency Virus

IDEP=Interstate Duplicate Evaluation Project

IDU=Injection drug use/Injection drug user

HRSA=Health Resources and Services Administration

MDHSS=Missouri Department of Health and Senior Services

MSM=Men who have sex with men

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

NIR=No indicated risk

P&S=Primary and secondary

RIDR=Routine Interstate Duplicate Review

STD=Sexually Transmitted Disease

STD*MIS=Sexually Transmitted Disease Management Information System

TB=Tuberculosis

MISSOURI STATE SUMMARY



Population Counts, by HIV Region, Missouri, 2011

	St. Louis Region	Kansas City Region	Northwest Region	North Central Region	Southwest Region	Southeast Region	Missouri Total
Sex							
Male	1,008,179	614,734	124,422	378,592	570,233	248,274	2,944,434
Female	1,080,742	645,962	123,643	383,485	580,406	252,016	3,066,254
Total	2,088,921	1,260,696	248,065	762,077	1,150,639	500,290	6,010,688
Race/Ethnicity							
White	1,534,897	937,965	226,472	675,395	1,035,481	448,745	4,858,955
Black/African American	404,858	184,931	8,293	39,883	23,179	31,456	692,600
Hispanic	55,412	83,157	7,175	21,165	44,996	9,250	221,155
Asian/Pacific Islander	55,777	22,338	1,782	10,488	14,158	2,563	107,106
American Indian/Alaskan Native	4,369	5,350	946	2,533	9,558	1,799	24,555
Two or More Races/Other Race	33,608	26,955	3,397	12,613	23,267	6,477	106,317
Total	2,088,921	1,260,696	248,065	762,077	1,150,639	500,290	6,010,688
Race/Ethnicity-Males							
White Male	749,419	459,233	112,057	333,304	510,040	221,342	2,385,395
Black/African American Male	184,557	86,515	5,379	21,714	13,747	16,728	328,640
Hispanic Male	28,842	42,874	3,921	11,062	23,552	4,908	115,159
Asian/Pacific Islander Male	26,742	10,403	864	4,908	6,502	1,149	50,568
American Indian/Alaskan Native Male	2,171	2,650	478	1,308	4,812	907	12,326
Two or More Races/Other Race Male	16,448	13,059	1,723	6,296	11,580	3,240	52,346
Total	1,008,179	614,734	124,422	378,592	570,233	248,274	2,944,434
Race/Ethnicity-Females							
White Female	785,478	478,732	114,415	342,091	525,441	227,403	2,473,560
Black/African American Female	220,301	98,416	2,914	18,169	9,432	14,728	363,960
Hispanic Female	26,570	40,283	3,254	10,103	21,444	4,342	105,996
Asian/Pacific Islander Female	29,035	11,935	918	5,580	7,656	1,414	56,538
American Indian/Alaskan Native Female	2,198	2,700	468	1,225	4,746	892	12,229
Two or More Races/Other Race Female	17,160	13,896	1,674	6,317	11,687	3,237	53,971
Total	1,080,742	645,962	123,643	383,485	580,406	252,016	3,066,254
Age							
<2	51,324	34,206	6,160	17,906	29,155	12,181	150,932
2-12	296,158	190,026	34,348	104,510	164,575	71,117	860,734
13-18	172,067	100,428	19,332	59,124	92,043	39,211	482,205
19-24	160,321	98,314	23,086	81,201	107,705	39,667	510,294
25-44	545,838	337,536	58,810	182,965	277,371	120,695	1,523,215
45-64	583,778	337,007	66,480	203,342	300,681	137,368	1,628,656
65+	279,435	163,179	39,849	113,029	179,109	80,051	854,652
Total	2,088,921	1,260,696	248,065	762,077	1,150,639	500,290	6,010,688

Source: MDHSS, Bureau of Health Informatics

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

Magnitude of the Problem and General Trends

- From 1982 to 2012, there have been a total of 18,915 persons diagnosed with HIV disease in Missouri and reported to MDHSS. Of these individuals, 12,915 (68%) were subcategorized as AIDS cases, and the remaining 6,000 (32%) were subcategorized as HIV cases. Of the cumulative number of persons diagnosed with HIV disease, 11,419 (60%) were presumed to be living at the end of 2012.
- The number of new diagnoses has fluctuated slightly between 2003 and 2012, with no sustained upward or downward trend in new HIV diagnoses over this time period. In 2012, there were 540 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 8,104 persons in 2003 to 11,419 persons in 2012. 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 2012 was highest in St. Louis City (33.0 per 100,000). The second highest rate was in Kansas City (17.7 per 100,000). The rate of persons newly diagnosed who were classified as AIDS cases at the end of 2012 was highest in St. Louis City and Kansas City (6.9 per 100,000).

Who

Sex

- Males represented the majority of persons newly diagnosed (84%) and living with (83%) HIV disease. The rates of new diagnoses and persons living with HIV disease were more than 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 9.8 times as high as whites, and 3.0 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 65% 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 2003, the largest numbers of persons living with HIV disease were 40-44 years of age, whereas in 2012 persons 45-49 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 2012, the largest numbers of persons newly diagnosed with HIV disease were between 19-24 years of age, compared to 2003 when the largest numbers of new diagnoses were 30-34 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 2012, there were 4 people less than 13 years of age diagnosed with HIV disease.

Figure 1. HIV disease cases (living and deceased), by current HIV vs. AIDS status, Missouri, 1982—2012

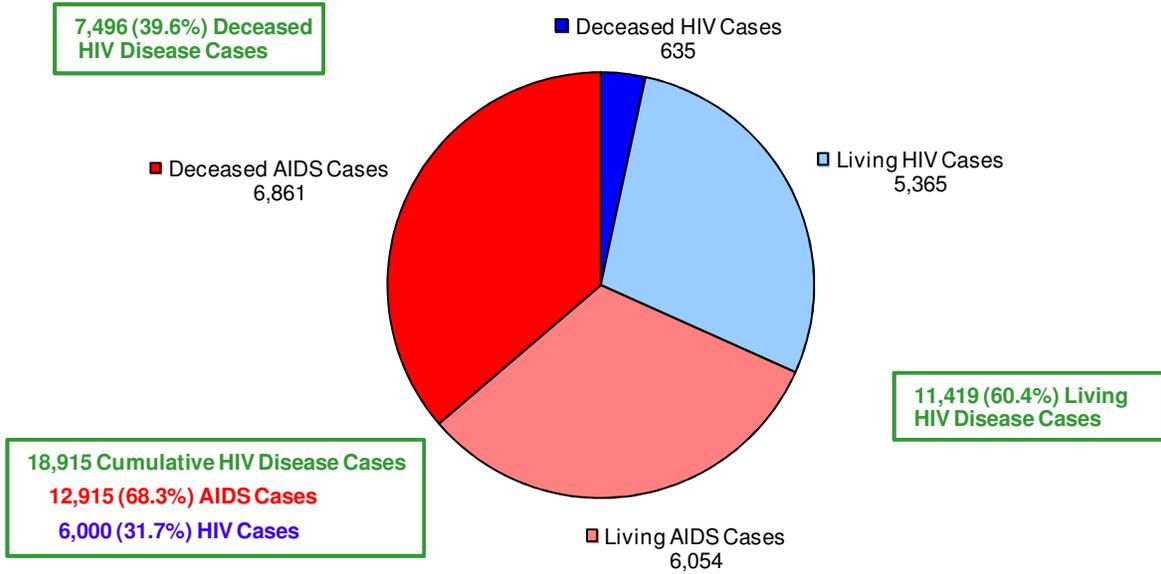
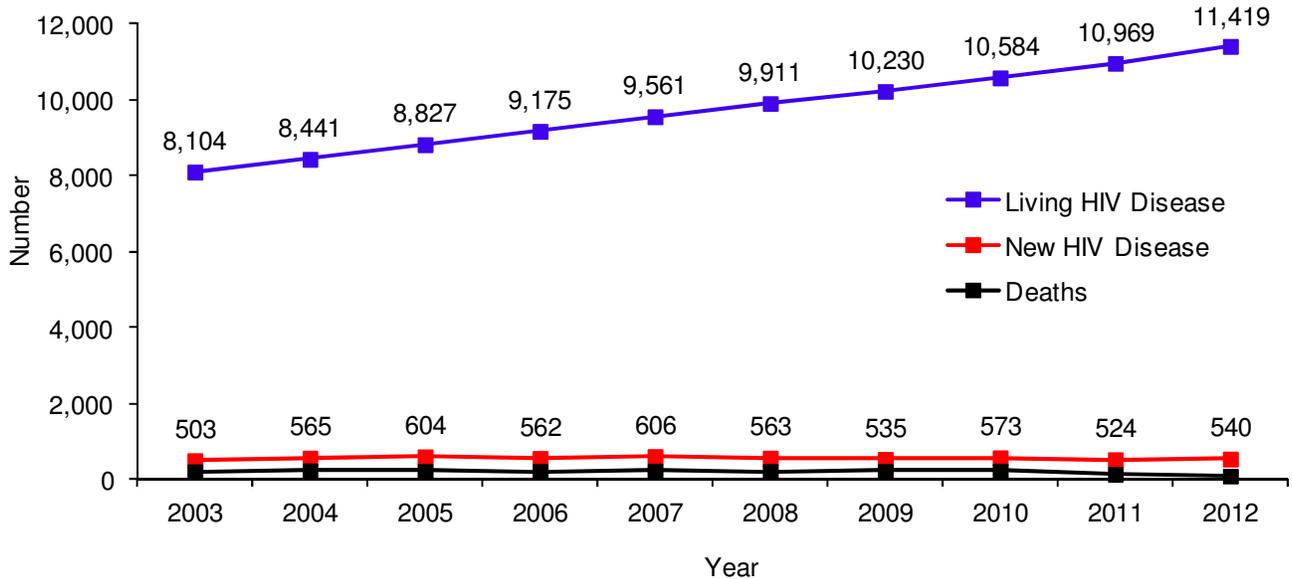


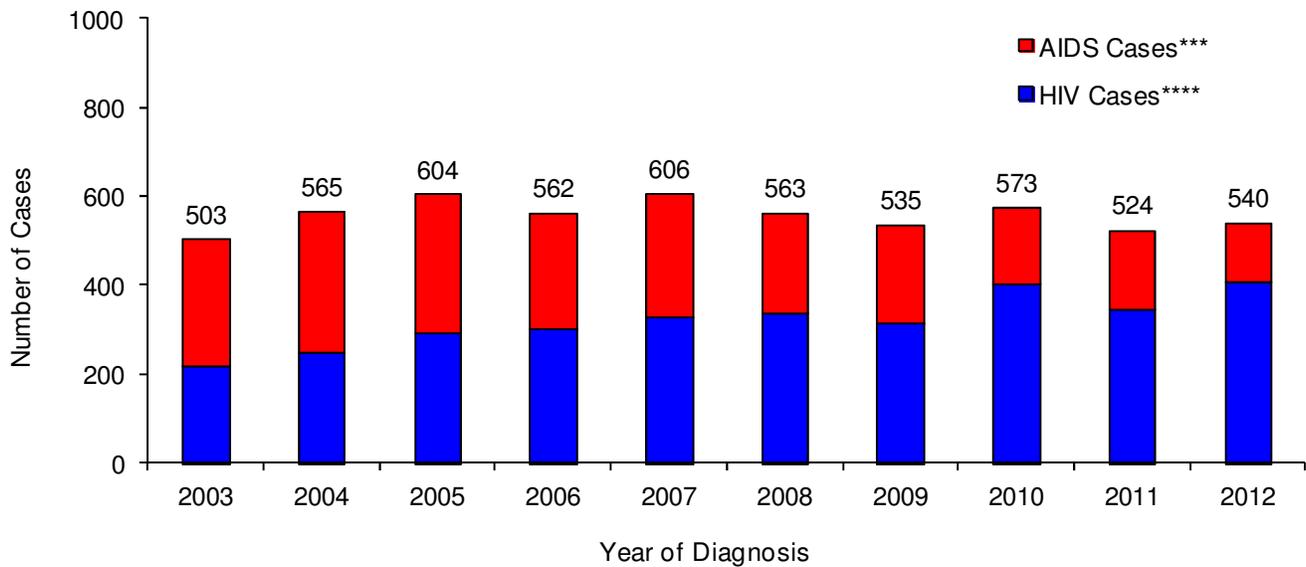
Figure 2. Living and new HIV disease cases and deaths by year*, Missouri, 2003—2012



*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 2012, there have been a total of 18,915 HIV disease cases diagnosed in Missouri and reported to MDHSS (Figure 1). Of the cumulative cases reported, 60% were still presumed to be living with HIV disease at the end of 2012. Among those living with HIV disease, 5,365 were classified as HIV cases at the end of 2012 and 6,054 were classified as AIDS cases.

At the end of 2012, there were 11,419 persons living with HIV disease whose most recent diagnosis occurred in Missouri (Figure 2). The number of people living with HIV disease increased each year. There were 540 new HIV disease diagnoses in 2012. The number of new diagnoses from 2003 to 2012 has fluctuated; the number of new diagnoses ranged from 503 cases in 2003 to 606 cases in 2007. The number of deaths among persons with HIV disease each year has remained generally steady. The lower number of deaths in 2012 was likely due to delays in death reporting.

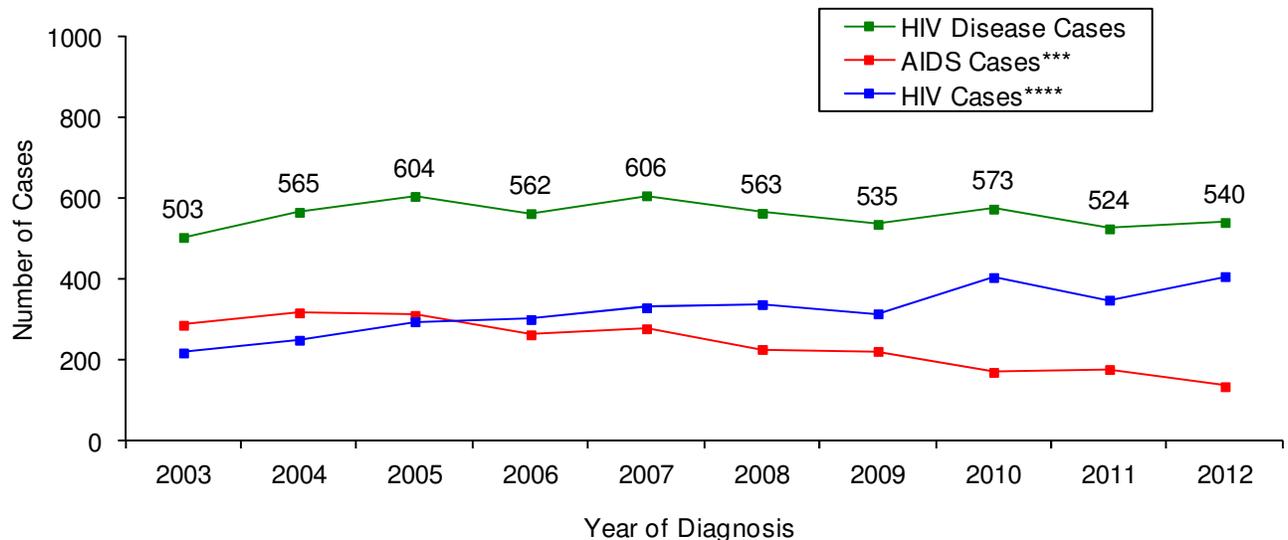
Figure 3. HIV disease cases, by current status* and year of diagnosis, Missouri, 2003-2012**

*HIV case vs. 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 an HIV case or an AIDS case, was documented by the Department).

***These cases were either: 1) initially reported as HIV cases and then later reclassified as AIDS cases because they subsequently met the AIDS case definition; or 2) initially reported as AIDS cases.

****These cases were initially reported as HIV cases and have remained HIV cases. They have not met the case definition for AIDS as of December 31, 2012.

Figure 4. Reported HIV disease cases, by current status* and year of diagnosis, Missouri, 2003-2012**

*HIV case vs. AIDS case

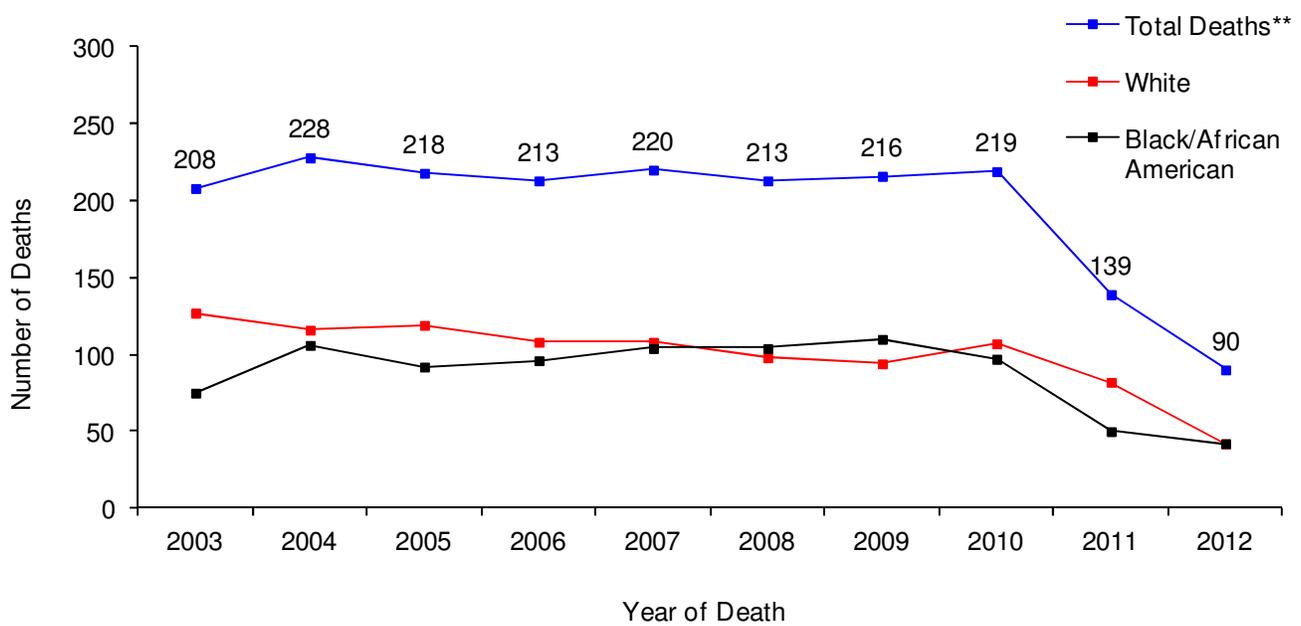
**Cases are indicated by year of initial diagnosis reported to MDHSS. (The year in which the first diagnosis of the person, whether as an HIV case or an AIDS case, was documented by the Department).

***These cases were either: 1) initially reported as HIV cases and then later reclassified as AIDS cases because they subsequently met the AIDS case definition; or 2) initially reported as AIDS cases.

****These cases were initially reported as HIV cases and have remained HIV cases. They have not met the case definition for AIDS as of December 31, 2012.

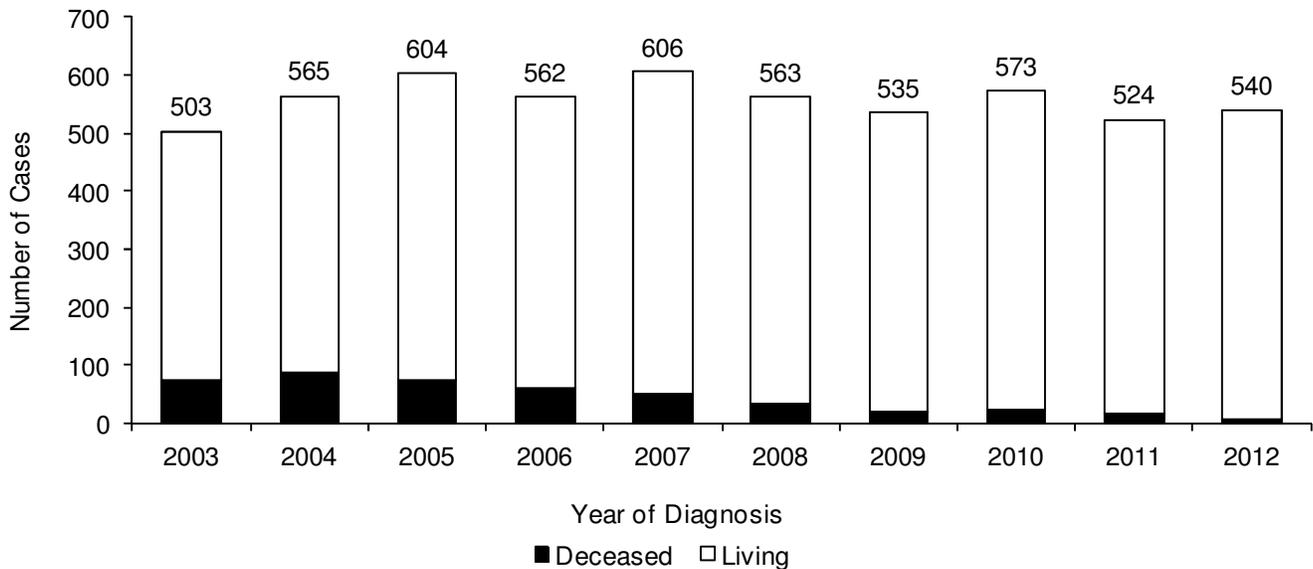
Between 2003 and 2012, the number of new HIV disease diagnoses has ranged from 503 cases in 2003, to 606 cases in 2007 (Figures 3 and 4). The number of new diagnoses has fluctuated slightly between 2003 and 2012, with no sustained upward or downward trend in new HIV diagnoses over this time period. Differences in the number of persons sub-classified as AIDS cases each year are due to the progression of the disease over time. For those diagnosed with HIV disease in 2003, a larger number are currently classified as AIDS cases compared to those diagnosed in 2012 because they have been living with the virus longer.

Figure 5. HIV disease deaths*, by selected race, by year of death, Missouri, 2003—2012†**



*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, 2012, and reported by February 28, 2013.

Figure 6. Persons diagnosed with HIV disease by current vital status* and year of diagnosis, Missouri, 2003—2012**



*Vital status on December 31, 2012.
 **Cases are indicated by year of initial diagnosis reported to MDHSS. (The year in which the first diagnosis of the person, whether as an HIV case or an AIDS case, was documented by the Department).

The number of deaths among persons with HIV disease was generally steady between 2003 and 2010 (Figure 5). The lower number of deaths in 2011 and 2012 is likely due to delays in death reporting. Of the 503 persons diagnosed with HIV disease in 2003, 75 (15%) were deceased by the end of 2012 (Figure 6). Among the 540 cases first diagnosed in 2012, seven (1%) were deceased at the end of 2012. 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 1. Living[†] HIV, AIDS, and HIV disease cases, by sex, by race/ethnicity, by race/ethnicity and sex, and by current age, Missouri, 2012

	HIV*			AIDS**			HIV Disease***		
	Cases	%	Rate****	Cases	%	Rate****	Cases	%	Rate****
Sex									
Male	4,389	81.8%	149.1	5,084	84.0%	172.7	9,473	83.0%	321.7
Female	976	18.2%	31.8	970	16.0%	31.6	1,946	17.0%	63.5
Total	5,365	100.0%	89.3	6,054	100.0%	100.7	11,419	100.0%	190.0
Race/Ethnicity									
White	2,643	49.3%	54.4	2,992	49.4%	61.6	5,635	49.3%	116.0
Black/African American	2,421	45.1%	349.6	2,725	45.0%	393.4	5,146	45.1%	743.0
Hispanic	217	4.0%	98.1	245	4.0%	110.8	462	4.0%	208.9
Asian/Pacific Islander	39	0.7%	36.4	26	0.4%	24.3	65	0.6%	60.7
American Indian/Alaskan Native	4	0.1%	16.3	9	0.1%	36.7	13	0.1%	52.9
Two or More Races/Unknown	41	0.8%	--	57	0.9%	--	98	0.9%	--
Total	5,365	100.0%	89.3	6,054	100.0%	100.7	11,419	100.0%	190.0
Race/Ethnicity-Males									
White Male	2,314	52.7%	97.0	2,701	53.1%	113.2	5,015	52.9%	210.2
Black/African American Male	1,833	41.8%	557.8	2,097	41.2%	638.1	3,930	41.5%	1195.8
Hispanic Male	178	4.1%	154.6	213	4.2%	185.0	391	4.1%	339.5
Asian/Pacific Islander Male	31	0.7%	61.3	19	0.4%	37.6	50	0.5%	98.9
American Indian/Alaskan Native Male	4	0.1%	32.5	9	0.2%	73.0	13	0.1%	105.5
Two or More Races/Unknown Male	29	0.7%	--	45	0.9%	--	74	0.8%	--
Total	4,389	100.0%	149.1	5,084	100.0%	172.7	9,473	100.0%	321.7
Race/Ethnicity-Females									
White Female	329	33.7%	13.3	291	30.0%	11.8	620	31.9%	25.1
Black/African American Female	588	60.2%	161.6	628	64.7%	172.5	1,216	62.5%	334.1
Hispanic Female	39	4.0%	36.8	32	3.3%	30.2	71	3.6%	67.0
Asian/Pacific Islander Female	8	0.8%	14.1	7	0.7%	12.4	15	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	12	1.2%	--	12	1.2%	--	24	1.2%	--
Total	976	100.0%	31.8	970	100.0%	31.6	1,946	100.0%	63.5
Current Age[‡]									
<2	1	0.0%	0.7	0	0.0%	0.0	1	0.0%	0.7
2-12	32	0.6%	3.7	1	0.0%	0.1	33	0.3%	3.8
13-18	28	0.5%	5.8	8	0.1%	1.7	36	0.3%	7.5
19-24	452	8.4%	88.6	125	2.1%	24.5	577	5.1%	113.1
25-44	2,496	46.5%	163.9	2,107	34.8%	138.3	4,603	40.3%	302.2
45-64	2,184	40.7%	134.1	3,530	58.3%	216.7	5,714	50.0%	350.8
65+	172	3.2%	20.1	283	4.7%	33.1	455	4.0%	53.2
Total	5,365	100.0%	89.3	6,054	100.0%	100.7	11,419	100.0%	190.0

[†]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 2012.

**Cases classified as AIDS by December 31, 2012.

***The sum of HIV cases and AIDS cases.

****Per 100,000 population based on 2011 MDHSS estimates.

[‡]Based on age as of December 31, 2012.

