

2016 STD/HIV Surveillance Report

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Department of Health
Office of Public Health



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In addition, we wish to acknowledge the contribution of persons with STD diagnoses, persons living with HIV Infection, STD and HIV health care providers, community groups, researchers, and members of the community. Publication of this report would not have been possible without their cooperation, dedication, and hard work.

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Louisiana Office of Public Health STD/HIV Program Overview

The History of the STD and HIV Program Offices

The STD Control Program has been in existence for many years to screen and treat persons infected with a sexually transmitted disease, primarily syphilis, gonorrhea, and chlamydia in Louisiana. The STD Control Program staff located in the central office are responsible for collaborating with regional staff and community partners to ensure that STD screenings, treatment, and partner services are provided, as well as conduct surveillance and implement outbreak response initiatives and other special projects.

The Louisiana State University Health Sciences Center (LSUHSC) HIV Program Office was established in 1992 under the LSU School of Medicine, Department of Preventive Medicine. Simultaneously, the Louisiana Department of Health and Hospitals (DHH) was also addressing HIV public health issues through the Office of Public Health (OPH) HIV/AIDS Services. Noting that there were two State agencies addressing the HIV epidemic, LSU and OPH came together as the Department of Health and Hospitals (DHH) Office of Public Health (OPH) HIV/AIDS Program (HAP) in 1998.

In December 2010, the STD Control Program and the HIV/AIDS Program merged to become the STD/HIV Program (SHP).

About the Current STD/HIV Program

The STD/HIV Program (SHP) administers statewide and regional programs designed to prevent the transmission of STDs and HIV, to ensure the availability of quality medical and social services for those diagnosed with an STD or HIV, and to track the impact of the STD and HIV epidemics in Louisiana.

VISION

Achieve a state of awareness that promotes sexual health, ensures universal access to care, and eliminates new STD and HIV infections.

MISSION

SHP's mission is to lead the effort to build a holistic, integrated, and innovative system of STD and HIV prevention, care, and education that eliminates health inequities. We will do this by utilizing quality data and technology to inform and direct policy and program around sexual health.

About this Report

The *2016 STD/HIV Surveillance Report* provides a thorough surveillance profile of the HIV and STD epidemics in Louisiana. The diagnoses included in this report include syphilis, congenital syphilis, gonorrhea, chlamydia, HIV and AIDS. A new chapter was added to this report that addresses HIV co-infection among new diagnoses of P&S syphilis, gonorrhea, chlamydia and hepatitis C.

For More Information:

SHP maintains two websites <http://dhh.louisiana.gov/hiv> and www.louisianahealthhub.org.

Executive Summary

The following report provides detailed information regarding demographic and risk characteristics of individuals with HIV and STD infections and trends in the epidemics over time. This report includes cases diagnosed through 2016. Some of the most significant trends are highlighted below:

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HIV Surveillance

- At the end of 2016, 20,938 persons were living with HIV infection in Louisiana, of whom 10,839 (52%) have been diagnosed with AIDS. There are persons living with HIV in every parish in Louisiana.
- In the most recent *CDC HIV Surveillance Report (Vol. 28)*, Louisiana ranked 3rd in the nation for HIV case rates (24.6 per 100,000 population) and 8th in the number of reported HIV cases. The New Orleans MSA ranked 2nd in the nation and the Baton Rouge MSA ranked 3rd in the nation for HIV case rates (33.3 and 30.2 per 100,000, respectively), among the large metropolitan areas in the nation.
- According to the same report, Louisiana ranked 2nd highest in state AIDS case rates (12.0 per 100,000) and 9th in the number of AIDS cases in 2016. The Baton Rouge MSA ranked 1st in AIDS case rates (18.0 per 100,000) and the New Orleans MSA ranked 4th in AIDS case rates (14.1 per 100,000) in 2016 among the large metropolitan areas in the nation.
- In 2016, 1,129 individuals were newly diagnosed with HIV infection in Louisiana.
- The New Orleans region had the highest number and the highest rate of new HIV diagnoses in 2016 out of all nine public health regions. The Baton Rouge region had the 2nd highest number and 2nd highest rate of new diagnoses.
- Women accounted for 27% of new HIV diagnoses in 2016. The HIV diagnosis rate among men was nearly three times greater than the rate for women in Louisiana.
- Blacks continue to experience severe health inequalities; the HIV diagnosis rate for blacks was over six times higher than among whites in 2016. Although blacks make up only 32% of the state's population, 73% of newly diagnosed HIV cases and 74% of newly diagnosed AIDS cases were among blacks in 2016.
- In 2016, HIV diagnoses in youth aged 13-24 accounted for 25% of all new diagnoses. The majority of new diagnoses among youth are men (79%), black (85%), and are gay, bisexual men, or transwomen who have sex with men (79%).
- In 2016, gay, bisexual men, and transwomen who have sex with men (MSM), accounted for 61% of HIV diagnoses in the state; an additional 3% of HIV diagnoses were among MSM who were also injection drug users (MSM/IDU). The majority of the new diagnoses among MSM in Louisiana were black (68%) and under the age of 35 (66%).
- Of the 1,129 persons diagnosed with HIV in 2016, 16% had an AIDS diagnosis at the time of their initial HIV diagnosis, an additional 3% had an AIDS diagnosis within three months. Overall, 21% of all new HIV diagnoses in 2016 had an AIDS diagnosis within six months and are considered to be "late testers".

HIV Linkage and Retention in Medical Care

- In 2016, 70% of persons newly diagnosed with HIV were linked to HIV medical care within 30 days of their diagnosis.
- In 2016, 26% of all persons living with HIV infection in Louisiana were considered to have unmet need for HIV medical care. These persons did not have a single CD4 count or viral load test conducted in 2016.
- Among persons living with HIV in 2016 who had at least one HIV medical care appointment, 81% were virally suppressed (last viral load < 200 copies/ml).

Perinatal HIV Exposure and Congenital Syphilis

- Perinatal HIV transmission rates have declined significantly from a high of nearly 16% in 1994 to less than 2% in 2015.
- In 2015, 90% of HIV positive women in Louisiana received ARV therapy during pregnancy; 97% received appropriate care and treatment during labor/delivery; and almost 99% of newborns received prophylactic zidovudine shortly after birth. Eighty-seven percent of mother-infant pairs received all three recommended components of the antiretroviral prophylaxis protocol. Increased effort must be made to intervene during pregnancy, labor/delivery, and after the birth of the child to reduce the transmission rate below 1%.
- In 2016, 48 congenital syphilis cases in Louisiana were reported to the CDC. Louisiana's congenital syphilis case rate in 2016 decreased for the first time since 2011, but ranked 1st in the US for congenital syphilis with a case rate of 74.4 per 100,000 live births, almost five times the national rate of 15.7 per 100,000 live births.
- As of June 2014, Louisiana state law requires that pregnant women are screened for HIV and syphilis at the beginning of their third trimester of pregnancy, in addition to screening at their first prenatal care visit. All pregnant women should receive this repeated testing and timely treatment for HIV and syphilis to reduce the number of perinatal transmissions of HIV and syphilis.

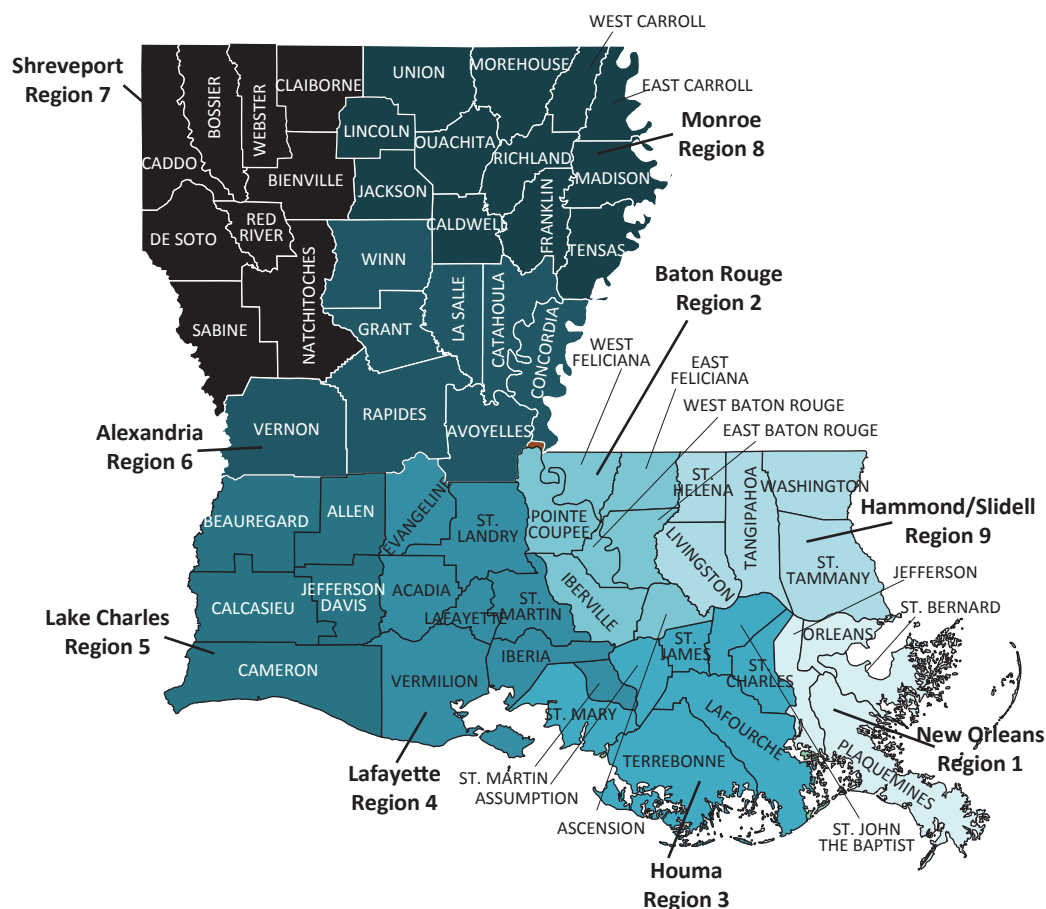
STD Surveillance

- In 2016, Louisiana ranked 1st in the nation in primary and secondary (P&S) syphilis rates (16.0 per 100,000), 2nd in gonorrhea rates (230.3 per 100,000), and 2nd in chlamydia rates (677.7 per 100,000).
- There were 31,727 new cases of chlamydia, 10,783 cases of gonorrhea, and 750 cases of P&S syphilis diagnosed in Louisiana in 2016.
- The New Orleans region had the highest rates of chlamydia and gonorrhea, and the Shreveport region had the highest rate of P&S syphilis out of all nine public health regions in Louisiana.
- Women accounted for 72% of chlamydia diagnoses, 51% of gonorrhea diagnoses, and 26% of P&S syphilis diagnoses in 2016.
- New STD diagnoses among blacks is a significant health disparity. Blacks accounted for 71% of chlamydia diagnoses, 78% of gonorrhea diagnoses, and 74% of P&S syphilis diagnoses in 2016.
- Persons under the age of 25 account for the majority of STD diagnoses in Louisiana: 71% of chlamydia diagnoses and 61% of gonorrhea diagnoses. Persons 15-29 years old accounted for 63% of P&S syphilis diagnoses.

HIV Co-Infection

- In 2016, co-infection with HIV was identified in 2% of chlamydia diagnoses (n=556), 6% of gonorrhea diagnoses (n=683), 30% of P&S syphilis diagnoses (n=221), and 4% of hepatitis C virus diagnoses (n=165).
- The number of persons identified with P&S syphilis/HIV co-infection has increased by 96% between 2013 and 2016, from 113 co-infections in 2013 to 221 co-infections in 2016.
- From 2013 to 2016, the gonorrhea/HIV co-infection rate more than doubled from a low of 6.0 per 100,000 in 2013 to a high of 14.6 per 100,000 in 2016. During the same period, the gonorrhea/HIV co-infection rate in black males almost tripled from 24.7 per 100,000 black males to 66.2 per 100,000 black males.
- Gay, bisexual and other men who have sex with men (MSM), accounted for the greatest proportion of HCV/HIV co-infections in 2016 (38% of HCV/HIV co-infections), closely followed by persons who inject drugs (32% of HCV/HIV co-infections).

Geographic Guide to Louisiana's Public Health Regions and Metro Areas



Louisiana's Population

	Parishes in Public Health Region	Parishes in MSA
Region 1: New Orleans	Jefferson, Orleans, Plaquemines, St. Bernard	Jefferson, Orleans, Plaquemines, St. Bernard, St. Charles, St. James, St. John the Baptist, St. Tammany
Region 2: Baton Rouge	Ascension, E. Baton Rouge, E. Feliciana, Iberville, Pointe Coupee, W. Baton Rouge, W. Feliciana	Ascension, E. Baton Rouge, E. Feliciana, Iberville, Livingston, Pointe Coupee, St. Helena, W. Baton Rouge, W. Feliciana
Region 3: Houma	Assumption, Lafourche, St. Charles, St. James, St. John the Baptist, St. Mary, Terrebonne	Lafourche, Terrebonne
Region 4: Lafayette	Acadia, Evangeline, Iberia, Lafayette, St. Landry, St. Martin, Vermillion	Acadia, Iberia, Lafayette, St. Martin, Vermillion
Region 5: Lake Charles	Allen, Beauregard, Calcasieu, Cameron, Jefferson Davis	Calcasieu, Cameron
Region 6: Alexandria	Avoyelles, Catahoula, Concordia, Grant, La Salle, Rapides, Vernon, Winn	Grant, Rapides
Region 7: Shreveport	Bienville, Bossier, Caddo, Claiborne, DeSoto, Natchitoches, Red River, Sabine, Webster	Bossier, Caddo, DeSoto, Webster
Region 8: Monroe	Caldwell, E. Carroll, Franklin, Jackson, Lincoln, Madison, Morehouse, Ouachita, Richland, Tensas, Union, W. Carroll	Ouachita, Union
Region 9: Hammond/Slidell	Livingston, St. Helena, St. Tammany, Tangipahoa, Washington	Tangipahoa

Louisiana's Population and Healthcare Environment

Louisiana's Population

In the 2016 census, the total population of Louisiana was 4,681,666 persons. Louisiana is made up of 64 county-equivalent subdivisions called parishes. In 2016, parish populations ranged from a low of 4,597 persons (Tensas Parish) to a high of 447,037 persons (East Baton Rouge Parish). While the state is considered rural, 84% of the population resides in urban areas.ⁱ The state has nine public health regions and nine metropolitan statistical areas (MSAs). The largest MSA is the New Orleans Metro Area (1,268,883) followed by the Baton Rouge Metro Area (835,175). With the addition of three parishes to the Lafayette MSA, it now has the third largest population in the state; 491,528.

Demographic Composition

According to the 2016 estimated census data, the racial and ethnic composition of the state was estimated to be 59% white, non-Hispanic, 32% black, non-Hispanic, 2% Asian, and <1% American Indian. Persons of Hispanic origin make up an additional 5% of the total population.

Age and Sex

In 2016, the census estimates that persons under the age of 18 made up 23.8% of the population while persons 65 and older made up 14.4% of the population. The median age in Louisiana is 37 years. As in previous years, the estimated proportion of females in the overall population in 2016 was slightly higher than that of males (51% vs. 49%).ⁱⁱ

Education, Income, Poverty and Unemployment

An estimated 83.9% of Louisiana residents aged 25 years and older had attained a high school degree or higher, compared to 87.0% nationally. Additionally, 23.0% of Louisiana adults had a bachelor's degree or higher compared to 30.3% nationally. The estimated median household income in Louisiana was \$45,652 for 2016 compared to \$53,322 nationally. Moreover, an estimated 19.7% of Louisiana's population was living below the poverty level, compared to 15.1% of the national population. Louisiana has one of the highest proportions of children living in poverty, with an estimated 27.8% of all children 18 years or younger living in households with an income below the federally defined poverty level in 2016 compared to the national estimate of 21.2% of all US children.ⁱⁱⁱ During 2016, the average unemployment rate in Louisiana was 6.0%.^{iv}

Incarceration/Crime

In 2015, the crime rate in Louisiana was 37% higher than the national average rate. Property crimes accounted for 86% of the crime rate and violent crimes accounted for 14% of the crime rate. Of the 50 states, the Louisiana incarceration rate ranked 1st with 776 per 100,000 adults incarcerated. Louisiana's incarceration rate was more than double the national rate of 385 incarcerated adults per 100,000. As of December 31, 2015, the Louisiana prison population was 36,377 among nine state facilities. An additional 31,000 inmates can be found in the parish jail system.^v

Health Indicators

In the 2016 United Health Foundation's *America's Health Rankings* report, Louisiana ranked **49th** out of 50 in overall health. This national health survey compares multiple health outcomes and health determinants in all states. The low-place ranking is predominately due to the state having a high percentage of adults who smoke, high percentage of children in poverty, high rates of obesity, high rates of premature death, and high infant mortality rates.^{vi}

Public Aid

In 2016, Medicaid covered 25% and Medicare covered 14% of all persons living in Louisiana. An additional 11% of the population was considered to be uninsured. Medicaid expenditures in Louisiana totaled \$8.6 billion in the 2016 fiscal year.^{vii} In 2016, 50% of children ages 0-18 were insured through Medicaid.^{viii}

National HIV/AIDS Strategy for the United States: Updated to 2020

The National HIV/AIDS Strategy (NHAS) was released by the White House on July 13, 2010. This strategy was the first of its kind for the United States. The NHAS outlined measureable targets to be achieved by 2015. The NHAS was constructed between Federal and community partners to create a common purpose and to determine what strategies and programs are working effectively to reach these common goals. This strategy helped change the way that people talk about HIV and prioritize services and prevention activities.

On July 30, 2015, the NHAS was updated to look ahead to 2020 and incorporate new scientific advances for testing, treatment and prevention.

VISION

“The United States will become a place where new HIV infections are rare and when they do occur, every person, regardless of age, gender, race/ethnicity, sexual orientation, gender identity or socio-economic circumstance, will have unfettered access to high quality, life-extending care, free from stigma and discrimination.”

There are four goals embedded in the Strategy with 2-3 unique actions steps:

GOAL 1: Reduce New HIV Infection

Focus on: Gay, bisexual and other men who have sex with men of all races and ethnicities, Black women and men, Latino women and men, People who inject drugs, Youth age 13 to 24 years, People in the Southern United States, and Transgender women.

- Intensify HIV prevention efforts in communities where HIV is most heavily concentrated.
- Expand efforts to prevent HIV infection using a combination of effective, evidence-based approaches.
- Educate all Americans with easily accessible, scientifically accurate information about HIV risks, prevention, and transmission.

GOAL 2: Increase Access to Care and Improve Health Outcomes for People Living with HIV

- Establish seamless systems to link people to care immediately after diagnosis, and support retention in care to achieve viral suppression that can maximize the benefits of early treatment and reduce transmission risk.
- Take deliberate steps to increase the capacity of systems as well as the number and diversity of available providers of clinical care and related services for people living with HIV.
- Support comprehensive, coordinated patient-centered care for people living with HIV, including addressing HIV-related co-occurring conditions and challenges in meeting basic needs, such as housing.

GOAL 3: Reduce HIV-Related Disparities and Health Inequities

- Reduce HIV-related disparities in communities at high-risk for HIV infection, which include: Black, Latino, and American Indian/Alaska Native people, transgender people, and young people.
- Adopt structural approaches to reduce HIV infections and improve health outcomes in high-risk communities.
- Reduce stigma and eliminate discrimination associated with HIV status.

GOAL 4: Achieve a More Coordinated National Response to the HIV Epidemic

- Increase the coordination of HIV programs across the Federal government and between Federal agencies and State, territorial, Tribal, and local governments.
- Develop improved mechanisms to monitor and report on progress toward achieving national goals.

National HIV/AIDS Strategy (NHAS) Indicators	Louisiana Data by Year									NHAS 2020 Goal
	2010 Baseline	2011	2012	2013	2014	2015	2016	2016 Target	Annual Progress	
Goal 1: Reduce New Infections										
Increase the percentage of people living with HIV who know their serostatus to at least 90%	78.5%	79.6%	78.5%	79.4%	80.1%	80.0%	--	82.5% ^a	✗	90%
Reduce the number of new diagnoses by at least 25%	1,121	1,211	1,054	1,143	1,213	1,111	1,129	995	✗	841
Reduce the percentage of young gay and bisexual men who have engaged in HIV-risk behavior by at least 10%	--	--	--	--	--	--	--	--	○	--
Goal 2: Increase Access to Care and Improve Health Outcomes for PLWH										
Increase the percentage of newly diagnosed persons linked to HIV medical care within one month of their HIV diagnosis to at least 85%	53.1%	55.1%	56.0%	56.5%	65.0%	67.0%	69.7%	67.5%	✓	85%
Increase the percentage of persons with diagnosed HIV infection who are retained in HIV medical care to at least 90%	49.3%	49.8%	52.4%	52.9%	54.5%	54.5%	56.5%	67.6%	↗	90%
Increase the percentage of persons with diagnosed HIV infection who are virally suppressed to at least 80%	39.9%	40.4%	43.2%	47.8%	52.4%	55.9%	59.7%	57.9%	✓	80%
Reduce the percentage of persons in HIV medical care who are homeless to no more than 5%	6.8%	5.8%	6.5%	4.3%	3.8%	2.7%	2.1%	6.0%	✓	5%
Reduce the death rate among persons with diagnosed HIV infection by at least 33% ^b	26.2	26.1	25.5	21.2	20.9	19.8	19.0	22.3	✓	17.6
Goal 3: Reduce HIV-Related Disparities and Health Inequities										
Reduce disparities in the rate of new diagnoses by at least 15% among gay and bisexual men ^c	19.4	19.2	19.2	22.7	22.2	22.3	22.6	18.1	✗	16.5
Reduce disparities in the rate of new diagnoses by at least 15% among young Black gay and bisexual men ^c	70.8	75.1	80.3	89.1	90.6	86.3	85.8	66.0	✗	60.2
Reduce disparities in the rate of new diagnoses by at least 15% among Black females ^c	0.88	0.87	0.89	0.54	0.58	0.46	0.58	0.82	✓	0.75
Reduce disparities in the rate of new diagnoses by at least 15% among persons living in the Southern United States (i.e. Louisiana) ^d	0.74	0.96	0.75	0.98	1.07	0.92	0.96	0.69	✗	0.63
Increase the percentage of youth with diagnosed HIV infections who are virally suppressed to at least 80%	21.2%	28.5%	29.9%	33.8%	41.4%	47.6%	52.1%	47.7%	✓	80%
Increase the percentage of persons who inject drugs with diagnosed HIV infections who are virally suppressed to at least 80%	39.3%	39.3%	41.5%	45.3%	48.8%	51.6%	54.8%	57.6%	↗	80%

^a 2015 Annual Target listed since 2016 data unavailable^b Death rate is per 1,000 persons diagnosed with HIV infection^c Measures shown are the ratios of the disparity rate in specified group to the overall rate in Louisiana^d Measures shown are the ratios of the disparity rate in Louisiana to the overall U.S. HIV diagnosis rate

Met or exceeded Annual Target



Annual Target not met, moving in direction of target



Annual Target not met, fluctuating progress towards target



Unable to assess target at this time

Understanding HIV Disparities in Louisiana

Research has shown that a person's social circumstance has the single largest impact on their HIV outcomes.¹ While it is important to encourage individual responsibility for one's health, it is also critical to address the social and economic factors that may limit a person's opportunity to routinely engage in healthy behaviors. In the sections below, we identify populations that are disproportionately affected by HIV in Louisiana and the specific social circumstances that are driving these disparities.

In Louisiana and across the US, Black, gay, bisexual and other men who have sex with men (GBM), and transgender persons have the highest rates of HIV infection and HIV-related mortality compared to their counterparts. Studies show that these disparities stem from a complex combination of interrelated social factors that have largely resulted from an extensive history of institutional oppression. These social factors act as a barrier to routine HIV screening and sustained engagement in HIV medical treatment, which are two critical methods of preventing new HIV infections and HIV-related mortality. In recent years, Louisiana's STD/HIV Program (SHP) has increasingly focused on crafting policies and public health interventions to break down institutional barriers to HIV prevention and treatment in order to lower HIV infection and HIV-related mortality rates among these groups.

Causes of HIV Disparities among Blacks

A common misconception is that Blacks have higher rates of engaging in individual risky behaviors than other populations (*e.g.*, unprotected sex, high number of sexual partners, drug use) and consequently, are at greater risk of being infected with HIV. Data from numerous studies have debunked this myth and show that Blacks actually tend to have lower rates of individual risky behaviors compared to their White counterparts. Furthermore, Blacks have higher rates of HIV infection even when engaging in behaviors of similar risk as Whites.²⁻¹⁷ Taken together, these data suggest that the causes of HIV disparities among Blacks cannot be explained by differences in rates of individual risky behaviors.

Studies show the actual causes of HIV disparities among Blacks are complex and involve interrelated social factors that are largely tied to the effects of historical and present-day institutionalized racism. A selection of these factors are discussed below.

Stigma and a Lack of Social Support. Studies have shown that stigma tied to race, HIV, same-sex sexuality and non-conforming gender identity has played a critical role in the development of HIV disparities.¹⁸⁻²¹ Stigma generates psychological distress, internalized shame, loss of self-worth, fear of being ostracized by society, and discriminatory treatment by others among persons associated with a marginalized population.²²⁻²⁴ Racial stigma against Blacks is fueled by an extensive history of institutional attitudes and policies that have systematically devalued, stereotyped, and excluded Blacks. Sources of racial stigma include the dehumanization of Blacks during slavery; denying Blacks equal rights; laws permitting and/or requiring racial segregation; unequal protection and treatment from police; housing discrimination and the isolation of Blacks in impoverished neighborhoods; inequitable access to education and employment; and inequities in incarceration rates. Furthermore, Blacks are often portrayed by the media and community leaders as being criminals, violent, promiscuous, lazy, and unintelligent. These institutional policies and practices reinforce the devaluation and stereotyping of Blacks in communities across the US.²⁵⁻³¹

The effects of multiple stigmas have been shown to be additive; thus, Blacks are more sensitive to other stigmas that have been shown to be associated with HIV disparities such as HIV stigma.³²⁻³³ HIV stigma also stems from the institutional marginalization and discrimination of persons with HIV infection that has existed in the US since the beginning of the epidemic. HIV infection is often involuntarily associated with other stigmatizing attributes (such as promiscuity, drug use, and same-sex sexuality) and myths regarding how it can be transmitted.³⁴ Other related stigmas that are associated with HIV disparities include homosexuality stigma and gender-related stigma against effeminate men and transgender women (these stigmas are discussed

below in *Causes of Disparities among GBM and Transgender Persons: Stigma and a Lack of Support*).

Persons may forgo or delay HIV screening or HIV medical treatment due to the following stigma-related reasons:

- Avoiding healthcare providers that offer HIV-related services out of fear of being seen by community members and subsequently being associated with HIV, same-sex sexuality, or other stigmatizing attributes.
- Avoiding disclosure of HIV status, sexual orientation, or gender identity to providers, community members, sexual partners, or family because of internalized shame, fear of being shunned or discriminated against, or previous experiences of being shamed or treated unfairly.
- Avoiding HIV treatment adherence or sustained engagement in HIV medical treatment due to internalized shame or fear of HIV-status disclosure to community members, sexual partners, or family.

Poverty and Isolation in Underserved Neighborhoods. In Louisiana, 45% of Blacks are estimated to live in poverty compared to 17% of Whites.³⁵ This alarming socioeconomic gap is largely the result of institutional policies and practices that deny Blacks equal opportunities for housing, education, and employment.³⁶ Blacks have endured a history of discriminatory legislation and housing practices in the US that have limited them to living in underserved neighborhoods isolated from Whites. Throughout the majority of the 20th century, Blacks were banned from home ownership assistance programs (such as the GI bill), barred from White neighborhoods due to legislation (1934 Housing Act), and faced widespread discriminatory real estate and mortgage lending practices (such as redlining). Blacks also have a long history of being effectively barred from renting in White neighborhoods due to discriminatory renting practices.³⁷⁻⁴⁶ Many Black neighborhoods suffer major disinvestment from local governments, the real estate market, and businesses leading to plummeting housing values, a dearth of livable wage employment opportunities, and a lack of high-quality public services such as education, healthcare, access to healthy foods, and public transportation. These structural inequities result in neighborhoods with little opportunity for overall economic growth and perpetually high rates of poverty.^{37,47}

Poverty and isolation in underserved neighborhoods have a significant impact on the utilization of HIV screening and HIV medical treatment among Blacks. Some examples of this impact are described below

- Lack of comprehensive, adequate healthcare coverage due to affordability, a lack of Medicaid expansion, and a lack of opportunities for jobs that include health insurance benefits. Consequently, Blacks may delay or forgo HIV screening and HIV medical treatment due to affordability concerns.
- Lack of transportation to attend healthcare appointments. Many Blacks lack adequate transportation options to attend healthcare appointments due to affordability and a lack of adequate public transportation options and nearby healthcare providers within Black communities.^{37,47}
- Lack of job flexibility to attend healthcare appointments. Employees of low-wage jobs typically do not have paid sick leave or affordable child-care options in order to go to clinic appointments during business hours.
- Homelessness can lead to a lack of privacy to store and take HIV medications as well as a dearth of methods of contact for healthcare providers to reach patients.
- Healthcare providers may have policies that unintentionally or intentionally make healthcare access difficult for impoverished patients who have Medicaid, lack certain identification documents, are illiterate, have mental disabilities, or have drug abuse issues.

Inequitable Treatment in the Healthcare System. Blacks have endured a history of abuses and discriminatory treatment in the healthcare system that continues into the present-day. In response, many Blacks consider healthcare providers to be untrustworthy or unreliable. This sentiment can lead to delayed HIV screening and significant gaps in HIV medical treatment engagement. Some sources and examples of this mistrust are

listed below.⁴⁸

- The Tuskegee syphilis experiment. A study conducted by the US Public Health Service for 40 years (between 1932 and 1972) where Blacks who were diagnosed with syphilis were purposely not told of their diagnosis and not treated in order to monitor the progression of the disease.^{48,49}
- Black are more likely than Whites to report feeling belittled, stereotyped, or disrespected by healthcare provider staff and doctors. Blacks have also been less likely than Whites to report feeling satisfied with the care and treatment they received.⁴⁹
- Nationally, Blacks receive less aggressive or delayed treatment (including delayed prescribing of HIV treatment), on average, compared to Whites for the same medical conditions due to implicit racial biases and stereotyping among healthcare providers.⁴⁹
- A lack of Black physicians in the healthcare system. Blacks make up only 4% of US physicians even though they make up 13% of the US population. Black patients report higher levels of confidence, trust, and satisfaction when seeing Black physicians compared to White physicians. In addition, Black physicians may be more likely to have a better understanding of the social and cultural factors that affect health behaviors and outcomes among Black patients.⁴⁹⁻⁵⁰

Incarceration Disparities. Louisiana has the highest incarceration rate and some of the longest incarceration sentences in the US. Blacks in Louisiana are four times more likely than Whites to be incarcerated in jails or prisons.⁵¹ Reasons for this alarming disparity include over-policing in Black communities, racial profiling due to racial stigmas, differences in incarceration outcomes for similar crimes between Whites and Blacks, lack of adequate legal representation in court, bond policies that favor wealthy individuals, and a lack of social support and job opportunities upon reentry into the community.⁵²⁻⁵⁷ Incarceration may have the following effects:

- Persons may experience substantial interruptions in routine HIV screening and HIV medical treatment during and after incarceration due to difficulty accessing HIV medical services in correctional facilities and significant difficulty obtaining employment, housing, and healthcare upon release.^{52,57}
- Incarceration may disrupt stable, monogamous relationships and lead to a lower number of available sexual partners in a community. A smaller sexual network increases the risk of exposure to HIV and other STDs.^{52,57}
- Incarceration generates additional stigma that may affect HIV screening and medical treatment utilization patterns.^{52,57}

Causes of HIV disparities among Gay, Bisexual and other Men who have Sex with Men and Transgender Women*

While gay, bisexual and other men who have sex with men (GBM) and transgender women have the same concerns regarding their health as other groups, they continually have the highest rates of HIV infection in Louisiana and across the US.⁶⁵ Studies show that HIV disparities among GBM and transgender women are fueled by interrelated social factors associated with a history of institutional norms and policies in the US that are rooted in heterosexism, homophobia, and transphobia. Social factors related to the institutional oppression of Blacks (discussed in the previous section) also play a role in the development and persistence of these disparities as Black GBM and transgender women bear the largest burden of HIV of any population in Louisiana. A selection of these social factors are discussed on the following pages.

* Rates of HIV infection among transgender men in the US has not been sufficiently researched; however, transgender men in the US suffer from some of the same institutional oppressions as transgender women. SHP intends to include transgender men in all prevention and service efforts.

Stigma and a Lack of Social Support. Studies have shown that stigma tied to same-sex sexuality and non-conforming gender identities has played a critical role in the development of HIV disparities.^{18,22-25,33} Stigmas faced by GBM and transgender women are fueled and reinforced by an extensive history of institutional attitudes and policies that have perpetually devalued, stereotyped, and discriminated against same-sex sexuality and non-conforming gender identities. Laws and policies in the US have long allowed GBM and transgender women to be denied equal treatment, housing, employment, marriage benefits, entry into the armed forces, access to public accommodations (retail stores, banks, libraries, restaurants, etc.), and other equal protections.⁵⁷⁻⁶¹ Likewise, many important religious institutions strongly prohibit and/or vilify same-sex sexuality and non-conforming gender identities. Moreover, GBM and transgender women have often been negatively portrayed by community leaders and the media as being promiscuous, drug users, pedophiles, criminals, and/or sex workers.⁶³

Due to widespread stigma, GBM and transgender women often face severe hostility, ostracism, and violence from family, friends, and community members upon revealing their sexuality and/or gender identity. Consequently, GBM and transgender women may feel tremendous internalized shame, fear of discrimination or mistreatment, and psychological distress. GBM and transgender women are also more sensitive to other stigmas such as HIV stigma and racial stigma as the effects of multiple stigmas have been shown to be additive. Altogether, the psychological distress caused by this combination of stigma can result in delayed HIV screening and medical treatment (additional details on the effects of stigma on HIV infection risk are available in the above section, *Causes of HIV Disparities among Blacks: Stigma and a Lack of Support*).^{18,22-25,33}

Poverty, Ostracism, and Discriminatory Treatment. Transgender persons, particularly transgender persons of color, are dramatically more likely to live in poverty and experience homelessness than the general US population due to the widespread prevalence of discriminatory policies and hostile attitudes against this population. A national study of transgender women in the US found that transgender persons were four times as likely to have a household income under \$10,000 compared to the general US population (15% vs. 4%). Black transgender persons face worse financial outcomes than other transgender persons. One in three Black transgender persons (34%) reported an income below \$10,000 and 41% of Black transgender persons have reported ever being homeless.⁶¹

Transgender women often first encounter poverty and homelessness as youths. Studies show that transgender women are significantly more likely to endure harsh bullying, ostracism, harassment, and violence from schoolmates, families, and school administrators. Transgender students who face these experiences are more likely to have higher levels of psychological distress, lower academic achievement, miss class, and not plan on attending college. As a result, transgender persons may be less prepared to compete for livable-wage jobs. In addition, rejection from family members during childhood is a major cause of homelessness among transgender youth.^{64,65} Currently, Louisiana has no laws protecting students from discrimination or bullying on the basis of gender identity.⁶⁰

Transgender women also face significant employment and housing discrimination due to their gender identity. In a review of 11 surveys, 13-47% of transgender respondents reported being unfairly fired or denied a job. In another survey, 78% of transgender persons reported experiencing harassment or mistreatment at work.⁶¹ In addition, 19% of transgender persons have reported discrimination in the housing and renting market and 29% have reported discrimination from shelters and public housing.⁶² Currently, Louisiana has no laws banning employment or housing discrimination based on gender identity.⁶⁰

Poverty and homelessness have a significant impact on the transmission of HIV and the utilization of HIV screening and HIV medical treatment among transgender women. Some examples of this impact are described below (additional examples can be found in the above section, *Causes of HIV Disparities among Blacks: Poverty and Isolation in Underserved Neighborhoods*).

- Transgender women face immense employment discrimination due to gender nonconformity and may turn to sex work in order to survive. In a national survey of transgender persons in the US, 40% of black

transgender persons and 6.3% of white transgender persons reported ever engaging in sex work (10.8% for all races). Almost 70% of these individuals reported discrimination in the traditional workforce. Engaging in unregulated sex work for survival is a significant risk factor for HIV transmission as there are financial pressures to engage in unprotected sex and a risk of sexual assault.⁶²

- Lack of comprehensive, adequate healthcare coverage due to affordability, a lack of Medicaid expansion, and a lack of opportunities for jobs that include health insurance benefits. In one study, 48% of transgender persons reported delaying or going without medical care because they could not afford it.⁶⁵

Inequitable Treatment in the Healthcare System. GBM and transgender women face widespread discrimination and exclusionary policies within the US healthcare system. As a result, GBM and transgender women are less likely to have a regular place to go for medical care (such as a primary care physician) and they are more likely to delay or forgo preventative care and treatment (such as routine HIV screening and HIV medical treatment).^{62,65}

- Many GBM and transgender individuals report being refused care by healthcare providers and/or facing harassment, ridicule, or disrespectful treatment by health provider staff and physicians. Staff and physicians may also blame a patient's sexual orientation or gender identity as the cause of an illness.^{62,65}
- Many insurance policies have historically used or continue to use blanket exclusions to deny coverage for health concerns of transgender persons such as transition surgery, sex-specific preventative services (i.e., prostate exams for transgender women), and hormone medications. Louisiana lacks any laws prohibiting insurance companies from discriminating against transgender persons. As a result, transgender women may be discouraged from enrolling in healthcare insurance.^{62,65}
- Transgender persons may experience delays or difficulties in accessing coverage because their gender identity or chosen name does not reflect the gender or name on their identification documents (such as a driver's license or social security card). Changing identification documents to reflect one's gender identity can be time-consuming and expensive.^{62,65}
- Most doctors receive little or no instruction on the unique physical and mental health concerns of GBM and transgender women. Consequently, many GBM and transgender women go without receiving adequate, client-centered care.^{62,65}

Incarceration and Survival. Transgender women, particularly low-income and Black transgender women, face high levels of over-policing, profiling, police harassment, and incarceration. Transgender women are often shunned from employment opportunities, family, and their surrounding community. To survive, some transgender women may turn to activities that carry a high risk of incarceration such as sex work or drug trafficking. Transgender women also report being the target of random searches by police and being incarcerated for carrying condoms due to suspicion of sex work engagement.^{62,66} Incarceration may have the following effects for transgender women:

- Transgender women placed in men's prisons face a high-risk of being sexually assaulted. One study found that 59% of transgender women in men's prisons reported ever being sexually assaulted while in prison.⁶²
- Transgender women may experience substantial interruptions in routine HIV screening and HIV medical treatment during and after incarceration due to difficulty accessing HIV services in correctional facilities and difficulty obtaining access to healthcare upon release. In addition, they may experience disruptions in transgender-specific healthcare such as hormone therapy and mental healthcare.
- Transgender women may be discouraged from carrying condoms due to the risk of profiling and subsequently being incarcerated.
- Transgender persons who have been incarcerated are at higher risk of future incarceration because of the tremendous difficulty they may face obtaining employment, housing, and healthcare upon release.

Eliminating HIV Disparities among Blacks, GBM, and Transgender Women

SHP is committed to adopting policies and developing interventions that tackle the institutional barriers that are driving HIV disparities among Blacks, GBM, and transgender women. This commitment is aligned with the mission and goals of the National HIV/AIDS Strategy (described in the section titled National HIV/AIDS Strategy). Examples of SHP's efforts are presented below.

Addressing HIV Transmission Disparities

- **No-cost HIV testing and counseling.** SHP supports HIV testing and counseling through contracts with community-based organizations and through partnerships with parish health units, hospital emergency departments, correctional facilities, substance abuse treatment programs, Federally Qualified Health Centers, and school-based health clinics.
- **Wellness Centers.** SHP has contracted with six community-based organizations to provide integrated prevention services to GBM and transgender women in New Orleans, Baton Rouge, Lafayette, Shreveport, Monroe, and Alexandria.
- **Pre-exposure Prophylaxis (PrEP) Navigation.** SHP supports PrEP navigators at three community health centers in the New Orleans region to increase PrEP awareness, link HIV-negative persons to a PrEP provider, and assist PrEP users with long-term PrEP adherence. PrEP navigators also refer persons to social support services that may address barriers to HIV prevention behaviors and PrEP utilization, such as housing, transportation, financial support, medical, and mental health. PrEP medication (Truvada®) is highly effective at preventing HIV transmission when used as prescribed.
- **PrEP Telemedicine Navigation.** SHP's telemedicine navigation program connects HIV-negative persons to a PrEP provider that utilizes video conferencing to prescribe PrEP remotely.
- **No-cost condom distribution.** Condoms and lubricant are made available in neighborhoods through hundreds of community sites, parish health units, and through various outreach activities. The use of condoms during sexual activity is a highly effective method of preventing HIV transmission.

Addressing HIV Health Disparities among Persons Living with HIV

- **Case Management.** SHP contracts with community-based organizations to provide medical and non-medical case management and other critical supportive services to assist persons living with HIV with access to medical care and address potential medical and socioeconomic barriers to entering or staying connected to HIV care.
- **Louisiana Health Access Program (LA-HAP).** SHP provides access to HIV medications for uninsured persons living with HIV and assistance with health insurance premiums and other cost shares for insured persons living with HIV.
- **Louisiana Links.** A linkage/re-engagement and patient navigation intervention that utilizes HIV surveillance data to find persons living with HIV who may be in need of linkage/reengagement to HIV medical care or treatment adherence services. Enrollees in this program receive assistance overcoming socioeconomic barriers to HIV medical care that typically goes above and beyond what is provided through traditional case management.
- **Health Models.** A pay-for-performance treatment and prevention program that gives financial incentives to patients who attend regularly scheduled HIV medical appointments and reach and maintain viral suppression. Enrollees in this program also receive additional counseling and HIV education.
- **Pre-release Reentry Services.** Incarcerated persons living with HIV are offered pre-release reentry services aimed at helping them link to HIV medical care and other critical support services upon release and prepare for challenges that may arise while transitioning to life in the community. These services include education on social support services in their community that they may qualify for, referral to medical care, assistance making their first HIV medical appointment, assistance with enrollment into Louisiana's AIDS

Drug Assistance Program, and referral to case management at an agency in their community.

Social Equity Training for Health Department Staff and Care Providers

- **Trainings on Institutional Oppression.** SHP has partnered with capacity building organizations to provide trainings on institutional racism, transphobia, and homophobia to its staff, as well as staff at parish health centers, Federally Qualified Health Centers, and other community-based organizations across the state.

Community Engagement

- **Community Advisory Boards.** SHP consults with community advisory boards for guidance when designing and implementing HIV interventions and strategic plans, creating social marketing materials and programs, and interpreting monitoring and evaluation data.

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Profile Of The HIV Epidemic In Louisiana

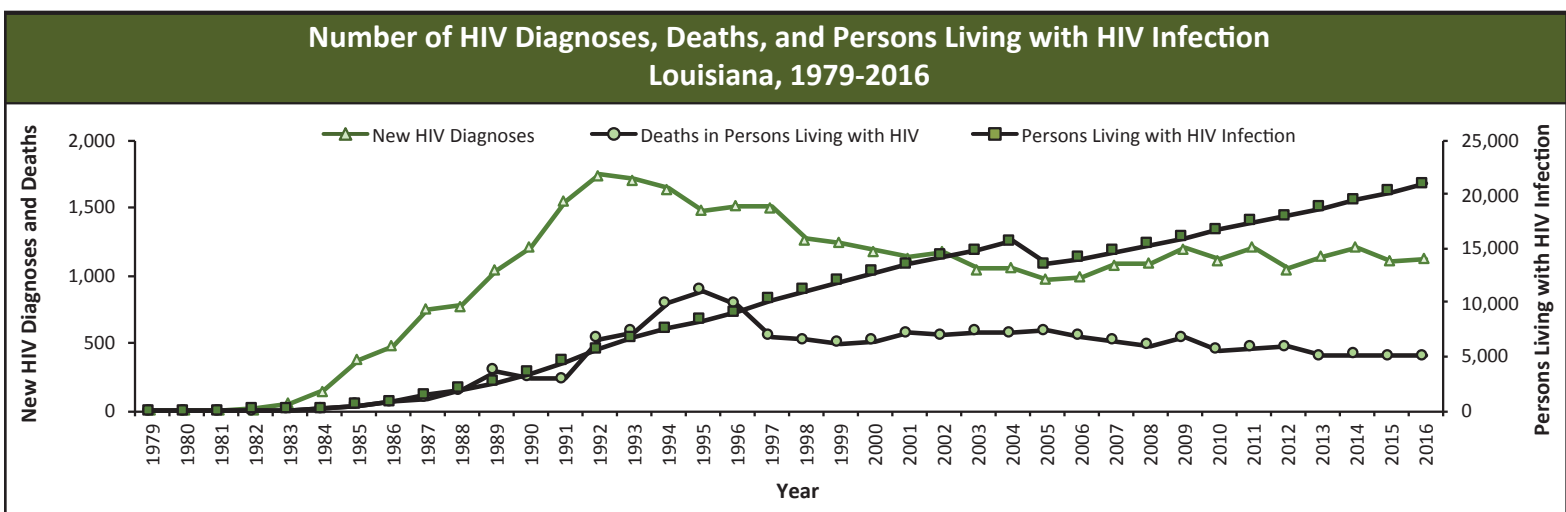
Introduction to HIV Surveillance

The Louisiana Department of Health, Office of Public Health STD/HIV Program's (SHP) HIV Surveillance Program conducts general case ascertainment through the receipt of reports of potential cases of HIV infection from clinical providers, laboratories, and other public health providers throughout the state with funding from the Centers for Disease Control and Prevention (CDC) and in accordance with the Louisiana Sanitary Code. Basic demographic and risk information are also collected. Additionally, the program monitors perinatal exposure to and transmission of HIV, HIV incidence, medication resistant strains of HIV, clinical manifestations of HIV disease, mortality, the utilization and impact of care and treatment, and measures of high risk behavior.

Louisiana began confidential name-based reporting of AIDS diagnoses in 1984 and confidential name-based reporting of HIV (non-AIDS) diagnoses in 1993. In 1999, the Louisiana Sanitary Code was revised to mandate the reporting of all HIV-related laboratory results (e.g., CD4 counts, viral loads, Western blots). In 2010, the Sanitary Code was revised to explicitly require the reporting of HIV in pregnancy as well as prenatal exposure to HIV. Maternal and pediatric medical records are reviewed to assess testing and treatment. Follow-up occurs until the infant's infection status is determined.

Data from the above surveillance activities are analyzed and non-identifying summary information is provided to public health programs, community based organizations, researchers, and the general public through reports, presentations, data requests, and regional profiles. The information is provided for the purposes of program planning and education, such as to assess the risks for HIV infection and develop effective HIV prevention programs; to help identify where services for people living with HIV infection are needed; and to assist with the allocation of federal and state funding.

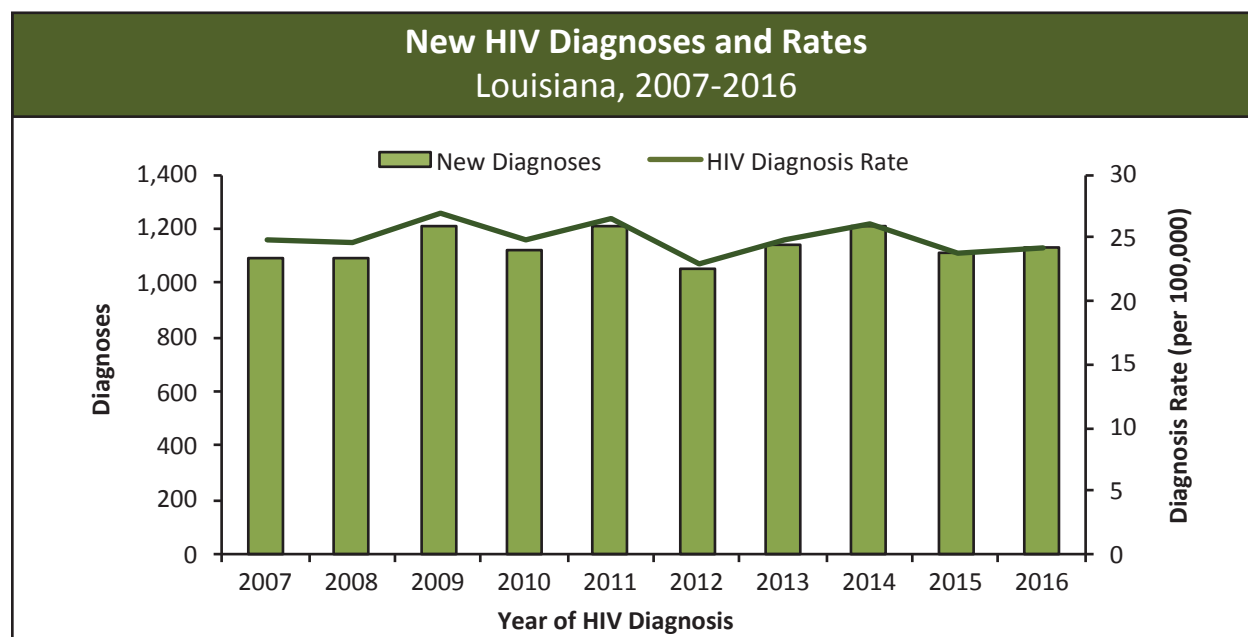
This report includes data for persons diagnosed with HIV or AIDS through December 31, 2016 and reported to SHP before December 22, 2017. The report presents both numbers and rates of HIV and AIDS diagnoses. New HIV diagnoses are the number of people diagnosed with HIV at any stage of the disease within a given year. Rates take into account differing population sizes among demographic groups or areas, which allows for the direct comparison of rates between two or more groups or areas. This can help identify important differences between groups of people or areas.



The first reported Louisiana resident with AIDS was diagnosed in 1979. In the 39 years since then, the number of persons living with HIV infection in the state has continued to increase. New HIV diagnoses peaked in 1992 and deaths among persons with HIV infection peaked in 1995. Deaths have decreased since 1995 due to the availability of more effective treatments. The decreases seen in 2005 in both persons living with HIV infection and new HIV diagnoses were due to the impact of Hurricane Katrina which resulted in the dislocation of a large number of persons from the New Orleans metropolitan area and disruptions in HIV testing.

10-Year Trends in New HIV Diagnoses (2007-2016)

The number of new HIV diagnoses in a given year has historically served as a measure of new infections (incidence). However, since individuals can be infected with HIV for varying periods of time before they are diagnosed, counting new HIV diagnoses is not an accurate representation of new infections in a given year.

