

# STATE OF MISSISSIPPI

2015 STD/HIV Epidemiologic Profile



MISSISSIPPI STATE DEPARTMENT OF HEALTH

*Department of  
Health, STD/HIV  
Office*

[www.healthyms.com/std](http://www.healthyms.com/std)

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## **STD/HIV Office Structure**

Acquired Immunodeficiency Syndrome (AIDS) has been reportable in Mississippi since 1983 and Human Immunodeficiency Virus (HIV) since 1988. In 1995, the Division of Sexually Transmitted Disease (STD)/Human Immunodeficiency Virus (HIV) was formed by the merger of two separate programs. The Division's primary mission is to reduce the number of newly diagnosed STDs including HIV infection and AIDS in Mississippi.

The STD/HIV Office is located within the Mississippi State Department of Health (MSDH) Office of Communicable Diseases (OCD) as the STD/HIV Office. The Office consists of the Organizational Management Team, Surveillance Branch, Education Branch, Policy Branch, Field Services, Epidemiology and Research Branch, and Ryan White Part B Program HIV Care and Services. The Surveillance Branch provides ongoing systematic collection, analysis, evaluation and dissemination of data describing STDs and HIV disease. The Education Branch is responsible for planning, implementing and evaluating interventions designed to reach high priority target populations. The Evaluation Branch manages federal funding provided for Community-Based Organizations (CBOs) throughout the state. The STD/HIV Office manages funds received through provision of Part B of the Ryan White Comprehensive AIDS Resources Emergency (CARE) Act. Federal funds are used to provide life-sustaining therapies for people living with HIV disease.

The vision of the Office is to be “leader among southern states to implement evidence-based practices in STD/HIV surveillance, prevention and treatment; and be a role model for the delivery of fair and equitable partner services and the evaluation of STD/HIV prevention and treatment strategies to acquire public trust and respect.” To accomplish this, the Office creates an empowered organization focusing energies in an integrated and cooperative effort.

## **Purpose**

The epidemiological (epi) profile presents descriptive data for persons diagnosed with STDs/HIV in the state of Mississippi. The profile is intended to give Mississippians a thorough understanding of the current epidemiology of sexually transmitted diseases and HIV disease in our state. By displaying the population most infected by and living with the diseases, the epi profile aids in identifying the people who are in need of prevention and care services, both those who are infected and those at risk. The epi profile serves as a starting point in the consideration of which prevention and care services are needed.

## **Data Limitations**

Mississippi State Department of Health (MSDH) has collected HIV data since the 1980s. Data obtained for the epi profile is mainly obtained through the Enhanced HIV/AIDS Surveillance system (eHARS) and the Patient Reporting Investigating Surveillance Manager (PRISM) at MSDH. The data in eHARS is mostly obtained through passive surveillance from providers and consist of reports of confirmatory tests, viral loads, and CD4 counts, in addition to case reports and interview data that include information on risk factors and behavior. The data in PRISM is obtained by passive and active surveillance from providers and disease intervention specialists. Data on risk factor and demographics rely heavily on patient and provider reporting. The data in this report are from interviewed and non-interviewed cases. Cases of STD/HIV include people currently living in Mississippi regardless of residence at diagnosis. Therefore, this data includes persons diagnosed in Mississippi as well as those diagnosed out of Mississippi (but have since moved here).

In 2014, the STD/HIV Office made a change in the STD surveillance systems from Sexually Transmitted Disease Management Information System (STDMIS) to PRISM. This change in surveillance possibly resulted in an artificial decrease in the STD outcomes in Mississippi for 2013.

## **Mississippi Demographics**

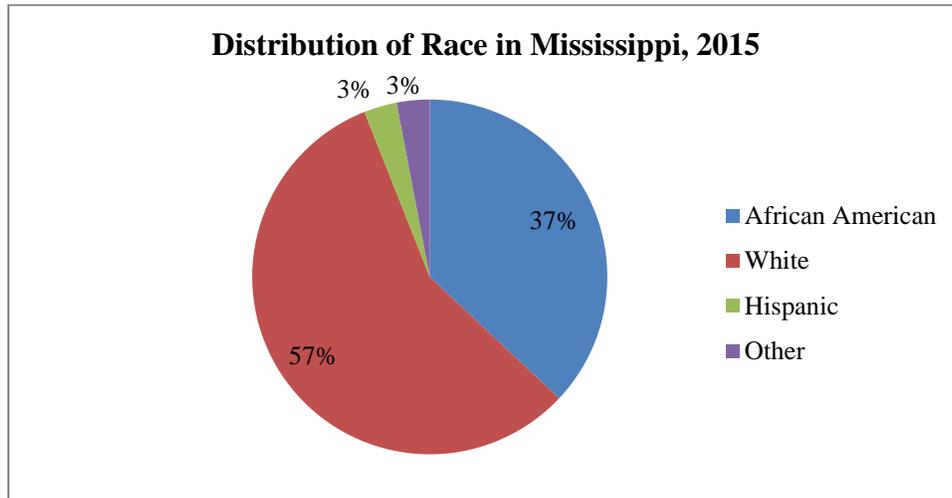
### **Geography**

The state of Mississippi is bordered by Tennessee (north), Alabama (east), the Gulf of Mexico (south), Arkansas (west) and Louisiana (west). As the thirty second largest state in the US, Mississippi covers approximately 47,000 total area square miles.<sup>1</sup> Mississippi is mostly composed of lowlands. The peak elevation is 807 feet above sea level at Woodall Mountain, and the lowest point is at sea level at the Gulf Coast. The state is divided into 82 counties, 69 of which are defined as rural<sup>2</sup>. Geographical regions in Mississippi: The Delta (northwest Mississippi), The Hills (central and north Mississippi), Piney Woods (southern Mississippi), and the Gulf Coast (bordering the Gulf of Mexico). There are four main metropolitan statistical areas (MSAs) in Mississippi: (1) Jackson MSA (counties: Copiah, Hinds, Madison, Rankin, Simpson, Yazoo) (2) Memphis MSA (counties: Benton, DeSoto, Marshall, Tunica, Tate), (3) Hattiesburg MSA (counties: Lamar, Forrest, Perry) and (4) Gulfport-Biloxi-Pascagoula (counties: Hancock, Harrison, Jackson)<sup>2</sup>. Jackson, the largest city and the state's capital, is located in Hinds county<sup>3</sup>.

### Race, Gender, and Age

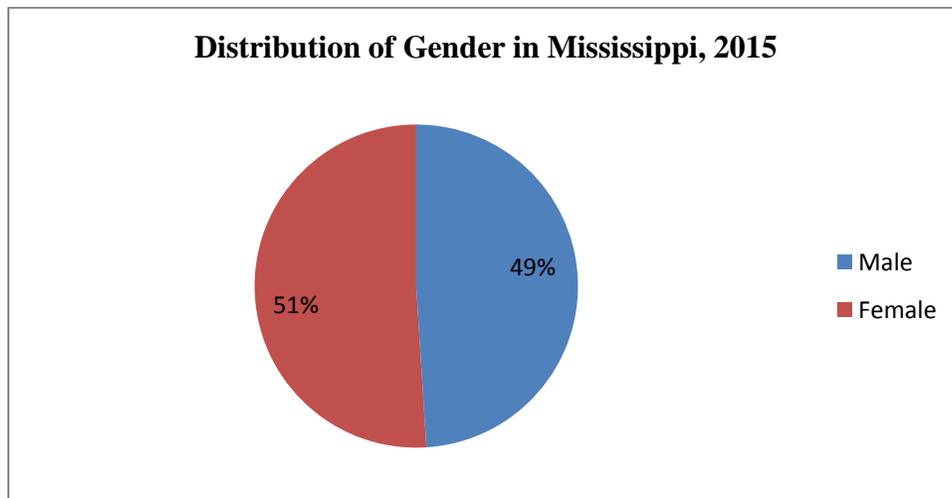
According to the 2015 U. S. Census Bureau’s population estimates<sup>1</sup>, Mississippi is 57% White, 37% African American, 3% Hispanic, and 3% other, as illustrated in Figure 1. The other races include: Asian, Native Hawaiian, Pacific Islander, Native American, Alaskan Native, and combinations of other races.

**Figure 1**



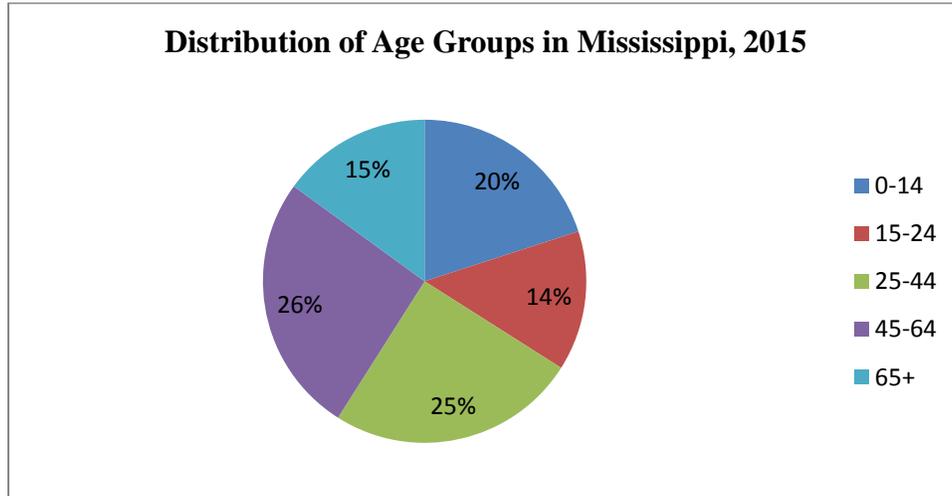
There is an equal amount of men and women in Mississippi. Women comprise 51% of the total population of Mississippians, and men account for 49% of the total population, as shown in Figure 2.

**Figure 2**



Currently, the 0-14 age group comprises 20% of the population, 14% of the population is made up of the 15-24 year old age group, 25% of the population is between the ages of 25-44, and 26% of the population belongs to the 45-64 year old age group. The remainder (15%) of the population is 65+ age group. These findings are illustrated in Figure 3.

**Figure 3**



### **Population**

According to the 2015 U. S. Census Bureau<sup>1</sup>, the total population of the state of Mississippi is estimated to be 2,992,333. Mississippi is comprised of 82 counties and is divided into 9 public health districts. In 2015, the population ranged from 1,337 in Issaquena County to 242,891 in Hinds County. Mississippi is a rural area. There are only six counties in Mississippi with populations above 100,000. These counties include: Hinds, Harrison, DeSoto, Rankin, Jackson, and Madison. As seen in Table 1, the smallest population is in District VII and the largest population is in District V. Map 1 illustrates the division of the counties into their respective districts.

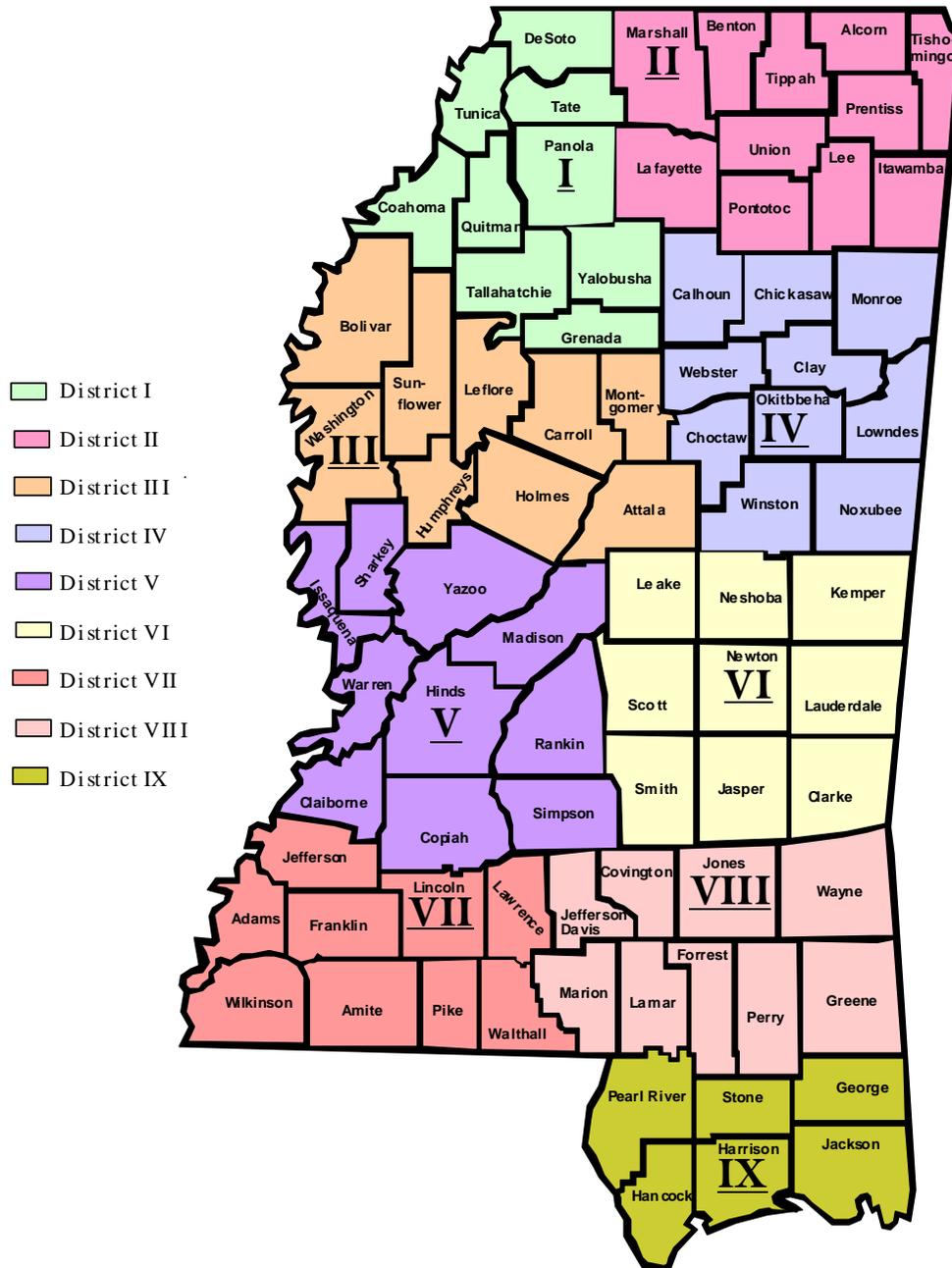
**Table 1**

<b>Distribution of Population by Public Health District, Mississippi 2015</b>	
<b>Public Health District</b>	<b>2015 Population Estimate</b>
District I	326,848
District II	370,028
District III	205,903
District IV	244,988
District V	641,334
District VI	239,365
District VII	170,065
District VIII	307,913
District IX	485,889
<b>Statewide</b>	<b>2,992,333</b>

**Note:** All figures estimated by the US Census Bureau

Map 1

Mississippi State Department of Health  
Public Health Districts

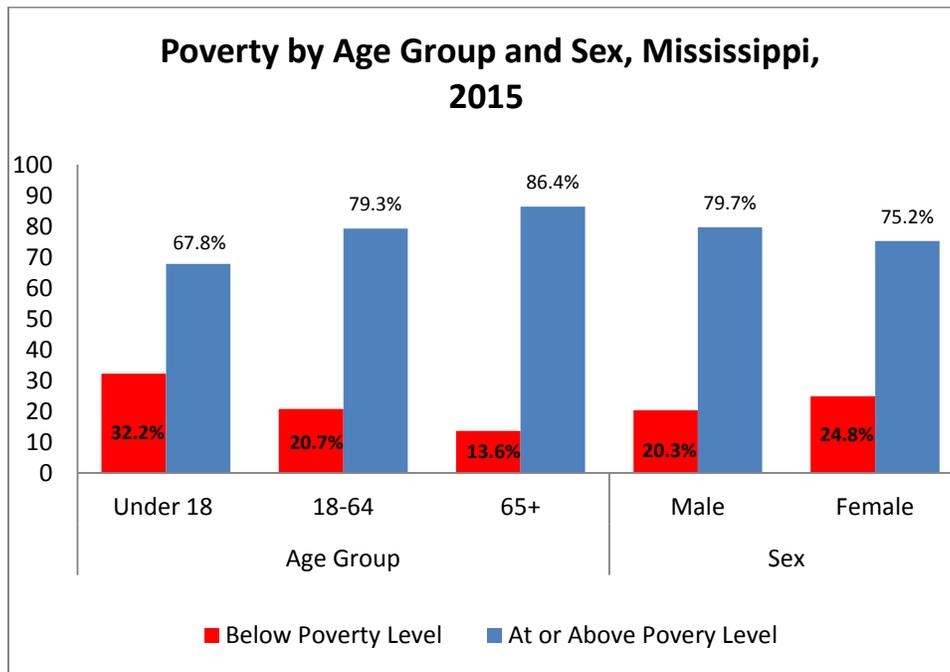


## Socioeconomic Status

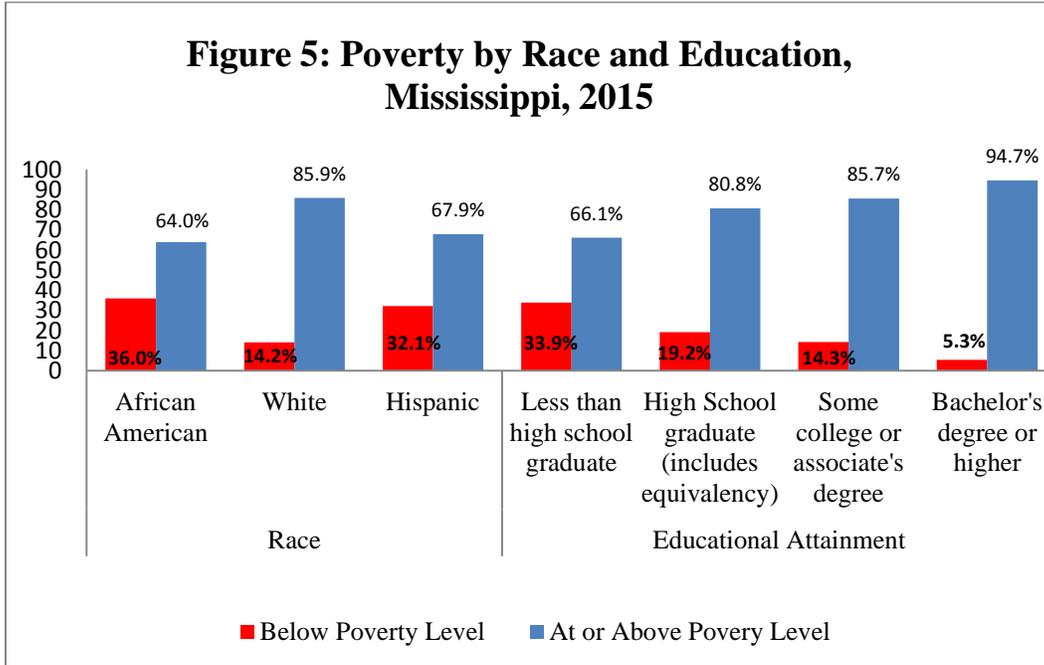
### Poverty and Income

Mississippi has a higher percentage of individuals living below poverty level and lower median income level than the national levels<sup>4</sup>. In Mississippi, the percentage living below poverty level (22.6%) is seven percent higher than the national level (15.6%). In regards to age, the “under 18 years old” age group bears the greatest burden (32.1 %), and females experience a higher burden (24.8%) than males (20.3%) as illustrated in Figure 4. African Americans have the highest percentage (36.0%) living below poverty level compared to 14.2% among Whites and 32.1% among Hispanics. Individuals 25 years and older who did not at least achieve a high school diploma bears the greatest burden (see Figure 5). The total median earnings for Mississippians (\$30,412) are 15.6% lower than the total median earnings for the nation (\$36,034).

**Figure 4**



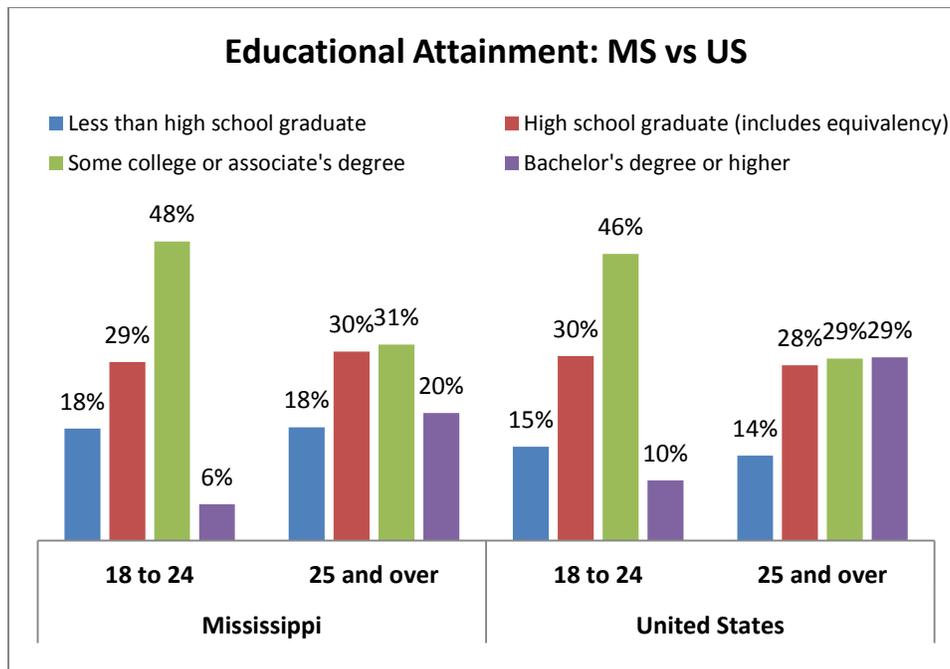
**Figure 5**



**Education**

Educational attainment in Mississippi mirrors national attainment by age group, with the exception of attaining a bachelor’s degree or higher. In Mississippi, only 20% of the 25 and over population attain a bachelor’s degree or higher, compared to 29% nationally (Figure 6).

**Figure 6**



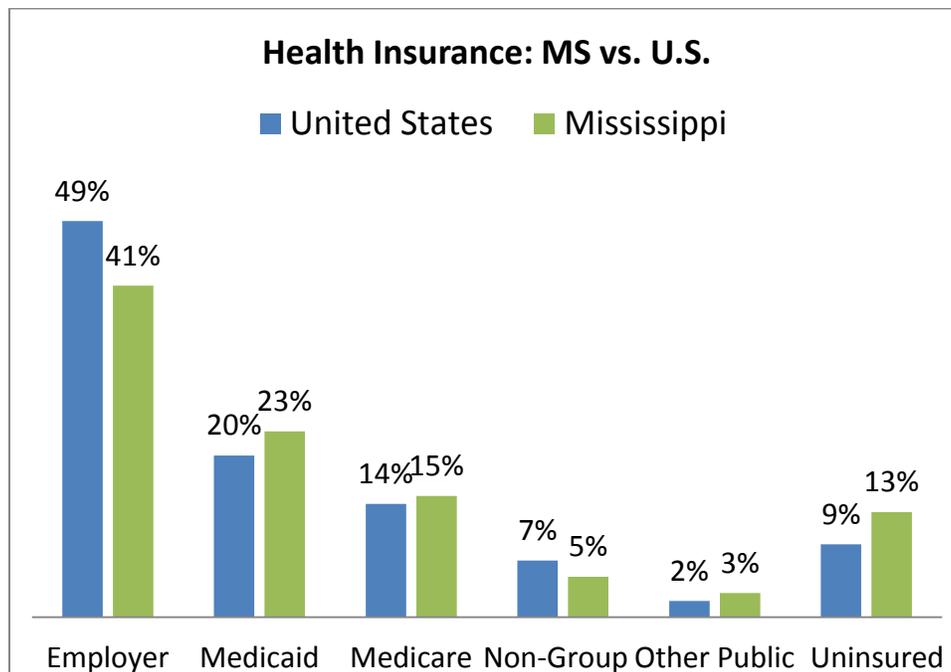
## Health Indicators

In the United Health Foundation’s America’s Health Rankings Annual Report, Mississippi ranked 49<sup>th</sup> in overall health in 2015<sup>5</sup>. Mississippi was among the bottom five states in many of the core measures of the report. When comparing Mississippi and the U.S., some of challenges include: prevalence of diabetes (13.0% vs 10%), obesity (35.5% vs. 29.6%), physical inactivity (31.6% vs. 22.6%), high rates of sexually transmitted diseases such as chlamydia (585.1 vs. 446.6), and infant mortality (11.5% vs. 8.0%)<sup>5</sup>.

## Health Insurance

According to the Kaiser Family Foundation (KFF), Mississippi has a higher percentage of uninsured individuals than the national percentage<sup>6</sup>. Among residents, 41% of are covered by employer-sponsored insurance, 38% are covered by Medicaid or Medicare, and 8% are covered by other public or non-group insurance<sup>6</sup>. Currently, 13% of Mississippians are uninsured, despite the passage of the Affordable Care Act in 2010 and 2012, respectively. Figure 7 illustrates the comparison of Mississippi to the U.S.

Figure 7



## **INTRODUCTION TO STDS AND HIV IN MISSISSIPPI**

### **HIV Surveillance in Mississippi**

The Surveillance Branch provides ongoing systematic collection and evaluation of data describing STDs and HIV disease. HIV infection is a Class 1B reportable condition requiring a telephone report to the Department of Health within one business day of first knowledge or suspicion (after hours reporting is not required). All providers are required to report all confirmed HIV positive tests, persons with an AIDS defining illness, pregnant women with HIV, or anyone suspected of having an HIV infection to the MSDH STD/HIV Surveillance Branch. Information about potential new cases comes from a variety of sources including hospitals, physicians in non-hospital based practices, public and private clinics, laboratories, routine matching to other registries (e.g. TB registry, death certificates), and active surveillance. The reports are received by phone calls only. MSDH staff is required to make initial contact with HIV positive individuals within 7 days of receipt of information to offer post-test counseling, conduct risk ascertainment, offer partner services, and initiate linkage to care. In conjunction with post-test counseling during the first session, the client is asked to provide a second specimen for HIV testing for additional confirmation by the Mississippi Public Health Laboratory and Serologic Testing Algorithm for Recent Seroconversion (STARHS).