Note: Percentages may not total due to rounding.

Table 2. Diagnosed HIV, AIDS, and HIV disease cases, by sex, by race/ethnicity, by race/ethnicity and sex, and current age, Missouri, 2012

	HIV*			AIDS**			HIV Disease***		
	Cases	%	Rate****	Cases	%	Rate****	Cases	%	Rate****
Sex									
Male	345	85.0%	11.7	110	82.1%	3.7	455	84.3%	15.5
Female	61	15.0%	2.0	24	17.9%	0.8	85	15.7%	2.8
Total	406	100.0%	6.8	134	100.0%	2.2	540	100.0%	9.0
Race/Ethnicity									
White	148	36.5%	3.0	60	44.8%	1.2	208	38.5%	4.3
Black/African American	230	56.7%	33.2	61	45.5%	8.8	291	53.9%	42.0
Hispanic	18	4.4%	8.1	11	8.2%	5.0	29	5.4%	13.1
Asian/Pacific Islander	5	1.2%	4.7	2	1.5%	1.9	7	1.3%	6.5
American Indian/Alaskan Native	0	0.0%	0.0	0	0.0%	0.0	0	0.0%	0.0
Two or More Races/Unknown	5	1.2%	--	0	0.0%	--	5	0.9%	--
Total	406	100.0%	6.8	134	100.0%	2.2	540	100.0%	9.0
Race/Ethnicity-Males									
White Male	132	38.3%	5.5	49	44.5%	2.1	181	39.8%	7.6
Black/African American Male	188	54.5%	57.2	48	43.6%	14.6	236	51.9%	71.8
Hispanic Male	18	5.2%	15.6	11	10.0%	9.6	29	6.4%	25.2
Asian/Pacific Islander Male	2	0.6%	4.0	2	1.8%	4.0	4	0.9%	7.9
American Indian/Alaskan Native Male	0	0.0%	0.0	0	0.0%	0.0	0	0.0%	0.0
Two or More Races/Unknown Male	5	1.4%	--	0	0.0%	--	5	1.1%	--
Total	345	100.0%	11.7	110	100.0%	3.7	455	100.0%	15.5
Race/Ethnicity-Females									
White Female	16	26.2%	0.6	11	45.8%	0.4	27	31.8%	1.1
Black/African American Female	42	68.9%	11.5	13	54.2%	3.6	55	64.7%	15.1
Hispanic Female	0	0.0%	0.0	0	0.0%	0.0	0	0.0%	0.0
Asian/Pacific Islander Female	3	4.9%	5.3	0	0.0%	0.0	3	3.5%	5.3
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	0	0.0%	--	0	0.0%	--	0	0.0%	--
Total	61	100.0%	2.0	24	100.0%	0.8	85	100.0%	2.8
Current Age[†]									
<2	1	0.2%	0.7	0	0.0%	0.0	1	0.2%	0.7
2-12	3	0.7%	0.3	0	0.0%	0.0	3	0.6%	0.3
13-18	9	2.2%	1.9	1	0.7%	0.2	10	1.9%	2.1
19-24	125	30.8%	24.5	14	10.4%	2.7	139	25.7%	27.2
25-44	196	48.3%	12.9	65	48.5%	4.3	261	48.3%	17.1
45-64	69	17.0%	4.2	52	38.8%	3.2	121	22.4%	7.4
65+	3	0.7%	0.4	2	1.5%	0.2	5	0.9%	0.6
Total	406	100.0%	6.8	134	100.0%	2.2	540	100.0%	9.0

*HIV cases diagnosed during 2012 which remained HIV cases at the end of the year. Includes persons diagnosed in Missouri correctional facilities.

**AIDS cases initially diagnosed in 2012.

***The sum of newly diagnosed HIV cases and newly diagnosed AIDS cases. Does not include cases diagnosed prior to 2012 with HIV, which progressed to AIDS in 2012.

****Per 100,000 population based on 2011 MDHSS estimates.

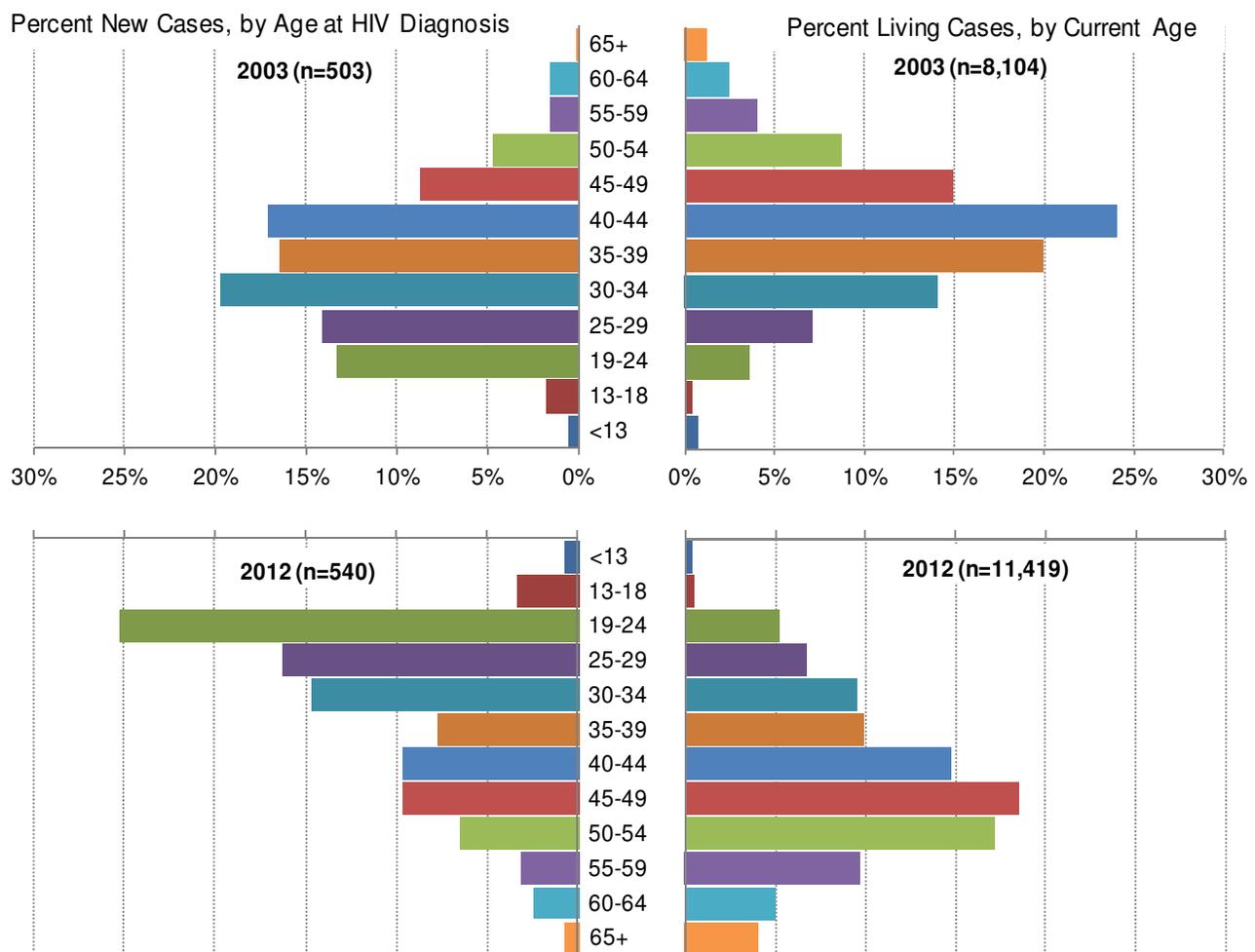
[†]Based on age as of December 31, 2012.

Note: Percentages may not total due to rounding.

Of the 11,419 persons living with HIV at the end of 2012, 83% were males (Table 1). The rate of those living with HIV disease was 5.1 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 6.4 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 5.7 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 13.3 times as high as the rate among whites, and 2.7 times as high among Hispanics compared to whites.

Of the 540 persons newly diagnosed with HIV disease in 2012, 25% were classified as AIDS cases by the end of 2012 (Table 2). The rate of new HIV disease diagnoses was 5.5 times as high among males compared to females. The rate of new HIV disease cases was 9.8 times as high among blacks/African Americans compared to whites, and 3.0 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 2012 (27.2 per 100,000).

Figure 7. Distribution of new HIV disease cases by age at diagnosis and living HIV disease cases by current age in selected year, Missouri, 2003 and 2012



Changes have occurred in the distribution of the age at diagnosis among new HIV disease cases over time (Figure 7). In 2003, the greatest proportion of new diagnoses occurred among those ages 30-34 (20%). In 2012, the greatest proportion of new diagnoses occurred among those ages 19-24 (25%). Although the age of new diagnoses has decreased, the age of individuals living with HIV has increased over time. In 2003, the greatest proportion of living cases was among those ages 40-44 (24%). In 2012, the greatest proportion of living cases was between 45-49 years old (19%).

Table 3. New and living HIV and AIDS cases and rates, by geographic area, and by HIV region, Missouri, 2012

Location	HIV Cases						AIDS Cases					
	Diagnosed 2012*			Living with HIV			Diagnosed 2012**			Living with AIDS		
	Cases	%	Rate***	Cases	%	Rate***	Cases	%	Rate***	Cases	%	Rate***
Geographic Area												
St. Louis City†	105	25.9%	33.0	1,530	28.5%	481.0	22	16.4%	6.9	1,669	27.6%	524.7
St. Louis County†	108	26.6%	10.8	941	17.5%	94.2	28	20.9%	2.8	933	15.4%	93.4
Kansas City†	82	20.2%	17.7	1,194	22.3%	257.8	32	23.9%	6.9	1,585	26.2%	342.2
Outstate†	96	23.6%	2.3	1,371	25.6%	32.4	49	36.6%	1.2	1,483	24.5%	35.1
Missouri Correctional Facilities††	15	3.7%	N/A	329	6.1%	N/A	3	2.2%	N/A	384	6.3%	N/A
Total	406	100.0%	6.8	5,365	100.0%	89.3	134	100.0%	2.2	6,054	100.0%	100.7
HIV Region												
St. Louis HIV Region†	226	55.7%	10.8	2,679	49.9%	128.2	60	44.8%	2.9	2,803	46.3%	134.2
Kansas City HIV Region†	109	26.8%	8.6	1,510	28.1%	119.8	45	33.6%	3.6	1,956	32.3%	155.2
Northwest HIV Region†	2	0.5%	0.8	47	0.9%	18.9	1	0.7%	0.4	61	1.0%	24.6
North Central HIV Region†	16	3.9%	2.1	229	4.3%	30.0	5	3.7%	0.7	241	4.0%	31.6
Southwest HIV Region†	32	7.9%	2.8	434	8.1%	37.7	14	10.4%	1.2	435	7.2%	37.8
Southeast HIV Region†	6	1.5%	1.2	137	2.6%	27.4	6	4.5%	1.2	174	2.9%	34.8
Missouri Correctional Facilities††	15	3.7%	N/A	329	6.1%	N/A	3	2.2%	N/A	384	6.3%	N/A
MISSOURI	406	100.0%	6.8	5,365	100.0%	89.3	134	100.0%	2.2	6,054	100.0%	100.7

*HIV cases diagnosed and reported to the Department during 2012 which remained HIV cases at the end of the year.

**Does not include HIV cases diagnosed prior to 2012 that progressed to AIDS in 2012.

***Per 100,000 population based on 2011 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 AIDS or progressed to AIDS at the end of 2012 by geographic area and HIV region (Table 3). In Outstate and Kansas City, 34% and 28% of newly diagnosed HIV disease cases progressed to AIDS at the end of 2012, respectively. In comparison, the proportion was 21%, 17%, and 17% for St. Louis County, St. Louis City, and Missouri correctional facilities, respectively. In the Southeast HIV Region, 50% of newly diagnosed HIV disease cases progressed to AIDS at the end of 2012, whereas the proportion was 33%, 30%, 29%, 24%, 21%, and 17% for the HIV regions of Northwest, Southwest, Kansas City, North Central, St. Louis, and Missouri correctional facilities, respectively. The variation in the proportion of newly diagnosed individuals that progressed to AIDS by the end of 2012 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 rates of new and living HIV and living AIDS cases were greatest in St. Louis City, while rates of new AIDS cases were greatest in St. Louis City and Kansas City (Table 3). The rate of new HIV case diagnoses in St. Louis City was 14.3 times as high as Outstate, and 7.7 times as high in Kansas City compared to Outstate. The rate of new AIDS case diagnoses was 5.8 times as high in St. Louis City and Kansas City compared to Outstate. This demonstrates the disproportionate impact of HIV disease on the major metropolitan areas in Missouri.

Table 4. Diagnosed HIV cases and rates, by selected race/ethnicity, by geographic area, Missouri, 2012

Area	White			Black/African American			Hispanic			Total		
	Cases	%	Rate*	Cases	%	Rate*	Cases	%	Rate*	Cases**	%	Rate*
St. Louis City†	32	30.5%	23.2	68	64.8%	44.6	3	2.9%	26.2	105	100.0%	33.0
St. Louis County†	21	19.4%	3.1	81	75.0%	35.0	5	4.6%	19.1	108	100.0%	10.8
Kansas City†	22	26.8%	8.5	55	67.1%	43.0	2	2.4%	4.3	82	100.0%	17.7
Outstate Missouri†	64	66.7%	1.7	20	20.8%	11.1	8	8.3%	5.8	96	100.0%	2.3
Missouri Correctional Facilities††	9	60.0%	N/A	6	40.0%	N/A	0	0.0%	N/A	15	100.0%	N/A
MISSOURI TOTAL	148	36.5%	3.0	230	56.7%	33.2	18	4.4%	8.1	406	100.0%	6.8

*Per 100,000 population based on 2011 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 5. Diagnosed HIV cases and rates, by selected race/ethnicity, by HIV region, Missouri, 2012

Area	White			Black/African American			Hispanic			Total		
	Cases	%	Rate*	Cases	%	Rate*	Cases	%	Rate*	Cases**	%	Rate*
St. Louis HIV Region†	64	28.3%	4.2	151	66.8%	37.3	8	3.5%	14.4	226	100.0%	10.8
Kansas City HIV Region†	35	32.1%	3.7	64	58.7%	34.6	4	3.7%	4.8	109	100.0%	8.6
Northwest HIV Region†	0	0.0%	0.0	2	100.0%	24.1	0	0.0%	0.0	2	100.0%	0.8
North Central HIV Region†	11	68.8%	1.6	3	18.8%	7.5	2	12.5%	9.4	16	100.0%	2.1
Southwest HIV Region†	25	78.1%	2.4	2	6.3%	8.6	4	12.5%	8.9	32	100.0%	2.8
Southeast HIV Region†	4	66.7%	0.9	2	33.3%	6.4	0	0.0%	0.0	6	100.0%	1.2
Missouri Correctional Facilities††	9	60.0%	N/A	6	40.0%	N/A	0	0.0%	N/A	15	100.0%	N/A
MISSOURI TOTAL	148	36.5%	3.0	230	56.7%	33.2	18	4.4%	8.1	406	100.0%	6.8

*Per 100,000 population based on 2011 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 2012 by race/ethnicity varied by geographic area (Table 4). Whites comprised 67% of new HIV case diagnoses in 2012 in Outstate, but only 19% 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 6.5 times as high as the rate among whites, and 3.4 times as high among Hispanics compared to whites. In comparison, the rate of new HIV cases was 1.9 times as high in blacks/African Americans compared to whites, and the rate was only 1.1 times as high for Hispanics compared to whites in St. Louis City.

Similar patterns observed for the geographic areas were also present by HIV region (Table 5). In the Southwest HIV Region, whites represented 78% of new HIV case diagnoses, whereas blacks/African Americans represented the majority of cases in the St. Louis (67%) and Kansas City (59%) Regions and all cases in the Northwest Region.

Table 6. Newly diagnosed and living HIV and AIDS cases in men who have sex with men, by selected race/ethnicity, Missouri, 2012

Race/Ethnicity	HIV Cases*				AIDS Cases			
	Newly Diagnosed		Living		Newly Diagnosed**		Living	
	Cases	%	Cases	%	Cases	%	Cases	%
White	95	35.8%	1,816	55.1%	34	46.6%	2,109	56.3%
Black/African American	146	55.1%	1,290	39.1%	34	46.6%	1,441	38.5%
Hispanic	18	6.8%	143	4.3%	3	4.1%	138	3.7%
Other/Unknown	6	2.3%	48	1.5%	2	2.7%	58	1.5%
MISSOURI TOTAL***	265	100.0%	3,297	100.0%	73	100.0%	3,746	100.0%

*Remained HIV cases at the end of the year.

**Does not include HIV cases diagnosed prior to 2012 that progressed to AIDS in 2012.

***Totals include persons diagnosed in Missouri correctional facilities.

Note: Percentages may not total due to rounding.

Table 7. Living HIV disease cases in men who have sex with men, by selected race/ethnicity, by current age group, Missouri, 2012

Age Group	White		Black/African American		Hispanic		Total*	
	Cases	%**	Cases	%**	Cases	%**	Cases	%**
13-18	1	0.0%	8	0.3%	1	0.4%	11	0.2%
19-24	64	1.6%	336	12.3%	13	4.6%	423	6.0%
25-44	1,299	33.1%	1,225	44.9%	150	53.4%	2,728	38.7%
45-64	2,353	59.9%	1,107	40.5%	112	39.9%	3,609	51.2%
65+	208	5.3%	55	2.0%	5	1.8%	272	3.9%
MISSOURI TOTAL	3,925	100.0%	2,731	100.0%	281	100.0%	7,043	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 6-19 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 2012. These data are subject to change.

There were a total of 338 new HIV disease diagnoses attributed to MSM in 2012 (Table 6). Although blacks/African Americans represented 1.5 times as many new HIV cases compared to whites, these groups represented equal proportions of new AIDS cases among MSM diagnosed with HIV disease in 2012 (47%). Whites represented a larger proportion of MSM living with both HIV and AIDS compared to blacks/African Americans and Hispanics. Of the newly diagnosed cases among MSM, 22% progressed to AIDS by the end of 2012.

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 7). Among white MSM living with HIV disease, the majority (60%) were between 45-64 years of age at the end of 2012. However, only 41% of living black/African American MSM and 40% 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 (344).

Table 8. Living HIV disease cases in men who have sex with men, by selected race/ethnicity, by geographic area, by HIV region, Missouri, 2012

Geographic Area	White		Black/African American		Hispanic		Total*	
	Cases	%**	Cases	%**	Cases	%**	Cases	%***
St. Louis City	1,033	49.3%	987	47.1%	43	2.1%	2,097	29.8%
St. Louis County	513	43.6%	608	51.7%	45	3.8%	1,176	16.7%
Kansas City	1,007	53.5%	724	38.5%	111	5.9%	1,882	26.7%
Outstate	1,274	81.6%	192	12.3%	74	4.7%	1,562	22.2%
Missouri Correctional Facilities	98	30.1%	220	67.5%	8	2.5%	326	4.6%
MISSOURI TOTAL	3,925	55.7%	2,731	38.8%	281	4.0%	7,043	100.0%
HIV Region								
St. Louis Region	1,754	49.9%	1,624	46.2%	91	2.6%	3,516	49.9%
Kansas City Region	1,313	57.5%	782	34.2%	141	6.2%	2,285	32.4%
Northwest Region	54	93.1%	3	5.2%	1	1.7%	58	0.8%
North Central Region	181	74.5%	46	18.9%	14	5.8%	243	3.5%
Southwest Region	413	87.3%	30	6.3%	23	4.9%	473	6.7%
Southeast Region	112	78.9%	26	18.3%	3	2.1%	142	2.0%
Missouri Correctional Facilities	98	30.1%	220	67.5%	8	2.5%	326	4.6%
MISSOURI TOTAL	3,925	55.7%	2,731	38.8%	281	4.0%	7,043	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 7,043 MSM living with HIV disease at the end of 2012, the largest proportion were diagnosed in St. Louis City (30%), followed by Kansas City (27%) (Table 8). There were differences in the proportion of living HIV disease cases among MSM diagnosed in each geographic area by race/ethnicity. In Outstate Missouri, 82% of persons living with HIV disease attributed to MSM were white, whereas only 30% 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 regions. The St. Louis HIV Region represented 50% of all living cases among MSM and the Kansas City HIV Region comprised 32%. The proportion of living cases among white MSM was highest in the Northwest HIV Region and lowest in Missouri correctional facilities.

Table 9. Newly diagnosed and living HIV and AIDS cases in men who have sex with men and inject drugs, by selected race/ethnicity, Missouri, 2012

Race/Ethnicity	HIV Cases*				AIDS Cases			
	Newly Diagnosed		Living		Newly Diagnosed**		Living	
	Cases	%	Cases	%	Cases	%	Cases	%
White	8	88.9%	141	67.1%	2	66.7%	230	62.5%
Black/African American	1	11.1%	61	29.0%	1	33.3%	125	34.0%
Hispanic	0	0.0%	7	3.3%	0	0.0%	9	2.4%
Other/Unknown	0	0.0%	1	0.5%	0	0.0%	4	1.1%
MISSOURI TOTAL***	9	100.0%	210	100.0%	3	100.0%	368	100.0%

*Remained HIV cases at the end of the year.
**Does not include HIV cases diagnosed prior to 2012 that progressed to AIDS in 2012.
***Totals include persons diagnosed in Missouri correctional facilities.
Note: Percentages may not total due to rounding.

Table 10. Living HIV disease cases in men who have sex with men and inject drugs, by selected race/ethnicity, by current age group, Missouri, 2012

Age Group	White		Black/African American		Hispanic		Total*	
	Cases	%**	Cases	%**	Cases	%**	Cases	%**
13-18	0	0.0%	0	0.0%	0	0.0%	0	0.0%
19-24	3	0.8%	3	1.6%	0	0.0%	6	1.0%
25-44	122	32.9%	50	26.9%	10	62.5%	184	31.8%
45-64	233	62.8%	127	68.3%	5	31.3%	368	63.7%
65+	13	3.5%	6	3.2%	1	6.3%	20	3.5%
MISSOURI TOTAL	371	100.0%	186	100.0%	16	100.0%	578	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 12 new HIV disease diagnoses attributed to men who have sex with men and inject drugs (MSM/IDU) in 2012 (Table 9). 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, 25% of newly diagnosed cases progressed to AIDS by the end of 2012. Whites represented the majority (89%) of new HIV cases among MSM/IDU. Among living HIV and AIDS cases, whites represented the largest proportion of cases, 67% and 63%, respectively.

The distribution of living HIV disease cases by current age varied by race/ethnicity among MSM/IDU (Table 10). Among white and black/African American MSM/IDU living with HIV disease, the majority, 63% and 68%, were between 45-64 years of age at the end of 2012. In contrast, only 31% 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 2012.

Table 11. Living HIV disease cases in men who have sex with men and inject drugs, by selected race/ethnicity, by geographic area, by HIV region, Missouri, 2012

Geographic Area	White		Black/African American		Hispanic		Total*	
	Cases	%**	Cases	%**	Cases	%**	Cases	%***
St. Louis City	42	41.2%	58	56.9%	2	2.0%	102	17.6%
St. Louis County	26	54.2%	22	45.8%	0	0.0%	48	8.3%
Kansas City	101	63.9%	43	27.2%	9	5.7%	158	27.3%
Outstate	167	89.3%	15	8.0%	5	2.7%	187	32.4%
Missouri Correctional Facilities	35	42.2%	48	57.8%	0	0.0%	83	14.4%
MISSOURI TOTAL	371	64.2%	186	32.2%	16	2.8%	578	100.0%
HIV Region								
St. Louis Region	77	47.8%	81	50.3%	3	1.9%	161	27.9%
Kansas City Region	139	70.2%	45	22.7%	9	4.5%	198	34.3%
Northwest Region	9	100.0%	0	0.0%	0	0.0%	9	1.6%
North Central Region	23	79.3%	4	13.8%	2	6.9%	29	5.0%
Southwest Region	71	92.2%	4	5.2%	2	2.6%	77	13.3%
Southeast Region	17	81.0%	4	19.0%	0	0.0%	21	3.6%
Missouri Correctional Facilities	35	42.2%	48	57.8%	0	0.0%	83	14.4%
MISSOURI TOTAL	371	64.2%	186	32.2%	16	2.8%	578	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 578 MSM/IDU living with HIV disease at the end of 2012, the largest proportion was diagnosed in Outstate Missouri (32%), followed by Kansas City (27%) (Table 11). 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, 89% of living cases attributed to MSM/IDU were white, whereas only 41% of living cases diagnosed in St. Louis City among MSM/IDU were white.

The Kansas City HIV Region represented 34% of all living cases among MSM/IDU, and the St. Louis HIV Region comprised 28%. The proportion of white living cases among MSM/IDU was highest in the Northwest HIV Region (100%) and lowest in Missouri correctional facilities (42%).

Table 12. Newly diagnosed and living HIV and AIDS cases in injecting drug users, by selected race/ethnicity and sex, Missouri, 2012

Race/Ethnicity and Sex	HIV Cases*				AIDS Cases			
	Newly Diagnosed		Living		Newly Diagnosed**		Living	
	Cases	%	Cases	%	Cases	%	Cases	%
White Male	5	38.5%	77	31.4%	2	66.7%	109	26.8%
Black/African American Male	3	23.1%	70	28.6%	1	33.3%	147	36.2%
Hispanic Male	0	0.0%	4	1.6%	0	0.0%	14	3.4%
White Female	2	15.4%	55	22.4%	0	0.0%	54	13.3%
Black/African American Female	3	23.1%	35	14.3%	0	0.0%	70	17.2%
Hispanic Female	0	0.0%	1	0.4%	0	0.0%	8	2.0%
MISSOURI TOTAL***	13	100.0%	245	100.0%	3	100.0%	406	100.0%

*Remained HIV cases at the end of the year.