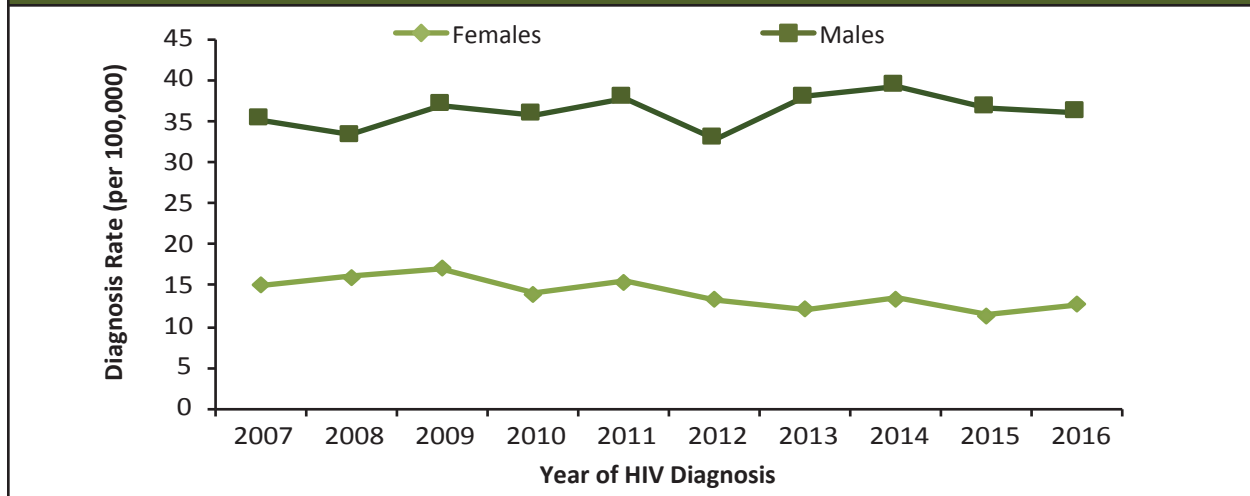


- In 2016, 1,129 individuals were newly diagnosed with HIV infection in Louisiana. Over the past 10 years, the number of new HIV diagnoses has fluctuated from a low of 1,054 diagnoses in 2012 to a high of 1,213 diagnoses in 2014.
- Over the past 10 years, the HIV diagnosis rate ranged from a low of 22.9 per 100,000 in 2012 to a high of 26.8 per 100,000 in 2009, followed closely by 26.5 per 100,000 in 2011.

HIV Diagnoses by Sex, Race/Ethnicity, and Age

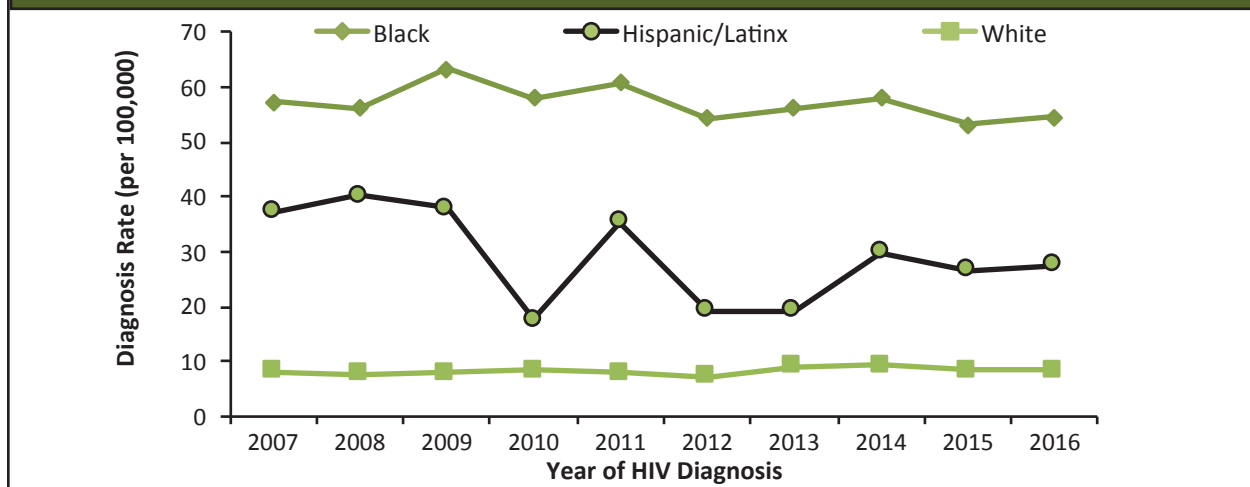
Although the HIV epidemic affects persons of all genders, ages, and race/ethnicities in Louisiana, the impact is not the same across all populations. Identifying the populations most at risk for HIV infection helps in planning HIV prevention activities and services, as well as determine the most effective use of limited resources. To get a better understanding as to how some groups are disproportionately impacted by the HIV epidemic, refer to the introductory chapter of this surveillance report.

Trends in HIV Diagnosis Rates by Sex at Birth Louisiana, 2007-2016

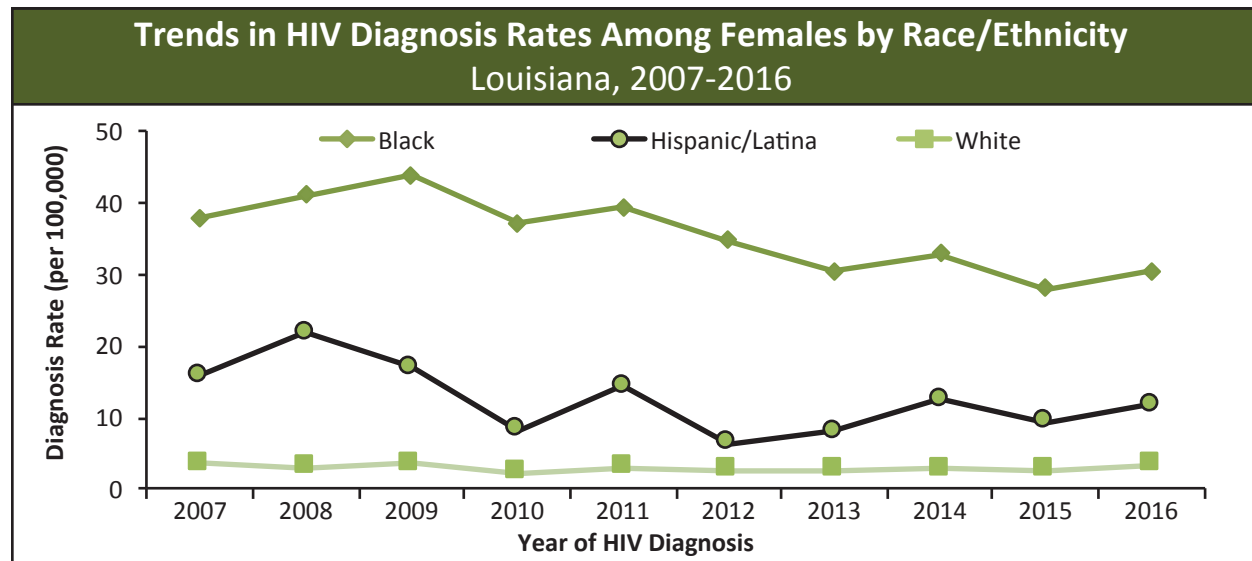


- Overall, the HIV diagnosis rate for females in Louisiana has been slowly declining over the past 10 years. In 2007, the female HIV diagnosis rate was 15.0 per 100,000 females. In 2016, the female HIV diagnosis rate had declined to 12.7 per 100,000.
- The rate for men over the past 10 years has been more variable. From 2012 to 2014, the male HIV diagnosis rate increased sharply from 32.9 per 100,000 to 39.3 per 100,000. In 2016, the male HIV diagnosis rate declined to a 4-year low of 36.1 per 100,000 males. The HIV diagnosis rate for males was almost three times greater than females in 2016. Cumulatively, males have accounted for 71% of all new HIV diagnoses in Louisiana over the past 10 years.

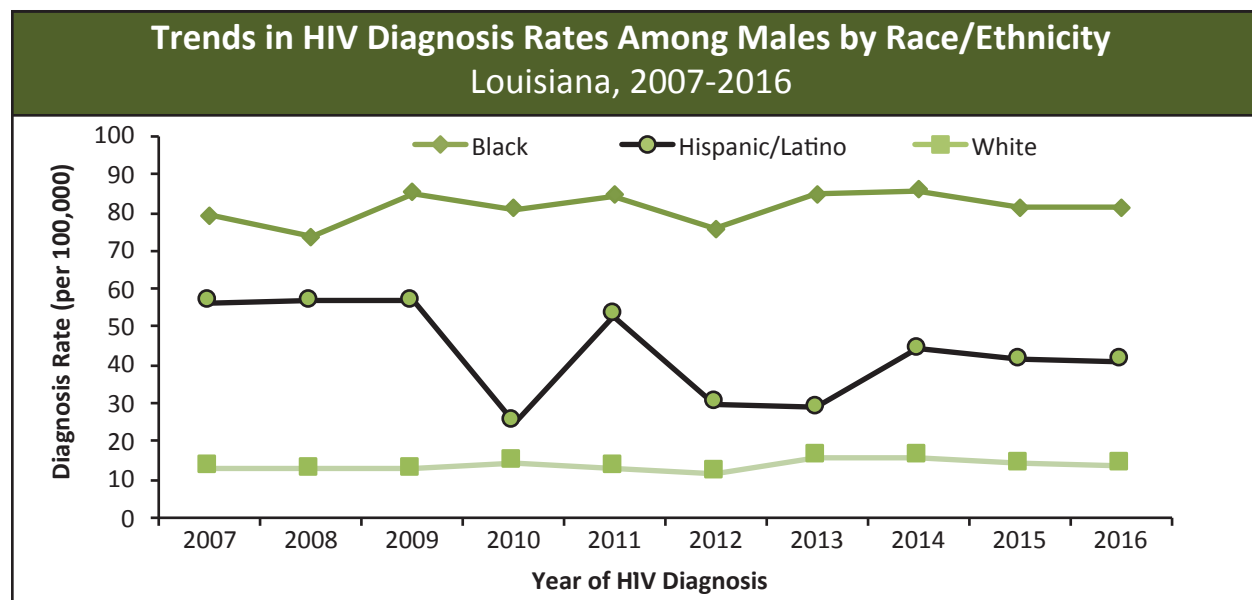
Trends in HIV Diagnosis Rates by Race/Ethnicity Louisiana, 2007-2016



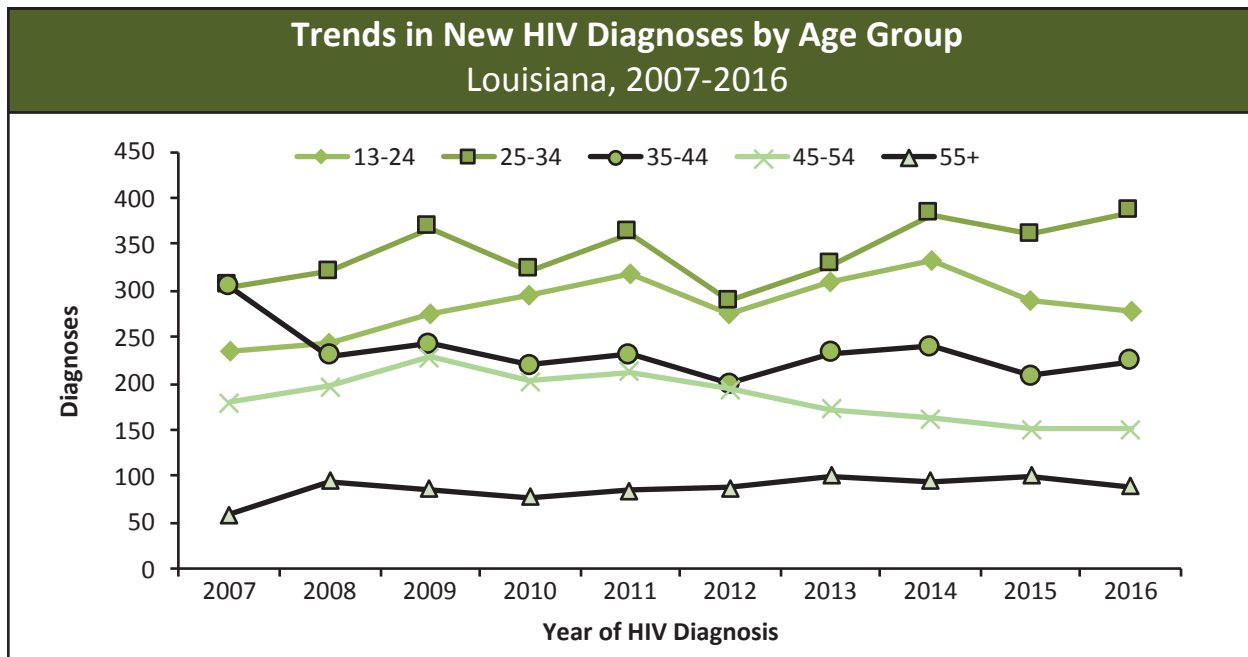
- The HIV diagnosis rate among whites has remained stable over the past 10 years, with a diagnosis rate of 8.5 per 100,000 whites in 2016. The rate for blacks has been more variable with a low of 53.3 per 100,000 blacks in 2015 to a high of 63.3 per 100,000 blacks in 2009. The 2016 diagnosis rate was 54.6 per 100,000 blacks.
- In 2016, the HIV diagnosis rate for blacks was over six times greater than the rate for whites and two times the rate for Hispanic/Latinx (27.5 per 100,000 Hispanic/Latinx). The HIV diagnosis rate for Hispanic/Latinx was over three times the rate for whites; among the 1,129 newly diagnosed persons in 2016, 65 were Hispanic/Latinx. The number of new diagnoses among Hispanic/Latinx persons is smaller which causes more variability in the rate of new diagnoses from year to year.



- In 2016, the HIV diagnosis rate in black females (30.5 per 100,000) was nine times greater than the rate for white females (3.4 per 100,000) and was 2.6 times greater than the rate for Hispanic/Latina females (11.9 per 100,000).
- The HIV diagnosis rate among black females has declined significantly from a high of 43.8 per 100,000 in 2009 to a low of 28.0 per 100,000 in 2015.
- The HIV diagnosis rate for Hispanic/Latina females is higher than for white females, although the number of diagnoses is higher among whites.



- In 2016, the HIV diagnosis rate among black males (81.3 per 100,000) was almost six times greater than the rate for white males (13.8 per 100,000), and was double the rate for Hispanic/Latino males (41.0 per 100,000). Between 2014 and 2016, the rates of new HIV diagnoses among males decreased among all race/ethnicity groups.
- Black females and males in Louisiana account for the overwhelming majority of new HIV diagnoses each year. When considering blacks make up only 32% of Louisiana's population, these disproportionately high diagnosis rates reflect the stark racial and ethnic health disparities that exist in the state.

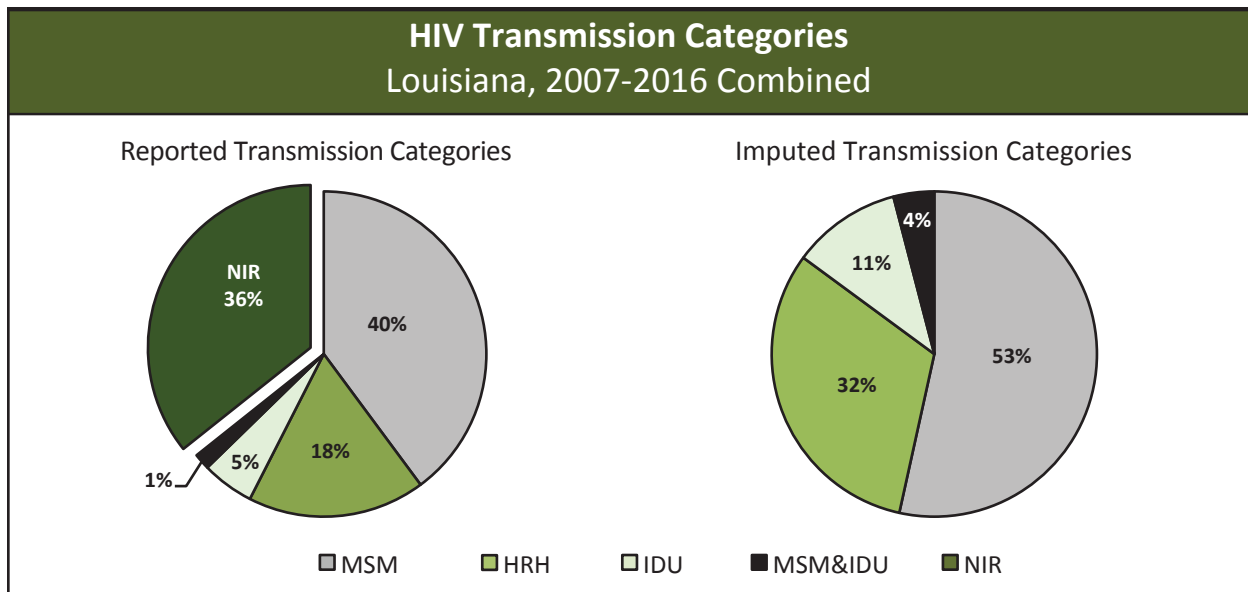


- The number of new diagnoses among youth, age 13-24 years, is of special interest in Louisiana and across the nation. In 2008, the number of new diagnoses among 13-24 year olds surpassed the number of new diagnoses among 35-44 year olds to become the second largest age group for new diagnoses. In 2016, new diagnoses in youth accounted for 25% of new diagnoses, compared to 22% of new diagnoses in 2007.
- The 25-34 year age group consistently accounts for the highest number of new diagnoses over the past 10 years, 34% of all new HIV diagnoses in 2016. The number of new diagnoses in persons aged 35-44 accounted for an additional 20% of all new diagnoses in 2016.
- From 2015 to 2016, the number of new diagnoses declined among youth and among persons 45 and older. New diagnoses rose in persons 25-44 years of age.

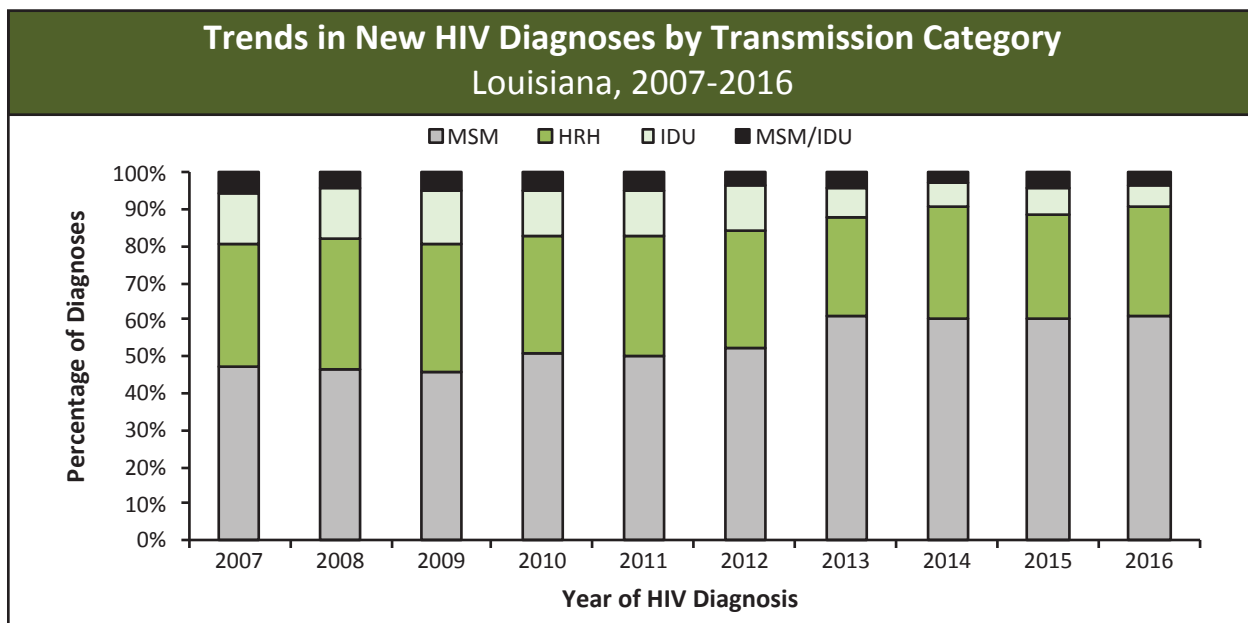
HIV Diagnoses by Transmission Category

In accordance with the transmission categories used by the CDC, SHP classifies cases into six transmission categories: gay, bisexual, and other men who have sex with men (MSM), high risk heterosexual contact (HRH), injection drug use (IDU), men who have sex with men and inject drugs (MSM/IDU), mother-to-child transmission (Pediatric), and cases who received a transfusion or hemophiliac products (Transfusion/Hemophilia). As illustrated in the graph on the following page, many cases do not have risk information reported or do not meet the transmission category criteria and are labeled as no identified risk (NIR). For all persons diagnosed between 2007 and 2016, 36% do not have a reported risk.

Risk information is difficult to ascertain because individuals may not know how they acquired the infection, their healthcare provider may not feel comfortable collecting the information, or the person may not be willing to share that information possibly due to stigma or fear of discrimination. A person who reports only heterosexual contact is not classified with a transmission category because according to the CDC “persons whose transmission category is classified as high risk heterosexual contact 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).” Due to the large number of NIR cases, SHP uses a statistical method to assign a mode of transmission for NIR cases called “imputation” (described in the Technical Notes located in the Appendix of this report).

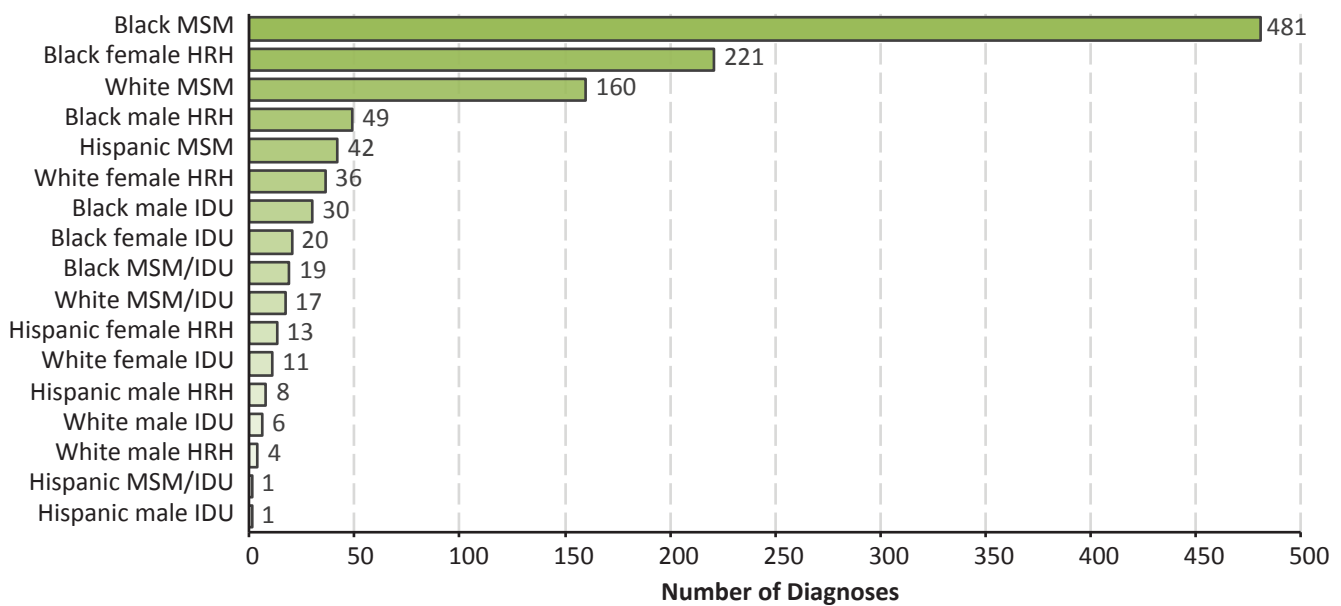


- Of the new diagnoses from 2007 to 2016, 36% do not have a recorded transmission category.
- A risk category is imputed for all cases without a recorded risk; 53% of all cases over the past 10 years were MSM, 32% were HRH, 11% were IDU, 4% were MSM/IDU. Perinatal infections are not included above as they do not undergo the risk imputation process.
- After assigning a transmission category for all NIR cases through imputation, trends in the percentage of cases for each transmission category can be analyzed. The following graphs and tables use imputed transmission categories unless otherwise noted.

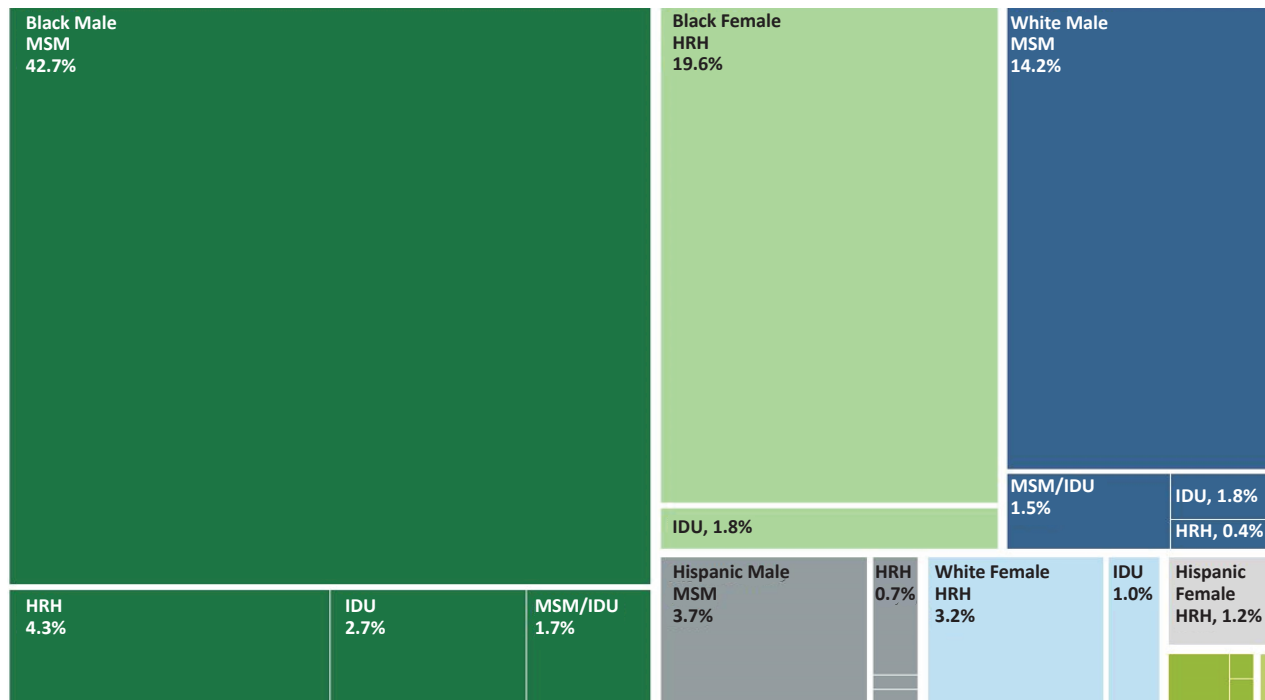


- The percentage of adult HIV diagnoses attributed to MSM has increased significantly from a low of 46% in 2009 to a high of 61% in 2016. Since 2013, the proportion of MSM has consistently remained around 61%.
- Proportions in all other risk categories have steadily decreased over the past 10 years. The percentage of diagnoses attributed to IDU has seen the largest decline from a high of 15% in 2009 to a low of 6% in 2016. The percentage of HRH diagnoses has decreased significantly as well, from a high of 35% in 2008 to a low of 27% in 2013; 29% in 2016. The percentage of MSM/IDU diagnoses has declined less dramatically from 5% in 2007 to 3% in 2016.

New HIV Diagnoses by Race/Ethnicity, Sex at Birth, and Transmission Category Louisiana, 2016

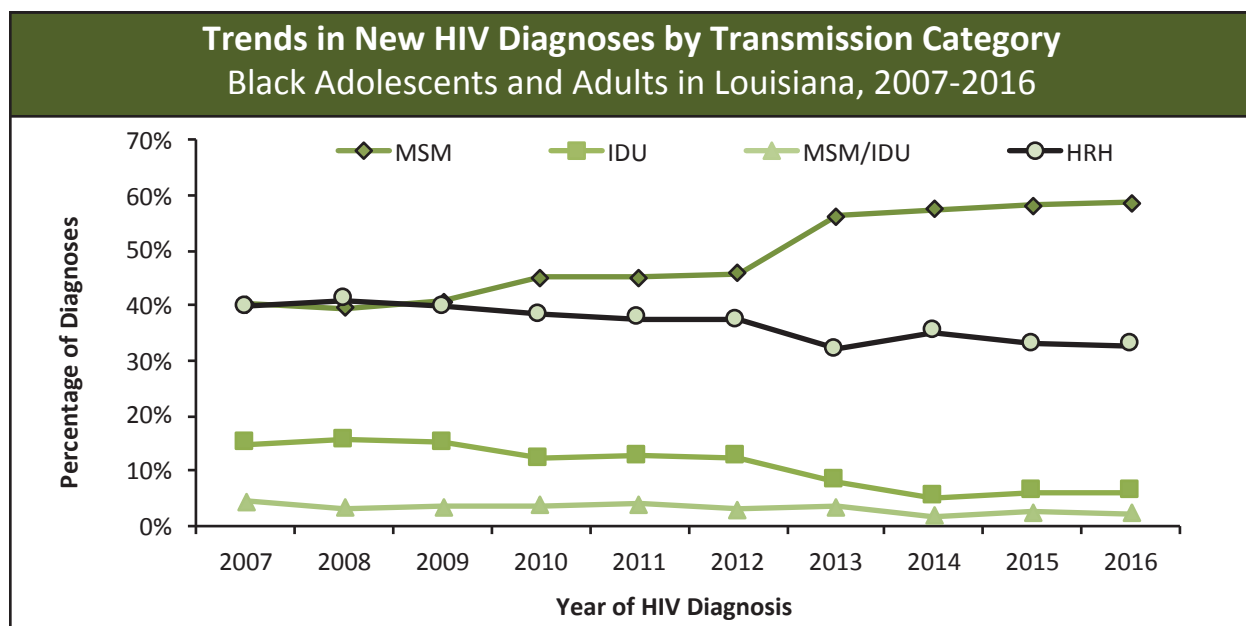


- The chart above, highlights the marked disparities in the number of new HIV infections when persons are grouped by their race/ethnicity, sex at birth, and imputed transmission category.
- Among newly diagnosed persons in 2016 in Louisiana, 76% of new infections occurred among three groups: black gay, bisexual, and other men who have sex with men (MSM), black high-risk heterosexual women, and white gay, bisexual, and other men who have sex with men (MSM).
- In 2016, black MSM accounted for 481 (43%) of Louisiana's 1,129 new HIV infections. This was more than double the number of new diagnoses among the second highest group, black female HRH, who accounted for 221 new HIV infections and triple the 160 new HIV infections among white MSM.

New HIV Diagnoses by Race/Ethnicity, Sex at Birth, and Transmission Category-Louisiana, 2016

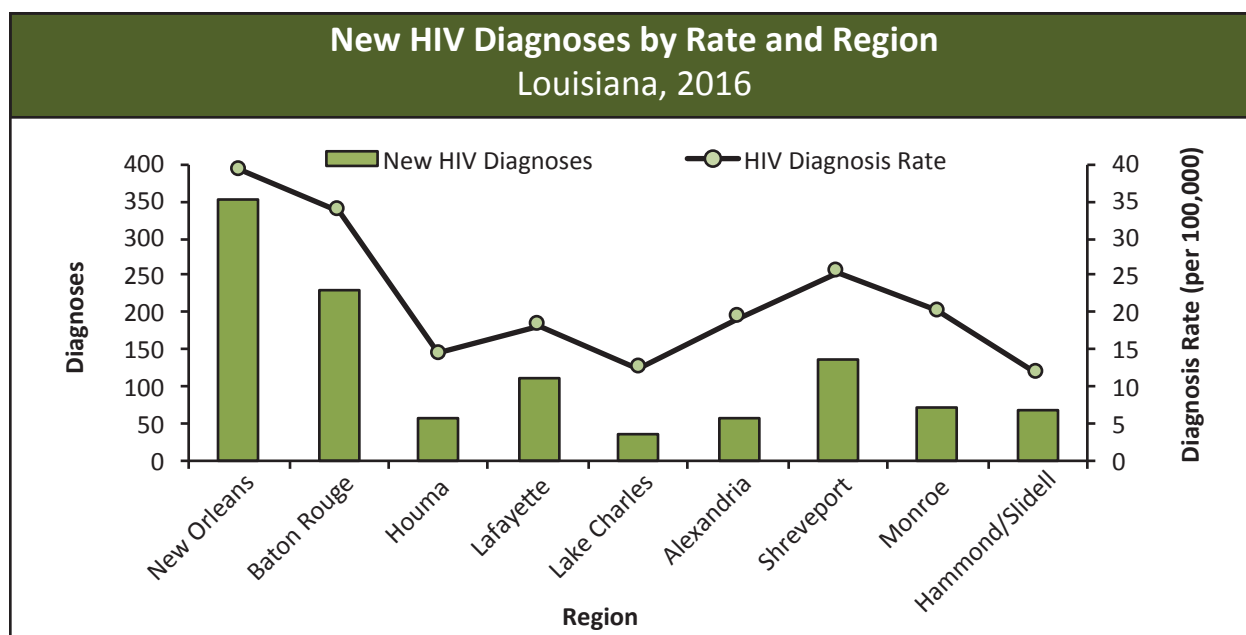
*Boxes without a label or percentage indicated < 0.5%

- The Treemap above is a graphical tool designed here to emphasize disparities in the proportion of new HIV diagnoses in 2016 by their race/ethnicity, sex at birth, and transmission category. Black males only comprise 15% of Louisiana's population but account for 51% of all new HIV infections. Black females experience a slightly less striking disparity, making up 17% of Louisiana's population and accounting for 21% of new HIV infections. As a group, blacks make up 73% of new HIV infections in 2016.
- The primary mode of transmission among all males is MSM, accounting for 61% of Louisiana's new HIV infections in 2016. Among all females, HRH is the primary mode of transmission, making up 24% of new HIV infections. Overall, slightly more than a quarter (27%) of new HIV infections are among females.
- In 2016, 29% of all new infections were among HRH, 6% IDU, and 3% MSM/IDU.



- Historically, the primary mode of transmission for blacks was HRH contact followed closely by MSM. In 2009, the percentage of new diagnoses among black gay, bisexual, and other men who have sex with men (MSM) surpassed the percentage of diagnoses among high risk heterosexuals (HRH) and has remained the primary mode of transmission among blacks to present.
- In 2016, 59% of all new HIV diagnoses among blacks were MSM and 33% were HRH; 2013 marked a large increase among MSM from 46% in 2012 to 56% in 2013.
- From 2007 to 2016, the percentage of HIV diagnoses among black IDU and black MSM/IDU has declined significantly from 15% to 6% for IDU and 5% to 2% for MSM/IDU.

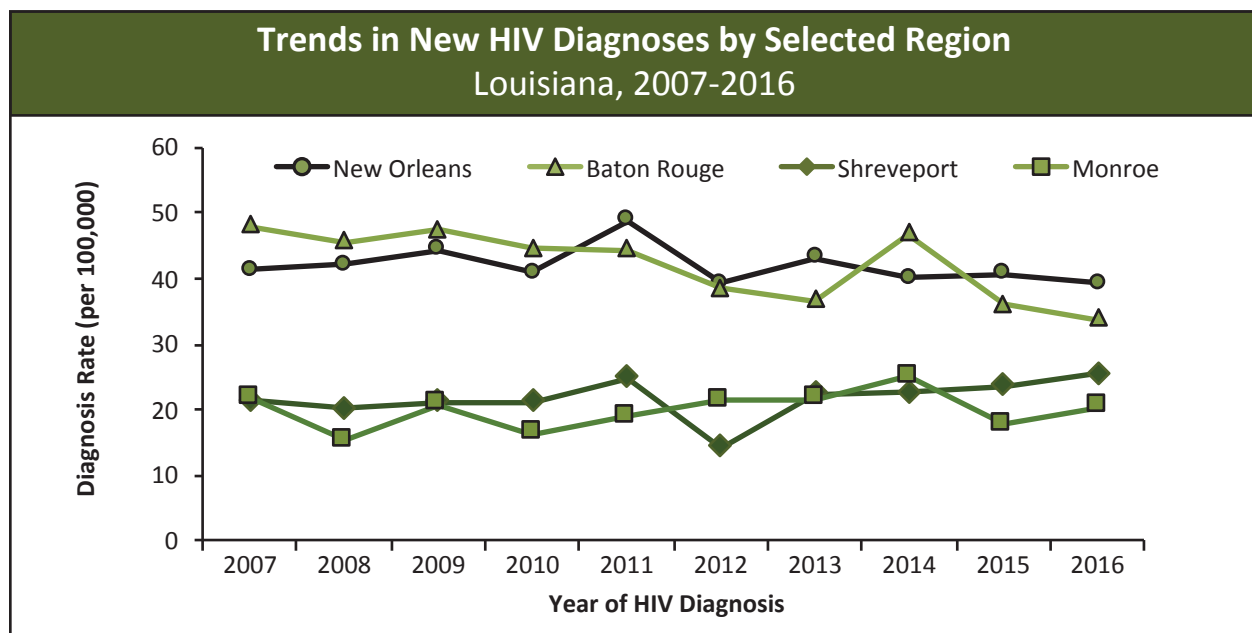
HIV Diagnoses by Public Health Region



- In 2016, the New Orleans region had the highest number of new HIV diagnoses and the highest HIV diagnosis rate. The Baton Rouge region had the second highest number of new diagnoses and the second highest diagnosis rate.
- The Lake Charles region had the lowest number of new HIV diagnoses, and the Hammond/Slidell region had the lowest HIV diagnosis rate.

New HIV Diagnoses by Region and Year Louisiana, 2012-2016										
	2012		2013		2014		2015		2016	
Louisiana	1,054	100%	1,143	100%	1,213	100%	1,111	100%	1,129	100%
1-New Orleans	341	32%	379	33%	355	29%	364	33%	352	31%
2-Baton Rouge	258	24%	248	22%	318	26%	246	22%	231	20%
3-Houma	55	5%	58	5%	52	4%	63	6%	59	5%
4-Lafayette	82	8%	91	8%	111	9%	89	8%	111	10%
5-Lake Charles	38	4%	38	3%	39	3%	45	4%	38	3%
6-Alexandria	56	5%	63	6%	58	5%	52	5%	59	5%
7-Shreveport	79	7%	123	11%	124	10%	129	12%	138	12%
8-Monroe	76	7%	77	7%	89	7%	63	6%	72	6%
9-Hammond/Slidell	69	7%	66	6%	67	6%	60	5%	69	6%

- Over half of new HIV diagnoses occur in the New Orleans and Baton Rouge regions each year. In 2016, the Shreveport region has the third highest number of new diagnoses followed by Lafayette. From 2012 to 2016, the proportion of new diagnoses in Baton Rouge fluctuated from a high of 26% in 2014 to a low of 20% in 2016. The proportion of new diagnoses in New Orleans fluctuated from a high of 33% in 2013 and 2015 to a low of 29% in 2014.



- The four public health regions in Louisiana with the highest HIV diagnosis rates in 2016 were New Orleans, Baton Rouge, Shreveport, and Monroe (regions 1, 2, 7, and 8, respectively).
- Over the past 10 years, the New Orleans and Baton Rouge regions have had the highest rates in the state. In 2016, the HIV diagnosis rate in the New Orleans region (39.2 per 100,000) was 14% greater than the rate in the Baton Rouge region (33.7 per 100,000). The Shreveport region had the third highest rate in 2016 (25.4 per 100,000) followed by the Monroe region (20.3 per 100,000). A table with the number of HIV diagnoses for each region, 2007-2016, is located in the Appendix.

Characteristics of Persons Newly Diagnosed with HIV

Characteristics of Persons Newly Diagnosed with HIV Louisiana, 2015-2016				
	Persons First Diagnosed with HIV in 2015		Persons First Diagnosed with HIV in 2016	
	Diagnoses	Percent	Diagnoses	Percent
TOTAL	1,111	100%	1,129	100%
Gender				
Men	829	75%	804	71%
Women	272	24%	303	27%
Transgender women	10	1%	22	2%
Race/Ethnicity				
Black/African American	798	72%	821	73%
Hispanic/Latinx	62	6%	65	6%
White	230	21%	235	21%
Other/Unknown/Multi-race	21	2%	8	1%
Age at HIV Diagnosis				
0-12	2	< 1%	2	< 1%
13-19	68	6%	55	5%
20-24	221	20%	224	20%
25-34	360	32%	385	34%
35-44	208	19%	224	20%
45-54	151	14%	150	13%
55-64	85	8%	75	7%
65+	16	1%	14	1%
Transmission Category				
Men & Transwomen who have sex with men (MSM)	665	60%	688	61%
Injection Drug User (IDU)	84	8%	69	6%
MSM/IDU	43	4%	38	3%
High Risk Heterosexual (HRH)	316	28%	332	29%
Perinatal/Pediatric*	3	< 1%	2	< 1%
Rural/Urban				
Rural	120	11%	104	9%
Urban	991	89%	1,025	91%

* Transmission category not imputed.

- In 2016, 1,129 persons were newly diagnosed with HIV, a 2% increase from 2015.
- In 2016, 71% of new diagnoses were men, 27% were women, and 2% were transgender women.
- Among all HIV diagnoses in 2016, 73% were black even though blacks make up only 32% of Louisiana's population, representing a large racial disparity among new HIV diagnoses.
- In 2015 and 2016, the greatest number and proportion of diagnoses were among persons age 25-34 years.
- In 2016, 61% of all new diagnoses were among gay, bisexual men, and transwomen who have sex with men (MSM) and an additional 3% were among MSM who also inject drugs (MSM/IDU).
- In Louisiana, the majority of new diagnoses in 2016 (91%) were among persons residing in an urban area. An urban area is defined as a parish that belongs to a metropolitan statistical area (MSA).

Late HIV Testing in Louisiana

Since improved antiretroviral medications and preventive therapies are now available for people living with HIV, it is important that people are tested for HIV and if positive, are referred to care early so that they can benefit from these treatment advances. However, a significant number of people are not tested for HIV until they are symptomatic. In 2006, the CDC released new recommendations for HIV testing of adults, adolescents and pregnant women in health-care settings. HIV screening is recommended for all patients age 13 and older, unless the patient declines testing (“opts out”). Persons at high risk of HIV should be tested annually. HIV screening is required for all pregnant women as part of their routine prenatal screening tests.

Late HIV Testing Louisiana, 2016									
	Persons Diagnosed with HIV, 2016								
	New HIV Diagnoses	AIDS at Time of Diagnosis*		AIDS Within 3 Months of Diagnosis		AIDS Within 6 Months of Diagnosis		AIDS Within 9 Months of Diagnosis	
		Count	Percent [†]	Count	Percent [†]	Count	Percent [†]	Count	Percent [†]
Total	1,129	176	16%	214	19%	239	21%	254	22%
Gender									
Men	804	137	17%	160	20%	170	21%	181	23%
Women	303	37	12%	50	17%	64	21%	67	22%
Transgender women	22	2	9%	4	18%	5	23%	6	27%
Race/Ethnicity									
Black/African American	821	113	14%	140	17%	161	20%	173	21%
Hispanic/Latinx	65	14	22%	18	28%	19	29%	19	29%
White	235	48	20%	55	23%	58	25%	61	26%
Other/Unknown/Multi-race	8	1	13%	1	13%	1	13%	1	13%
Age Group									
0-12	2	1	50%	1	50%	1	50%	1	50%
13-19	55	4	7%	4	7%	4	7%	4	7%
20-24	224	12	5%	18	8%	22	10%	24	11%
25-34	385	52	14%	61	16%	75	19%	80	21%
35-44	224	46	21%	51	23%	54	24%	59	26%
45-54	150	33	22%	42	28%	45	30%	48	32%
55-64	75	25	33%	33	44%	34	45%	34	45%
65+	14	3	21%	4	29%	4	29%	4	29%
Transmission Category									
Men & Transwomen who have sex with men (MSM)	688	104	15%	124	18%	134	19%	145	21%
Injection Drug User (IDU)	69	13	19%	15	22%	16	23%	16	23%
MSM/IDU	38	9	24%	9	24%	9	24%	9	24%
High Risk Heterosexual (HRH)	332	49	15%	65	20%	79	24%	83	25%
Perinatal/Pediatric**	2	1	50%	1	50%	1	50%	1	50%
Region									
1-New Orleans	352	49	14%	63	18%	68	19%	75	21%
2-Baton Rouge	231	39	17%	44	19%	51	22%	52	23%
3-Houma	59	4	7%	8	14%	10	17%	10	17%
4-Lafayette	111	21	19%	24	22%	28	25%	29	26%
5-Lake Charles	38	10	26%	11	29%	12	32%	12	32%
6-Alexandria	59	9	15%	13	22%	13	22%	14	24%
7-Shreveport	138	17	12%	18	13%	22	16%	26	19%
8-Monroe	72	12	17%	14	19%	14	19%	14	19%
9-Hammond/Slidell	69	15	22%	19	28%	21	30%	22	32%

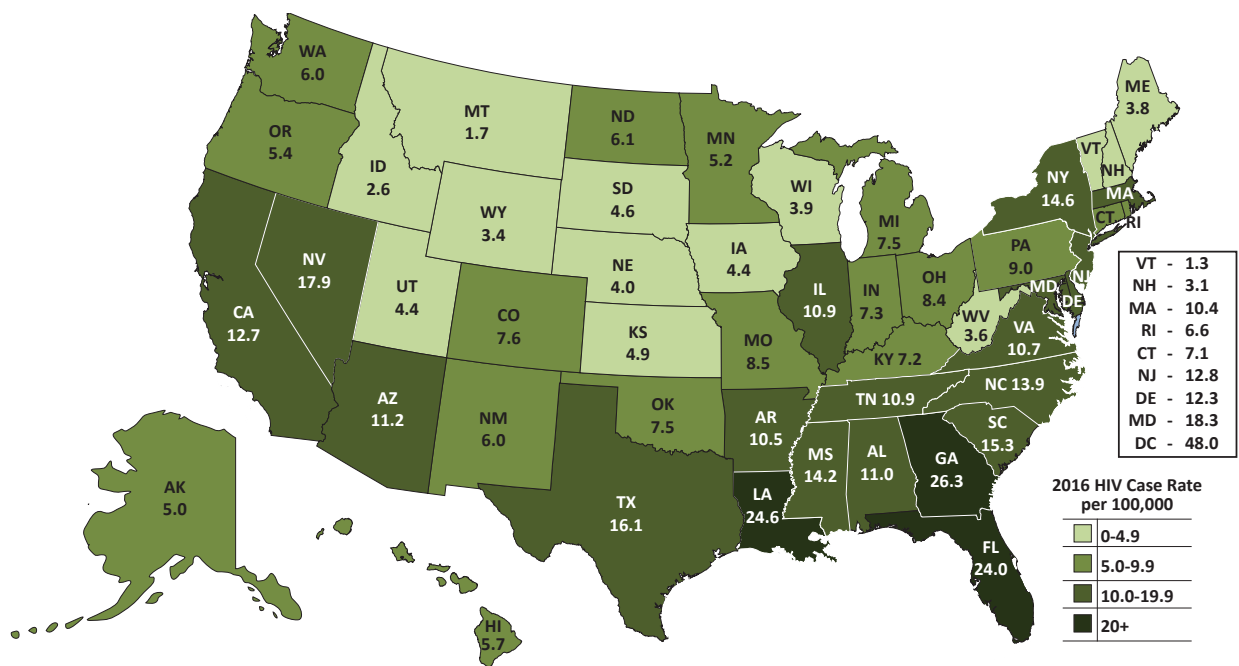
*If AIDS diagnosis was within 1 month of HIV diagnosis

**Transmission category not imputed

†Value calculated as the number of persons in the demographic variable category over the total number of new diagnoses in the category (e.g. percentage of men with AIDS at HIV diagnosis = $137/804 * 100 = 17\%$).

- Of the 1,129 persons diagnosed with HIV in 2016, 16% had an AIDS diagnosis at the time of their initial HIV diagnosis, an additional 3% had an AIDS diagnosis within three months. A total of 22% of persons had an AIDS diagnosis within nine months post HIV diagnosis.
- A greater proportion of men were concurrently diagnosed with HIV and AIDS (17%) than women (12%). Among transgender women, 9% were diagnosed with AIDS at HIV diagnosis. At nine months post HIV diagnosis, 23% of men had an AIDS diagnosis compared to 22% of women and 27% of transgender women.
- Whites and blacks had lower proportions of AIDS concurrent with HIV diagnosis and at three, six, and nine months as compared to Hispanic/Latinx.
- Persons 25 years and older had much higher proportions of AIDS at the time of HIV diagnosis and within the following nine months as compared to youth, ages 13-24.
- The proportion of late testers varies by region throughout the state. The Houma and Shreveport regions had the lowest proportion of AIDS after three months of HIV diagnosis compared to Lake Charles and Hammond/Slidell which had the highest proportions of AIDS after three months.

HIV Rates in the United States (2016)^{ix}



- In November 2017, the CDC released their *HIV Surveillance Report, 2016; vol. 28*, which provides national and statewide HIV and AIDS data.
- In the US, 39,782 new HIV diagnoses were reported in 2016, for a national HIV diagnosis rate of 12.3 diagnoses per 100,000 population.
- In 2016, Louisiana ranked 3rd highest in state HIV diagnosis rates (24.6 per 100,000 population) in the US, behind the District of Columbia (48.0 per 100,000) and Georgia (26.3 per 100,000).
- In 2016, Louisiana ranked 8th in the nation for the number of new HIV diagnoses.

HIV Among Gay, Bisexual and Other Men Who Have Sex with Men (MSM)

Nationally, MSM account for over half of the one million people living with HIV and two-thirds of all new HIV infections in the US each year. In 2016, MSM accounted for 67% of all new HIV diagnoses across the US and MSM/IDU accounted for an additional 3% of new HIV diagnoses.

SHP has made a concerted effort to analyze the epidemic among MSM to adequately target prevention efforts. The following table shows the demographics of new HIV diagnoses in 2016 among MSM who may or may not be injection drug users. Transgender women are not included in the table below.

- In 2016, there were 1,129 new HIV diagnoses in Louisiana; 62% (704) among all MSM (IDU and non-IDU).
- The majority of the new diagnoses among MSM are black (68%) and under the age of 35 (66%).
- 52% of MSM were diagnosed in the New Orleans and Baton Rouge regions.
- Nearly half (45%) of the MSM/IDU cases were white and 55% were 35 years and older. While 53% of MSM/Non-IDU were diagnosed in New Orleans and Baton Rouge regions, only 39% of MSM/IDU were diagnosed in New Orleans and Baton Rouge regions.
- The percentage MSM diagnosed with AIDS at HIV diagnosis was the same as the overall population of new diagnoses in Louisiana, 16%. Nearly a quarter (24%) of MSM/IDU diagnosed in 2016 were late testers diagnosed with AIDS at HIV diagnosis.