### **Indirect Indicators of HIV/AIDS Infection Risk**

People at greatest risk of HIV infection are generally people who engage in high-risk behaviors and live in communities where HIV prevalence is high. This section examines the trends and characteristics of populations that are vulnerable to HIV infection.

### **Youth Risk Behaviors**

Alcohol and drug use are directly related to earlier initiation of sex and an increase in risky sexual behaviors, such as having unprotected sex<sup>7</sup>. The combination of alcohol, sex, and drugs increases the chances of unintended pregnancies and exposures to sexually transmitted diseases, including HIV infection

#### *Alcohol and Drug Use*

According to the Youth Risk Behavior Surveillance Survey (YRBSS), the percentage of Mississippi high school students who had at least one alcoholic drink significantly decreased from 65% in 2011 to 60% in 2015<sup>8</sup>. From 2011 to 2015, significant increases were observed among those who ever used cocaine (4.3 % vs. 6.5 % ), ecstasy (5.3 % vs.7.8 % ), heroin (2.3% vs. 5.9% ), methamphetamines (3.0% vs. 6.0% ), steroids without a doctor's prescription (4.2% vs.6.3% ), and injection of illegal drugs (2.5% vs. 5.4%).

**Table 2**

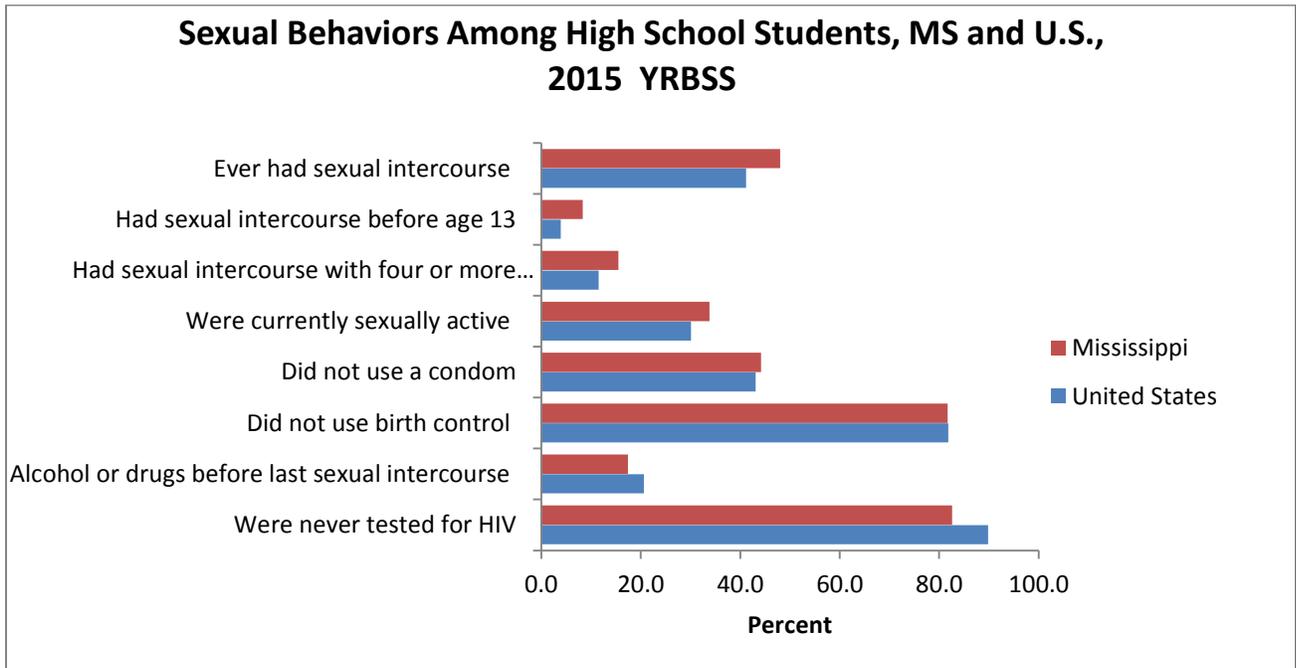
Mississippi Youth Risk Behavior Survey, 2011 and 2015			
	2011	2015	P-value
<b>Alcohol and Drug Use</b>	N (%)	N (%)	
Ever drank alcohol	1,774(64.8)	1,935(59.9)	0.05*
Drank alcohol before age 13 years	1,818(23.9)	2,122(24.5)	0.76
Currently drank alcohol	1,639(36.2)	1,751(31.5)	0.08
Ever used marijuana (one or more times during their life)	1,775(33.2)	1,976(35.1)	0.41
Ever used cocaine	1,807(4.3)	2,135(6.5)	0.01*
Ever used ecstasy	1,817(5.3)	2,121(7.8)	0.05*
Ever used heroin	1,817(2.3)	2,114(5.9)	0.00*
Ever used methamphetamines	1,816 (3.0)	2,128(6.0)	0.00*
Ever took steroids without a doctor's prescription	1,818(4.2)	2,143(6.3)	0.03*
Ever injected any illegal drug	1,820(2.5)	2,087(5.4)	0.00*

\*P-value indicates statistical significance,  $p \leq 0.05$

*Sexual Behaviors That Result in HIV Infection, Other Sexually Transmitted Diseases, and Unintended Pregnancies*

Figure 8 shows the sexual behaviors of high school students in Mississippi and the United States in 2015. When comparing Mississippi and the U.S., high school students in Mississippi were more likely to have sexual intercourse (48.0 % vs 41.2 %), have sexual intercourse before age 13 (8.3% vs 3.9 %), and have sexual intercourse with four or more persons during their lifetime (15.5% vs. 11.5%). Among the respondents, 89.8% in Mississippi and 82.6 % nationally have never been tested for HIV.

**Figure 8**

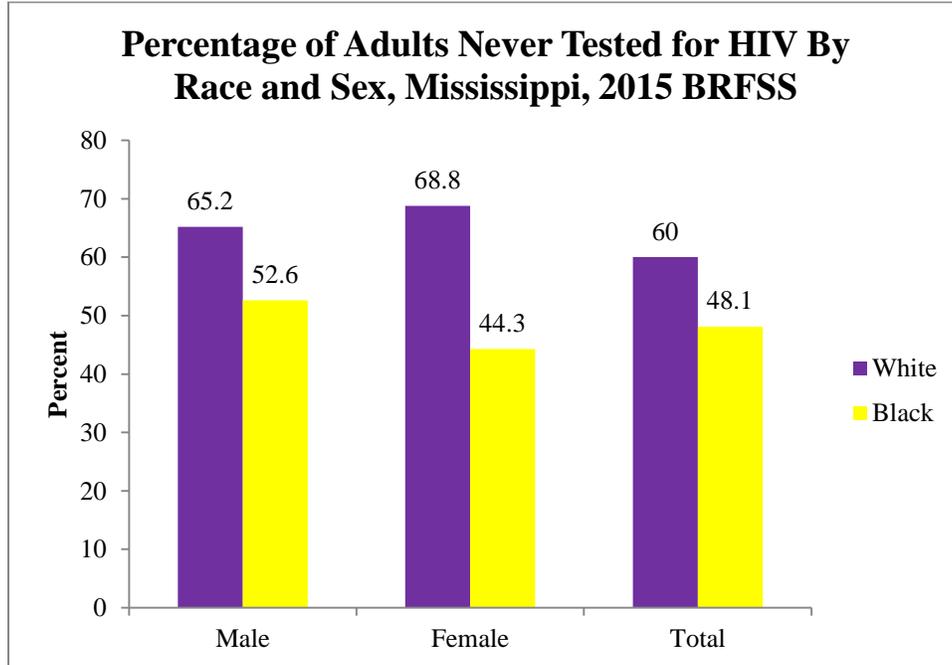


### **Adult Risk Behaviors**

Based on CDC recommendations, people who engage in high risk behaviors which increase their chances of acquiring HIV should be tested for HIV at least once a year<sup>9</sup>. High risk behaviors include: having unprotected sex with men who have sex with men, having multiple partners, and/or having sex with anonymous partners; injecting drugs or steroids with used injection equipment; having sex in exchange for money or drugs; and being diagnosed with or treated for hepatitis, tuberculosis, or a sexually transmitted disease.

The 2015 Behavioral Risk Factor Surveillance Survey asked respondents if they have ever been tested for HIV and whether they had participated in high risk behaviors<sup>10</sup>. As a result, more than half (59.4%) of respondents between ages 18-64 reported that they had never been tested. More white respondents (60.0%) reported that they have never been tested than black respondents (48.1%). Among white respondents, 65.2% of males and 68.8% of females reported that they have never been tested. Among black respondents, the rates were 52.6% for males and 44.3% for females. (Figure 9)

**Figure 9**



**Sexually Transmitted Diseases**

Sexually transmitted diseases increase the risk of HIV transmission. When infected with an STD, inflammation occurs and activates the presence of cells that are targeted by HIV; thus, increasing the infectiousness and susceptibility to HIV<sup>11</sup>. Individuals who are infected with STDs are two to five times more likely than uninfected individuals to acquire HIV infection if they are exposed to the virus through sexual contact<sup>12</sup>. Similarly, persons co-infected with HIV and another STD are more likely to transmit HIV through sexual contact than HIV-infected individuals who are not co-infected.

## CHLAMYDIA

### Clinical Features

Chlamydia is a sexually transmitted bacterial infection causing urethritis in males and cervicitis in females. Urethritis in men presents as scant to moderate mucopurulent urethral discharge, urethral itching, and dysuria. Cervicitis presents as a mucopurulent endo-cervical discharge, often with endo-cervical bleeding. The most significant complications in women are pelvic inflammatory disease and chronic infections, both of which increase the risk of ectopic pregnancy and infertility. Perinatal transmission of chlamydia occurs when an infant is exposed to the infected cervix during birth resulting in chlamydial pneumonia or conjunctivitis. Asymptomatic infection may be found in 1%-25% of sexually active men. Up to 70% of sexually active women with chlamydial infections may also be asymptomatic.

### Infectious Agent

*Chlamydia trachomatis*, an obligate intracellular bacteria. Immunotypes D through K have been identified in 35-50% of non-gonococcal urethritis.

### Reservoir

Humans.

### Transmission

Transmitted primarily through sexual contact.

### Incubation

Incubation period is poorly defined, ranging from 7 to 14 days or longer.

### Period of Communicability

Unknown.

### Methods of Control

Prevention and control of chlamydia are based on behavior change, effective treatment, and mechanical barriers. Condoms and diaphragms provide some degree of protection from transmission or acquisition of chlamydia. Effective treatment of the infected patient and their partners, from 60 days prior to the onset of symptoms, is recommended.

### Reporting Classification

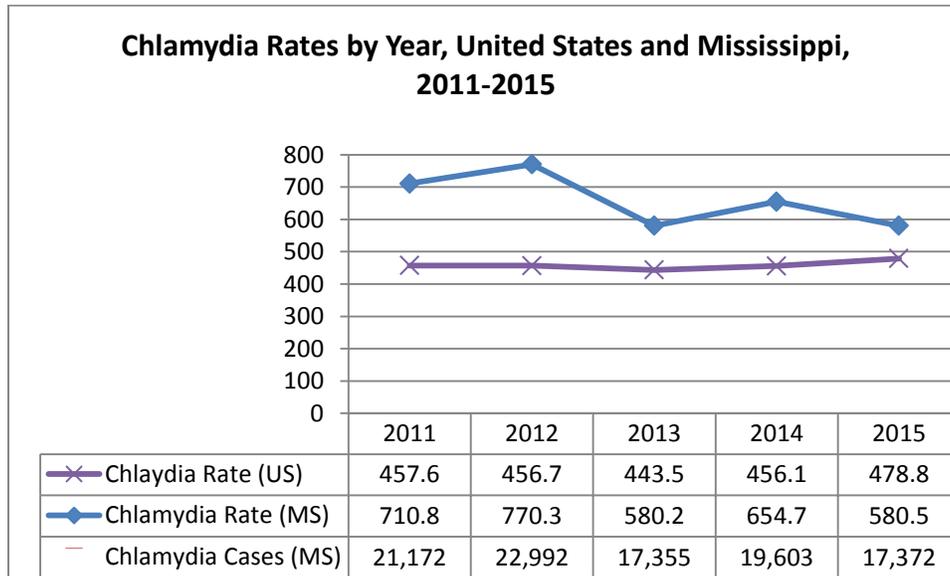
*Chlamydia trachomatis* is a Class 2 reportable condition requiring it to be reported by mail, telephone, fax, or electronically to the Department of Health within one (1) week of diagnosis.

### Epidemiology

Nationally and in Mississippi, chlamydia is the most frequently reported bacterial STD. In 2015, the total number of reported cases of chlamydia in the United States was 1,526,658<sup>13</sup>. Of that figure, 1.1% (17,372) cases were reported from Mississippi, which ranked 5<sup>th</sup> in the nation. From 2011-2012, the number of chlamydia cases increased by 1,820 cases (from 21,172 to 22,992). In 2013, Mississippi experienced a 25% decrease in the number of reported chlamydia cases (from 22,992 to 17,355). This large discrepancy could be due to the fact that Mississippi's

reporting system changed during this time. Mississippi saw a 13% increase in 2014 and an 11% decline in 2015. (Figure 10)

**Figure 10**



**Note:** The rate represents the number of people infected with chlamydia per 100,000 populations in Mississippi. 2013 may reflect an artificial decrease due to change in surveillance systems.

### By Sex

Between 2011 and 2015, the number of male and female cases decreased by 8.8% and 21.3% respectively (Figures 11&12). For the past five years, females have reported more chlamydia cases and higher rates than males. This may be attributed to chlamydia screenings that target females, particularly in family planning and prenatal care clinics. In 2011, the rate for chlamydia infections for females was nearly three times the rate for males. Overall rates have declined, and in 2015, the female rate was the lowest it has been during the past five years (791.9 cases per 100,000 population).

Figure 11

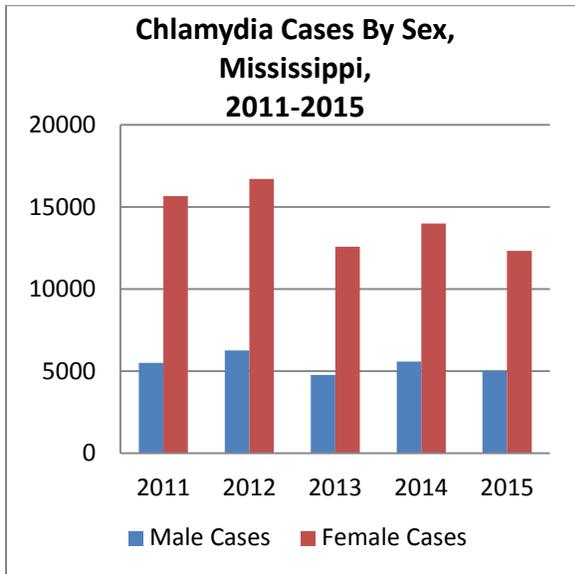
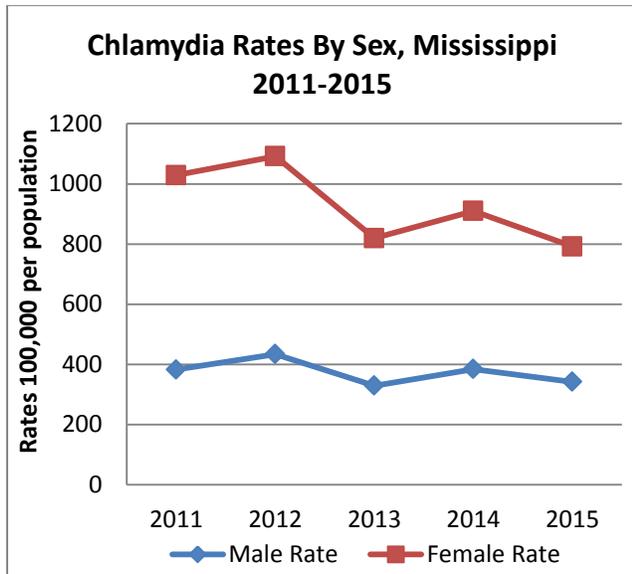


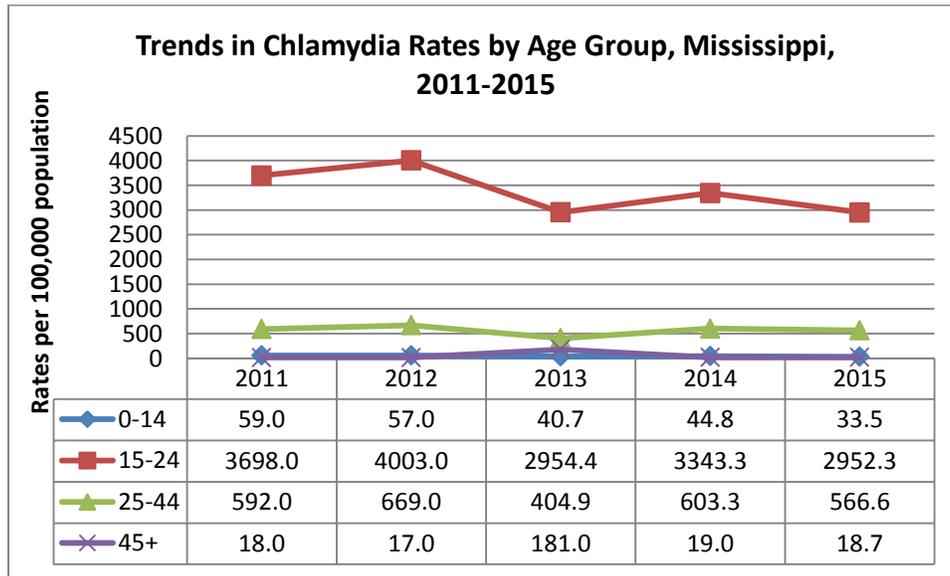
Figure 12



### By Age Group

Figure 13 illustrates that chlamydia cases rates have been relatively stable in all age groups, except for 15-24 year olds in which the rate varied over time. Chlamydia has been reported predominantly among persons 15-24 years old, followed by persons 25-44 years old. From 2011-2015, there was an overall decline in the case rate of chlamydia in each age group.

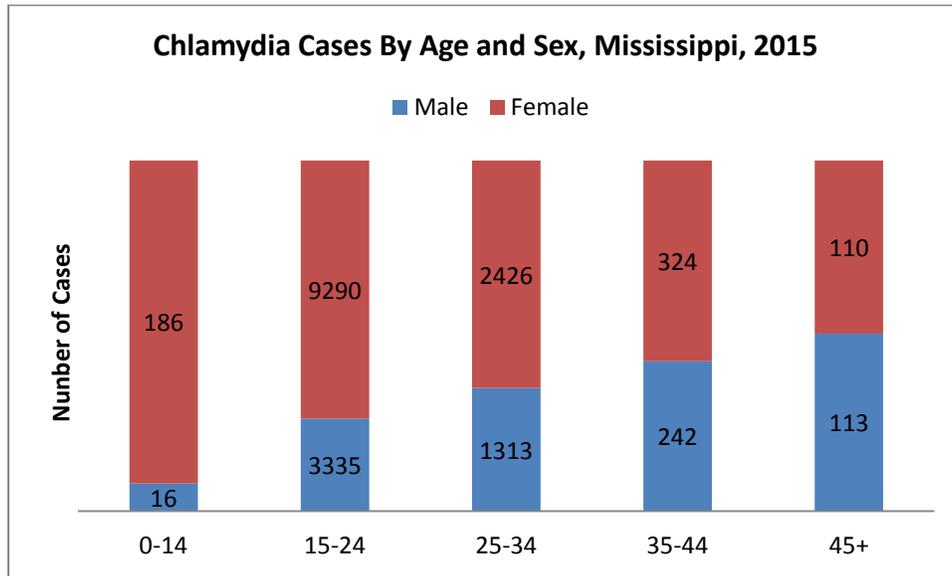
**Figure 13**



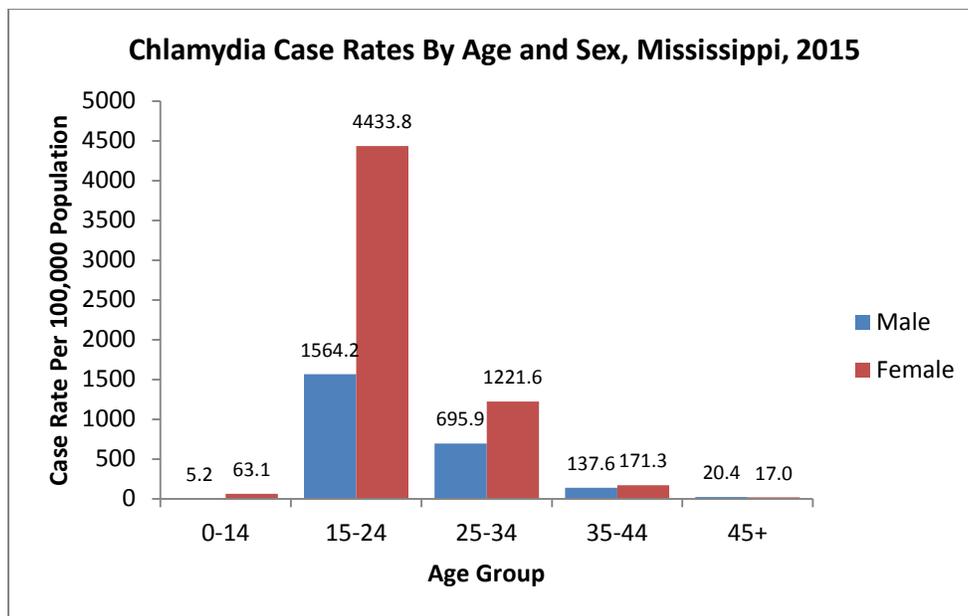
**By Age and Sex**

In every age group, a higher number of chlamydia cases was reported among females. In 2015, females aged 15-24 and 25-34 reported the highest numbers of chlamydia cases (9,290 and 2,426, respectively). The highest rate was among females aged 15-24, followed by females age 25-34. Likewise, these age groups accounted for the highest numbers of cases in males (3,335 and 1,313 cases per 100,000 population). The highest rate among men was among 15-24 age group. The number of cases in women 15-24 was nearly 3 times that of men in the same age group (9,290 vs 3,335 cases per population). For females, the lowest number of cases was among the 45 and over age group followed by 0-14 age group. The lowest number of cases for males was among the 0-14 age group followed by age 45 and over. Figures 14 & 15 illustrate these findings.

**Figure 14**



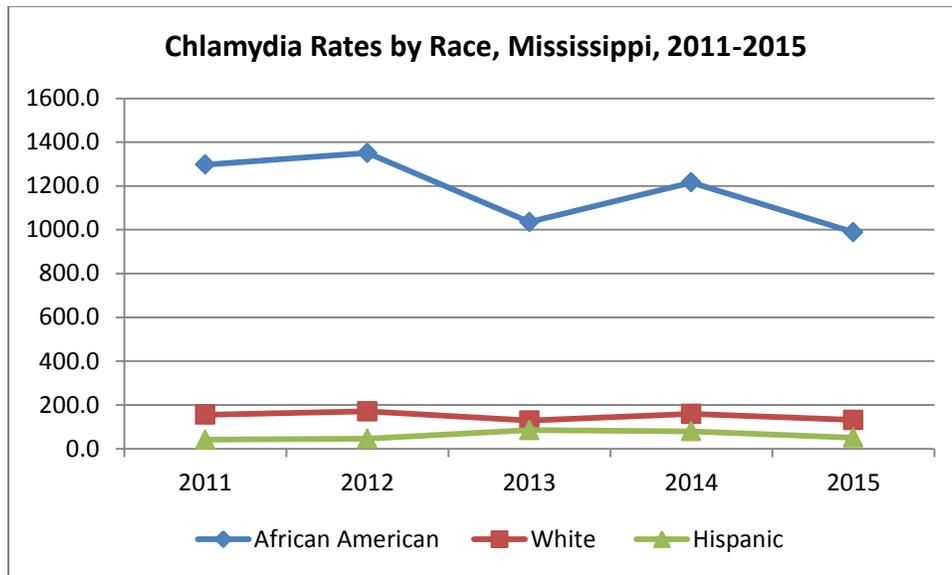
**Figure 15**



### By Race/Ethnicity

Since 2011, trends in the number of chlamydia cases have varied among African Americans, but remained relatively stable among Whites and Hispanics. Figure 16 illustrates severe disparities, as African Americans are consistently impacted the most. By the end of 2015, 63% of chlamydia infections were reported among African Americans compared to 13% by whites and less than 1% by Hispanics. In 2015, rate for African Americans was 7.5 times higher than the rate for Whites (988.4 vs 130.9 cases per 100,000) population) and nearly 20 times the rate for Hispanics (988.4 vs 50.0 cases per 100,000 population).