**Does not include HIV cases diagnosed prior to 2012 that progressed to AIDS in 2012.

***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 13. Living HIV disease cases in injecting drug users, by selected race/ethnicity and sex, by current age group, Missouri, 2012

Age Group	White Males		Black/African American Males		White Females		Black/African American Females		Total*	
	Cases	%**	Cases	%**	Cases	%**	Cases	%**	Cases	%**
13-18	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
19-24	2	1.1%	2	0.9%	4	3.7%	1	1.0%	9	1.4%
25-44	48	25.8%	48	22.1%	46	42.2%	37	35.2%	190	29.2%
45-64	128	68.8%	156	71.9%	58	53.2%	62	59.0%	423	65.0%
65+	8	4.3%	11	5.1%	1	0.9%	5	4.8%	29	4.5%
MISSOURI TOTAL	186	100.0%	217	100.0%	109	100.0%	105	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 16 new HIV disease diagnoses attributed to IDU in 2012 (Table 12). 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, 19% progressed to AIDS by the end of 2012. Males represented approximately 65% 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 AIDS by the end of 2012 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 AIDS cases. For example, white males represented the largest proportion of living HIV cases (31%) while black/African American males represented the largest proportion (36%) of living 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 2012 (Table 13). The proportion of living HIV disease cases between the ages of 25 and 44 was greatest among white females.

Table 14. Living HIV disease cases in injecting drug users, by selected race/ethnicity, by geographic area, by HIV region, Missouri, 2012

Geographic Area	White		Black/African American		Hispanic		Total*	
	Cases	%**	Cases	%**	Cases	%**	Cases	%***
St. Louis City	21	15.6%	111	82.2%	2	1.5%	135	20.7%
St. Louis County	21	38.2%	32	58.2%	1	1.8%	55	8.4%
Kansas City	47	31.8%	88	59.5%	11	7.4%	148	22.7%
Outstate	157	79.7%	31	15.7%	8	4.1%	197	30.3%
Missouri Correctional Facilities	49	42.2%	60	51.7%	5	4.3%	116	17.8%
MISSOURI TOTAL	295	45.3%	322	49.5%	27	4.1%	651	100.0%
HIV Region								
St. Louis Region	72	32.7%	143	65.0%	3	1.4%	220	33.8%
Kansas City Region	79	41.8%	94	49.7%	14	7.4%	189	29.0%
Northwest Region	5	71.4%	2	28.6%	0	0.0%	7	1.1%
North Central Region	19	67.9%	8	28.6%	1	3.6%	28	4.3%
Southwest Region	59	81.9%	8	11.1%	4	5.6%	72	11.1%
Southeast Region	12	63.2%	7	36.8%	0	0.0%	19	2.9%
Missouri Correctional Facilities	49	42.2%	60	51.7%	5	4.3%	116	17.8%
MISSOURI TOTAL	295	45.3%	322	49.5%	27	4.1%	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 2012, the largest proportion was diagnosed in Outstate Missouri (30%), followed by Kansas City (23%) (Table 14). There were differences in the proportion of living HIV disease cases among IDU diagnosed in each geographic area by race/ethnicity. In Outstate Missouri, 80% of living cases attributed to IDU were white, whereas only 16% 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 Region represented 34% of all living cases among IDU, and the Kansas City HIV Region comprised 29%. The proportion of white living cases among IDU was highest in the Southwest HIV Region (82%) and lowest in the St. Louis HIV Region (35%) while the reverse was true of black/African American living cases among IDU (11% and 69%). Though proportions of Hispanic living cases among IDU by HIV 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 (14).

Table 15. Newly diagnosed and living HIV and AIDS cases in heterosexual contacts, by selected race/ethnicity and sex, Missouri, 2012

Race/Ethnicity and Sex	HIV Cases*				AIDS Cases			
	Newly Diagnosed		Living		Newly Diagnosed**		Living	
	Cases	%	Cases	%	Cases	%	Cases	%
White Male	3	8.6%	58	7.9%	0	0.0%	52	6.2%
Black/African American Male	7	20.0%	101	13.8%	2	15.4%	166	19.8%
Hispanic Male	0	0.0%	2	0.3%	1	7.7%	10	1.2%
White Female	9	25.7%	204	27.9%	7	53.8%	192	22.9%
Black/African American Female	16	45.7%	330	45.2%	3	23.1%	386	46.1%
Hispanic Female	0	0.0%	21	2.9%	0	0.0%	17	2.0%
MISSOURI TOTAL***	35	100.0%	730	100.0%	13	100.0%	838	100.0%

*Remained HIV cases at the end of the year.

**Does not include HIV cases diagnosed prior to 2012 that progressed to AIDS in 2012.

***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 16. Living HIV disease cases in heterosexual contacts, by selected race/ethnicity and sex, by current age group, Missouri, 2012

Age Group	White Males		Black/African American Males		White Females		Black/African American Females		Total*	
	Cases	%**	Cases	%**	Cases	%**	Cases	%**	Cases	%**
	13-18	0	0.0%	0	0.0%	1	0.3%	1	0.1%	2
19-24	0	0.0%	7	2.6%	5	1.3%	26	3.6%	39	2.5%
25-44	22	20.0%	123	46.1%	180	45.5%	410	57.3%	782	49.9%
45-64	73	66.4%	125	46.8%	182	46.0%	266	37.2%	674	43.0%
65+	15	13.6%	12	4.5%	28	7.1%	13	1.8%	71	4.5%
MISSOURI TOTAL	110	100.0%	267	100.0%	396	100.0%	716	100.0%	1,568	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 48 new HIV disease diagnoses attributed to heterosexual contact in 2012 (Table 15). The small number of new cases diagnosed among IDU make patterns by race/ethnicity and sex difficult to interpret. Though based on small numbers, white and black/African American females represented the largest number of new HIV disease diagnoses among heterosexuals. White females were more likely to have progressed to AIDS by the end of 2012 than black/African American females (43% vs. 16%). Overall, 27% of newly diagnosed cases attributed to heterosexual contact progressed to AIDS by the end of 2012.

Females represented 78% of living HIV cases and 72% of living 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 and 25-44 years of age in black/African American females (Table 16). The number of living cases among black/African American male and white female heterosexual contact cases was nearly equally distributed among those 25-44 and 45-64 years of age.

Geographic Area	White		Black/African American		Hispanic		Total*	
	Cases	%**	Cases	%**	Cases	%**	Cases	%***
St. Louis City	70	14.8%	389	82.2%	11	2.3%	473	30.2%
St. Louis County	66	22.1%	216	72.5%	9	3.0%	298	19.0%
Kansas City	61	24.4%	171	68.4%	11	4.4%	250	15.9%
Outstate	290	65.5%	125	28.2%	18	4.1%	443	28.3%
Missouri Correctional Facilities	19	18.3%	82	78.8%	1	1.0%	104	6.6%
MISSOURI TOTAL	506	32.3%	983	62.7%	50	3.2%	1,568	100.0%
HIV Region								
St. Louis Region	177	21.4%	616	74.5%	22	2.7%	827	52.7%
Kansas City Region	109	34.3%	183	57.5%	18	5.7%	318	20.3%
Northwest Region	9	56.3%	7	43.8%	0	0.0%	16	1.0%
North Central Region	57	60.6%	30	31.9%	3	3.2%	94	6.0%
Southwest Region	92	71.9%	28	21.9%	5	3.9%	128	8.2%
Southeast Region	43	53.1%	37	45.7%	1	1.2%	81	5.2%
Missouri Correctional Facilities	19	18.3%	82	78.8%	1	1.0%	104	6.6%
MISSOURI TOTAL	506	32.3%	983	62.7%	50	3.2%	1,568	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 1,568 living cases among heterosexual contacts at the end of 2012, the largest proportion was diagnosed in St. Louis City (30%); the next highest was Outstate Missouri (28%) (Table 17). 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 (63%) compared to all other exposure categories.

The St. Louis HIV Region represented 53% of all living cases among heterosexuals, and the Kansas City HIV Region comprised 20%. The proportion of white living cases among heterosexuals was highest in the Southwest HIV Region (72%) and lowest in Missouri correctional facilities (18%). The proportion of black/African American living cases was highest in Missouri correctional facilities (79%) and lowest in the Southwest Region (22%).

Table 18. Deaths* among HIV cases, by mode of transmission, by selected race and sex, Missouri, 1982—2012

Mode of Transmission	White Males		Black/African American Males		White Females		Black/African American Females		Total**	
	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%
MSM	193	64.3%	129	57.6%	0	0.0%	0	0.0%	330	52.0%
MSM/IDU	41	13.7%	15	6.7%	0	0.0%	0	0.0%	59	9.3%
IDU	27	9.0%	30	13.4%	7	20.6%	17	31.5%	85	13.4%
Heterosexual Contact	4	1.3%	18	8.0%	17	50.0%	27	50.0%	67	10.6%
No Indicated Risk (NIR)	28	9.3%	31	13.8%	10	29.4%	9	16.7%	85	13.4%
MISSOURI TOTAL***	300	100.0%	224	100.0%	34	100.0%	54	100.0%	635	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 nine 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 19. Deaths* among AIDS cases, by mode of transmission, by selected race and sex, Missouri, 1982—2012

Mode of Transmission	White Males		Black/African American Males		White Females		Black/African American Females		Total**	
	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%
MSM	3,241	78.0%	1,252	68.5%	0	0.0%	0	0.0%	4,619	67.3%
MSM/IDU	417	10.0%	198	10.8%	0	0.0%	0	0.0%	631	9.2%
IDU	171	4.1%	171	9.4%	79	28.5%	103	25.5%	546	8.0%
Heterosexual Contact	65	1.6%	86	4.7%	143	51.6%	246	60.9%	550	8.0%
No Indicated Risk (NIR)	107	2.6%	99	5.4%	27	9.7%	33	8.2%	283	4.1%
MISSOURI TOTAL***	4,156	100.0%	1,828	100.0%	277	100.0%	404	100.0%	6,861	100.0%

*May or may not be due to AIDS-related illnesses.

**Totals include cases in persons whose race/ethnicity is either unknown or not listed.

***Total (numbers and percentages) include 232 cases (3.4%) 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.

The number of deaths that have occurred among persons still classified as HIV cases at the time of death was small (635) in comparison to the number of deaths among persons classified as AIDS (6,861) (Tables 18 and 19). The greatest proportion of deaths among HIV cases has occurred among white males (47%) (Table 18).

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 AIDS cases (Table 19). Among both white and black/African American female AIDS cases, cases attributed to heterosexual contact represented the majority of deaths. The proportion of deaths among those with no indicated risk among AIDS cases was smaller than that among HIV cases, likely because there was more time to obtain exposure category information.

Table 20. Newly diagnosed and living HIV and AIDS cases with exposure category assignments for Missouri, 2012

Exposure category	HIV cases				AIDS cases			
	2012*		Living		2012**		Living	
Adult/Adolescent								
Men who have sex with men	311	77.4%	3,746	70.7%	97	72.4%	4,077	67.7%
Men who have sex with men and inject drugs	11	2.7%	237	4.5%	4	3.0%	398	6.6%
Injecting drug use	19	4.7%	299	5.6%	4	3.0%	468	7.8%
Heterosexual contact	61	15.2%	1,005	19.0%	29	21.6%	1,039	17.2%
Hemophilia/coagulation disorder	0	0.0%	10	0.2%	0	0.0%	35	0.6%
Blood transfusion or tissue recipient	0	0.0%	3	0.1%	0	0.0%	7	0.1%
No indicated risk (NIR)	-----	-----	-----	-----	-----	-----	-----	-----
ADULT/ADOLESCENT SUBTOTAL	402	100.0%	5,302 †	100.0%	134	100.0%	6,025 †	100.0%
Pediatric (<13 years old)								
PEDIATRIC SUBTOTAL	4	100.0%	63	100.0%	0	0.0%	29	100.0%
TOTAL	406		5,365		134		6,054	

*HIV cases reported during 2012 which remained HIV cases at the end of the year.

**Does not include HIV cases diagnosed prior to 2012 that progressed to AIDS in 2012.

†Includes 2 cases with a confirmed "other" exposure category among persons living with HIV and one case among persons living with AIDS.

Note: Percentages may not total due to rounding.

The data in Table 20 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 AIDS cases, MSM represented the greatest proportion of cases. The proportion of MSM cases was greater for new HIV and AIDS cases compared to the proportion among their respective living cases. This 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 four new HIV cases diagnosed among children less than 13 years of age in 2012.

The majority of HIV disease cases diagnosed in 2012 (94%) and those living with HIV disease (93%) were residents of a metropolitan area at the time of diagnosis (Table 21). 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 73% of living cases in nonmetropolitan areas were among males. There were differences in the distribution of new and living HIV disease cases by race/ethnicity based on the population of the area of residence. For both new and living HIV disease cases, as the population of the area of residence became smaller, the proportion of cases that occurred among whites increased. For example, only 36% of new HIV disease diagnoses were among whites in metropolitan areas compared to 92% 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 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 21. 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, 2012†

	Newly Diagnosed						Living					
	Metropolitan Area**		Micropolitan Area***		Nonmetropolitan Area****		Metropolitan Area**		Micropolitan Area***		Nonmetropolitan Area****	
	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%
Sex												
Male	418	84.8%	10	58.8%	10	83.3%	8,317	83.3%	295	73.8%	237	72.9%
Female	75	15.2%	7	41.2%	2	16.7%	1,664	16.7%	105	26.3%	88	27.1%
Total	493	100.0%	17	100.0%	12	100.0%	9,981	100.0%	400	100.0%	325	100.0%
Race/Ethnicity												
White	175	35.5%	12	70.6%	11	91.7%	4,868	48.8%	294	73.5%	252	77.5%
Black/African American	279	56.6%	3	17.6%	1	8.3%	4,532	45.4%	86	21.5%	57	17.5%
Hispanic	27	5.5%	2	11.8%	0	0.0%	416	4.2%	16	4.0%	14	4.3%
Other/Unknown	12	2.4%	0	0.0%	0	0.0%	165	1.7%	4	1.0%	2	0.6%
Total	493	100.0%	17	100.0%	12	100.0%	9,981	100.0%	400	100.0%	325	100.0%
Exposure Category												
Men who have sex with men	316	64.1%	7	41.2%	7	58.3%	6,390	64.0%	181	45.3%	146	44.9%
Men who have sex with men and inject drugs	10	2.0%	0	0.0%	0	0.0%	448	4.5%	29	7.3%	18	5.5%
Injecting drug use	9	1.8%	1	5.9%	1	8.3%	478	4.8%	29	7.3%	28	8.6%
Heterosexual contact	40	8.1%	4	23.5%	2	16.7%	1,294	13.0%	88	22.0%	82	25.2%
No Indicated Risk (NIR)	114	23.1%	5	29.4%	2	16.7%	1,252	12.5%	61	15.3%	40	12.3%
Other	0	0.0%	0	0.0%	0	0.0%	44	0.4%	4	1.0%	5	1.5%
Pediatric	4	0.8%	0	0.0%	0	0.0%	75	0.8%	8	2.0%	6	1.8%
Total	493	100.0%	17	100.0%	12	100.0%	9,981	100.0%	400	100.0%	325	100.0%
Age at Diagnosis												
<2	1	0.2%	0	0.0%	0	0.0%	44	0.4%	5	1.3%	3	0.9%
2-12	3	0.6%	0	0.0%	0	0.0%	24	0.2%	2	0.5%	2	0.6%
13-18	16	3.2%	1	5.9%	0	0.0%	263	2.6%	8	2.0%	11	3.4%
19-24	130	26.4%	2	11.8%	0	0.0%	1,442	14.4%	44	11.0%	31	9.5%
25-44	235	47.7%	13	76.5%	3	25.0%	6,546	65.6%	263	65.8%	193	59.4%
45-64	104	21.1%	1	5.9%	9	75.0%	1,611	16.1%	77	19.3%	83	25.5%
65+	4	0.8%	0	0.0%	0	0.0%	51	0.5%	1	0.3%	2	0.6%
Total	493	100.0%	17	100.0%	12	100.0%	9,981	100.0%	400	100.0%	325	100.0%

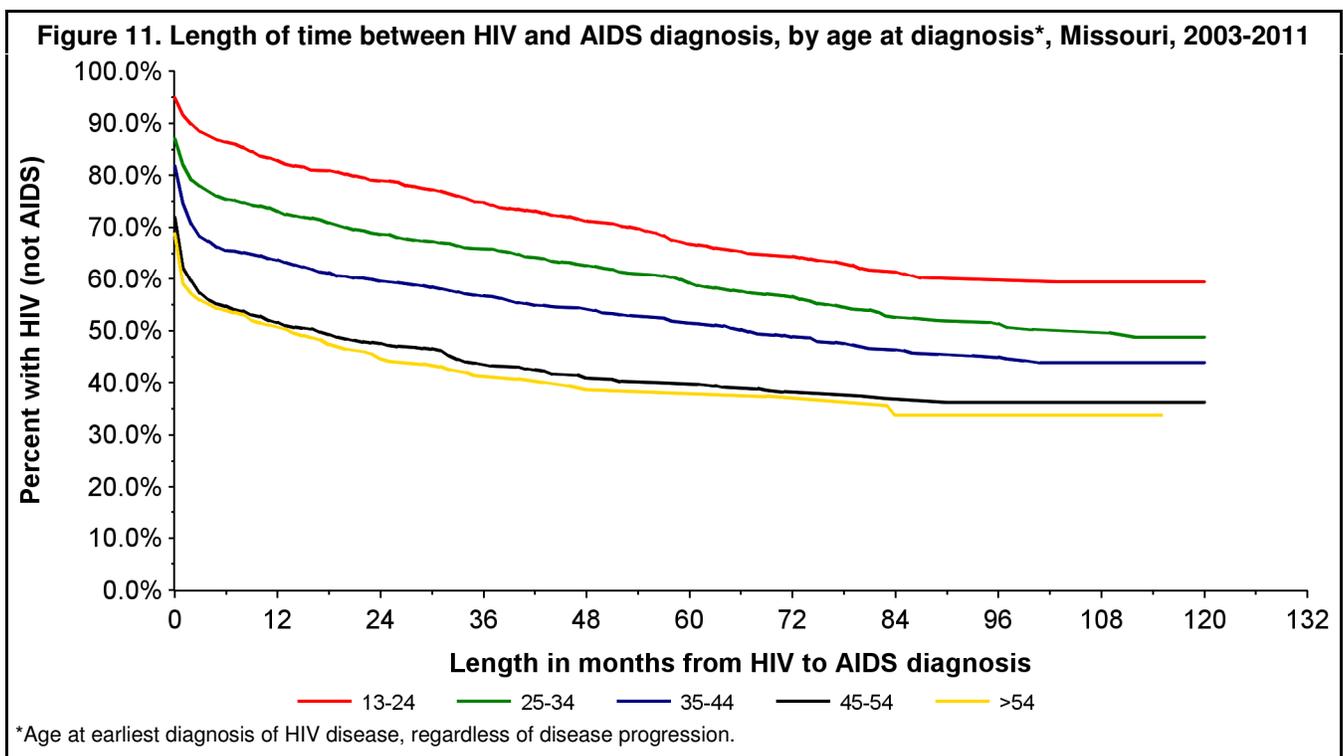
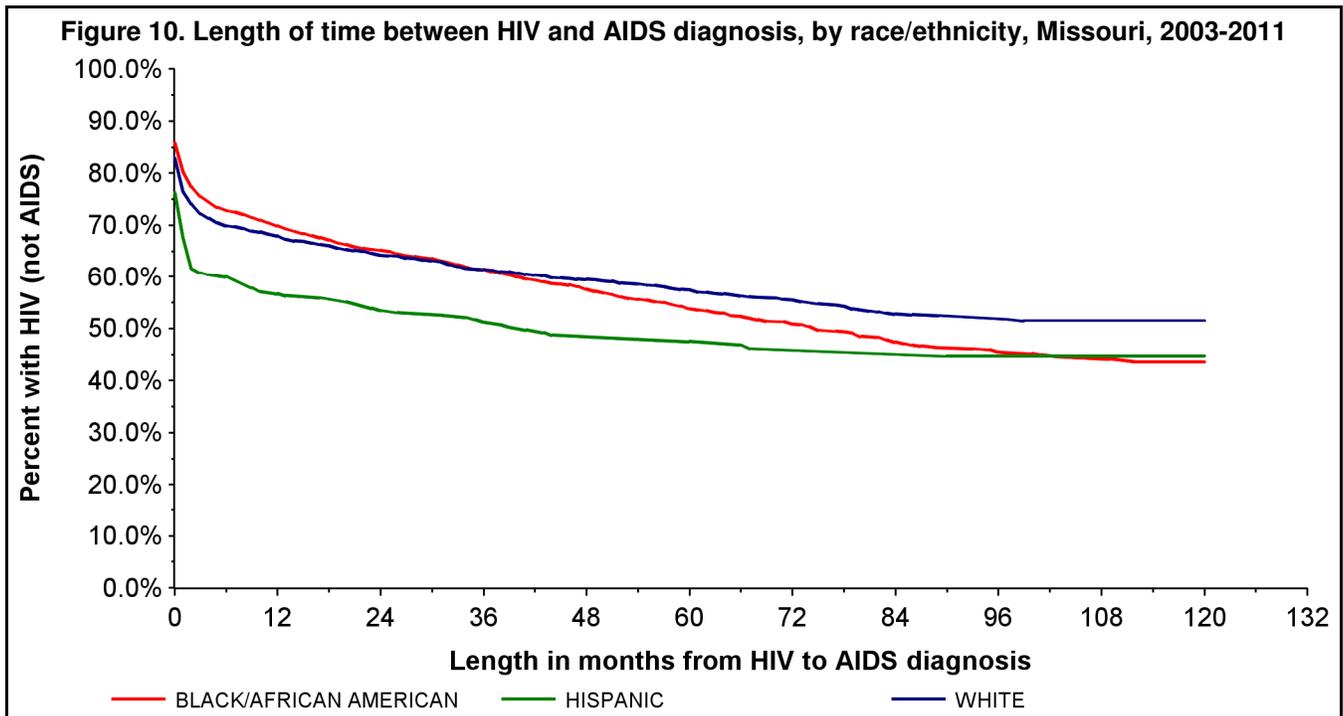
*Includes all individuals diagnosed with the HIV virus, regardless of current status (i.e., HIV or AIDS)

†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 2008 US Census estimates. See Appendix for map of included counties.

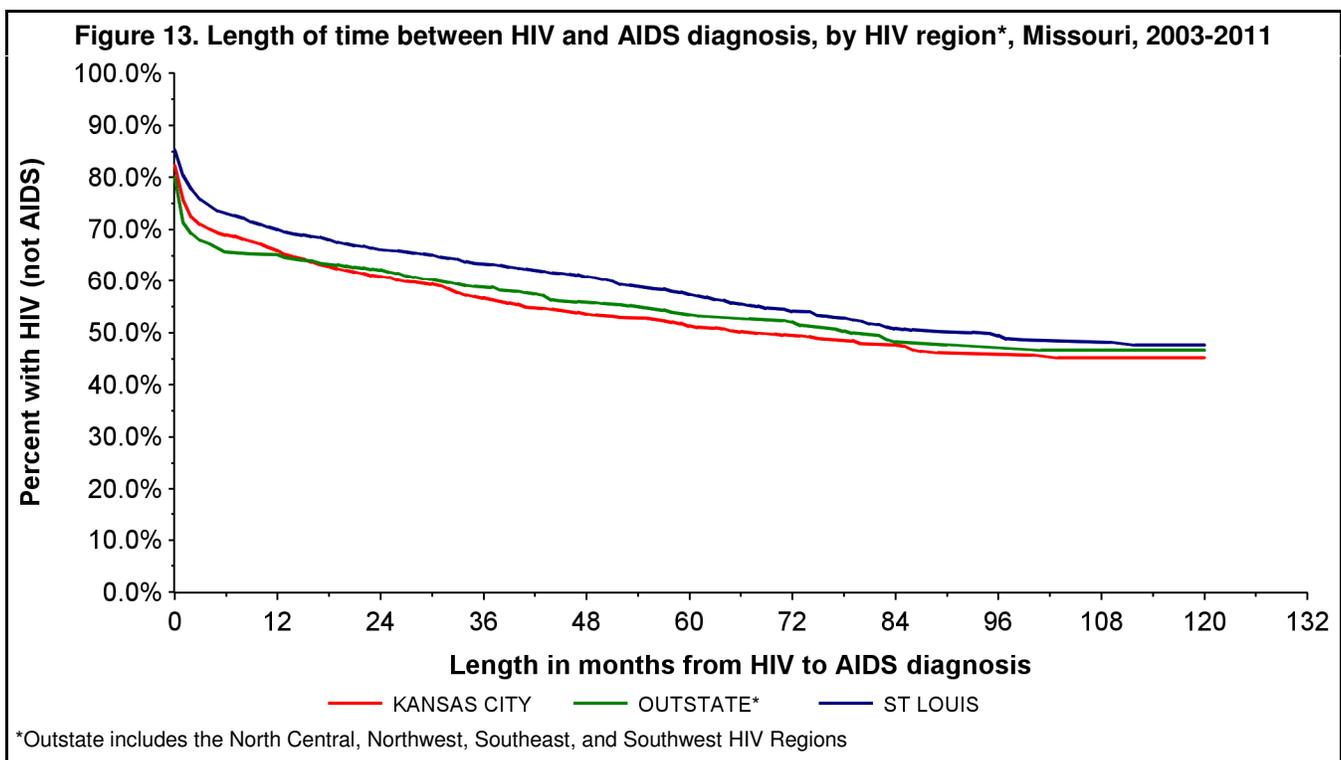
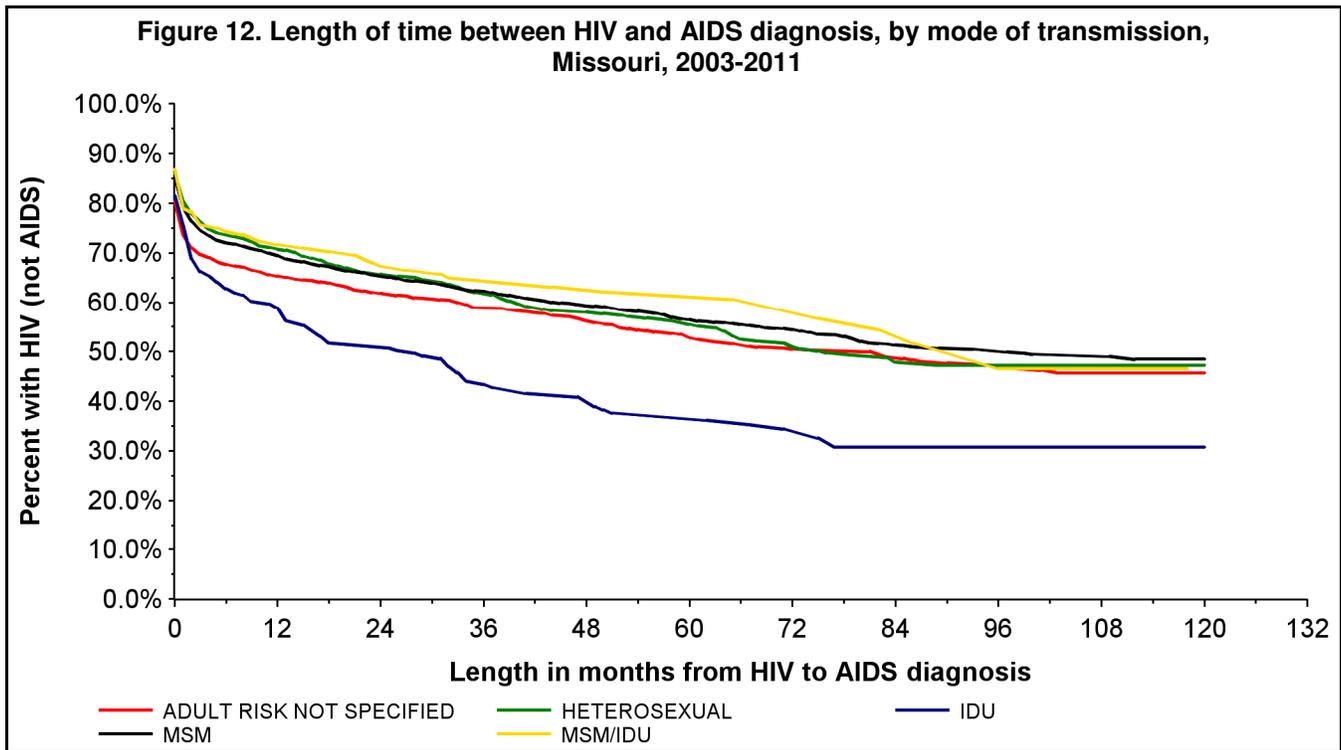
***A micropolitan area contains a core urban area with a population between 10,000-49,999. It also includes adjacent counties that have a high degree of social and economic integration with the core urban area. Based on 2008 US Census estimates. See Appendix for map of included counties.