* For more information about the HIV/AIDS disparities in Louisiana in relation to the MSM population, please refer to the introduction of this surveillance report.

Demographics of New HIV Diagnoses Among MSM Louisiana, 2016

	MSM/Non-IDU		MSM/IDU		All MSM*	
	Cases	Percent	Cases	Percent	Cases	Percent
TOTAL	666	100%	38	100%	704	100%
Race/Ethnicity						
Black/African American	460	69%	19	50%	479	68%
Hispanic/Latinx	42	6%	1	3%	43	6%
White	159	24%	17	45%	176	25%
Other/Unknown/Multi-race	5	1%	1	3%	6	1%
Age at HIV Diagnosis						
13-19	39	6%	1	3%	40	6%
20-24	174	26%	4	11%	178	25%
25-34	236	35%	12	32%	248	35%
35-44	118	18%	9	24%	127	18%
45-54	63	9%	8	21%	71	10%
55-64	31	5%	4	11%	35	5%
65+	5	1%	0	0%	5	1%
Region						
1-New Orleans	224	34%	9	24%	233	33%
2-Baton Rouge	128	19%	6	16%	134	19%
3-Houma	30	5%	4	11%	34	5%
4-Lafayette	60	9%	4	11%	64	9%
5-Lake Charles	26	4%	4	11%	30	4%
6-Alexandria	37	6%	1	3%	38	5%
7-Shreveport	75	11%	6	16%	81	12%
8-Monroe	44	7%	3	8%	47	7%
9-Hammond/Slidell	42	6%	1	3%	43	6%
Late Testers						
AIDS at Time of HIV Diagnosis	102	15%	9	24%	111	16%
AIDS Within 3 Months of HIV Diagnosis	120	18%	9	24%	129	18%
AIDS Within 6 Months of HIV Diagnosis	129	19%	9	24%	138	20%

*All MSM is a cumulative total of MSM/Non-IDU (666) and MSM/IDU (38). Transgender women are not included in the table.

HIV Among Youth in Louisiana

In 2016, persons age 13-24 years made up 21% of all new HIV diagnoses in the United States.

- In 2016, there were 1,129 new HIV diagnoses in Louisiana; 25% (279) were among youth 13-24 years old.
 - 224 (80%) of the youth diagnoses were among persons age 20-24 years.
- Among all youth, 79% of the new diagnoses were men.
- The majority (85%) of the new diagnoses among youth were black. The proportion was higher among 13-19 year olds (93%) than it was among 20-24 year olds (83%).
- The majority (79%) of new diagnoses among youth were men and transgender women who have sex with men (MSM), followed by high risk heterosexuals (18%).
- Among all youth diagnosed in Louisiana, 51% of new diagnoses occurred in the New Orleans and Baton Rouge regions.
- The percentage of late testers among youth is much lower than the state's overall population of new diagnoses.

Demographics of New HIV Diagnoses Among Youth Louisiana, 2016

	13-19 Years		20-24 Years		All Youth: 13-24 Years	
	Cases	Percent	Cases	Percent	Cases	Percent
TOTAL	55	100%	224	100%	279	100%
Gender						
Men	40	73%	180	80%	220	79%
Women	15	27%	36	16%	51	18%
Transgender Women	0	0%	8	4%	8	3%
Race/Ethnicity						
Black/African American	51	93%	185	83%	236	85%
Hispanic/Latinx	1	2%	7	3%	8	3%
White	3	5%	31	14%	34	12%
Other/Unknown/Multi-race	0	0%	1	0%	1	0%
Transmission Category						
Men & Transwomen who have sex with men (MSM)	39	71%	182	81%	221	79%
Injection Drug User (IDU)	0	0%	3	1%	3	1%
MSM/IDU	1	2%	4	2%	5	2%
High Risk Heterosexual (HRH)	15	27%	35	16%	50	18%
Region						
1-New Orleans	18	33%	74	33%	92	33%
2-Baton Rouge	10	18%	41	18%	51	18%
3-Houma	2	4%	16	7%	18	6%
4-Lafayette	4	7%	23	10%	27	10%
5-Lake Charles	2	4%	10	4%	12	4%
6-Alexandria	2	4%	8	4%	10	4%
7-Shreveport	11	20%	35	16%	46	16%
8-Monroe	3	5%	11	5%	14	5%
9-Hammond/Slidell	3	5%	6	3%	9	3%
Late Testers						
AIDS at Time of HIV Diagnosis	4	7%	12	5%	16	6%
AIDS Within 3 Months of HIV Diagnosis	4	7%	18	8%	22	8%
AIDS Within 6 Months of HIV Diagnosis	4	7%	22	10%	26	9%

HIV Among African Americans in Louisiana

In 2016, African Americans made up 44% of all new HIV diagnoses across the United States even though they comprise only 12% of the total U.S. population.

- In 2016, there were 1,129 new HIV diagnoses in Louisiana; 73% (821) were among African Americans.
- In 2016, 68% of the new diagnoses among blacks were men.
- Youth, 13-24 years old, made up 29% of all diagnoses among African Americans. An additional 35% of diagnoses were 25-34 years old.
- The majority (59%) of new diagnoses among African Americans were men and transwomen who have sex with men (MSM).
- More than half (54%) of all new diagnoses among African Americans occurred in the New Orleans and Baton Rouge regions.
- The percentage of late testers among African Americans is comparable to the overall population of new diagnoses in Louisiana.

* For more information about the HIV/AIDS disparities in Louisiana in relation to the black population, please refer to the introduction of this surveillance report.

Demographics of New HIV Diagnoses Among African Americans Louisiana, 2016		
	Cases	Percent
TOTAL	821	100%
Gender		
Men	559	68%
Women	241	29%
Transgender Women	21	3%
Age at HIV Diagnosis		
0-12	1	0%
13-19	51	6%
20-24	185	23%
25-34	286	35%
35-44	140	17%
45-54	99	12%
55-64	50	6%
65+	9	1%
Transmission Category		
Men & Transwomen who have sex with men (MSM)	481	59%
IDU	50	6%
MSM/IDU	19	2%
HRH	270	33%
Perinatal*	1	0%
Region		
1-New Orleans	251	31%
2-Baton Rouge	189	23%
3-Houma	45	5%
4-Lafayette	72	9%
5-Lake Charles	23	3%
6-Alexandria	36	4%
7-Shreveport	119	14%
8-Monroe	50	6%
9-Hammond/Slidell	36	4%
Late Testers		
AIDS at Time of HIV Diagnosis	113	14%
AIDS Within 3 Months of HIV Diagnosis	140	17%
AIDS Within 6 Months of HIV Diagnosis	161	20%

*Transmission category not imputed.

HIV Among Transgender Persons in Louisiana

Since data for transgender people is not collected uniformly, overall new infections in the United States is not available. According to the Center of Excellence for Transgender Health, there are numerous social and contextual issues that impact the ascertainment of risk behaviors reported among transgender people, including stigma, discrimination, alienation, poverty, and victimization. (<http://transhealth.ucsf.edu/>)

- In 2016, there were 1,129 new HIV diagnoses in Louisiana; 22 diagnoses were reported as transgender women. In 2015, there were 1,111 new HIV diagnoses in Louisiana; 10 diagnoses were reported as transgender women.
- As of December 31, 2016, there were 20,938 persons living with HIV infection, 225 persons were transgender. Of the 225 transgender people living with HIV infection in Louisiana, 99% (224) were transgender women.
- Between 2015 and 2016, 91% of new HIV diagnoses among transgender women were African American. Among transgender persons living with HIV infection at the end of 2016, 83% were African American.
- Between 2015 and 2016, 84% of the diagnoses among transgender women were 20-29 years old.
- The majority (88%) of transgender persons living with HIV reported engaging in sex with men; 12% of transgender persons reported engaging in sex with men and injection drug use.
- Between 2015 and 2016, 41% of new HIV diagnoses among transgender women occurred in the New Orleans region. At the end of 2016, 52% of all transgender individuals living with HIV infection lived in the New Orleans region and an additional 21% in the Baton Rouge region.

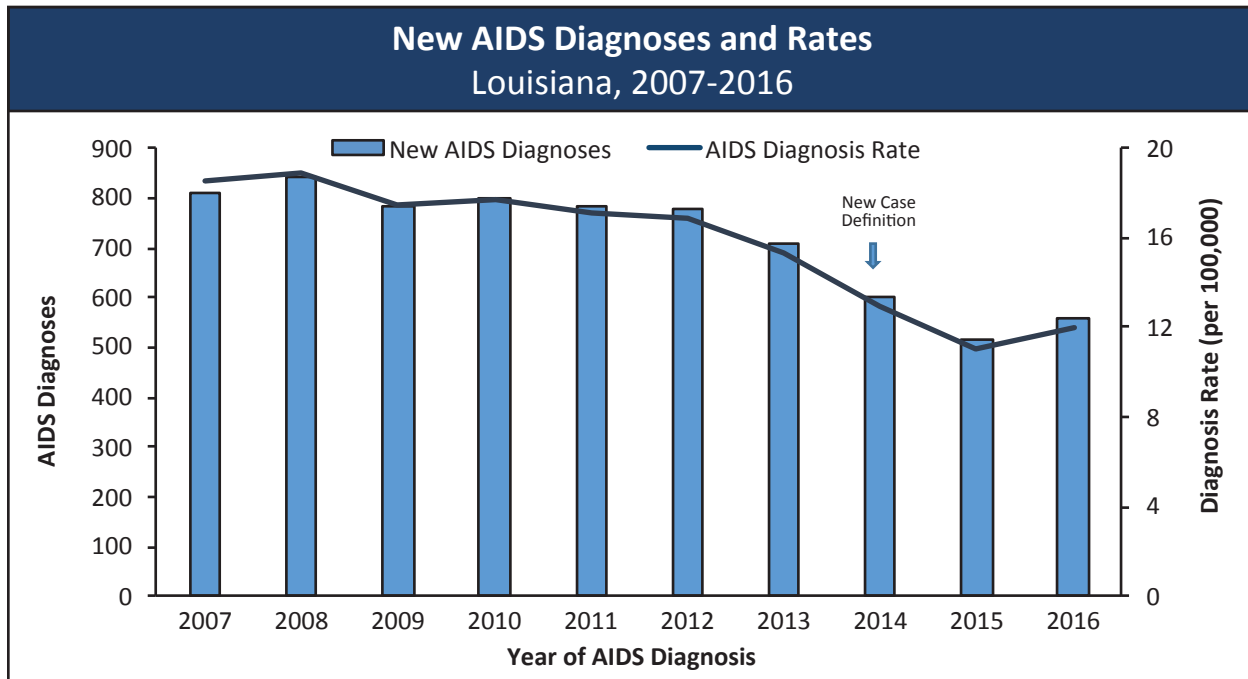
* For more information about the HIV/AIDS disparities in Louisiana in relation to the transgender population, please refer to the introduction of this surveillance report.

Demographics of New HIV Diagnoses and Persons Living with HIV Infection Among Transgender Persons Louisiana, 2015 and 2016

	New HIV Diagnoses				Persons Living with HIV Infection	
	2015		2016		As of Dec. 31, 2016	
	Cases	Percent	Cases	Percent	Cases	Percent
TOTAL	10	100%	22	100%	225	100%
Transgender Women	10	100%	22	100%	224	99%
Transgender Men	0	0%	0	0%	1	<1%
Race/Ethnicity						
Black/African American	8	80%	21	95%	187	83%
Hispanic/Latinx	1	10%	0	0%	12	5%
White	1	10%	1	5%	23	10%
Other/Unknown/Multi-race	0	0%	0	0%	3	1%
Age at HIV Diagnosis						
					Current Age	
13-19	2	20%	0	0%	2	1%
20-24	6	60%	8	36%	22	10%
25-29	2	20%	11	50%	62	28%
30-34	0	0%	2	9%	40	18%
35-39	0	0%	1	5%	39	17%
40-44	0	0%	0	0%	22	10%
45+	0	0%	0	0%	38	17%
Transmission Category						
Sex with Men	8	80%	22	100%	197	88%
Sex with Men & Injection Drug User	2	20%	0	0%	27	12%
Sex with Women	0	0%	0	0%	1	<1%
Region						
					Current Region	
1 - New Orleans	5	50%	8	36%	116	52%
2 - Baton Rouge	1	10%	2	9%	48	21%
3 - Houma	0	0%	2	9%	10	4%
4 - Lafayette	0	0%	3	14%	9	4%
5 - Lake Charles	0	0%	1	5%	7	3%
6 - Alexandria	1	10%	1	5%	6	3%
7 - Shreveport	1	10%	2	9%	11	5%
8 - Monroe	1	10%	2	9%	10	4%
9 - Hammond/Slidell	1	10%	1	5%	8	4%

10-Year Trends in New AIDS Diagnoses (2007-2016)

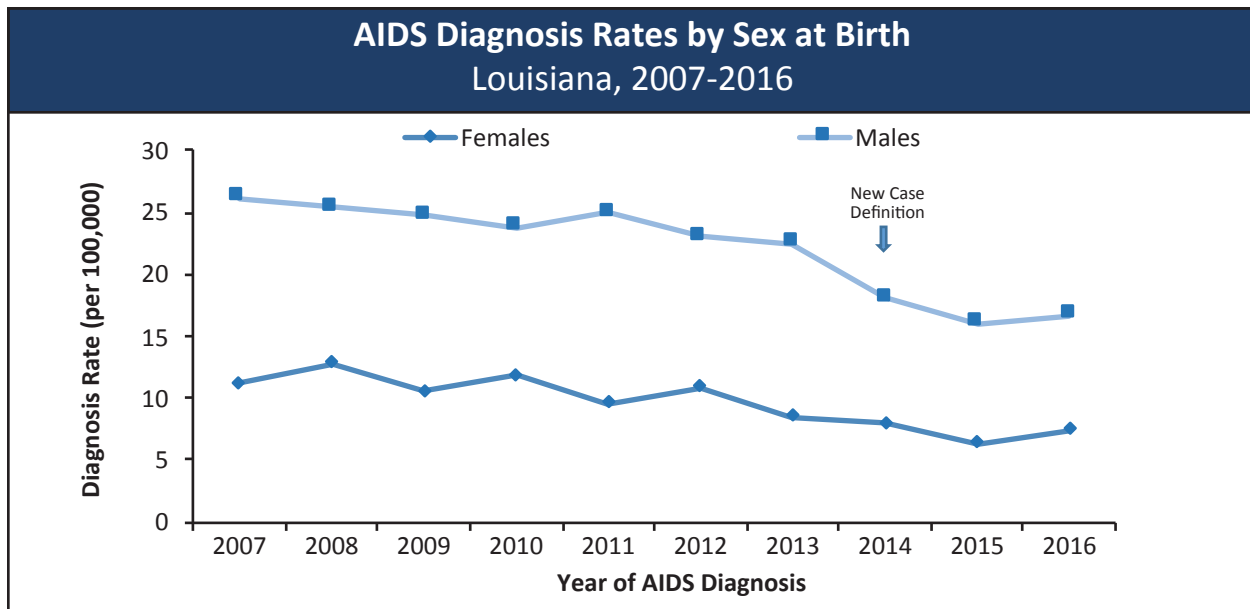
AIDS diagnoses are the number of individuals diagnosed with AIDS within a given time period. The surveillance case definition for an AIDS diagnosis is a CD4 cell count <200 or the diagnosis of an opportunistic infection (OI) such as Kaposi Sarcoma or wasting syndrome. Once a person is diagnosed with AIDS, they remain categorized as AIDS even if their CD4 count rises above 200 or they are cured of their OI. The number of AIDS diagnoses has been collected since the beginning of the epidemic, both nationally and in Louisiana. AIDS diagnoses are useful for highlighting issues regarding access to testing, medical care, medication and treatment adherence. *In 2014, the AIDS surveillance case definition was altered to no longer define an AIDS case based on CD4 percentage. This change in case definition only impacts AIDS cases diagnosed after 2013.*



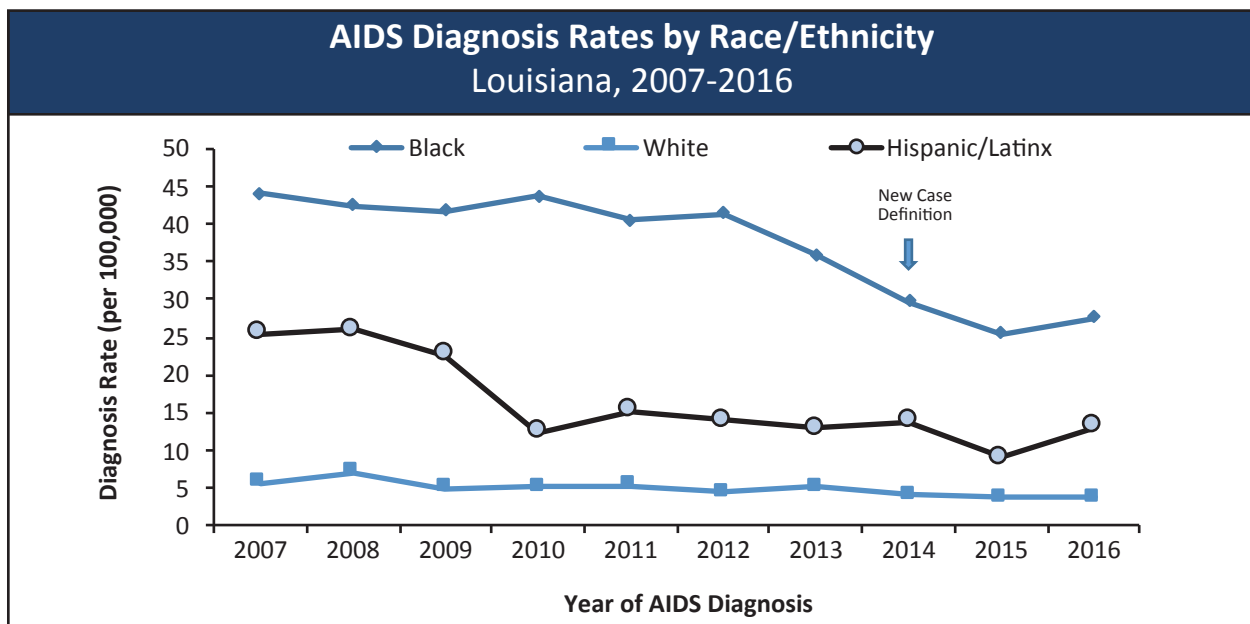
- Since 1997, the number of new AIDS diagnoses each year in Louisiana has remained below 1,000. Over the past 10 years, the number of new AIDS diagnoses has fluctuated from a high of 842 diagnoses in 2008 to a low of 515 AIDS diagnoses in 2015. The steep decrease between 2013 and 2014 was in part due to the new AIDS surveillance case definition. The number of new AIDS diagnoses further declined from 2014 to 2015 under the same case definition.
- In 2016, the AIDS diagnosis rate for Louisiana was 11.9 per 100,000 population which was more than twice as high as the national AIDS diagnosis rate of 5.6 per 100,000.

AIDS diagnoses and deaths in the United States

In June 1981, the first cases of what would later be diagnosed as AIDS were reported in the US. During the 1980s, there was a rapid increase in the number of AIDS diagnoses and deaths in persons with AIDS. Cases peaked in 1993 with the expansion of the AIDS case definition. The most dramatic drop in both new diagnoses and deaths began in 1996, with the widespread use of combination antiretroviral therapy. Since 2000, the annual numbers of AIDS diagnoses have been relatively constant, with 18,160 new AIDS diagnoses in 2016. The CDC reports that since the beginning of the epidemic through the end of 2016, approximately 1,232,346 people have been diagnosed with AIDS in the US. By region, the South has the greatest number of people living with AIDS, AIDS deaths, and new AIDS diagnoses.

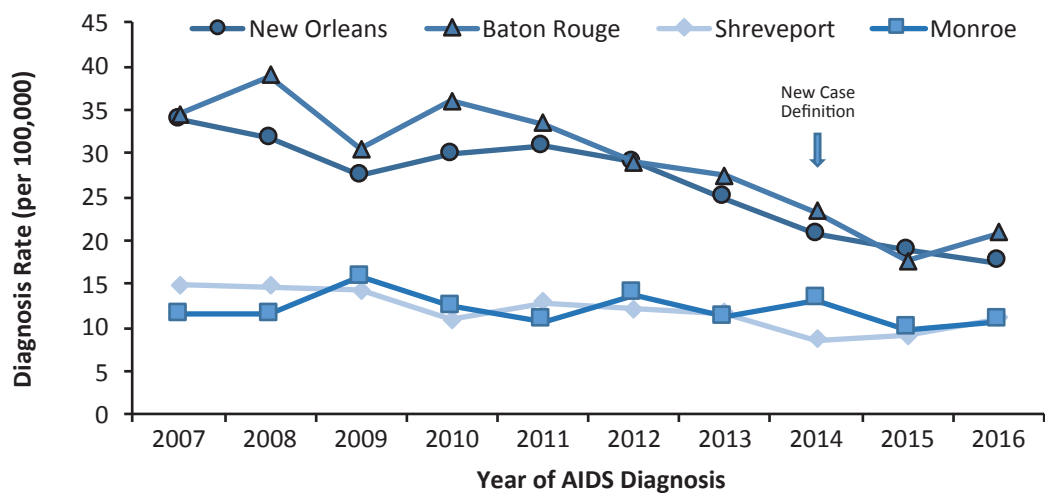


- Under the previous case definition, the AIDS diagnosis rate for males and females decreased slightly from 2006 to 2013.
- From 2013 to 2014, the new case definition led to a 24% decrease in the male AIDS diagnosis rate but the female rate was relatively unchanged.
- From 2015 to 2016, the AIDS diagnosis rate increased slightly for males and females. The male AIDS diagnosis rate (16.7 per 100,000) was more than twice the female AIDS diagnosis rate (7.4 per 100,000) in 2016.



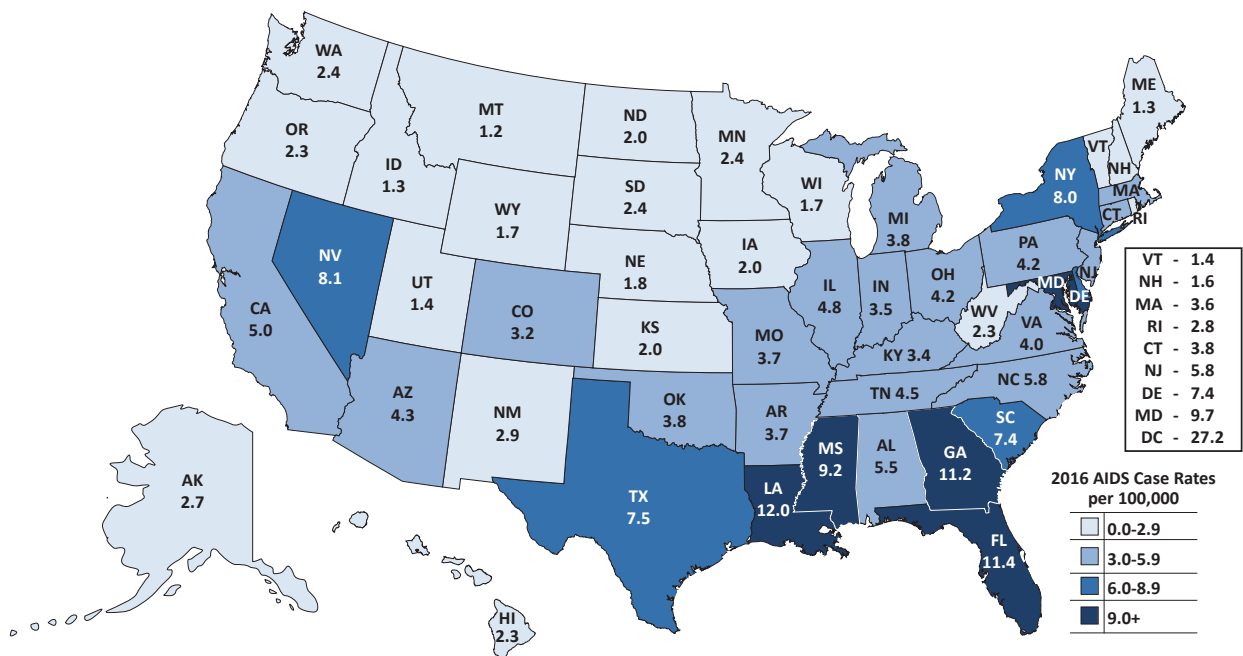
- In 2016, the AIDS diagnosis rate for blacks (27.7 per 100,000 blacks) was two times greater than for Hispanic/Latinx (13.1 per 100,000 Hispanic/Latinx) and over seven times greater than for whites (3.8 per 100,000 whites).
- From 2015 to 2016, the AIDS diagnosis rate increased among all race/ethnicity groups. The rate among blacks increased 8% and whites 3%. Although there was a sharp increase (31%) in the AIDS diagnosis rate among Hispanic/Latinx from 2015 to 2016, the number of new AIDS diagnoses increased from twenty-one to thirty-one.

AIDS Diagnosis Rates by Selected Region Louisiana, 2007-2016



- For the majority of the past 10 years, the Baton Rouge region has had the highest AIDS diagnosis rate among all nine public health regions. In 2016, the Baton Rouge and New Orleans regions had the highest AIDS diagnosis rates (20.9 per 100,000 and 17.5 per 100,000, respectively). The AIDS diagnosis rate has been on a downward trend in Baton Rouge since 2010 and the rate in New Orleans has been decreasing steadily since 2011.
- The AIDS diagnosis rates for the Shreveport and Monroe regions are very similar each year. In 2016, the AIDS rates in Shreveport and Monroe were 11.0 per 100,000 and 10.7 per 100,000, respectively.

AIDS Rates in the United States (2016)^x



- In the US, 18,160 new AIDS cases were reported in 2016, for a national AIDS diagnosis rate of 5.6 per 100,000 population.
- In 2016, Louisiana ranked 2nd highest in state AIDS diagnosis rates (12.0 per 100,000 population) and 9th in the number of AIDS diagnoses in the US, according to the most recent *CDC HIV Surveillance Report, 2016; vol. 28*. Louisiana's AIDS rate was more than double the national rate.

Characteristics of Persons Newly Diagnosed with AIDS

Characteristics of Persons Newly Diagnosed with AIDS Louisiana, 2015-2016				
	Persons First Diagnosed with AIDS in 2015		Persons First Diagnosed with AIDS in 2016	
	Diagnoses	Percent	Diagnoses	Percent
TOTAL	515	100%	559	100%
Gender				
Men	361	70%	376	67%
Women	150	29%	176	31%
Transgender Women	4	1%	7	1%
Race/Ethnicity				
Black/African American	380	74%	416	74%
Hispanic/Latinx	21	4%	31	6%
White	102	20%	105	19%
Other/Unknown/Multi-race	12	2%	7	1%
Age at AIDS Diagnosis				
0-12	1	<1%	1	<1%
13-19	5	1%	8	1%
20-24	40	8%	49	9%
25-34	142	28%	174	31%
35-44	127	25%	136	24%
45-54	123	24%	109	19%
55-64	60	12%	72	13%
65+	17	3%	10	2%
Transmission Category				
Men & Transwomen who have sex with men (MSM)	248	48%	268	48%
Injecting Drug User (IDU)	50	10%	74	13%
MSM/IDU	23	4%	22	4%
High Risk Heterosexual (HRH)	192	37%	190	34%
Perinatal/Pediatric*	2	<1%	5	1%
Rural/Urban				
Rural	58	11%	55	10%
Urban	457	89%	504	90%

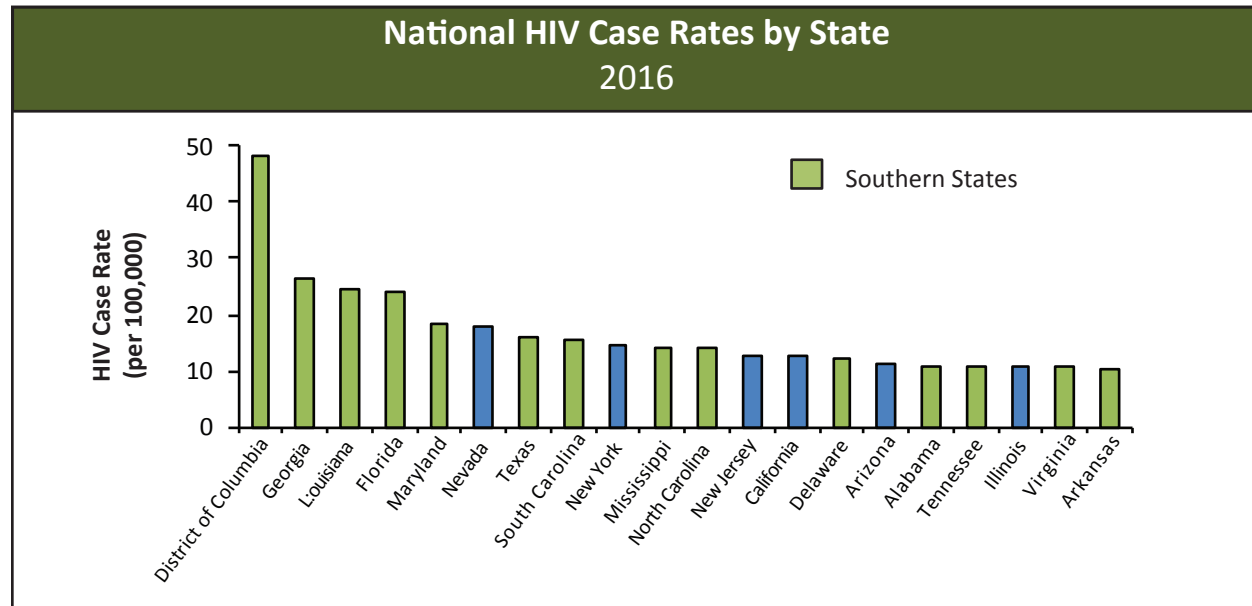
* Transmission category not imputed

- In 2016, there were 559 new AIDS diagnoses in Louisiana; 8% increase from 2015.
- In 2016, men accounted for 67% of all new AIDS diagnoses.
- In 2015 and 2016, 74% of all AIDS diagnoses were among blacks.
- In 2015 and 2016, the greatest number of new AIDS diagnoses were among persons age 25-34 followed by 35-44 year olds.
- In 2015 and 2016, the greatest number and percentage of new AIDS diagnoses were among men and transgender women who have sex with men (MSM), followed by high risk heterosexuals (HRH).
- The majority of AIDS diagnoses occurred in urban areas in 2015 (89%) and 2016 (90%).

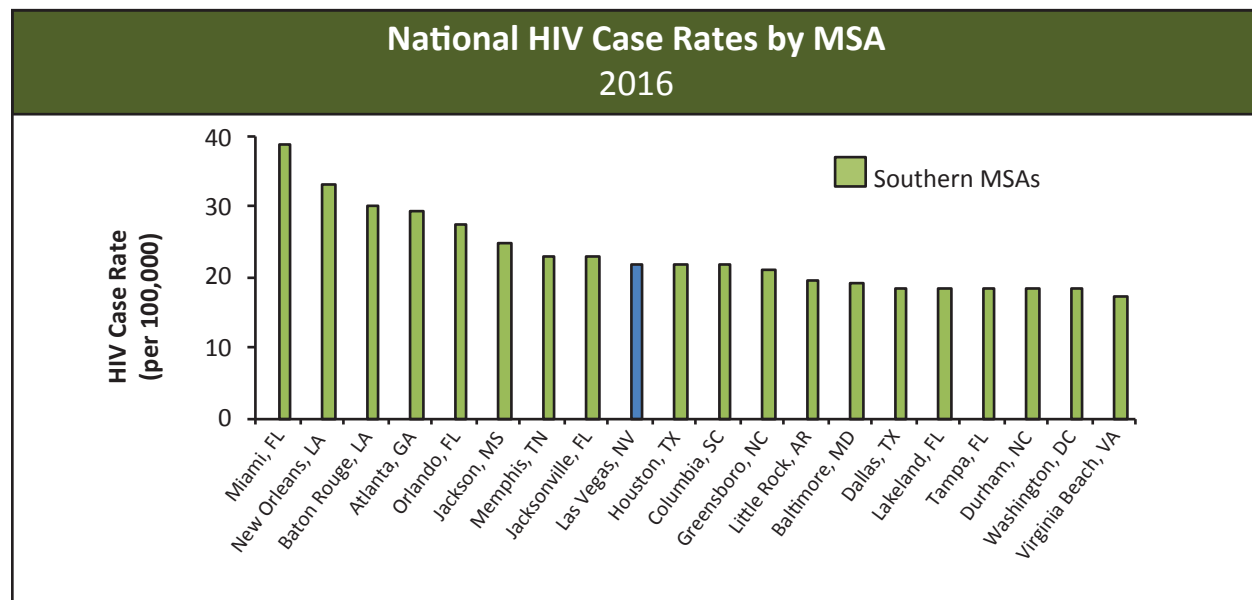
HIV and AIDS in the South

Southern states are disproportionately impacted by HIV infection and AIDS. Seventeen states are included in the southern region of the United States: Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia and West Virginia.^{xi}

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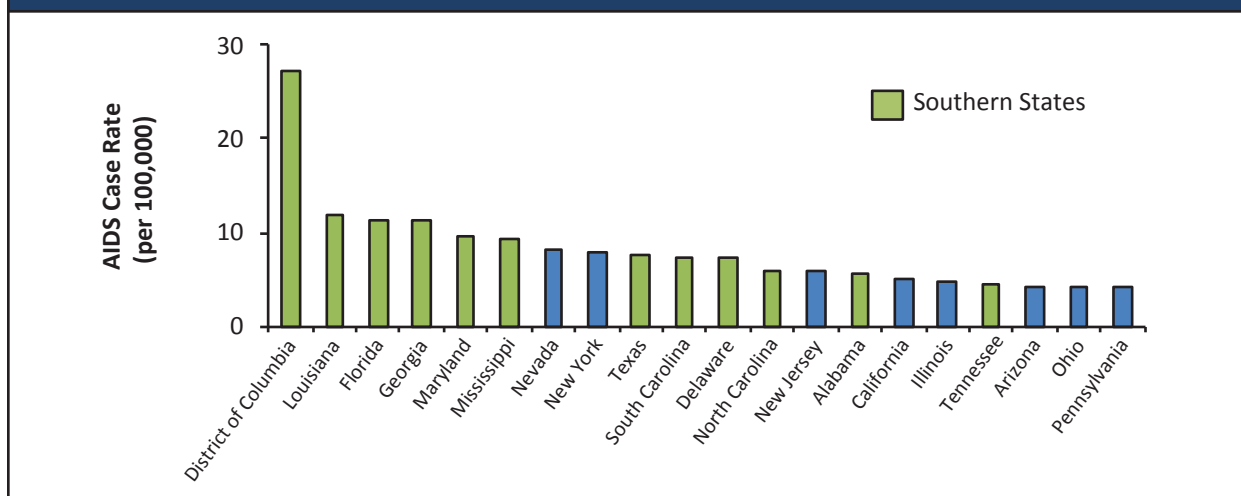


- In 2016, southern states represented 38% of the US population but 52% of new HIV diagnoses. The District of Columbia, when included as a state, is restricted to its borders.
- Of the 20 states that had the highest HIV diagnosis rates in 2016, 14 (70%) were in the South.



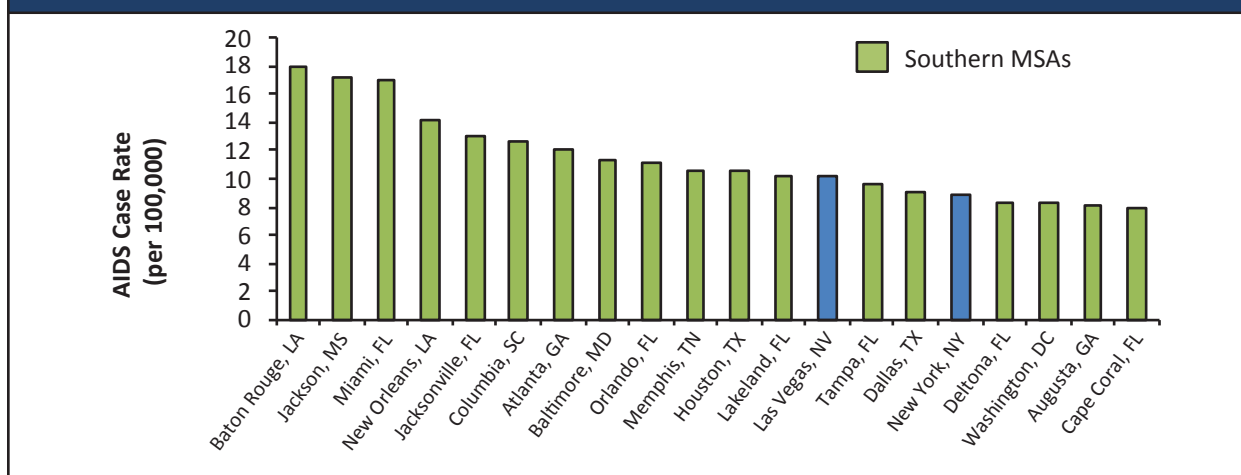
- Of the 20 metropolitan areas that had the highest HIV diagnosis rates in 2016, 19 (95%) were in the South. According to the CDC, the New Orleans metro area ranked 2nd and the Baton Rouge metro area ranked 3rd in HIV diagnosis rates in 2016 among metropolitan areas in the US with more than 500,000 people. Washington, DC when included as a MSA, includes parts of neighboring states resulting in a greater baseline population and a ranking of 19th.

National AIDS Case Rates by State 2016



- In 2016, southern states represented 38% of the US population but over 53% of new AIDS diagnoses.
- Of the 20 states that had the highest AIDS diagnosis rates in 2016, 12 (60%) were in the South.

National AIDS Case Rates by MSA 2016



- Of the 20 metropolitan statistical areas that had the highest AIDS diagnosis rates in 2016, 18 (90%) were in the South. According to the CDC, the Baton Rouge metro area ranked 1st and the New Orleans metro area ranked 4th in AIDS diagnosis rates in 2016 among metropolitan areas in the US with more than 500,000 persons.

2016 AIDS and HIV National Rankings

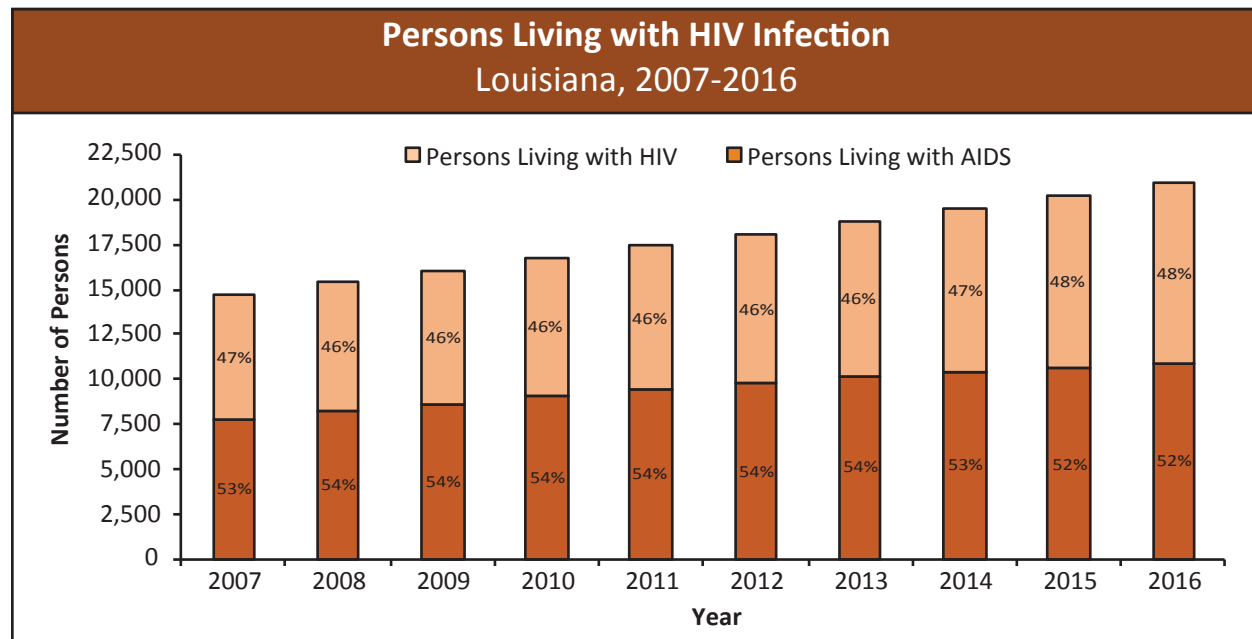
	LOUISIANA		NEW ORLEANS MSA		BATON ROUGE MSA	
	Rate	Rank	Rate	Rank	Rate	Rank
AIDS Case Rate*	12.0	2nd	14.1	4th	18.0	1st
AIDS Case Count	564	9th	179	20th	150	25th
HIV Case Rate*	24.6	3rd	33.3	2nd	30.2	3rd
HIV Case Count	1,153	8th	422	20th	252	31st

* Rates are per 100,000

** This table is based on case counts and rates reported by the CDC.

Persons Living in Louisiana with HIV Infection (Prevalence)

Prevalence is a measure describing the number of persons living with HIV infection at a certain point in time and includes people living with all stages of HIV or AIDS. Prevalence is the accumulation of diagnoses for people who are still living with the disease. Prevalence numbers and rates are important for ascertaining the burden of HIV on health care systems, allocating resources and monitoring trends over time. Reported HIV diagnosis data provide only the minimum estimate of the number of people living with HIV, since persons who have not been tested and those who test anonymously are not included. The CDC now estimates that approximately one in seven people infected with HIV in the United States is not aware of his or her infection status.^{xii}



- The number of persons living with HIV infection increased each year in Louisiana from the beginning of the epidemic. There was a decrease from 2004 to 2005 due to the dislocation of a large number of persons from the New Orleans metropolitan area who left Louisiana following Hurricane Katrina in August 2005. Since then, the number of persons living with HIV infection has far surpassed pre-Katrina numbers.
- At the end of 2016, 20,938 persons were known to be living with HIV infection in Louisiana, 10,839 (52%) of whom had received an AIDS diagnosis.

Persons living with HIV Infection in the United States

In 2015, an estimated 1,122,900 persons were living with HIV infection in the United States, including 162,549 (15%) persons whose infections had not been diagnosed. Of these 1.1 million people, gay and bisexual men of all races, blacks, and Hispanic/Latinx were most heavily affected.^{xi} There has been a steady increase in the US in the number of persons living with HIV infection, which is expected, due to the widespread use of antiretroviral treatment and the continued development of new antiretroviral regimens. In the US, more people become infected with HIV than die from the disease each year.

Historically, it was estimated that 25% of HIV-positive persons were undiagnosed or are unaware of their status. Since 2010 when the CDC released a new undiagnosed estimate of 16.9%, the estimate has continued to decrease to a low of 14.4% as reported by the CDC in 2015.^{xii}

Characteristics of Persons Living with HIV Infection in Louisiana and Cumulative Louisiana Cases

Characteristics of Persons Living with HIV Infection and Cumulative Cases Louisiana, 2016				
	Persons Living with HIV Infection as of 12/31/2016		Cumulative Persons with HIV Infection as of 12/31/2016*	
	Number	Percent	Number	Percent
TOTAL	20,938	100%	37,493	100%
Gender				
Men	14,622	70%	27,457	73%
Women	6,091	29%	9,772	26%
Transgender Women	224	1%	263	1%
Transgender Men	1	<1%	1	<1%
Race/Ethnicity				
Black/African American	14,346	69%	24,766	66%
Hispanic/Latinx	923	4%	1,210	3%
White	5,399	26%	11,097	30%
Asian	76	<1%	100	<1%
Mixed Race	140	1%	252	1%
Other/Unknown	54	<1%	68	<1%
Age Group				
	Age in 2016		Age at Diagnosis	
0-12	51	<1%	356	1%
13-19	143	1%	1,887	5%
20-24	953	5%	5,295	14%
25-34	4,143	20%	12,919	34%
35-44	4,934	24%	9,952	27%
45-54	5,688	27%	4,956	13%
55-64	3,918	19%	1,652	4%
65+	1,108	5%	476	1%
Transmission Category				
Men & Transwomen who have sex with men (MSM)	10,509	50%	17,732	47%
Injection Drug User (IDU)	2,544	12%	6,672	18%
MSM/IDU	1,287	6%	3,031	8%
High Risk Heterosexual (HRH)	6,330	30%	9,217	25%
Transfusion/Hemophilia**	66	<1%	482	1%
Perinatal/Pediatric**	202	1%	359	1%
Rural/Urban				
Rural	2,127	10%	3,426	9%
Urban	18,811	90%	34,067	91%

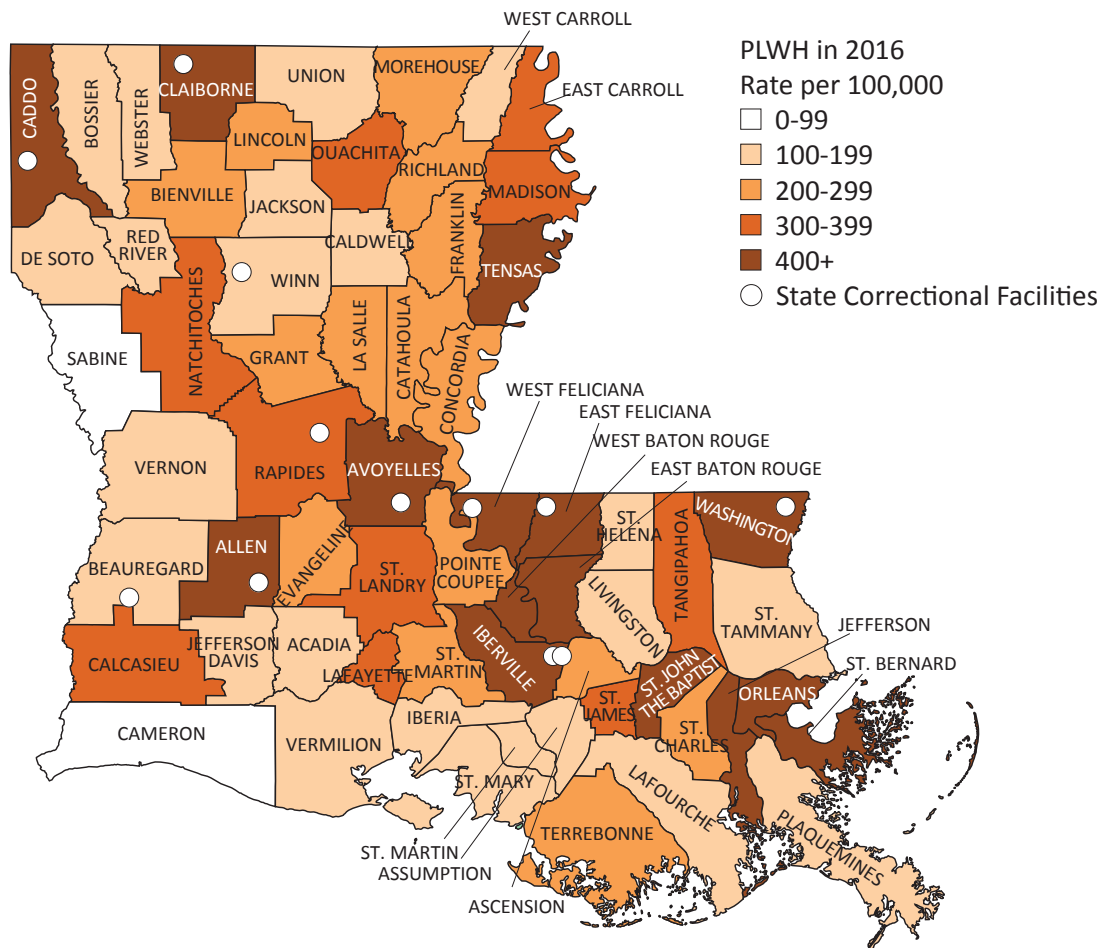
*Cumulative persons reflects the total number of HIV-infected persons diagnosed in Louisiana, including those who have died.

**Transmission category not imputed.

- At the end of 2016, there were 20,938 people with HIV living in Louisiana. These persons may have originally been diagnosed in other states or countries but in 2016 they had a current residence in Louisiana.
- In 2016, men made up 70% of all people living with HIV infection in Louisiana.
- Although blacks only made up 32% of Louisiana's population in 2016, they accounted for 69% of all people living with HIV infection.

- A quarter of all persons living with HIV are under the age of 35, 24% are between 35-44 years of age, and 51% are 45 and older.
- Half of all people living with HIV infection are MSM, 30% are HRH, 12% are IDU, and 6% are MSM/IDU. Less than 1% of people living with HIV in Louisiana were infected via transfusion or from the use of hemophiliac products and 1% were perinatally infected.
- The majority of people living with HIV infection live in urban areas of the state (90%).

Persons Living with HIV Infection (PLWH), by Parish Rate per 100,000, Louisiana, 2016



- The above map illustrates the geographic distribution of persons living with HIV infection in the state. There are persons living with HIV in every parish in Louisiana. All persons living with HIV infection in Louisiana are included in the analyses, regardless of their type of residence (correctional facility, nursing home, homeless shelter, etc.).
- At the end of 2016, 15 parishes had a prevalence rate greater than or equal to 400 per 100,000 and an additional 10 parishes had a rate between 300 and 399 per 100,000.
- Many of the parishes with disproportionate prevalence rates have state correctional facilities that are home to persons living with HIV infection.
- Although the majority of persons living with HIV reside in urban areas, 10% live in rural parishes.

National HIV Behavioral Surveillance Survey 2014-2016

Initiated in 2003, the National HIV Behavioral Surveillance (NHBS) system collects behavioral data among people at high risk for HIV infection in the United States. The rationale for this surveillance system is to “provide ongoing, systematic collection of data on behaviors related to HIV acquisition”.^{xiv} New Orleans was among 20 US metropolitan areas conducting NHBS in 2016. This study collects data from three target populations: men who have sex with men (MSM), injection drug users (IDU), and heterosexuals living in areas at high risk for HIV/AIDS (HET), each in discrete annual cycles. The NHBS survey instrument contains items regarding sexual behavior, substance use, and HIV testing behaviors. In 2007, NHBS added anonymous HIV testing of participants, followed by hepatitis C testing in the 2012 study cycle. During each annual cycle, NHBS staff conduct ethnographic research and in-depth surveys, which include locally developed questions concerning key issues for each target population.

Because many of the behaviors surveyed are highly stigmatized or illegal, the populations are considered hard to reach using traditional probability-based sampling methods. Each cycle utilizes specialized sampling methods for recruitment of participants in order to yield the most valid population estimates. NHBS-MSM uses a targeted venue-based time/space sampling procedure while NHBS-HET and NHBS-IDU uses a modified chain referral approach known as respondent-driven sampling.