**Figure 16**

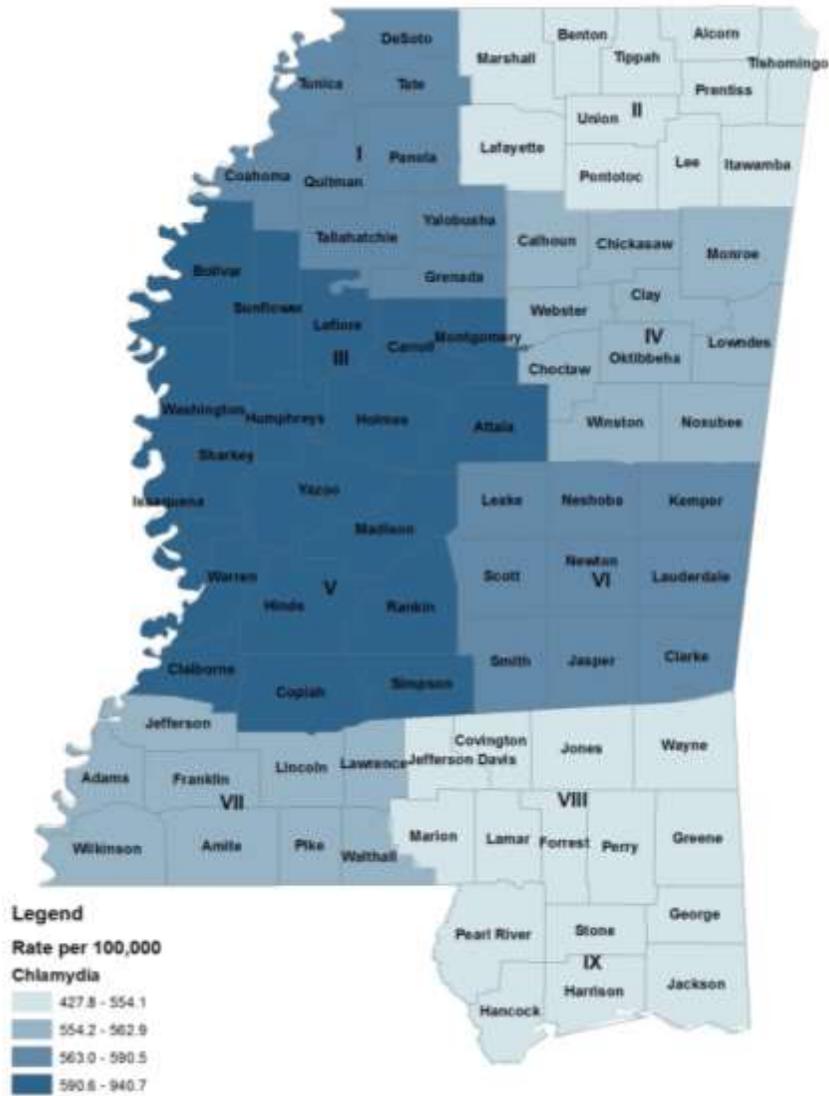


### Chlamydia Infections by Public Health District

In 2015, chlamydia was reported in every county within the state (Map 2). Public Health District III had the highest incidence rate (940.7 per 100,000) followed by Public Health District V (684.2 per 100,000), Public Health District II had the lowest.

## Map 2

### Chlamydia Infection by Public Health District, Mississippi 2015



District	Cases	Population	Rate
I	1,930	326,848	590.5
II	1,583	370,028	427.8
III	1,937	205,903	940.7
IV	1,379	244,988	562.9
V	4,388	641,334	684.2
VI	1,359	239,365	567.8
VII	949	170,065	558.0
VIII	1,706	307,913	554.1
IX	2,141	485,889	440.6
Statewide	17,372	2,992,333	580.6

## **GONORRHEA**

### **Clinical Features**

Gonorrhea is a bacterial infection associated primarily with infection of the urogenital tract producing symptoms of discharge and dysuria. Other less common sites of infection include: pharynx, rectum, conjunctiva, and blood.

Complications associated with gonorrhea infection in men include epididymitis, penile lymphangitis, penile edema, and urethral strictures. The primary complication associated with gonorrhea infection in women is pelvic inflammatory disease, which produces symptoms of lower abdominal pain, cervical discharge, and cervical motion pain. Asymptomatic infections do occur. Pregnant women infected with gonorrhea may transmit the infection to their infants during a vaginal delivery. Infected infants can develop conjunctivitis leading to blindness if not rapidly and adequately treated. Septicemia can also occur in infected infants.

### **Infectious Agent**

*Neisseria gonorrhoeae*, an intracellular gram-negative diplococcus.

### **Reservoir**

Humans.

### **Transmission**

Gonorrhea is transmitted primarily by sexual contact, but transmission from the infected cervix to an infant during birth occurs.

### **Incubation**

In men, the incubation period is primarily 2-5 days, but may be 10 days or longer. In women, it is more unpredictable, but most develop symptoms less than 10 days after exposure.

### **Period of Communicability**

In untreated individuals, communicability can last for months; but if an effective treatment is provided communicability ends within hours.

### **Methods of Control**

Prevention and control of gonorrhea are based on education, effective treatment, and mechanical barriers. Condoms and diaphragms provide some degree of protection from transmission or acquisition of gonorrhea. Effective treatment of the infected patient and their partners from 60 days prior to the onset of symptoms is recommended.

### **Reporting Classification**

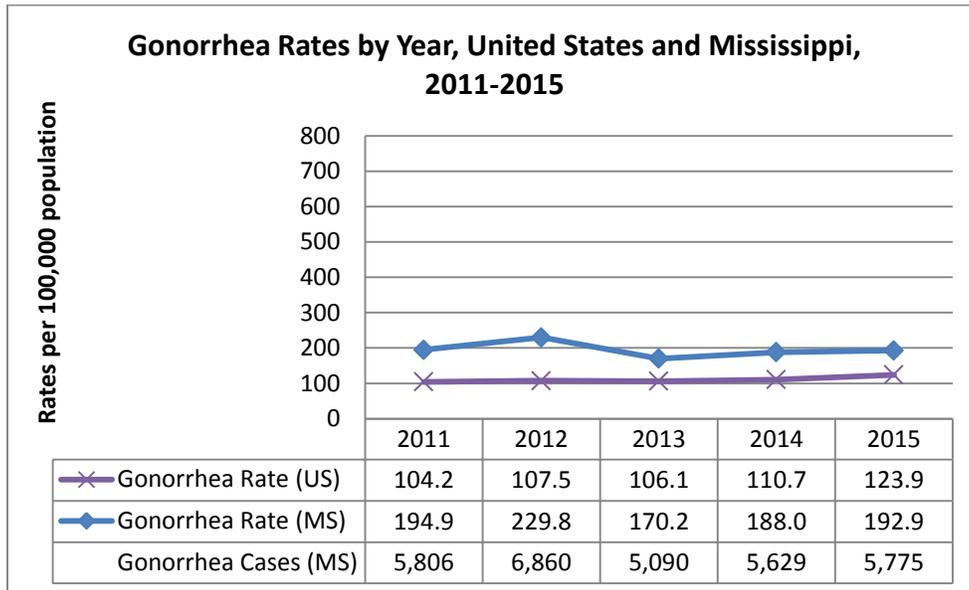
Gonorrhea is a Class 2 reportable condition requiring it to be reported by mail, telephone, fax, or electronically to the Department of Health within one (1) week of diagnosis.

### **Epidemiology and Trends**

Nationally and in Mississippi, gonorrhea is the second most commonly reportable notifiable disease. In 2015, Mississippi ranked 3<sup>rd</sup> in the nation with a rate of 193 per 100,000 population. There was an 18% increase in the number of cases from 2011 to 2012 and a 25.8% decrease in

the number of cases from 2012-2013. In 2014, Mississippi experienced a 10.5% increase in the number of cases and another 2.6% increase in 2015. Figure 17 illustrates these observations below.

**Figure 17**



**Note:** The rate represents the number of people infected with chlamydia per 100,000 population in Mississippi. 2013 may reflect an artificial decrease due to change in surveillance systems.

### By Sex

From 2011 to 2015, cases among males increased and cases among females decreased. Figure 18 provides the rates for females and males from 2011-2015. For the past five years, females have reported more gonorrhea cases and experienced higher rates than males. In 2015, females represented 54% of cases. This may be attributed to gonorrhea screenings that target females, particularly in family planning and prenatal care clinics. The number of cases and rates have fluctuated, both of which experienced an increase in 2012, a decrease in 2013, and increases in 2014 and 2015.

From 2011 to 2015, female gonorrhea infections decreased by 6.4% (from 3,346 to 3,131) and male gonorrhea infections increased by 6.8% (from 2,470 to 2,638) (Figure 18). Overall, females reported more gonorrhea cases and higher rates of infection compared to males. The rate of infection among females was approximately 1.2 times higher than that of males. In 2015, 58% of gonorrhea infections occurred among females.

Figure 18

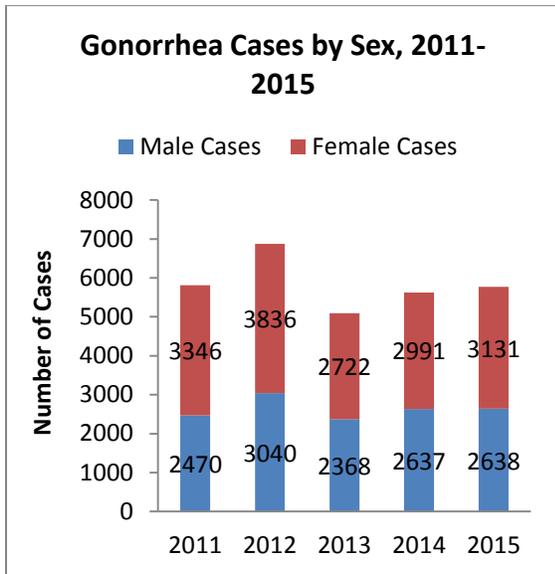
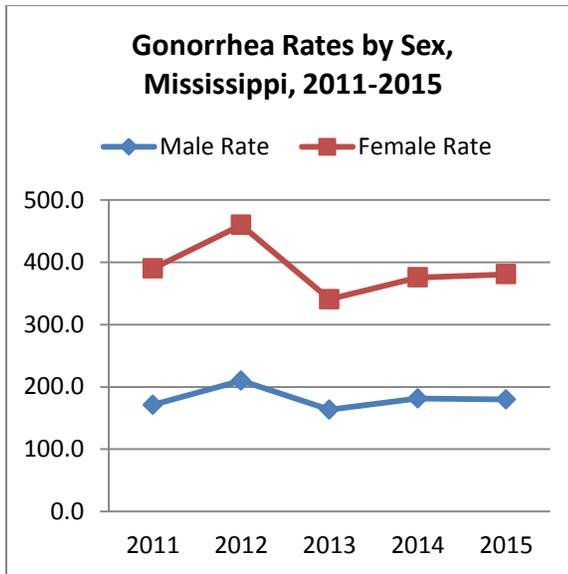


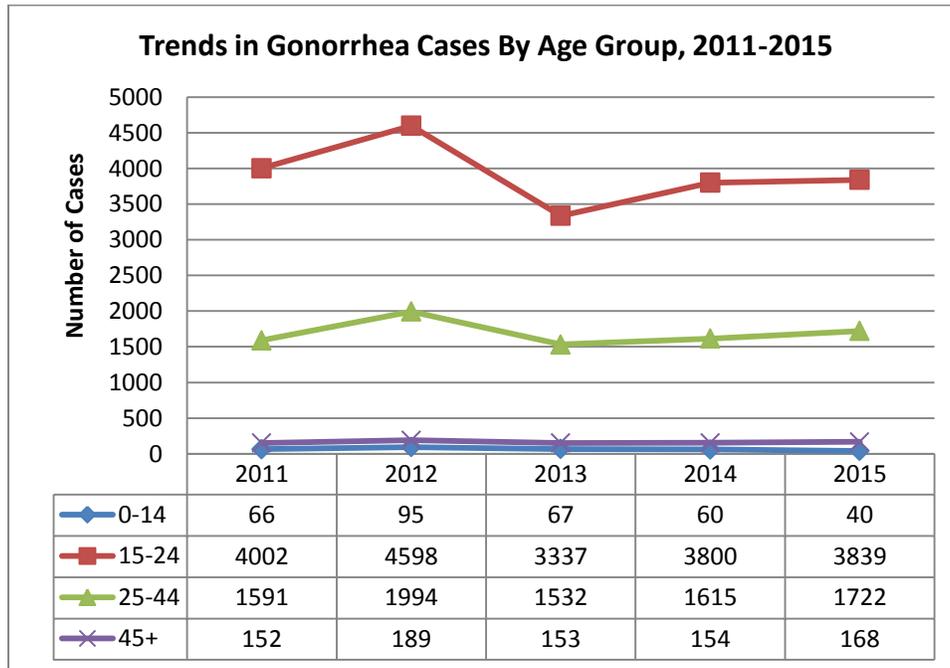
Figure 19



**By Age Group**

The age group that bears the highest burden is the 15-24 year old group, followed by the 25-44 year old group. Both groups followed a similar trend, with an increase in 2012, decline in 2013, and an increase in 2014 and 2015. The 45+ and the 0-14 age groups are the least affected by gonorrhea cases. In comparison to 2011, the numbers of cases in 2015 were 39.3% lower for the 0-14 age group, 4.1% lower for the 15-24 age group, 8.2% higher for the 25-44 age group, and 10.5% higher for the 45+ age group (Figure 20).

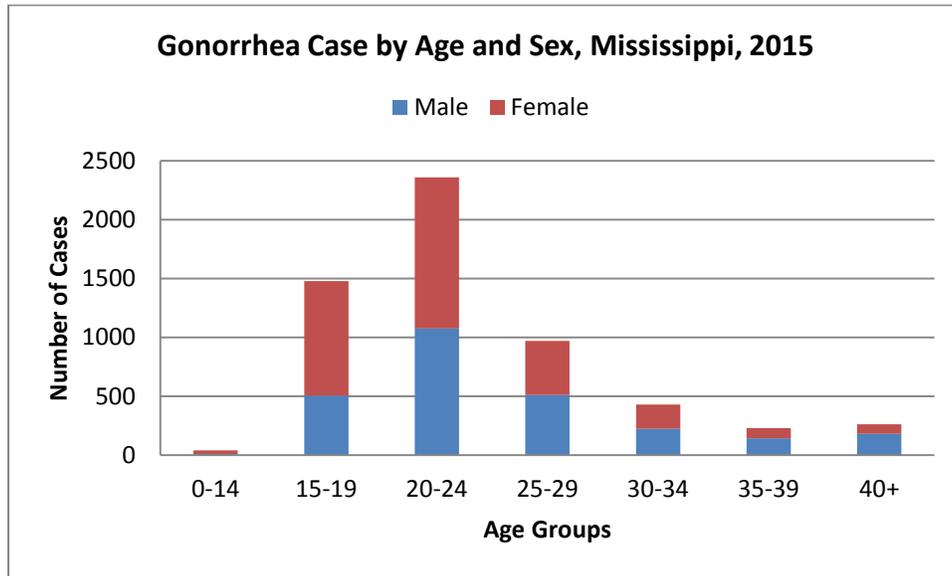
**Figure 20**



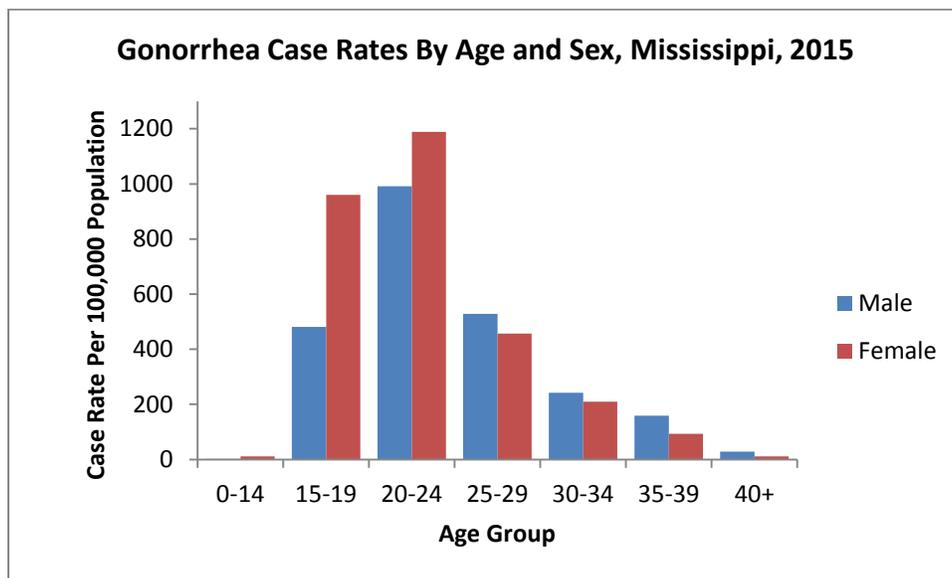
**By Age and Sex**

In 2015, the highest rates of gonorrhea were among females aged 15-19 and 20-24 (960.6 per 100,000 and 1189.3 per 100,000). The rate of gonorrhea for females aged 15-19 was nearly twice the rate of males in the same age group (960.6 per 100,000 vs. 480.9 per 100,000). The rate among females aged 20-24 was higher than the rate of males in the same age group. However, reported gonorrhea infections and rates among females over the age of 30 were lower compared to males in the same age group. (Figure 21 and Figure 22).

**Figure 21**



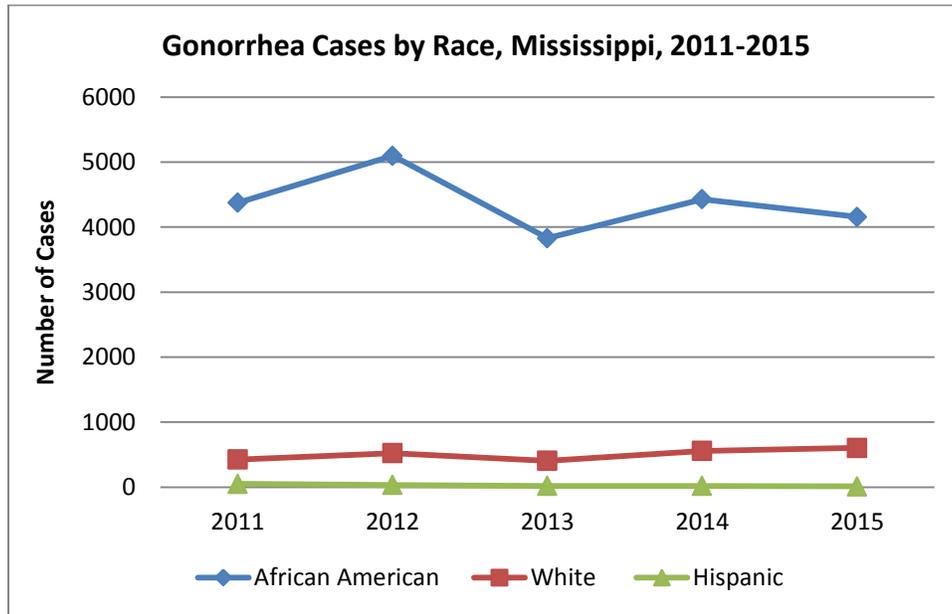
**Figure 22**



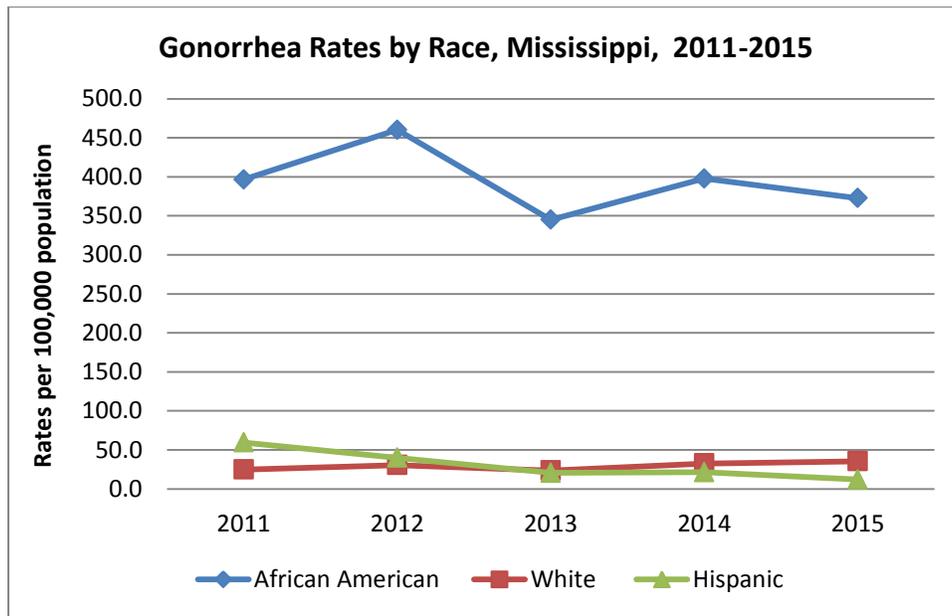
**By Race/Ethnicity**

Gonorrhea cases reflect significant racial disparities. Among the 5,775 gonorrhea cases reported in 2015, 72% were African American, 10.5% were White, and 2% were Hispanic. The rate of cases in African Americans was 10.5 times the rate of whites (372.8 vs 35.4 cases per 100,000 population) and 31 times higher than the rate of Hispanics (372.8 vs 12.0 cases per 100,000 population) in 2015 (Figure 23 and Figure 24).

**Figure 23**



**Figure 24**

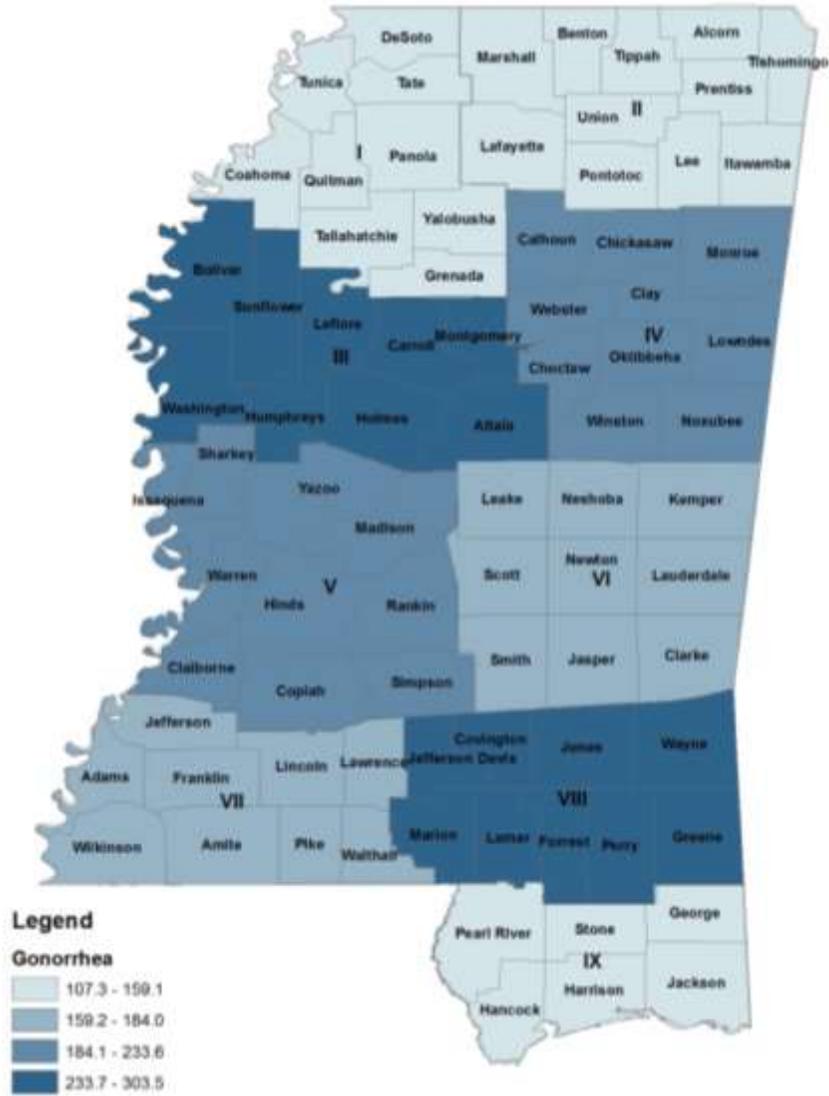


**Gonorrhea by Public Health District**

In 2015, gonorrhea was reported in every public health district (Map 3). Public Health District III had the highest incidence rate (303.5 per 100,000) followed by Public Health District VIII (252.3 per 100,000), Public Health District II had the lowest (107.3 per 100,000).

### Map 3

### Gonorrhea by Public Health District, Mississippi 2015



District	Cases	Population	Rate
I	520	326,848	159.1
II	397	370,028	107.3
III	625	205,903	303.5
IV	471	244,988	192.3
V	1498	641,334	233.6
VI	428	239,365	178.8
VII	313	170,065	184.0
VIII	777	307,913	252.3
IX	746	485,889	153.5
Statewide	5775	2,992,333	193.0

## **SYPHILIS**

### **Clinical Features**

Syphilis is a bacterial infection that has three stages: primary, secondary, and tertiary. The primary lesion (chancre) is a painless indurated ulcer that develops at the site of initial infection, usually on the external genitalia. Even without treatment, this lesion resolves in 4-6 weeks. Secondary syphilis may then develop and is characterized by a generalized symmetrical maculopapular rash that often involves the soles and palms. It may be accompanied by generalized lymphadenopathy, fever, malaise, sore throat, headache and arthralgia. Clinical manifestations of secondary syphilis usually resolve without treatment in weeks to months. Tertiary syphilis will develop years later in 15-40% if untreated, primarily as cardiovascular or neuro-syphilis, or as skin, bone, visceral or mucosal surface gummas. Latent syphilis, a period of sero-reactivity without clinical disease, is classified as early (infection acquired within the preceding year) or late (infection of more than a year's duration).

Fetal transmission occurs trans-placentally in untreated women with early syphilis, resulting in congenital syphilis. Congenital syphilis can lead to abortions, stillbirths or death shortly after birth. An infected infant may be asymptomatic for the first few weeks of life; however, late manifestations may occur resulting in CNS involvement or other conditions such as Hutchinsonian teeth, saddle-nose, periostitis, interstitial keratitis or deafness.

### **Infectious Agent**

*Treponema pallidum*, a spirochete.

### **Reservoir**

Humans.

### **Transmission**

Syphilis is transmitted primarily by sexual contact with an infected individual with early syphilis (the first year of infection), especially during primary and secondary syphilis. If untreated, infection of the fetus occurs during the pregnancy of an infected woman, resulting in congenital syphilis. Transmission can also result from a blood transfusion if the donor is in the early stages of infection.

### **Incubation**

The average incubation period for syphilis before clinical manifestations is 3 weeks but ranges from 3 – 90 days.