****An area that does not meet the population requirements for the metropolitan or micropolitan area. Based on 2008 US Census estimates. See Appendix for map of included counties. Note: Percentages may not total due to rounding.



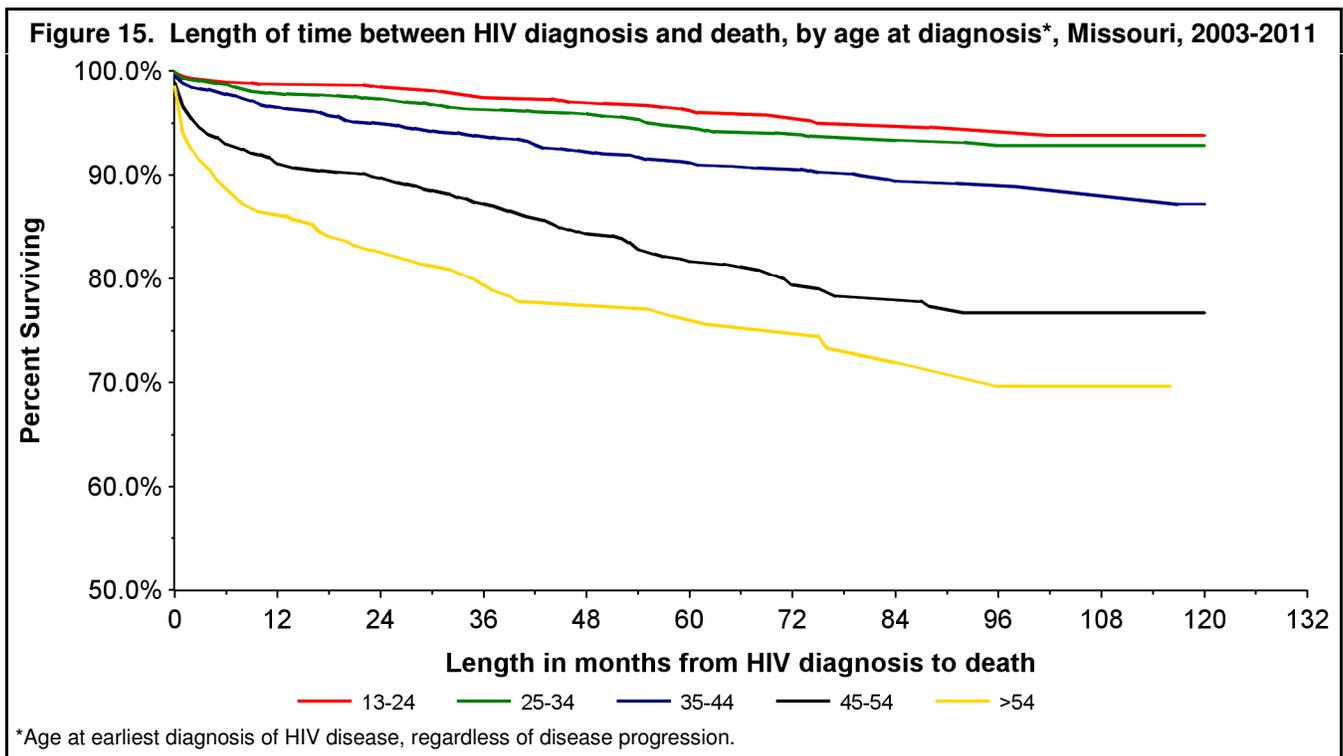
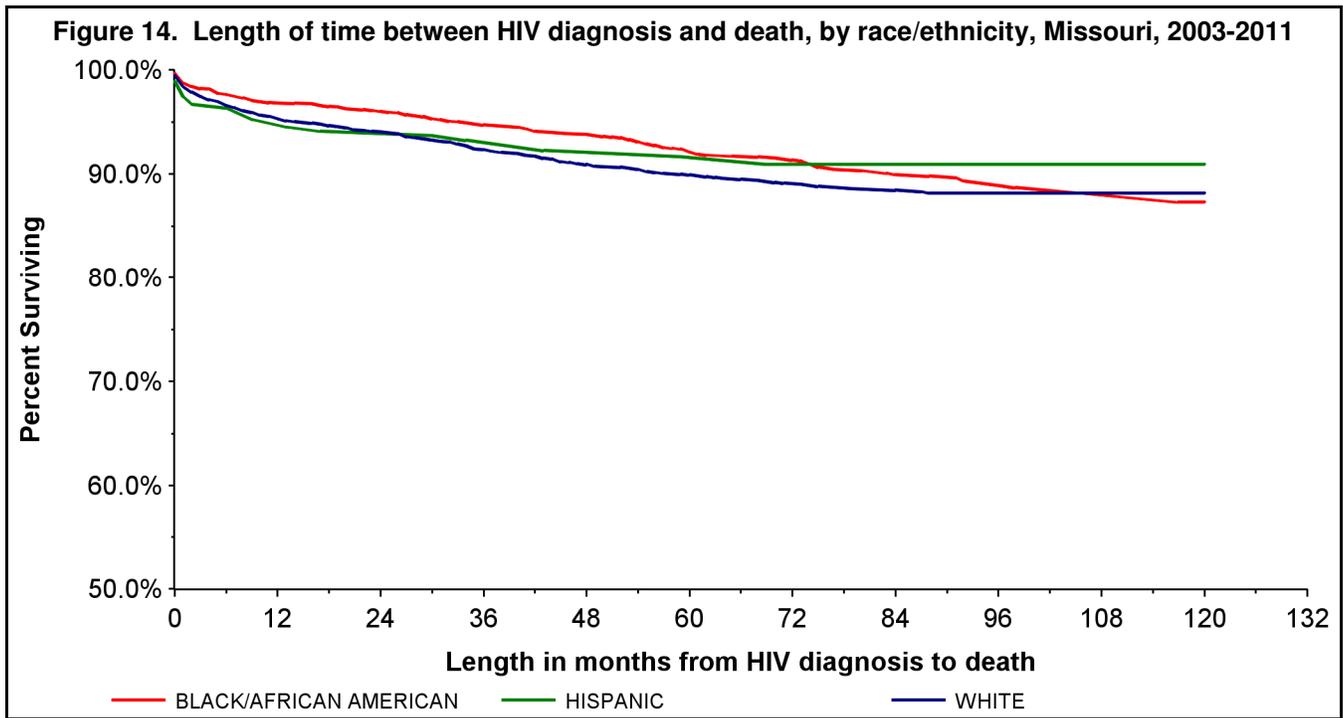
A greater proportion of Hispanics progressed from HIV to AIDS within 12 months of their HIV diagnosis compared to whites and blacks/African Americans (Figure 10). It is important to note that for all curves displayed, data in the later months should be interpreted with caution as they are based on small numbers.

Younger age was associated with slower progression from HIV to AIDS, as the proportion of individuals progressing to AIDS increased as age at diagnosis increased (Figure 11). Over time, the proportion of cases that progressed to AIDS remained higher as the age at initial HIV diagnosis increased.



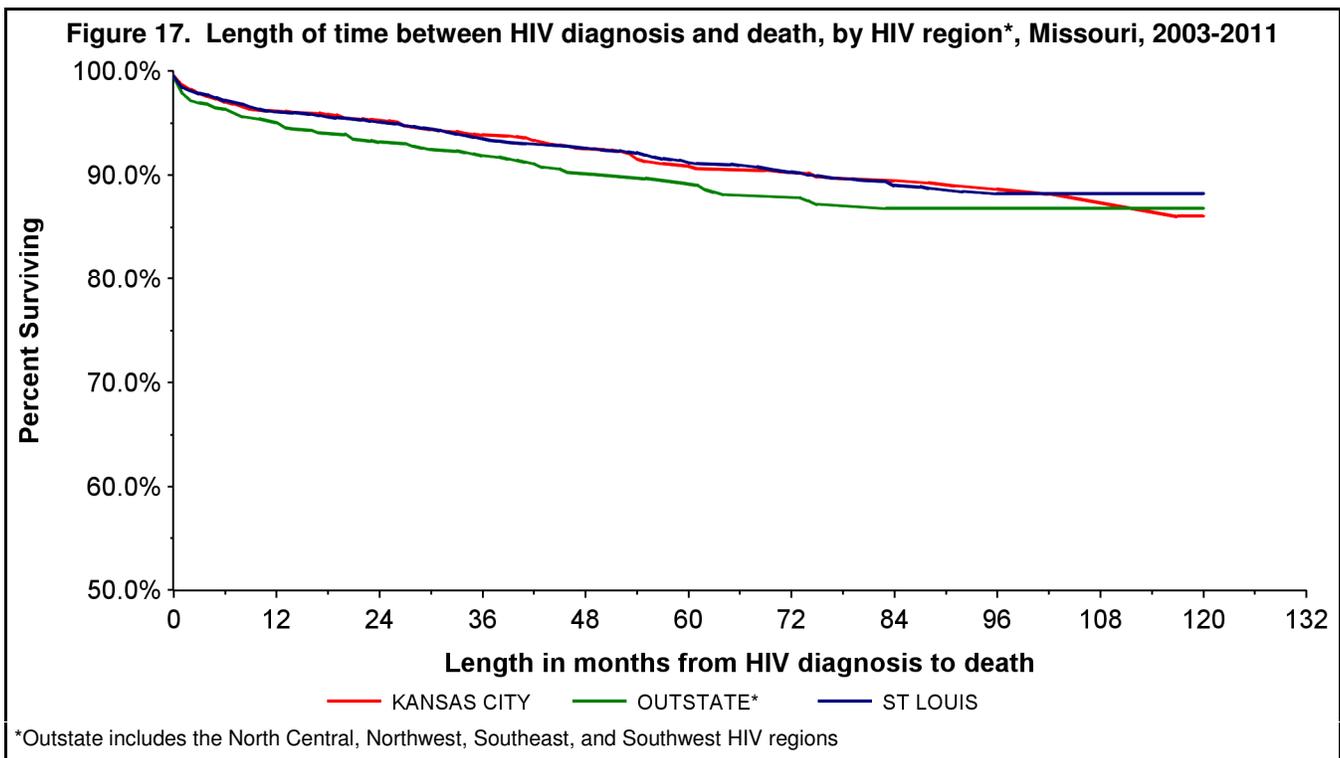
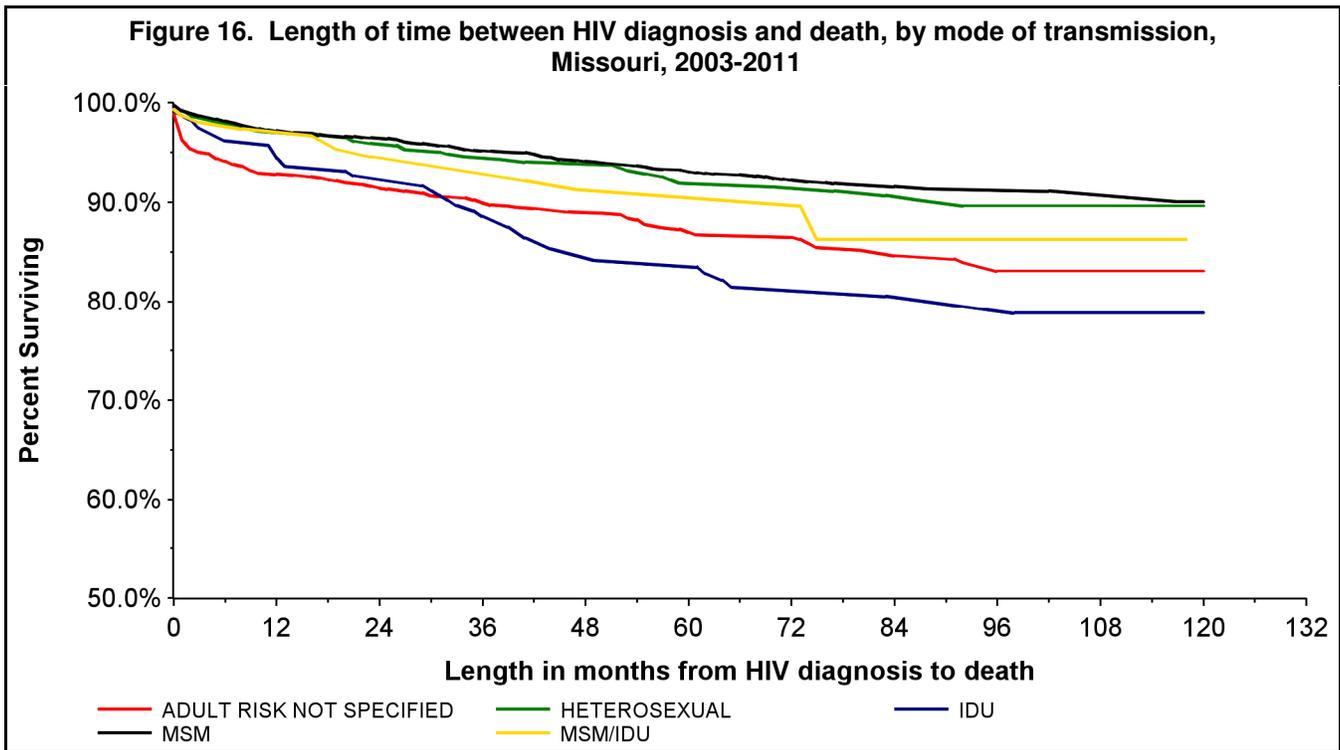
A greater proportion of IDU progressed from HIV to AIDS within 12 months of their HIV diagnosis compared to individuals from all other exposure categories (Figure 12). At 96 months after the initial HIV diagnosis, the proportion of cases that progressed to AIDS remained higher for IDU compared with other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

There were differences in the progression from HIV to AIDS by HIV region (Figure 13). The proportion of individuals that progressed to AIDS over time was generally greater for the Kansas City HIV Region and all Outstate HIV Regions combined compared to the St. Louis HIV 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.



The length of time between the initial HIV diagnosis and reported death was similar by race/ethnicity (Figure 14). Five years following the initial HIV diagnosis, 91% 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 15). For example, 72 months following the initial diagnosis, 96% of individuals diagnosed between 13-24 years of age were still living, compared to only 76% of individuals diagnosed at greater than 54 years of age.



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 16). Differences in survival persisted over time.

There were not significant differences in survival following HIV diagnosis by HIV region (Figure 17). At 24 months following the initial HIV diagnosis, the proportion still living was 95% for the both St. Louis HIV Region and Kansas City HIV Region and 93% for all other Outstate HIV Regions combined.

Table 22. Initial CD4 and viral load values[†] among adults and adolescents newly diagnosed with HIV disease, Missouri, 2010-2011

Viral Load (copies/mL)	CD4 Count (cells/ μ L)											
	No Test		<200		200-350		351-500		>500		Total	
	N	%*	N	%*	N	%*	N	%*	N	%*	N	%**
No Test	150	13.7%	14	1.3%	10	0.9%	7	0.6%	10	0.9%	191	17.5%
0-10,000	78	7.1%	50	4.6%	38	3.5%	46	4.2%	86	7.9%	298	27.3%
10,001-100,000	81	7.4%	80	7.3%	48	4.4%	60	5.5%	77	7.0%	346	31.7%
>100,000	32	2.9%	136	12.4%	31	2.8%	34	3.1%	25	2.3%	258	23.6%
Total	341	31.2%	280	25.6%	127	11.6%	147	13.4%	198	18.1%	1,093	100.0%

[†]Within 12 months of the initial HIV diagnosis

* % of table total

**% of column total

Of persons newly diagnosed with HIV disease between 2010 and 2011, 14% did not have a CD4 or a viral load laboratory result reported to MDHSS within 12 months of diagnosis (Table 22). Nearly 26% of persons diagnosed between 2010 and 2011 had an initial CD4 count of less than 200 cells/ μ L. This 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 suggests greater emphasis is needed to establish routine HIV testing, so individuals are diagnosed within a shorter time period after becoming infected.

Table 23. Percent of adults and adolescents receiving at least one CD4 within 12 months of their HIV diagnosis and the median initial CD4 count, Missouri, 2010-2011

	Number	% with CD4 within 12 months of HIV diagnosis	Median of initial CD4 counts (cells/ μ L)
HIV Status			
HIV (not AIDS)	748	56.7%	470
Concurrent HIV and AIDS diagnosis	231	98.7%	77
AIDS >1 month after HIV diagnosis	114	87.7%	151
Sex			
Male	909	68.0%	320
Female	184	72.8%	365
Race/Ethnicity			
White	463	74.9%	339
Black/African American	551	61.2%	326
Hispanic	56	89.3%	276
Other/Unknown	23	78.3%	351
Exposure Category			
MSM	715	66.2%	328
MSM/IDU	26	80.8%	507
IDU	44	79.5%	322
HRH	125	74.4%	356
Other	0	--	--
NIR	183	71.0%	225
Age at HIV Diagnosis			
13-18	47	59.6%	477
19-24	261	60.5%	429
25-44	536	69.6%	333
45-64	237	77.6%	193
65+	12	75.0%	108

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 23). Of adults and adolescents newly diagnosed between 2010 and 2011, a greater proportion of females had a CD4 within 12 months of diagnosis (73%) compared to males (68%). The initial median CD4 count tended to be greater for females (365 cells/ μ L) compared to males (320 cells/ μ L). 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 (89%). Among those with a CD4 count within 12 months of diagnosis, the initial median CD4 count tended to be lower among Hispanics (276 cells/ μ L). 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.

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

Primary and Secondary (P&S) Syphilis

- The number of reported P&S syphilis cases increased from 136 cases in 2011 to 157 cases in 2012. The increase observed was due to increases in the St. Louis, Kansas City, and Southwest HIV Regions.
- The rate of reported cases was highest in St. Louis City (15 per 100,000).
- Blacks/African Americans were disproportionately impacted, with a case rate 9.9 times as high as the rate among whites.

Early Latent Syphilis

- The number of early latent syphilis cases increased from 2011 (124 cases) to 2012 (135 cases). The increase was seen in all HIV regions except for the North Central and Southeast Regions.
- The number of reported cases in 2012 was highest in St. Louis City (38).
- Males represented the majority (91%) of reported early latent syphilis cases.
- The case rate was 9.7 times as high among blacks/African Americans compared to whites.

Gonorrhea

- The number of reported gonorrhea cases increased from 2011 (7,802 cases) to 2012 (7,889 cases). The number of reported gonorrhea cases was lower in 2012 compared to 2007 in all HIV regions except the Southwest and Southeast HIV Regions.
- St. Louis City had the highest rate of reported gonorrhea cases at 554 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 (23%), black/African American males (20%), and white males (11%).

Chlamydia

- The number of reported chlamydia cases decreased from 27,887 in 2011 to 27,835 in 2012. Similar trends were observed in the St. Louis and Kansas City HIV Regions, while all other regions showed an increase.
- St. Louis City had the highest chlamydia rate in 2012 (1,283 per 100,000). Jackson County reported the second highest case rate of chlamydia (816 per 100,000).
- A larger proportion of reported chlamydia cases was diagnosed between 15 and 19 years old among black/African American females (41%) compared to white females (38%), black/African American males (27%) and white males (20%).

Hepatitis B

- The number of reported hepatitis B cases in Missouri increased by 56 cases from 2011 (481) to 2012 (537).
- St. Louis County had the greatest number of reported hepatitis B cases with 109 cases.
- Among females, the largest numbers of cases were 20-29 years of age, while among males the largest numbers of cases were nearly equally distributed among persons 30-39, 40-49, and 50-59 years of age.

Hepatitis C

- There were 4,726 hepatitis C cases reported in Missouri in 2012.
- St. Louis City had the greatest number of reported hepatitis C cases with 780 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 382 persons living with HIV who were reported with an STD in 2012.
- Of the 292 early syphilis cases reported in 2012, 43% were among individuals living with HIV. Only 3% of gonorrhea cases and less than 1% of chlamydia cases reported in 2012 were among individuals living with HIV.
- St. Louis residents represented 58% of all living HIV cases reported with multiple STD co-morbidities in 2012, 60% of those with a chlamydia co-morbidity, 64% of those with an early syphilis co-morbidity, and 74% of those with a gonorrhea co-morbidity.
- Although blacks/African Americans represented only 45% of living HIV disease cases, they represented 68% of individuals diagnosed with an STD co-morbidity.
- Of the 11,419 individuals living with HIV disease, 61 were reported with a hepatitis co-morbidity in 2012.
- Three percent of chronic hepatitis B cases and 1% of chronic hepatitis C cases reported in 2012 were among persons living with HIV disease.
- Of the 11,419 individuals living with HIV disease, five were reported with TB disease in 2012.

	Male			Female			Total	
	Cases	%	Rate**	Cases	%	Rate**	Cases	Rate**
Missouri								
White	57	39.3%	2.4	4	33.3%	0.2	61	1.3
Black/African American	82	56.6%	25.0	7	58.3%	1.9	89	12.9
Other/Unknown*	6	4.1%	--	1	8.3%	--	7	--
Total Cases	145	100.0%	4.9	12	100.0%	0.4	157	2.6
St. Louis Region								
White	26	32.9%	3.5	2	22.2%	0.3	28	1.8
Black/African American	50	63.3%	27.1	6	66.7%	2.7	56	13.8
Other/Unknown*	3	3.8%	--	1	11.1%	--	4	--
Total Cases	79	100.0%	7.8	9	100.0%	0.8	88	4.2
Kansas City Region								
White	22	39.3%	4.8	0	0.0%	0.0	22	2.3
Black/African American	31	55.4%	35.8	1	100.0%	1.0	32	17.3
Other/Unknown*	3	5.4%	--	0	0.0%	--	3	--
Total Cases	56	100.0%	9.1	1	100.0%	0.2	57	4.5
Northwest Region								
White	0	--	0.0	0	--	0.0	0	0.0
Black/African American	0	--	0.0	0	--	0.0	0	0.0
Other/Unknown*	0	--	--	0	--	--	0	--
Total Cases	0	--	0.0	0	--	0.0	0	0.0
North Central Region								
White	1	50.0%	0.3	1	100.0%	0.3	2	0.3
Black/African American	1	50.0%	4.6	0	0.0%	0.0	1	2.5
Other/Unknown*	0	0.0%	--	0	0.0%	--	0	--
Total Cases	2	100.0%	0.5	1	100.0%	0.3	3	0.4
Southwest Region								
White	7	100.0%	1.4	1	100.0%	0.2	8	0.8
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	7	100.0%	1.2	1	100.0%	0.2	8	0.7
Southeast Region								
White	1	100.0%	0.5	0	--	0.0	1	0.2
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%	0.4	0	--	0.0	1	0.2

*Includes cases identified with Hispanic ethnicity.
**Per 100,000 population based on 2011 MDHSS population estimates.

There were a total of 157 P&S syphilis cases reported in 2012 (Table 24). This represented an increase from the 136 P&S syphilis cases reported in 2011. The majority of cases (92%) were reported among males. The rate of P&S syphilis cases among males was highest in the Kansas City HIV Region (9.1), followed by the St. Louis HIV Region (7.8). Fifty-six percent of all P&S syphilis cases were reported in the St. Louis HIV Region and 36% were reported in the Kansas City HIV 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. Between 2011 and 2012, the number of reported P&S syphilis cases increased from 82 to 88 in the St. Louis HIV Region, from 46 to 57 in the Kansas City HIV Region, and from 2 to 8 in the Southwest HIV Region. In all other HIV regions the number of reported P&S syphilis cases decreased or remained the same from 2011 to 2012.