Men who have sex with men (2014 Study Cycle)

Men who have sex with men (MSM) are recruited using a venue-based time-space sampling procedure, where individuals are approached within venues that are attended by MSM.

- HIV testing is high within the MSM community with 96% having been tested for HIV in their lifetime. Of those, 41% reportedly received their last HIV test at an HIV counseling and testing site nearly half of which were during an outreach event or through a mobile testing unit, followed by a public health clinic (19%), or private health clinic (17%).
- Only 46% of the MSM interviewed had been tested for other STDs in the past 12 months. Of those who had been tested for gonorrhea, 17% self-reported a positive result. Of those who had been tested for chlamydia, 7% self-reported a positive result. Of those who had been tested for syphilis, 9% self-reported a positive result.

Injection drug users (2015 Study Cycle)

Recruitment of persons who inject drugs (PWID) for the IDU cycle is conducted using a modified chain referral strategy known as respondent-driven sampling (RDS) wherein a small number persons or “seeds” who are known to be currently using injection drugs are recruited and interviewed by staff and asked to recruit other participants from within their own social network. These respondents are then subsequently interviewed and offered a similar opportunity to recruit their peers. Recruitment continues until a desired sample size of 500 is reached. In 2015, a total of 622 people who inject drugs in New Orleans participated in the NHBS survey:

- The majority of the IDU sample (90%) had been tested for HIV in their lifetime. Of those, 25% received their last HIV test in a correctional facility, followed by a public health clinic (17%), drug treatment program (12%), or an emergency room (10%).
- Only 24% of the IDU sample had been tested for gonorrhea, chlamydia, or syphilis in the past 12 months. Of those who had been tested for gonorrhea, 8% self-reported a positive result. Of those who had been tested for chlamydia, 11% self-reported a positive result. Of those who had been tested for syphilis, 3% self-reported a positive result.

- When asked what drug they primarily inject, 68% of participants reported heroin by itself, 18% reported combination of heroin and cocaine (speedball), 5% reported cocaine by itself, 6% crystal meth, and 2% crack.
- Additional hepatitis C (HCV) testing was provided to the IDU sample participants in 2015; 69% screened positive for hepatitis C antibodies. Among those who screened positive, 44% were unaware of their HCV status before NHBS screening.

Heterosexuals living in high risk areas (2016 Study Cycle)

Participants are recruited during the HET cycle using a similar RDS procedure; however, the initial recruits or “seeds” are individuals residing in areas at increased HIV risk and poverty. Key qualitative and quantitative findings from the New Orleans NHBS surveillance during 2016 are presented below:

- The majority of participants during the HET cycle (94%) had been tested for HIV in their lifetime. This was an increase from the 2013 cycle where only 84% of respondents had ever been tested. Of those, 25% reportedly received their last HIV test at public health clinic, followed by the hospital (15%), or a correctional facility (12%).
- Only 29% of the HET sample had been tested for gonorrhea, chlamydia, or syphilis in the past 12 months. Of those who had been tested for gonorrhea, 10% self-reported a positive result. Of those who had been tested for chlamydia, 18% self-reported a positive result. Of those who had been tested for syphilis, 8% self-reported a positive result.

Additional topics

In each cycle additional topics of interest and/or importance to the population are asked.

- Beliefs about stigma and discrimination surrounding HIV are asked during all cycles. Across all cycles many participants agreed that “most people in New Orleans would discriminate against someone with HIV” (45% of MSM, 66% IDU, 62% HET). However, the majority of participants (52%-67%) agreed that most people in New Orleans would support the rights of a person with HIV to live and work wherever they wanted and about two thirds (62%-65%) think that people would be friends with someone with HIV. From 17%-24%, agreed that most people in the city think that individuals who got HIV through sex or drug use have gotten what they deserve.
- When asked about personal negative experiences due to being attracted to men during the past 12 months, 15% of MSM participants reported receiving poorer services than other people in restaurants, stores, other businesses or agencies and 38% had been called names or insulted.
- Compared to the general population of Louisiana, MSM are much more likely to be current smokers. More than half of the MSM participants were current tobacco smokers. In addition, 84% reportedly had friends who are MSM that smoke and 58% of those who currently smoke reported being interested in quitting.
- Recent and lifetime nonfatal overdoses have increased for people who inject drugs. Forty two percent of the IDU sample in 2015 experienced an overdose in their lifetime and 81% had been around someone else while they were overdosing, an increase from the 2012 responses of 29% and 64%, respectively.
- Among the personal or witnessed overdose experiences, only half the time did someone seek medical assistance or call 911. The main reason cited for not seeking assistance was fear of arrest.

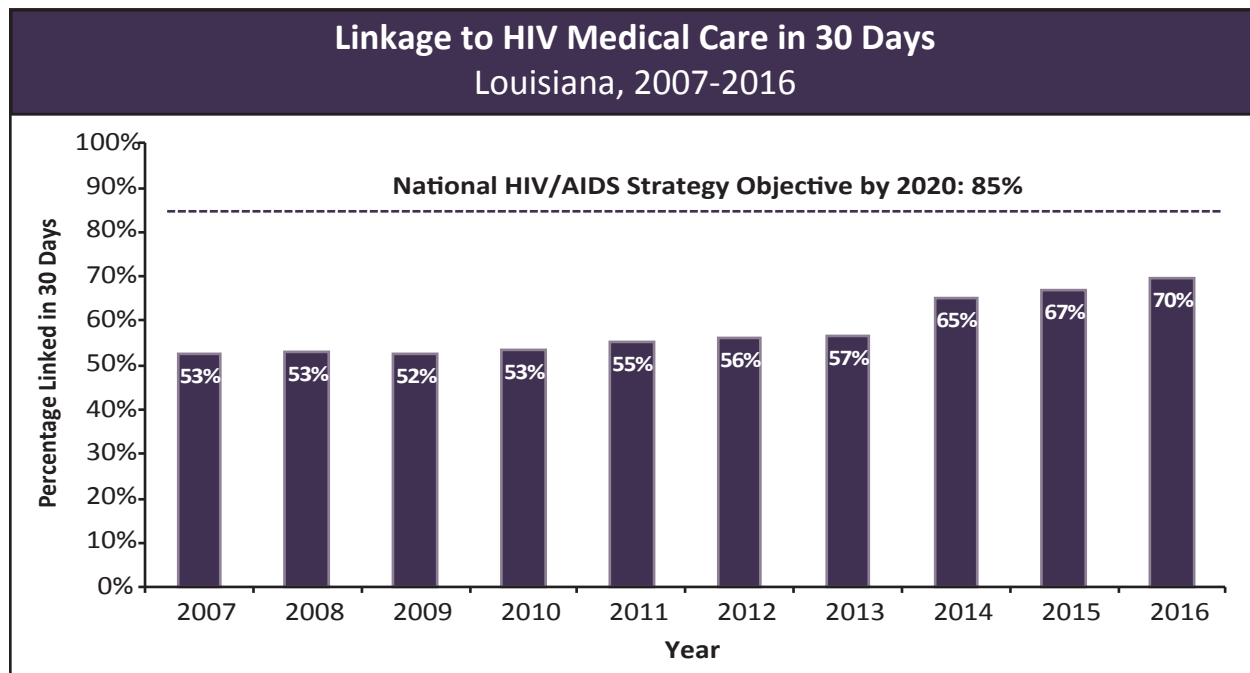
National HIV Behavioral Surveillance (NHBS) Louisiana, 2014-2016						
	Men Who Have Sex With Men (2014)		Persons Who Inject Drugs (2015)		Heterosexuals at Increased Risk for HIV (2016)	
Category	Number	Percent	Number	Percent	Number	Percent
Race/Ethnicity						
Black/African American	201	35%	260	42%	576	85%
Hispanic/Latinx	30	5%	22	4%	29	4%
White	306	53%	312	50%	43	6%
Multi-race	32	6%	23	4%	22	3%
Other/Unknown	7	1%	4	1%	6	2%
Gender						
Male	579	100%	474	76%	375	55%
Female	N/A	0%	145	23%	303	45%
Transgender	N/A	0%	3	<1%	0	0%
Age						
18-24	104	18%	39	6%	67	10%
25-29	113	20%	75	12%	52	8%
30-34	93	16%	93	15%	47	7%
35-39	51	9%	113	18%	64	9%
40-44	47	7%	90	14%	78	12%
45-50	62	11%	83	13%	115	17%
51+	114	20%	129	12%	255	38%
Sexual Identity						
Heterosexual or "Straight"	20	3%	529	85%	591	87%
Homosexual, Gay, or Lesbian	459	80%	23	4%	3	<1%
Bisexual	97	17%	70	11%	82	12%
Substance Use						
Ever Injected Drugs	58	10%	622	100%	143	21%
Injected Any Drug (past 12 months)	16	28%	622	100%	56	39%
Shared Needle (past 12 months)	5	31%	313	50%	26	46%
Shared Works/Equipment (past 12 months)	4	25%	465	75%	39	69%
Used Non-Injection Drugs (past 12 months)	332	57%	488	79%	425	63%
HIV Positivity						
Self-Reported Previous Known Positive	115	22%	19	3%	26	4%
Newly Detected Positive	22	3%	10	2%	15	2%
Never Tested Previously	18	4%	39	10%	76	6%

Linkage and Retention in HIV Care

Linkage to HIV Medical Care

Following a person's HIV diagnosis, patients should be immediately linked into HIV medical care. Linkage into HIV medical care allows for proper monitoring of a person's health and well-being in addition to providing opportunities for intervention to prevent HIV transmission. Early initiation of HIV treatment and long-term adherence leads to better health outcomes and reduces HIV transmission. Initiation of HIV treatment is dependent on linkage and retention in medical care.

Louisiana's surveillance system is able to monitor the proportion of newly diagnosed persons linked to care using HIV laboratory and surveillance data. Linkage to care within 30 days is defined as having a CD4 count or viral load (VL) test conducted within 30 days of HIV diagnosis. If the diagnosis and the CD4 count or VL test are conducted on the same day, those persons are considered to be linked to care.

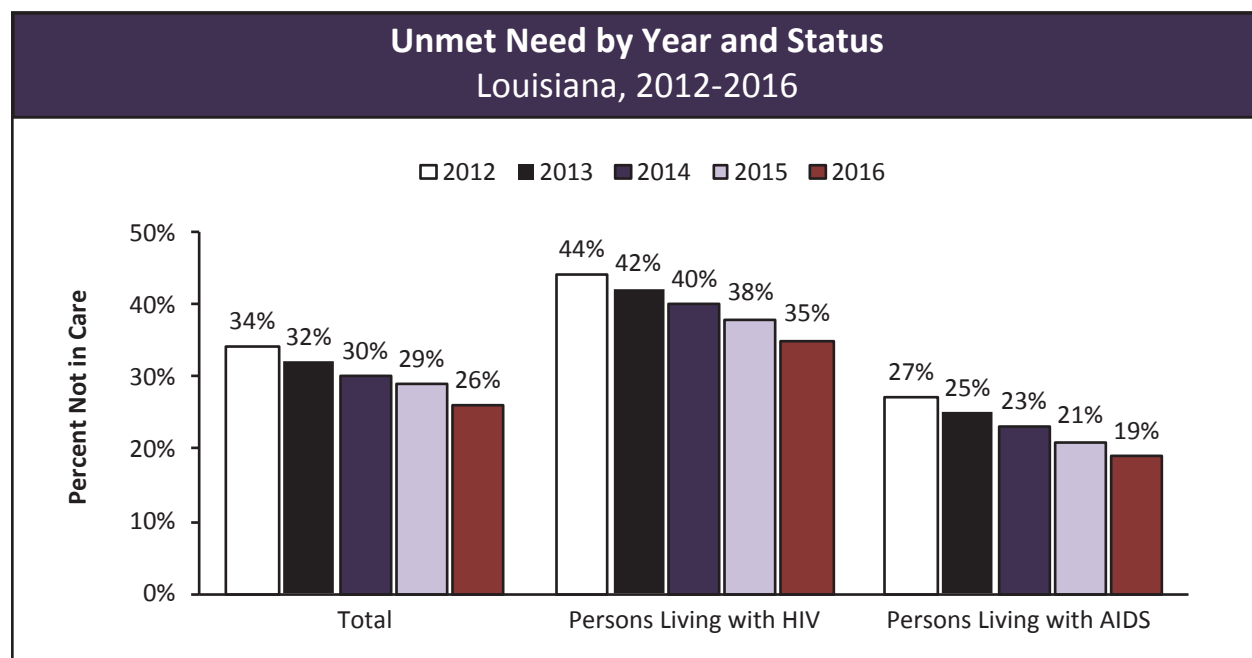


- In Louisiana, the proportion of newly diagnosed persons linked to care within 30 days has increased substantially over the past ten years. In 2007, only 53% of newly diagnosed persons were linked to care within 30 days. By 2016, the proportion had increased to 70% of newly diagnosed persons linked to care within 30 days. While the steady increase in linkage to care is promising, Louisiana still has work to do in order to reach the National HIV/AIDS Strategy (NHAS) Objective of 85% by 2020.
- Linkage to care rates in Louisiana have improved significantly between 2013-2016, in part due to interventions from the Disease Intervention Specialists (DIS) and the Linkage to Care Coordinators (LCCs). Late in 2013, LCCs were hired in Regions 1, 2, and 7 and tasked with engaging individuals without a CD4 count or viral load in the past 1-3 years, linking newly diagnosed persons without labs in the 6-12 months post-diagnosis, and reaching out to persons consistently exhibiting viral loads >1,000 copies/mL. By targeting regions with the highest HIV morbidity in the state, significant improvements have been made in linking HIV positive persons into medical care. By Spring 2016, each of the state's nine public health regions had designated LCCs working to link and re-engage persons with diagnosed HIV infection into medical care.

Unmet Need: Percentage of Persons out of HIV Medical Care

The primary focus of the Ryan White HIV/AIDS Program is to help ensure that individuals living with HIV routinely access primary medical care and medications in order to maintain their health and delay progression to an AIDS diagnosis or death. There are, however, many people who are living with HIV infection who do not regularly access medical care. Unmet need is defined as the number of individuals in a set geographic area who know their HIV status but have not accessed HIV-related primary medical care in a 12-month period, as measured by lack of evidence of a CD4 or VL test result in the last 12 months.

In Louisiana, SHP's Surveillance Unit manages and calculates the data needed to estimate unmet need. Persons who had at least one CD4 or VL test within a 12-month period are considered to have been "in care" during that year. Persons who did not are considered "out of care" and are deemed as having an "unmet need" for care and treatment. Louisiana's Public Health Sanitary Code requires that laboratories report all test results indicative of HIV infection for persons residing in Louisiana. As a result, laboratory data received by SHP's Surveillance Unit can be used to assess whether a person is in care or not in care during a specified time period.



- The overall percentage of persons with unmet need has steadily decreased over the last 5 years. In 2016, slightly more than one-quarter of all persons living with HIV infection in Louisiana did not have a single CD4 count or viral load lab conducted in that year and were considered to be out of HIV medical care.
- Persons living with AIDS continue to have lower percentages of unmet need than persons living with HIV. People living with AIDS may require more intensive antiretroviral treatment (ART) regimens and may have more symptoms, leading them to more frequent medical visits.

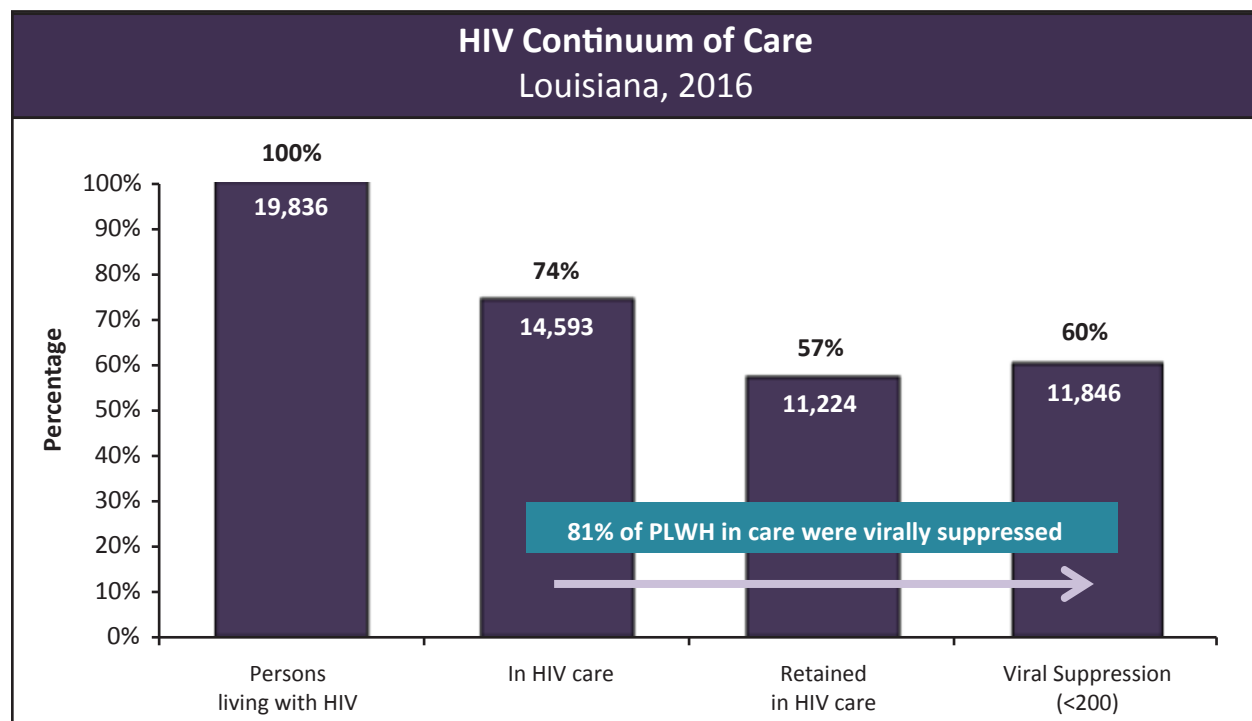
Unmet Need for Primary HIV Medical Care Louisiana, 2014-2016						
	2014		2015		2016	
	Percent in Care	Percent Not in Care (Unmet Need)	Percent in Care	Percent Not in Care (Unmet Need)	Percent in Care	Percent Not in Care (Unmet Need)
Overall	70%	30%	71%	29%	74%	26%
Persons living with HIV (non-AIDS)	60%	40%	62%	38%	65%	35%
Persons living with AIDS	77%	23%	79%	21%	81%	19%
Gender						
Men	68%	32%	69%	31%	72%	28%
Women	75%	25%	76%	24%	77%	23%
Transgender persons	82%	18%	79%	21%	82%	18%
Race/Ethnicity						
Black/African American	71%	29%	72%	28%	75%	25%
Hispanic/Latinx	47%	53%	49%	51%	51%	49%
White	71%	29%	73%	27%	75%	25%
Other	64%	36%	67%	33%	68%	32%
Age Group						
0-12	82%	18%	83%	17%	90%	10%
13-24	72%	28%	75%	25%	76%	24%
25-44	69%	31%	70%	30%	73%	27%
45-64	71%	29%	72%	28%	74%	26%
65+	69%	31%	68%	32%	72%	28%
Region						
1-New Orleans	70%	30%	71%	29%	74%	26%
2-Baton Rouge	75%	25%	77%	23%	79%	21%
3-Houma	74%	26%	75%	25%	77%	23%
4-Lafayette	68%	32%	68%	32%	70%	30%
5-Lake Charles	58%	42%	60%	40%	61%	39%
6-Alexandria	65%	35%	67%	33%	70%	30%
7-Shreveport	66%	34%	65%	35%	67%	33%
8-Monroe	68%	32%	67%	33%	70%	30%
9-Hammond/Slidell	73%	27%	73%	27%	76%	24%

- Of persons living with HIV infection in 2016, only 74% had at least one primary medical care visit during the year. Persons living with AIDS were more likely to have a medical visit (81%) compared to persons living with HIV (non-AIDS) (65%).
- Women and non-Hispanics were more likely to be receiving medical care.
- Persons residing in the New Orleans, Baton Rouge, Houma, and Hammond/Slidell regions were most likely to be in care, while persons in the Lake Charles and Shreveport regions were least likely to be in care.

Louisiana's Continuum of Care

The HIV Continuum of Care is a way to graphically represent the number of individuals living with HIV who are actually receiving the full benefits of the medical care and treatment they need. This model was first described by Dr. Edward Gardner and colleagues, who reviewed current HIV research and developed estimates of how many individuals with HIV in the US are engaged at various steps in the continuum of care from diagnosis through viral suppression. The following graph shows the Louisiana-specific continuum created by the STD/HIV Program using data from surveillance and laboratory reporting.

- Column 1: The number of persons living with HIV infection (PLWH) at the end of 2016 included in the continuum is limited to people living with HIV infection as of 12/31/2016, but who were diagnosed before 01/01/2016 and whose current address is in Louisiana. This number is smaller than the overall number of persons living with HIV infection presented in Chapter 1 because it removes anyone newly diagnosed in 2016. In 2016, there were 19,836 persons in Louisiana who met these criteria.
- Column 2: The number of people in HIV care includes all PLWH who had at least one CD4 count or VL test conducted in 2016. In 2016, 74% of Louisiana's PLWH had at least one medical care visit.
- Column 3: The number of people retained in HIV care includes the number of PLWH who had two or more CD4 counts or VL tests conducted in 2016 at least 90 days apart. In 2016, 57% of Louisiana's PLWH were retained in HIV medical care.
- Column 4: The number of people who are virally suppressed are the number of PLWH whose most recent VL test in 2016 was less than 200 copies/mL. In 2016, 60% of Louisiana's PLWH were virally suppressed at their most recent VL.
- An additional feature that Louisiana has added is the connection between Column 2 and Column 4. If viral suppression is assessed for people who had at least one medical care visit in 2016, 81% of the persons living with HIV infection in care are virally suppressed.

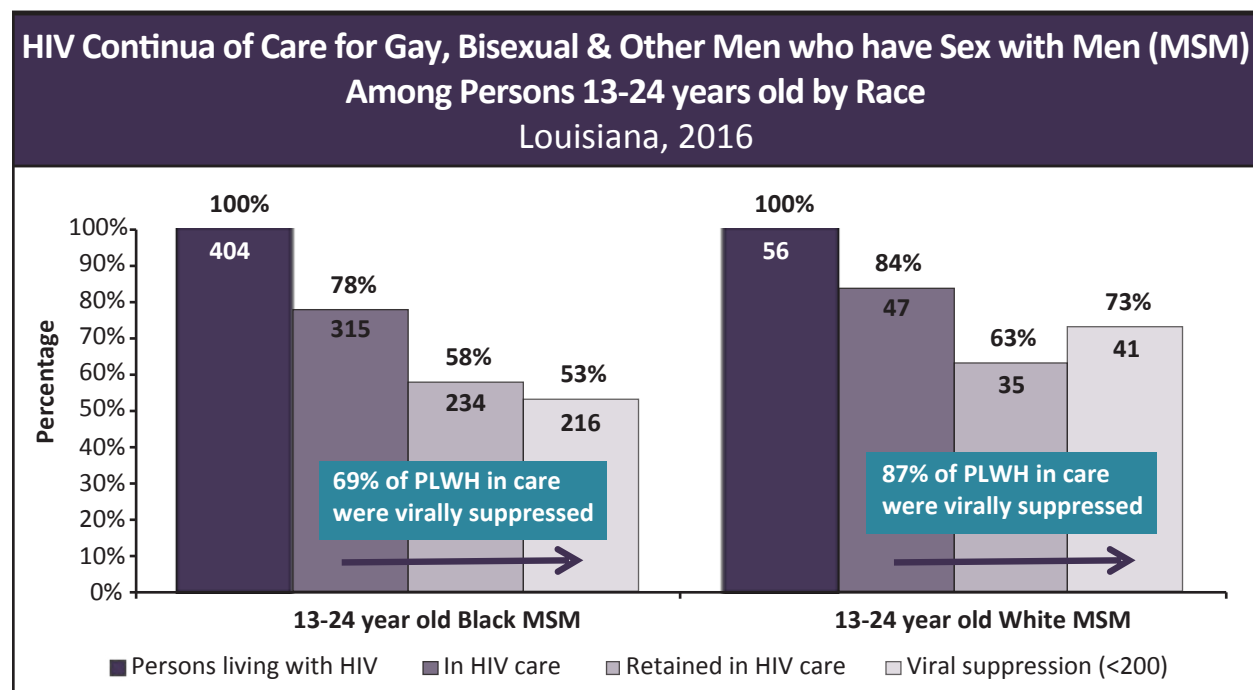


Viral Load Test Results by Region

Viral Load (VL) Test Results by Region Louisiana, 2016							
					Most recent VL Result in 2016 (among cases with VL lab)		
	Total No. PLWH in 2016	No. Cases with a VL Result in 2016	% of PLWH with a VL Result in 2016	% PLWH Virally Suppressed in 2016	Virally Suppressed ≤200 copies/mL	201-99,999 copies/mL	High VL ≥100,000 copies/mL
Region							
1-New Orleans	7,239	5,326	74%	62%	84%	13%	3%
2-Baton Rouge	5,002	3,918	78%	61%	78%	18%	4%
3-Houma	877	675	77%	65%	84%	13%	2%
4-Lafayette	1,601	1,116	70%	56%	80%	15%	4%
5-Lake Charles	1,010	619	61%	47%	77%	20%	3%
6-Alexandria	945	666	70%	52%	73%	22%	5%
7-Shreveport	1,846	1,209	65%	50%	77%	20%	3%
8-Monroe	1,083	754	70%	56%	80%	18%	2%
9-Hammond/Slidell	1,335	1,004	75%	62%	83%	14%	3%
Louisiana Total	20,938	15,287	73%	60%	81%	16%	3%

- In Louisiana, nearly three-quarters of all persons living with HIV in 2016 had a VL lab result during that year and 60% of those living with HIV were virally suppressed.
- The Baton Rouge region had the highest percent of PLWH who had a VL result in 2016 at 78%. The Lake Charles region had the lowest percentage of PLWH with a VL (61%) and the lowest percentage of PLWH who were virally suppressed (47%). The Houma region had the highest percentage of virally suppressed PLWH with 65%.
- Among Louisiana's PLWH who had a VL lab in 2016, 81% were virally suppressed (<200 copies/mL) at their last reported VL lab. The New Orleans and Houma regions had the highest percentage of virally suppressed in care persons at 84%. The Alexandria region had the lowest percentage of virally suppressed in care persons at 73% in 2016.

Visualizing Disparities with the HIV Continuum of Care



- Young gay, bisexual, and other men who have sex with men (MSM) comprise a significant proportion of new HIV diagnoses. Engaging HIV-positive persons in this population in HIV medical care and achieving viral suppression plays an important role in reducing the spread of HIV.
- Young, white MSM have significantly higher proportions of engagement in HIV medical care, retention, and viral suppression than young, black MSM. Among those in HIV medical care, 87% of 13-24 year old white MSM were virally suppressed as compared to only 69% of 13-24 year old black MSM. Young, white MSM have better outcomes on all measures of the HIV continuum as compared to all persons living with HIV in Louisiana, as well.
- The Louisiana Department of Health is currently implementing two Centers for Disease Control and Prevention (CDC) demonstration projects in the New Orleans Metropolitan Statistical Area with primary project aims to address the high HIV burden among MSM, in particular, the racial and gender disparities in this population. Below are descriptions of the demonstration projects:
 1. Project PrIDE (FOA PS15-1506) – The PrEP Implementation Data2Care Evaluation (PrIDE) 3-year demonstration project started in Fall 2015. PrIDE employs two strategies to reduce new HIV infections: 1) Engaging MSM and transgender persons in Pre-exposure Prophylaxis (PrEP) to prevent HIV acquisition and 2) “Data to Care” which utilizes HIV surveillance data to link and re-engage HIV positive persons to HIV medical care.
 2. THRIVE (FOA PS15-1509) – The Targeted Highly-Effective Interventions to Reverse the HIV Epidemic (THRIVE) is a 4-year demonstration project started in Fall 2015. THRIVE utilizes a community collaborative model to reduce HIV acquisition and transmission among MSM of color by increasing PrEP uptake, performing routine HIV/STD screening, and improving health outcomes for persons of color living with HIV through ART adherence and achievement of viral suppression.

Perinatal HIV Exposure and Congenital Syphilis

Active surveillance of perinatal HIV exposure and congenital syphilis is an important aspect in preventing disease transmission of HIV or syphilis to a newborn. Through proper care and treatment, both perinatal transmission of HIV and congenital syphilis can be prevented. The rate of HIV transmission from mother to child can be reduced from 25% to less than 1% with adherence to antiretroviral prophylaxis. Adequate treatment for syphilis during pregnancy is 98% effective in reducing congenital syphilis.^{xv} Early and repeat testing for HIV and syphilis during pregnancy is important in the timely treatment and reduction of transmission. In a move to reinforce these recommendations, Louisiana passed legislation in 2014 requiring physicians to repeat HIV and syphilis testing for pregnant women during their third trimester, in addition to testing already mandated during their first prenatal care visit.

Perinatal exposure to HIV and congenital syphilis are not equal in Louisiana. Black mothers under the age of 30 are affected more than any other race/ethnicity and age group in Louisiana. Barriers to care can include lack of transportation to and from healthcare appointments, low income, stigma, and gaps in other supportive services for pregnant women with these particular health concerns. While Louisiana's rates for perinatal HIV exposure/transmission and congenital syphilis have been historically higher than the US rate, Louisiana is committed to improving health and birth outcomes for women that have been affected by HIV and syphilis.

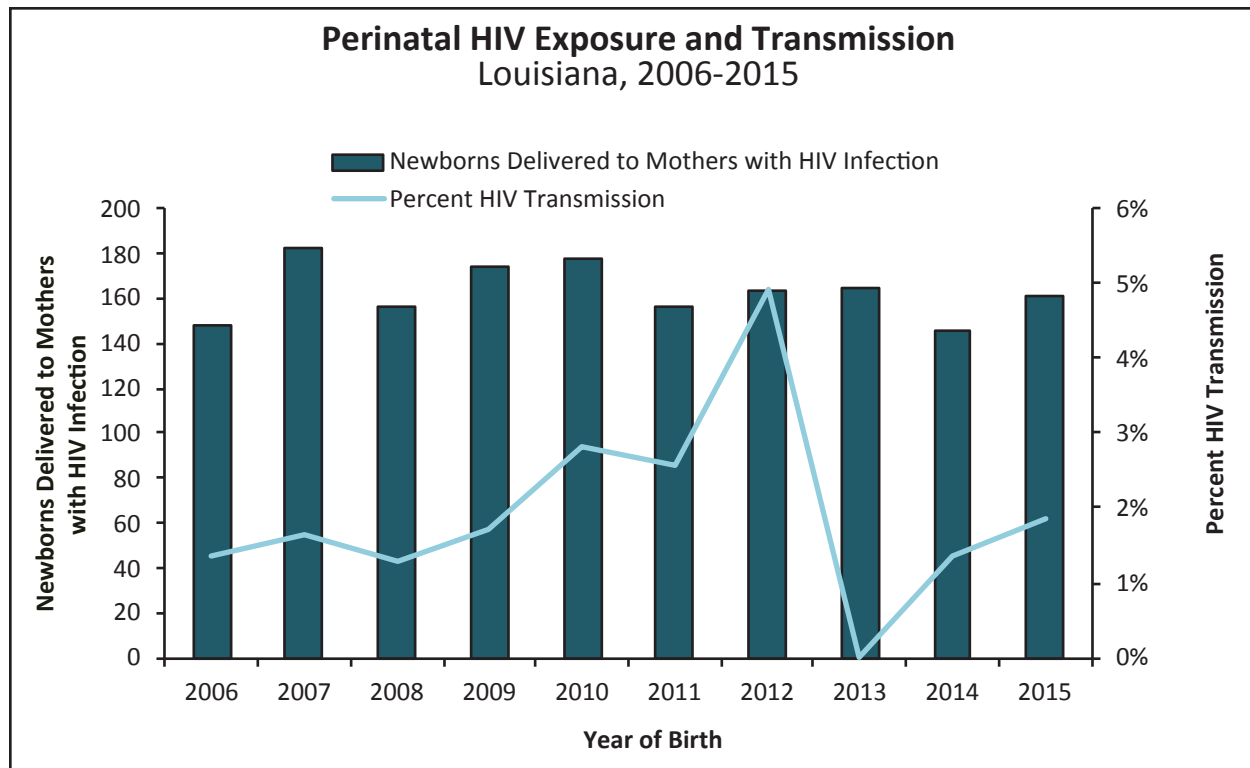
Perinatal HIV Exposure

Background and Overview

In 1994, the Pediatric AIDS Clinical Trials Group demonstrated that zidovudine (ZDV) administered to HIV-infected pregnant women could reduce the risk of perinatal transmission of HIV. As a result, the United States Public Health Service (USPHS) issued recommendations for the use of ZDV during pregnancy to reduce perinatal transmission. Subsequent clinical trials and observational studies demonstrated that combination antiretroviral (ARV) medication given to a mother was associated with further declines in transmission. The recommendations for prevention of perinatal transmission are continuously updated and are available from the NIH's AIDS Info website (<http://aidsinfo.nih.gov/>).^{xvi}

The CDC has published recommendations to include HIV testing as part of the routine screening panel for all pregnant women, as well as repeat testing during the third trimester in areas with high HIV incidence, which includes Louisiana. The CDC also recommends a rapid test at delivery for women without documented HIV test results.^{xvii} Louisiana law (Louisiana RS 40:1091) requires any physician providing medical care to a pregnant woman to offer an HIV test as a component of her routine laboratory panel at her first prenatal care visit and at the first prenatal care visit of the third trimester unless she specifically declines ("opts out"). In addition, the law allows physicians to test a child born to a woman whose HIV status is unknown at the time of delivery, without parental consent. Title 51 of the Administrative Code (Public Health -- Sanitary Code, available at: <http://doa.louisiana.gov/osr/lac/books.htm>) also requires the explicit reporting of pregnancy in an HIV-infected woman, as well as all HIV tests performed on children aged 0-6 years regardless of test result (positive or negative).

Perinatal HIV exposure surveillance requires several rounds of testing to determine whether an infant is definitively HIV positive or HIV negative. Reporting of this information ensures effective monitoring of all perinatal HIV exposures. Infants born to HIV-infected women need a recorded negative result on HIV tests conducted at one month and four months of age to be confirmed as HIV negative. Until an infant receives adequate HIV testing, that infant is considered to have an indeterminate HIV status.

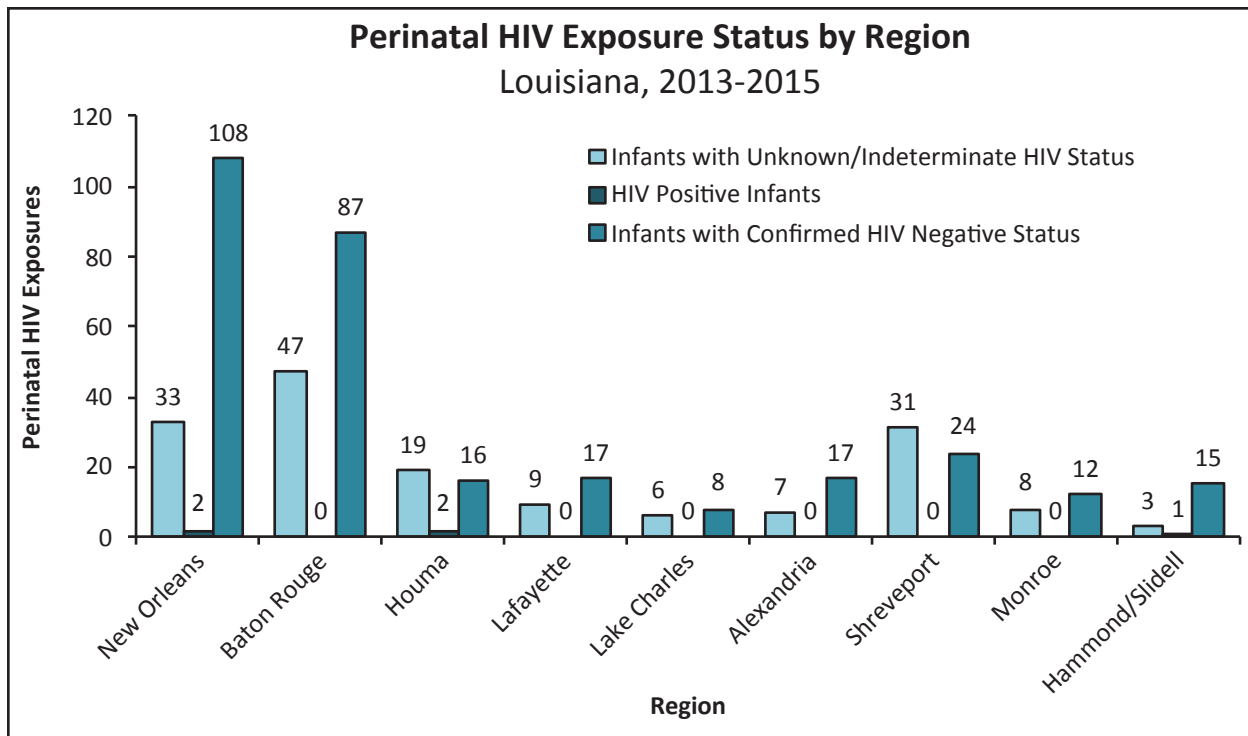


- In 2015, 161 infants were perinatally exposed to HIV in Louisiana.*
- There were three cases of perinatal HIV transmission in 2015 (1.9%).
- Over the past ten years, the highest percentage of perinatal transmission was in 2012 (6%), while 2013 was the lowest (0%).
- Preliminary data indicate two confirmed cases of perinatal transmission of HIV in 2016 and no cases of perinatal transmission in 2017.

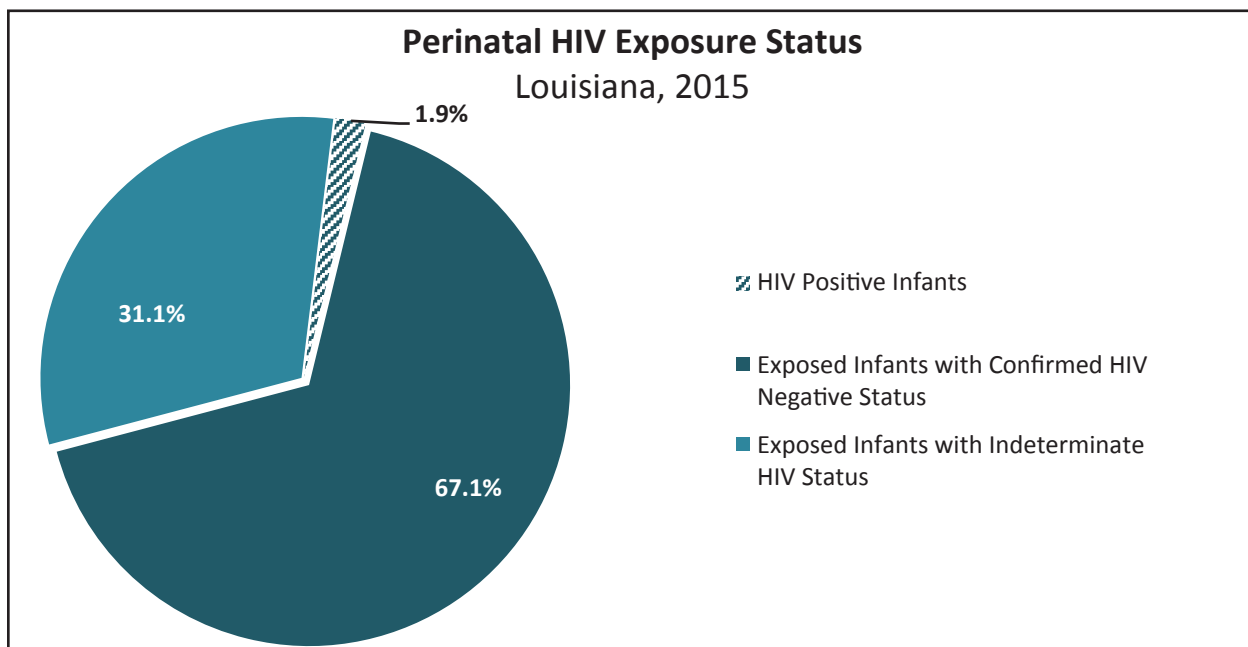
Perinatal HIV in the United States

In 2015, an estimated 120 children under the age of 13 were infected with HIV, 86 were a result of perinatal transmission.^{xviii} While the United States has a low rate of mother-to-child transmission (MTCT) of HIV, the CDC has proposed a framework to end MTCT in the United States, which is defined as a transmission rate of less than 1% of infants born to HIV-infected mothers. The framework includes universal testing (i.e. opt-out testing), data reporting and long-term monitoring, as well as reproductive health and family planning services for women. These efforts, individually managed by each state, sets a foundation for the elimination of MTCT through identifying HIV positive women before they are pregnant, providing care for them while they are pregnant, and monitoring of women out of care or in need of other services related to their infection.^{xix}

*One infant died within 24 hours of birth due to extreme prematurity (21 weeks gestation) and is not included in additional data presentations. The mother of the infant is presented in the remainder of this chapter.



- Between 2013 and 2015, HIV positive mothers delivered newborns in all nine public health regions in Louisiana. The New Orleans region had the highest number of perinatal exposures (143 exposures), including two transmissions. The Baton Rouge region had the second highest number of perinatal exposures (134 exposures) and zero transmissions.
- Approximately 34% of HIV exposed infants born between 2013 and 2015 have an indeterminate HIV status. To decrease the number of perinatal exposure cases with an indeterminate status, more work must be done to improve reporting of negative test results, create better access to testing, and conduct more complete follow-up on infants.



- Approximately 31% of infants born in 2015 have an indeterminate HIV status due to an insufficient number of labs to confirm serostatus.

The following table shows demographic information for mothers infected with HIV who delivered a newborn in 2015. There were four sets of twins. A total of 157 mothers are included below who gave birth to 161 infants.

Demographics of Mothers with HIV Infection Louisiana, 2015		
	Mothers with HIV Infection	Percent
Total	157	100.0%
Race/Ethnicity		
Asian	2	1.3%
Black/African American	141	89.8%
Hispanic/Latina	2	1.3%
White	12	7.6%
Age at Delivery		
15-19	5	3.2%
20-24	46	29.3%
25-29	48	30.6%
30-34	33	21.0%
35-45	25	15.9%
Imputed Transmission Category		
Injection Drug User (IDU)	9	5.7%
High Risk Heterosexual (HRH)	146	92.9%
Perinatal/Pediatric*	1	0.6%
Other*	1	0.6%
Delivery Type		
Vaginal	62	39.5%
Elective Cesarean	74	47.1%
Non-elective Cesarean	20	12.7%
Cesarean, unknown type	1	0.6%
Region		
1-New Orleans	50	31.9%
2-Baton Rouge	40	25.5%
3-Houma	10	6.4%
4-Lafayette	12	7.6%
5-Lake Charles	2	1.3%
6-Alexandria	7	4.5%
7-Shreveport	17	10.8%
8-Monroe	10	6.4%
9-Hammond/Slidell	9	5.7%

*Perinatal/Pediatric transmission and Other are not imputed.

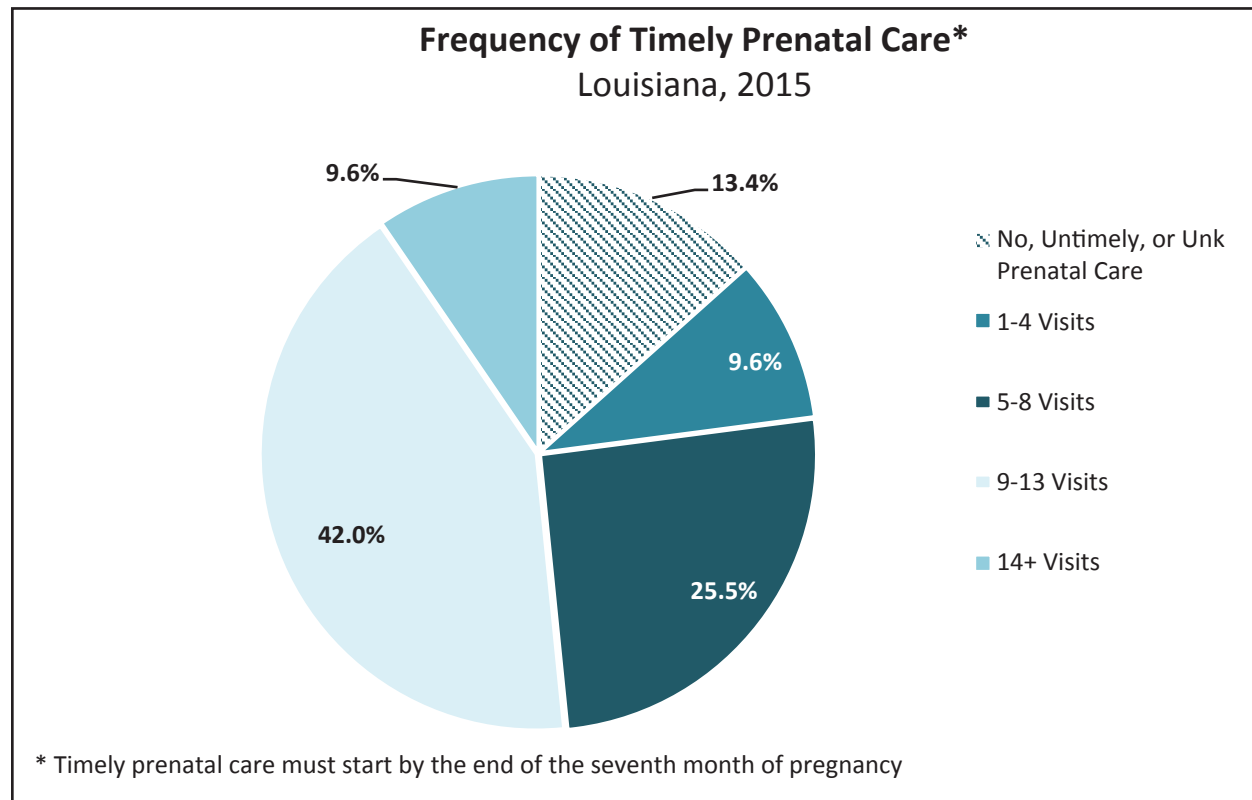
- Mothers with HIV infection were predominately black (90%) and between 20-34 years old (81%).
- Nearly six percent of mothers were injections drug users and one mother was herself perinatally infected; the majority were infected by high risk heterosexual sex (93%).
- In 2015, 32% of HIV-infected women who delivered a newborn lived in the New Orleans region, and 26% lived in the Baton Rouge region.

Birth Outcomes of HIV Exposed Newborns Louisiana, 2015		
	HIV Exposed Newborns	Percent
Total	160	100.0%
Birth Weight		
Low (<2500g)	35	21.9%
Normal (≥2500g)	125	78.1%
Gestational Age		
Preterm (<37 weeks)	31	19.4%
Early Term (37-38 weeks)	83	51.9%
Full Term (≥39 weeks)	46	28.8%

- Among HIV exposed newborns in Louisiana in 2015, nearly 22% were born at a low birth weight (<2500g), and 19% were born preterm (before 37 weeks gestational age). This is compared to all newborns born in Louisiana in 2015, where 11% were low or very low birthweight and 12% were born preterm.^{xx}

Prenatal Care and Perinatal Transmission Risk Reduction

The American Congress of Obstetricians and Gynecologists (ACOG) recommends a total of 14 prenatal care visits during pregnancy.^{xxi} Lack of prenatal care is one of the factors that most significantly impacts perinatal transmission since women who are not in prenatal care are less likely to get tested for HIV and receive ARVs during their pregnancy.



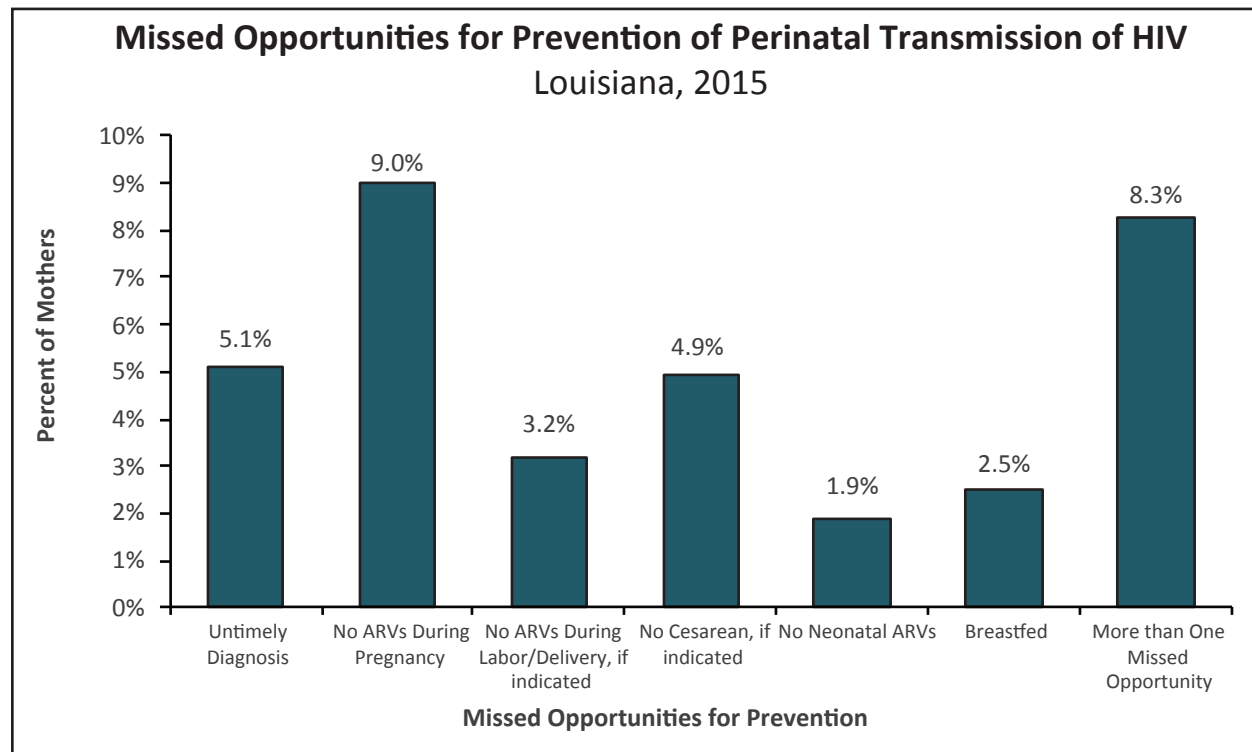
- In 2015, approximately 13% of mothers with HIV infection had no, untimely, or unknown status of prenatal care, 10% of mothers had 1-4 visits, 26% had 5-8 visits, and 42% of mothers had 9-13 prenatal visits.
- Only 10% of mothers had the recommended number of 14 or more prenatal care visits.