### **Period of Communicability**

In untreated individuals, communicability can last for up to two years. Syphilis is most communicable during the primary and secondary stages. Maternal-fetal transmission is more likely in early syphilis, but may occur at any stage.

### **Methods of Control**

Mechanical barriers, early detection, and effective treatment of the patient and their partners are effective methods in prevention and control of syphilis. MSDH performs contact investigation and treatment for each reported case of syphilis.

### Reporting Classification

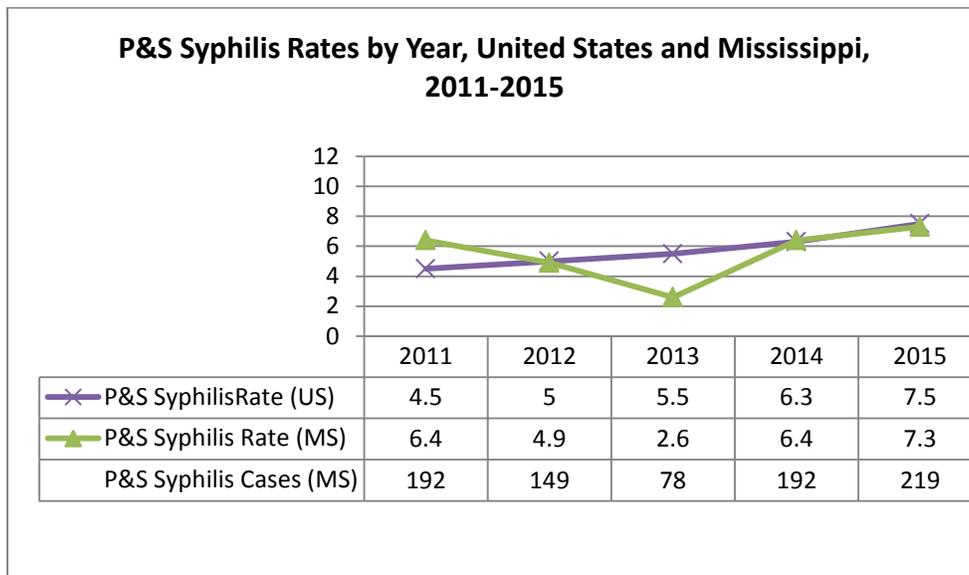
Syphilis is a Class 1B reportable condition requiring a telephone report to the Department of Health within one business day of first knowledge or suspicion (after hours reporting is not required).

### Epidemiology and Trends

#### Primary & Secondary Syphilis

In 2015, Mississippi ranked 12<sup>th</sup> nationally in primary and secondary syphilis (P&S) case rates; however, Mississippi's rate (7.3 cases per 100,000 population) is lower than the national rate (7.5 cases per 100,000 population). From 2011-2015, national rates increased annually, while Mississippi's rates fluctuated, with the lowest rate (2.6 cases per 100,000 population) reported in 2013 (Figure 25).

**Figure 25**



**Note:** The rate represents the number of people infected with chlamydia per 100,000 population in Mississippi. 2013 may reflect an artificial decrease due to change in surveillance systems.

#### By Sex

From 2011 to 2015, P&S syphilis decreased in females and increased in males. The numbers of cases for females have fluctuated over the past 5 years, with the highest number of cases being reported in 2011 and the lowest number of cases being reported in 2013. Further, approximately 80% of reported P&S syphilis cases from 2011 to 2015 were among males. Figures 26 & 27 illustrate the numbers of cases and case rates for the past 5 years.

Figure 26

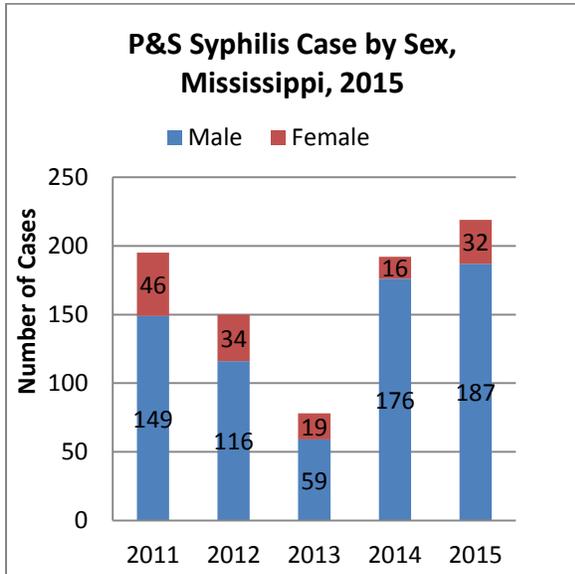
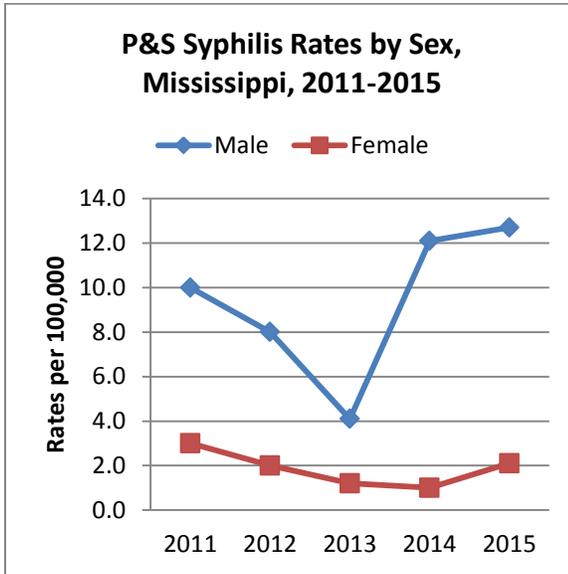


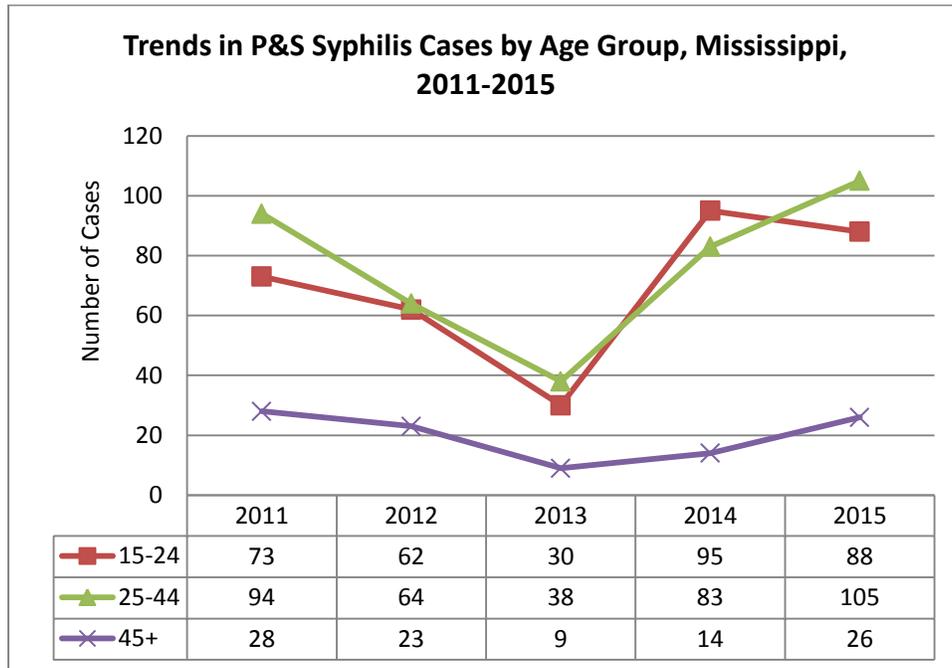
Figure 27



**By Age Group**

The numbers of P&S syphilis cases have varied over the years. There were no cases reported among the 0-14 age group for the past 5 years. Nearly 42% of cases were reported among 15-24 year olds, and over 46% of cases were reported among 25-44 year olds. The 45 and older age group reported 12% of cases over the past 5 years. Figure 28 shows the trends for each age group affected by P&S syphilis.

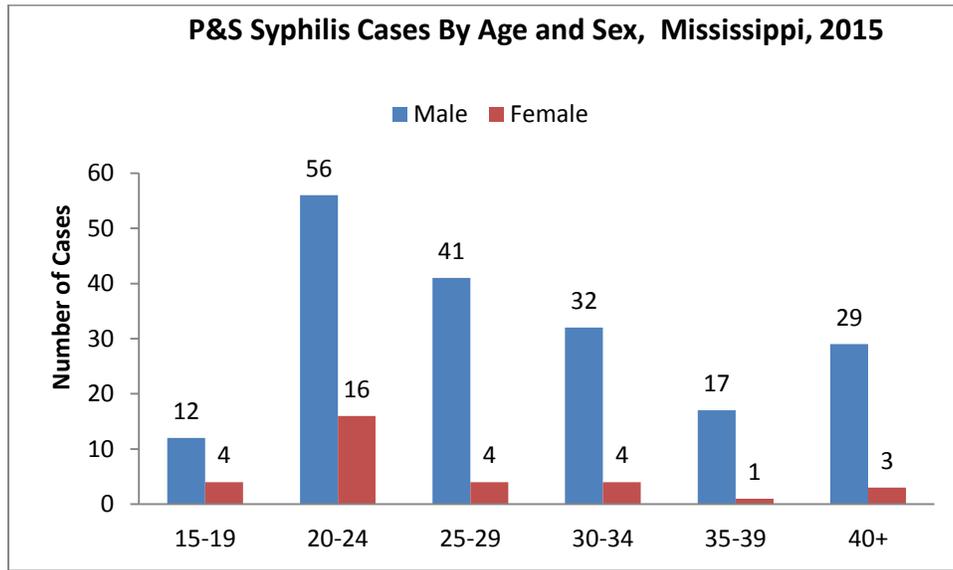
**Figure 28**



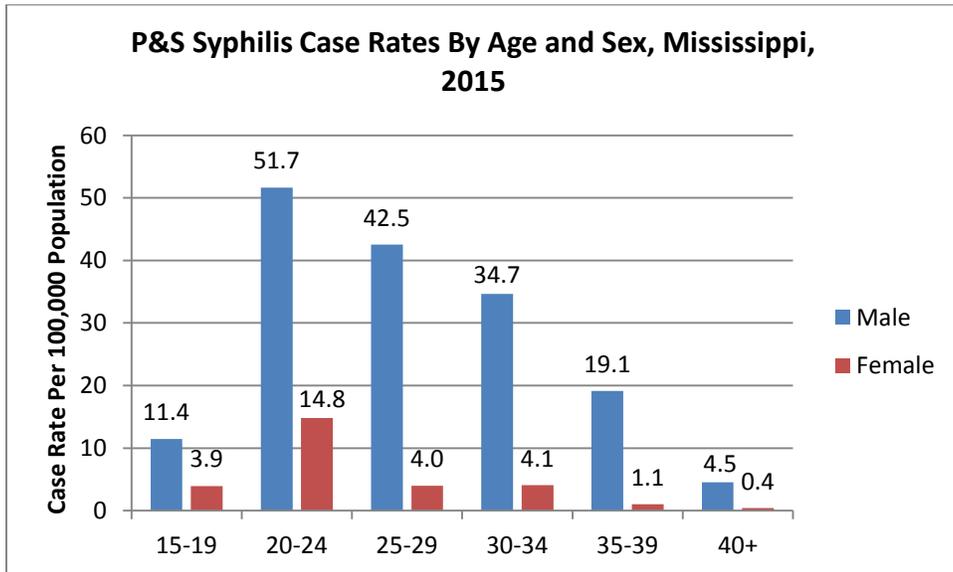
**By Age and Sex**

Overall, the age group most affected by P&S syphilis in 2015 was the 20-24 year old group. This group reported over 30% of total male P&S syphilis cases and 50% of total female P&S syphilis cases (Figure 29). Males had the highest proportion of cases in every age group. As shown in Figure 30, men aged 20-24 experienced the highest case rate, nearly 4 times the rate of females.

**Figure 29**



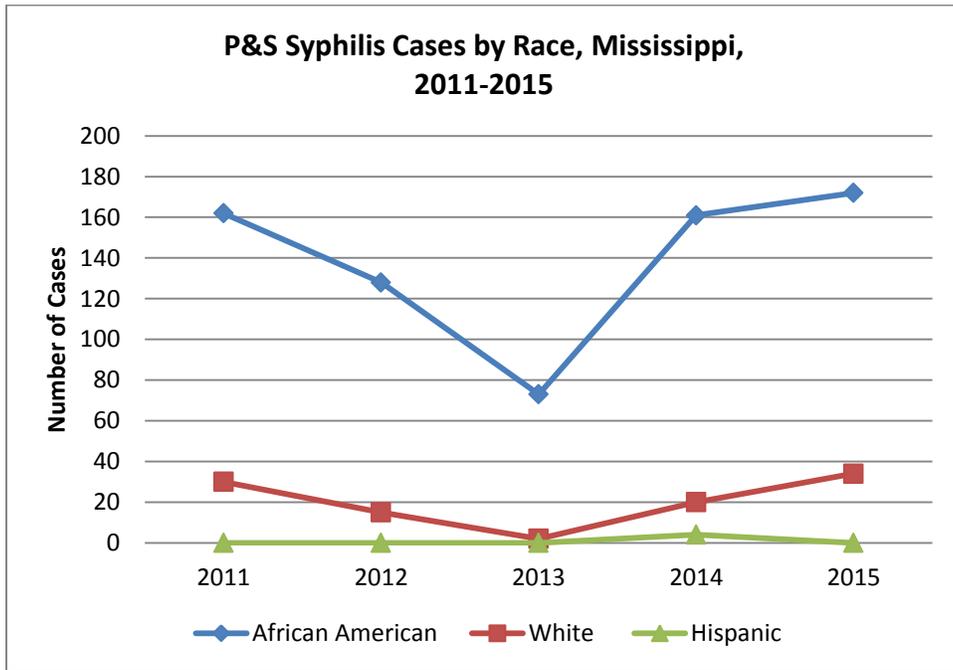
**Figure 30**



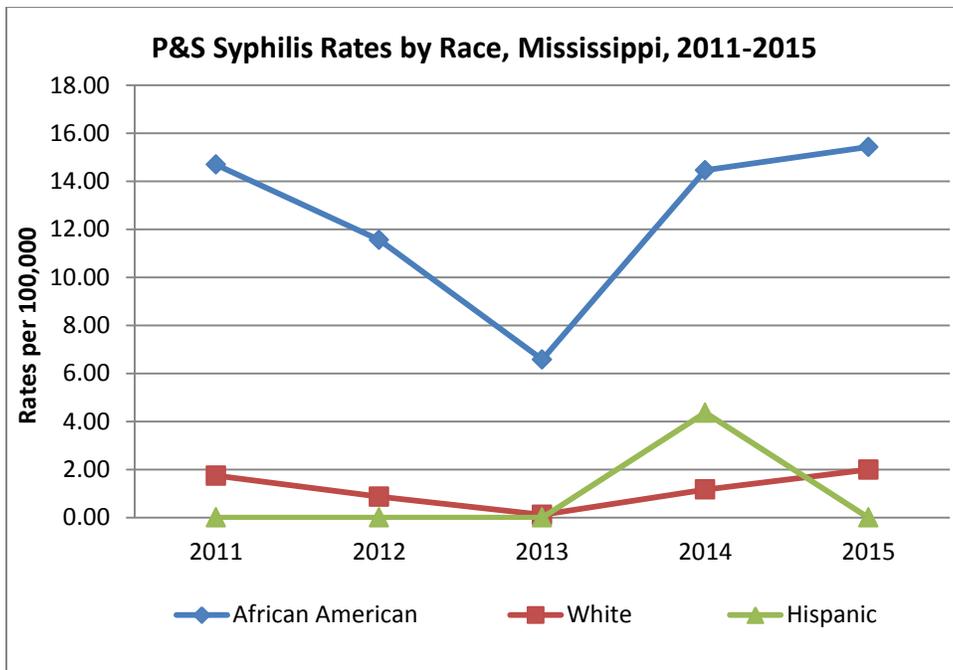
**By Race/Ethnicity**

The number of cases peaked in 2015, African Americans represented approximately 83% of P&S syphilis cases, Whites accounted for nearly 17%. The rate for African Americans was 7.7 times higher than the rate for Whites (15.4 vs 2.0 cases per 100,000 population). Between 2011 and 2015, only 4 cases of P&S syphilis were reported among Hispanics. (See Figures 31 and 32).

**Figure 31**



**Figure 32**

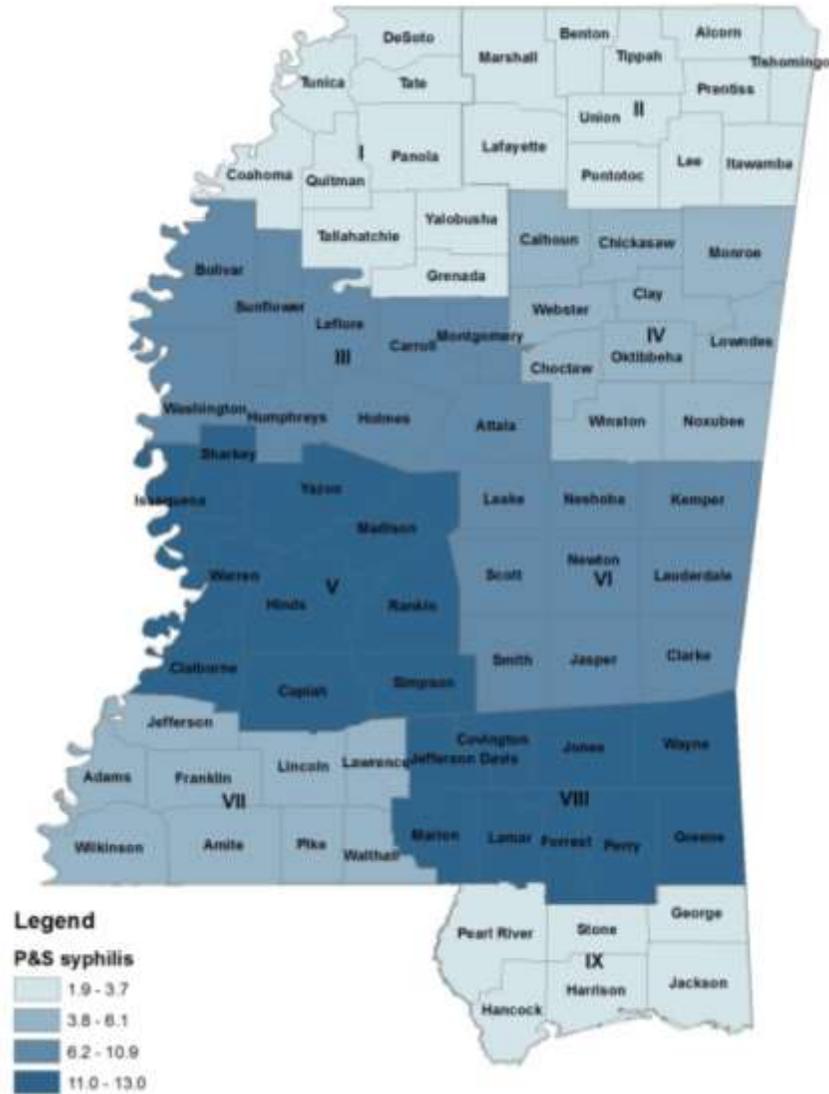


### **Primary and Secondary Syphilis by Public Health District**

In 2015, P & S syphilis was reported in every public health district (Map 4). Public Health District VIII had the highest incidence rate (13.0 per 100,000) followed by Public Health District V (11.9 per 100,000), Public Health District II had the lowest (1.9 per 100,000).

## Map 4

### Primary and Secondary Syphilis by Public Health District, Mississippi 2015

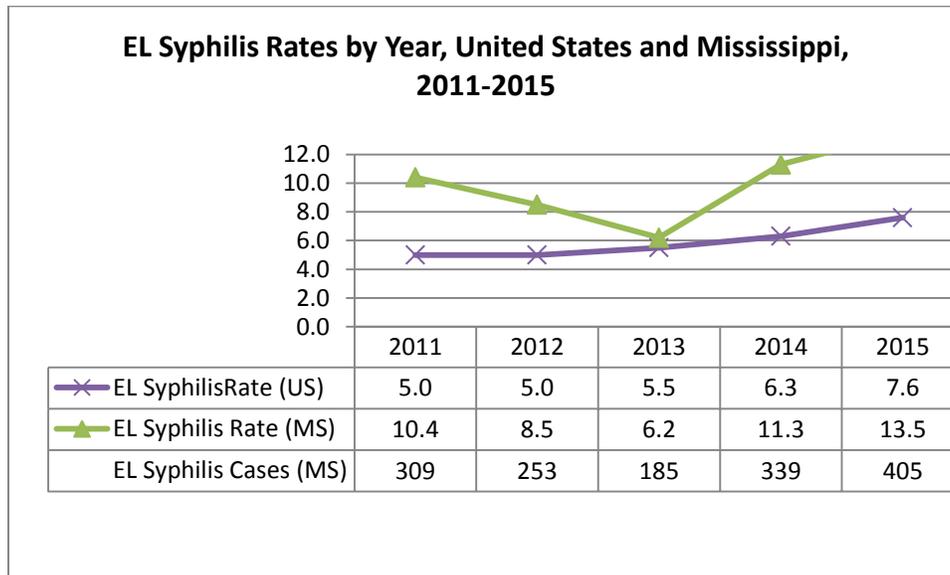


District	Cases	Population	Rate
I	12	326,848	3.7
II	7	370,028	1.9
III	18	205,903	8.7
IV	15	244,988	6.1
V	76	641,334	11.9
VI	26	239,365	10.9
VII	7	170,065	4.1
VIII	40	307,913	13.0
IX	18	485,889	3.7
Statewide	219	2,992,333	7.3

### Early Latent Syphilis

In 2015, Mississippi ranked 5<sup>th</sup> in the nation in early latent syphilis (ELS) case rates, with a rate of 13.5 cases per 100,000 population. The national rate of ELS is 7.6. For the past 5 years, ELS rates in Mississippi have been higher than the national rates. From 2011 to 2015, the number of ELS cases increased 31%, from 309 to 405 cases. Figure 33 illustrates the national and state trends of ELS for the past 5 years.

**Figure 33**



**Note:** The rate represents the number of people infected with chlamydia per 100,000 population in Mississippi. 2013 may reflect an artificial decrease due to switch in surveillance systems.

### By Sex

Among males and females, the numbers of cases varied. Each year, higher numbers were reported among males. Further, the gap in the numbers of male and female cases increased each year. In 2015, males accounted for nearly 80% of ELS cases, and the male to female ratio was 4:1. Figures 34 and 35 illustrate these findings.

Figure 34

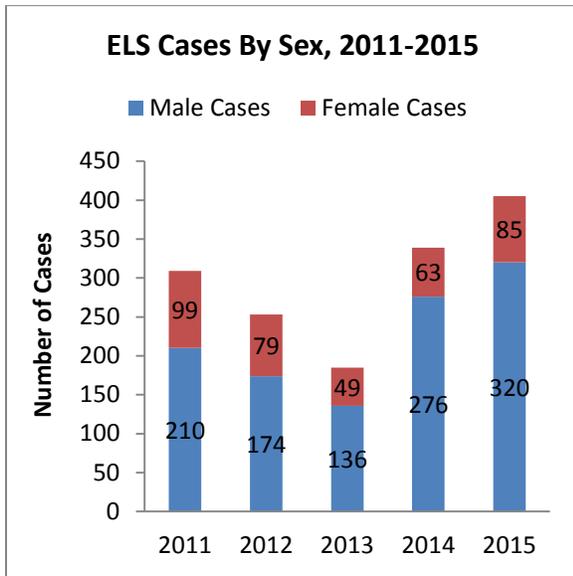
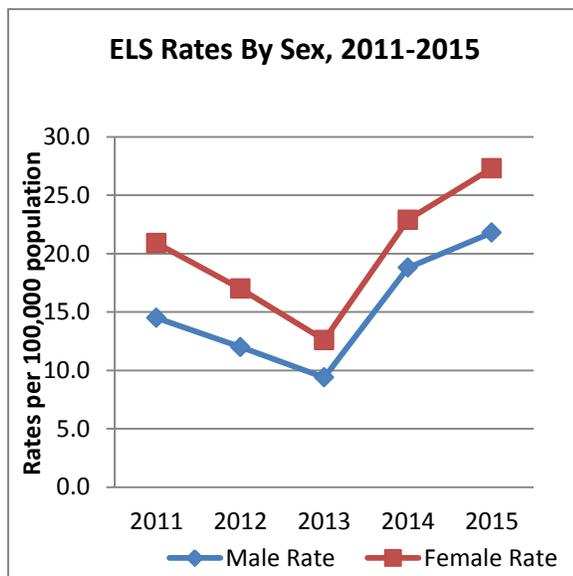


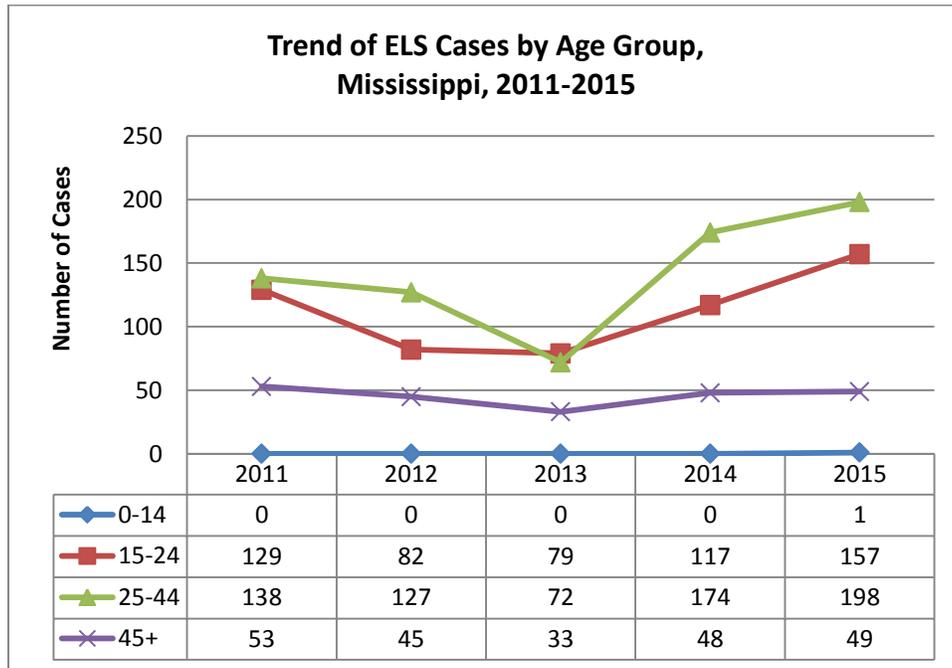
Figure 35



### By Age Group

Overall, trends in ELS cases varied for all age groups, except the 0-14 age group which no cases were reported for until 2015 (Figure 36). Every year, the 25-44 year olds have lead the groups in numbers of cases, except in 2013. During the past 5 years, 1,501 ELS cases have been reported. Of that figure, 47% (n=709) were reported from 25-44 year olds, 38% (n=564) were reported from 15-24 year olds, and 15% (n=228) were reported from the 45 and older age group. Figure 36 illustrates these findings.