Figure 19. Reported P&S syphilis cases, by race and sex, by age group at diagnosis, Missouri, 2012

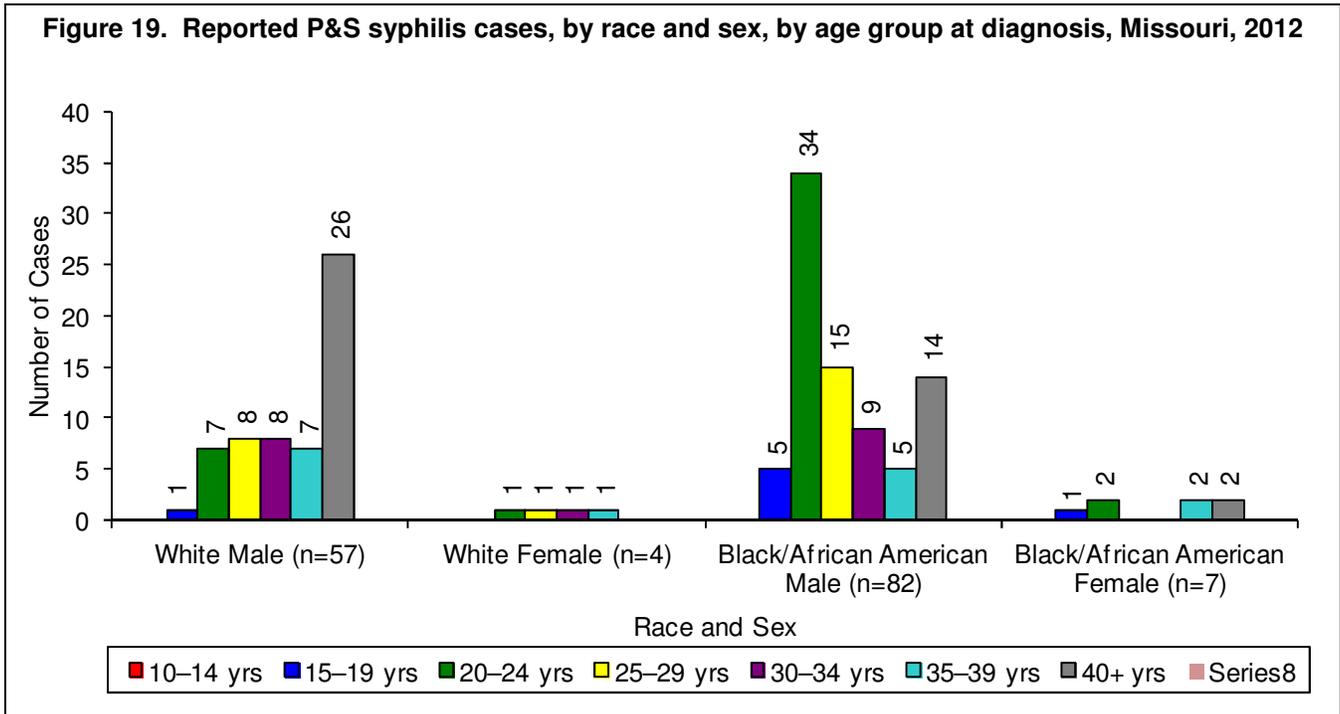
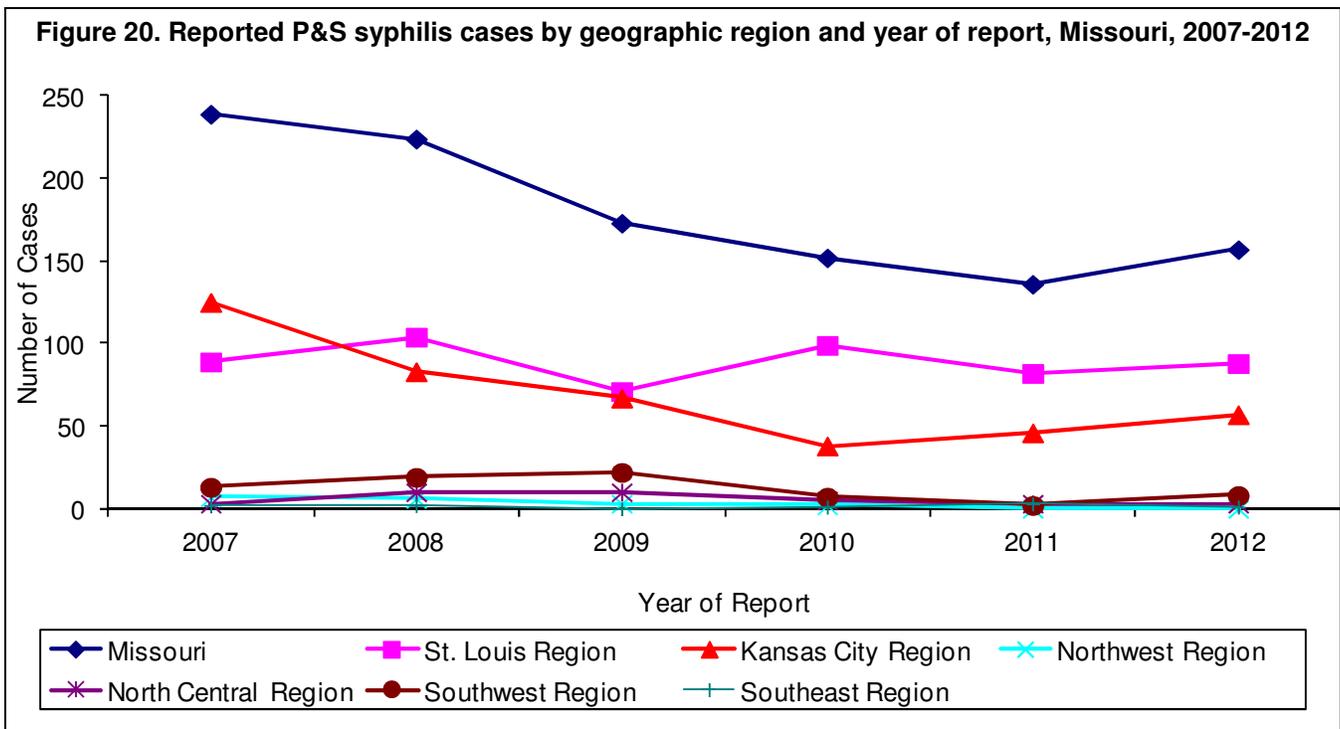


Figure 20. Reported P&S syphilis cases by geographic region and year of report, Missouri, 2007-2012



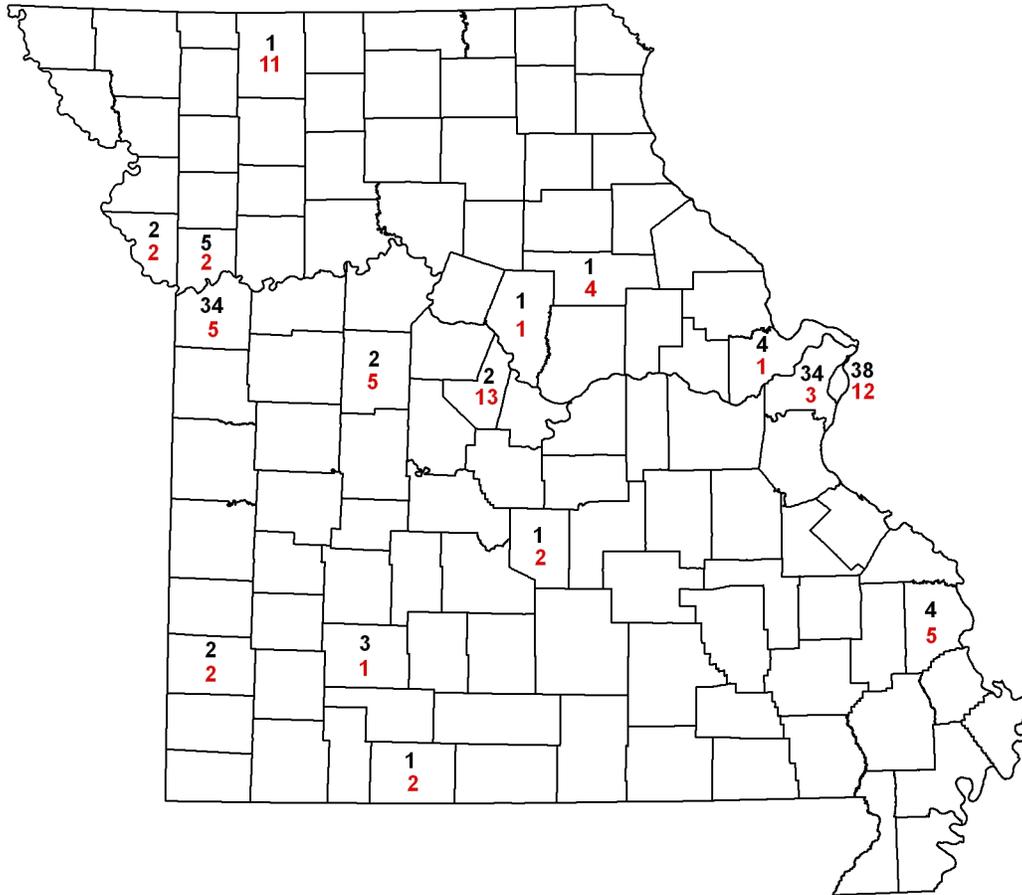
The largest numbers of P&S syphilis cases were reported among black/African American males (82) and white males (57) (Figure 19). The number of reported cases increased from 2011 to 2012 among all other race/ethnicity and sex categories presented. There were differences in the distribution of reported cases by age at diagnosis among the race/ethnicity and sex categories. Among white males, the largest number of cases was reported among individuals 40 or more years of age at the time of diagnosis. Among black/African American males, cases were greatest among those 20-24 years of age.

The number of reported P&S syphilis cases in Missouri decreased from 2007 to 2011 and then increased in 2012 (Figure 20). The number of reported P&S syphilis cases increased from 2011 to 2012 in the St. Louis HIV Region (82 to 88), the Kansas City HIV Region (46 to 57) and the Southwest HIV Region (2 to 8). The number of reported P&S syphilis cases decreased or remained the same from 2011 to 2012 in the remaining HIV regions.

Table 25. Reported early latent syphilis cases and rates, by race*, by geographic region, by sex, Missouri, 2012								
	Male			Female			Total	
	Cases	%	Rate**	Cases	%	Rate**	Cases	Rate**
Missouri								
White	48	39.0%	2.0	5	41.7%	0.2	53	1.1
Black/African American	67	54.5%	20.4	7	58.3%	1.9	74	10.7
Other/Unknown*	8	6.5%	--	0	0.0%	--	8	--
Total Cases	123	100.0%	4.2	12	100.0%	0.4	135	2.2
St. Louis Region								
White	17	24.6%	2.3	2	28.6%	0.3	19	1.2
Black/African American	49	71.0%	26.6	5	71.4%	2.3	54	13.3
Other/Unknown*	3	4.3%	--	0	0.0%	--	3	--
Total Cases	69	100.0%	6.8	7	100.0%	0.6	76	3.6
Kansas City Region								
White	18	47.4%	3.9	1	33.3%	0.2	19	2.0
Black/African American	15	39.5%	17.3	2	66.7%	2.0	17	9.2
Other/Unknown*	5	13.2%	--	0	0.0%	--	5	--
Total Cases	38	100.0%	6.2	3	100.0%	0.5	41	3.3
Northwest Region								
White	0	--	0.0	1	100.0%	0.9	1	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	0	--	0.0	1	100.0%	0.8	1	0.4
North Central Region								
White	3	60.0%	0.9	1	100.0%	0.3	4	0.6
Black/African American	2	40.0%	9.2	0	0.0%	0.0	2	5.0
Other/Unknown*	0	0.0%	--	0	0.0%	--	0	--
Total Cases	5	100.0%	1.3	1	100.0%	0.3	6	0.8
Southwest Region								
White	7	100.0%	1.4	0	--	0.0	7	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	7	100.0%	1.2	0	--	0.0	7	0.6
Southeast Region								
White	3	75.0%	1.4	0	--	0.0	3	0.7
Black/African American	1	25.0%	6.0	0	--	0.0	1	3.2
Other/Unknown*	0	0.0%	--	0	--	--	0	--
Total Cases	4	100.0%	1.6	0	--	0.0	4	0.8
*Includes cases identified with Hispanic ethnicity.								
**Per 100,000 population based on 2011 MDHSS population estimates.								

There were a total of 135 early latent syphilis cases reported in 2012, compared to 124 cases reported in 2011 (Table 25). The majority of cases (91%) were reported among males. The rate of early latent syphilis cases among all cases was highest in the St. Louis HIV Region (3.6), followed by the Kansas City HIV Region (3.3). Fifty-six percent (56%) of all early latent syphilis cases were reported in the St. Louis HIV Region and 30% were reported in the Kansas City HIV Region. The Southwest HIV 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 21. Reported early latent syphilis cases* and rates**, by county, Missouri, 2012



*Case counts are in black.

**Case rates are in red, per 100,000 population based on 2011 MDHSS population estimates.

Early latent syphilis cases were concentrated in metropolitan areas (Figure 21). There were 99 counties that did not report any early latent syphilis cases in 2012. St. Louis City had the highest number of reported early latent syphilis cases (38).

Figure 22. Reported early latent syphilis cases, by race and sex, by age group at diagnosis, Missouri, 2012

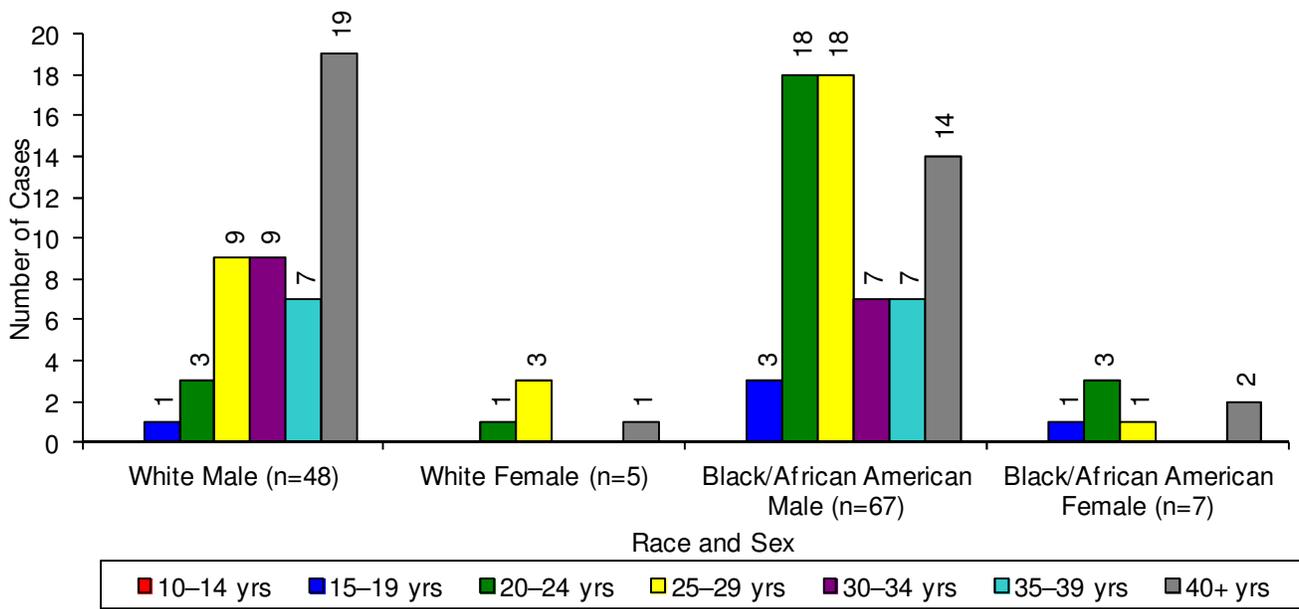
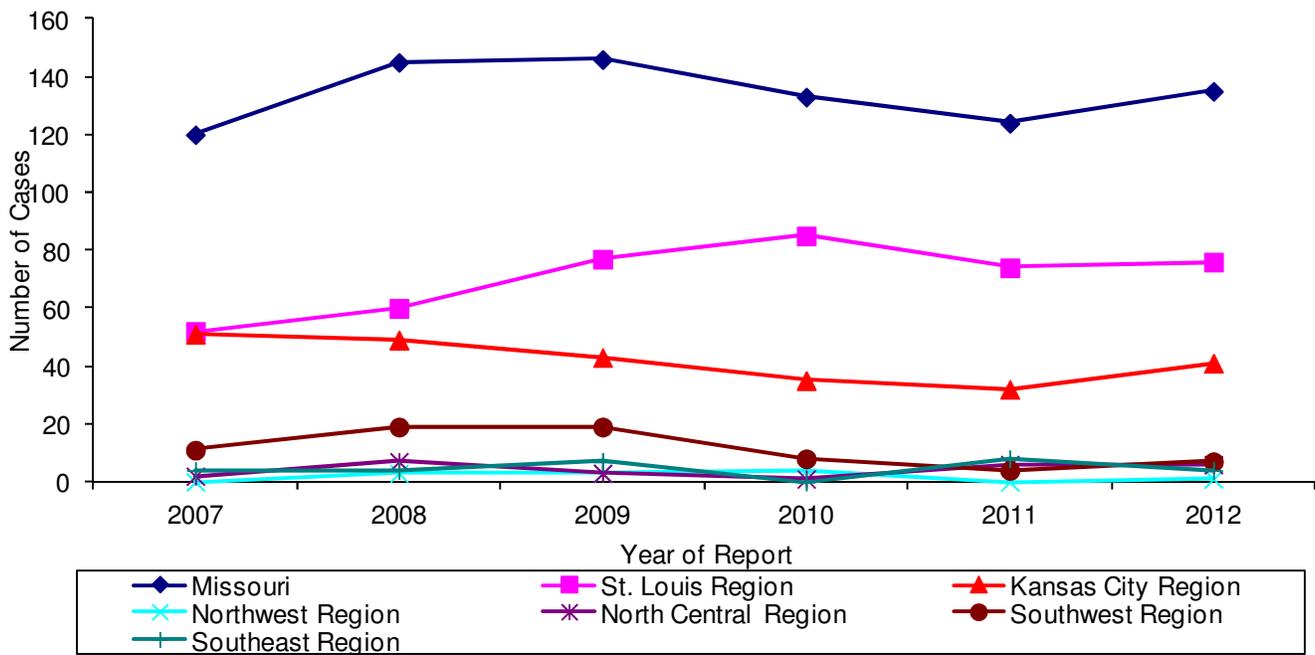


Figure 23. Reported early latent syphilis cases by geographic region and year of report, Missouri, 2007-2012



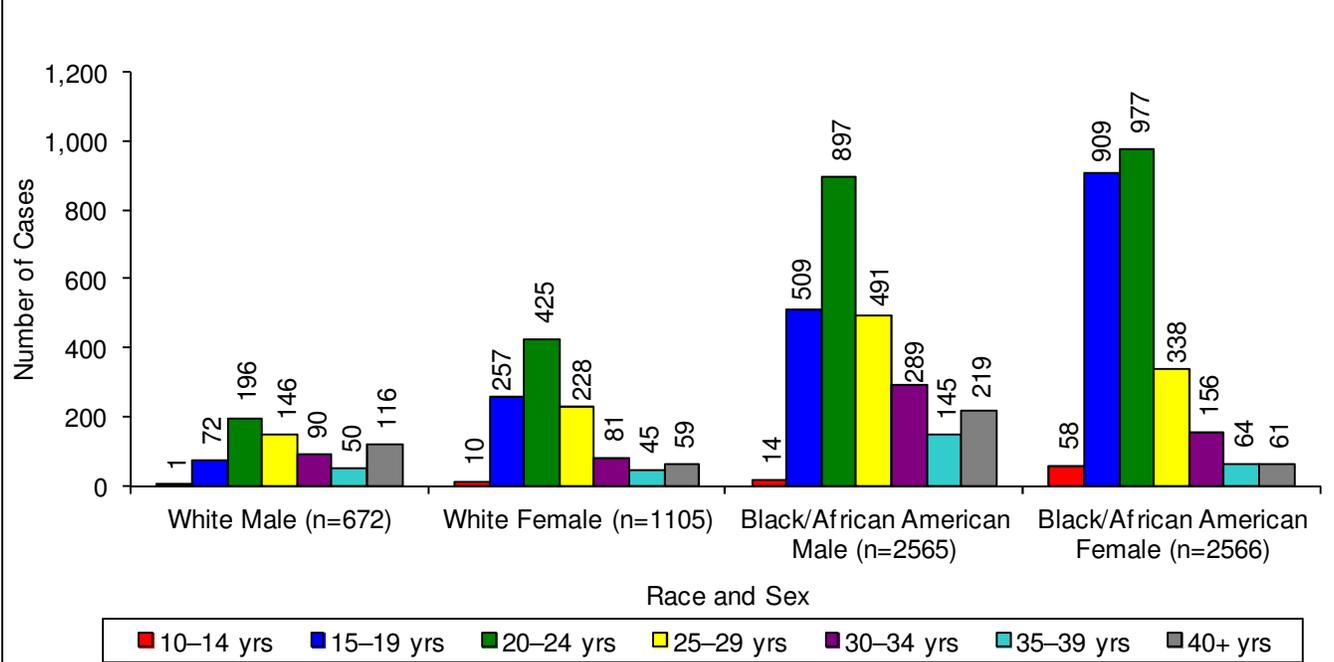
The largest numbers of early latent syphilis cases were reported among black/African American males (67) and white males (48) (Figure 22). The number of reported cases decreased or remained the same among all race/ethnicity and sex categories presented except black/African American males. From 2011 to 2012 the number of early latent syphilis cases among black/African American males increased from 56 to 67 cases. Among white males, the largest number of cases was reported among individuals 40 or more years of age at the time of diagnosis. Among black/African American males, cases were greatest among those 20-24 and 25-29 years of age.

The number of reported early latent syphilis cases in Missouri fluctuated from 2007 to 2012 (Figure 23). The number of reported early latent syphilis cases generally increased from 2007 to 2010, decreased through 2011, and then increased slightly in 2012 in the St. Louis HIV Region. In the Kansas City HIV Region, reported early latent syphilis cases decreased from 2007 to 2011, then increased in 2012. The number of reported early latent syphilis cases increased or remained the same from 2011 to 2012 in all regions except the Southeast Region.

Table 26. Reported gonorrhea cases and rates, by race*, by geographic region, by sex, Missouri, 2012								
	Male			Female			Total	
	Cases	%	Rate**	Cases	%	Rate**	Cases	Rate**
Missouri								
White	672	18.3%	28.2	1,105	26.3%	44.7	1,777	36.6
Black/African American	2,565	69.7%	780.5	2,566	61.0%	705.0	5,131	740.8
Other/Unknown*	443	12.0%	--	538	12.8%	--	981	--
Total Cases	3,680	100.0%	125.0	4,209	100.0%	137.3	7,889	131.2
St. Louis Region								
White	167	8.7%	22.3	166	8.4%	21.1	333	21.7
Black/African American	1,532	79.5%	830.1	1,535	78.0%	696.8	3,067	757.5
Other/Unknown*	227	11.8%	--	267	13.6%	--	494	--
Total Cases	1,926	100.0%	191.0	1,968	100.0%	182.1	3,894	186.4
Kansas City Region								
White	233	21.4%	50.7	369	28.5%	77.1	602	64.2
Black/African American	764	70.2%	883.1	796	61.5%	808.8	1,560	843.6
Other/Unknown*	92	8.4%	--	129	10.0%	--	221	--
Total Cases	1,089	100.0%	177.1	1,294	100.0%	200.3	2,383	189.0
Northwest Region								
White	15	44.1%	13.4	38	65.5%	33.2	53	23.4
Black/African American	13	38.2%	241.7	12	20.7%	411.8	25	301.5
Other/Unknown*	6	17.6%	--	8	13.8%	--	14	--
Total Cases	34	100.0%	27.3	58	100.0%	46.9	92	37.1
North Central Region								
White	56	29.8%	16.8	161	51.8%	47.1	217	32.1
Black/African American	95	50.5%	437.5	111	35.7%	610.9	206	516.5
Other/Unknown*	37	19.7%	--	39	12.5%	--	76	--
Total Cases	188	100.0%	49.7	311	100.0%	81.1	499	65.5
Southwest Region								
White	157	57.1%	30.8	265	73.0%	50.4	422	40.8
Black/African American	62	22.5%	451.0	29	8.0%	307.5	91	392.6
Other/Unknown*	56	20.4%	--	69	19.0%	--	125	--
Total Cases	275	100.0%	48.2	363	100.0%	62.5	638	55.4
Southeast Region								
White	44	26.2%	19.9	106	49.3%	46.6	150	33.4
Black/African American	99	58.9%	591.8	83	38.6%	563.6	182	578.6
Other/Unknown*	25	14.9%	--	26	12.1%	--	51	--
Total Cases	168	100.0%	67.7	215	100.0%	85.3	383	76.6
*Includes cases identified with Hispanic ethnicity.								
**Per 100,000 population based on 2011 MDHSS population estimates.								

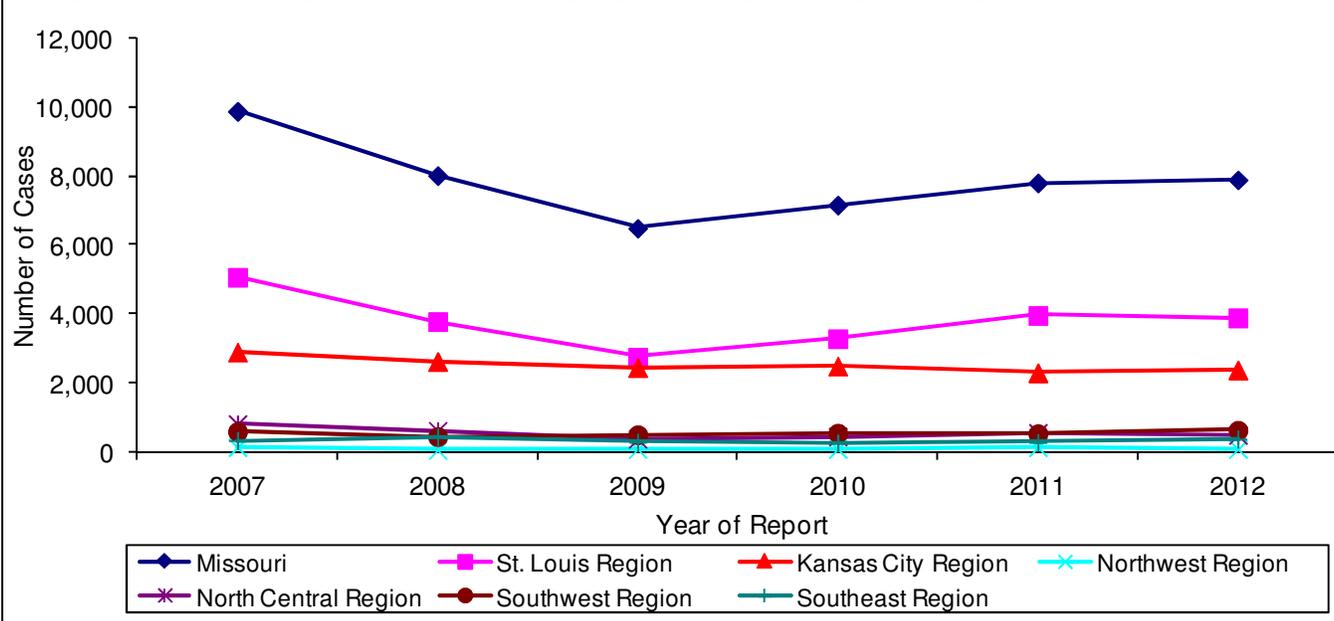
There were a total of 7,889 gonorrhea cases reported in 2012 (Table 26). This represented a 1% increase in the number of reported cases compared to 2011. The majority of cases (53%) were reported among females. The proportion of gonorrhea cases reported among females varied by HIV region. The St. Louis HIV Region reported the lowest proportion of female cases (51%), followed by the Kansas City (54%), Southeast (56%), Southwest (57%), North Central (62%) and Northwest (63%) HIV Regions. The rate of gonorrhea cases among females was highest in the Kansas City HIV Region (200.3), followed by the St. Louis HIV Region (182.1). Forty-nine percent (49%) of all gonorrhea cases were reported in the St. Louis HIV Region and 30% were reported in the Kansas City HIV Region. The Southwest HIV 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 25. Reported gonorrhea cases, by race and sex, by age group at diagnosis, Missouri, 2012



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

Figure 26. Reported gonorrhea cases by geographic region and year of report, Missouri, 2007-2012



The largest numbers of gonorrhea cases were reported among black/African American females (2,566) and black/African American males (2,565) (Figure 25). The number of reported cases increased from 2011 to 2012 among all race/ethnicity and sex categories presented. The observed increase was likely due, at least in part, to changes in surveillance activities which allowed for better ascertainment of race/ethnicity information, not due solely to a true increase in gonorrhea among the race/ethnicity categories. 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 (17%) and black/African American (9%) males was diagnosed among individuals 40 or more years of age compared to females cases presented.