Perinatal HIV Exposure Risk and Missed Opportunities

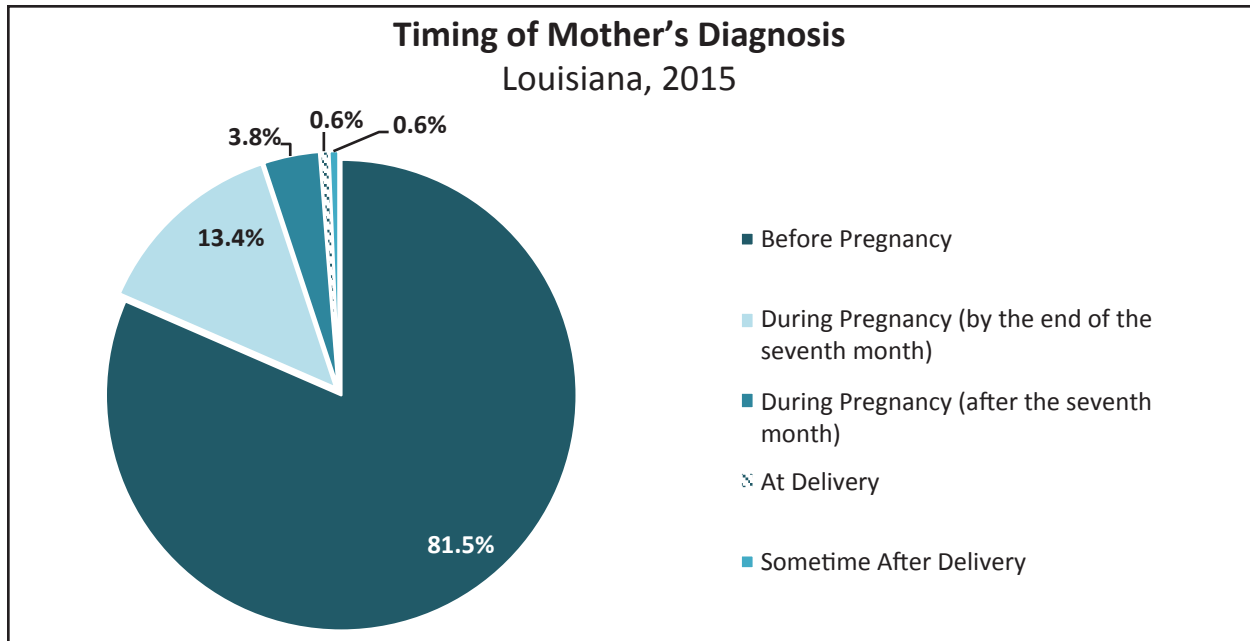
Risk of perinatal transmission of HIV depends on fetal/infant exposure to maternal virus. This exposure can be reduced by adhering to the following recommendations:

- The mother's infection is diagnosed early (by the end of the seventh month of pregnancy) so that maternal viral load can be reduced
- The mother receives ARVs during pregnancy
- The mother receives ARVs during labor/delivery (recommended if the maternal viral load is over 1,000 copies/mL)
- The newborn is delivered by cesarean section (recommended if the maternal viral load is over 1,000 copies/mL)
- The newborn receives ARVs after delivery
- The newborn/infant is not breastfed

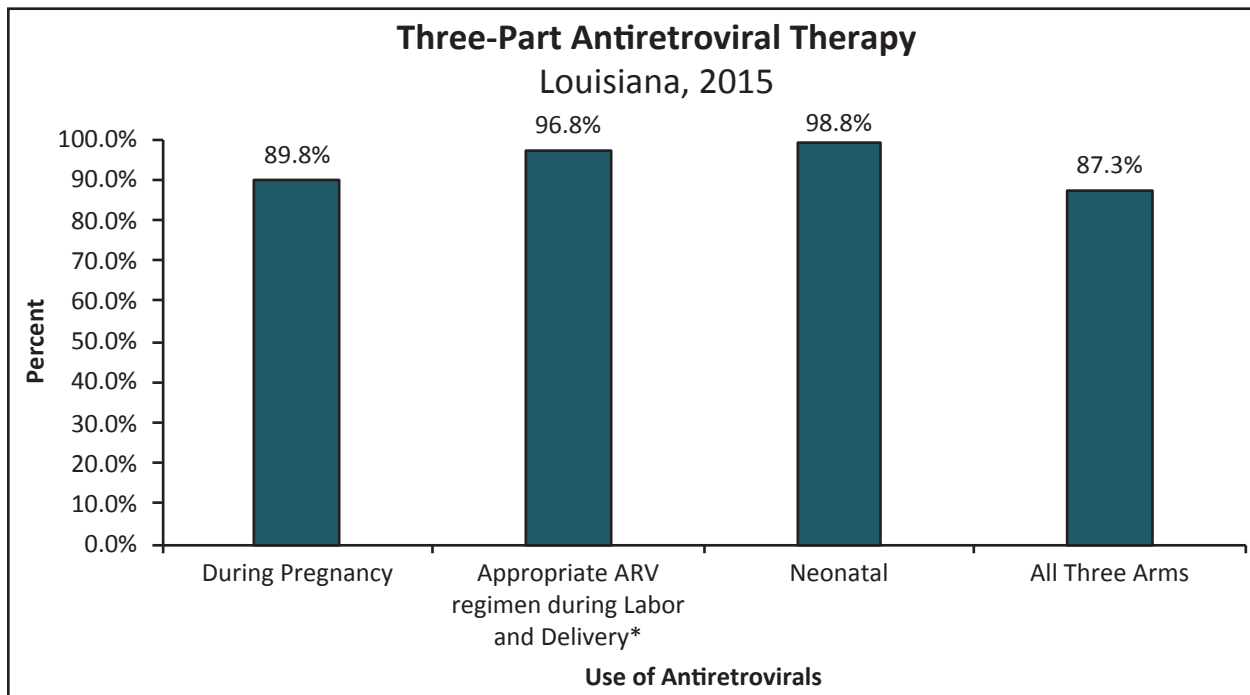
Following all of these recommendations can reduce the rate of perinatal transmission to less than 1%. Although prenatal care is not listed among these missed opportunities because it does not directly increase fetal exposure to maternal virus, it is a crucial component of the prevention of perinatal transmission and facilitates testing and treatment for pregnant women.



- In 2015, the most prevalent missed opportunity was no ARVs during pregnancy (9%). Five percent of mothers had an untimely HIV diagnosis and no cesarean section, where indicated (Viral Load >1,000 copies/mL). The use of ARV medication during pregnancy depends on several factors including timing of diagnosis, prenatal care, and mother's access to ARVs. Overall, 8% of mother-infant pairs had one or more missed opportunities for prevention of perinatal transmission.



- Eighty-two percent of mothers were diagnosed with HIV before pregnancy, approximately 13% were diagnosed while pregnant but before their seventh month of pregnancy, 4% diagnosed after the seventh month, one mother was diagnosed at delivery, and one mother was diagnosed after delivery.



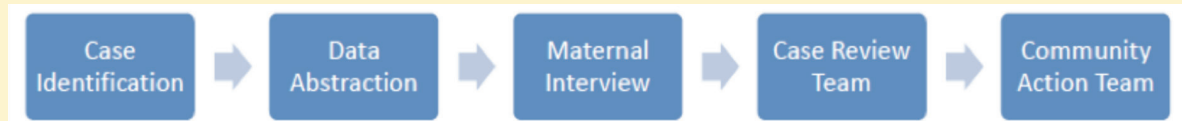
*Includes women given ARVs during labor and delivery when indicated (viral load >1,000 copies/mL) and women who were virally suppressed at time of delivery.

- Antiretroviral therapy administered to women with HIV during pregnancy, labor/delivery and to newborns can greatly reduce perinatal transmission to less than 1%.
- In 2015, 90% of HIV positive women in Louisiana received ARV therapy during pregnancy; 97% received appropriate care and treatment if indicated during labor/delivery; and almost 99% of newborns received prophylactic zidovudine shortly after birth. Overall, 87% of mother-infant pairs received all three recommended components of the antiretroviral prophylaxis protocol.

Highlight

Fetal Infant Mortality Review/HIV (FIMR/HIV)

In 2009, the Louisiana STD/HIV Program and the Louisiana Bureau of Family Health partnered and were funded to carry out a perinatal HIV prevention methodology, based upon the Fetal Infant Mortality Review (FIMR), in the New Orleans region. The FIMR/HIV Prevention Methodology is an action-oriented community process that continually assesses, monitors, and works to improve service systems and community resources for women, infants, and families. The goal of the FIMR/HIV Prevention Methodology is to improve perinatal HIV prevention systems by using the FIMR case review and community action process. The FIMR/HIV Methodology follows a five-step process for data collection, review, and community action:



Cases reviewed to date include all cases of perinatal transmission of HIV from 2009 onward, as well as other cases with noted gaps in HIV or prenatal care. Louisiana is no longer funded specifically for FIMR/HIV, but continues to implement this methodology in the New Orleans and Baton Rouge regions with resources from the STD/HIV Program. Below are several recent recommendations from the FIMR/HIV Case Review Team.

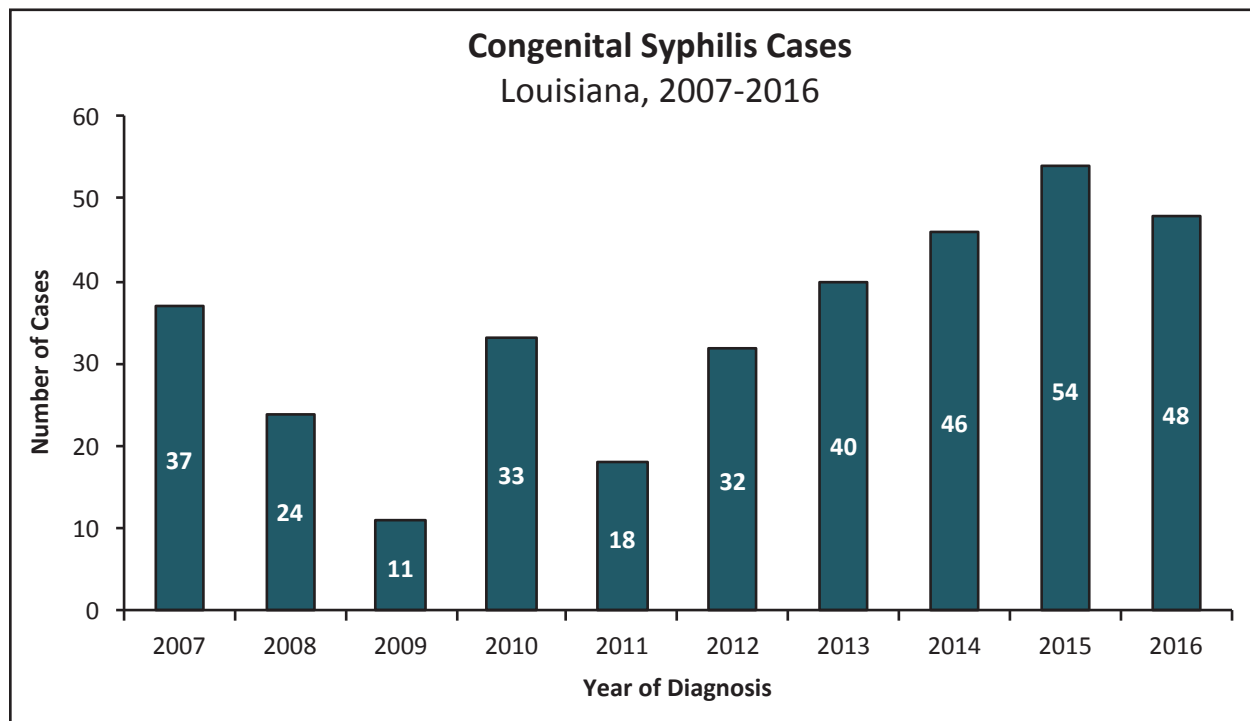
FIMR/HIV Recommendations

- **HIV Testing and Care for Emergency Departments:** If a mother does not have prenatal care during her pregnancy, a visit to the Emergency Department may be the only contact she has with the health care system. HIV testing for women, especially pregnant women, during Emergency Department visits would provide a testing opportunity as well as care for women who do not otherwise utilize the healthcare system.
- **Hospital Social Workers and Mental Health Services:** Hospital Social workers can be a crucial asset for women with HIV giving birth in a hospital, especially for women in greatest need of other social support services, including mental health and referrals to housing services, food/nutrition assistance and other services.

Congenital Syphilis

Syphilis is both curable and easily treated. Subject to the stage of infection, recommended treatment of syphilis during pregnancy ranges from one to three shots of benzathine penicillin, initiated at least 30 days prior to delivery. A case of congenital syphilis occurs when a pregnant woman with a current syphilis infection passes the infection on to her infant in utero or during delivery, most often due to inadequate and/or incomplete treatment, reinfection during pregnancy, or no treatment during pregnancy. Congenital syphilis may result in stillbirth, infant death and/or other significant adverse clinical outcomes.^{xxii}

The STD/HIV Program (SHP) evaluates the medical records of all infants exposed to syphilis and uses the CDC case report algorithm for case determination. This algorithm considers maternal testing and treatment of syphilis during pregnancy as well as infant testing and signs of congenital syphilis at birth, though clinical manifestations and/or morbidity of congenital syphilis need not be present in the infant to be considered a reportable case.



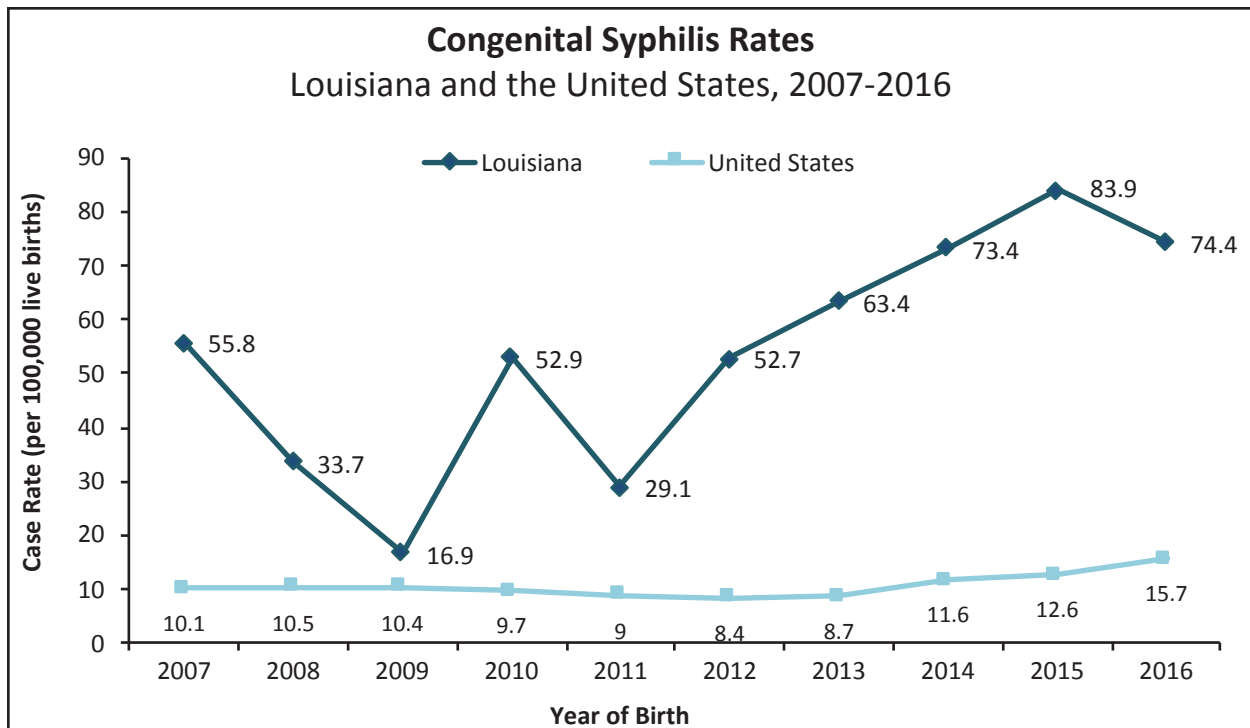
- Congenital syphilis cases have fluctuated over the past ten years, with a low of 11 cases in 2009 and a high of 54 cases in 2015.
- The number of congenital syphilis cases in Louisiana decreased for the first time in five years from 54 cases in 2015 to 48 cases in 2016, an 11% decrease. In 2017, congenital syphilis cases increased to 59 cases.

The following table shows demographic information for mothers of congenital syphilis cases in 2016. A total of 48 mothers are included below who gave birth to 48 infants.

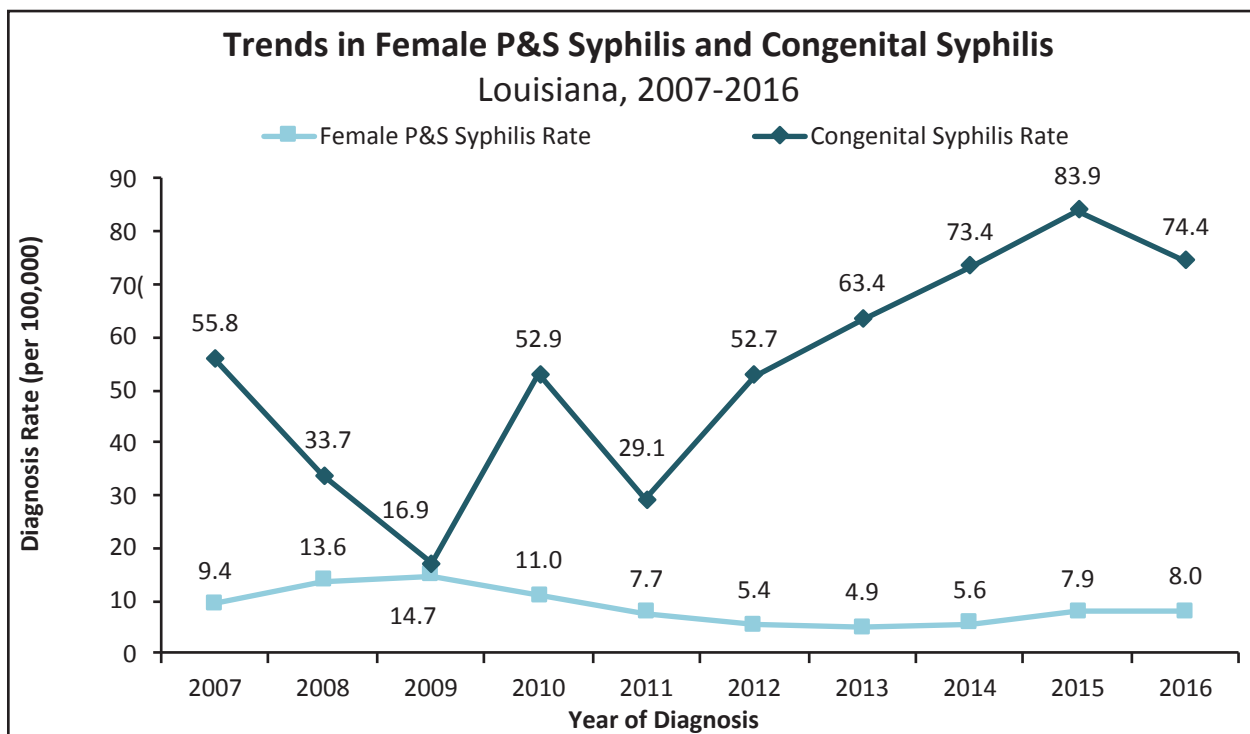
Congenital Syphilis Louisiana, 2016		
	Number	Percent
Total Cases	48	100%
Case Definition		
Presumed Case*	45	93.8%
Syphilitic Stillbirth	3	6.3%
Maternal Race/Ethnicity		
Black/African American	44	91.7%
White	4	8.3%
Maternal Age Group		
15-19	13	27.1%
20-24	20	41.7%
25-29	7	14.6%
30-34	6	12.5%
35+	2	4.2%
Region		
1-New Orleans	5	10.4%
2-Baton Rouge	11	22.9%
3-Houma	5	10.4%
4-Lafayette	5	10.4%
5-Lake Charles	1	2.1%
6-Alexandria	1	2.1%
7-Shreveport	8	16.7%
8-Monroe	9	18.8%
9-Hammond/Slidell	3	6.3%

*A presumed case of syphilis is defined as an infant whose mother had untreated or inadequately treated syphilis at delivery or an infant who had a reactive test for syphilis and possible signs of syphilis at birth.

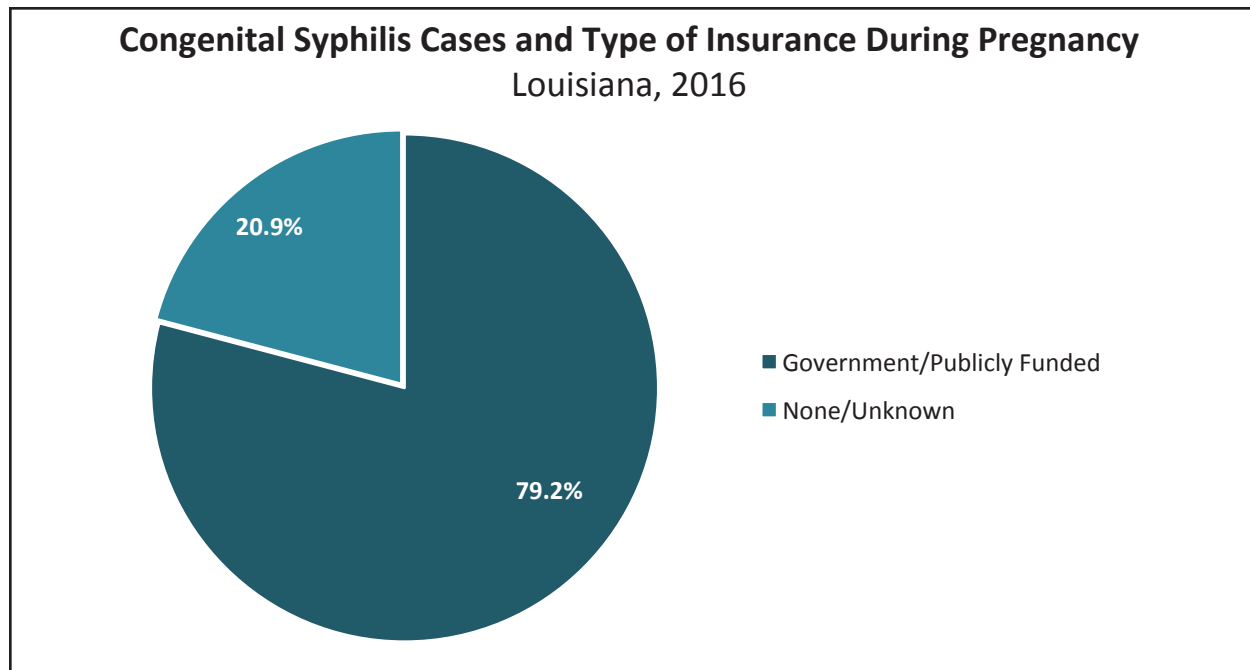
- In 2016, 92% of mothers of the 48 congenital syphilis cases were black, and 8% were white.
- Approximately 83% of mothers were under 30 years of age when they delivered.
- All nine of Louisiana's public health regions had at least one case of congenital syphilis. The Baton Rouge region had the highest proportion of cases (23%), followed by Monroe (19%) and Shreveport (17%).



- Louisiana's congenital syphilis rate in 2016 decreased for the first time since 2011, but ranked 1st in the US for congenital syphilis with a case rate of 74.4 per 100,000 live births.
- Thirty-seven states in the nation reported one or more cases of congenital syphilis in 2016. The congenital syphilis rate in the U.S. continues to rise. The national rate of congenital syphilis increased from 12.6 cases per 100,000 live births in 2015 to 15.7 cases per 100,000 live births in 2016.
- In 2016, Louisiana's congenital syphilis rate was over five times the national rate.



- National trends in congenital syphilis tend to follow trends for primary and secondary syphilis in women with a one to two year lag. Since 2013, the P&S syphilis rate among women increased by 63% in Louisiana.



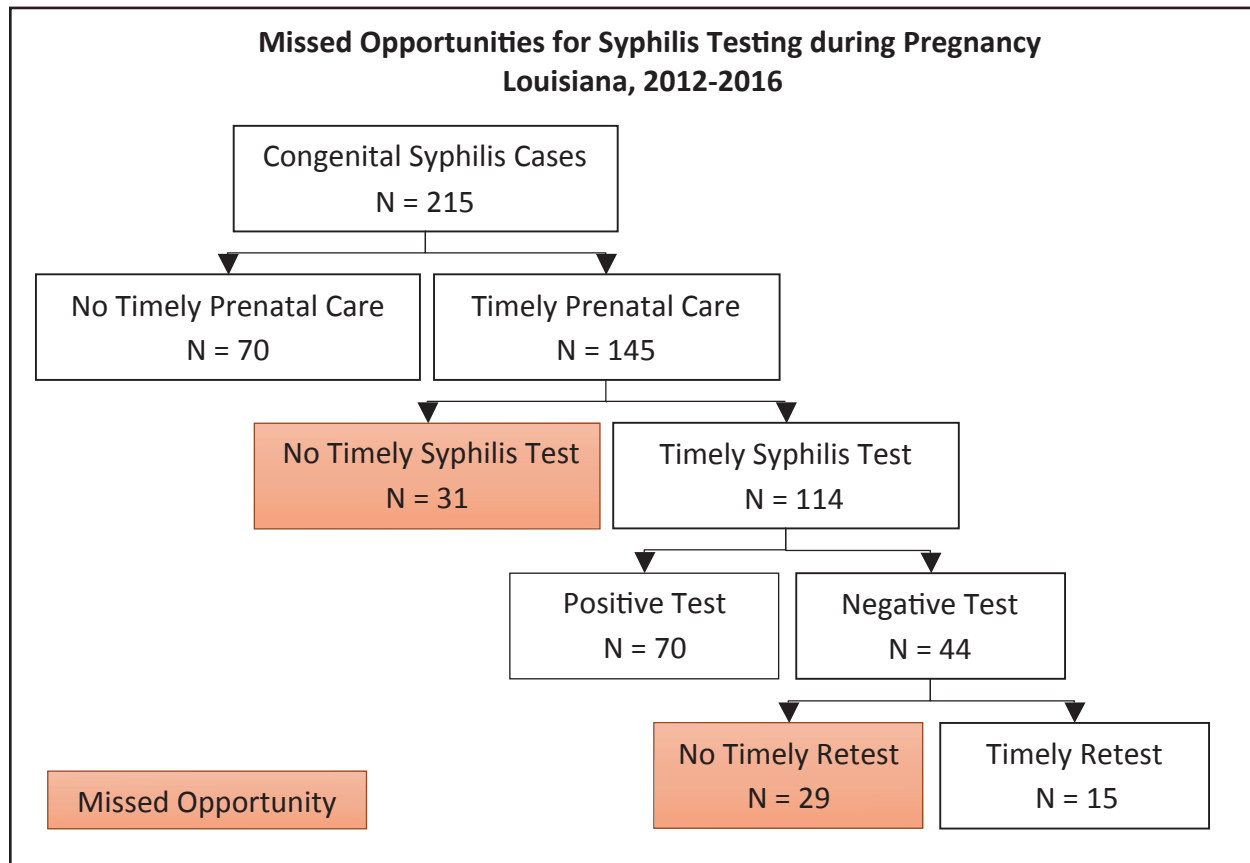
- While insurance is not a direct measure of income, it can help identify where the greatest need in prevention is.
- Nearly 80% of women utilized government/publicly funded insurance during their pregnancy.

Prenatal Care and Birth Outcomes of Congenital Syphilis Cases Louisiana, 2016		
	Number	Percent
Total Cases	48	100.0%
Frequency of Prenatal Care		
No Prenatal Care	9	18.8%
1-4 Prenatal Visits	6	12.5%
5-8 Prenatal Visits	16	33.3%
9-13 Prenatal Visits	13	27.1%
14+ Prenatal Visits	4	8.3%
Birth Weight		
Low Birth Weight (<2500g)	20	41.7%
Normal Birthweight (≥2500g)	28	58.3%
Gestational Age		
Preterm (<37 weeks)	17	35.4%
Term (≥37 weeks)	31	64.6%

- Of the 48 mothers, 19% had no prenatal care and 13% attended between 1-4 prenatal visits. Eight percent of mothers had the ACOG recommended number of 14 or more prenatal visits.
- Infants born prematurely or underweight have greater health risks during their first year of life, as well as later in life. Nearly 42% of congenital syphilis cases in 2016 had a low birth weight (under 2500 grams) and 35% were preterm (prior to 37 weeks gestation).

Missed Opportunities for Syphilis Testing

Syphilis testing during pregnancy is a crucial aspect of preventing cases of congenital syphilis. In 2007, Louisiana enacted a law requiring that physicians offer opt-out syphilis testing during a woman's first prenatal care visit. In 2014, Louisiana extended the law to require that physicians also offer opt-out syphilis testing at the first prenatal care visit of the third trimester. In the chart below, 'Timely Prenatal Care' is prenatal care that starts at least 60 days before delivery and a 'Timely Syphilis Test' is a syphilis test conducted at least 45 days before delivery. This timing allows ample time for a woman to be treated for syphilis before delivery.



Approximately 21% of the women who delivered a newborn with congenital syphilis and who had timely prenatal care were never tested for syphilis during pregnancy. Physicians are required to offer a syphilis test at the first prenatal care visit, which could have prevented these cases of congenital syphilis.

A large proportion (61%) of the women who delivered a newborn with congenital syphilis and who had timely prenatal care did have a timely, positive syphilis test. These women may not have been adequately treated for syphilis during pregnancy or were adequately treated but re-infected. Finally, 39% of women received timely, negative syphilis tests but were not retested later in pregnancy. Timely third trimester syphilis testing is essential for preventing cases in which syphilis infection or seroconversion occurs late in pregnancy.

Profile of STDs in Louisiana

Introduction to STD Surveillance

The Louisiana Department of Health Office of Public Health STD/HIV Program's (SHP) Sexually Transmitted Disease (STD) Surveillance Program collects and analyzes data on diagnoses of syphilis (all stages), congenital syphilis, gonorrhea, and chlamydia. Louisiana's Sanitary Code mandates that all medical providers and laboratories report these STDs to SHP along with basic demographic and residence information. Funding for STD Surveillance comes from the Centers for Disease Control and Prevention (CDC).

Reports of positive syphilis tests are sent to the field staff in each region for evaluation and follow-up investigations, when needed. Positive chlamydia and gonorrhea tests are reviewed in the state central office and presently do not receive additional follow-up by regional staff except for select persons found to be co-infected with gonorrhea and HIV.

Data from STD surveillance activities are analyzed and non-identifying summary information is provided to public health programs, medical providers, researchers, and the general public through reports, presentations, data requests, and fact sheets. The information is provided for the purposes of program planning, education, and evaluation.

Louisiana consistently experiences some of the highest rates of STDs in the United States. Syphilis, chlamydia, and gonorrhea are the three most commonly reported STDs. In 2016, Louisiana had the highest primary and secondary (P&S) syphilis diagnosis rate, the 2nd highest for gonorrhea diagnosis rate, and the 2nd highest chlamydia diagnosis rate according to the CDC's *2016 STD Surveillance Report*.

The data presented below represent all new diagnoses of chlamydia, gonorrhea, P&S syphilis, and early latent (EL) syphilis diagnosed from 2007 to 2016 and reported to SHP before April 28, 2017. This report presents both counts of STD diagnoses and STD diagnosis rates. Rates take into account differing population sizes among demographic groups or areas. Comparing rates between two or more groups or areas can identify important differences.

Trends in STD Cases Louisiana, 2007-2016										
Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Chlamydia	19,362	23,536	28,148	29,151	31,614	27,353	28,739	28,896	32,305	31,727
Gonorrhea	11,137	9,766	9,150	8,912	9,169	8,873	8,669	8,978	10,274	10,783
P&S Syphilis	533	721	742	547	447	339	423	575	696	750
EL Syphilis	738	886	772	739	488	342	276	372	439	568

In 2016, 31,727 chlamydia diagnoses, 10,783 gonorrhea diagnoses, 750 P&S syphilis diagnoses, and 568 early latent (EL) syphilis diagnoses were reported in Louisiana.

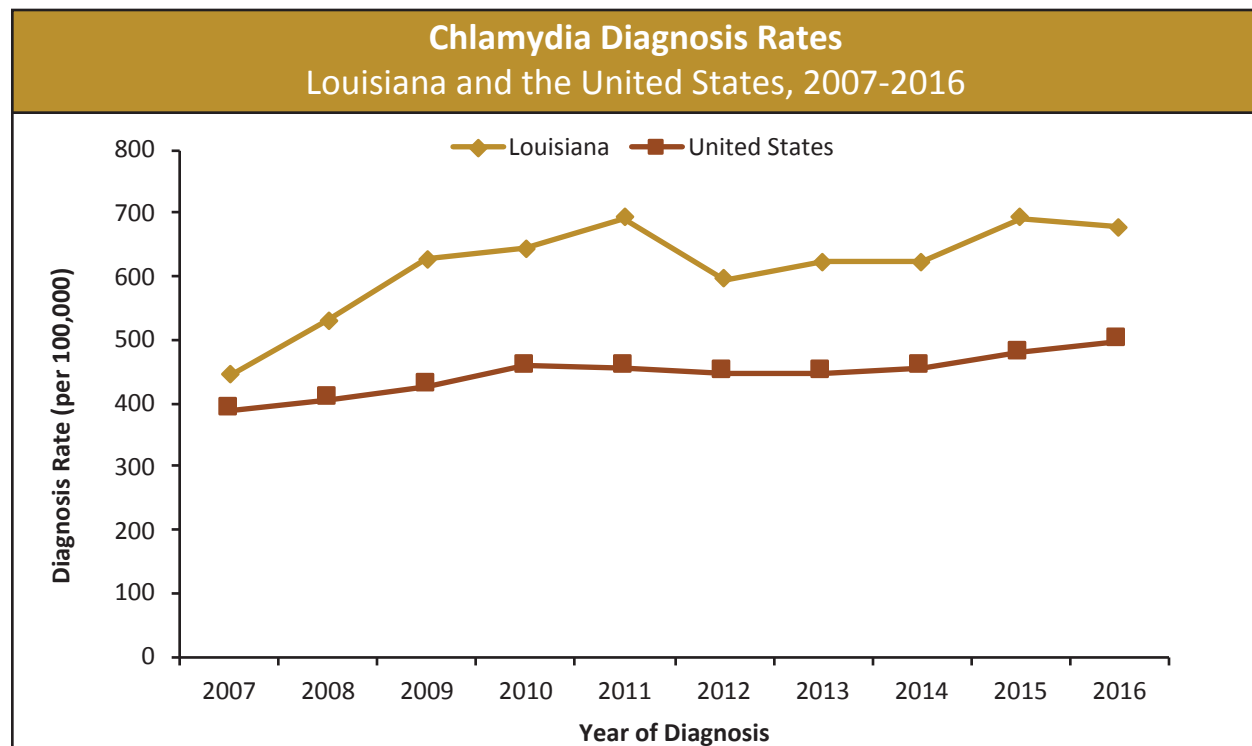
Chlamydia

Caused by the bacterium *Chlamydia trachomatis*, chlamydia is the most commonly diagnosed STD in the United States. 2013 was the first time that the chlamydia diagnosis rates decreased nationally since reporting began. National rates began to rise again in 2014. Though chlamydial infections are often asymptomatic, symptoms can range from urethritis or vaginitis to severe pelvic inflammatory disease (PID) in women. PID can cause infertility, ectopic pregnancy, and chronic pelvic pain. Pregnant women with chlamydia can pass the infection to their infants during delivery, potentially causing health issues such as ophthalmia neonatorum or pneumonia. The CDC recommends annual screening of all sexually active women under 25 years.^{xxiii}

10 Year Trends in Chlamydia Diagnoses

There were 31,727 chlamydia diagnoses reported in Louisiana in 2016. This represents a 2% decrease in the number of diagnoses from 2015, when 32,305 diagnoses were reported. Over the past 10 years, the number of new chlamydia diagnoses has fluctuated from a low of 19,362 in 2007 to a high of 32,305 in 2015.

Some of the rise in diagnoses may be due to improved chlamydia screening practices. Louisiana's public health units have replaced genetic probe testing with the Amplified Nucleic Acid Test as recommended by the CDC, which has increased sensitivity, capturing more infections.^{xxiv} In addition, screening for chlamydia is performed for all sexually active female patients age 30 and younger in Louisiana's family planning clinics.



- In 2016, the chlamydia diagnosis rate in Louisiana was 677.7 per 100,000 population, a decrease of 2% from the 2015 rate of 691.6 diagnoses per 100,000. The 2016 Louisiana rate was 1.4 times higher than the 2016 national rate of 497.3 per 100,000 population. It should be noted that in 2012, intensive deduplication efforts were begun in Louisiana which may be responsible for the reduction in diagnosis counts and rates from previous years.

Chlamydia Diagnoses by Sex at Birth, Race/Ethnicity, and Age

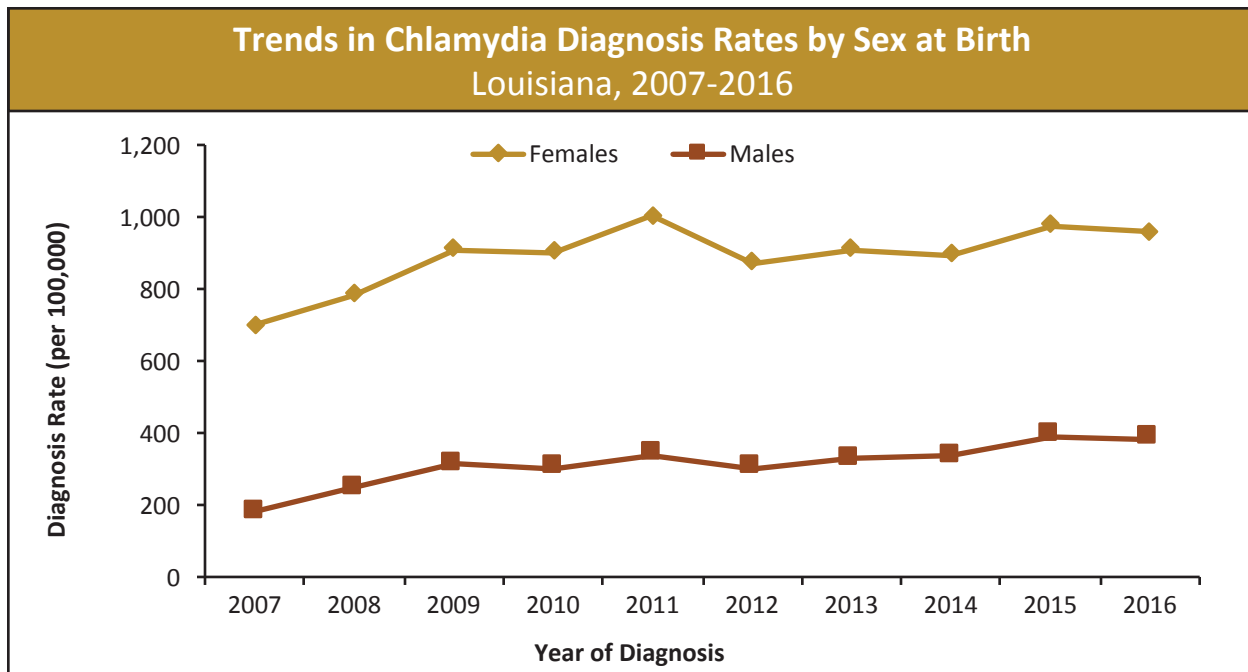
Although STDs affect persons of all sexes, ages, and race/ethnicities in Louisiana, the impact is not the same across all populations. Identifying the populations most at risk of contracting an STD helps in planning STD prevention activities and services, and in determining the most effective use of limited resources.

Characteristics of Persons Diagnosed with Chlamydia Louisiana, 2016			
	Cases	Percent	Rate**
Total	31,727	100%	677.7
Sex at Birth*			
Female	22,942	72.3%	959.0
Male	8,784	27.7%	383.7
Unknown	1	0.0%	-
Race/Ethnicity*			
Black/African American	22,426	70.9%	1,491.9
Hispanic/Latinx	1,120	3.5%	474.3
White	7,786	24.6%	282.0
Other/Multi-race	319	1.0%	-
Unknown	76	0.2%	-
Age Group*	Age at Diagnosis		
0-9	19	0.1%	3.1
10-14	318	1.0%	104.3
15-19	10,106	31.9%	3,336.0
20-24	11,914	37.6%	3,644.0
25-29	5,275	16.6%	1,512.1
30-34	2,256	7.1%	677.9
35-39	989	3.1%	324.5
40-44	362	1.1%	134.3
45+	485	1.5%	25.9
Unknown	3	0.0%	-

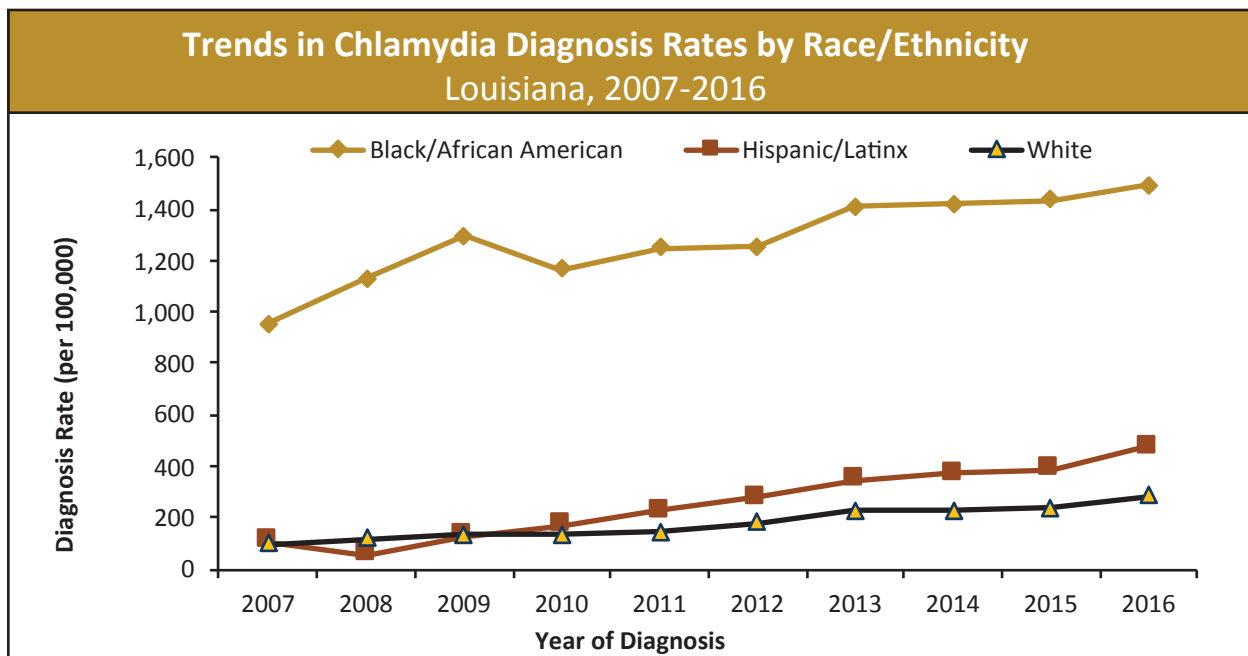
* Demographic information not available through all reporting mediums

** Rate per 100,000

- In 2016, there were 22,942 chlamydia diagnoses in females, decreasing 4% from the 23,342 diagnoses in 2015. The number of male chlamydia diagnoses in Louisiana decreased 2%, from 8,963 in 2015 to 8,784 in 2016. Overall, 72% of reported chlamydia diagnoses were among women.
- There is a significant racial disparity for chlamydia diagnoses in Louisiana. The rate of chlamydia in blacks in Louisiana was over five times higher than the rate in whites, and over three times higher than among Hispanic/Latinx persons.
- In 2016, 71% of all chlamydia diagnoses with reported race were among blacks and 25% were among whites. Only 32% of Louisiana's population was black in 2016.
- In 2016, over 70% of new chlamydia diagnoses were among youth under 25 years of age. From 2015 to 2016, the number of new chlamydia diagnoses decreased in all age groups except in persons age 25-34 and in persons age 45 and older.



- The 2016 female chlamydia rate of 959.0 per 100,000 females was 2.5 times the male rate of 383.7 per 100,000 males. Cumulatively, females accounted for nearly 80% of all chlamydia diagnoses in Louisiana over the past 10 years.
- The chlamydia diagnosis rate for males in Louisiana has more than doubled, increasing from 181.4 per 100,000 in 2007 to 383.7 per 100,000 in 2016.



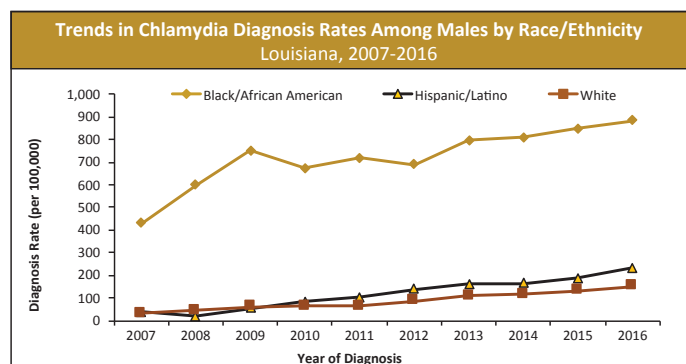
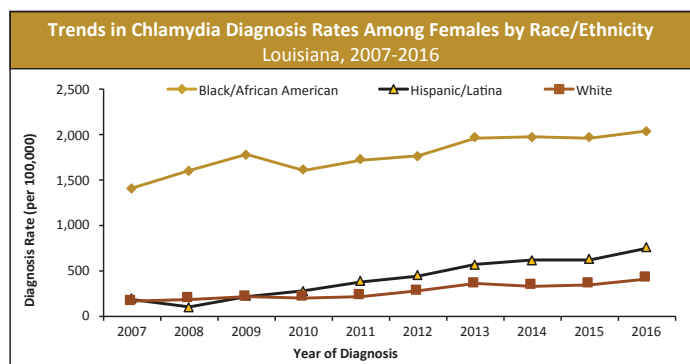
- The chlamydia diagnosis rate for whites and Hispanic/Latinx in Louisiana has steadily risen over the past 10 years. The rate for whites increased from a low of 95.3 per 100,000 in 2007 to a high of 282.0 per 100,000 in 2016. The rate for Hispanic/Latinx increased from a low of 53.2 per 100,000 in 2008 to a high of 474.3 per 100,000 in 2016.
- The diagnosis rate for blacks has consistently been higher than the rate for other race/ethnicities. Since 2008, the rate of chlamydia among blacks has been over 1,000 per 100,000 black persons.
- The completeness of known race/ethnicity in 2016 far exceeded the completeness in prior years, leading to rate increases among all race/ethnicities despite a drop in chlamydia rates in Louisiana in 2016.

Race/Ethnicity of Persons Diagnosed with Chlamydia by Sex at Birth Louisiana, 2016			
	Cases	Percent	Rate**
Total*	31,727	100%	677.7
Female	22,942	72.3%	959.0
American Indian/Alaskan Native	82	0.4%	543.5
Asian/Pacific Islander	145	0.6%	335.1
Black/African American	16,119	70.4%	2,041.0
Hispanic/Latina	826	3.6%	754.9
White	5,720	25.0%	408.4
Other/ Multirace	3	0.0%	-
Unknown	47	0.2%	-
Male	8,784	27.7%	383.7
American Indian/Alaskan Native	24	0.3%	162.4
Asian/Pacific Islander	62	0.7%	150.0
Black/African American	6,307	72.0%	884.0
Hispanic/Latino	294	3.4%	232.0
White	2,066	23.6%	151.9
Other/ Multirace	3	0.0%	-
Unknown	28	0.3%	-

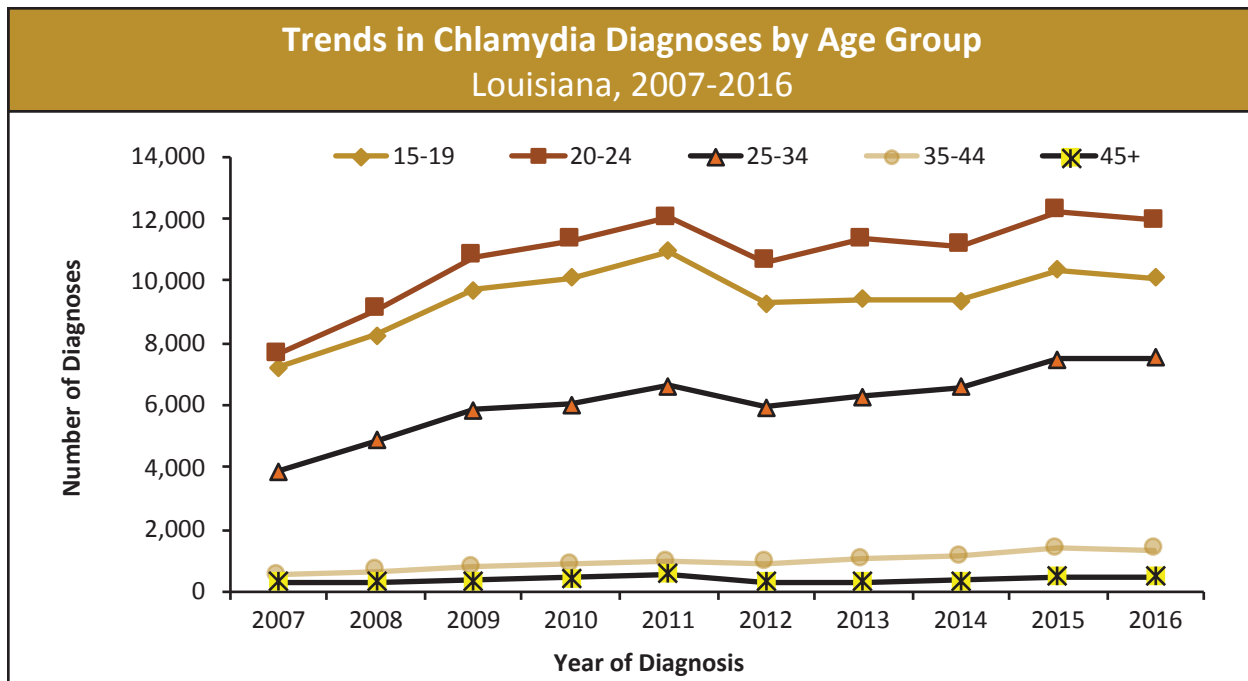
* Sex at birth was unknown for one diagnosis

** Rate per 100,000

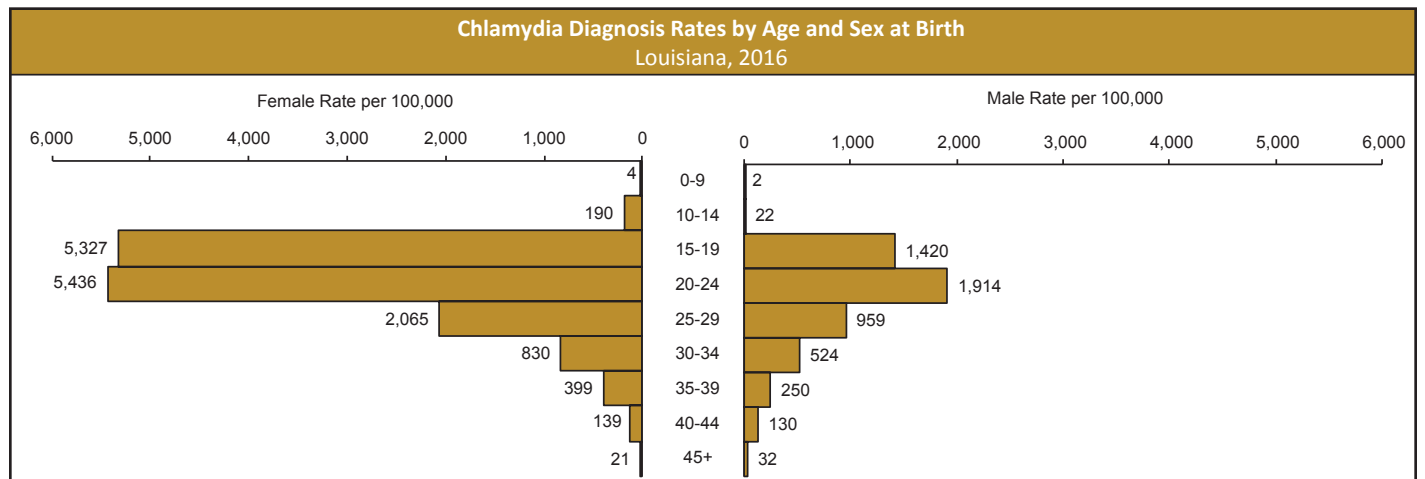
- Among females diagnosed with chlamydia that had a reported race, 70% were black, 25% were white, and 4% were Hispanic/Latina. Of the diagnoses in males with a reported race, 72% were black, 24% were white, and 3% were Hispanic/Latino.
- Although the numbers were small, there were over three times as many chlamydia diagnoses in American Indian/Alaskan Native females and over two times as many chlamydia diagnoses in Asian/Pacific Islander females as males of the same races/ethnicities.
- The rate of chlamydia in black females was nearly two and a half times the rate in black males, and the chlamydia rate in white females was over two and a half times that seen in white males. The rate in Hispanic/Latina females was over three times that of Hispanic/Latino males.