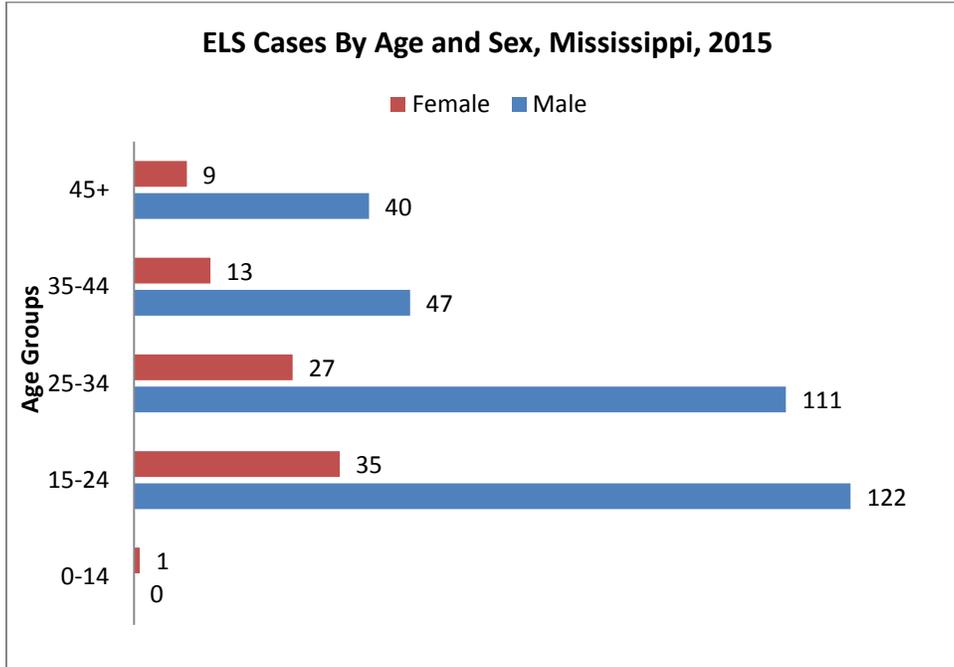
**Figure 36**



**By Age and Sex**

In 2015, the age group most affected for both men (n=122) and women (n=35) was the 15-24 year old age group. With the exclusion of the 0-14 year olds, the 45 and older age group was the least affected and reported 12.1% of cases. The highest number of cases was reported among men aged 15-24, followed by men aged 25-34 and men aged 35-44, consecutively (Figure 37).

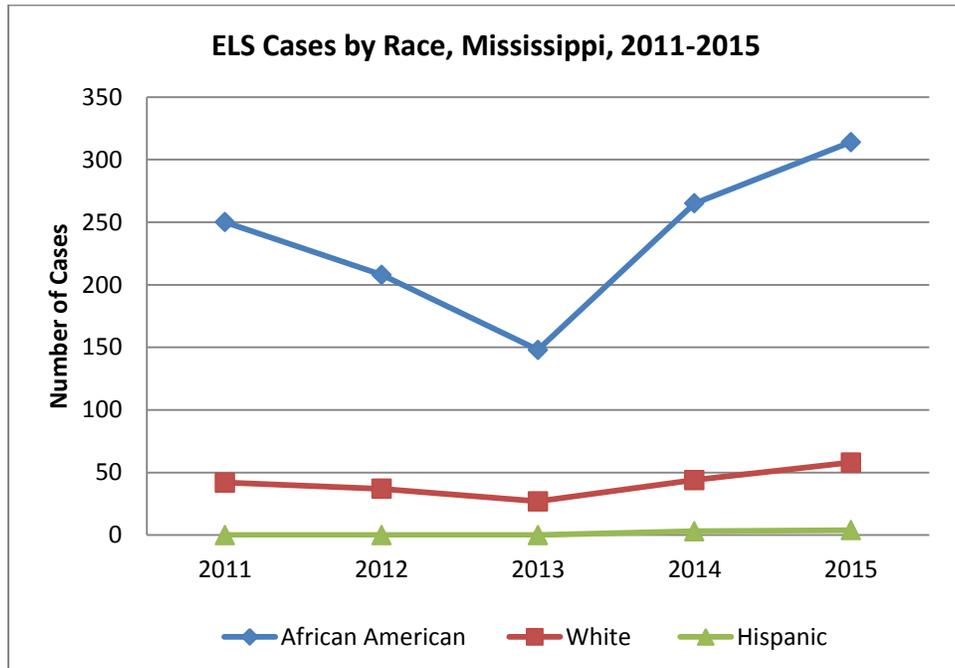
**Figure 37**



**By Race/Ethnicity**

Figure 38 illustrates that African Americans are disproportionately affected by ELS. The disparity between ELS cases in African Americans and Whites has increased since 2011. The number of cases remained relatively stable in Whites and Hispanics. In 2015, African Americans accounted for 77.5% of cases, Whites accounted for 14% of cases, and Hispanics accounted for less than 1% of cases.

**Figure 38**

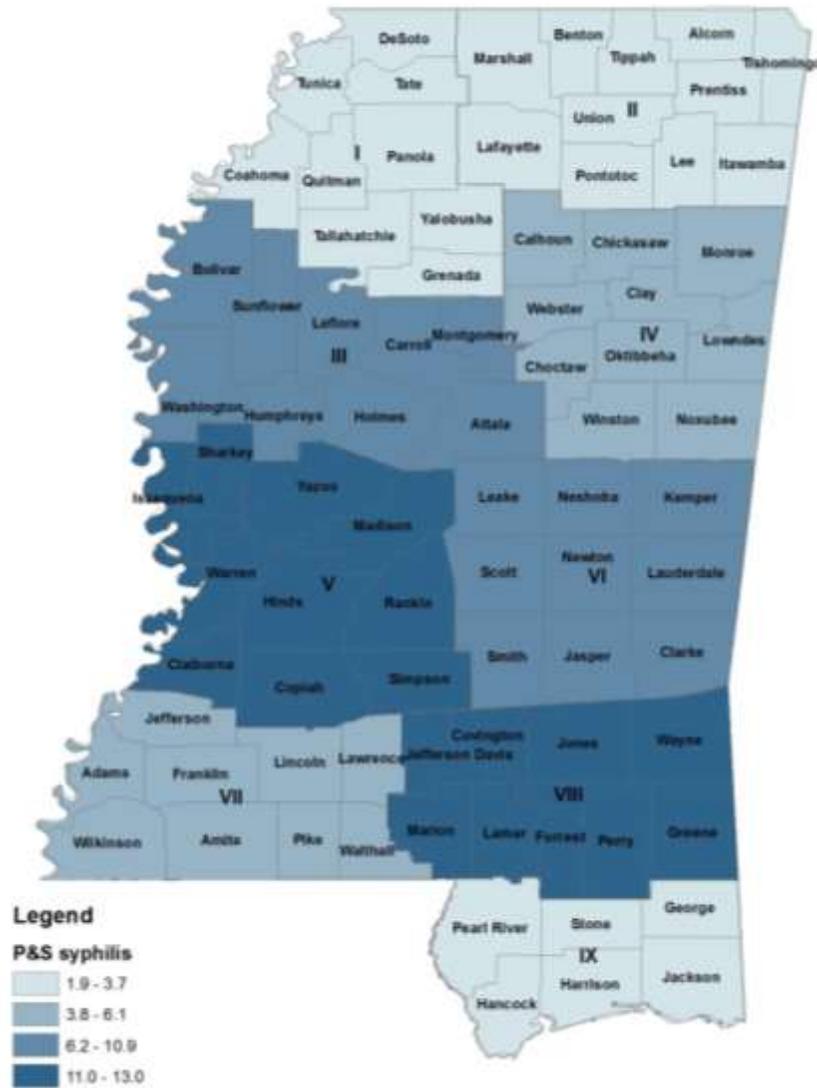


**Early Latent Syphilis by Public Health District**

In 2015, Early Latent syphilis was reported in every district) (Map 5). District V had the highest case rates in the state (28.8 per 100,000). Public Health District VII had the lowest (2.9 per 100,000).

## Map 5

### Early Latent Syphilis by Public Health District, Mississippi, 2015



District	Cases	Population	Rate
I	28	326,848	8.6
II	26	370,028	7.0
III	30	205,903	14.6
IV	18	244,988	7.3
V	185	641,334	28.8
VI	29	239,365	12.1
VII	5	170,065	2.9
VIII	29	307,913	9.4
IX	55	485,889	11.3
Statewide	405	2,992,333	13.5

## **HIV DISEASE**

### **Clinical Features**

The clinical spectrum of human immunodeficiency virus (HIV) infection varies from asymptomatic infections to advanced immunodeficiency with opportunistic complications. One half to two thirds of recently infected individuals have manifestations of an infectious mononucleosis-like syndrome in the acute stage. Fever, sweats, malaise, myalgia, anorexia, nausea, diarrhea, and non-exudative pharyngitis are prominent symptoms in this stage. Constitutional symptoms of fatigue and wasting may occur in the early months or years before opportunistic disease is diagnosed. Over time, HIV can weaken the immune system, lowering the total CD4 count and leading to opportunistic infections and the diagnosis of Acquired Immunodeficiency syndrome (AIDS).

### **Infectious Agent**

Human immunodeficiency virus is a retrovirus with two known types, HIV-1 and HIV-2. These two types are serologically distinct and have a different geographical distribution, with HIV-1 being primarily responsible for the global pandemic and the more pathogenic of the two.

### **Reservoir**

Humans.

### **Transmission**

HIV infection can be transmitted from person to person during sexual contact, by blood product transfusion, sharing contaminated needles or infected tissue or organ transplant. Transmission by contact with body secretions like urine, saliva, tears or bronchial secretions has not been recorded. Without appropriate prenatal treatment, 15-30% of infants born to HIV positive mothers are infected. Breast feeding is also a known cause of mother to infant transmission of HIV.

### **Incubation**

The period from the time of infection to the development of AIDS ranges from 1 year up to 15 years or longer. The availability of effective anti-HIV therapy has greatly reduced the development of AIDS in the U.S.

### **Period of Communicability**

Individuals become infectious shortly after infection and remain infectious throughout the course of their lives.

### **Methods of Control**

Abstinence is the only sure way to avoid sexual HIV transmission; otherwise mutual monogamy with partners known to be uninfected and the use of latex condoms are known to reduce the risk

of infection. Confidential HIV testing and counseling and testing of contacts, prenatal prevention by counseling and testing all pregnant women, and early diagnosis and treatment with appropriate anti-retroviral therapy can reduce transmission. Post-exposure prophylaxis for health care workers exposed to blood or body fluids suspected to contain HIV is an important worksite preventive measure. MSDH performs contact investigation, counseling and testing for each reported case of HIV infection.

### **Reporting Classification**

HIV infection is a Class 1B reportable condition requiring a telephone report to the Department of Health within one business day of first knowledge or suspicion (after hours reporting is not required).

### **Epidemiology and Trends**

#### **HIV in the United States**

The HIV/AIDS epidemic was first recognized in the United States in 1981. Since that time, all states and U.S. dependent areas have conducted AIDS surveillance by using a standardized, confidential name-based reporting system. Because successful treatment delays the progression of HIV infection to AIDS, AIDS surveillance data alone are insufficient to monitor trends in HIV incidence or to meet federal, state, or local data needs for planning and allocating resources for HIV prevention and care programs. AIDS trends do, however, continue to provide important information about where care and treatment resources are most needed.

An integrated national HIV/AIDS surveillance system has enhanced the ability to monitor and characterize populations affected by the HIV epidemic and provide information on the entire population of HIV-infected persons who have been tested confidentially. In order to acquire high-quality HIV data, CDC recommended that all states and U.S. dependent areas adopt confidential name-based public health disease surveillance systems to report cases of HIV infection. As of April 2008, all jurisdictions provide confidential, name based reporting for both HIV infection and AIDS to CDC.

CDC estimates that more than 1.2 million people are living with HIV in the United States. One in eight (13%) of those living with HIV is unaware of their infection.<sup>14</sup> Despite increases in the total number of people living with HIV in the US in recent years, the annual number of new HIV infections has decreased. In 2015, the estimated rate of diagnoses of HIV infection in the United States was 12.3 per 100,000 population, a 10% decrease from the estimated rate of diagnoses reported in 2014 (13.8 per 100,000 population).

#### **HIV Rates in the United States and Mississippi**

According to the 2015 National HIV Surveillance Report, among 50 states, the District of Columbia and 6 dependent areas with a mature reporting system, Mississippi had the 6<sup>th</sup> highest rate of HIV diagnoses (Table 3). Among all metropolitan statistical areas in the United States, the Jackson, MS MSA had the highest rate of AIDS diagnoses in 2015 (Table 4).

**Table 3**

Diagnoses of HIV infection, by area of residence, 2014 and 2015— United States and 6 dependent areas			
Area of residence	No.	Rate	Rank
• District of Columbia	383	57	1
• Louisiana	1,131	24.2	2
• Florida	4,864	24	3
• Georgia	2,386	23.4	4
• Maryland	1,348	22.4	5
• <b>Mississippi</b>	<b>510</b>	<b>17</b>	<b>6</b>
• Nevada	487	16.8	7
• Texas	4,491	16.3	8
• New York	3,128	15.8	9
• South Carolina	696	14.2	10

Source:

Centers for Disease Control and Prevention. HIV Surveillance Report, 2015; vol. 27.  
Published. November 2016. Accessed April 2017

**Table 4**

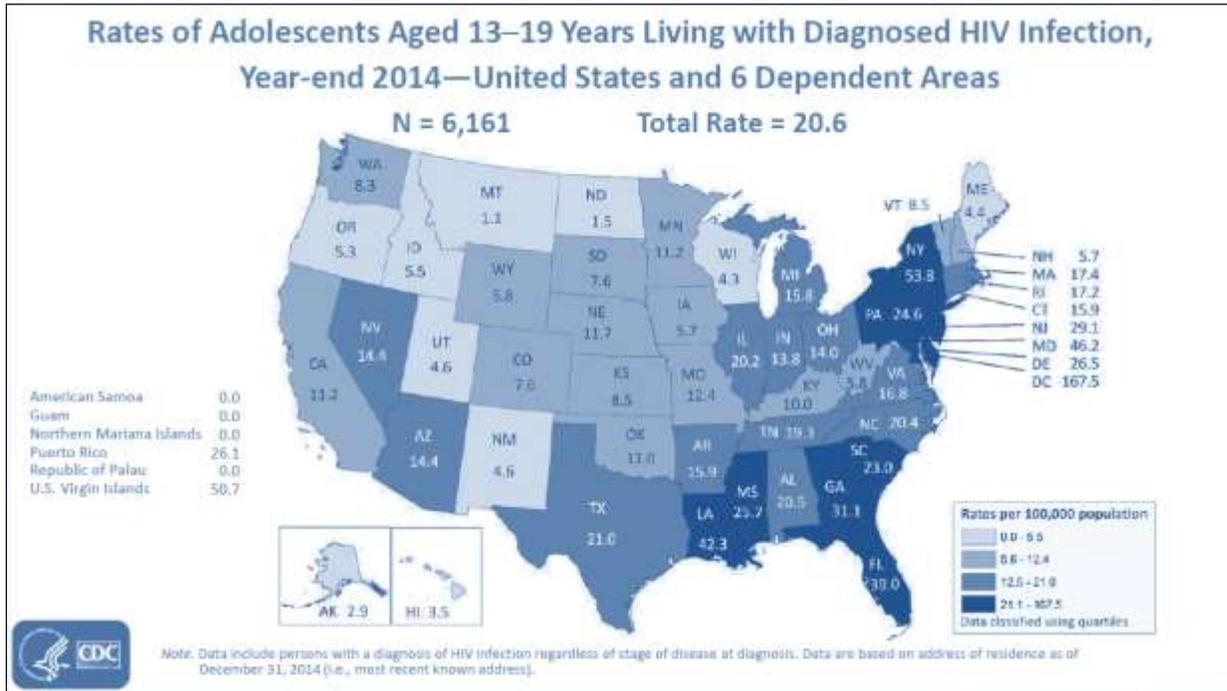
Stage 3 (AIDS) Diagnoses, 2015, by metropolitan statistical area of residence— United States and Puerto Rico			
Area of residence	No.	Rate	Rank
• <b>Jackson, MS</b>	<b>97</b>	<b>16.8</b>	<b>1</b>
• Baton Rouge, LA	133	16	2
• Miami–Fort Lauderdale–West Palm Beach, FL	953	15.9	3
• New Orleans–Metairie, LA	188	14.9	4
• Columbia, SC	105	13	5
• Jacksonville, FL	185	12.8	6
• Baltimore–Columbia–Towson, MD	356	12.7	7
• Durham–Chapel Hill, NC	68	12.3	8
• Atlanta–Sandy Springs–Roswell, GA	692	12.1	9
• Winston-Salem, NC	78	11.8	10

Source:

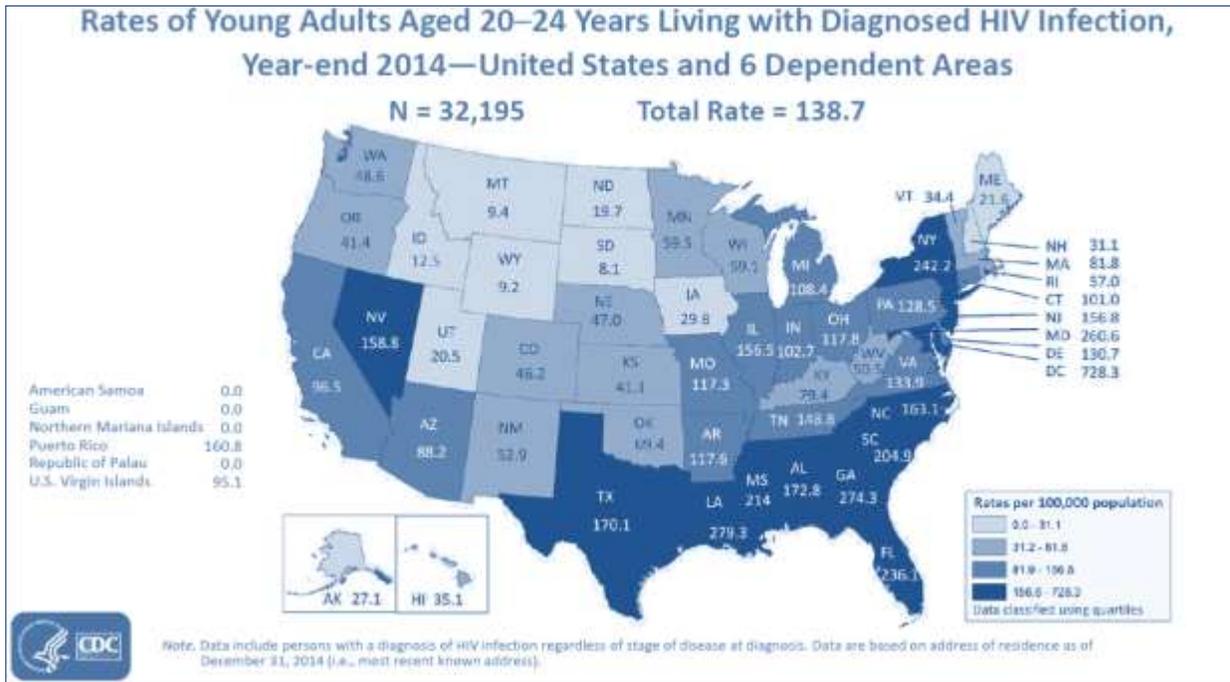
Centers for Disease Control and Prevention. HIV Surveillance Report, 2015; vol. 27.  
Published. November 2016. Accessed April 2017

When assessing rates of infection among certain age groups, Mississippi reported the 7<sup>th</sup> highest rate of infection among 13-19 year olds and the 8th highest rate of infection among 20-24 year olds in 2014 (Maps 6 and 7) .

**Map 6**



Map 7

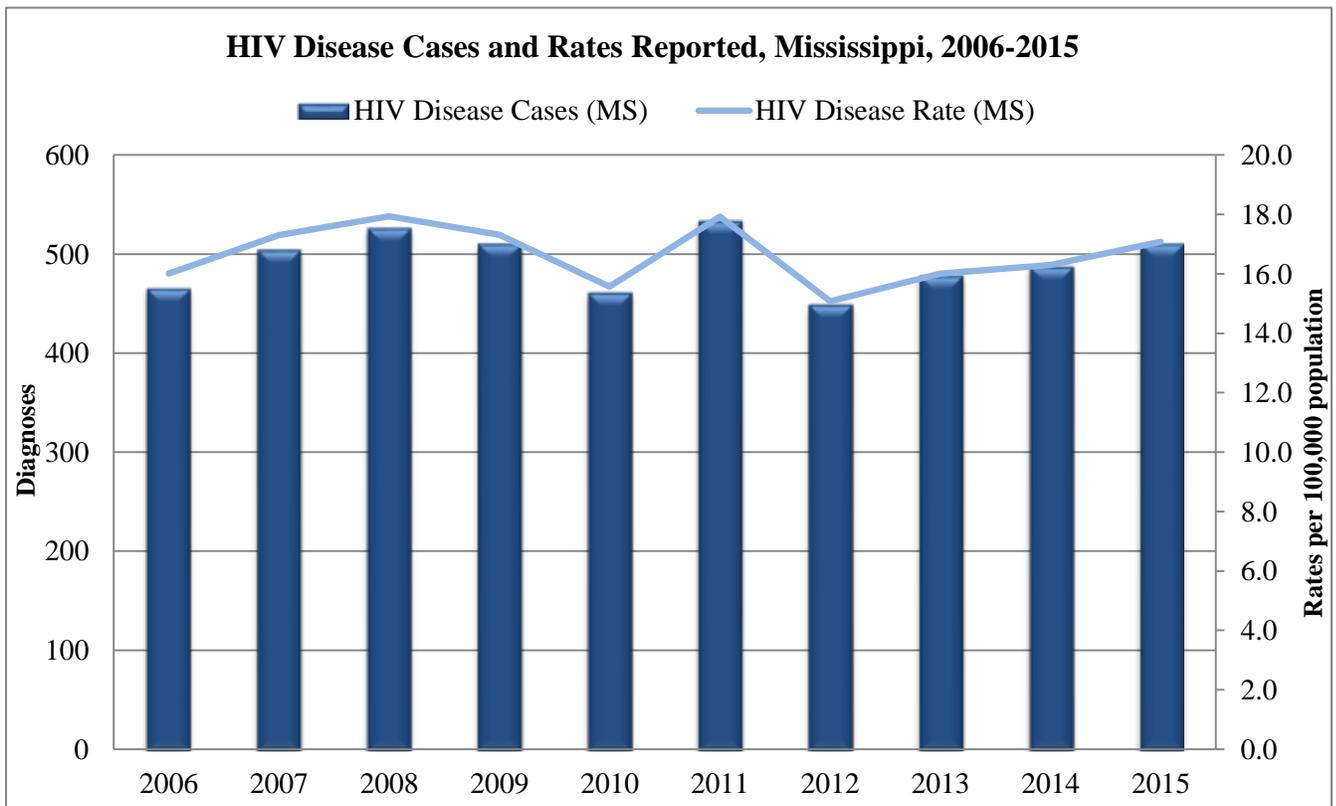


Each year, Mississippi compiles an annual summary of sexually transmitted diseases, including HIV disease, by county and district and by race, gender, and age group. Mississippi participates in RIDR twice a year, and as a result, the number of cases that have been previously reported using earlier year end data may be different once RIDR reports are completed. The numbers represented in this profile may not signify numbers reported in the past. The cases summarized in this document represent HIV cases reported among residents of Mississippi, as of January 2017.