The number of reported gonorrhea cases in Missouri decreased from 2007 to 2009 and then increased through 2012 (Figure 26). The numbers of reported gonorrhea cases were lower in 2012 than 2011 in the St. Louis, Northwest, and North Central HIV Regions. In all other regions, the number of reported gonorrhea cases increased from 2011 to 2012. The number of reported gonorrhea cases was lower in 2012 compared to 2007 in all HIV regions, except for the Southwest and Southeast Regions.

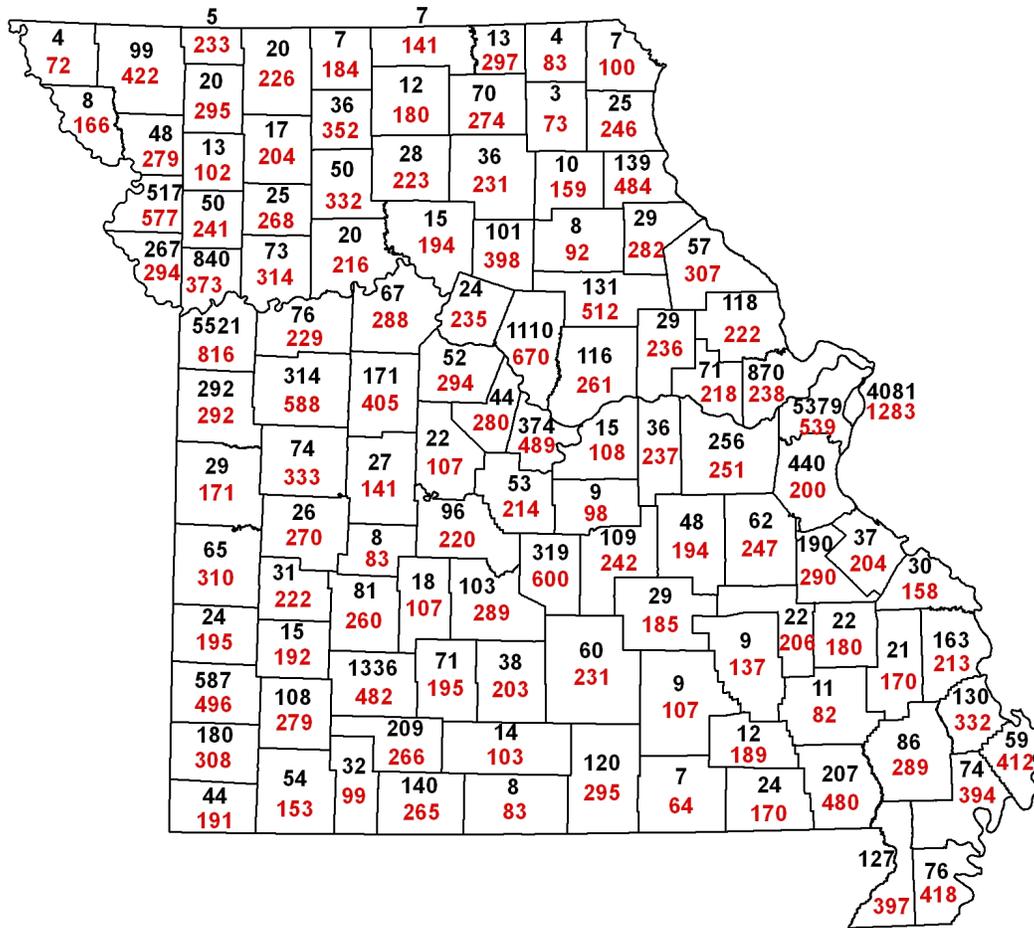
Table 27. Reported chlamydia cases and rates, by race*, by geographic region, by sex, Missouri, 2012								
	Male			Female			Total	
	Cases	%	Rate**	Cases	%	Rate**	Cases	Rate**
Missouri								
White	2,565	31.7%	107.5	8,125	41.1%	328.5	10,690	220.0
Black/African American	4,135	51.1%	1258.2	7,868	39.8%	2161.8	12,003	1733.0
Other/Unknown*	1,390	17.2%	--	3,752	19.0%	--	5,142	--
Total Cases	8,090	100.0%	274.8	19,745	100.0%	643.9	27,835	463.1
St. Louis Region								
White	594	17.0%	79.3	1,529	19.8%	194.7	2,123	138.3
Black/African American	2,274	65.0%	1232.1	4,589	59.5%	2083.1	6,863	1695.2
Other/Unknown*	632	18.1%	--	1,597	20.7%	--	2,229	--
Total Cases	3,500	100.0%	347.2	7,715	100.0%	713.9	11,215	536.9
Kansas City Region								
White	582	26.2%	126.7	1,967	37.2%	410.9	2,549	271.8
Black/African American	1,269	57.2%	1466.8	2,413	45.6%	2451.8	3,682	1991.0
Other/Unknown*	368	16.6%	--	914	17.3%	--	1,282	--
Total Cases	2,219	100.0%	361.0	5,294	100.0%	819.6	7,513	595.9
Northwest Region								
White	144	66.7%	128.5	570	78.8%	498.2	714	315.3
Black/African American	40	18.5%	743.6	65	9.0%	2230.6	105	1266.1
Other/Unknown*	32	14.8%	--	88	12.2%	--	120	--
Total Cases	216	100.0%	173.6	723	100.0%	584.7	939	378.5
North Central Region								
White	392	48.8%	117.6	1,308	62.0%	382.4	1,700	251.7
Black/African American	297	36.9%	1367.8	457	21.7%	2515.3	754	1890.5
Other/Unknown*	115	14.3%	--	344	16.3%	--	459	--
Total Cases	804	100.0%	212.4	2,109	100.0%	550.0	2,913	382.2
Southwest Region								
White	680	67.7%	133.3	2,082	73.3%	396.2	2,762	266.7
Black/African American	142	14.1%	1033.0	138	4.9%	1463.1	280	1208.0
Other/Unknown*	183	18.2%	--	620	21.8%	--	803	--
Total Cases	1,005	100.0%	176.2	2,840	100.0%	489.3	3,845	334.2
Southeast Region								
White	173	50.0%	78.2	669	62.9%	294.2	842	187.6
Black/African American	113	32.7%	675.5	206	19.4%	1398.7	319	1014.1
Other/Unknown*	60	17.3%	--	189	17.8%	--	249	--
Total Cases	346	100.0%	139.4	1,064	100.0%	422.2	1,410	281.8

*Includes cases identified with Hispanic ethnicity.

**Per 100,000 population based on 2011 MDHSS population estimates.

There were a total of 27,835 chlamydia cases reported in 2012 (Table 27). The majority of cases (71%) were reported among females. The proportion of chlamydia cases reported among females varied by HIV region. The Northwest HIV Region reported the highest proportion of female cases (77%), followed by the Southeast (75%), Southwest (74%), North Central (72%), Kansas City (70%) and St. Louis (69%) HIV Regions. The rate of chlamydia cases among females was highest in the Kansas City HIV Region (819.6), followed by the St. Louis HIV Region (713.9). Forty percent (40%) of all chlamydia cases were reported in the St. Louis HIV Region and 27% were reported in the Kansas City HIV 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.

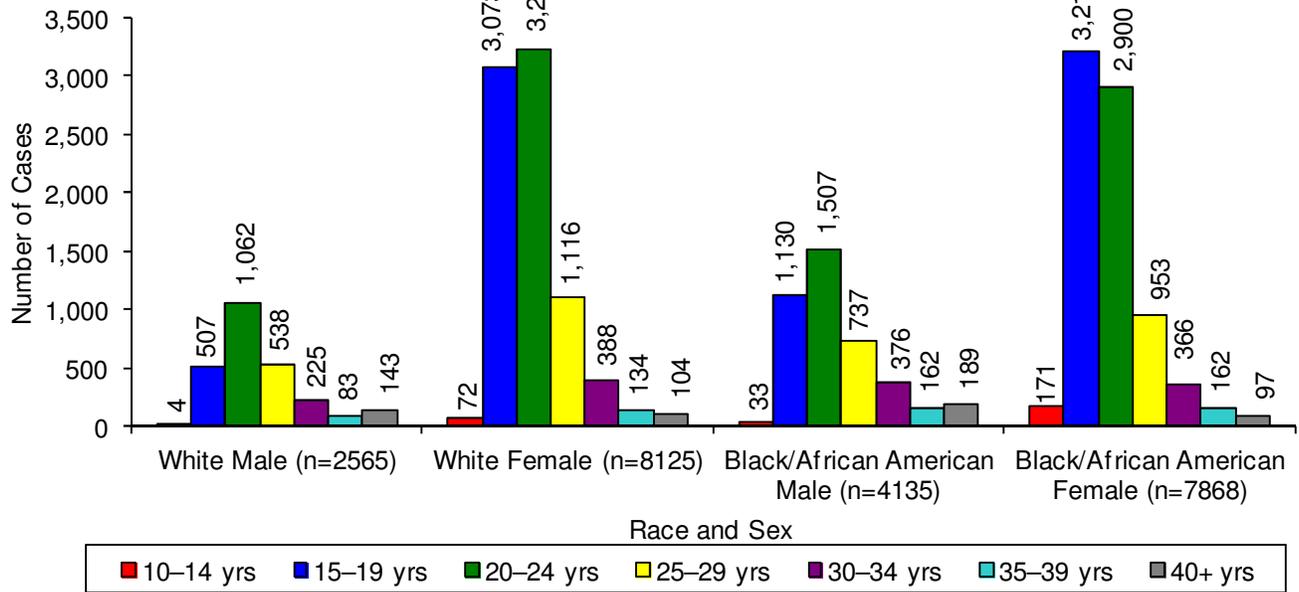
Figure 27. Reported chlamydia cases* and rates**, by county, Missouri, 2012



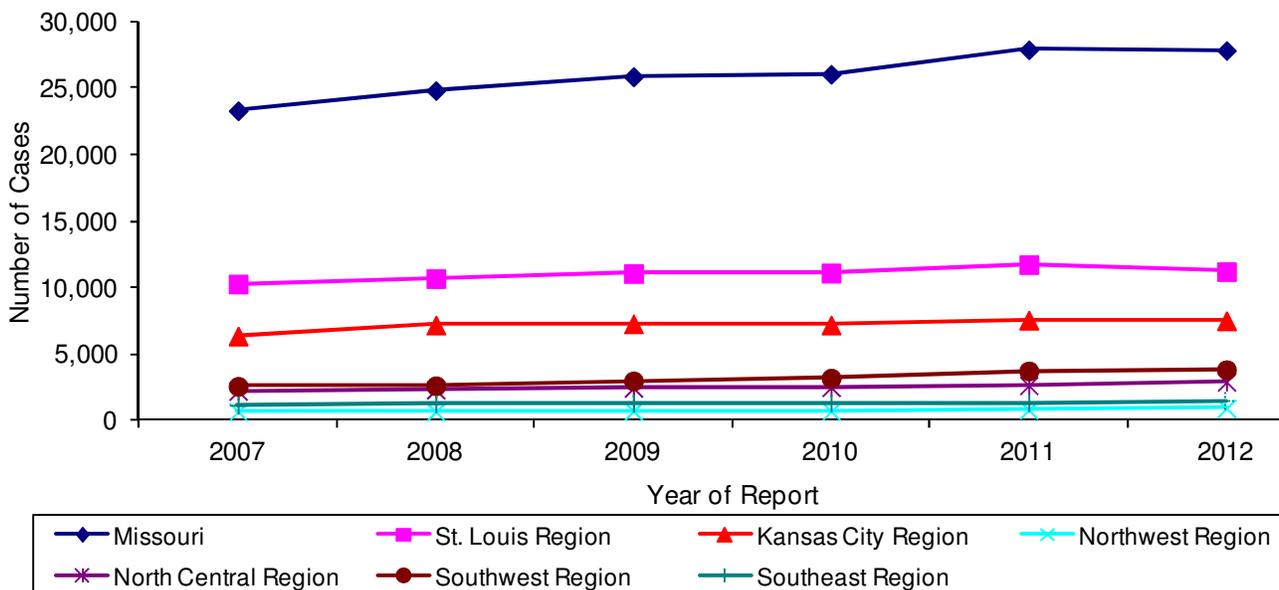
*Case counts are in black.

**Case rates are in red, per 100,000 population based on 2011 MDHSS population estimates.

Chlamydia cases reported in St. Louis City, St. Louis County, and Jackson County represented 54% of all reported cases in 2012 (Figure 27), although these areas represent only 33% of Missouri’s general population. All counties reported more than one chlamydia case in 2012. St. Louis City had the highest rate of reported chlamydia cases at 1,283 per 100,000 persons. This means that for every 100,000 persons living in St. Louis City, there were 1,283 reported with chlamydia in 2012.

Figure 28. Reported chlamydia cases, by race and sex, by age group at diagnosis, Missouri, 2012

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

Figure 29. Reported chlamydia cases by geographic region and year of report, Missouri, 2007-2012

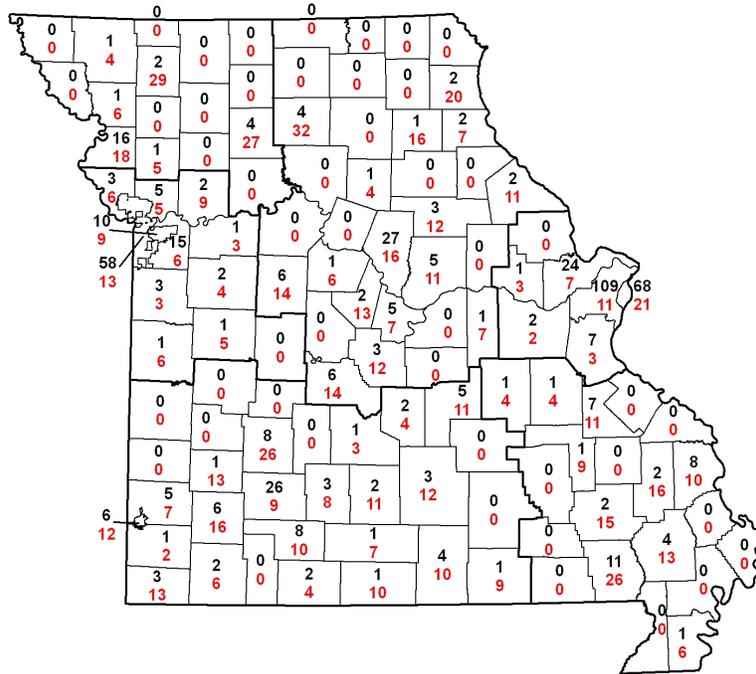
The largest numbers of chlamydia cases were reported among black/African American females (7,868) and white females (8,125) (Figure 28). The number of reported cases increased from 2011 to 2012 among all race/ethnicity and sex categories presented. The observed increase was likely due, at least in part, to changes in surveillance activities which allowed for better ascertainment of race/ethnicity information, not due solely to a true increase in chlamydia among the race/ethnicity categories. The total number of reported chlamydia cases in Missouri decreased slightly from 2011 to 2012. Among males and white females, the largest number of cases was reported among individuals 20-24 years of age at the time of diagnosis. Among black/African American females, the largest number of cases was reported among 15-19 year olds.

The number of reported chlamydia cases in Missouri increased from 2007 to 2011, then decreased slightly in 2012 (Figure 29). All regions showed a general increasing trend from 2007 to 2011 in the number of cases, though some showed slight fluctuations during individual years.

	Male			Female			Total	
	Cases	%	Rate**	Cases	%	Rate**	Cases	Rate**
Missouri								
White	66	29.6%	2.8	65	20.7%	2.6	131	2.7
Black	33	14.8%	10.0	56	17.8%	15.4	89	12.9
Other/Unknown*	124	55.6%	--	193	61.5%	--	317	--
Total Cases	223	100.0%	7.6	314	100.0%	10.2	537	8.9
St. Louis Region								
White	12	12.6%	1.6	14	12.1%	1.8	26	1.7
Black	21	22.1%	11.4	25	21.6%	11.3	46	11.4
Other/Unknown*	62	65.3%	--	77	66.4%	--	139	--
Total Cases	95	100.0%	9.4	116	100.0%	10.7	211	10.1
Kansas City Region								
White	8	25.0%	1.7	7	10.1%	1.5	15	1.6
Black	3	9.4%	3.5	13	18.8%	13.2	16	8.7
Other/Unknown*	21	65.6%	--	49	71.0%	--	70	--
Total Cases	32	100.0%	5.2	69	100.0%	10.7	101	8.0
Northwest Region								
White	9	64.3%	8.0	4	36.4%	3.5	13	5.7
Black	0	0.0%	0.0	2	18.2%	68.6	2	24.1
Other/Unknown*	5	35.7%	--	5	45.5%	--	10	--
Total Cases	14	100.0%	11.3	11	100.0%	8.9	25	10.1
North Central Region								
White	9	39.1%	2.7	13	27.1%	3.8	22	3.3
Black	3	13.0%	13.8	10	20.8%	55.0	13	32.6
Other/Unknown*	11	47.8%	--	25	52.1%	--	36	--
Total Cases	23	100.0%	6.1	48	100.0%	12.5	71	9.3
Southwest Region								
White	17	45.9%	3.3	22	40.7%	4.2	39	3.8
Black	2	5.4%	14.5	3	5.6%	31.8	5	21.6
Other/Unknown*	18	48.6%	--	29	53.7%	--	47	--
Total Cases	37	100.0%	6.5	54	100.0%	9.3	91	7.9
Southeast Region								
White	11	50.0%	5.0	5	31.3%	2.2	16	3.6
Black	4	18.2%	23.9	3	18.8%	20.4	7	22.3
Other/Unknown*	7	31.8%	--	8	50.0%	--	15	--
Total Cases	22	100.0%	8.9	16	100.0%	6.3	38	7.6
[†] 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 2011 MDHSS population estimates. Note: One additional prenatal hepatitis B is not included in the Missouri total, but was reported to the CDC as a Missouri hepatitis case. This was an out of state case.								

Of the 537 hepatitis B cases reported in 2012, 48 were reported with acute hepatitis B, 350 with chronic hepatitis B, 138 with prenatal hepatitis B, and 1 with perinatal hepatitis B. The number of reported hepatitis B cases in Missouri increased by 56 cases from 2011 (481) to 2012 (537) (Table 28). The number of persons reported with hepatitis B increased from 2011 to 2012 in all HIV regions except the Southwest HIV Region. Overall, the rate of reported hepatitis B cases was highest in the St. Louis and Northwest HIV Regions (10.1 per 100,000). Overall, 58% of reported cases were females, although variation in the ratio of male to female cases existed among the HIV regions. The large proportion of cases with unknown race/ethnicity information makes it difficult to interpret differences in reported infections by race/ethnicity.

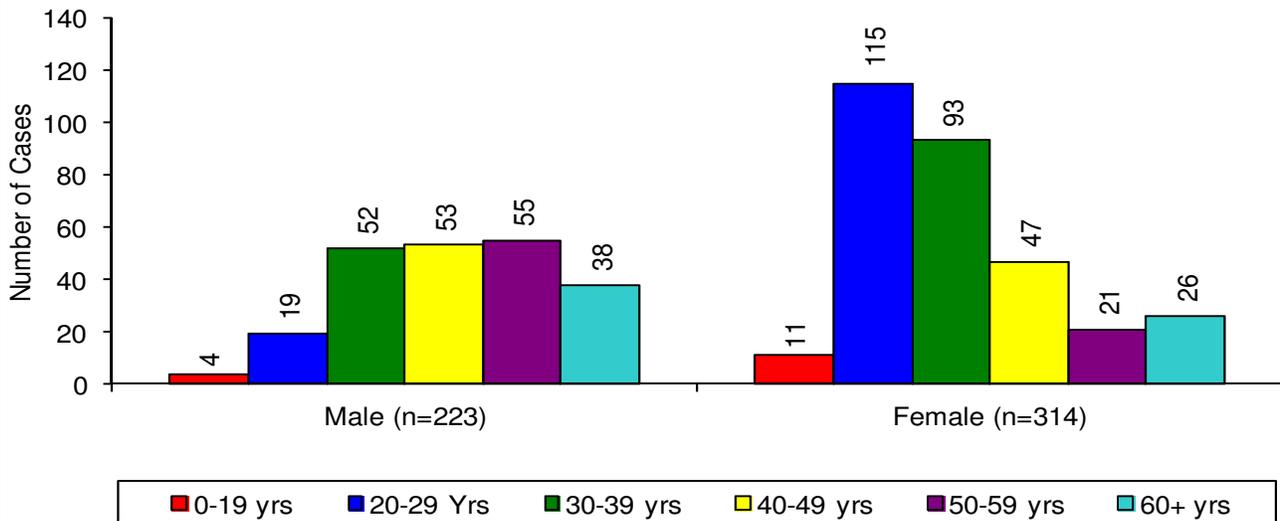
Figure 30. Reported hepatitis B cases* and rates, by jurisdiction, Missouri, 2012**



*Case counts are in black.

**Case rates are in red, per 100,000 population based on 2011 MDHSS population estimates.

Figure 31. Reported hepatitis B cases, by sex and by age group at diagnosis, Missouri, 2012



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

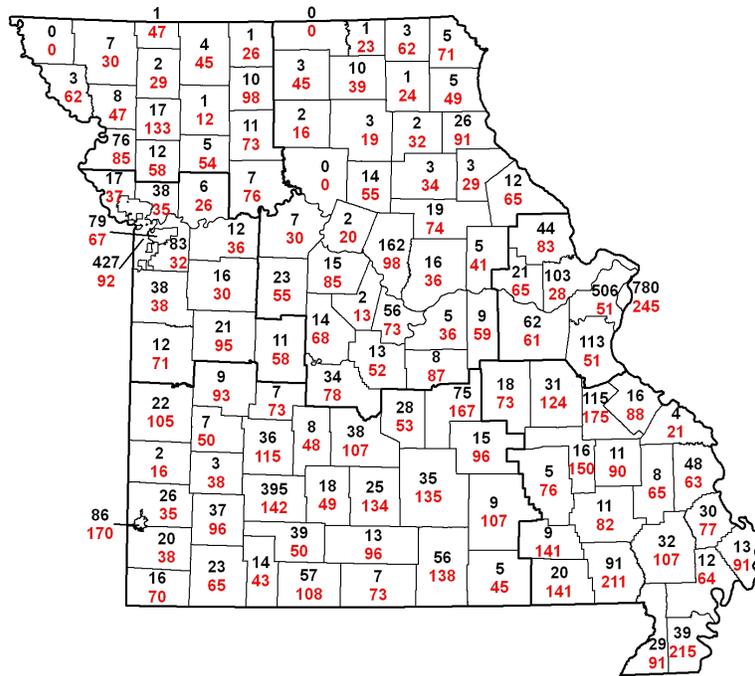
St. Louis County had the greatest number of reported hepatitis B cases (109), followed by St. Louis City (68) (Figure 30). There were 48 jurisdictions that did not report any hepatitis B cases in 2012.

There were differences in the age distribution of reported hepatitis B cases by sex (Figure 31). Among males, the largest numbers of reported cases were nearly equally distributed among persons 30-39, 40-49, and 50-59 years of age. The largest numbers of cases were 20-29 years of age at diagnosis among females.

Table 29. Reported hepatitis C[†] cases and rates, by race*, by geographic region, by sex, Missouri, 2012								
	Male			Female			Total[‡]	
	Cases	%	Rate**	Cases	%	Rate**	Cases	Rate**
Missouri								
White	895	30.6%	37.5	768	42.7%	31.0	1,663	34.2
Black	279	9.5%	84.9	145	8.1%	39.8	424	61.2
Other/Unknown*	1,752	59.9%	--	885	49.2%	--	2,639	--
Total Cases	2,926	100.0%	99.4	1,798	100.0%	58.6	4,726	78.6
St. Louis Region								
White	181	17.2%	24.2	152	26.5%	19.4	333	21.7
Black	196	18.6%	106.2	103	17.9%	46.8	299	73.9
Other/Unknown*	677	64.2%	--	319	55.6%	--	997	--
Total Cases	1,054	100.0%	104.5	574	100.0%	53.1	1,629	78.0
Kansas City Region								
White	135	27.4%	29.4	93	34.7%	19.4	228	24.3
Black	49	10.0%	56.6	23	8.6%	23.4	72	38.9
Other/Unknown*	308	62.6%	--	152	56.7%	--	460	--
Total Cases	492	100.0%	80.0	268	100.0%	41.5	760	60.3
Northwest Region								
White	41	39.0%	36.6	41	68.3%	35.8	82	36.2
Black	2	1.9%	37.2	2	3.3%	68.6	4	48.2
Other/Unknown*	62	59.0%	--	17	28.3%	--	79	--
Total Cases	105	100.0%	84.4	60	100.0%	48.5	165	66.5
North Central Region								
White	99	32.4%	29.7	70	39.5%	20.5	169	25.0
Black	16	5.2%	73.7	4	2.3%	22.0	20	50.1
Other/Unknown*	191	62.4%	--	103	58.2%	--	294	--
Total Cases	306	100.0%	80.8	177	100.0%	46.2	483	63.4
Southwest Region								
White	304	47.0%	59.6	283	58.5%	53.9	587	56.7
Black	2	0.3%	14.5	9	1.9%	95.4	11	47.5
Other/Unknown*	341	52.7%	--	192	39.7%	--	533	--
Total Cases	647	100.0%	113.5	484	100.0%	83.4	1,131	98.3
Southeast Region								
White	135	41.9%	61.0	129	54.9%	56.7	264	58.8
Black	14	4.3%	83.7	4	1.7%	27.2	18	57.2
Other/Unknown*	173	53.7%	--	102	43.4%	--	276	--
Total Cases	322	100.0%	129.7	235	100.0%	93.2	558	111.5
[†] 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 2011 MDHSS population estimates.								