- The rate of chlamydia in black females was nearly five times the rate in white females and nearly three times the rate in Hispanic/Latina females.
- The rate of chlamydia in black males was nearly six times the rate in white males and nearly four times the rate in Hispanic/Latino males.

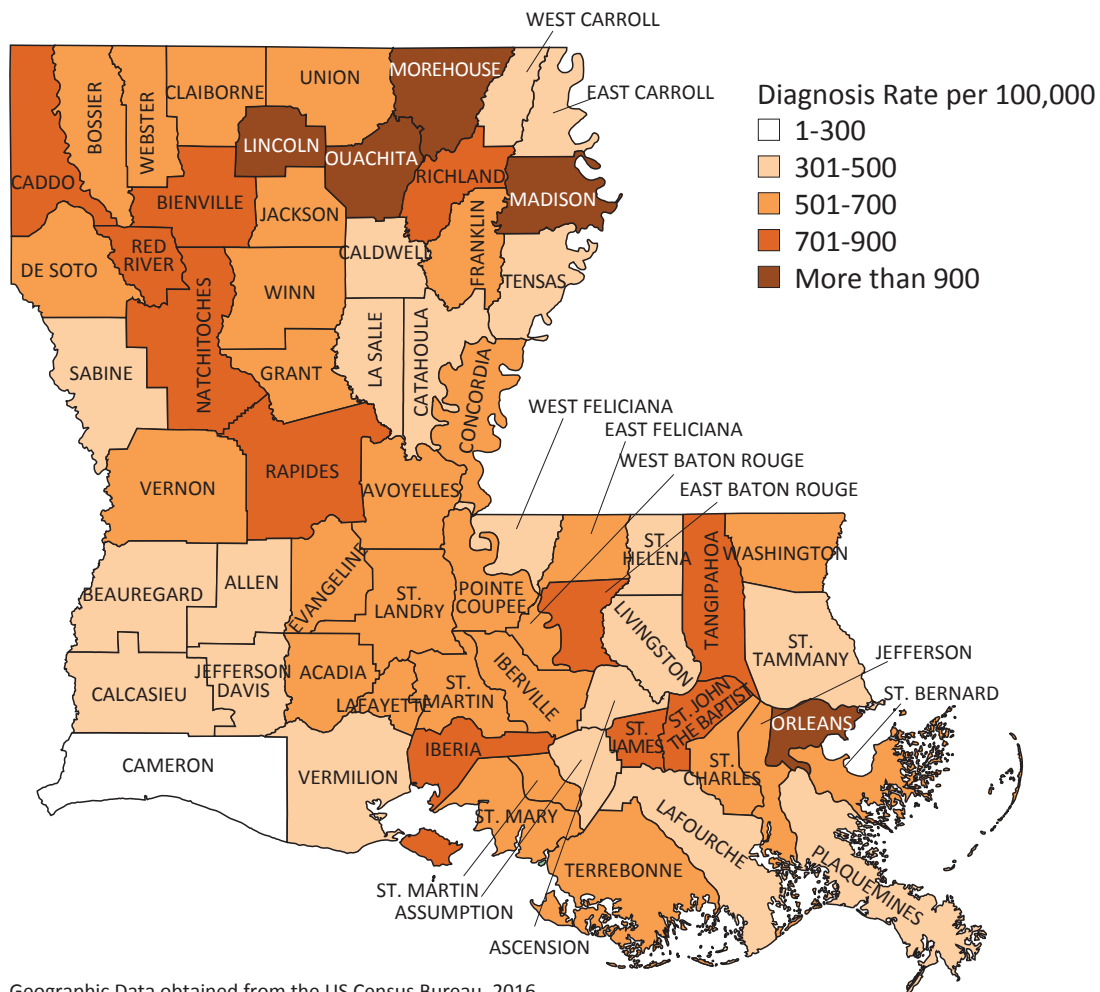


- The highest number of chlamydia diagnoses occur in persons aged 20-24 and 15-19, accounting for an average of 71% of Louisiana diagnoses since 2007. Persons aged 25-34 have made up an additional 23% of diagnoses over the last 10 years.

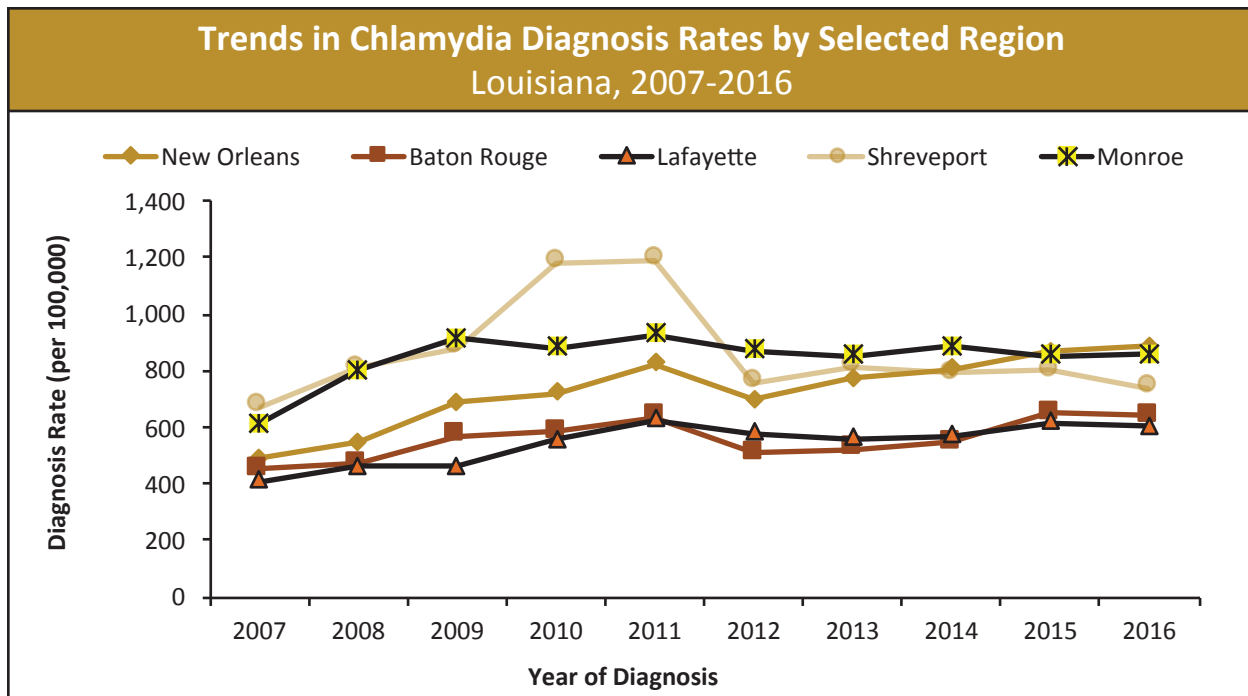


- In 2016, the highest age-specific rate was among 20-24 year old females, followed closely by females age 15-19.
- Among males in 2016, the highest age-specific rate was among 20-24 year olds, followed by males age 15-19. It is only in the 45+ age group that the male diagnosis rate is higher than the female rate.

Chlamydia Diagnosis Rates by Parish, 2016



- Chlamydia diagnosis rates vary by parish in Louisiana. There were persons diagnosed with chlamydia in all 64 parishes in 2016.
- A total of five parishes had a chlamydia diagnosis rate greater than 900 per 100,000 (Lincoln, Madison, Morehouse, Orleans, and Ouachita), a decrease from seven parishes in 2015.
- Additional breakdowns by race/ethnicity and parish can be found in the Appendix.

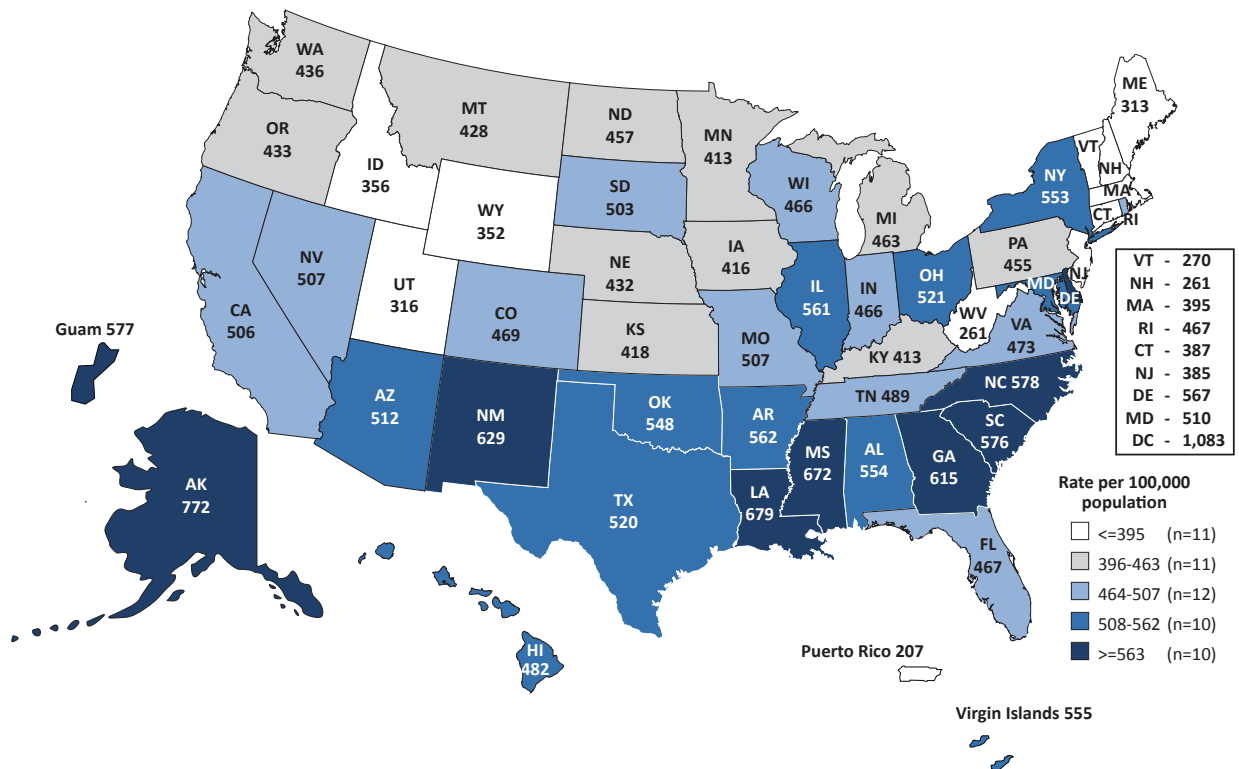


- From 2012 to 2014, the Monroe region had the highest chlamydia diagnosis rate in the state. In 2015, the diagnosis rate in the New Orleans region increased over 10%, surpassing the rate in the Monroe region. In 2016, the New Orleans region once again had the highest diagnosis rate in the state.
- From 2011 to 2016, the chlamydia rate in Shreveport declined by 38%. In 2016, the Shreveport region had the 3rd highest chlamydia rate in Louisiana.

New Chlamydia Diagnoses by Region and Year Louisiana, 2012-2016										
	2012		2013		2014		2015		2016	
Louisiana	27,353	%	28,739	%	28,896	%	32,305	%	31,727	%
1-New Orleans	6,045	22%	6,784	24%	7,138	25%	7,754	24%	7,942	25%
2-Baton Rouge	3,418	13%	3,522	12%	3,711	13%	4,430	14%	4,370	14%
3-Houma	2,118	8%	2,304	8%	2,441	8%	2,482	8%	2,425	8%
4-Lafayette	3,427	13%	3,342	12%	3,420	12%	3,746	12%	3,674	12%
5-Lake Charles	1,394	5%	1,364	5%	1,111	4%	1,618	5%	1,376	4%
6-Alexandria	1,744	6%	1,678	6%	1,499	5%	1,913	6%	2,066	7%
7-Shreveport	4,174	15%	4,480	16%	4,328	15%	4,358	14%	4,023	13%
8-Monroe	3,103	11%	3,032	11%	3,158	11%	3,025	9%	3,033	10%
9-Hammond/Slidell	1,908	7%	2,081	7%	2,024	7%	2,529	8%	2,772	9%
Unknown	22	0%	152	1%	66	0%	449	1%	46	0%

- The New Orleans region had the highest number of new chlamydia diagnoses in 2016, followed by Baton Rouge and Shreveport. Over the past five years, the New Orleans region has had between 22% to 25% of all new chlamydia diagnoses in Louisiana.

Chlamydia Diagnosis Rates in the United States (2016)^{xxiii}



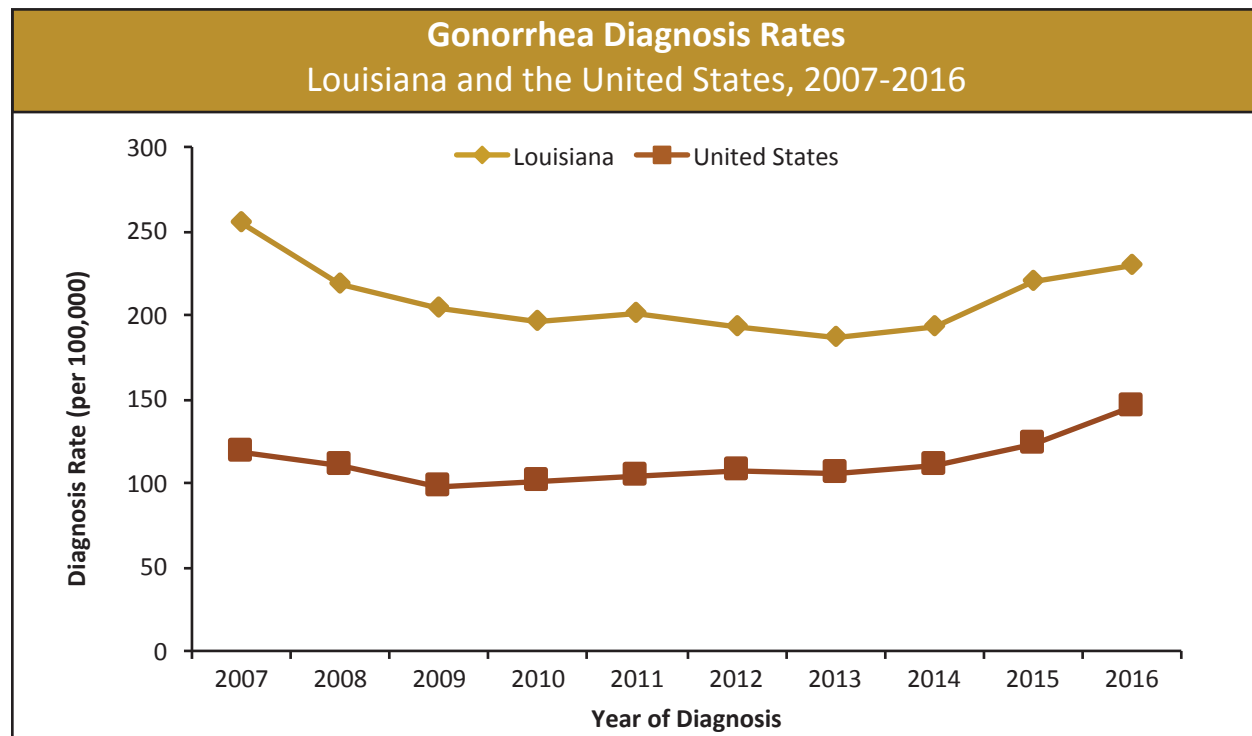
- In September 2017, the CDC released the *STD Surveillance Report, 2016*, which provides national and state-specific STD data. The CDC report uses estimated 2015 Census data while the Louisiana report uses estimated 2016 Census data, resulting in slightly different rate estimates between the reports.
- In the United States, there were 1,598,354 new chlamydia diagnoses reported in 2016, for a national chlamydia rate of 497.3 diagnoses per 100,000 population. In 2015, the national chlamydia diagnosis rate was 478.8 per 100,000 population.^{xxiii}
- The national chlamydia diagnosis rates increased 5% from 2015 to 2016.^{xxiii}
- Nationally, the rate of females diagnosed with chlamydia rose nearly 3% from 2015, while the rate in males increased 9%. Potential reasons for the increase in males include increased disease transmission, improved screening coverage, the use of more sensitive tests, an increased use of electronic laboratory reports, and changes in reporting practices.^{xxiii}
- In 2016, Louisiana ranked 2nd in the nation for chlamydia diagnosis rates (677.7 per 100,000). Alaska (771.6 per 100,000), and Mississippi (672.1 per 100,000) ranked 1st and 3rd respectively.^{xxiii} The District of Columbia has the highest rate in the nation but is not included in national rankings.
- Louisiana's 2016 rate was 1.4 times greater than the national rate.^{xxiii}

Gonorrhea

Gonorrhea is caused by the bacterium *Neisseria gonorrhoeae*. It is the second most commonly reported STD in the United States. If left untreated, gonorrhea can affect fertility in males and females, increase the risk of HIV infection and transmission, and cause other serious health problems. Gonorrhea is a common cause of epididymitis in men and PID in women, and both of these conditions can lead to infertility. Pregnant women with a gonorrhea infection may infect their infants during delivery which can potentially cause blindness, joint infection, or a blood infection.^{xxiii} Resistance to antimicrobials is important in considering the treatment of gonorrhea infections. Increasing resistance to fluoroquinolones and a decline in susceptibility to cefixime has been noted. Therefore, only dual therapy with ceftriaxone and either azithromycin or doxycycline is now recommended by the CDC.^{xxiii}

10 Year Trends in Gonorrhea Diagnoses

There were 10,783 gonorrhea diagnoses in Louisiana in 2016. This represents over a 5% increase in the number of diagnoses from 2015, when 10,274 diagnoses were reported. Over the past 10 years, the number of new gonorrhea diagnoses has fluctuated from a low of 8,669 in 2013 to a high of 11,137 in 2007.



- In 2016, the gonorrhea diagnosis rate in Louisiana was 230.3 per 100,000 population, nearly a 5% increase from 220.0 diagnoses per 100,000 in 2015. The 2016 Louisiana rate was 1.6 times greater than the national rate of 145.8 per 100,000 population. It should be noted that in 2012, intensive deduplication efforts were begun in Louisiana which may be responsible for the reduction in diagnosis counts and rates from previous years.
- From 2007 to 2013, the gonorrhea diagnosis rate in Louisiana decreased by more than 29%, but since then has risen 23%.

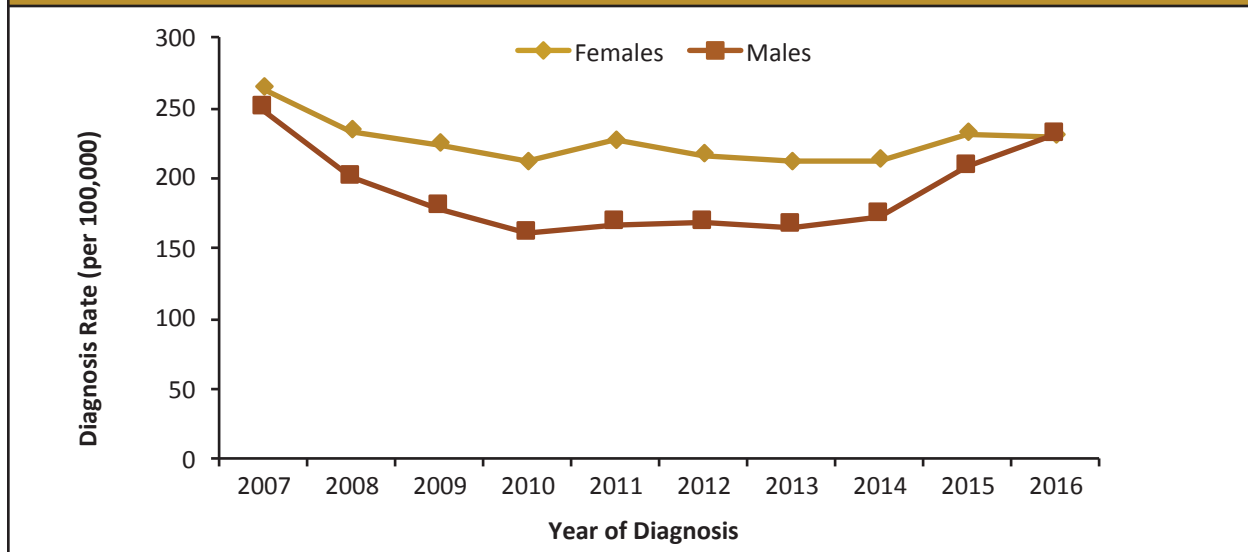
Characteristics of Persons Diagnosed with Gonorrhea Louisiana, 2016			
	Cases	Percent	Rate**
Total	10,783	100%	230.3
Sex at Birth			
Female	5,494	51.0%	229.7
Male	5,289	49.0%	231.0
Race/Ethnicity*			
Black/African American	8,381	77.9%	557.5
Hispanic/Latinx	167	1.6%	70.7
White	2,143	19.9%	77.6
Other/Multi-race	70	0.7%	-
Unknown	22	0.2%	-
Age Group	Age at Diagnosis		
0-9	9	0.1%	1.4
10-14	93	0.9%	30.5
15-19	2,675	24.8%	883.0
20-24	3,747	34.7%	1,146.1
25-29	1,962	18.2%	562.4
30-34	987	9.2%	296.6
35-39	559	5.2%	183.4
40-44	250	2.3%	92.8
45+	501	4.6%	26.8

* Demographic information not available through all reporting mediums.

** Rate per 100,000

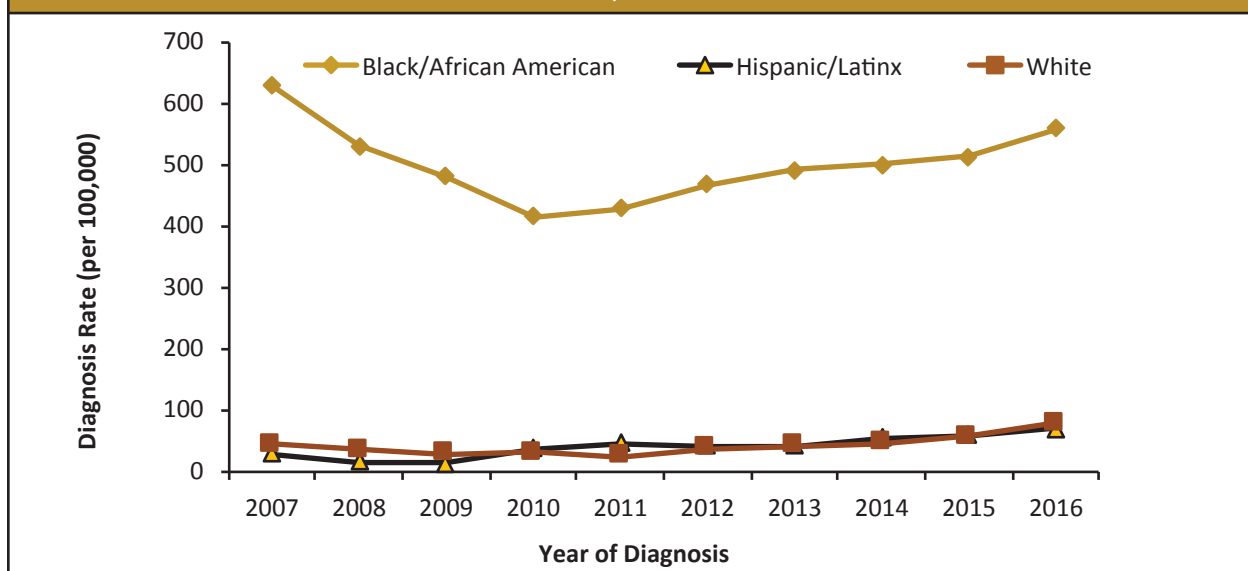
- In 2016, 5,494 gonorrhea diagnoses were reported in females, a 1% decrease from the 5,532 diagnoses in 2015. The number of gonorrhea diagnoses in males in Louisiana increased 12% from 4,742 diagnoses in 2015 to 5,289 diagnoses in 2016.
- There is a significant racial disparity for gonorrhea diagnoses in Louisiana. In 2016, the rate of new gonorrhea diagnoses among blacks was 557.5 per 100,000, over seven times higher than among whites and over seven and a half times higher than among Hispanic/Latinx persons.
- Nearly 78% of all gonorrhea diagnoses with reported race were black, 20% were white, and less than 2% were Hispanic/Latinx. Only 32% of Louisiana's population was black in 2016.
- In 2016, over 60% of new gonorrhea diagnoses were among youth under 25 years of age. From 2015 to 2016, the number of new diagnoses in persons under 20 decreased 6% but rose among persons age 20 and older. Increases in number of diagnoses ranged from 3% in persons age 20-24 to 57% in persons age 45 and older.

Trends in Gonorrhea Diagnosis Rates by Sex at Birth Louisiana, 2007-2016



- In 2016, the male gonorrhea diagnosis rate of 231.0 per 100,000 males surpassed the female diagnosis rate of 229.7 per 100,000 females. The rate increase for males marks the first time the male diagnosis rate has been higher than the female diagnosis rate in Louisiana.
- The difference between the female and male diagnosis rate was greatest in 2011. Since 2011 the male diagnosis rate has increased 13% to its current height in 2016.
- Cumulatively, females have accounted for 56% of all gonorrhea diagnoses in Louisiana over the past 10 years.

Trends in Gonorrhea Diagnosis Rates by Race/Ethnicity Louisiana, 2007-2016



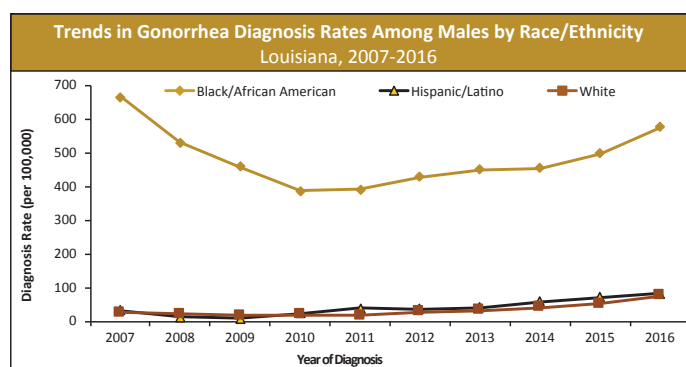
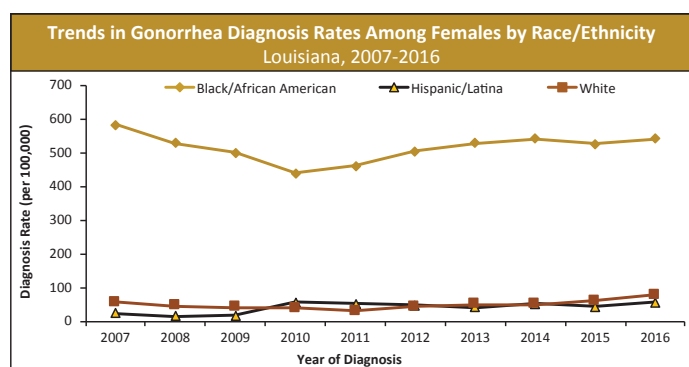
- The gonorrhea rate for blacks has increased steadily over the past seven years, from a low of 414.4 per 100,000 in 2010 to a high of 557.5 per 100,000 in 2016. The rate has also risen in Hispanic/Latinx, from a low of 13.5 per 100,000 in 2009 to a high of 70.7 per 100,000 in 2016.
- The diagnosis rate for blacks has consistently been higher than the rate for other races and ethnicities. The rate of gonorrhea has consistently exceeded 400 per 100,000 blacks, while the rate for whites and Hispanic/Latinx has remained under 80 per 100,000.

Race/Ethnicity of Persons Diagnosed with Gonorrhea by Sex at Birth Louisiana, 2016			
	Cases	Percent	Rate**
Total	10,783	100%	230.3
Female*	5,494	51.0%	229.7
American Indian/Alaskan Native	16	0.3%	106.1
Asian/Pacific Islander	22	0.4%	50.8
Black/African American	4,270	77.9%	540.7
Hispanic/Latina	63	1.1%	57.6
White	1,113	20.3%	79.5
Other/ Multi-race	0	0.0%	-
<i>Unknown</i>	<i>10</i>	<i>0.2%</i>	<i>-</i>
Male*	5,289	49.0%	231.0
American Indian/Alaskan Native	11	0.2%	74.5
Asian/Pacific Islander	19	0.4%	46.0
Black/African American	4,111	77.9%	576.2
Hispanic/Latino	104	2.0%	82.1
White	1,030	19.5%	75.7
Other/ Multi-race	2	0.0%	-
<i>Unknown</i>	<i>12</i>	<i>0.2%</i>	<i>-</i>

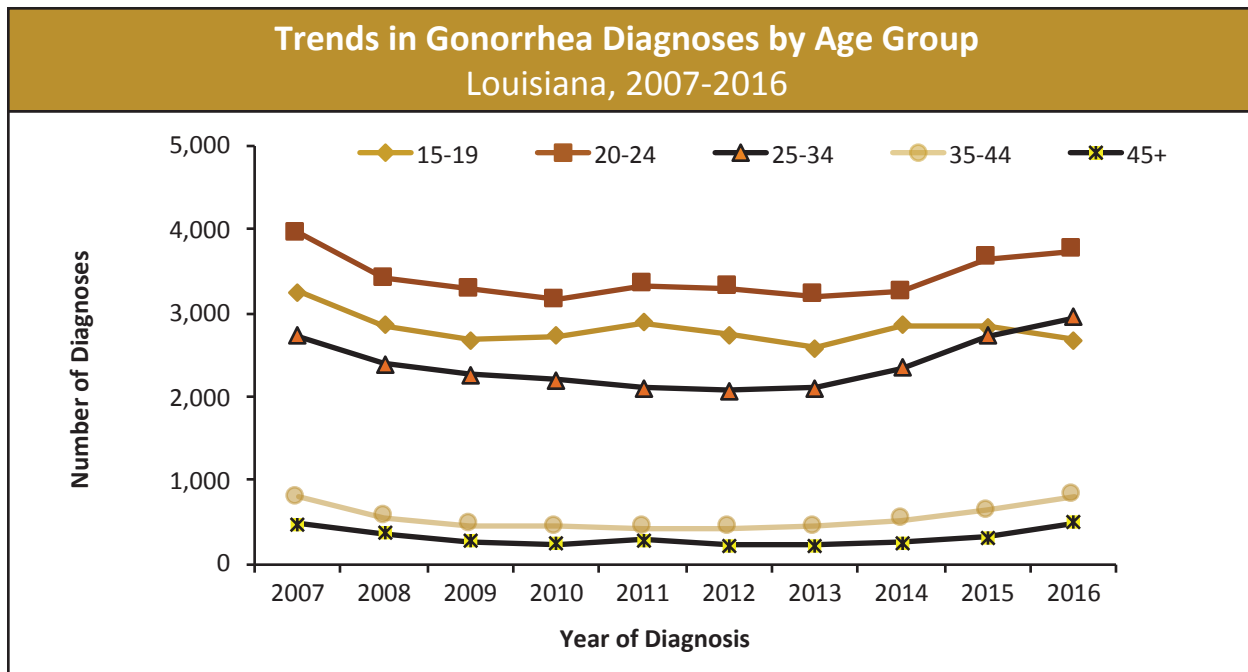
* Demographic information not available through all reporting mediums.

** Rate per 100,000

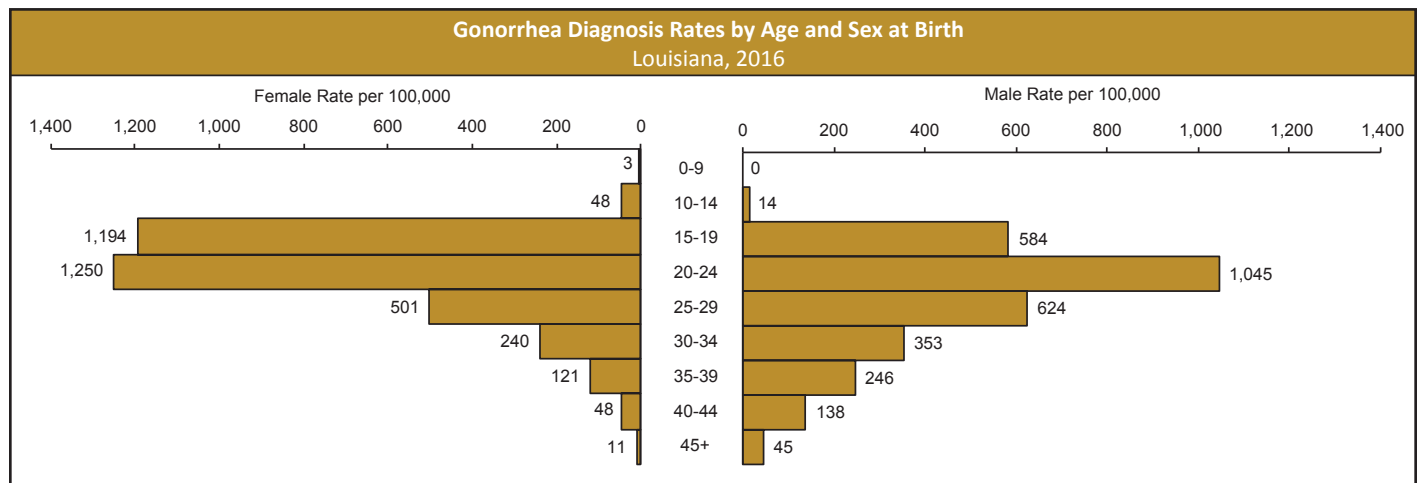
- Among females and males diagnosed with gonorrhea that had a reported race, 78% were black and 20% were white.
- The number of diagnoses in Hispanic/Latino males was 61% higher than the number of diagnoses in Hispanic/Latina females. Hispanic/Latinx persons accounted for nearly 2% of all gonorrhea diagnoses with reported race in 2016.
- The rate of gonorrhea in black males was 6% higher than the rate in black females. Among all other races/ethnicities the female gonorrhea rate was greater than the male gonorrhea rate.



- The rate of gonorrhea in black females was nearly seven times the gonorrhea rate in white females and over nine times the rate in Hispanic/Latina females.
- The rate of gonorrhea in black males was over seven and a half times the rate in white males and seven times the rate in Hispanic/Latino males.

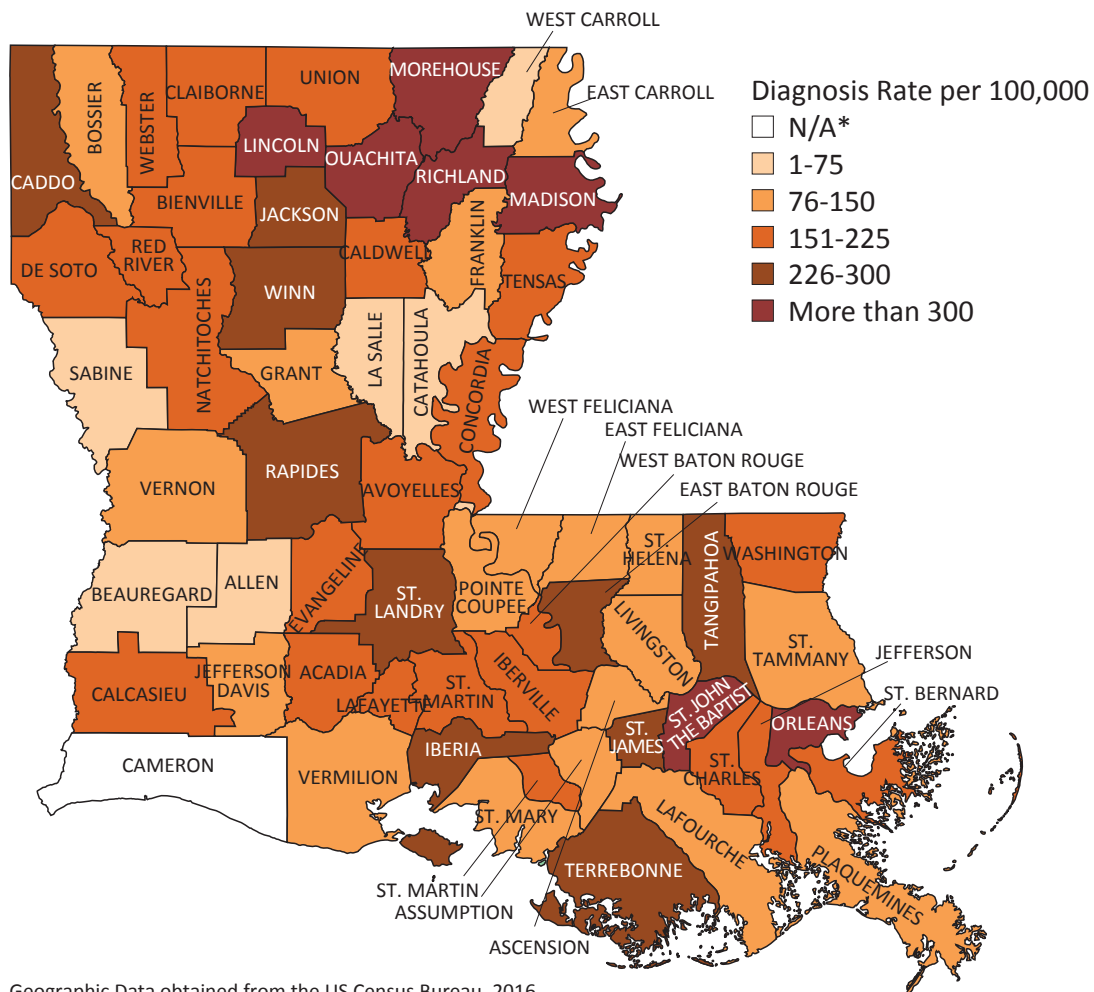


- The highest number of gonorrhea diagnoses occur in persons aged 20-24, accounting for an average of 36% of Louisiana's gonorrhea diagnoses since 2007. Persons aged 15-19 made up an additional 29% of diagnoses over the past 10 years.
- For the first time in 10 years, the number of gonorrhea diagnoses in 2016 was higher in persons age 25-34 than in persons age 15-19.

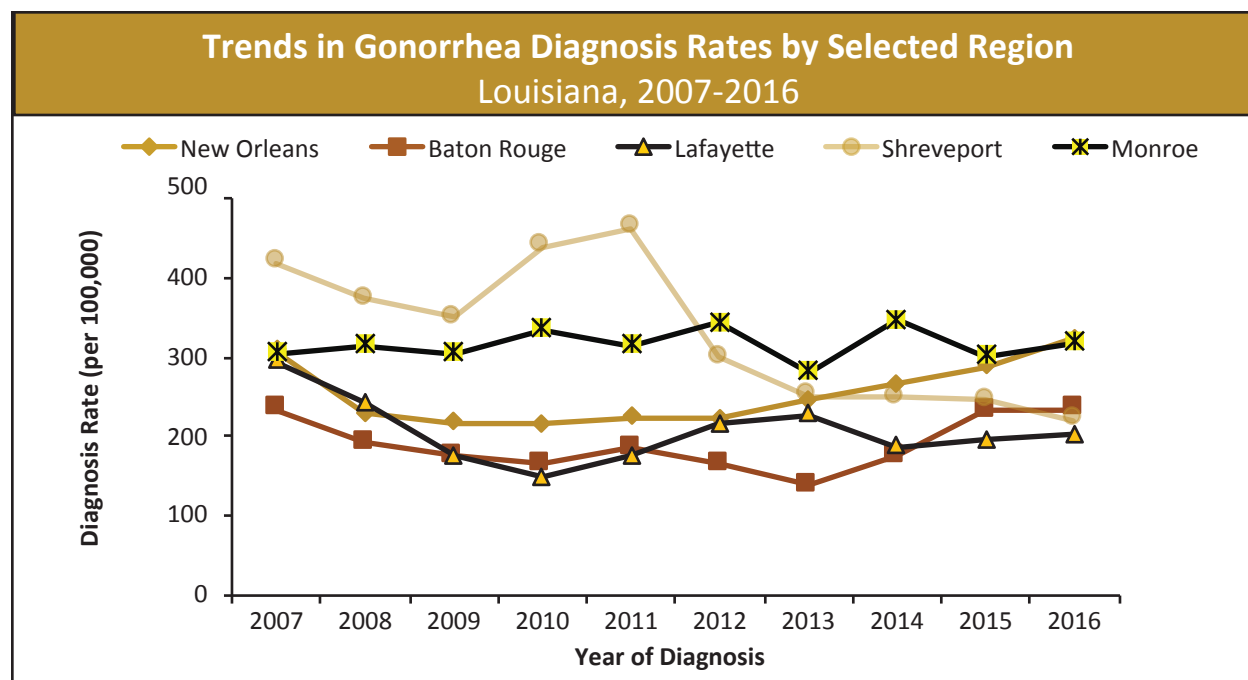


- In 2016, the highest age specific gonorrhea rate was among 20-24 year old females, followed by 15-19 year old females.
- Among males in 2016, the highest age-specific rate was among 20-24 year olds, followed by males age 25-29. Among persons 25 and older, the diagnosis rates in males were higher than in females.

Gonorrhea Diagnosis Rates by Parish, 2016



- Gonorrhea diagnosis rates vary by parish in Louisiana. In 2016, there were persons diagnosed with gonorrhea in all 64 parishes.
- A total of seven parishes had a gonorrhea diagnosis rate greater than 300 per 100,000 (Lincoln, Madison, Morehouse, Orleans, Ouachita, Richland, and St. John the Baptist), down from eight parishes in 2015.
- Additional breakdowns by race/ethnicity and parish can be found in the Appendix.

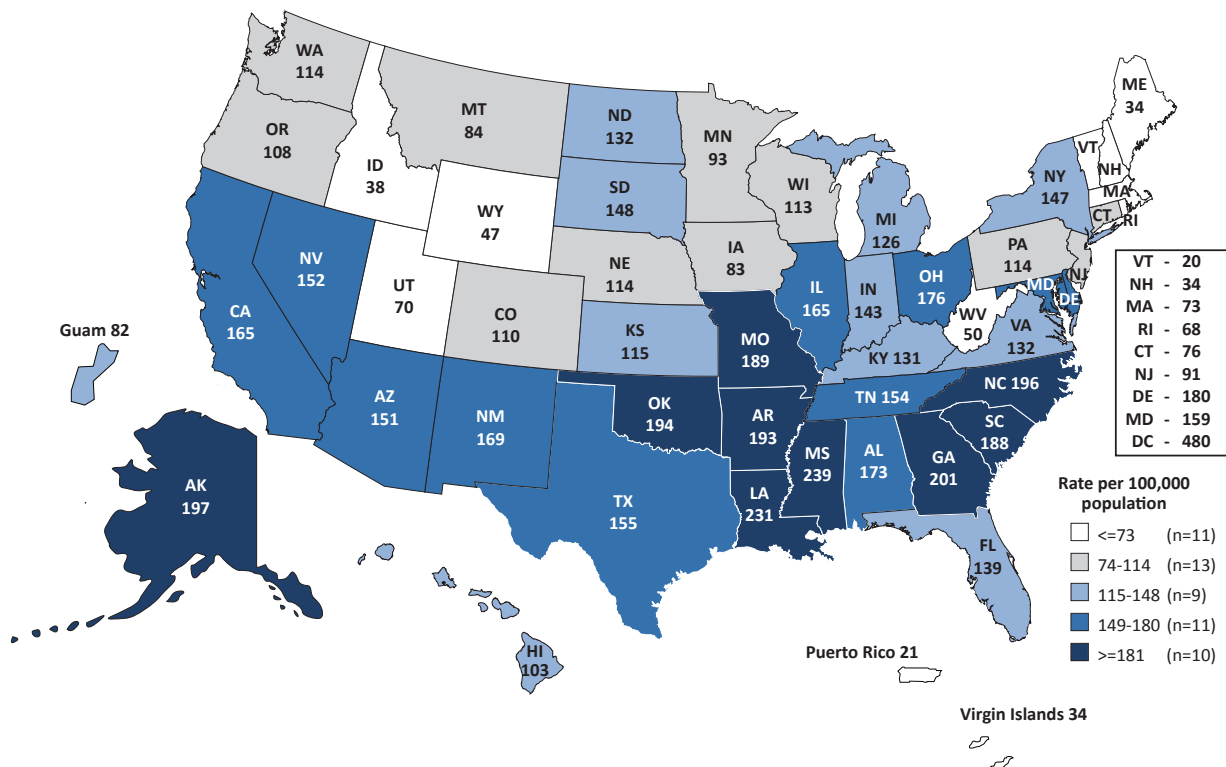


- In 2014 and 2015 the New Orleans region ranked 2nd for gonorrhea diagnosis rates. In 2016, the New Orleans region had the highest gonorrhea diagnosis rate.
- Until 2012, the gonorrhea diagnosis rate was highest in the Shreveport region, decreasing to 4th in 2016. From 2012 to 2015, the Monroe region had the highest gonorrhea rate, decreasing to 2nd in 2016. In 2016, the Baton Rouge region had the 3rd highest gonorrhea diagnosis rate.

New Gonorrhea Diagnoses by Region and Year Louisiana, 2012-2016										
	2012		2013		2014		2015		2016	
Louisiana	8,873	%	8,669	%	8,978	%	10,274	%	10,783	%
1-New Orleans	1,920	22%	2,156	25%	2,363	26%	2,568	25%	2,900	27%
2-Baton Rouge	1,110	13%	933	11%	1,187	13%	1,583	16%	1,600	15%
3-Houma	476	5%	623	7%	553	6%	723	7%	786	7%
4-Lafayette	1,274	14%	1,347	16%	1,123	13%	1,189	12%	1,227	11%
5-Lake Charles	343	4%	324	4%	310	3%	489	5%	428	4%
6-Alexandria	444	5%	483	6%	428	5%	525	5%	660	6%
7-Shreveport	1,645	19%	1,373	16%	1,358	15%	1,339	13%	1,194	11%
8-Monroe	1,220	14%	1,002	12%	1,233	14%	1,066	10%	1,129	10%
9-Hammond/Slidell	429	5%	388	4%	408	5%	671	7%	849	8%
Unknown	12	0%	40	0%	15	0%	121	1%	10	0%

- In 2016, the New Orleans region had the highest number of gonorrhea diagnoses, followed by the Baton Rouge region. From 2012 to 2016, the New Orleans region has made up 22% to 27% of all gonorrhea diagnoses in Louisiana.