### 10-Year Trends in New HIV Diagnoses (2006-2015)

From years 2006 (n=466) to 2015 (n=511), there was a 10% increase in the number of newly reported HIV diagnoses in the state of Mississippi. During this time, the rates of new HIV diagnoses reported in Mississippi were variable (between 15.1 and 17.9 per 100,000). The rate of individuals newly diagnosed with HIV in Mississippi increased from 16.0 per 100,000 in 2006 to 17.1 per 100,000 in 2015. (Figure 39)

**Figure 39**

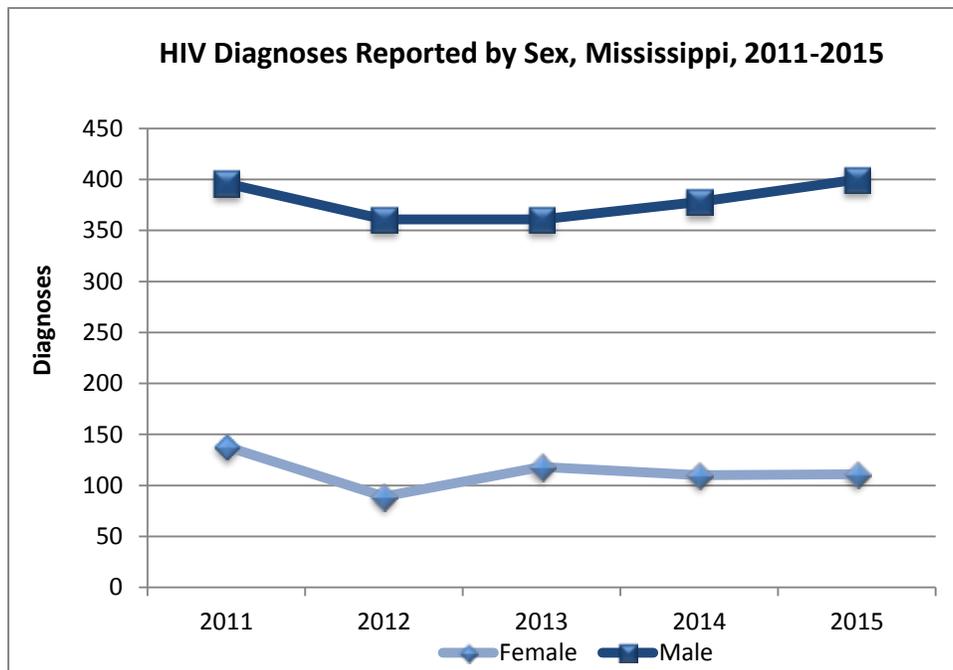


## HIV Diagnoses by Sex, Race/Ethnicity, and Age

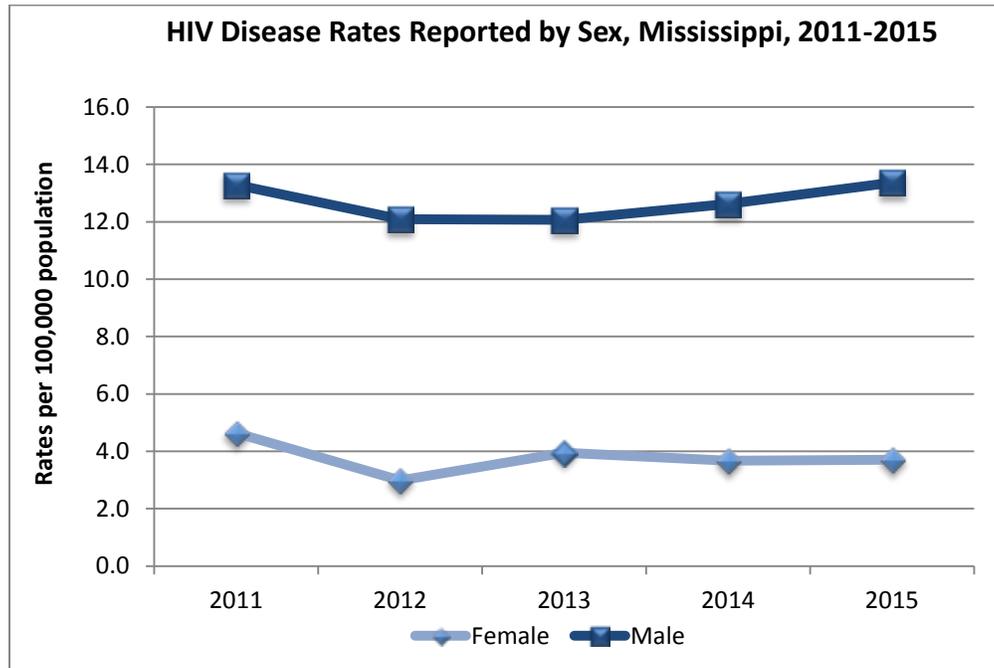
### Sex

Trends have shown that men are more likely to be infected with HIV. Over the past 5 years, males have accounted for 69% of all new HIV diagnoses in Mississippi (Figure 40). From years 2011-2015, the HIV diagnoses rate among males increased from 13.3 to 13.4 per 100,000 males, while rates among females decreased from 4.6 to 3.7 per 100,000 females. In 2015, males represented approximately 80% of all newly diagnosed cases of HIV infection. During the same year, the HIV diagnoses rate for males was almost four times greater than the rate for females (Figure 41).

**Figure 40**



**Figure 41**



**Race/Ethnicity**

In past years, HIV diagnoses rates among African Americans exceeded rates reported among any other race/ethnicity. In 2015, the HIV diagnoses rate for African Americans (36.8 per 100,000 African Americans) was two times greater than the rate for Hispanics (16.4 per 100,000 Hispanics) and over eight times greater than the rate for Whites (4.4 per 100,000 Whites). Though fewer diagnosed cases were reported among Hispanics than Whites each year, Hispanics had the second highest rates of HIV diagnoses. Among the 511 newly diagnosed persons in 2015, African Americans accounted for 80% of all new cases. Whites and Hispanics accounted for 15% and 3% of all new cases, respectively (Figure 42 and Figure 43).

Figure 42

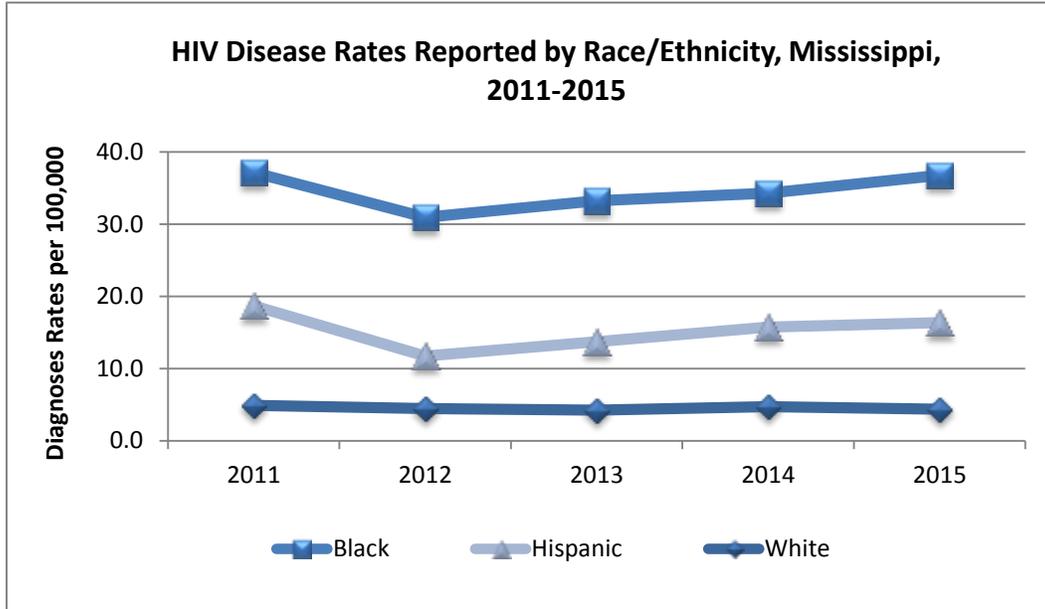
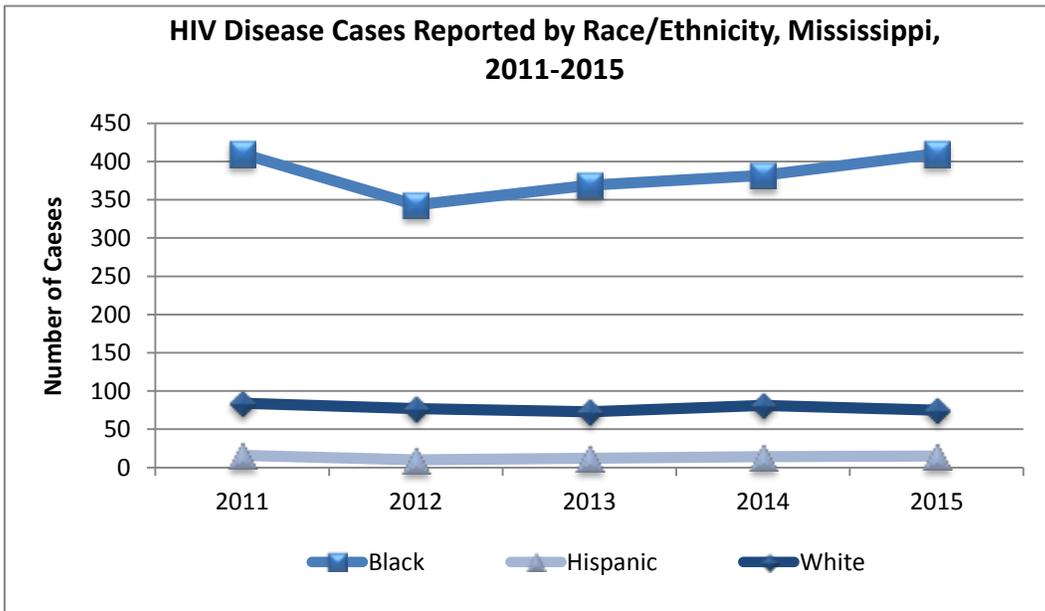


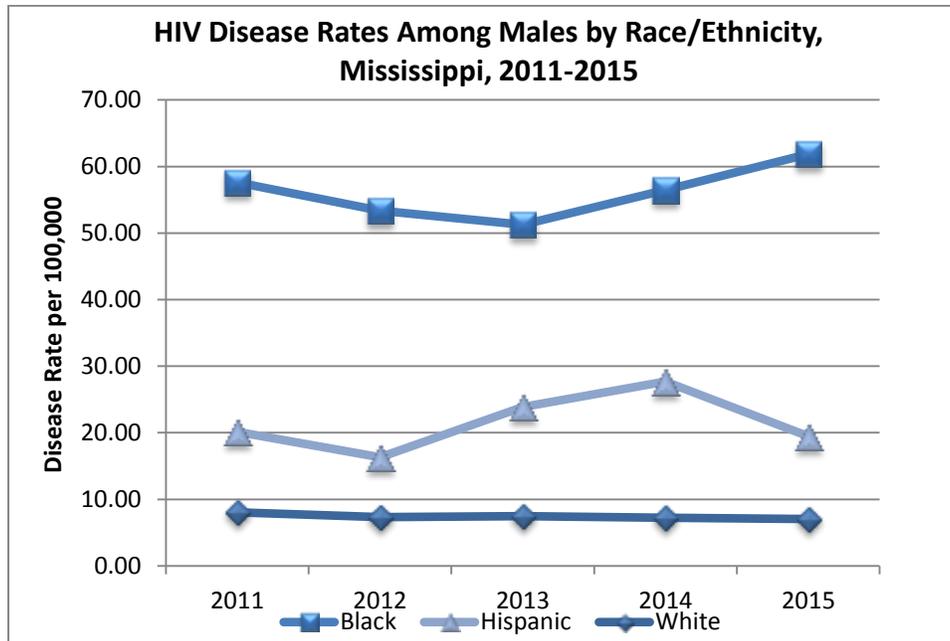
Figure 43



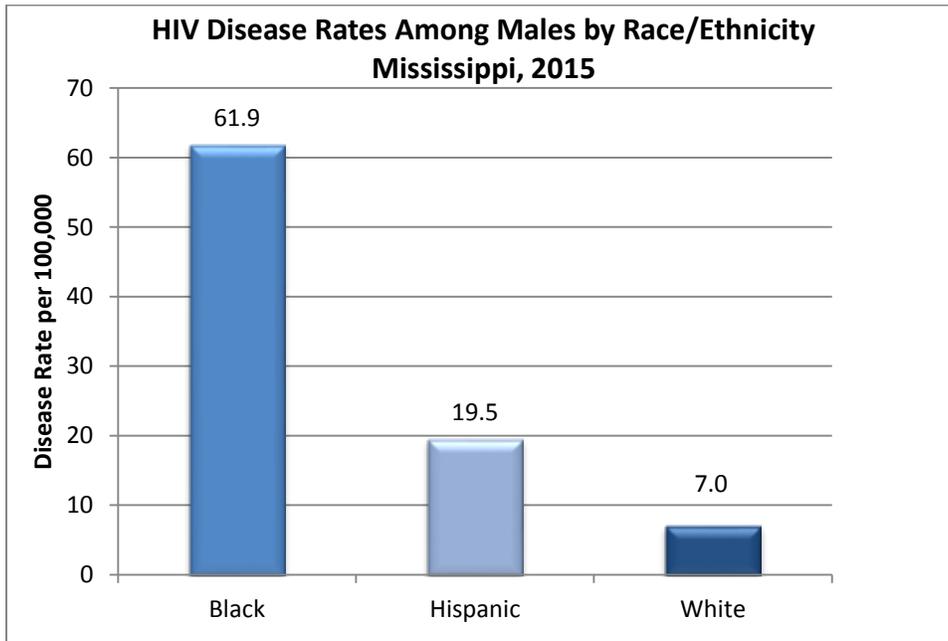
African American men have the highest rate of HIV infection and number of cases reported. From 2011-2015, there was increase in cases (from 299 to 324 cases) and the rate increased from 57.6 to 61.9 per 100,000 African American males (Figure 44). In 2015, African American men had rates eight times higher than white men (61.9 vs. 7.0) and nearly three times

higher than Hispanic men (61.9 vs. 19.5 per 100,000) (Figure 45). African American men represented 60% of cases reported in 2015 (Figure 46). The diagnoses rate among Hispanic males was 2.8 times higher than White males, although White males had a higher number of cases. Hispanic men represented only 2% of cases reported in 2015. White men accounted for 11% of cases reported in the same year.

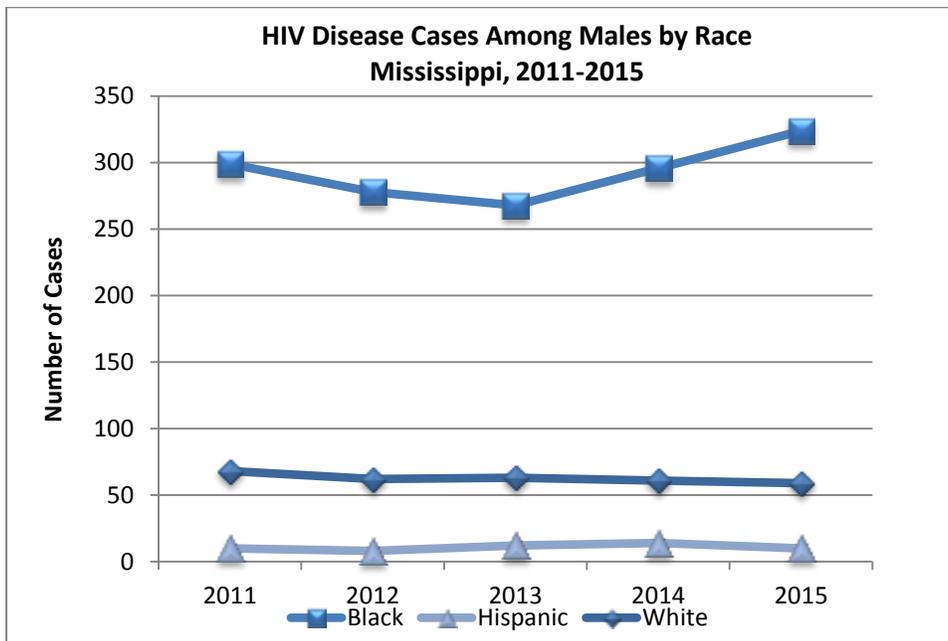
**Figure 44**



**Figure 45**



**Figure 46**



Among females, African Americans have the highest burden of disease (Figure 47). Over the past five years, cases were highest in 2011. Since then, cases have decreased 20% (from 111 to 86 cases) (Figure 48). In 2015, rates among African American females were eight times higher than White females (14.5 vs. 1.8). Although the number of cases reported among Hispanic females was less than ten each year, rates among Hispanic females were higher than White females. Rates among White females have remained stable (Figure 49).

**Figure 47**

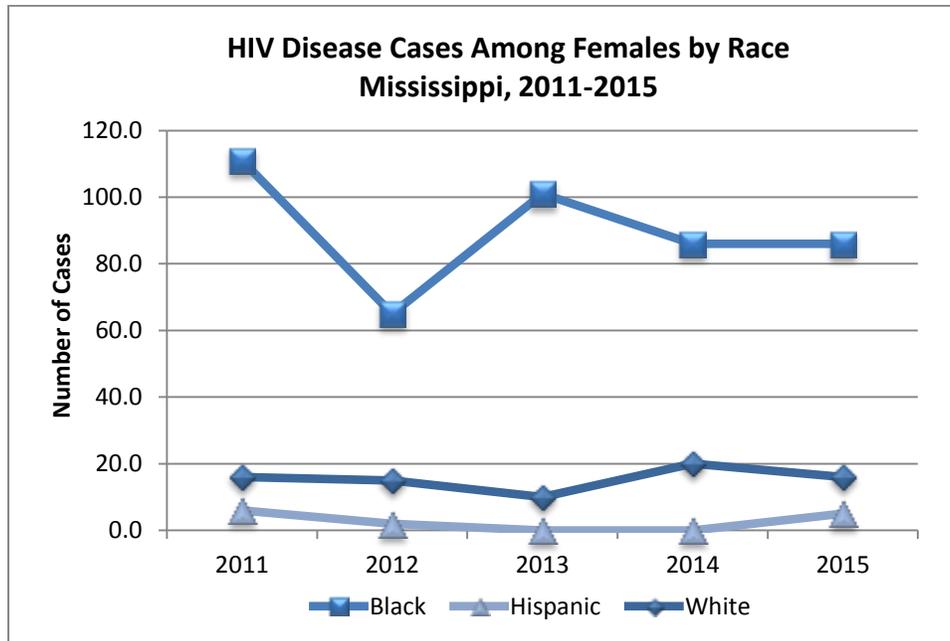


Figure 48

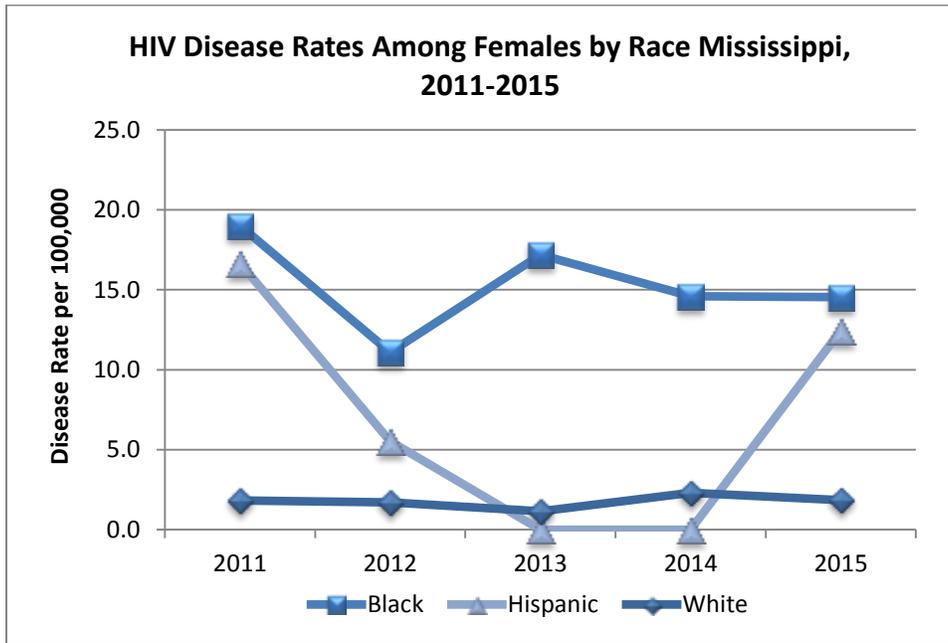
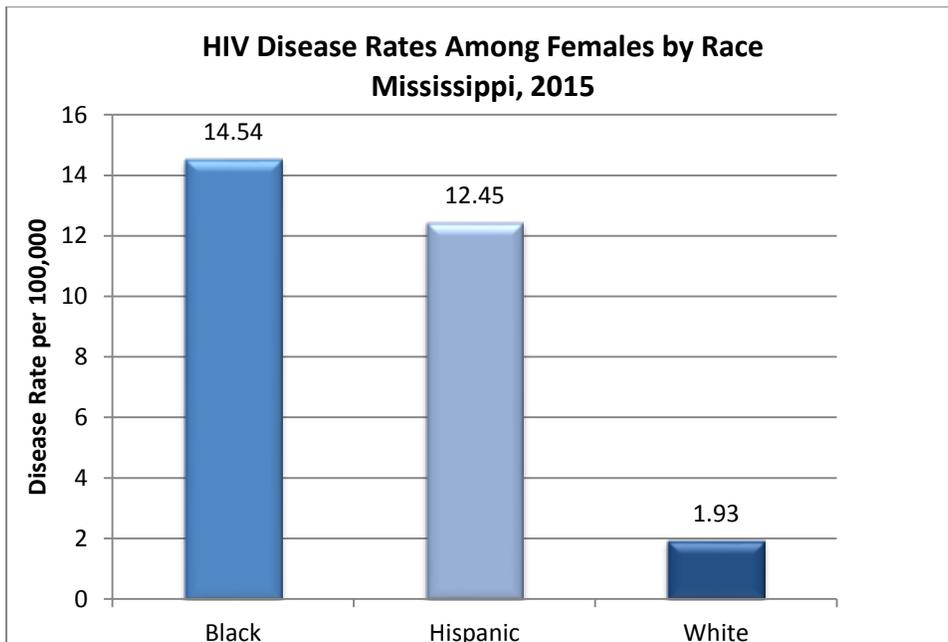


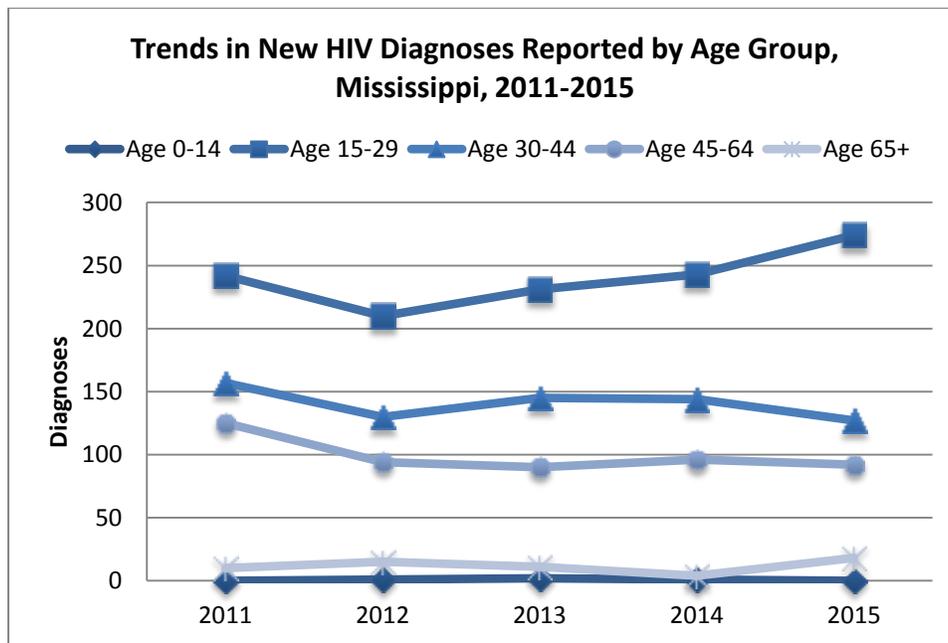
Figure 49



## Age

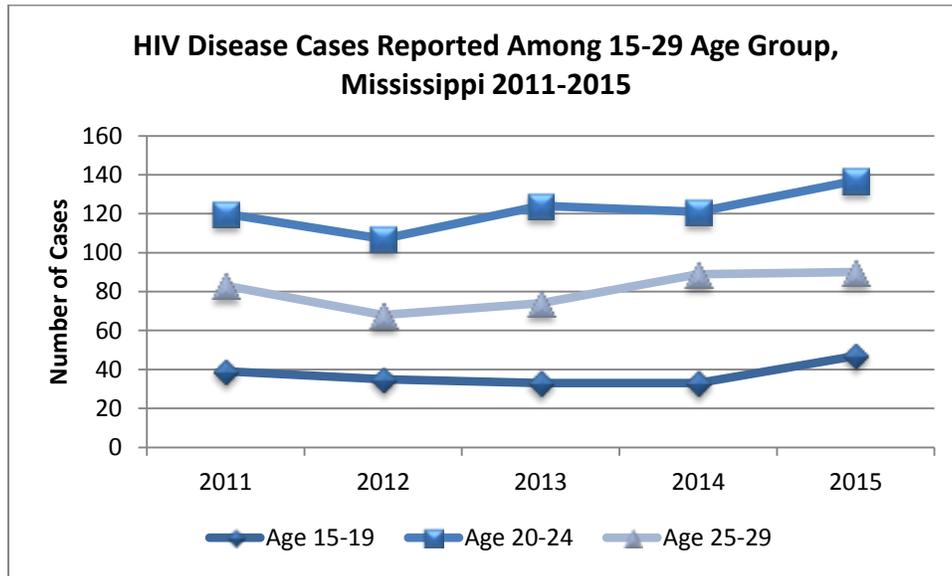
15-29 year olds represented the highest number of new diagnoses from 2011-2015. Cases among the 15-29 year old age group increased from 242 cases in 2011 to 274 cases in 2015. 30-44 year olds, the second largest age group for new diagnoses, showed a decrease in the number of diagnoses. There was also a decrease in the number of new diagnoses among the 45-64 year old age group. In 2015, 15-29 year olds represented 53% of cases, 30-44 year olds represented 25% of cases, and 45-64 year olds represented 18% of cases (Figure 50).

**Figure 50**



The increase among 15-29 year olds has primarily been driven by those aged 20-24. Among the 15-29 year old age group, the number of new diagnoses in persons aged 20-24 accounted for 50% of all new diagnoses, 25-29 year olds accounted for 32%, and 15-19 year olds accounted for 18% of all new diagnoses in 2015. Despite a decrease in cases in 2012, cases among 15-29 year olds have since increased and surpassed where they were in 2011 (Figure 51).