Of the 4,726 hepatitis C cases reported in 2012, four were reported with acute hepatitis C and 4,722 with chronic hepatitis C. The number of reported hepatitis C cases in Missouri decreased by 322 cases from 2011 (5,048) to 2012 (4,726) (Table 29). The number of persons reported with hepatitis C decreased from 2011 to 2012 in all HIV regions except the Southeast HIV Region. Overall, the rate of reported hepatitis C cases was highest in the Southeast HIV Region (111.5 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.

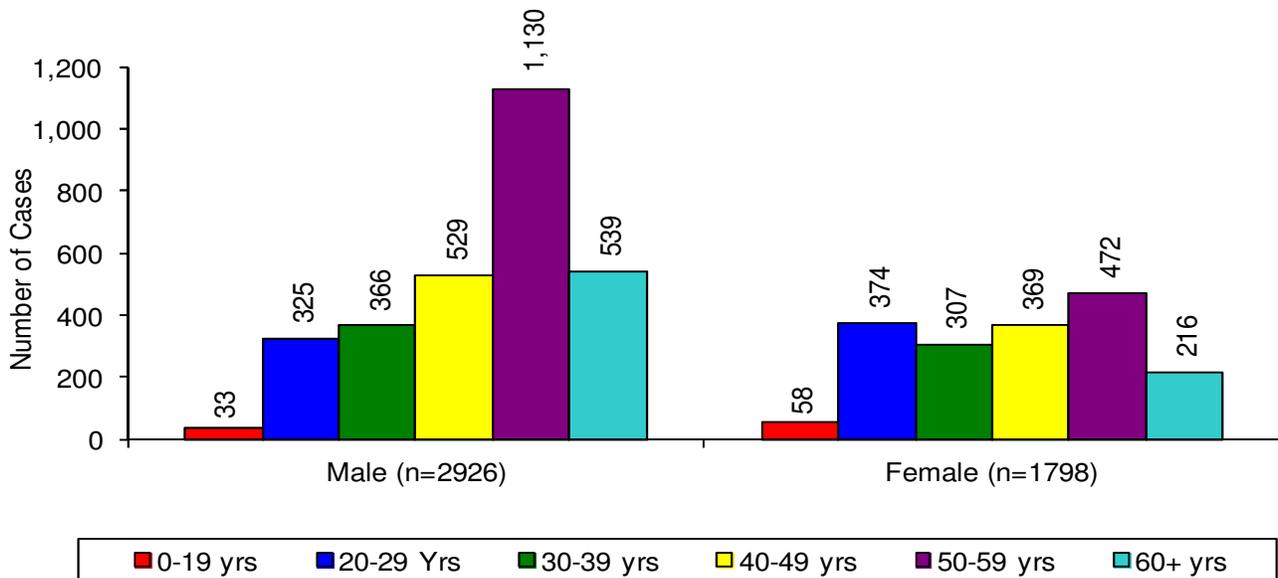
Figure 32. Reported hepatitis C cases* and rates, by jurisdiction, Missouri, 2012**



*Case counts are in black.

**Case rates are in red, per 100,000 population based on 2011 MDHSS population estimates.

Figure 33. Reported hepatitis C cases, by sex and by age group at diagnosis, Missouri, 2012



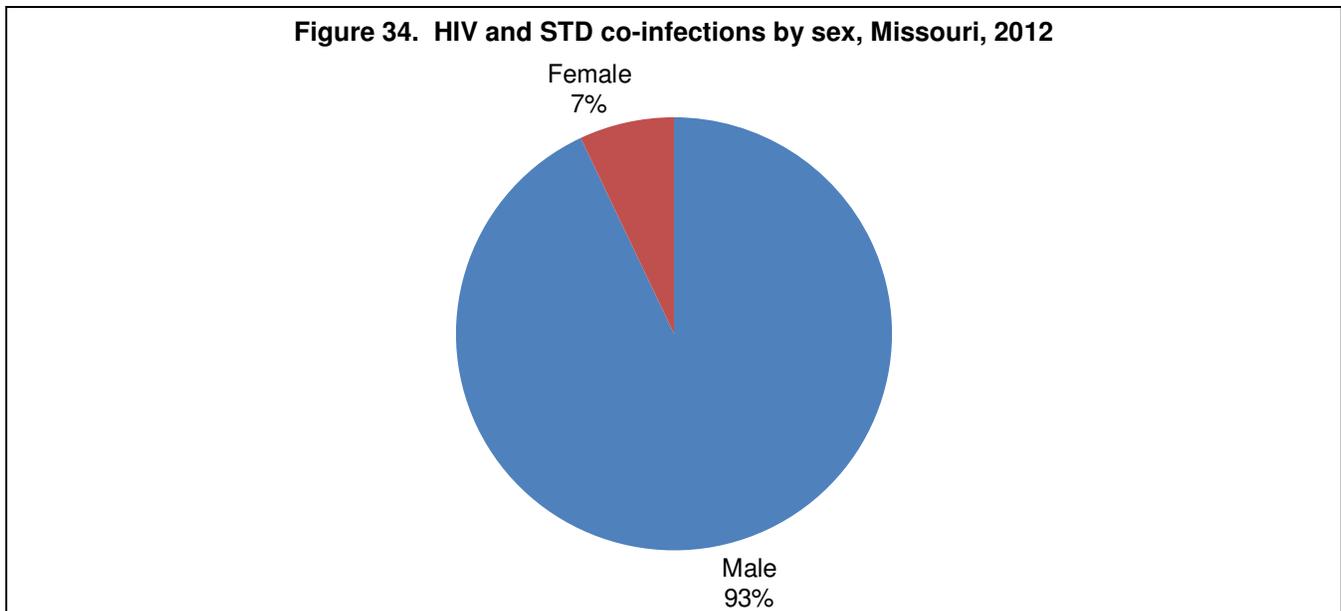
Note: Totals include persons whose age at diagnosis is unknown.

St. Louis City had the greatest number of reported hepatitis C cases with 780 cases (Figure 32). The second largest number of hepatitis C cases occurred in St. Louis County (506). There were three jurisdictions which did not report a hepatitis C case in 2012.

Among both males and females, the largest numbers of reported hepatitis C cases were between 50-59 years (Figure 33).

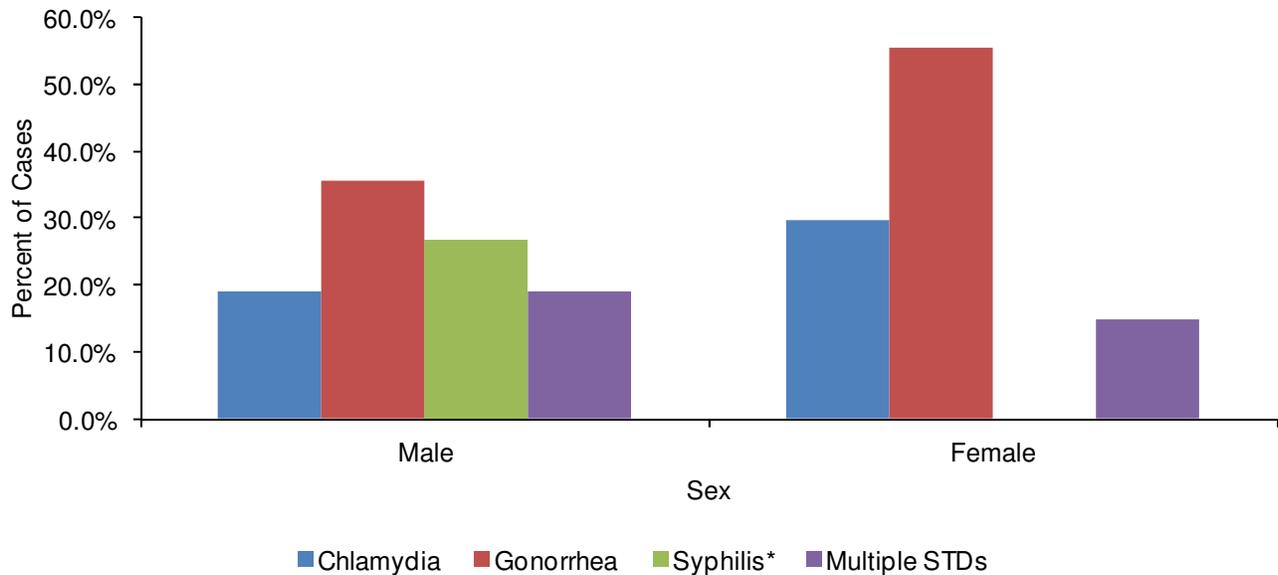
Co-infection	Diagnosed with HIV Prior to 2012		Diagnosed with HIV in 2012		Total	
	N	%	N	%	N	%
Chlamydia	59	20.1%	16	18.0%	75	19.6%
Gonorrhea	112	38.2%	29	32.6%	141	36.9%
Syphilis*	71	24.2%	24	27.0%	95	24.9%
Chlamydia and Gonorrhea	34	11.6%	7	7.9%	41	10.7%
Chlamydia and Syphilis*	9	3.1%	5	5.6%	14	3.7%
Gonorrhea and Syphilis*	8	2.7%	5	5.6%	13	3.4%
Chlamydia, Gonorrhea, and Syphilis*	0	0.0%	3	3.4%	3	0.8%
Total	293	100.0%	89	100.0%	382	100.0%

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



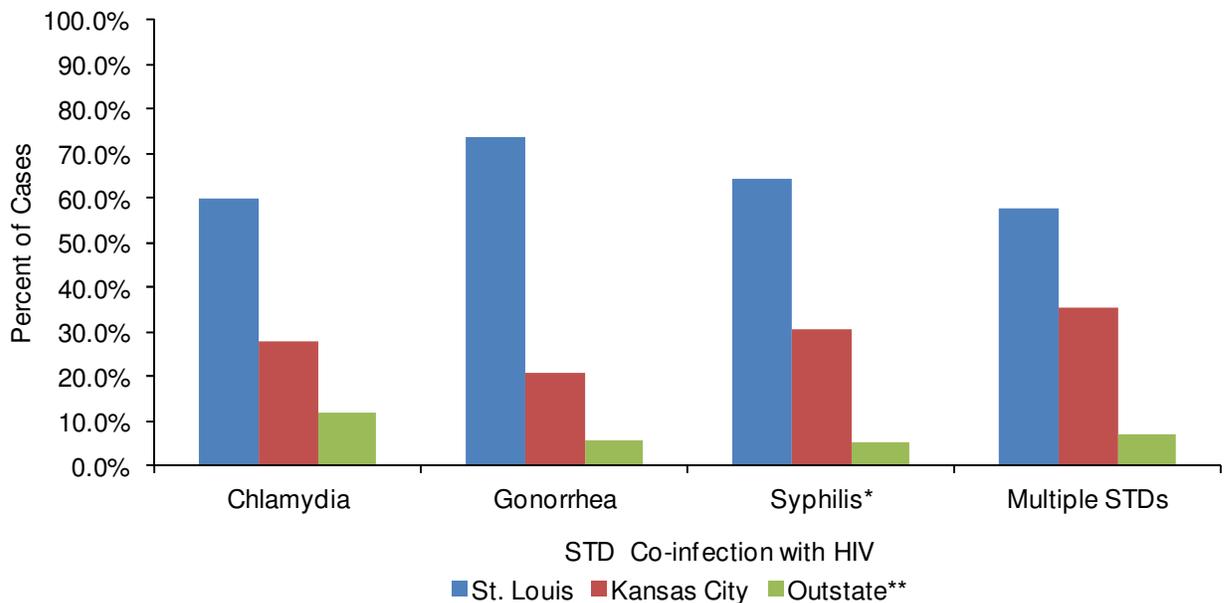
Of the 11,419 individuals living with HIV disease, 382 were reported with an STD co-morbidity in 2012 (Table 30). The majority of those reported with an STD co-morbidity were diagnosed with HIV prior to 2012 (77%). There were not significant differences in the type of STD co-morbidity diagnosed based 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 2012 that were living with HIV varied by infection type. Of the 292 early syphilis cases reported in 2012, 43% were among individuals living with HIV. Only 3% of gonorrhea cases and less than 1% of chlamydia cases reported in 2012 were among individuals living with HIV.

Of the 382 reported STD co-morbidity cases, 93% were among males (Figure 34). Males represented a higher proportion of the STD co-morbidity cases (93%) compared to all males living with HIV disease (83%).

Figure 35. HIV and STD co-infections by sex and type of co-infection, Missouri, 2012

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

Note: No early syphilis co-infections were reported among females living with HIV disease in 2012.

Figure 36. HIV and STD co-infections by geographic region of STD diagnosis, Missouri, 2012

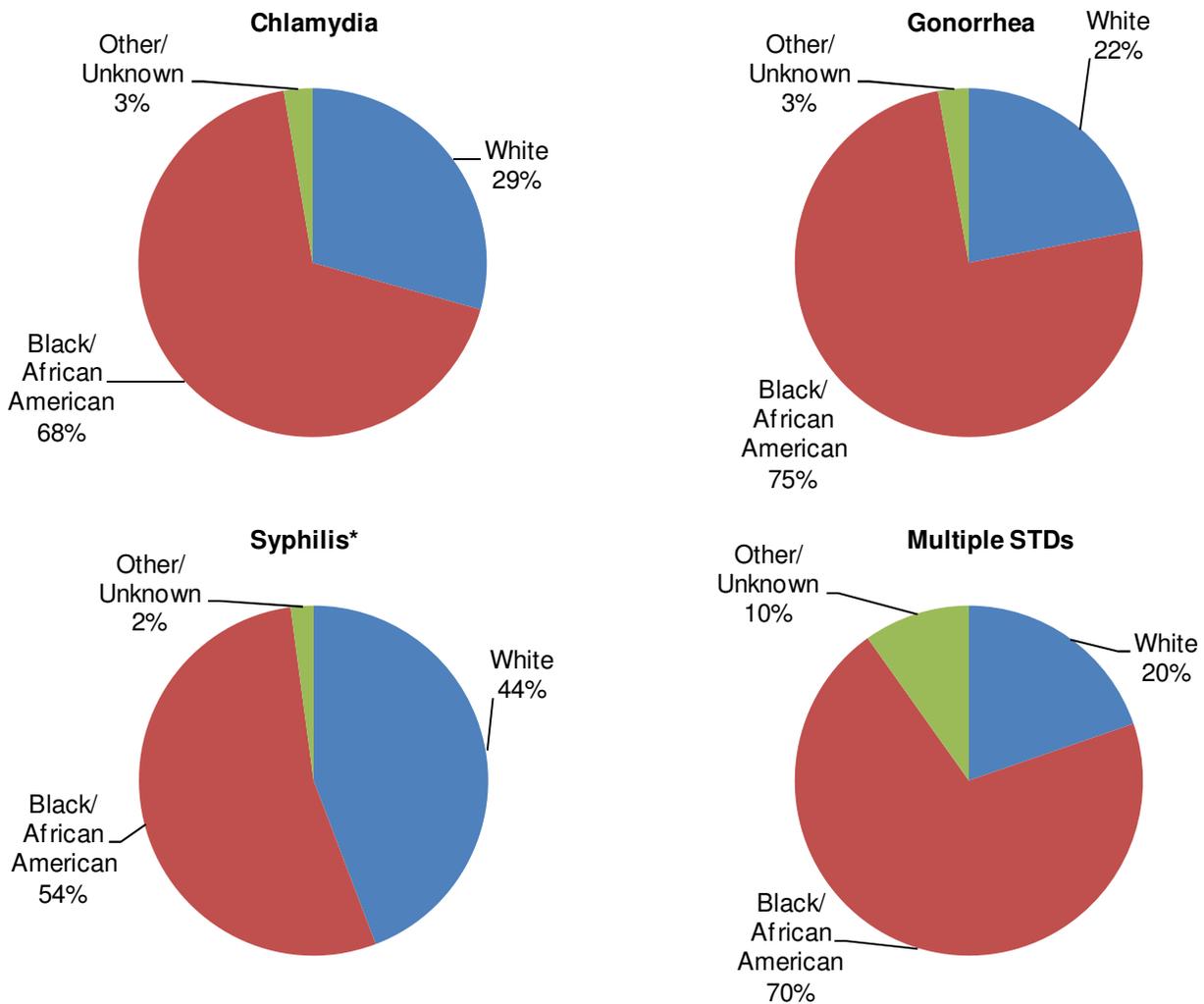
**Only includes diagnoses of primary, secondary, and early latent syphilis.

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

There were differences in the distribution of STD co-morbidity types by sex (Figure 35). Among females living with HIV that were reported with an STD co-morbidity in 2012, 30% were co-infected with chlamydia, 56% with gonorrhea, and 14% with multiple STDs. In contrast, among males living with HIV reported with an STD co-morbidity in 2012, only 19% were co-infected with chlamydia, 35% with gonorrhea, 19% with multiple STDs, and 27% with early syphilis.

Among all HIV and STD co-morbidity types, the greatest proportion of cases was diagnosed in the St. Louis HIV Region (Figure 36). Among those living with HIV that were reported with chlamydia in 2012, 60% were residents of the St. Louis HIV Region when diagnosed with chlamydia. The St. Louis HIV Region represented 74% of all living HIV cases reported with gonorrhea in 2012, 64% of those with early syphilis, and 58% of those with multiple STD co-morbidities. In St. Louis, STD co-morbidity with HIV was highest for gonorrhea, while in Kansas City gonorrhea and syphilis were equally represented as the highest. Outstate STD co-morbidity with HIV was nearly equal for chlamydia and gonorrhea.

Figure 37. HIV and STD co-infections by race/ethnicity and type of co-infection, Missouri, 2012

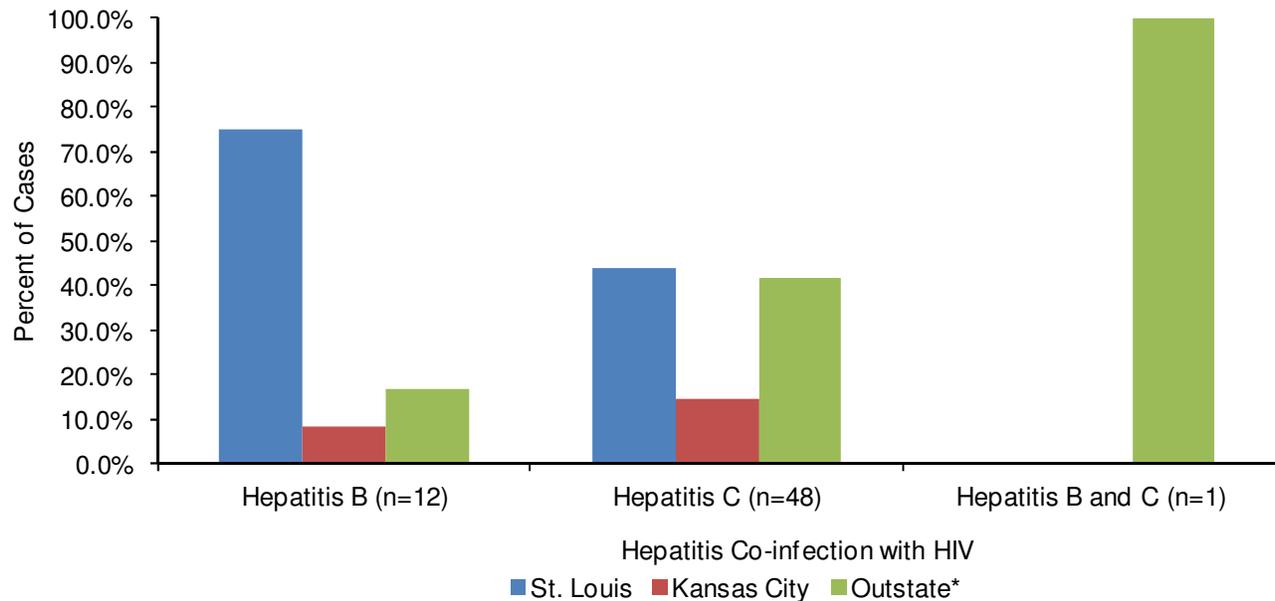


*Only includes diagnoses of primary, secondary, and early latent syphilis.

There were differences in the distribution of race/ethnicity among HIV and STD co-morbidities depending on the type of STD diagnosed (Figure 37). The proportion of co-morbidity cases attributed to blacks/African Americans was highest among those co-infected with gonorrhea (75%), followed by those co-infected with multiple STDs (70%). In all instances, minorities were disproportionately represented in the proportion of co-morbidities that were reported. Although blacks/African Americans represented only 45% of living HIV disease cases, they represented 68% of individuals diagnosed with an STD co-morbidity.

Table 31. Reported hepatitis B and C infections among persons living with HIV disease, Missouri, 2012

Co-infection	Diagnosed with HIV	Diagnosed with HIV in	Total Co-infections
	Prior to 2012	2012	
	N	N	N
Acute Hepatitis B	0	0	0
Chronic Hepatitis B	11	0	11
Prenatal Hepatitis B	1	0	1
Perinatal Hepatitis B	0	0	0
Acute Hepatitis C	0	0	0
Chronic Hepatitis C	44	4	48
Chronic Hepatitis B & C	1	0	1
Total	57	4	61

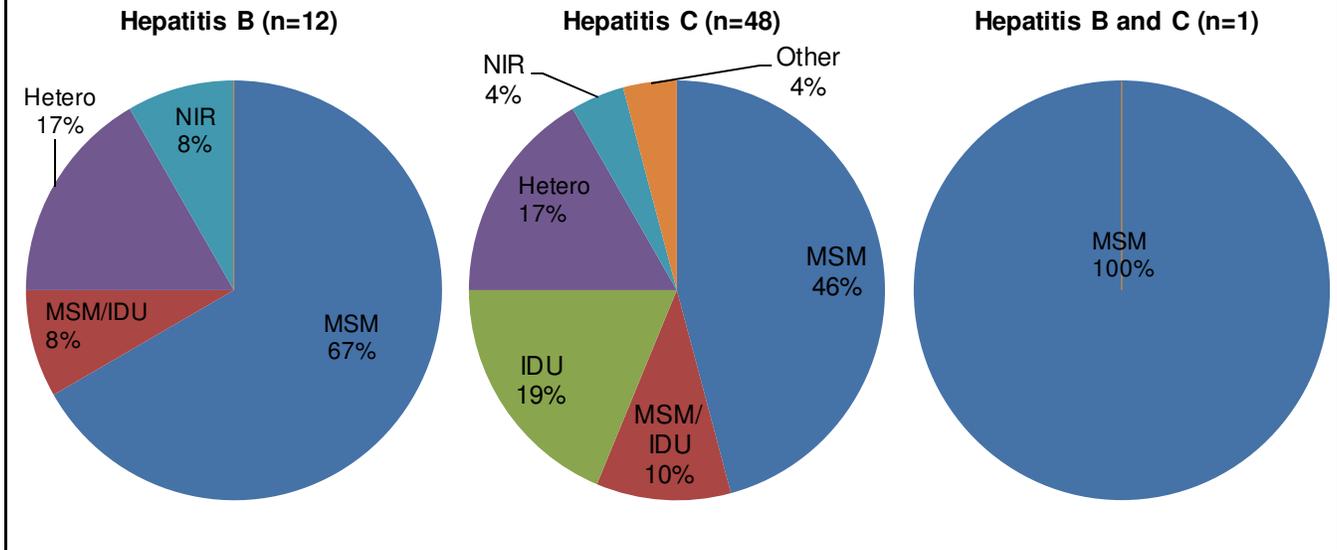
Figure 38. HIV and hepatitis co-infections by geographic region of hepatitis diagnosis, Missouri, 2012

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

Of the 11,419 individuals living with HIV disease, 61 were reported with a hepatitis co-morbidity in 2012 (Table 31). The majority of those reported with a hepatitis co-morbidity were diagnosed with HIV prior to 2012 (93%). The largest number of HIV co-morbidities was with chronic hepatitis C. The proportion of reported hepatitis infections in 2012 that were living with HIV varied by infection type. Of the 350 chronic hepatitis B cases reported in 2012, 3% were among individuals living with HIV. Only 1% of chronic hepatitis C cases reported in 2012 were among individuals living with HIV.