Gonorrhea Diagnosis Rates in the United States (2016)^{xxiii}



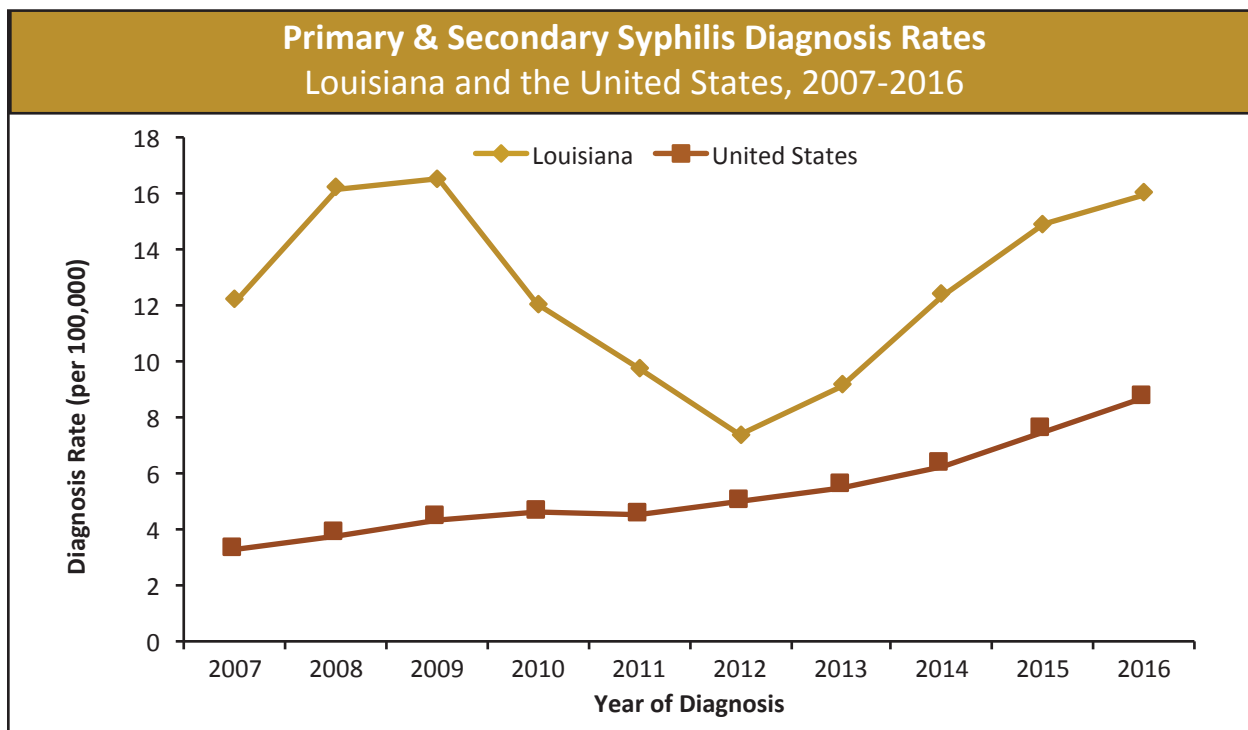
- According to the most recent CDC report, there were 468,514 new gonorrhea diagnoses reported in the United States in 2016, for a national gonorrhea diagnosis rate of 145.8 diagnoses per 100,000 population. In 2015, the national gonorrhea diagnosis rate was 123.9 per 100,000 population.^{xxiii}
- The national gonorrhea diagnosis rate increased more than 18% from 2015 to 2016.^{xxiii}
- Nationally, the rate of males diagnosed with gonorrhea surpassed the rate in females, rising 22% since 2015, while the rate in females increased 14%. Potential reasons for the increase in males include increased disease transmission and detection among gay, bisexual, and other men who have sex with men. This increase may also be due to changes in testing technology, more sensitive tests, and changes in reporting practices.^{xxiii}
- In 2016, Louisiana ranked 2nd in the nation for gonorrhea diagnosis rates (230.3 per 100,000). Mississippi (239.2 per 100,000), and Georgia (201.2 per 100,000), ranked 1st and 3rd respectively in 2016.^{xxiii} The District of Columbia has the highest rate in the nation but is not included in national rankings.
- Louisiana's 2016 rate was 1.6 times greater than the national rate.^{xxiii}

Primary & Secondary Syphilis

Syphilis is one of the three most commonly diagnosed STDs. It is caused by the bacterium *Treponema pallidum* and is typically transmitted through contact with an infected genital ulcer, though ulcers can be found in other locations on the body. These ulcers also facilitate the sexual transmission and contraction of HIV. The primary and secondary stages are the most infectious stages of syphilis.^{xxiii} If left untreated, syphilis can cause other serious health problems and may include neurologic involvement. Pregnant women with an untreated syphilis infection may experience stillbirth or give birth to a child with congenital defects. Penicillin G is the preferred drug for treating all stages of syphilis. The preparation, dosage, and length of treatment depend on the stage and clinical manifestation of the disease.^{xxv}

10 Year Trends in P&S Syphilis Diagnoses

In 2016 there were 750 new P&S syphilis diagnoses, an 8% increase compared to 696 diagnoses in 2015. From 2009 to 2011, the number of diagnoses dropped in Louisiana to a diagnosis rate of just 7.4 per 100,000. Since that time, Louisiana has experienced significant increases in P&S syphilis diagnoses and has returned to levels recorded in 2009. From 2006 to 2011 and from 2015 to 2016 Louisiana has had the highest P&S syphilis rate in the nation.^{xxiii}

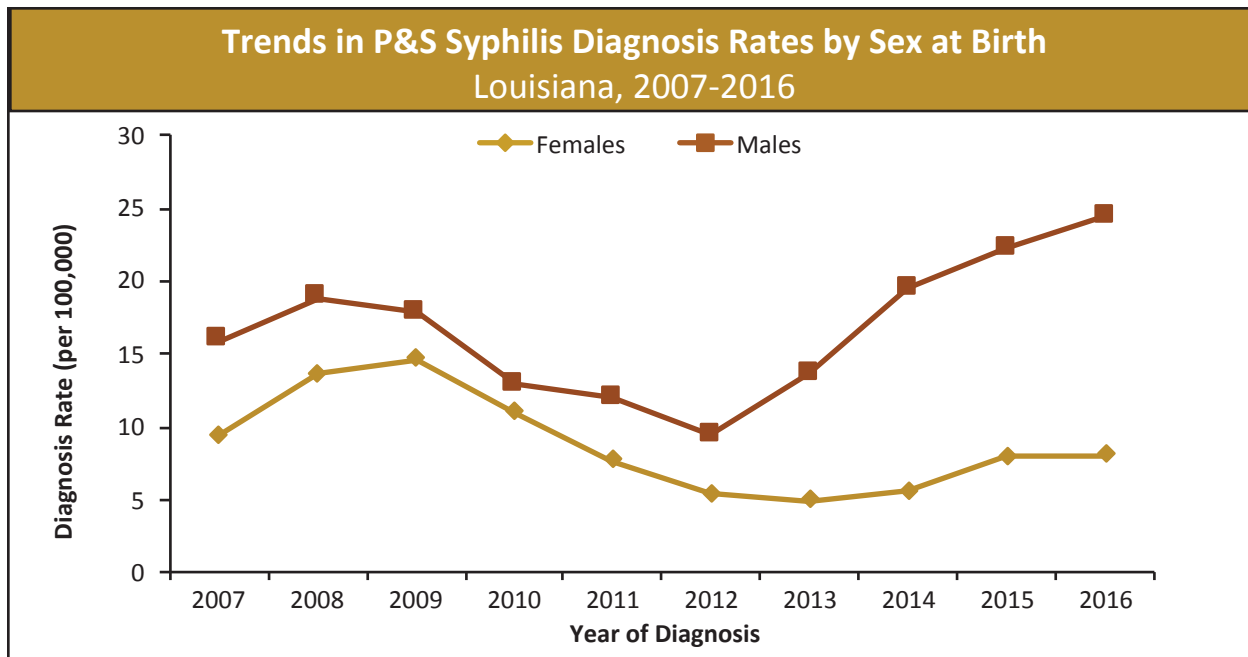


- In 2016, the P&S syphilis diagnosis rate in Louisiana was 16.0 per 100,000 population, which was 1.8 times the national rate of 8.7 per 100,000 population.
- Louisiana is not alone in experiencing significant diagnosis rate increases in recent years. Across the nation, the rate of P&S syphilis has more than doubled in the past 10 years.

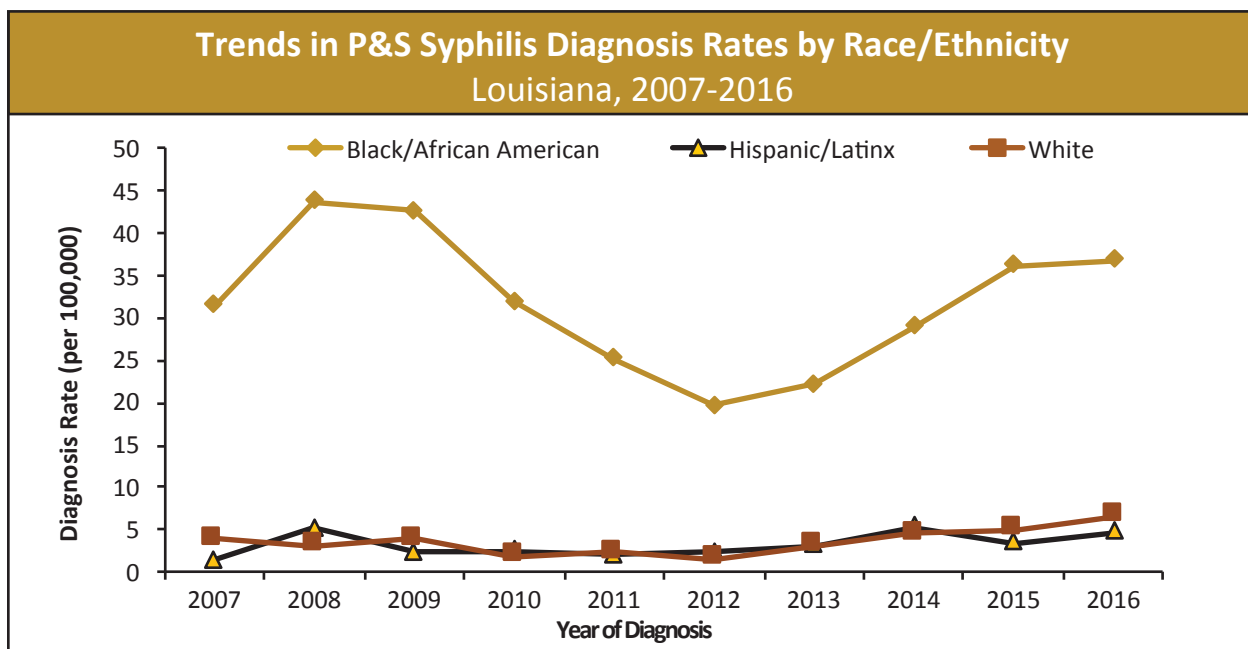
Characteristics of Persons Diagnosed with P&S Syphilis Louisiana, 2016			
	Cases	Percent	Rate*
Total	750	100%	16.0
Sex at Birth			
Female	192	25.6%	8.0
Male	558	74.4%	24.4
Race/Ethnicity			
Black/African American	552	73.6%	36.7
Hispanic/Latinx	11	1.5%	4.7
White	184	24.5%	6.7
Other/Multi-race	3	0.4%	-
Age Group	Age at Diagnosis		
0-9	0	0.0%	0.0
10-14	2	0.3%	0.7
15-19	104	13.9%	34.3
20-24	201	26.8%	61.5
25-29	165	22.0%	47.3
30-34	94	12.5%	28.2
35-39	73	9.7%	24.0
40-44	36	4.8%	13.4
45+	75	10.0%	4.0

* Rate per 100,000

- In 2016, 192 females were diagnosed with P&S syphilis, a 2% increase from the 189 diagnoses in 2015. The number of males diagnosed with P&S syphilis in Louisiana increased 10%, from 507 diagnoses in 2015 to 558 diagnoses in 2016.
- There is a significant racial disparity in syphilis diagnoses in Louisiana. In 2016, the rate of new P&S syphilis diagnoses among blacks was 36.7 per 100,000 blacks, five and a half times higher than among whites and nearly eight times higher than among Hispanic/Latinx persons.
- Nearly 74% of all P&S syphilis diagnoses were among blacks, 25% were among whites, and less than 2% were among Hispanic/Latinx. Only 32% of Louisiana's population was black in 2016.
- In 2016, 41% of new P&S syphilis diagnoses were among persons under 25 years of age. Among older age groups a large increase in the number of new diagnoses was seen. In persons age 35-44, the number of diagnoses increased 28% from 2015, and in persons 45 and older the number of diagnoses increased 14% from 2015.



- The 2016 male P&S syphilis diagnosis rate of 24.4 per 100,000 males was three times greater than the female rate of 8.0 per 100,000 females.
- From 2015 to 2016, the P&S syphilis diagnosis rate sharply increased in males and remained level in females. The greatest gap in rates between males and females was observed in 2016.
- In 2016, 74% of P&S syphilis diagnoses were male. Cumulatively, males made up 64% of all P&S syphilis diagnoses in Louisiana over the past 10 years.

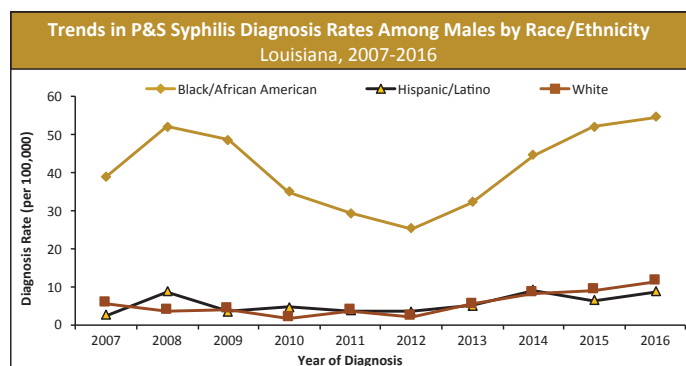
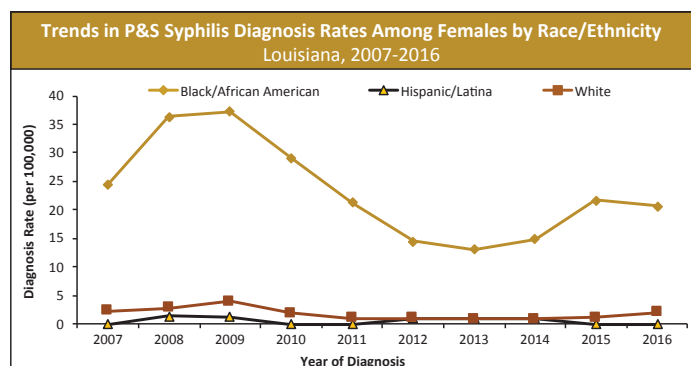


- The P&S syphilis rate for blacks has varied greatly over the past 10 years, from a low of 19.6 per 100,000 in 2012 to a high of 43.7 per 100,000 in 2008. The rate has also fluctuated in whites, from a low of 1.6 per 100,000 in 2012 to a high of 6.7 per 100,000 in 2016.
- The rate for blacks has consistently been higher than the rate for other race/ethnicities. The rate of P&S syphilis has averaged 31.8 per 100,000 blacks over the last 10 years, while the rate among whites has averaged 3.6 per 100,000 whites.
- The P&S syphilis rate for blacks has increased 40% from 2012 to 2016, rising from 19.6 per 100,000 to 27.5 per 100,000.

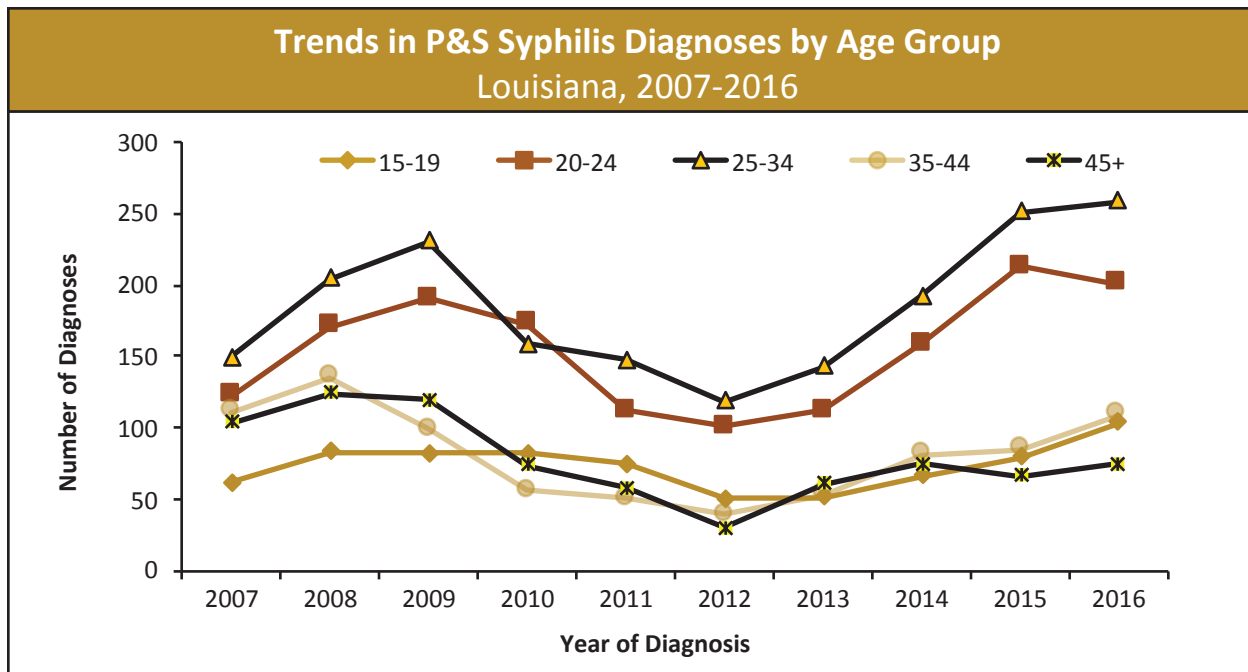
Race/Ethnicity of Persons Diagnosed with P&S Syphilis by Sex at Birth Louisiana, 2016			
	Cases	Percent	Rate*
Total	750	100%	16.0
Female	192	25.6%	8.0
American Indian/Alaskan Native	1	0.5%	6.6
Asian/Pacific Islander	0	0.0%	0.0
Black/African American	163	84.9%	20.6
Hispanic/Latina	0	0.0%	0.0
White	28	14.6%	2.0
Other/Multi-race	0	0.0%	-
Male	558	74.4%	24.4
American Indian/Alaskan Native	2	0.4%	13.5
Asian/Pacific Islander	0	0.0%	0.0
Black/African American	389	69.7%	54.5
Hispanic/Latino	11	2.0%	8.7
White	156	28.0%	11.5
Other/Multi-race	0	0.0%	-

* Rate per 100,000

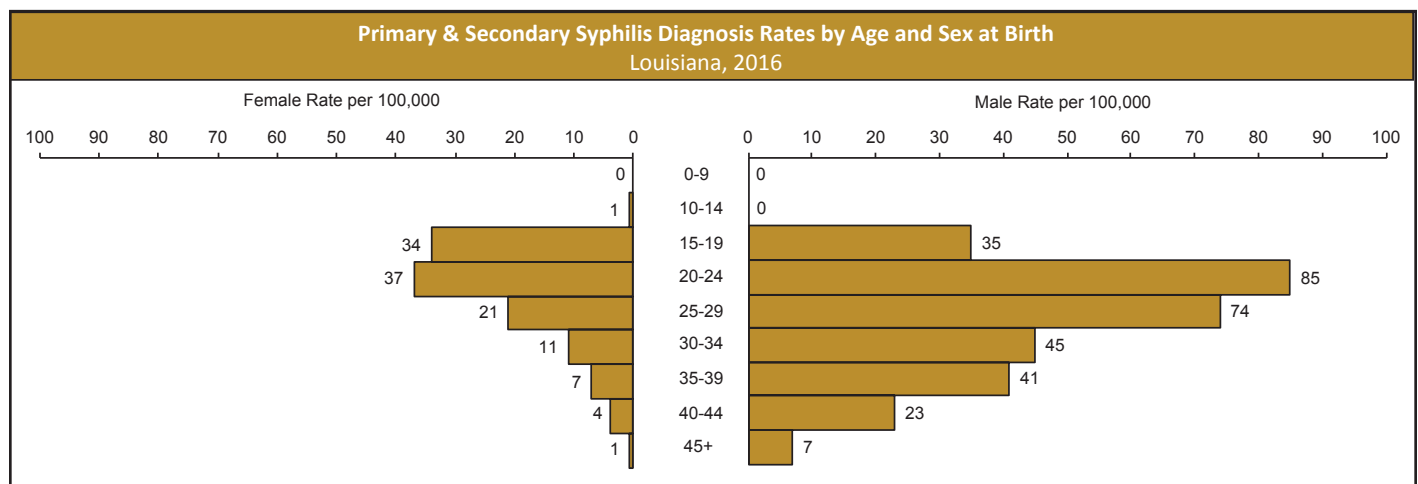
- Among the P&S syphilis diagnoses in females, 85% were black and 15% were white. Of the P&S syphilis diagnoses in males, 70% were black, 28% were white, and 2% were Hispanic/Latino.
- The rate of P&S syphilis in black males was over two and a half times higher than the rate in black females, and the P&S syphilis rate in white males was over five and a half times higher than the rate in white females.



- The rate of P&S syphilis in black females was 10 times the rate in white females.
- The rate of P&S syphilis in black males was over four and a half times the rate in white males and was six times the rate in Hispanic/Latino males.
- From 2013 to 2016, the syphilis diagnosis rate among white males has increased nearly five and a half times, and the syphilis rate among black males has doubled.

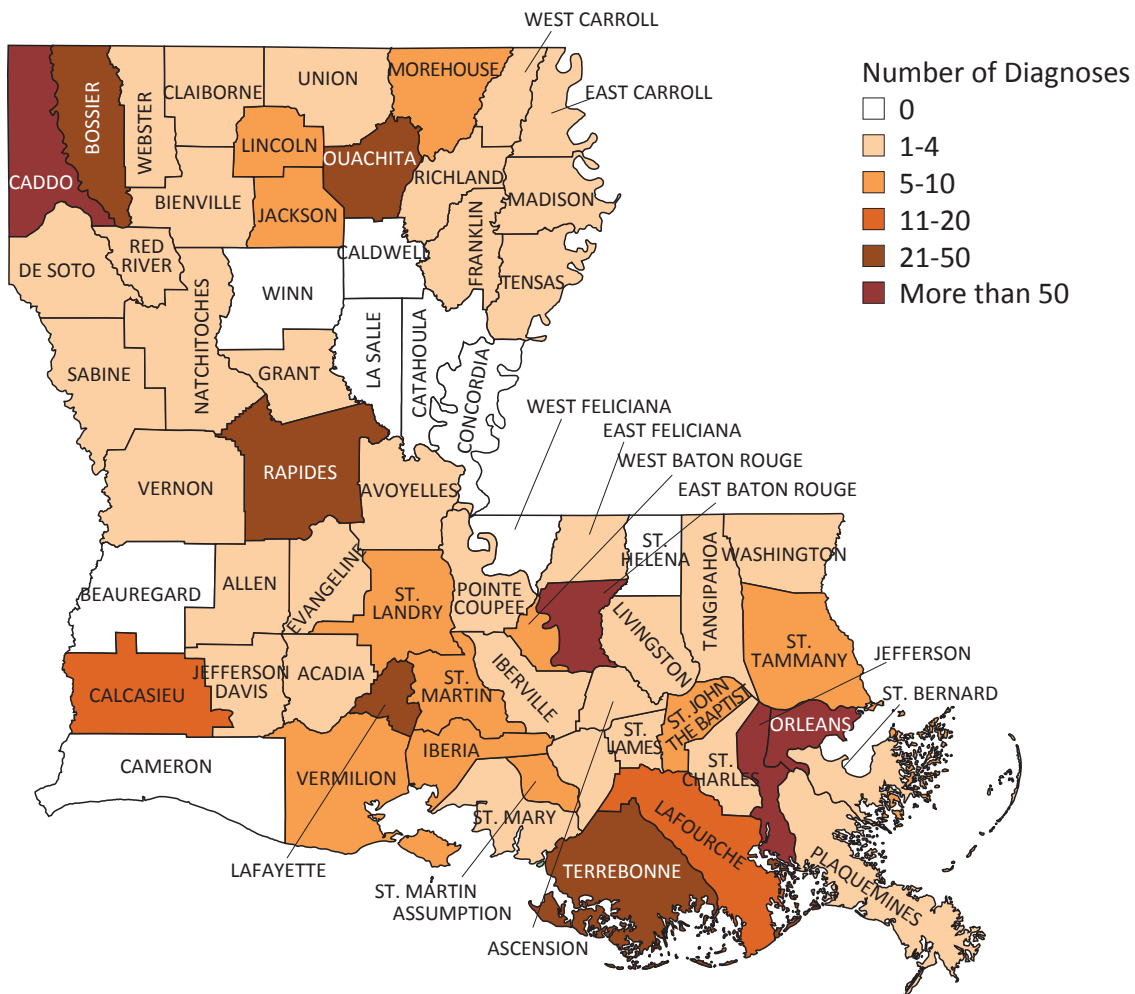


- The highest number of P&S syphilis diagnoses typically occur in persons aged 25-34, accounting for an average of 33% of Louisiana diagnoses since 2007. Persons aged 20-24 have made up an additional 28% of diagnoses over the last 10 years.
- The only age group to experience a decrease in the number of new diagnoses in 2016 was 20-24 year olds.



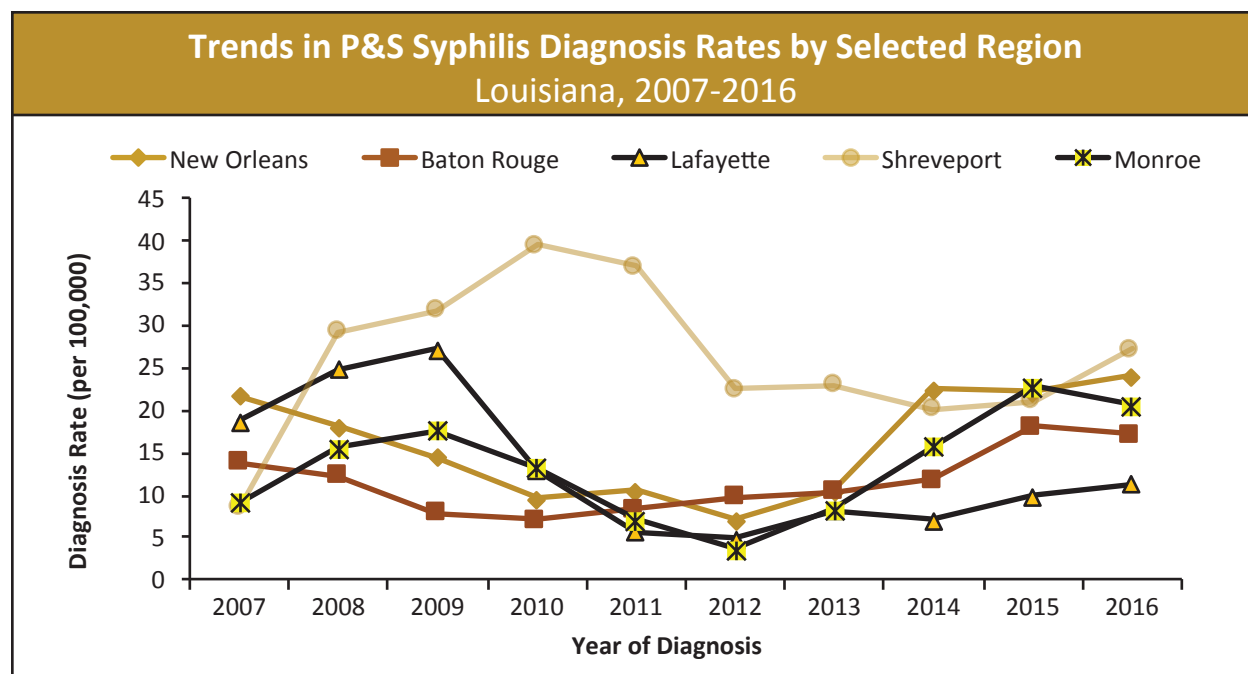
- In 2016, the highest age specific rate was among 20-24 year old males, followed by 25-29 year old males.
- Among females in 2016, the highest age-specific rate was among 20-24 year olds, followed by females age 15-19. Only among persons under the age of 20 are rates similar between males and females.

Number of P&S Syphilis Diagnoses by Parish, 2016



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- The number of P&S syphilis diagnoses varied by parish in Louisiana. In 2016, there were persons diagnosed with P&S syphilis in 55 of Louisiana's 64 parishes.
- A total of four parishes had P&S diagnosis counts greater than 50 (Caddo, East Baton Rouge, Jefferson, and Orleans). These four parishes account for 55% of all P&S syphilis diagnoses in 2016.
- Additional breakdowns by race/ethnicity and parish can be found in the Appendix.

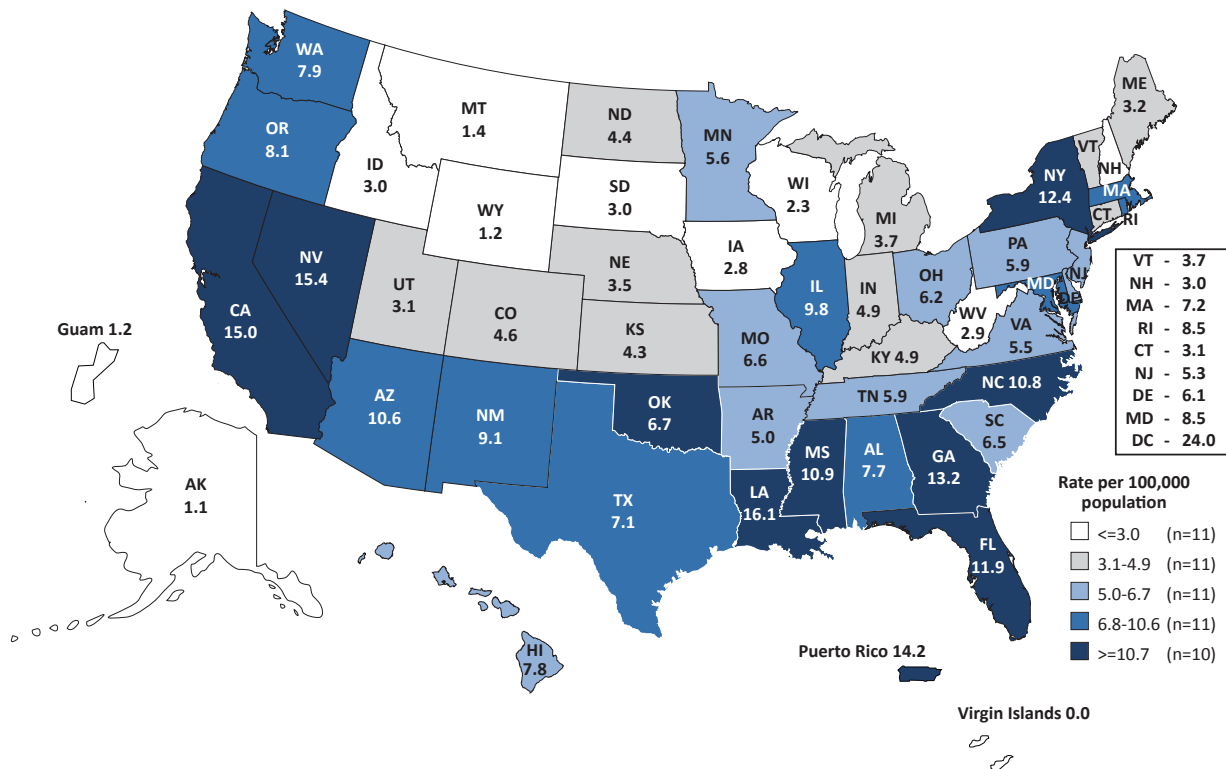


- From 2008 to 2013, the P&S syphilis diagnosis rate was highest in the Shreveport region, decreasing to 2nd in 2014 and to 3rd in 2015. In 2016, the Shreveport region once again rose to have the highest P&S syphilis rate in the state.
- From 2014 to 2015, the New Orleans region had the highest P&S syphilis rate in the state but dropped to 2nd in 2016 despite a continued rate increase.

New P&S Syphilis Diagnoses by Region and Year Louisiana, 2012-2016										
	2012		2013		2014		2015		2016	
Louisiana	338	%	423	%	575	%	696	%	750	%
1-New Orleans	62	18%	93	22%	199	35%	199	29%	216	29%
2-Baton Rouge	66	20%	70	17%	80	14%	123	18%	117	16%
3-Houma	14	4%	21	5%	54	9%	43	6%	56	7%
4-Lafayette	29	9%	49	12%	43	7%	60	9%	69	9%
5-Lake Charles	12	4%	7	2%	6	1%	14	2%	21	3%
6-Alexandria	17	5%	13	3%	10	2%	34	5%	30	4%
7-Shreveport	124	37%	126	30%	110	19%	115	17%	148	20%
8-Monroe	13	4%	30	7%	56	10%	81	12%	73	10%
9-Hammond/Slidell	1	0%	14	3%	17	3%	27	4%	20	3%

- In 2016, the number of new diagnoses was highest in the New Orleans region. From 2012 to 2016, the number of P&S syphilis diagnoses more than tripled in this region.
- Between 2012 and 2014, the number of P&S syphilis diagnoses in the Shreveport region decreased by 11%; from 2014 to 2016, the number of cases increased 34%.

P&S Syphilis Diagnosis Rates in the United States (2016)^{xxiii}



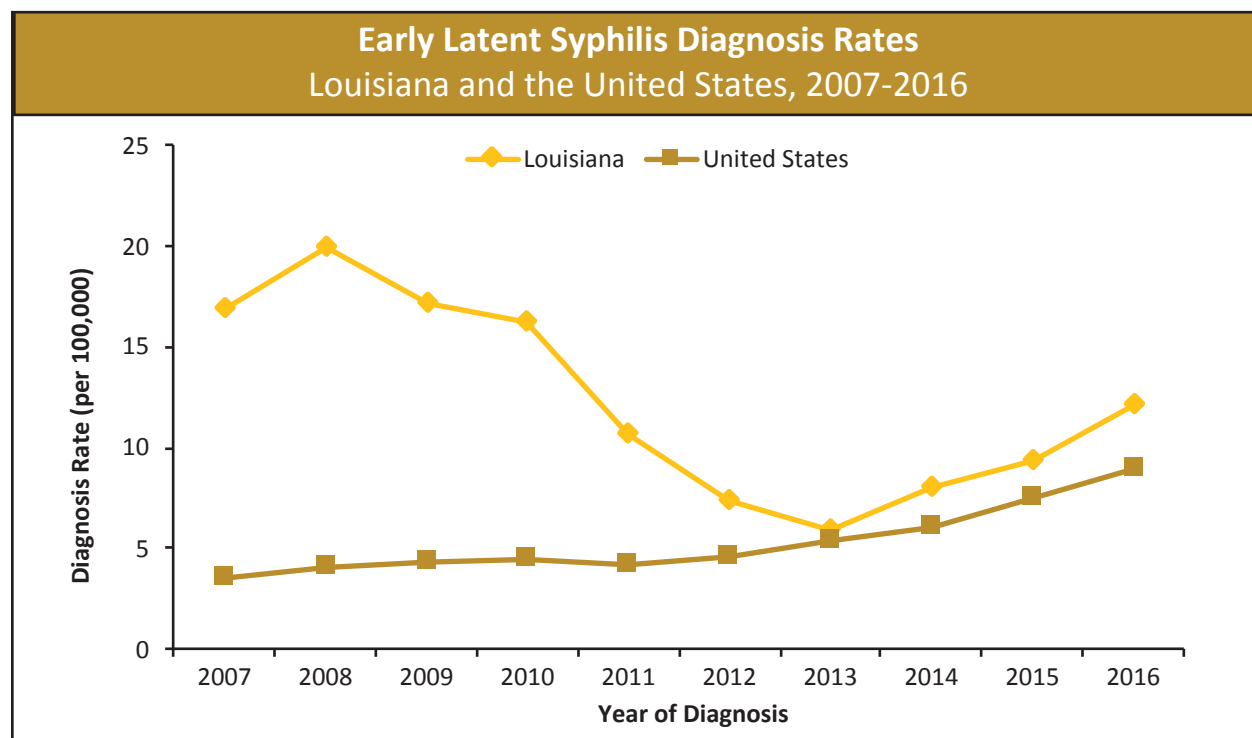
- According to the most recent CDC report, there were 27,814 new P&S syphilis diagnoses reported in the United States in 2016, for a national P&S syphilis rate of 8.7 diagnoses per 100,000 population. In 2015, the national P&S syphilis diagnosis rate was 7.5 per 100,000 population.^{xxiii}
- The national P&S syphilis diagnosis rate increased nearly 18% from 2015 to 2016.^{xxiii}
- Nationally, the diagnosis rate in females increased more than the rate in males, rising 36% from 2015 to 2016 in females, and 15% in males. However, the rate of P&S syphilis in males still far exceeds that seen in females, accounting for nearly 89% of all P&S syphilis diagnoses.^{xxiii}
- In 2016, Louisiana ranked 1st in the nation for P&S syphilis diagnosis rates (16.0 per 100,000). Georgia (14.0 per 100,000), and California (12.6 per 100,000), ranked 2nd and 3rd respectively in 2016.^{xxiii} The District of Columbia has the highest rate in the nation but is not included in national rankings.
- Louisiana's 2016 rate was nearly 1.8 times greater than the national rate.^{xxiii}

Early Latent Syphilis

Early latent syphilis is defined as an infection which has occurred within 12 months of diagnosis without any signs or symptoms of P&S syphilis. If not detected and treated early, syphilis may lead to long-term health problems including blindness, dementia, paralysis, and other damage to internal organs. Also, in pregnant women, monitoring of all stages of syphilis infection is important because undetected cases can lead to stillbirth or congenital defects.^{xxvi} In Louisiana, early latent syphilis cases receive the same partner services and follow-up by trained disease intervention specialists as P&S syphilis. This is because early latent syphilis can occur between the primary and secondary stages, or in some cases, if a chancre is not visible upon cursory examination, a case may be misclassified as early latent instead of primary.

10 Year Trends in Early Latent Syphilis Diagnoses

In 2016, there were 568 early latent syphilis diagnoses in Louisiana, a 29% increase compared to 439 diagnoses in 2015. Between 2008 and 2013, the Louisiana early latent syphilis rate decreased 70%, from 19.9 per 100,000 to 6.0 per 100,000. However, from 2013 to 2016, the Louisiana early latent syphilis rate doubled.



- In 2016, the early latent syphilis diagnosis rate in Louisiana was 12.1 per 100,000 population, which was 34% greater than the national rate of 9.0 per 100,000 population.

Characteristics of Persons Diagnosed with Early Latent Syphilis Louisiana, 2016			
	Cases	Percent	Rate*
Total	568	100%	12.1
Sex at Birth			
Female	177	31.2%	7.4
Male	391	68.8%	17.1
Race/Ethnicity			
Black/African American	411	72.4%	27.3
Hispanic/Latinx	17	3.0%	7.2
White	134	23.6%	4.9
Other/Multi-race	6	1.1%	-
Age Group	Age at Diagnosis		
0-9	0	0.0%	0.0
10-14	2	0.4%	0.7
15-19	58	10.2%	19.1
20-24	142	25.0%	43.4
25-29	131	23.1%	37.6
30-34	90	15.8%	27.0
35-39	46	8.1%	15.1
40-44	23	4.0%	8.5
45+	76	13.4%	4.1

* Rate per 100,000

- In 2016, 391 males were diagnosed with early latent syphilis, a 27% increase from the 309 males diagnosed in 2015.
- There were 177 diagnoses of early latent syphilis in females in 2016, a 36% increase from the 130 females diagnosed in 2015.
- The rate of early latent syphilis in males was over two times the rate in females in 2016.
- The numbers of early latent syphilis cases increased across all race/ethnicities from 2015 to 2016; a 22% increase in blacks from 338 cases in 2015 to 411 cases in 2016; a 63% increase in whites from 82 cases in 2015 to 134 cases in 2016; a 6% increase in Hispanic/Latinx from 16 cases in 2015 to 17 cases in 2016.
- There is a significant racial disparity in early syphilis diagnoses in Louisiana. In 2016, 72% of early latent syphilis diagnoses were among blacks, 24% were among whites, and 3% were among Hispanics/Latinx. Only 32% of Louisiana's population is black.
- In 2016, nearly 36% of all diagnoses of early latent syphilis were in persons under 25 years old. An additional 23% were in persons age 25-29.

Race/Ethnicity of Persons Diagnosed with Early Latent Syphilis by Sex at Birth Louisiana, 2016			
	Cases	Percent	Rate*
Total	568	100%	12.1
Female	177	31.2%	7.4
American Indian/Alaskan Native	0	0.0%	0.0
Asian/Pacific Islander	0	0.0%	0.0
Black/African American	142	80.2%	18.0
Hispanic/Latina	1	0.6%	0.9
White	34	19.2%	2.4
Other/Multi-race	0	0.0%	-
Male	391	68.8%	17.1
American Indian/Alaskan Native	2	0.5%	13.5
Asian/Pacific Islander	4	1.0%	9.7
Black/African American	269	68.8%	37.7
Hispanic/Latino	16	4.1%	12.6
White	100	25.6%	7.4
Other/Multi-race	0	0.0%	-

* Rate per 100,000

- From 2015 to 2016, the numbers of early latent syphilis diagnoses increased 29% in black females from 110 diagnoses to 142 diagnoses. Diagnoses increased 18% in black males from 228 diagnoses to 269 diagnoses.
- The numbers of early latent syphilis diagnoses increased 51% in white males, from 66 in 2015 to 100 in 2016. Diagnoses more than doubled in white females, from 16 in 2015 to 34 in 2016.
- Among females, 80% of early latent syphilis diagnoses were in blacks, 19% were in whites, and less than 1% were Hispanic/Latina. The diagnosis rate in black females was seven and a half times that in white females.
- Among males, 69% of early latent syphilis diagnoses were in blacks, 26% were in whites, and 4% were Hispanic/Latino. The diagnosis rate in black males was five times that in white males and three times that in Hispanic/Latino males.

Early Syphilis Risk Behaviors

A diagnosis of P&S syphilis or early latent syphilis is also known as early syphilis. Persons diagnosed with early syphilis may have acquired the infection via a variety of different routes. Additionally, certain environmental factors and behaviors such as incarceration, transactional sex such as paying for or being paid for sexual activity, and illegal drug use are associated with increased risk of acquiring syphilis. These risks vary between males and females. An individual can have multiple risk factors, thus proportions in the table below do not sum to 100%.

Gay, bisexual, and other men who have sex with men (MSM), injection drug users (IDU), and MSM/IDU are mutually exclusive categories. Among both sexes, heterosexual and high-risk heterosexual contact are also mutually exclusive categories. An individual reporting sex with a person of the opposite sex who also engages in behaviors such as anonymous sex falls into the high-risk heterosexual contact category while persons who report sex with a person of the opposite sex without additional risk behaviors fall into the heterosexual contact category. Illegal drug use includes use of any street drugs and use of prescription drugs other than as prescribed. This group includes persons who may engage in injection drug use. Injection drug use has a separate category because it is an extremely efficient way of transmitting syphilis, injecting the spirochete directly into the bloodstream.

Risk Factors in Persons Diagnosed with Early Syphilis by Sex at Birth Louisiana, 2016						
	P&S Syphilis		Early Latent Syphilis		Total	
	Cases	Percent	Cases	Percent	Cases	Percent
	750	57%	568	43%	1,318	100%
Female	192	26%	177	31%	369	28%
MSM/IDU	-	-	-	-	-	-
Male Sex with Male	-	-	-	-	-	-
IDU	3	1.6%	4	2.5%	7	2.0%
Transactional Sex	10	5.4%	3	1.9%	13	3.8%
High Risk Heterosexual Contact	31	16.8%	19	11.7%	50	14.5%
Heterosexual Contact	152	82.6%	143	88.3%	295	85.3%
Incarceration	9	4.9%	10	6.2%	19	5.5%
Illegal Drug Use	42	22.8%	38	23.5%	80	23.1%
<i>No Identified Risk</i>	8	4.2%	15	8.5%	23	6.2%
Male	558	74%	391	69%	949	72%
MSM/IDU	10	1.9%	5	1.5%	15	1.7%
Male Sex with Male	338	64.1%	226	67.5%	564	65.4%
IDU	9	1.7%	3	0.9%	12	1.4%
Transactional Sex	27	5.1%	12	3.6%	39	4.5%
High Risk Heterosexual Contact	104	19.7%	49	14.6%	153	17.7%
Heterosexual Contact	115	21.8%	86	25.7%	201	23.3%
Incarceration	48	9.1%	44	13.1%	92	10.7%
Illegal Drug Use	180	34.2%	117	34.9%	297	34.5%
<i>No Identified Risk</i>	31	5.6%	56	14.3%	87	9.2%

- 100% of females with known risk behaviors reported heterosexual or high-risk heterosexual contact. A total of 69% of males reported having sex with males and 41% reported having sex with females.
- A greater proportion of males reported high-risk heterosexual contact (18%) such as anonymous partners than females (14.5%). The proportion of males who were incarcerated in the prior year (11%) was twice that of females (5.5%) and more males reported illegal drug use (35%) than females (23%).

HIV Co-Infection with STDs and Hepatitis C

HIV Co-Infection with STDs and Hepatitis C

HIV shares a number of risk factors with other sexually transmitted diseases (STDs) and the hepatitis C virus (HCV). As a result, persons diagnosed with an STD or HCV are more likely than others to be co-infected with HIV. Co-infection with HIV may introduce additional complications for treatment, increased risk of disease transmission, and accelerated disease progression. The STD/HIV Program routinely conducts matches between Louisiana's HIV, STD, and viral hepatitis registries to monitor the epidemiology of these co-infected persons in order to evaluate disease transmission risk and determine the need for integrated medical and public health services.

In 2016, 2% of chlamydia diagnoses were co-infected with HIV (556 co-infected persons), 6% of gonorrhea diagnoses were co-infected with HIV (683 co-infected persons), 30% of primary and secondary (P&S) syphilis diagnoses were co-infected with HIV (221 co-infected persons), and 4% of hepatitis C virus diagnoses were co-infected with HIV (165 co-infected persons).

Number and Percent of STD/HCV Diagnoses with HIV Co-infection Louisiana, 2013-2016								
Co-infections	2013		2014		2015		2016	
	# Co-infections	% of STD or HCV Diagnoses	# Co-infections	% of STD or HCV Diagnoses	# Co-infections	% of STD or HCV Diagnoses	# Co-infections	% of STD or HCV Diagnoses
Chlamydia/HIV	285	1%	393	1%	429	1%	556	2%
Gonorrhea/HIV	278	3%	382	4%	433	4%	683	6%
P&S Syphilis/HIV	113	27%	216	38%	206	30%	221	30%
HCV/HIV*	-	-	-	-	-	-	165	4%

* HCV and HIV co-infection data are only available for 2016.

HIV and STD Co-infection

Common risk factors for transmission of HIV and STDs include unprotected anal or vaginal sex with anonymous- or multiple partners and sexual activity under the influence of alcohol or other drugs. HIV transmission is also more likely to occur during unprotected anal or vaginal sex if one or more sexual partners has sores or lesions present due to an active STD infection.^{xxvii} Gay, bisexual, and other men who have sex with men (MSM) are at an elevated risk for both HIV and STD transmission due to a variety of factors: the practice of anal sex among some MSM, which carries a higher risk for STD and HIV transmission compared to other types of sexual activity; a noted decrease in safe sex practices over time; the practice of seeking out sexual partners of the same HIV status thereby creating smaller sexual networks (serosorting); and a complex combination of social barriers to routine HIV/STD screening and medical treatment (e.g., multiple stigmas, socioeconomic status, and mistreatment in the healthcare system).

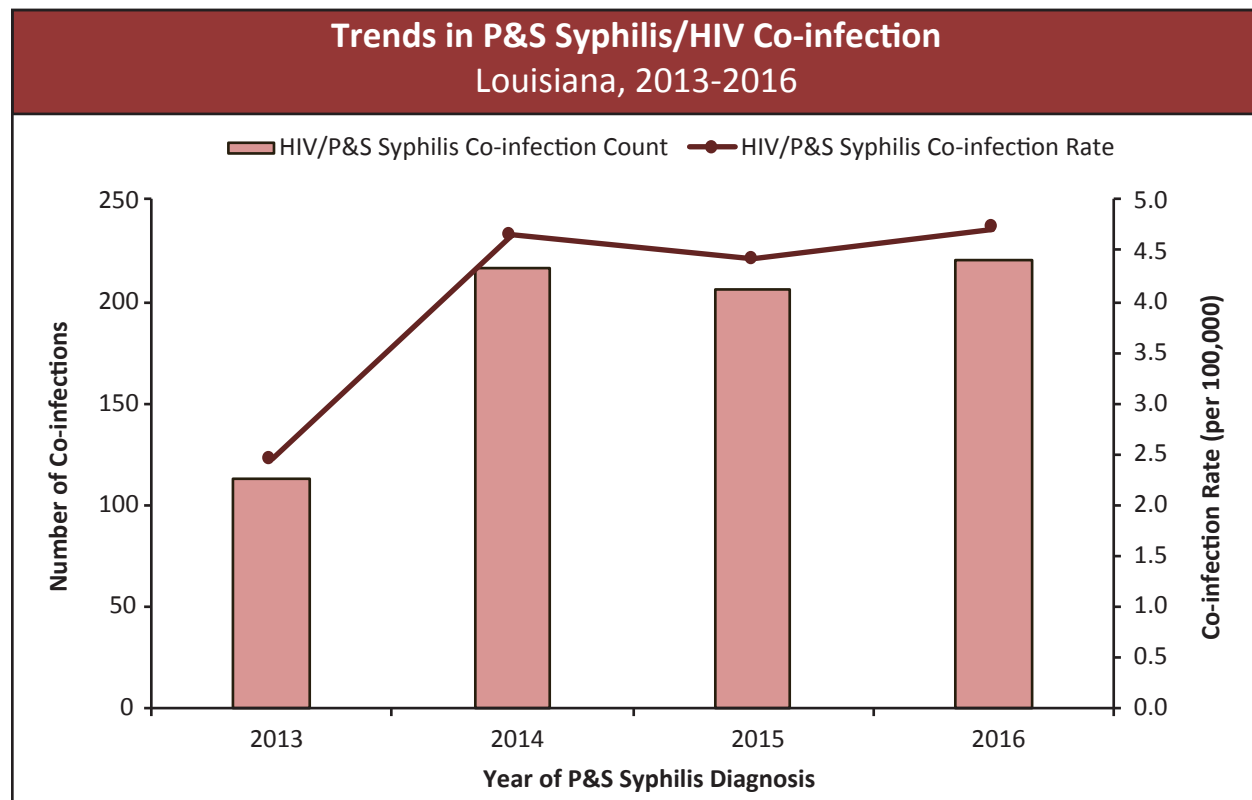
Blacks are also at an elevated risk for acquiring HIV and STDs compared to other racial groups in Louisiana due to a similar combination of social barriers to routine HIV/STD screening and medical treatment that also includes disparate incarceration rates, and being limited to smaller, racially-segregated sexual networks more than other racial groups (see introduction section Understanding HIV disparities). For black MSM, the risk of HIV and STD transmission is compounded due to overlapping risk factors experienced by the MSM population and black population; consequently, black MSM currently have some of the highest rates of HIV, STDs, and HIV/STD co-infection.^{xxviii}

Syphilis

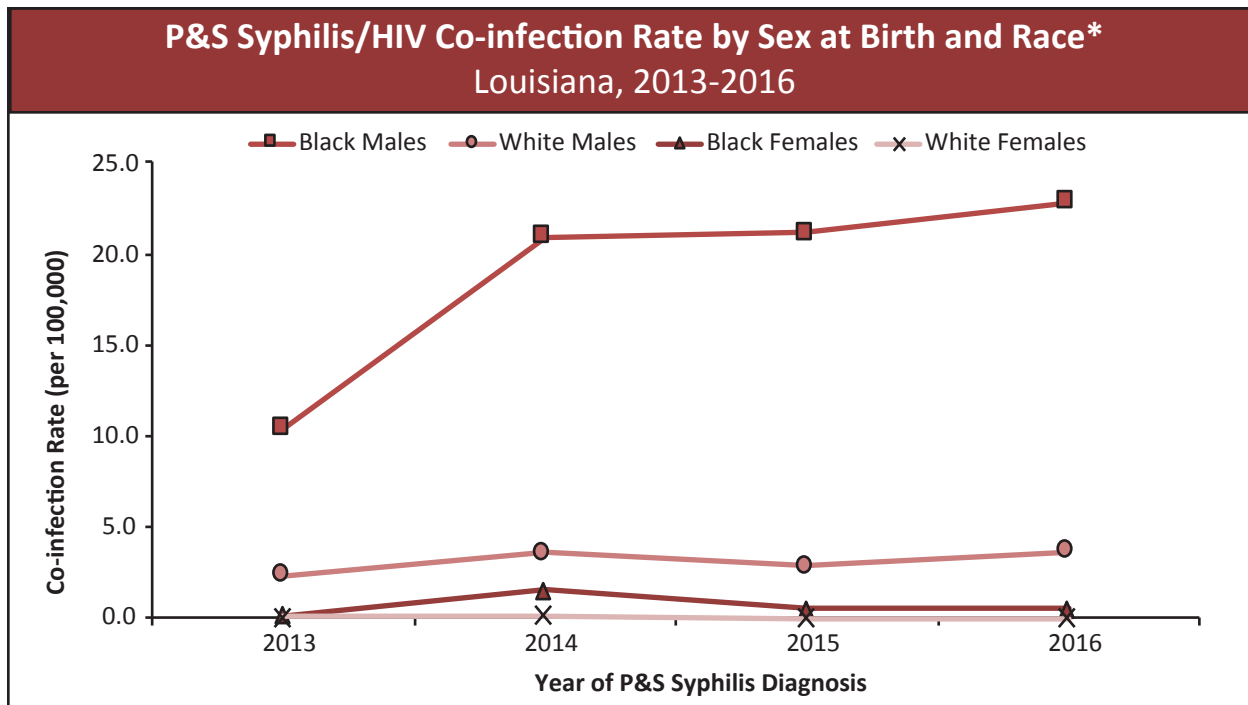
In Louisiana, the primary and secondary (P&S) syphilis rate more than doubled between 2012 and 2016, from 7.4 per 100,000 in 2012 to 16.0 per 100,000 in 2016 (see *Chapter 4: Profile of STDs in Louisiana*). Most of this increase occurred in males; in 2013, males had a diagnosis rate that was almost double the rate in females, and by 2016 males had a diagnosis rate that was three times the rate of females. In 2016, gay, bisexual, and other men who have sex with men (MSM) accounted for 45% of diagnoses. According to national data, P&S syphilis rates have rapidly increased around the US, primarily due to increased transmission among MSM. This recent resurgence in P&S syphilis may be linked to an increase in high-risk activity among MSM, such as decreases in condom usage, the use of the internet and cellular phone apps to find sex partners, serosorting and an increase in alcohol and recreational drug use.^{xxix, xxx}

Persons diagnosed with P&S syphilis are at the highest risk for being co-infected with HIV, compared to other STDs. In 2013, 27% of persons diagnosed with P&S syphilis in Louisiana were co-infected with HIV, and in 2016, 30% of persons diagnosed with P&S syphilis were co-infected with HIV. In Louisiana, MSM accounted for 92% of P&S syphilis/HIV co-infections in 2016. In addition, P&S syphilis/HIV co-infection rates have nearly doubled since 2013 from 2.4 per 100,000 to 4.7 per 100,000 in 2016.