**Figure 51**



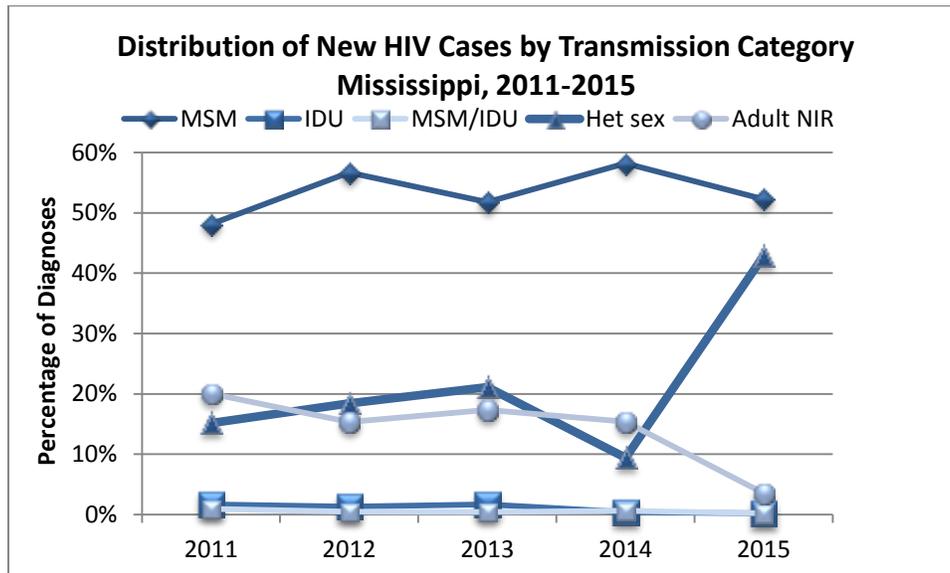
### **HIV Diagnoses by Transmission Category**

*Transmission category* is the term for the classification of cases that summarizes a person’s possible HIV risk factors; the summary classification results from selecting from the presumed hierarchical order of probability, the one risk factor most likely to have been responsible for transmission. For surveillance purposes, a diagnosis of HIV infection or AIDS is counted only once in the hierarchy of transmission categories. Persons with more than one reported risk factor for HIV infection are classified in the transmission category listed first in the hierarchy. The exception is men who report sexual contact with other men and injection drug use; this group belongs to a separate transmission category.

Persons whose transmission category is classified as male-to-male sexual contact (MSM) include men who report sexual contact with other men (i.e., homosexual contact) and men who report sexual contact with both men and women (i.e., bisexual contact). Persons whose transmission category is classified as heterosexual contact (hetero) are persons who report specific heterosexual contact with a person known to have, or to be at high risk for, HIV infection (e.g., an injection drug user). Cases in persons with no reported exposure to HIV through any of the routes listed in the hierarchy of transmission categories are classified as “no risk factor reported or identified” or (NIR).

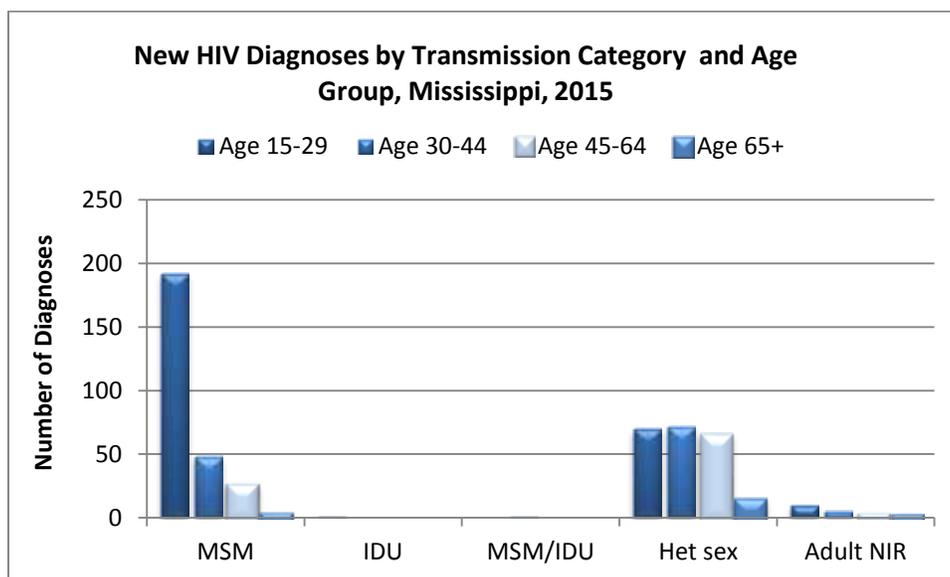
Since 2011, there has been a significant decrease in the proportion of cases reported that have no risk identified (from 20% to 3%). Those who reported as MSM increased from 48% to 64%, during 2011-2015. The percentage of heterosexual sex diagnoses significantly increased from 15% to 42%. Both MSM/IDU and IDU categories decreased in 2015. See Figure 52.

**Figure 52**

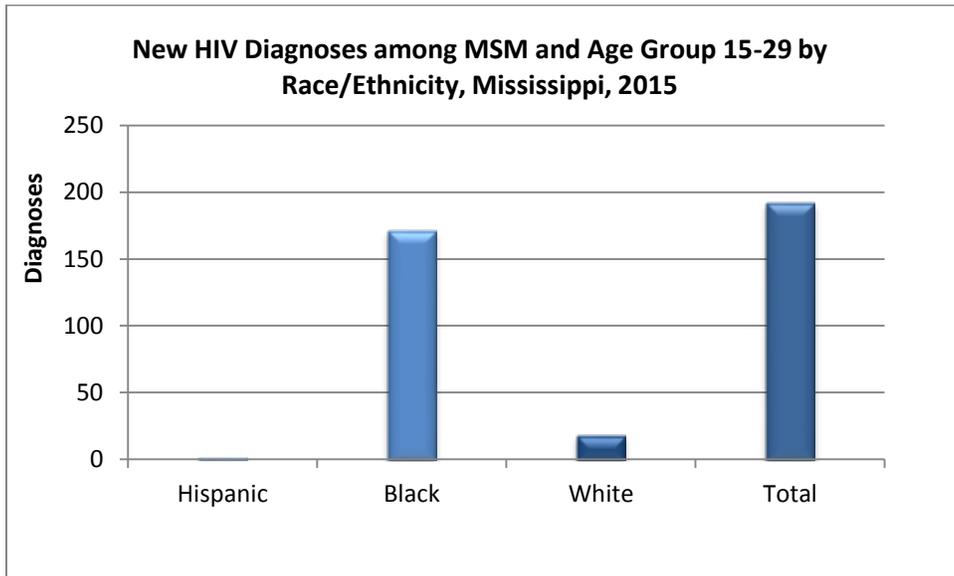


In Mississippi, persons between the ages of 15-29 account for a disproportionate number of new HIV diagnoses, especially those who identify as MSM (Figure 53). African American MSM between the ages of 15-29 represented 80% of all cases reported among all MSM aged 15-29 in 2015 (Figure 54). Current CDC guidelines recommend HIV testing at least once each year for sexually active MSM. MSM with multiple partners or anonymous partners are recommended to test at least two to four times a year<sup>15</sup>.

**Figure 53**



**Figure 54**

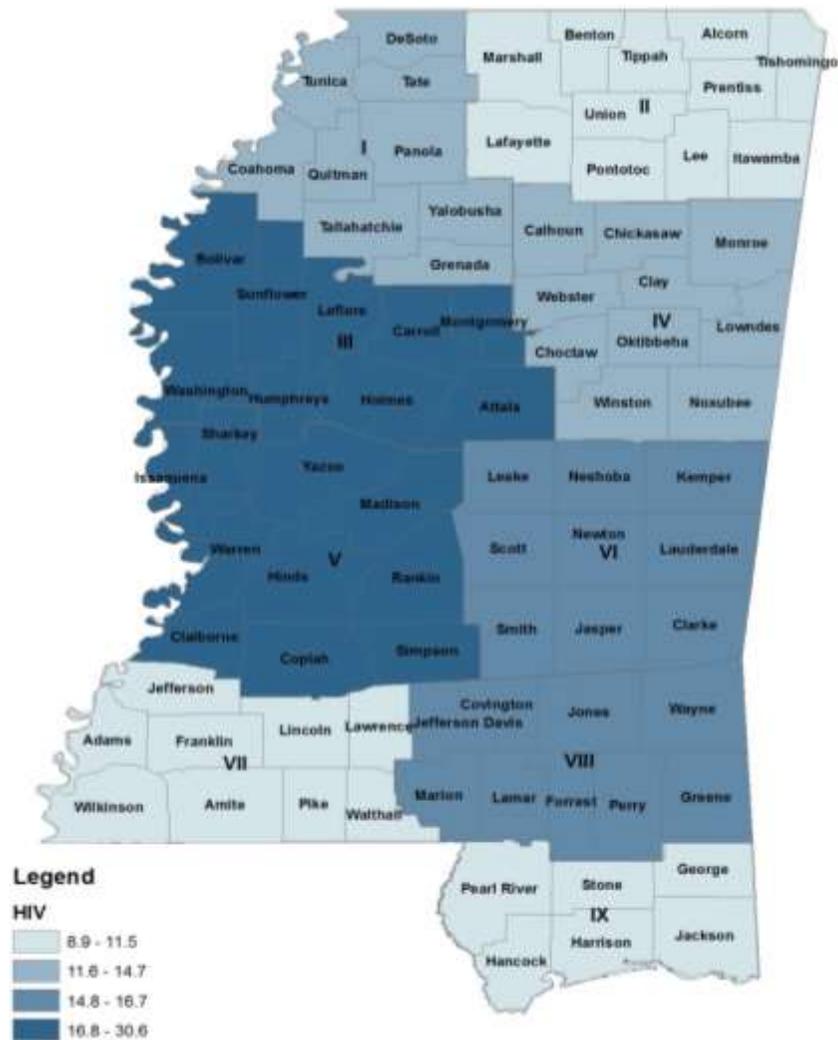


**HIV Diagnoses by Public Health District**

In 2015, HIV was reported in every public health district within the state (Map 8). Public Health District V had the highest incidence rate (30.6 per 100,000) followed by Public Health District III (17.9 per 100,000), Public Health District II had the lowest rate (8.9 per 100,000).

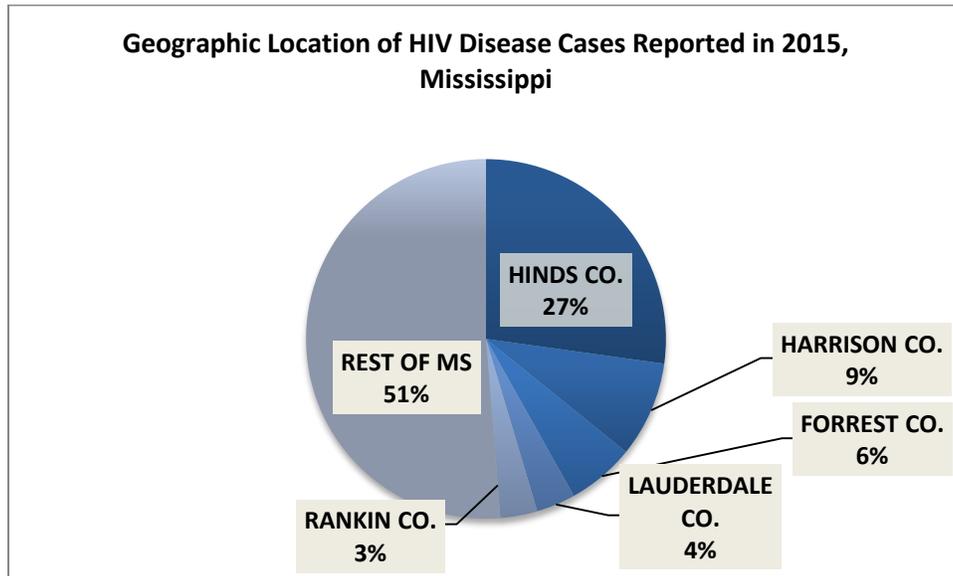
## Map 8

### HIV by Public Health District, Mississippi 2015



District	Cases	Population	Rate
I	44	326,848	13.5
II	33	370,028	8.9
III	36	205,903	17.5
IV	36	244,988	14.7
V	196	641,334	30.6
VI	40	239,365	16.7
VII	18	170,065	10.6
VIII	50	307,913	16.2
IX	56	485,889	11.5
Statewide	509	2,992,333	17.0

**Figure 55**



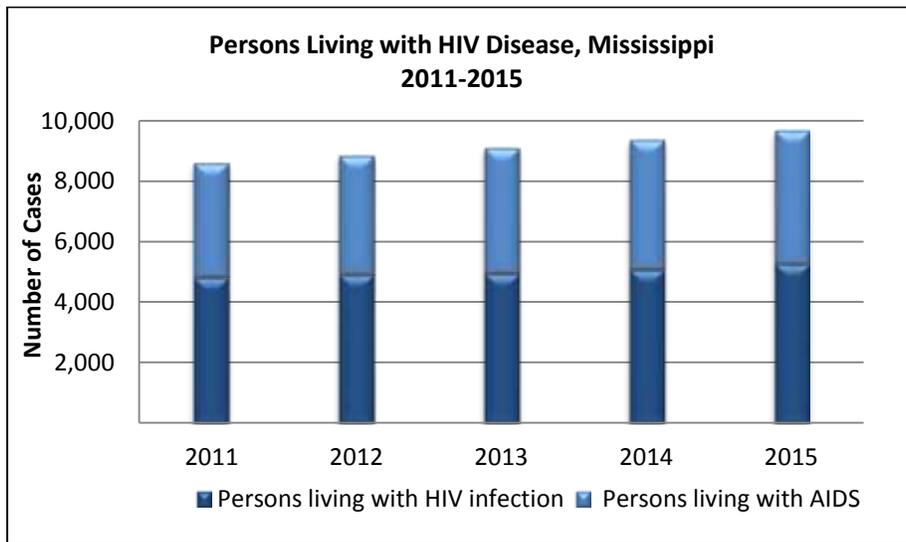
**HIV Prevalence in the United States (Persons Living with HIV disease)**

The Centers for Disease Control and Prevention (CDC) estimates that approximately 1.2 million persons are living with HIV in the United States; however, one in eight, or 13% were unaware of their infection<sup>14</sup>. This number is expected to continue to increase over time, as antiretroviral treatments prolong the lives of those who are infected and more people become infected with HIV than die from the disease each year. As the number of people living with HIV—or HIV prevalence—grows, so does the opportunity for HIV transmission to others.

**HIV Prevalence in Mississippi**

As of December 31, 2016, there were 9,699 Mississippians living with HIV disease in 2015. Not all of these individuals have been diagnosed in Mississippi, but currently reside in the state. Since 2011, there has been a gradual increase in the number of individuals living with HIV. In 2015, the number of reported individuals living with HIV reached almost a 10% increase since 2011 (from 8,866 to 9,699). Figure 56 shows that in recent years, the proportion is greater among persons living with HIV and in 2015, 45% (4,412) of reported living cases were classified as stage 3 (AIDS).

**Figure 56**



**Table 5**

**Persons Living with HIV Disease in Mississippi, 2015**

Persons Living with HIV Disease as of 12/31/2016		
	Cases	Percent
<b>Gender</b>		
Male	6748	69.7%
Female	2938	30.3%
<b>Race/Ethnicity</b>		
American Indian/Alaska Native	11	0.1%
African American	7247	74.7%
Asian/Pacific Islander	18	0.2%
Hispanic/Latino	226	2.3%
White	1907	19.7%
Multi-race	257	2.7%
Unknown	32	0.3%
<b>Age Group</b>		
13-24	623	6.5%
25-34	1894	19.6%
35-44	2204	22.9%
45-54	2870	29.8%
55-64	1623	16.8%
>=65	430	4.5%
<b>Transmission Category</b>		
MSM	3923	41.9%
IDU	409	4.4%
MSM/IDU	256	2.7%
Hetero	1784	19.1%
NIR/NRR/Other	3314	34.8%
<b>Public Health District</b>		
I	790	8.2%
II	533	5.5%
III	929	9.6%
IV	475	4.9%
V	3911	40.4%
VI	623	6.4%
VII	334	3.5%
VIII	814	8.4%
IX	1155	11.9%

### Summary of Living Cases

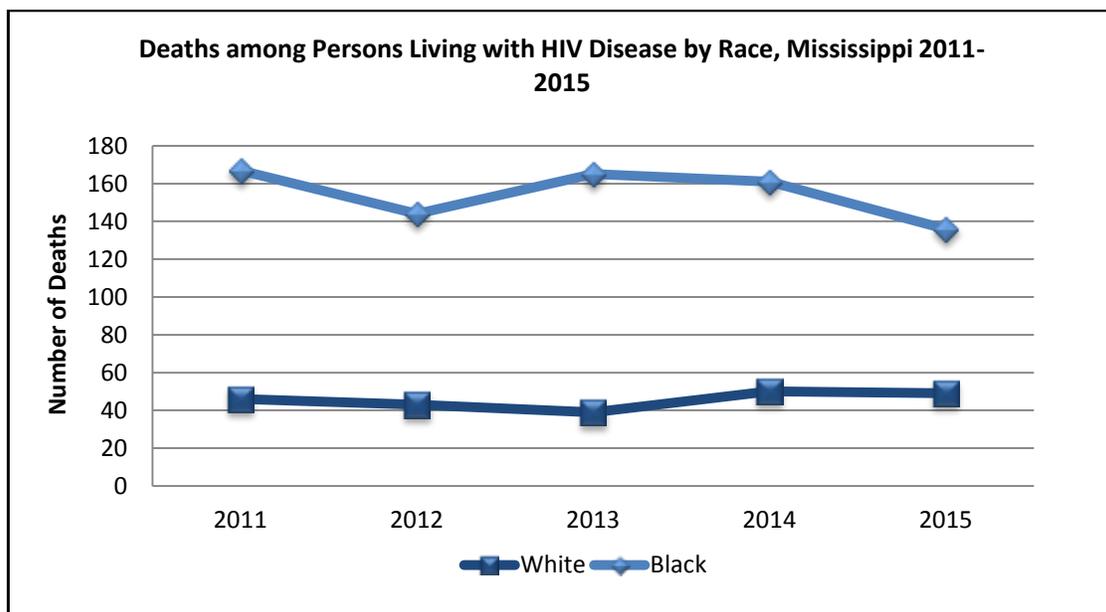
- Males represent 69.7% of living cases.
- African Americans represent 74.7% of living cases followed by Whites, who represent 19.7% of living cases
- Mississippians are living longer with HIV. Individuals 45 years and older represented half (51.1%) of all living cases; followed by 35-44 year olds who represent 22.9% of living cases.
- 41.9% of Mississippians living with HIV attribute their infection to MSM
- District V has the highest number of individuals living with HIV (38.5%), followed by District IX (12.8%)
- District V has the highest number of cases ever reported (40.4%), followed by District IX (11.9%)

### Deaths among Persons with HIV Disease in Mississippi

Each year, data are collected on the number of deaths among persons living with HIV disease. Death data are obtained from vital records and national death data. While individuals may die from HIV-related illnesses, others may die from other causes, such as heart disease, motor vehicle accidents, or diabetes. The information in Figure 57 and Table 6 summarizes deaths among individuals infected with HIV from 2011 to 2015.

In 2015, there were 200 deaths reported. The table below gives a breakdown of 2015 deaths. Deaths were among older individuals; 25% were among 45-54 year olds and 44% were among individuals 50 and older. There were more deaths among males (70%), African Americans (68%), and residents of Public Health District V (36%). African Americans had the highest number of reported deaths each year, nearly 80% of deaths annually.

Figure 57



## Deaths among Persons living with HIV Disease in Mississippi, 2015

**Table 6**

Deaths of persons with diagnosed HIV infection as of 01/02/2017		
	Cases	Percent
<b>Gender</b>		
Male	140	70.0%
Female	60	30.0%
<b>Race/Ethnicity</b>		
African American	136	68.0%
Hispanic/Latino	6	3.0%
White	49	24.5%
Multi-race	9	4.5%
<b>Age at time of Death</b>		
20-24	3	1.5%
25-34	18	9.0%
35-44	42	21.0%
45-54	51	25.5%
55-64	58	29.0%
>=65	28	14.0%
<b>Transmission Category</b>		
MSM	54	27.0%
IDU	10	5.0%
MSM/IDU	6	3.0%
Hetero	60	30.0%
NIR/NRR/Other	70	35.0%
<b>Public Health District</b>		
I	15	7.5%
II	10	5.0%
III	20	10.0%
IV	12	6.0%
V	72	36.0%
VI	14	7.0%
VII	6	3.0%
VIII	21	10.5%
IX	30	15.0%

## **Perinatal HIV Disease Surveillance**

Perinatal HIV/AIDS surveillance program collects information on HIV-infected pregnant mothers, infants perinatally exposed to HIV, and HIV-infected children. Perinatal HIV Incidence surveillance is intended to report new cases of perinatal exposures and HIV-infection among children. Between January 1, 2011, and December 31, 2015, an estimated 206 infants were born to women with HIV infection in Mississippi. There were 2 pediatric HIV cases that were diagnosed in other states during this period. Four additional pediatric HIV cases were diagnosed in Mississippi.

Some women are unaware of their HIV status during pregnancy, which may lead to an underestimate of the number of births to HIV infected mothers. Perinatal surveillance data include only those women who have had a positive result from a confirmatory HIV test and their infants.

## **Effective Prevention of Mother to Child Transmission**

Preventing HIV infection in the intrapartum period (period extends from the beginning of contractions that cause cervical dilation to the first 1 to 4 hours after delivery of the newborn and placenta) is critical. Diagnosing and treating HIV infections in women of child bearing age is one way Mississippi is preventing perinatal HIV transmission.

The Mississippi State Department of Health (MSDH) and local health departments work closely with The University of Mississippi Medical Center Pediatric Infectious Disease Department. Mississippi has low perinatal infections due to being actively aggressive and involved in getting HIV (+) mothers in for care. Mothers who cannot make appointments are provided transportation through Ryan White funding, and are contacted by hospital staff if an appointment is missed. UMC Pediatrics' staff also follows up with local health departments in the county where the patient resides if additional information is needed.

## **Recommended HIV Testing Schedule for Infants Born to Mothers Infected with HIV**

HIV infection can be reasonably excluded in children <18 months of age if there are at least two negative HIV tests by PCR, when one negative test is after 1 month of age and another is performed after 4 months of age.

The recommended HIV testing schedule followed by the CDC for infants with perinatal HIV exposure is a test at 14 to 21 days, then at 1 to 2 months, and again at 4 to 6 months using a virologic HIV test.<sup>16</sup> These tests detect HIV antibodies in the blood. UMC Pediatrics' staff provides care and follow up for most infants, whom either are born in or move to Mississippi,

that have been perinatally exposed to HIV by their infected Mothers. Infants seen at this clinic are tested using a more in-depth approach beyond what is recommended by the CDC. UMC Pediatrics staff tests infants earlier and more frequently, Table 7 gives a breakdown of the schedule UMC uses.

**Table 7**

**University of Mississippi Medical Center Pediatric  
Infectious Disease Testing Schedule**

Test Type	Age
DNA PCR	48 hours
DNA PCR	2 weeks
DNA PCR and RNA PCR	1 Month
DNA PCR	3 Months
DNA PCR and RNA PCR	6 Months
DNA PCR and RNA PCR	18 Months

**Disease Intervention Specialists**

Disease Intervention Specialists (DIS) are trained public health professionals whose main role is to identify, locate, counsel, and motivate people with sexually transmitted disease and their contacts in a confidential and ethical manner. The DIS are directly involved in each program component which includes: Surveillance, Disease Intervention, Health Care Provider visits, client referrals, venipuncture and other specimen collections, STD counseling, community screenings, educational presentations, laboratory visits, and other epidemiologic duties. DIS is responsible for providing timely disease management, investigation, and case management, and Partner Services to control the spread of STDs in communities.

In 2015, 494 new HIV cases were assigned to DIS for partner services (PS), of which 95% of cases were interviewed. DIS identified 827 partners from the interviews, with an average of 1.7 contacts per HIV case. Of the total partners identified from the interviews, 642 (78%) of the new partners were notified. Of the new partners notified, 70% were tested for HIV and 9% tested as newly positive for HIV.

**HIV Prevention**

The HIV Prevention program strives to increase public awareness about HIV as well as promote the reduction of new cases. These efforts are accomplished through the use of educational resources on HIV, screening and testing, effective condom use and partnering with community organizations that work with at risk populations. Education is also provided to health care

professionals to facilitate improvements in clinical practice and information sharing with policymakers.

In addition to community based partners, the HIV Prevention program implements public health strategies in collaboration with other state and local government agencies and departments, including family planning, the Department of Education, and the Department of Corrections, to assure that HIV education and prevention strategies are incorporated into existing programs or developed as new foci of implementation.

In 2015, HIV Prevention funded the following interventions in prioritized populations and districts:

### 2015 Interventions

**Table 8**

INTERVENTION	INTERVENTION & TARGET POPULATION	HEALTH DISTRICT
ARTAS	Newly Diagnosed Individuals	District 3 District 7
CLEAR	Individuals 16 and older living with HIV/AIDS or at high-risk for HIV	District 5 District 8
Many Men, Many Voices (3MV)	Gay men of color at high-risk for HIV	District 3
RESPECT	Individuals at High Risk for HIV	District 5
VOICES/VOCES	Individuals at High Risk for HIV	District 3
Basic Community Outreach	AA Youth, Young AA women and Men	District 9
AIDS Hotline	All Mississippians	Statewide

### Prevention Trainings and Community Presentations 2011 – 2015

HIV screening in healthcare settings is a public health intervention intended to increase awareness of HIV status in general as well as to identify undiagnosed HIV infections among patients in healthcare settings. The primary goal is to find patients who are infected with HIV but are unaware of their status. Further, HIV screening programs should make every effort to link

persons with HIV to clinical and HIV prevention services. All patients between 13 and 64 should be screened for HIV at least one time while in a clinical or nonclinical setting.