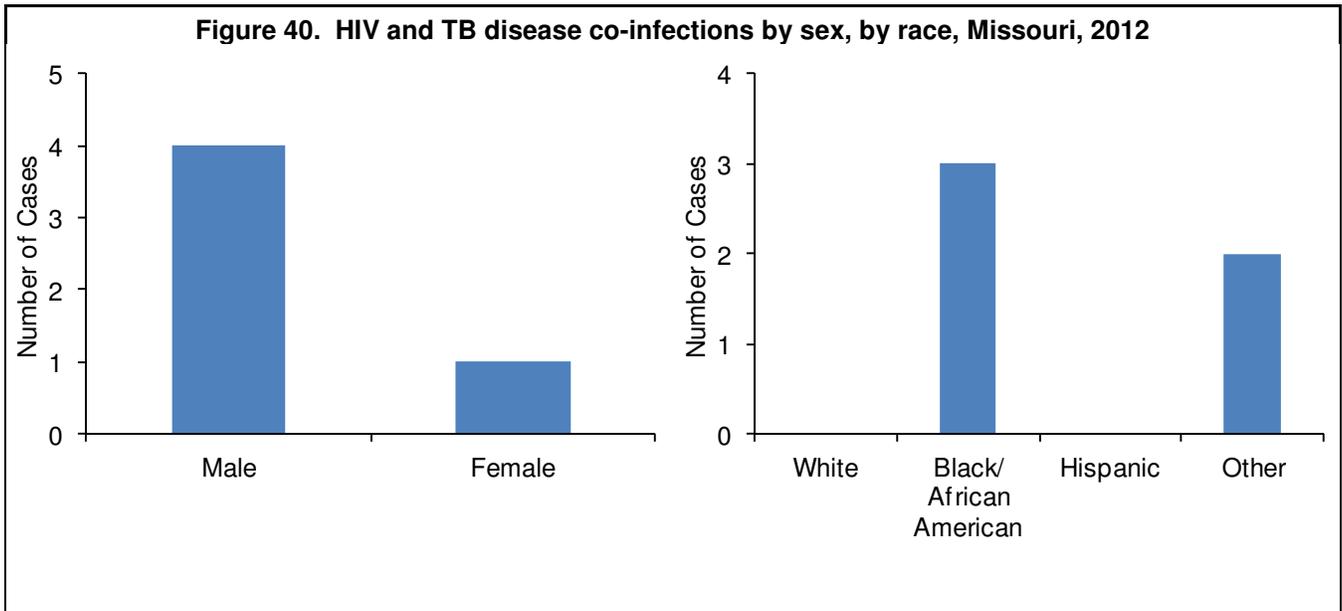
Among persons living with HIV disease that were reported with only a hepatitis B infection in 2012, the majority were residing in the St. Louis HIV Region (75%) at the time of the hepatitis diagnosis (Figure 38). Among HIV-positive persons reported with only a hepatitis C infection in 2012, a nearly equal number were residing in the St. Louis HIV Region (21) and Outstate (20) at the time of the hepatitis diagnosis.

Figure 39. HIV and hepatitis co-infections by HIV exposure category and type of co-infection, Missouri, 2012



Among persons living with HIV disease and reported with only a hepatitis B infection in 2012, 67% were among MSM (Figure 39). Among hepatitis C co-morbidity cases, 19% were attributed to IDU, and 10% were attributed to both IDU and MSM.

Figure 40. HIV and TB disease co-infections by sex, by race, Missouri, 2012



Among the 11,419 persons living with HIV disease, five were reported to be diagnosed with TB disease in 2012. Of those co-infected with TB disease in 2012, three of the co-infections were among persons diagnosed with HIV disease prior to 2012. Co-infections were reported among persons 13-44 years of age at the end of 2012. Four of the co-infections were among males, and three of the co-infections were among blacks/African Americans (Figure 40).

Key Highlights: What are the number and characteristics of the individuals who know they are HIV positive but who are not in care?

Magnitude of the Problem

- Overall, 66% 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 2012).
- Persons enrolled in HIV medical case management were significantly more likely to have their primary care medical needs met. Of the 11,419 persons living with HIV disease in Missouri, 4,788 (42%) were enrolled in medical case management at some point in 2012. Ninety-five percent (95%) of individuals in case management had their primary care medical needs met in 2012.
- Persons living with HIV who were subcategorized as AIDS cases in 2012 were more likely to have their medical needs met (74%) compared to persons subcategorized as HIV cases (57%). 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 AIDS) were important factors influencing unmet need.

Where

- Overall, the proportion of individuals with a met need was greatest in the Northwest HIV Region (74%), and lowest in the Kansas City and St. Louis HIV Regions (65%).
- Among those enrolled in HIV medical case management, the proportion with a met need ranged from 94% in the Southeast and St. Louis HIV Regions to 100% in the Northwest HIV Region.
- For those not enrolled in HIV medical case management, the proportion with a met need ranged from 39% in the Southwest HIV Region to 57% in the Northwest HIV Region.

Who

Sex

- Overall, there were not 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 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 2009-2011, 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 (11%).
- There were differences in unmet need by current age among individuals not enrolled in HIV medical case management. Unmet need was greatest among children 2-12 years of age (62%).

Exposure Category

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

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	1,466 (63.8%)	833 (36.2%)	724 (94.1%)	45 (5.9%)	742 (48.5%)	788 (51.5%)
Black/African American	1,979 (66.8%)	984 (33.2%)	1,388 (93.6%)	95 (6.4%)	591 (39.9%)	889 (60.1%)
Hispanic	83 (57.2%)	62 (42.8%)	60 (98.4%)	1 (1.6%)	23 (27.4%)	61 (72.6%)
Other/Unk.	49 (65.3%)	26 (34.7%)	36 (97.3%)	1 (2.7%)	13 (34.2%)	25 (65.8%)
Total	3,577 (65.2%)	1,905 (34.8%)	2,208 (94.0%)	142 (6.0%)	1,369 (43.7%)	1,763 (56.3%)
Kansas City Region						
White	1,158 (64.7%)	631 (35.3%)	529 (96.9%)	17 (3.1%)	629 (50.6%)	614 (49.4%)
Black/African American	921 (66.5%)	464 (33.5%)	642 (95.4%)	31 (4.6%)	279 (39.2%)	433 (60.8%)
Hispanic	120 (55.3%)	97 (44.7%)	70 (93.3%)	5 (6.7%)	50 (35.2%)	92 (64.8%)
Other/Unk.	56 (74.7%)	19 (25.3%)	27 (93.1%)	2 (6.9%)	29 (63.0%)	17 (37.0%)
Total	2,255 (65.1%)	1,211 (34.9%)	1,268 (95.8%)	55 (4.2%)	987 (46.1%)	1,156 (53.9%)
Northwest Region						
White	67 (77.9%)	19 (22.1%)	37 (100.0%)	0 (0.0%)	30 (61.2%)	19 (38.8%)
Black/African American	13 (72.2%)	5 (27.8%)	6 (100.0%)	0 (0.0%)	7 (58.3%)	5 (41.7%)
Hispanic	0 (0.0%)	4 (100.0%)	0 (N/A)	0 (N/A)	0 (0.0%)	4 (100.0%)
Other/Unk.	0 (N/A)	0 (N/A)	0 (N/A)	0 (N/A)	0 (N/A)	0 (N/A)
Total	80 (74.1%)	28 (25.9%)	43 (100.0%)	0 (0.0%)	37 (56.9%)	28 (43.1%)
North Central Region						
White	220 (70.5%)	92 (29.5%)	131 (97.8%)	3 (2.2%)	89 (50.0%)	89 (50.0%)
Black/African American	76 (61.8%)	47 (38.2%)	49 (98.0%)	1 (2.0%)	27 (37.0%)	46 (63.0%)
Hispanic	20 (69.0%)	9 (31.0%)	16 (94.1%)	1 (5.9%)	4 (33.3%)	8 (66.7%)
Other/Unk.	3 (50.0%)	3 (50.0%)	2 (66.7%)	1 (33.3%)	1 (33.3%)	2 (66.7%)
Total	319 (67.9%)	151 (32.1%)	198 (97.1%)	6 (2.9%)	121 (45.5%)	145 (54.5%)
Southwest Region						
White	525 (73.2%)	192 (26.8%)	384 (98.5%)	6 (1.5%)	141 (43.1%)	186 (56.9%)
Black/African American	48 (52.2%)	44 (47.8%)	40 (97.6%)	1 (2.4%)	8 (15.7%)	43 (84.3%)
Hispanic	32 (69.6%)	14 (30.4%)	25 (96.2%)	1 (3.8%)	7 (35.0%)	13 (65.0%)
Other/Unk.	7 (50.0%)	7 (50.0%)	5 (71.4%)	2 (28.6%)	2 (28.6%)	5 (71.4%)
Total	612 (70.4%)	257 (29.6%)	454 (97.8%)	10 (2.2%)	158 (39.0%)	247 (61.0%)
Southeast Region						
White	146 (69.2%)	65 (30.8%)	96 (94.1%)	6 (5.9%)	50 (45.9%)	59 (54.1%)
Black/African American	59 (62.8%)	35 (37.2%)	36 (92.3%)	3 (7.7%)	23 (41.8%)	32 (58.2%)
Hispanic	3 (60.0%)	2 (40.0%)	2 (100.0%)	0 (0.0%)	1 (33.3%)	2 (66.7%)
Other/Unk.	1 (100.0%)	0 (0.0%)	1 (100.0%)	0 (0.0%)	0 (N/A)	0 (N/A)
Total	209 (67.2%)	102 (32.8%)	135 (93.8%)	9 (6.3%)	74 (44.3%)	93 (55.7%)
Statewide (MO)****						
White	3,734 (66.3%)	1,901 (33.7%)	1,978 (96.2%)	79 (3.8%)	1,756 (49.1%)	1,822 (50.9%)
Black/African American	3,432 (66.7%)	1,714 (33.3%)	2,322 (94.0%)	147 (6.0%)	1,110 (41.5%)	1,567 (58.5%)
Hispanic	264 (57.1%)	198 (42.9%)	175 (95.6%)	8 (4.4%)	89 (31.9%)	190 (68.1%)
Other/Unk.	121 (68.8%)	55 (31.3%)	73 (92.4%)	6 (7.6%)	48 (49.5%)	49 (50.5%)
Total	7,551 (66.1%)	3,868 (33.9%)	4,548 (95.0%)	240 (5.0%)	3,003 (45.3%)	3,628 (54.7%)

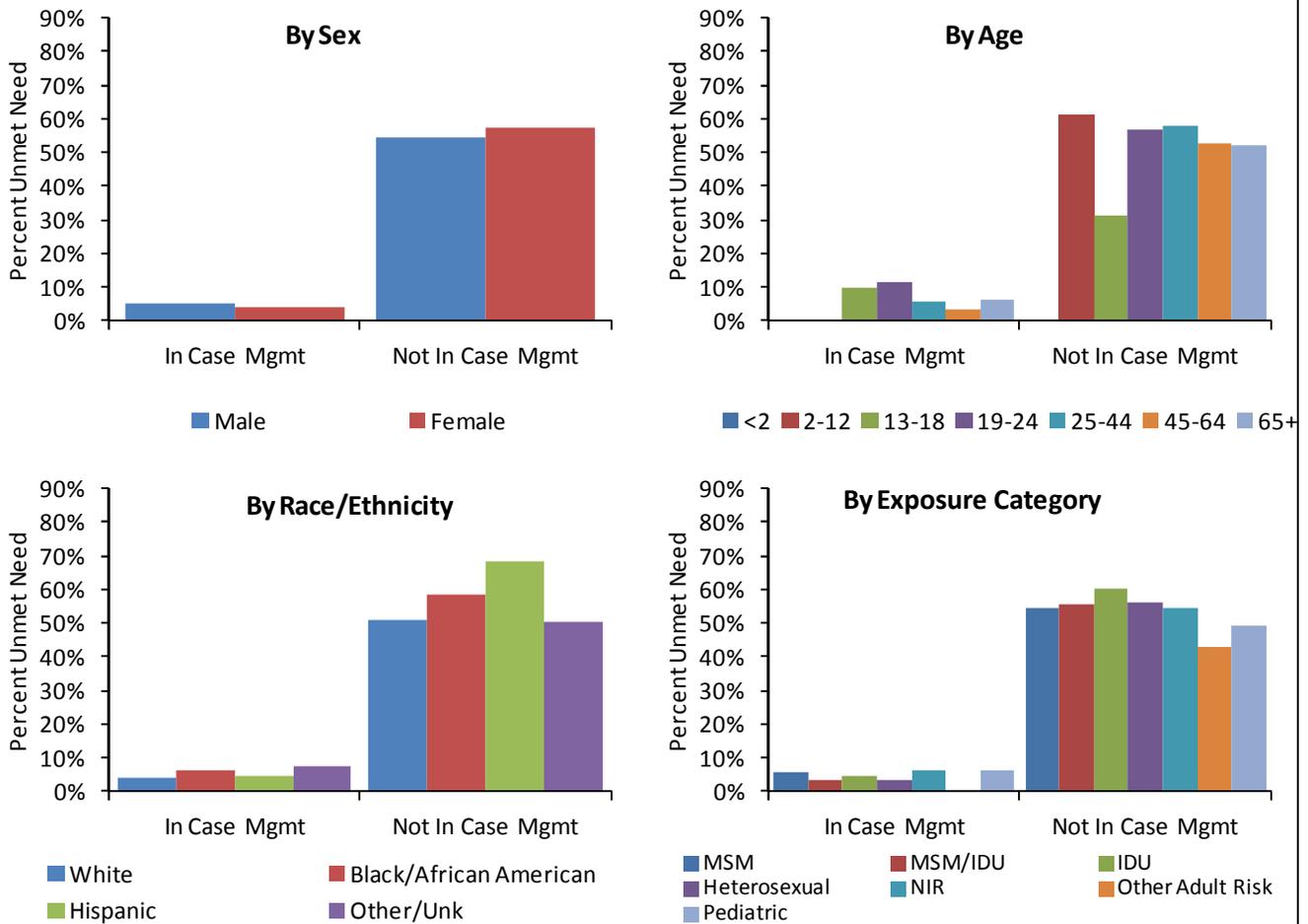
*Includes all individuals still living whose most recent diagnosis (i.e., HIV or AIDS) occurred in the region. Does not reflect the number of individuals currently living in the region.
**Evidence of a CD4+ T-lymphocyte or viral load laboratory test result or diagnosis with an opportunistic infection 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 11,419 persons living with HIV at the end of 2012, 66% had evidence of met primary care medical needs (i.e., met need) in 2012 (Table 32). 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 2012 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 2012. A significantly greater proportion of those enrolled in HIV medical case management had a met need (95%) in 2012 compared to those not enrolled (45%). 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 region. It is important to note that data presented by HIV region represent those who currently have a met need that were most recently diagnosed with HIV or AIDS in the selected HIV 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 HIV Region (74%), and lowest in the Kansas City and St. Louis HIV Regions (65%). 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 39% in the Southwest HIV Region to 57% in the Northwest HIV Region.

There were differences in the proportion of persons with a met need by race/ethnicity. Overall statewide, met need was lower among Hispanics (57%) 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 regions compared to whites, and the proportion of Hispanics with a met need was lower in all HIV regions compared to whites.

Figure 41. Percent of individuals living with HIV having an unmet* primary medical care need in 2012 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 41 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 not 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 children 2-12 years of age (62%). Those currently 13-18 years of age had the lowest proportion 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 (11%). There were differences in the proportion of individuals with unmet needs by race/ethnicity among those not enrolled in case management, and among those enrolled in case management. Among those not enrolled in case management, unmet need was greatest among Hispanics (68%) and lowest among those of other or unknown race (51%). Among those enrolled in case management, unmet need was greatest among those of other or unknown race (8%). There were not significant differences in the proportion of individuals with unmet need by exposure category regardless of whether enrolled in HIV medical case management.

Table 33 examines the proportion of cases reported with unmet need based on current status (i.e., HIV or AIDS) and selected characteristics. Overall, the proportion of those with an unmet need was greater for those classified as HIV cases compared to AIDS cases. The same trend was observed regardless of whether individuals were enrolled in HIV medical case management.

Table 33. Percent of individuals living with HIV having an unmet* primary medical care need in 2012 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)	AIDS Cases with Unmet Need* % (N)	HIV Cases with Unmet Need* % (N)	AIDS Cases with Unmet Need* % (N)	HIV Cases with Unmet Need* % (N)	AIDS Cases with Unmet Need* % (N)
Sex						
Male	44.2% (1,942)	26.6% (1,351)	7.6% (116)	3.7% (84)	63.8% (1,826)	44.8% (1,267)
Female	37.8% (369)	21.2% (206)	4.5% (20)	3.6% (20)	65.7% (349)	45.6% (186)
Race/Ethnicity						
White	40.6% (1,072)	27.7% (829)	4.8% (41)	3.2% (38)	57.9% (1,031)	44.0% (791)
Black/African American	45.3% (1,096)	22.7% (618)	8.8% (88)	4.0% (59)	70.8% (1,008)	44.6% (559)
Hispanic	47.9% (104)	38.4% (94)	5.0% (4)	3.9% (4)	73.0% (100)	63.4% (90)
Other/Unknown	46.4% (39)	17.4% (16)	9.7% (3)	6.3% (3)	67.9% (36)	29.5% (13)
Current Age†						
<2	0.0% (0)	-- (0)	-- (0)	-- (0)	0.0% (0)	-- (0)
2-12	46.9% (15)	100.0% (1)	0.0% (0)	-- (0)	60.0% (15)	100.0% (1)
13-18	17.9% (5)	25.0% (2)	5.6% (1)	50.0% (1)	40.0% (4)	16.7% (1)
19-24	31.2% (141)	14.4% (18)	13.2% (38)	4.8% (4)	62.4% (103)	34.1% (14)
25-44	41.6% (1,039)	25.0% (527)	6.6% (67)	4.6% (50)	65.5% (972)	46.8% (477)
45-64	46.5% (1,015)	26.0% (917)	4.3% (27)	2.9% (45)	63.4% (988)	44.2% (872)
65+	55.8% (96)	32.5% (92)	15.0% (3)	4.5% (4)	61.2% (93)	45.4% (88)
Exposure Category						
Men who have sex with men	42.3% (1,396)	26.7% (1,000)	8.0% (97)	3.8% (65)	62.4% (1,299)	45.8% (935)
Men who have sex with men and inject drugs	37.1% (78)	26.1% (96)	3.9% (4)	2.8% (5)	68.5% (74)	47.9% (91)
Injecting drug use	46.9% (115)	28.8% (117)	4.7% (4)	4.0% (8)	69.4% (111)	52.7% (109)
Heterosexual contact	40.5% (296)	23.0% (193)	3.2% (10)	3.3% (14)	68.1% (286)	43.7% (179)
No indicated risk (NIR)	48.7% (393)	21.8% (136)	8.5% (20)	3.8% (11)	65.1% (373)	36.9% (125)
Other Adult Risk	53.8% (7)	23.8% (10)	0.0% (0)	0.0% (0)	70.0% (7)	33.3% (10)
Pediatric	41.3% (26)	17.2% (5)	4.8% (1)	8.3% (1)	59.5% (25)	23.5% (4)
Total	43.1% (2,311)	25.7% (1,557)	6.9% (136)	3.7% (104)	64.1% (2,175)	44.9% (1,453)

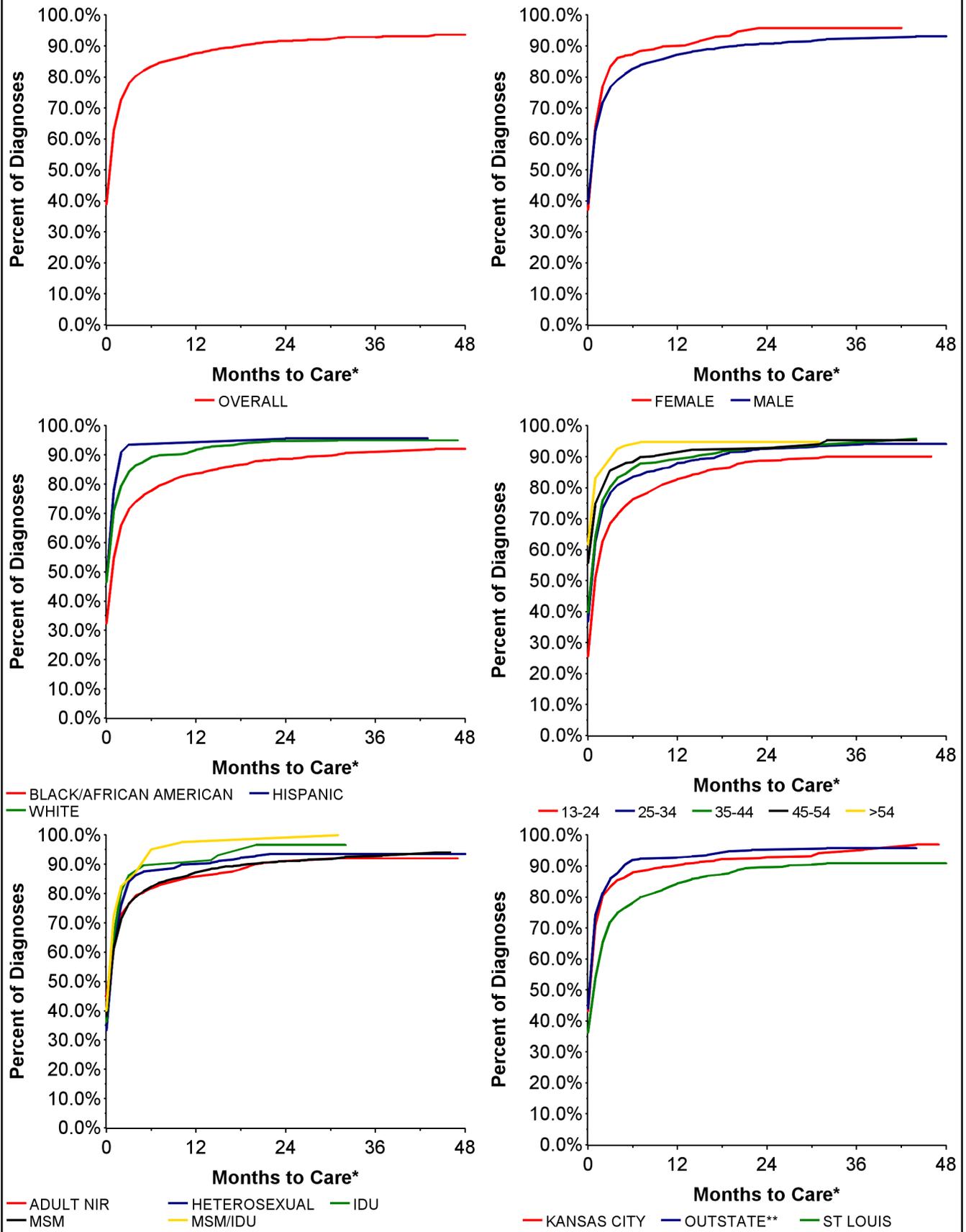
*No evidence of a CD4+ T-lymphocyte or viral load laboratory test result or diagnosis with an opportunistic infection in the current year.

**HIV case vs. AIDS case.

†Based on age as of December 31, 2012

Note: Rows with the percent marked '- ' indicates that there were no living persons in the selected category.

Figure 42. Length of time in months to enter care* after initial HIV diagnosis among persons diagnosed between 2009 and 2011, by selected characteristics, Missouri



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

Figure 42 examines the length of time until first entry into care among persons newly diagnosed with HIV disease between 2009 and 2011. Entry into care was measured as the receipt of a CD4 lymphocyte or viral load laboratory result by MDHSS. Overall, 88% 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 84% of blacks/African Americans had entered care, compared to 94% of Hispanics and 92% 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 83% entered care within one year of diagnosis, compared to 95% 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 region of diagnosis. Persons diagnosed in the St. Louis HIV Region were significantly less likely to enter into care over time. At one year after diagnosis, 90% of persons diagnosed in the Kansas City HIV Region, 93% of persons diagnosed in Outstate, and 84% of persons diagnosed in the St. Louis HIV Region entered care. Entry into care remained lower among those recently diagnosed in the St. Louis HIV 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.

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Glossary

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).

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 AIDS

All HIV-infected people who have fewer than 200 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.

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, 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 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 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 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

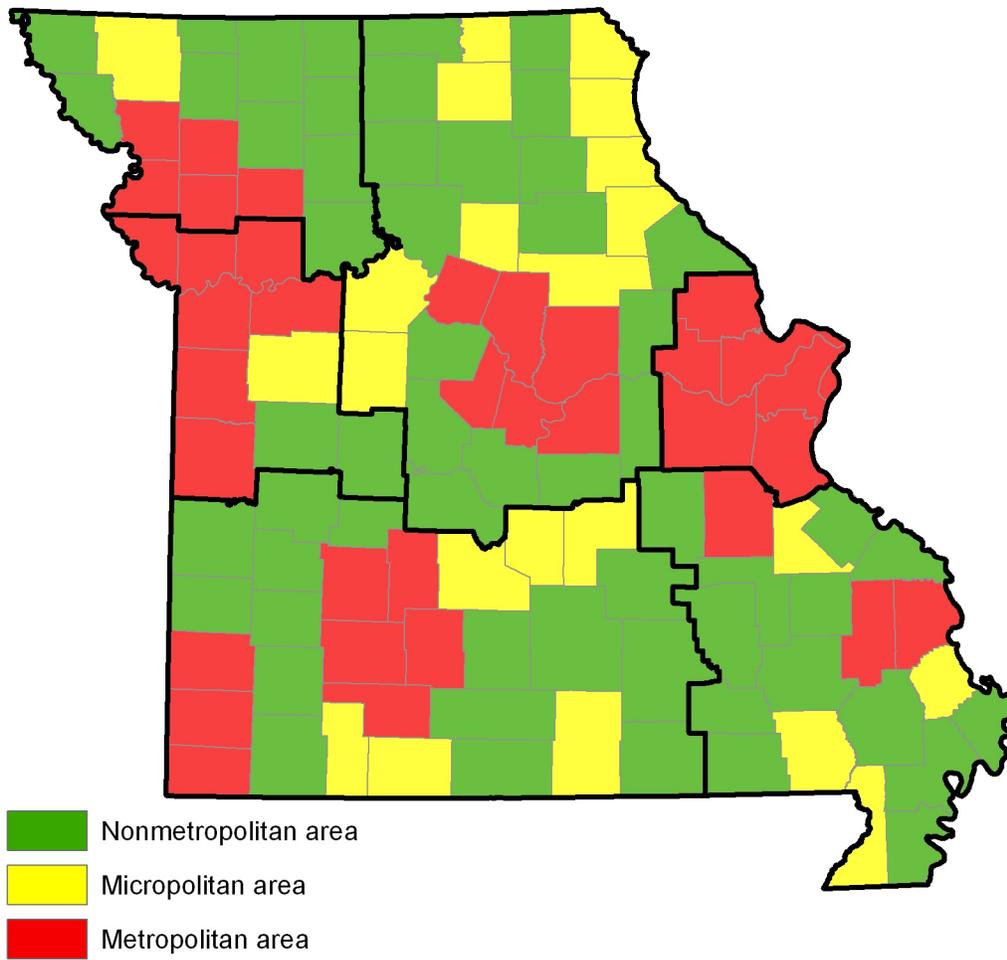
Sexually transmitted infections (STIs), commonly called **sexually transmitted diseases (STDs)** and once called venereal diseases, are among the most common infectious diseases in the United States today. They are a group of infections that are predominantly transmitted through sexual activity.

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

Appendix

Metropolitan, Micropolitan, and Nonmetropolitan Areas by County



Source: Missouri Census Data Center, MABLE/Geocorr2K. 2008 Metropolitan Divisions.