Under a cooperative agreement with the Centers for Disease Control (CDC), the Mississippi State Department of Health receives funding to train clinical and nonclinical agencies to administer the Waived Rapid HIV Test. The Prevention Branch Training Coordinator conducted and collaboratively provided STD/ HIV Awareness trainings and Community Presentations to CBOs, ASOs, and Mental Health Facilities as requested. Students enrolled in Public Health at Jackson State University and Hinds Community College completed Peer Educators training. The CDC leads the national effort to promote HIV awareness and prevention in collaboration with other public health organizations and organizations that represent hardest hit by the HIV epidemic. The following Trainings and Community Presentations were offered between 2011 – 2015 in several counties in Mississippi:

**Table 9**

<b>Courses and Community Presentations</b>		
STD/HIV Instructor		
Fundamentals of HIV Prevention Counseling		
Fundamentals of Waived Rapid HIV Testing		
HIV Prevention Counseling: Addressing Issues of Youth		
Comprehensive Risk Counseling Services		
Partner Counseling and Referral Services (PCRS)		
Community Planning Training		
ARTAS		
Peer Educators Training		
<b>Year</b>	<b>Community Presentations</b>	<b>Participants Trained</b>
<b>2011</b>	<b>22</b>	<b>103</b>
<b>2012</b>	<b>15</b>	<b>146</b>
<b>2013</b>	<b>17</b>	<b>201</b>
<b>2014</b>	<b>10</b>	<b>68</b>
<b>2015</b>	<b>12</b>	<b>132</b>

Additional trainings through Capacity Building Assistance (CBA) providers were offered to build skills, knowledge, cultural and linguistically appropriate services to enhance and strengthen STD/HIV Office staff, CBO, ASOs, and public health providers’ delivery of prevention efforts and services to individuals at-risk of acquisition of HIV, as well as affected, or infected by HIV. Trainings list is below:

**Table 10**

<b>CRIS Number</b>	<b>Date</b>	<b>Topic(s)</b>	<b>CBA Provider Name</b>
201505-3920	June 2015	CBA for HIV Planning Group (HPG)--HITAPS	NASTAD (OD)
201505-3918	June 2015	CBA for Health Department (HD)--HITAPS	NASTAD (OD)
201505-3917	June 2015	CBA for Health Department (HD)—	NASTAD (OD)
		Prevention with HIGH Risk HIV Negative Persons	
201505-3916	June 2015	CBA for Health Department (HD)—Policy; HITAPS	NASTAD (OD)
201505-224	June 2015	CBA for Health Department (HD)—Report Writing	APIAHI
201504-232	April 2015	3 <sup>rd</sup> Party Billing	Reassigned to the University of Washington.
201503-1719	March 2015	CBA for Community-Based Organizations--SMATF	National Community Health Partners
201503-1718	February 2015	CBA for Health Department (HD)—Program Managers Training	APIAHI
201503-1666	March 2015	CBA for Health Department (HD)—Policy; AA MSM	NASTAD (OD)
201501-1412	April 2015	CBA for Health Department (HD) — Testing; Data to Care.	University of Washington

Community and street outreach remains a key strategy in our efforts to prevent the acquisition and transmission of HIV/AIDS. Sub-grantee agreements mandate that funded agencies conduct community presentations to high-risk populations reaching at least 1,000 individuals each funding cycle. Additionally, staff from Prevention attended and conducted events, community presentations, and outreach activities to provide educational information, prevention messages, condoms, testing, and referral/linkage to care services. Promotion of National Awareness Days provides opportunities to host and collaborate with CBOs and ASOs to reach high risk

populations, reduce stigma associated with the disease, provide community-based targeted testing, and referrals for intervention activities.

### **Condom Distribution**

STD/HIV Office increased the number of condoms disseminated as a structural intervention with a focal concentration in areas of high HIV morbidity. Condoms are distributed through MSDH County Health Departments, Sub-grantee organizations, Federal Qualified Health Centers, College/University Health Center Clinics, local community based organizations and health clinics, community partners and MSDH staff. Individuals may obtain condoms by visiting county health departments, contacting community based organizations, or health care providers at their local health clinics and centers. Persons may also acquire free condoms through the mail order condom program, which can be accessed through the *Your PSH* app on smart phones and electronic devices. During January – December 2015, there were 1,751,456 condoms distributed to HIV-positive individuals, high-risk HIV negative individuals, or persons of unknown status throughout the state.

### **Statewide Community Planning**

The Mississippi Community Planning Group (MSCPG) for HIV Prevention is a required component of the Cooperative Agreement Programs for HIV Prevention funded by the Department of Health and Human Services, Centers for Disease Control and Prevention (CDC) and implemented by the Mississippi State Department of Health (MSDH). The responsibility and mission of the MSCPG is to develop, in collaboration with the Mississippi State Department of Health, a Comprehensive HIV Prevention Plan for the State of Mississippi. The Plan, which details HIV prevention activities/interventions and supportive services and the populations targeted for services due to the highest incidence of HIV disease and/or sexually transmitted diseases, provides direction for the MSDH in its application for CDC Cooperative Agreement Programs funds for implementation HIV prevention programs.

In June 2015, The Mississippi Community Planning Group merged with the Mississippi HIV and AIDS Care and Services Planning Council to form the Mississippi HIV Planning Council as recommended by CDC and HRSA. This merger provided the opportunity for the MHPC to become more integrated and diverse in the jurisdictional planning process. With the help of the MHPC in September 2016 the MSDH submitted a five year Integrated HIV Prevention and Care Plan that goes through 2021. This plan correlates with the National HIV/ AIDS Strategies (NHAS) Goals and several of the objectives in this plan will help to eradicate HIV in Mississippi.

### **Information Hotline**

The MSDH STD/HIV Program enters into a sub-grant agreement with a CBO/ASO to provide a 24 hour HIV/STD hotline for the entire state. All educational material advertises the hotline. Book marks advertising the hotline are disseminated at health fairs, presentations and community events.

## **Expanded Testing- Rapid HIV Testing**

CDC has provided funding to offer free HIV screenings in various clinical and nonclinical settings. As of December 31, 2015, the Expanded Testing program in Mississippi has 42 participating sites that offer rapid HIV tests, free of charge, to all their patients/clients (See Map 9 below). These sites include colleges/ universities, community health centers, community based organizations, substance abuse centers, and homeless clinics.

In Mississippi, testing is performed at the point-of-care-site in which whole blood is collected by pricking the finger. The test usually takes 20 minutes to perform and protocols are in place to ensure confidentiality and post-test counseling. Mississippi only offers confidential HIV testing, requiring the testing center to record the person's name, social security number, risk factors, and other specified variables. If the test is negative, further testing is not needed. If the test is positive, a confirmatory test by a licensed laboratory must be performed to confirm that a person is HIV positive.

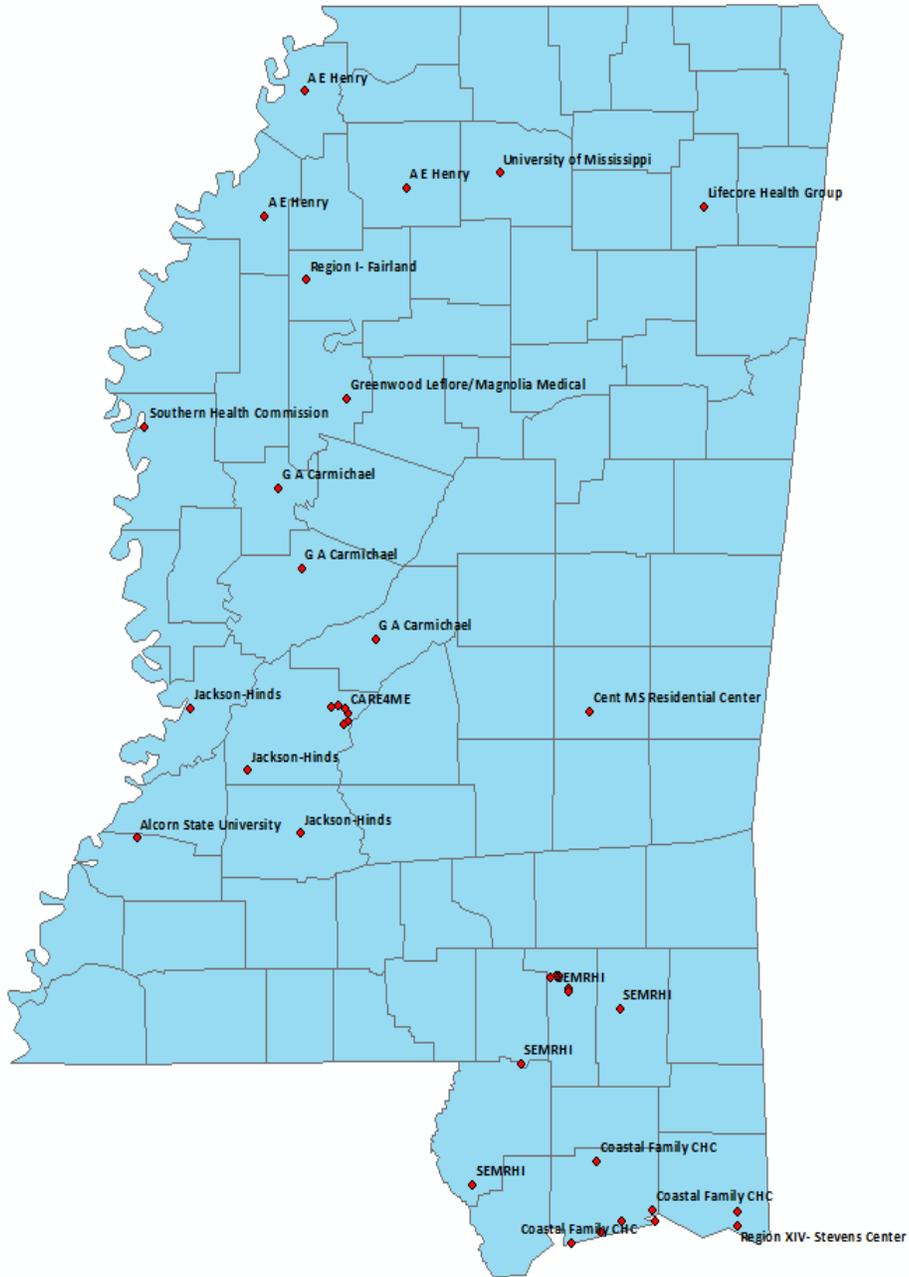
The rapid test ensures that high risk persons receive HIV testing and that newly diagnosed persons are linked to medical care and prevention services. DIS counsel newly diagnosed HIV positive persons about their status and a form is completed to document the counseling session. DIS refers HIV positive persons to social workers who will then provide additional resources.

### **The Benefits**

- People living with HIV can receive effective treatment, resulting in improved health and extended life, if their HIV status is diagnosed sooner. Currently, many people (up to 65% in one study) learn of their HIV infection only after they have developed HIV related symptoms.
- Most people, after finding out their positive HIV status, adopt behaviors which will reduce possible HIV transmission to others.
- Routine HIV testing will reduce the stigma associated with taking an HIV test.

# Expanded Testing Sites

Map 9



## **HIV Care and Services Program**

### **About the Ryan White HIV/AIDS Program**

The Ryan White Program works with cities, states, and local community-based organization to provide HIV-related services to more than half a million people each year. The program is for those who do not have sufficient health care coverage or financial resources for coping with HIV disease. Ryan White fills gaps in care not covered by other sources. The majority of Ryan White funds support primary medical care and essential support services. A smaller, but equally critical portion, fund technical assistance, clinical training, and research on innovative models of care. The Ryan White legislation created a number of programs, called Parts, to meet needs for different communities and populations affected by HIV/AIDS. Each is described below.

**Part A** provides emergency assistance to Eligible Metropolitan Areas and Transitional Grant Areas that are most severely affected by the HIV/AIDS epidemic.

**Part B** provides grants to all 50 States, the District of Columbia, Puerto Rico, Guam, the U.S. Virgin Islands, and 5 U.S. Pacific Territories or Associated Jurisdictions.

**Part C** provides comprehensive primary health care in an outpatient setting for people living with HIV disease.

**Part D** provides family-centered care involving outpatient or ambulatory care for women, infants, children, and youth with HIV/AIDS.

**Part F** provides funds for a variety of programs:

**The Special Projects of National Significance Program** grants fund innovative models of care and supports the development of effective delivery systems for HIV care.

**The AIDS Education and Training Centers Program** supports a network of 11 regional centers and several National centers that conduct targeted, multidisciplinary education and training programs for health care providers treating people living with HIV/AIDS.

**The Dental Programs** provide additional funding for oral health care for people with HIV.

**The Minority AIDS Initiative** provides funding to evaluate and address the disproportionate impact of HIV/AIDS on African Americans and other minorities.

Ryan White is administered by the U.S. Department of Health and Human Services (HHS), Health Resources and Services Administration (HRSA), HIV/AIDS Bureau (HAB). Federal funds are awarded to agencies located around the country, which in turn deliver care to eligible individuals under funding categories called Parts, as outlined below. First authorized in 1990, the

Ryan White HIV/AIDS Program was funded at more than \$2.2 billion during fiscal year (FY) 2015.<sup>2</sup>

### Ryan White Funding in Mississippi

**Table 11**

<b><sup>3</sup>Ryan White Program Funding Received by Mississippi Grantees, FY 2015</b>	
<b>Program</b>	<b>Fiscal Year 2015</b>
<b>EMAs/TGAs: Part A</b>	\$0
<b>States and Territories: Part B Base and Supplemental</b>	\$7,013,988
<b>ADAP (Part B) and ADAP Supplemental</b>	\$7,444,057
<b>Emerging Communities: Part B</b>	\$279,276
<b>Early Intervention: Part C</b>	\$3,172,697
<b>Capacity Development: Part C</b>	\$165,427
<b>Women, Infants, Youth, Families: Part D</b>	\$484,083
<b>Oral Health Programs: Part F</b>	\$264,181
<b>AETC: Part F</b>	\$0
<b>MAI Part A</b>	\$0
<b>MAI Part B</b>	\$129,509
<b>MAI AETCs</b>	\$0
<b>SPNS: Part F</b>	\$0
<b>Total</b>	<b>\$18,953,218</b>

Notes: Oral Health includes the Dental Reimbursement Program and the Community Dental Partnership Grant Program. Minority AIDS Initiative funding from Parts C and D is included in Part C and D totals. States with no direct AIDS Education and Training Center (AETC) funding are covered by an AETC local performance site.

The Mississippi State Department of Health participates in Part B of the Ryan White Program. AIDS Drug Assistance Program (ADAP) and not funded by Ryan White by Part B.

## AIDS Drug Assistance Program (ADAP)

The AIDS Drug Assistance Program (ADAP) is authorized under Part B of the CARE Act. The ADAP program is a state-administered program that provides HIV/AIDS medications to low-income individuals living with HIV disease who have little or no coverage from private or third party insurance. In addition to providing medications for HIV treatment, Part B funds for ADAP are used for the prevention and treatment of opportunistic infections.

In 2015 the Mississippi AIDS Drug Assistance Program (ADAP) provided medications to 2273 people, of which twenty-three percent (512) were newly enrolled clients. Table 12 gives a demographic breakdown of ADAP clients in Mississippi. Most Mississippi ADAP clients served in 2015 were African American (78%), male (74%), and between the ages of 25-44 years of age (54%).

### Demographic Characteristics of ADAP Clients: Mississippi, 2015

Table 12

Demographic Category	# of clients	% of Clients
<b>Race/Ethnicity</b>		
White	491	22%
African American	1765	78%
Hispanic	52	2.3%
American Indian	4	0.2%
Pacific Islander	1	0.3%
<b>Gender</b>		
Male	1692	74.4%
Female	572	25.2%
Transgender	9	0.4%
<b>Age (yrs)</b>		
Under 2	0	< 0%
2-12	1	<0. 1%
13-24	252	11.2%
25-44	1180	53.6%
45-64	547	32.9%
65 +	50	2.3%

## Housing Opportunities for People with AIDS (HOPWA)

The HOPWA program was established by HUD to address the specific needs of persons living with HIV/AIDS and their families. HOPWA makes grants to local communities, states, and nonprofit organizations for projects that benefit low income persons medically diagnosed with HIV/AIDS and their families.

Through the Mississippi HOPWA program, 542 individuals received housing assistance in 2015. Table 13 gives a demographic breakdown of HOPWA clients in Mississippi. Among HOPWA clients served in 2015, 79% were African American, 63% were male, and 49% were between the ages of 25 and 44.

### Demographic Characteristics of HOPWA Clients: Mississippi, 2015

Table 13

Demographic Category	# of clients	% of Clients
<b>Race/Ethnicity</b>		
White	97	18%
African American	424	79%
Other	21	< 3%
<b>Gender</b>		
Male	341	63%
Female	200	37%
Transgender	1	>1%
<b>Age (years)</b>		
Under 2	0	0%
2-12	0	0%
13-24	33	6%
25-44	265	49%
45-64	227	42%
65 +	17	3%

July 1, 2015, state funding for Mississippi HOPWA program was reallocated to Mississippi Home Corporation. October 1, 2015, the city funding for services was reverted to City of Jackson.

## **Special Programs/Projects**

### **MS Medical Monitoring Project**

#### ***Background and Methods***

The Medical Monitoring Project is a CDC-funded HIV surveillance program created to learn more about persons living with HIV/AIDS. The project is designed to assess and monitor the behavioral and clinical characteristics of HIV positive adults receiving ongoing medical care, and the types of services they need and receive. A multi-stage sampling methodology involves sampling of the state, the HIV treatment facility, and the patient levels. From 2009 to 2014, MMP interviewed 1,233 HIV-positive adults receiving care in Mississippi. Their responses reflect their experiences during the 12 months before their interview, unless otherwise noted.

Figure 58

## HIV-Positive Adults in Care in Mississippi, Medical Monitoring Project, 2009-2014

### The Medical Monitoring Project (MMP)

- MMP is a surveillance system funded by the Centers for Disease Control and Prevention and implemented by local health departments. It collects behavioral and medical data about HIV-positive adults receiving medical care in the United States.
- From 2009 to 2014, MMP interviewed 1,233 HIV-positive adults receiving care in Mississippi. Their responses reflect their experiences during the 12 months before their interview, unless otherwise noted. All data presented are weighted.
- The information in this factsheet can guide policy decisions, resource allocation, and evaluation of treatment and prevention initiatives.

### Characteristics of HIV-Positive Adults in Care in Mississippi, 2009-2014

- 63% were male and 36% were female
- 33% were men who have sex with men
- 80% were black/African-American, 1% were Hispanic or Latino, and 17% were white
- 28% had been diagnosed with HIV less than 5 years at the time of their interview
- 16% had private insurance, 52% had public insurance only, 27% had Ryan White coverage only, and 5% were uninsured
- 65% had a household income at or below the poverty line
- 5% experienced homelessness

### HIV Treatment and Prevention Measures among HIV-Positive Adults in Care in Mississippi, Medical Monitoring Project, 2009-2014\*

Characteristic	Prescription of ART <sup>1,2</sup> (%)	ART Dose Adherence <sup>3,4</sup> (%)	Sustained Viral Suppression <sup>2,5</sup> (%)	Receipt of Condoms <sup>3,6</sup> (%)	HIV Prevention Counseling <sup>3,7</sup> (%)
<b>Total</b>	<b>90</b>	<b>89</b>	<b>58</b>	<b>62</b>	<b>73</b>
<b>Age</b>					
18-29 years	80	86	43	64	83
30-39 years	90	85	55	71	76
40-49 years	91	90	54	62	74
≥50 years	92	92	70	55	67
<b>Gender</b>					
Male	91	89	57	63	74
Female	88	89	60	61	73
<b>Race/Ethnicity</b>					
Black/African-American	89	87	57	66	76
Hispanic/Latino	100	94	76	5	83
White	91	94	63	46	60
<b>Insurance</b>					
Any Private Insurance	91	86	59	50	70
Public Insurance Only	92	90	61	60	69
Ryan White Coverage Only	93	89	57	70	81
Uninsured	36	91	21	80	87
<b>Sexual Behavior</b>					
MSM <sup>8</sup>	89	90	55	61	71
MSW <sup>9</sup>	92	87	59	65	78
WSM <sup>10</sup>	86	88	58	62	73

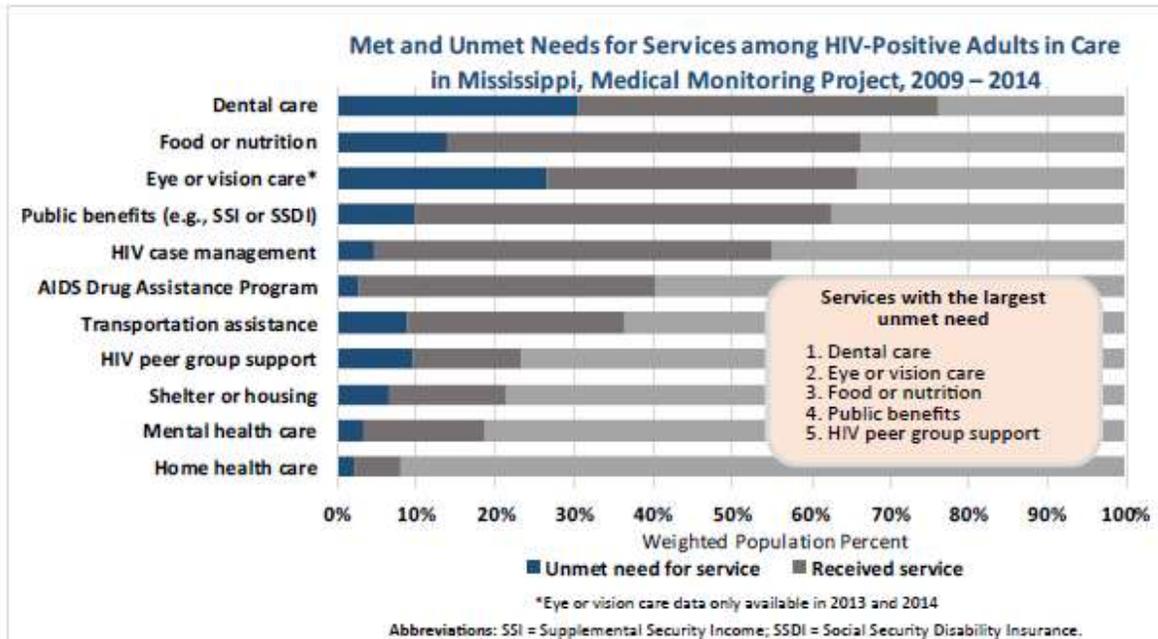
\*All data are from the past 12 months unless specified otherwise; <sup>1</sup>Estimates suppressed because coefficient of variation for the estimate was ≥30%; <sup>2</sup>Antiretroviral therapy;

<sup>3</sup>Documented in the medical record; <sup>4</sup>Self-reported; <sup>5</sup>Past three days; <sup>6</sup>All viral loads in past 12 months undetectable or <200 copies/ml;

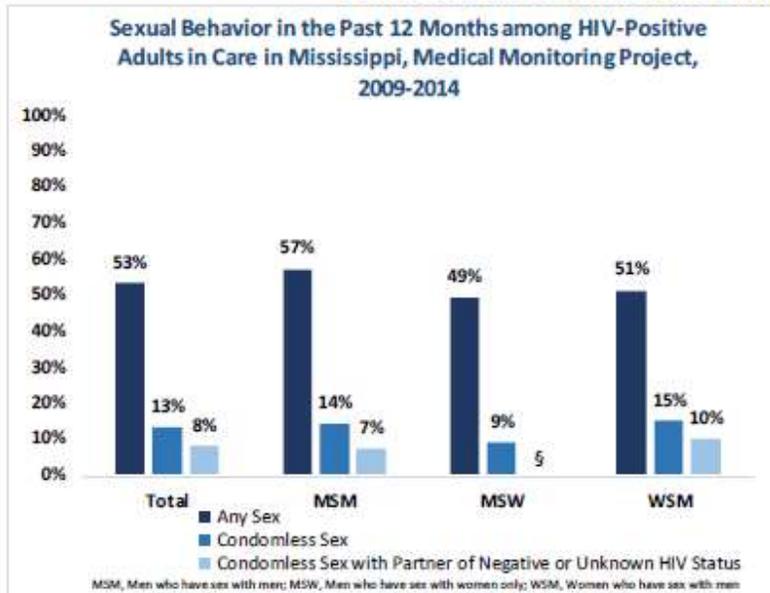
<sup>7</sup>Received free condoms, not counting those given by a friend, relative, or sex partner; <sup>8</sup>Given by a healthcare provider; <sup>9</sup>Men who have sex with men;

<sup>10</sup>Men who have sex with women only; <sup>11</sup>Women who have sex with men

Figure 59



### Behavioral and Clinical Characteristics



#### Substance Use<sup>1</sup>

- 43% were current smokers
- 10% engaged in binge drinking<sup>2</sup>

<sup>1</sup>Self-reported  
<sup>2</sup>Binge drinking is defined for men as 5 or more drinks in a sitting in the past 30 days and for women as 4 or more drinks in a sitting in the past 30 days.

#### STD Testing Among Sexually Active Persons in the Past 12 Months

- 67% were tested for syphilis
- 33% were tested for gonorrhea
- 33% were tested for chlamydia

#### Influenza Vaccination in the Past 12 Months

- 83% received an influenza vaccine

Notes: <sup>1</sup>Estimates suppressed because coefficient of variation for the estimate was ≥30%; any sex = any oral, anal, or vaginal sex from 2009 to 2013, but in 2014 oral sex was excluded; condomless sex = vaginal or anal sex without a condom; condomless sex with HIV-negative or unknown-status partner engaged in condomless sex with an HIV-negative partner or a partner whose status was unknown; all sexual behavior information is self-reported.

Documentation of MMP methods can be found here: [http://www.cdc.gov/hiv/pdf/HSSR\\_MMP\\_2010-PDF01.pdf](http://www.cdc.gov/hiv/pdf/HSSR_MMP_2010-PDF01.pdf)

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<http://www.cdc.gov/hiv/statistics/systems/mmp/>  
[http://msdh.ms.gov/msdhsite/\\_static/14\\_0\\_150\\_583.html](http://msdh.ms.gov/msdhsite/_static/14_0_150_583.html)



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