Persons with syphilis/HIV co-infection are at an increased risk for developing syphilis-related complications (e.g., neurosyphilis) and may be at an increased risk of transmitting HIV. As MSM living with HIV are at high risk for syphilis acquisition, CDC recommends that all MSM living with HIV be tested for syphilis upon entering HIV-related medical care and then continually assessed for sexual risk behaviors and tested for syphilis accordingly.^{xxxi}

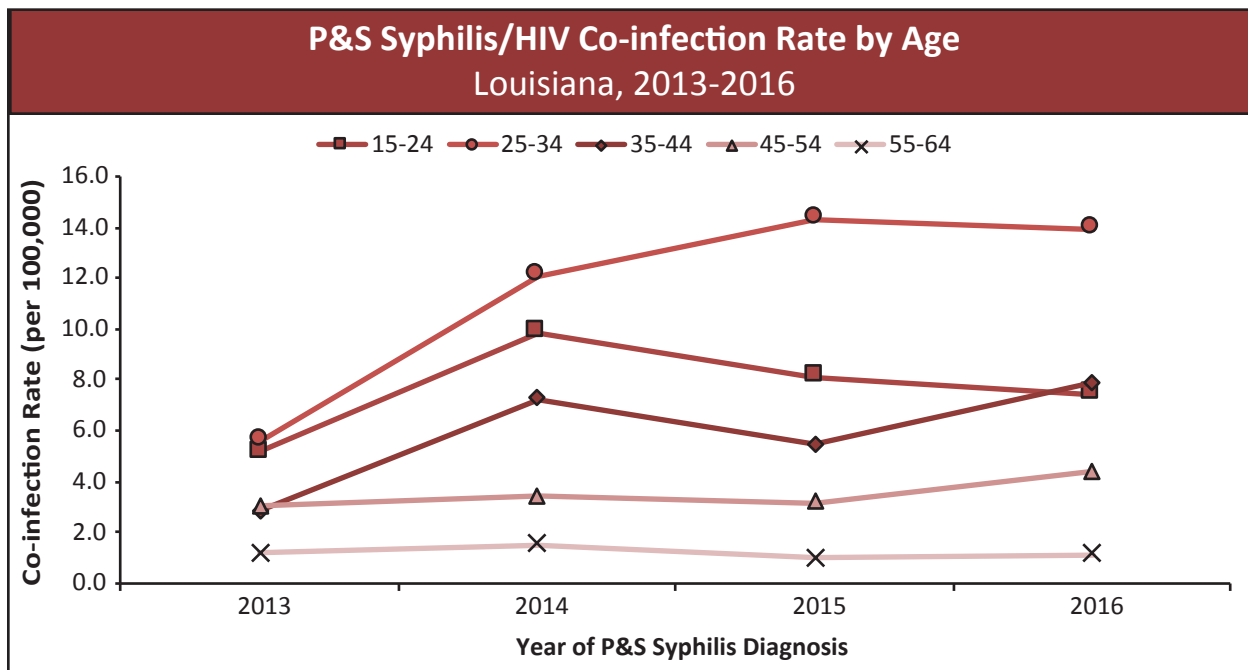


- The number of persons co-infected with P&S syphilis and HIV has increased by 96% between 2013 and 2016, from 113 co-infections in 2013 to 221 co-infections in 2016.
- From 2013 to 2014, the P&S syphilis/HIV co-infection rate nearly doubled from 2.4 per 100,000 in 2013 to 4.6 per 100,000 in 2014 and remained stable from 2015 to 2016.



*Latinx males and females are not depicted in the above graph as both groups accounted for less than 3 co-infections each year.

- In 2013, the P&S syphilis/HIV co-infection rate among black males was 4.5 times greater than among white males. By 2016, the P&S syphilis/HIV co-infection rate among black males was more than six times greater than among white males.
- Only males experienced an overall increase in P&S syphilis/HIV co-infection rate between 2013 and 2016. The greatest increase in P&S syphilis/HIV co-infection rate was among black males (119% increase), followed by white males (61% increase).



- P&S syphilis/HIV co-infection rates have increased overall for persons 15-54 years old; however, persons 35-44 years old (176% increase) and 25-34 years old (150% increase) saw the greatest increases.

Characteristics of Persons with P&S Syphilis/HIV Co-infection Louisiana, 2016

	Number Co-infections	Percent	Co-infection Rate (per 100,000)*
Total	221	100%	4.7
Sex at Birth			
Female	5	2%	0.2
Male	216	98%	9.4
Race/Ethnicity			
Black/African American	167	76%	11.1
Hispanic/Latinx	3	1%	n/a
White	50	23%	1.8
Other/Multi-race	1	1%	-
Age at P&S Syphilis Diagnosis			
15-24	47	21%	7.5
25-34	95	43%	13.9
35-44	43	20%	7.9
45-54	26	12%	4.4
55-64	7	3%	1.2
65+	3	1%	n/a
HIV Transmission Risk			
Men Who Have Sex With Men (MSM)	204	92%	-
Injection Drug User (IDU)	4	2%	-
MSM/IDU	6	3%	-
High Risk Heterosexual (HRH)	6	3%	-
Other	1	<1%	-
Timing of P&S Syphilis Diagnosis			
Concurrent P&S Syphilis/HIV Diagnosis**	51	23%	-
1 Month - 2 Years After HIV Diagnosis	55	25%	-
3-10 Years After HIV Diagnosis	65	30%	-
11+ Years After HIV Diagnosis	38	18%	-
Less than 1 year before HIV Diagnosis	12	5%	-

*Rates derived from numerators less than 5 may be unreliable and are not available (n/a).

** Concurrent P&S syphilis/HIV diagnosis is defined as having a confirmed HIV diagnosis within 30 days before or after having a confirmed P&S syphilis diagnosis.

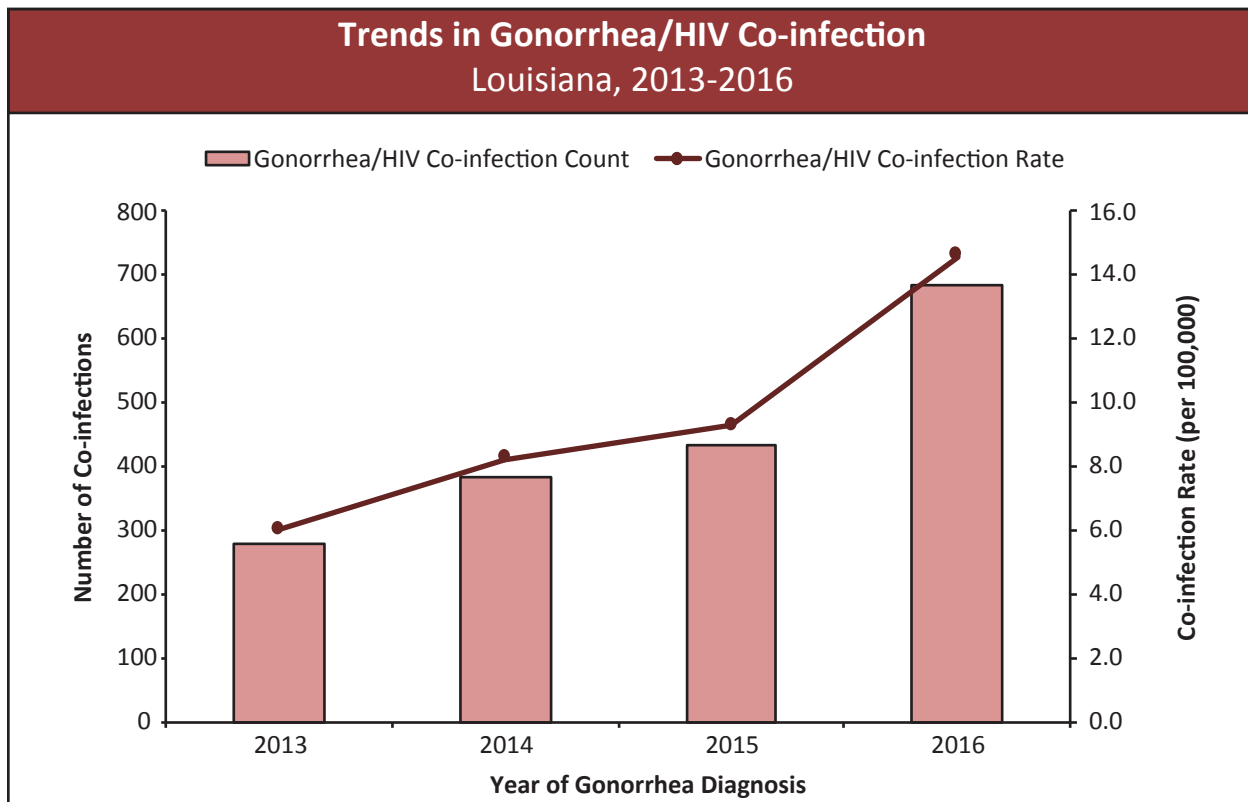
- In 2016, males accounted for 98% of P&S syphilis/HIV co-infections.
- Blacks accounted for 76% of P&S syphilis/HIV co-infections in 2016 even though blacks make up only 32% of Louisiana's population, representing a large racial disparity.
- In 2016, persons younger than 35 accounted for 64% of P&S syphilis/HIV co-infections but accounted for 75% of all P&S syphilis diagnoses.
- Gay, bisexual and other men who have sex with men (MSM) accounted for 92% of P&S syphilis/HIV co-infections in 2016. In the same year, this group accounted for 45% of all P&S syphilis diagnoses.
- In 2016, 48% of P&S syphilis/HIV co-infections occurred among persons that had been HIV positive for 3 years or longer.

Gonorrhea

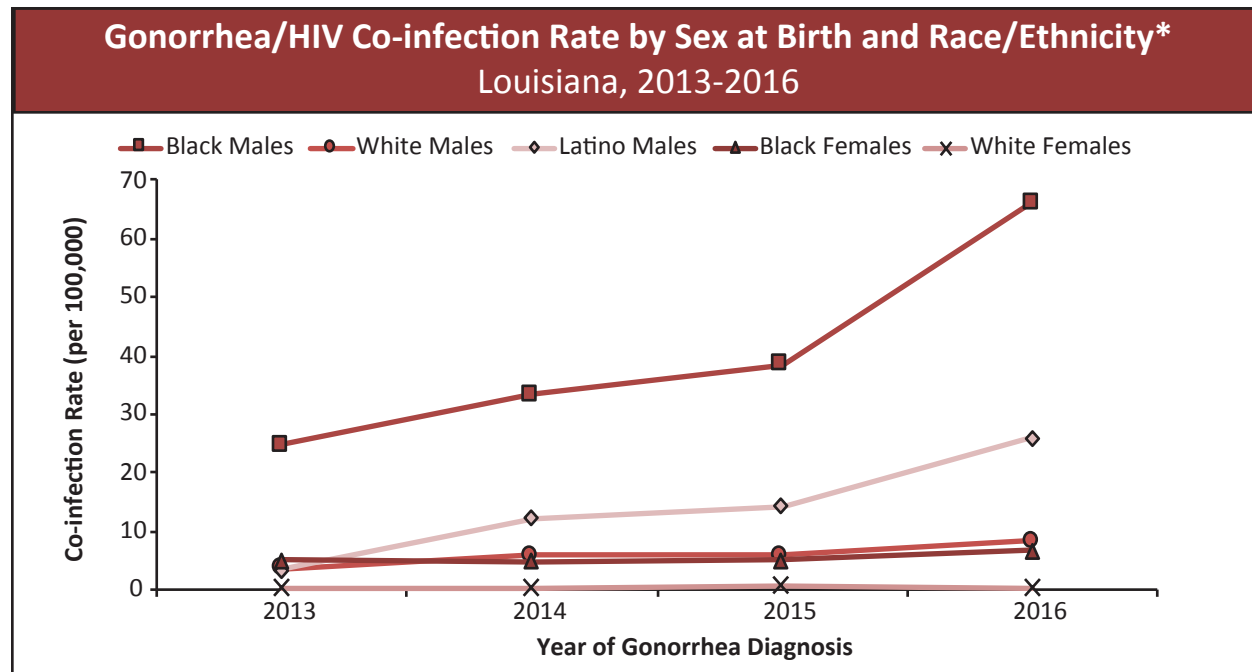
Gonorrhea rates in Louisiana have increased by 23% between 2013 and 2016 (see *Chapter 4: Profile of STDs in Louisiana*). While both males and females have experienced increases in gonorrhea rates during this time period, males have seen the greatest increase. In 2016, the gonorrhea rate among males surpassed that of females for the first time in recorded history.

During the same time period, the gonorrhea/HIV co-infection rate more than quadrupled from 3.6 per 100,000 in 2013 to 14.6 per 100,000 in 2016. The percentage of gonorrhea diagnoses co-infected with HIV grew from 1.9% in 2013 to 6.4% in 2016. MSM accounted for 69% of gonorrhea/HIV co-infections in 2013, and by 2016, MSM accounted for 83% of gonorrhea/HIV co-infections.

Taken together, these trends suggest that the recent increase in gonorrhea rates among males in Louisiana is primarily driven by increased transmission between MSM. Increased gonorrhea transmission among MSM has been associated with the risk factors described in the above sections, as well as increases in condomless sex, having multiple anonymous partners, and substance abuse. Recent increases in the utilization of gonorrhea testing of extragenital infection sites (e.g., throat and rectum) among MSM in Louisiana may have also contributed to the observed increase in gonorrhea diagnosis rates among MSM.^{xxxi}

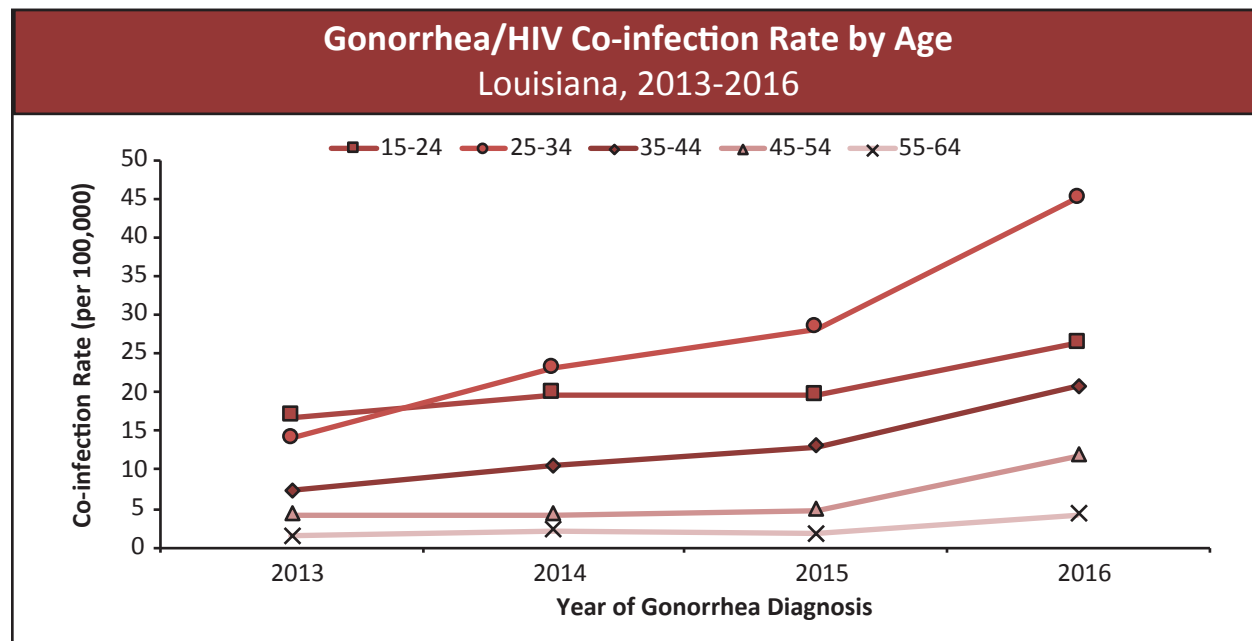


- The number of gonorrhea diagnoses co-infected with HIV more than doubled between 2013 and 2016, from 278 persons in 2013 to 683 persons in 2016.
- From 2013 to 2016, the gonorrhea/HIV co-infection rate more than doubled from a low of 6.0 per 100,000 in 2013 to a high of 14.6 per 100,000 in 2016.



*Latina females are not included in the above graph as this group accounted for less than 3 co-infections each year.

- In 2013, the gonorrhea/HIV co-infection rate in black males was seven times greater than the rate in white males. In 2016, the gonorrhea/HIV co-infection rate in black males was eight times greater than the rate in white males.
- Between 2013 and 2016, the gonorrhea/HIV co-infection rate in black males almost tripled from 24.7 per 100,000 black males to 66.2 per 100,000 black males.
- In 2013, Latino males had a gonorrhea/HIV co-infection rate that was similar to the rate in white males. By 2016, Latino males had a gonorrhea/HIV co-infection rate more than three times the rate in white males.
- In 2016, black females had a gonorrhea/HIV co-infection rate 22 times the rate in white females.



- Between 2013 and 2016, gonorrhea/HIV co-infection rates increased for all age groups between 15 and 64 years old. Persons 25-34 years old saw the largest rate increase (221% increase), followed by persons 55-64 years old (199% increase).

Characteristics of Persons with Gonorrhea/HIV Co-infection Louisiana, 2016			
	Number Co-infections	Percent	Co-infection Rate (per 100,000)*
Total	683	100%	14.6
Sex at Birth			
Female	58	8%	2.4
Male	625	92%	27.3
Race/Ethnicity			
Black/African American	525	77%	34.9
Hispanic/Latinx	33	5%	14.0
White	117	17%	4.2
Other/Multi-race	8	1%	-
Age at Gonorrhea Diagnosis			
15-24	166	24%	26.4
25-34	307	45%	45.0
35-44	114	17%	20.8
45-54	70	10%	11.8
55-64	25	4%	4.1
65+	1	<1%	n/a
HIV Transmission Risk			
Men Who Have Sex With Men (MSM)	564	83%	-
Injection Drug User (IDU)	15	2%	-
MSM/IDU	22	3%	-
High Risk Heterosexual (HRH)	79	12%	-
Other	3	<1%	-
Timing of Gonorrhea Diagnosis			
Concurrent Gonorrhea/HIV Diagnosis**	52	8%	-
1 Month - 2 Years After HIV Diagnosis	219	32%	-
3-10 Years After HIV Diagnosis	274	40%	-
11+ Years After HIV Diagnosis	103	15%	-
Less than 1 year before HIV Diagnosis	35	5%	-

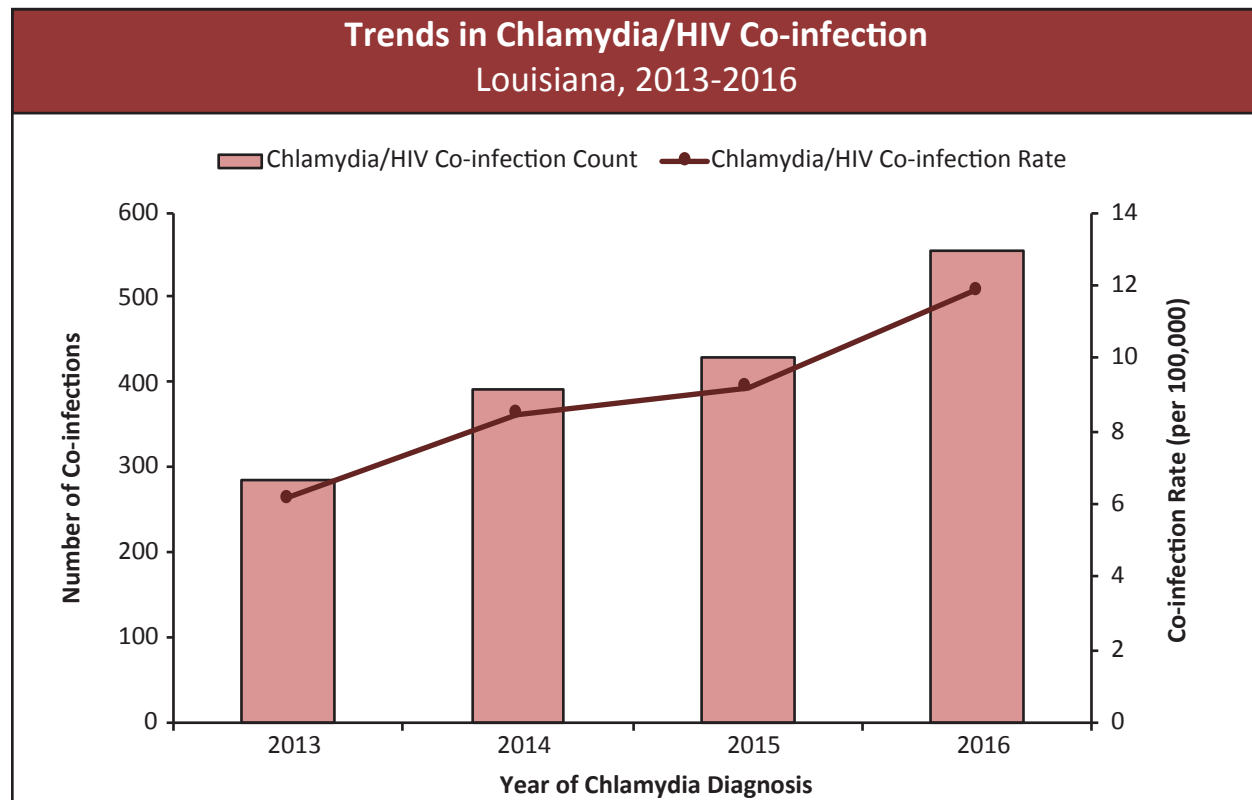
*Rates derived from numerators less than 5 may be unreliable and are not available (n/a).

** Concurrent gonorrhea/HIV diagnosis is defined as having a confirmed HIV diagnosis within 30 days before or after having a confirmed gonorrhea diagnosis.

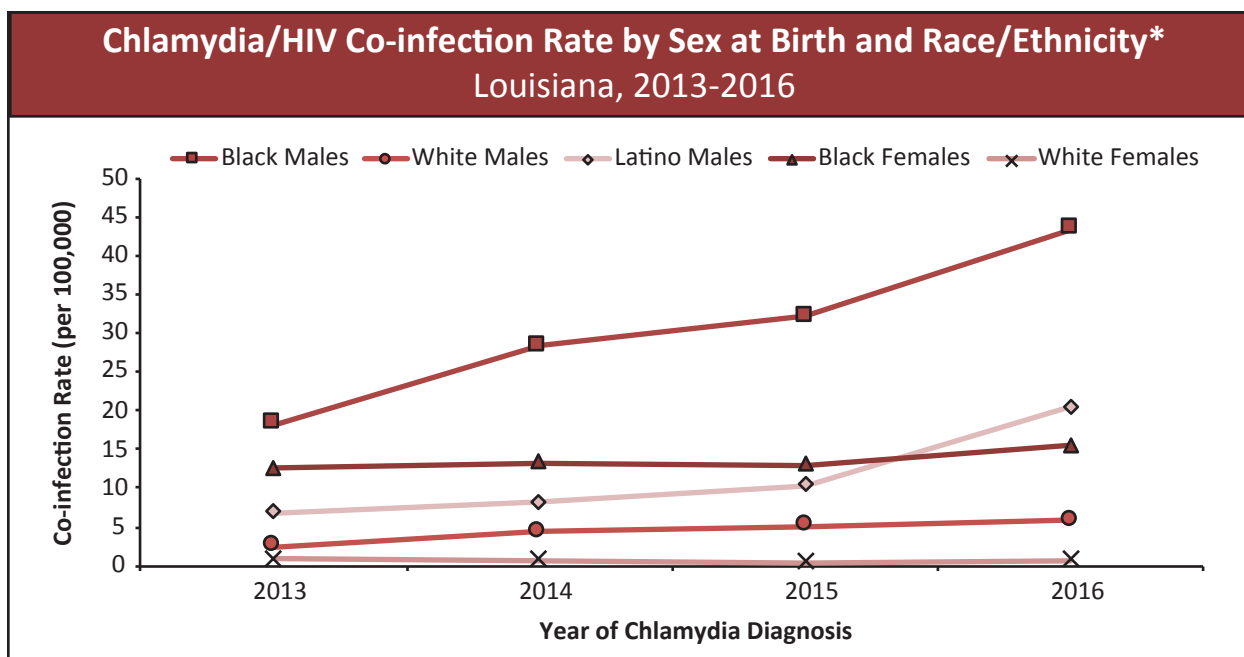
- In 2016, males accounted for 92% of gonorrhea/HIV co-infections.
- Blacks accounted for 77% of gonorrhea/HIV co-infections in 2016 even though blacks make up only 32% of Louisiana's population, representing a large racial disparity.
- In 2016, persons younger than 35 accounted for 69% of gonorrhea/HIV co-infections but accounted for 88% of all gonorrhea diagnoses.
- Gay, bisexual and other men who have sex with men (MSM) accounted for 83% of gonorrhea/HIV co-infections in 2016.
- In 2016, 55% of gonorrhea/HIV co-infections occurred among persons that had been HIV positive for 3 years or longer.

Chlamydia

Chlamydia is the most commonly diagnosed STD in the US and in Louisiana, but has less risk factors in common with HIV compared to syphilis and gonorrhea. Unlike HIV, chlamydia diagnosis rates in Louisiana have been consistently higher among women compared to men (see *Chapter 4: Profile of STDs in Louisiana*). Between 2013 and 2016, the chlamydia rate in Louisiana increased from 621.3 per 100,000 to 677.7 per 100,000 (9% increase). During the same period, the chlamydia/HIV co-infection rate in Louisiana nearly doubled from 6.2 per 100,000 to 11.9 per 100,000. In 2016, almost 2% of persons with a new chlamydia diagnosis were co-infected with HIV.

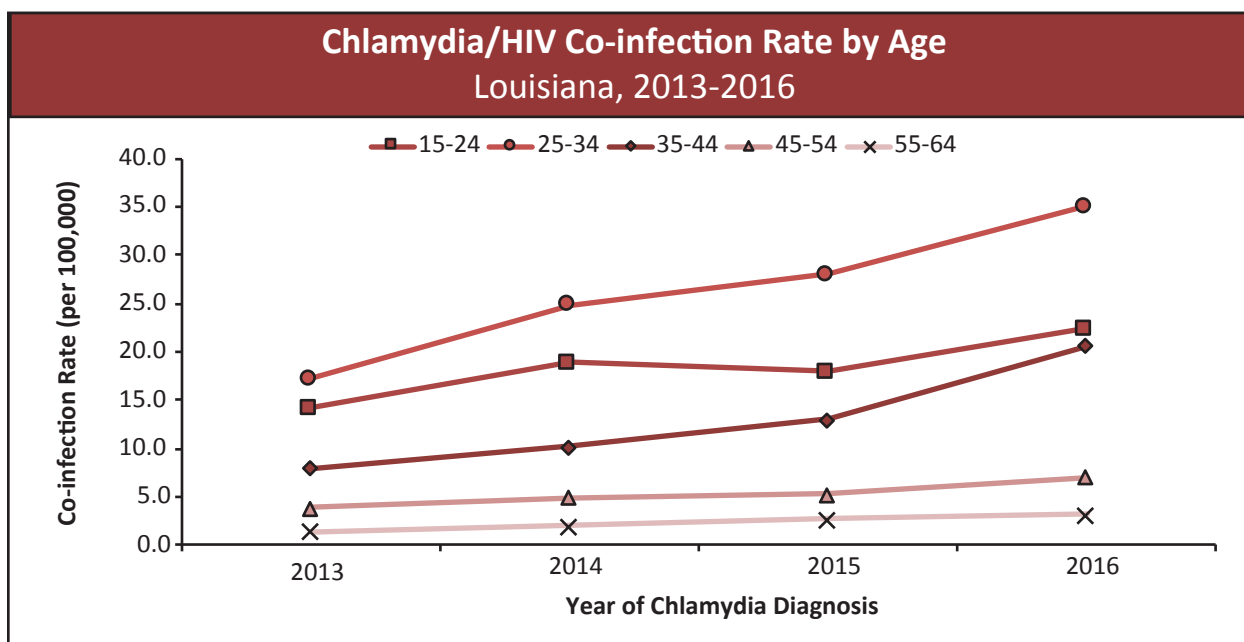


- The number of persons co-infected with chlamydia and HIV nearly doubled between 2013 and 2016, from 285 persons in 2013 to 556 persons in 2016.
- From 2013 to 2016, the chlamydia/HIV co-infection rate nearly doubled from a low of 6.2 per 100,000 in 2013 to a high of 11.9 per 100,000 in 2016.



*Latina females are not included in the above graph as this group accounted for less than 3 co-infections each year.

- In 2013 and 2016, the chlamydia/HIV co-infection rate in black males was approximately seven times greater than the rate in white males.
- Between 2013 and 2016, the chlamydia/HIV co-infection rate in black males more than doubled from 18.3 per 100,000 black males to 43.4 per 100,000 black males.
- Between 2013 and 2016, Latino males had a chlamydia/HIV co-infection rate that was 2.7-3.5 times greater than the rate in white males.
- Between 2013 and 2016, black females had a chlamydia/HIV co-infection rate that was approximately seven times greater than the rate in white females.



- Chlamydia/HIV co-infection rates have increased for all age groups between 2013 and 2016; however, persons 35-44 years old (158% increase), 55-64 years old (127% increase), and 25-34 years old (104% increase) saw the greatest increases.

Characteristics of Persons with Chlamydia/HIV Co-infection Louisiana, 2016

	Number Co-infections	Percent	Co-infection Rate (per 100,000)*
Total	556	100%	11.9
Sex at Birth			
Female	133	24%	5.6
Male	423	76%	18.5
Race/Ethnicity			
Black/African American	432	78%	28.7
Hispanic/Latinx	26	5%	11.0
White	90	16%	3.3
Other/Multi-race	8	1%	-
Age at Chlamydia Diagnosis			
15-24	141	25%	22.4
25-34	239	43%	35.1
35-44	113	20%	20.6
45-54	42	8%	7.1
55-64	19	3%	3.2
65+	2	<1%	n/a
HIV Transmission Risk			
Men Who Have Sex With Men (MSM)	370	67%	-
Injection Drug User (IDU)	21	4%	-
MSM/IDU	20	4%	-
High Risk Heterosexual (HRH)	130	23%	-
Other	15	3%	-
Timing of Chlamydia Diagnosis			
Concurrent Chlamydia/HIV Diagnosis**	57	10%	-
1 Month - 2 Years After HIV Diagnosis	164	29%	-
3-10 Years After HIV Diagnosis	211	38%	-
11+ Years After HIV Diagnosis	106	19%	-
Less than 1 year before HIV Diagnosis	18	3%	-

*Rates derived from numerators less than 5 may be unreliable and are not available (n/a).

** Concurrent chlamydia/HIV diagnosis is defined as having a confirmed HIV diagnosis within 30 days before or after having a confirmed chlamydia diagnosis.

- In 2016, males accounted for 76% of chlamydia/HIV co-infections but only accounted for 28% of all chlamydia diagnoses.
- Blacks accounted for 78% of chlamydia/HIV co-infections in 2016 even though blacks make up only 32% of Louisiana's population, representing a large racial disparity.
- In 2016, persons 35 and older accounted for 31% of chlamydia/HIV co-infections but only accounted for 6% of all chlamydia diagnoses.
- Gay, bisexual and other men who have sex with men (MSM) accounted for 67% of chlamydia/HIV co-infections in 2016.
- In 2016, 57% of chlamydia/HIV co-infections occurred among persons that had been HIV positive for 3 years or longer.

HIV and Hepatitis C Virus Co-Infection

Hepatitis C virus (HCV) is a blood-borne virus that is typically transmitted through syringe sharing and the use of unsterile equipment associated with injection drug use. Rarely, HCV transmission can occur through sexual contact, tattoo application in unregulated settings, and among infants born to mothers living with HCV. Before 1992, persons may have also acquired HCV from a blood transfusion, medical blood products, or kidney dialysis equipment. The risk of HCV transmission (and HIV transmission) associated with medical treatments has decreased greatly since 1992 due to the introduction of routine screening of blood products and widespread use of sterile syringes in healthcare settings. Most persons living with HCV do not experience any recognizable symptoms during the acute phase of an HCV infection. Symptoms of acute HCV, when they do occur, are typically mild and may include flu-like symptoms, abnormal bloodwork, or jaundice. It's estimated that 60-85% of persons with acute HCV will go on to develop a chronic HCV infection. Persons with chronic HCV do not usually experience any further symptoms until advanced disease progression has already occurred. Left untreated, an estimated 10-20% of persons living with chronic HCV will develop HCV-related cirrhosis 20-30 years after the initial HCV infection. Due to the asymptomatic nature of the disease, many persons living with HCV may be unaware of their status. Routine HCV testing of high-risk persons is important for early diagnosis and treatment.^{xxxii-xxxiii}

From 2010 to 2015, the number of reported HCV diagnoses in the US tripled and reached a 15-year high in 2015. HCV rates are most rapidly increasing among persons 20-29 years old primarily due to injection drug-use associated with growing opioid use; however, HCV continues to be most prevalent among persons born between 1945 and 1965. Currently, an estimated 3.5 million persons are living with HCV in the US. Although HCV is a reportable disease, HCV infections in the US are critically underreported due to a low volume of routine HCV screening among high-risk groups and a lack of resources devoted to viral hepatitis state surveillance programs.^{xxxii, xxxiv}

Co-infection with HIV and HCV is commonly associated with sharing injection drug equipment. While both infections represent serious health concerns, especially among persons who inject drugs, HCV/HIV co-infection introduces additional complications in the treatment and disease progression of both conditions.^{xxxiii, xxxv}

Region of Residence of Persons with HCV/HIV Co-infection Louisiana, 2016			
	Number Co-infections	Percent	Co-infection Rate (per 100,000)
Total	165	100%	3.5
Region			
1-New Orleans	38	23.0%	4.2
2-Baton Rouge	57	34.5%	8.3
3-Houma	1	0.6%	n/a
4-Lafayette	12	7.3%	2.0
5-Lake Charles	18	10.9%	6.0
6-Alexandria	4	2.4%	n/a
7-Shreveport	15	9.1%	2.8
8-Monroe	8	4.8%	2.3
9-Hammond/Slidell	12	7.3%	2.1

* Rates derived from numerators less than 5 may be unreliable and are not available (n/a).

- In 2016, the Baton Rouge region had the highest number of HCV/HIV co-infections and the highest HCV/HIV co-infection rate. New Orleans had the second highest number of HCV/HIV co-infections and Lake Charles had the second highest HCV/HIV co-infection rate.

Characteristics of Persons with HCV/HIV Co-infection Louisiana, 2016

	Number Co-infections	Percent	Co-infection Rate (per 100,000)*
Total	165	100%	3.5
Sex at Birth			
Female	39	24%	1.6
Male	126	76%	5.5
Race/Ethnicity			
Black/African American	114	69%	7.6
Hispanic/Latinx	5	3%	2.1
White	42	26%	1.5
Other/Multi-race	4	2%	-
Age at HCV Diagnosis			
15-24	4	2%	n/a
25-34	24	15%	3.5
35-44	22	13%	4.0
45-54	56	34%	9.5
55-64	52	32%	8.6
65+	7	4%	1.0
HIV Transmission Risk			
Men Who Have Sex With Men (MSM)	62	38%	-
Injection Drug User (IDU)	52	32%	-
MSM/IDU	19	12%	-
High Risk Heterosexual (HRH)	31	19%	-
Other	1	<1%	-

*Rates derived from numerators less than 5 may be unreliable and are not available (n/a).

- In 2016, males accounted for 76% of HCV/HIV co-infections.
- Blacks accounted for 69% of HCV/HIV co-infections in 2016 even though blacks make up only 32% of Louisiana's population, representing a large racial disparity.
- In 2016, persons 35 years old and older accounted for 83% of HCV/HIV co-infections but accounted for 46% of all persons living with HIV that year.
- Gay, bisexual and other men who have sex with men (MSM), accounted for the greatest proportion of HCV/HIV co-infections in 2016 (38%), closely followed by persons who inject drugs (32%). An additional 12% of co-infections are among MSM who also inject drugs.

Appendices

The appendix contains additional tables relevant to the HIV Surveillance chapter of this report, Chapter 1 and the STD Surveillance Chapter, Chapter 4. Immediately following the tables are the Technical Notes and Works Cited.

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HIV SURVEILLANCE TABLES

Trends in HIV Infection, Louisiana, 1979-2016

- This table includes the number of HIV Diagnoses, AIDS Diagnoses, Persons Living with HIV Infection, and Deaths in Persons with HIV Infection from 1979 to 2016. The number of deaths in 2016 are not finalized and are therefore not available.

New HIV Diagnoses by Region and Year, Louisiana, 2007-2016

- This table includes the number of New HIV Diagnoses from 2007 to 2016, for each of the nine public health regions in Louisiana.

New AIDS Diagnoses by Region and Year, Louisiana, 2007-2016

- This table includes the number of New AIDS Diagnoses from 2007 to 2016, for each of the nine public health regions in Louisiana.

Geographic Distribution of HIV in Louisiana, 2016

- This two-page table includes new AIDS Diagnoses in 2016, HIV Diagnoses in 2016, HIV Diagnosis Rate in 2016, Persons Living with HIV Infection in 2016 and Deaths in Persons Living with HIV Infection in 2015 for each of the nine public health regions and the 64 parishes of Louisiana.

Deaths among Persons with HIV Infection, Louisiana, 2015

- This table contains the demographic breakdown of Persons with HIV Infection who died in 2015 in Louisiana, regardless of cause of death.

STD SURVEILLANCE TABLES

Geographic Distribution of Chlamydia by Race/Ethnicity, Louisiana, 2016

- This two-page table includes Chlamydia diagnoses in 2016, for each of the nine public health regions and the 64 parishes of Louisiana.

Geographic Distribution of Gonorrhea by Race/Ethnicity, Louisiana, 2016

- This two-page table includes Gonorrhea diagnoses in 2016, for each of the nine public health regions and the 64 parishes of Louisiana.

Geographic Distribution of Primary & Secondary Syphilis by Race/Ethnicity, Louisiana, 2016

- This two-page table includes P&S syphilis diagnoses in 2016, for each of the nine public health regions and the 64 parishes of Louisiana.

Trends in HIV Infection Louisiana, 1979-2016				
Year	New HIV Diagnoses	New AIDS Diagnoses	Persons Living with HIV Infection	Deaths
1979	1	1	1	0
1980	1	1	1	0
1981	5	0	7	0
1982	17	10	22	0
1983	59	27	70	7
1984	146	84	188	15
1985	383	151	499	38
1986	482	242	853	65
1987	756	417	1,394	93
1988	781	450	1,956	149
1989	1,039	613	2,640	292
1990	1,214	708	3,470	241
1991	1,548	937	4,572	237
1992	1,751	1,064	5,700	528
1993	1,709	1,133	6,728	587
1994	1,646	1,104	7,654	799
1995	1,486	1,039	8,331	891
1996	1,520	1,120	9,144	784
1997	1,508	940	10,213	552
1998	1,274	840	11,097	522
1999	1,242	791	12,005	496
2000	1,187	820	12,805	518
2001	1,133	884	13,502	571
2002	1,178	969	14,260	556
2003	1,051	889	14,848	587
2004	1,055	863	15,680	578
2005	971	801	13,551	590
2006	988	764	14,103	547
2007	1,087	809	14,725	519
2008	1,089	842	15,368	482
2009	1,204	785	16,041	540
2010	1,121	801	16,747	448
2011	1,211	782	17,447	467
2012	1,054	775	18,030	470
2013	1,143	707	18,746	405
2014	1,213	599	19,524	416
2015	1,111	515	20,217	408
2016	1,129	559	20,938	n/a*

*Data are not complete

New HIV Diagnoses by Region and Year Louisiana, 2007-2016										
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Louisiana	1,087	1,089	1,204	1,121	1,211	1,054	1,143	1,213	1,111	1,129
1-New Orleans	323	354	382	342	409	341	379	355	364	352
2-Baton Rouge	309	295	310	296	292	258	248	318	246	231
3-Houma	45	42	40	56	56	55	58	52	63	59
4-Lafayette	71	74	85	88	89	82	91	111	89	111
5-Lake Charles	55	56	51	47	50	38	38	39	45	38
6-Alexandria	44	47	62	61	63	56	63	58	52	59
7-Shreveport	114	107	113	101	118	79	123	124	129	138
8-Monroe	76	53	72	58	67	76	77	89	63	72
9-Hammond/Slidell	50	61	89	72	67	69	66	67	60	69

New AIDS Diagnoses by Region and Year Louisiana, 2007-2016										
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Louisiana	809	842	785	801	782	775	707	599	515	559
1-New Orleans	265	266	236	250	258	252	219	183	168	157
2-Baton Rouge	222	252	199	239	220	195	185	158	120	143
3-Houma	31	32	34	49	30	37	40	29	25	18
4-Lafayette	56	63	50	60	55	59	65	47	37	54
5-Lake Charles	39	37	42	29	38	33	26	19	21	26
6-Alexandria	35	34	41	36	40	35	26	24	21	29
7-Shreveport	79	78	76	52	61	67	64	47	49	60
8-Monroe	40	40	55	44	38	49	40	47	35	38
9-Hammond/Slidell	42	40	52	42	42	48	42	45	39	34

Geographic Distribution of HIV Louisiana, 2016						
Region	Parish	AIDS Diagnoses in 2016*	HIV Diagnoses in 2016	HIV Diagnosis Rate 2016**	Persons Living with HIV Infection 2016	Deaths 2015
Statewide		559	1,129	24	20,938	408†
Region 1		157	352	39	7,239	141
	Jefferson	46	109	25	1,966	31
	Orleans	105	236	60	5,045	104
	Plaquemines	3	1	n/a	43	2
	St. Bernard	3	6	13	185	4
Region 2		143	231	34	5,002	113
	Ascension	10	16	13	244	3
	East Baton Rouge	111	182	41	3,970	94
	East Feliciana	5	7	36	188	1
	Iberville	10	12	36	291	5
	Pointe Coupee	2	4	n/a	55	1
	West Baton Rouge	2	8	31	107	4
	West Feliciana	3	2	n/a	147	5
Region 3		18	59	15	877	15
	Assumption	0	1	n/a	35	1
	Lafourche	6	11	11	154	5
	St. Charles	2	5	9	118	1
	St. James	3	7	32	73	2
	St. John the Baptist	4	18	41	177	1
	St. Mary	0	6	12	91	0
	Terrebonne	3	11	10	229	5
Region 4		54	111	18	1,601	29
	Acadia	5	12	19	122	1
	Evangeline	2	9	27	97	0
	Iberia	4	13	18	123	2
	Lafayette	24	44	18	754	14
	St. Landry	11	16	19	292	7
	St. Martin	5	10	19	115	2
	Vermilion	3	7	12	98	3
Region 5		26	38	13	1,010	16
	Allen	2	2	n/a	213	1
	Beauregard	2	2	n/a	52	2
	Calcasieu	20	31	15	682	12
	Cameron	0	0	0	3	1
	Jefferson Davis	2	3	n/a	60	0

Geographic Distribution of HIV Louisiana, 2016						
Region	Parish	AIDS Diagnoses in 2016*	HIV Diagnoses in 2016	HIV Diagnosis Rate 2016**	Persons Living with HIV Infection 2016	Deaths 2015
Statewide		559	1,129	24	20,938	408†
Region 6		29	59	19	945	15
	Avoyelles	2	3	n/a	174	2
	Catahoula	0	0	0	28	0
	Concordia	2	2	10	48	0
	Grant	0	2	n/a	49	1
	La Salle	1	4	n/a	42	0
	Rapides	22	43	32	507	12
	Vernon	2	5	10	70	0
	Winn	0	0	0	27	0
Region 7		60	138	25	1,846	32
	Bienville	0	1	n/a	30	2
	Bossier	11	22	17	247	4
	Caddo	36	94	38	1,190	19
	Claiborne	1	3	n/a	96	0
	De Soto	0	2	n/a	52	1
	Natchitoches	5	7	18	122	3
	Red River	0	1	n/a	16	1
	Sabine	1	2	n/a	15	1
	Webster	6	6	15	78	1
Region 8		38	72	20	1,083	21
	Caldwell	0	0	0	19	2
	East Carroll	0	0	0	23	1
	Franklin	5	7	34	52	1
	Jackson	0	2	n/a	20	0
	Lincoln	4	5	10	103	3
	Madison	1	3	n/a	41	1
	Morehouse	2	4	n/a	70	2
	Ouachita	21	38	24	626	11
	Richland	4	9	44	46	0
	Tensas	0	0	0	31	0
	Union	1	4	n/a	37	0
	West Carroll	0	0	0	15	0
Region 9		34	69	12	1,335	25
	Livingston	2	13	9	218	4
	St. Helena	3	1	n/a	20	0
	St. Tammany	11	27	11	492	4
	Tangipahoa	12	21	16	407	12
	Washington	6	7	15	198	5

*AIDS diagnoses will be included in counts of HIV diagnosis (3rd Column) for persons first diagnosed with HIV at an AIDS diagnosis or within the same year; therefore numbers from the two columns should not be added.

**Rates per 100,000 persons in parish. Rates derived from numerators less than 5 may be unreliable and are not available (n/a).

† Statewide total may include Louisiana deaths that lack a parish of death.

Deaths Among Persons with HIV Infection Louisiana, 2015		
	2015 Deaths	Percent
Total Deaths	408*	100%
Diagnosis at Death		
AIDS	338	83%
HIV	70	17%
Gender		
Men	284	70%
Women	118	29%
Transgender Women	6	1%
Race/Ethnicity		
Black/African American	309	76%
Hispanic/Latinx	2	<1%
White	94	23%
Multi-Race/Other	3	1%
Age at Death		
20-24	6	1%
25-34	54	13%
35-44	65	16%
45-54	127	31%
55-64	112	27%
65+	44	11%
Imputed Transmission Category		
Men & Transwomen who have sex with men (MSM)	134	33%
Injection Drug User (IDU)	95	23%
MSM/IDU	46	11%
High Risk Heterosexual (HRH)	128	31%
Transfusion/Hemophilia	2	<1%
Pediatric**	3	1%
Region		
1-New Orleans	141	35%
2-Baton Rouge	113	28%
3-Houma	15	4%
4-Lafayette	29	7%
5-Lake Charles	16	4%
6-Alexandria	15	4%
7-Shreveport	32	8%
8-Monroe	21	5%
9-Hammond/Slidell	25	6%
Rural/Urban		
Rural	36	9%
Urban	372	91%

*Statewide total may include Louisiana deaths that lack a parish of death.

**Transmission category not imputed.

Geographic Distribution of Chlamydia by Race/Ethnicity Louisiana, 2016								
	White		Black/African American		Hispanic/Latinx		Total†	
	Cases	Rate*	Cases	Rate*	Cases	Rate*	Cases	Rate*
Louisiana**	7,786	282	22,426	1,492	1,120	474	31,727	678
Region 1: New Orleans	1,361	342	5,920	1,640	543	596	7,942	885
Jefferson	619	266	1,917	1,664	381	603	2,980	683
Orleans	604	499	3,818	1,652	140	638	4,609	1,177
Plaquemines	37	243	47	1,004	2	n/a	88	375
St. Bernard	101	348	138	1,376	20	446	265	580
Region 2: Baton Rouge	804	282	3,422	1,210	98	361	4,370	638
Ascension	204	243	253	915	14	220	472	388
East Baton Rouge	460	228	2,695	1,309	75	417	3,270	731
East Feliciana	19	183	90	1,050	0	0	111	564
Iberville	42	268	154	971	1	n/a	199	604
Pointe Coupee	25	186	87	1,112	1	n/a	114	514
West Baton Rouge	42	290	96	951	6	768	144	558
West Feliciana	12	150	47	679	1	n/a	60	391
Region 3: Houma	750	293	1,513	1,423	93	450	2,425	600
Assumption	33	221	62	924	2	n/a	97	427
Lafourche	180	238	249	1,885	9	208	447	455
St. Charles	79	229	187	1,361	8	249	276	522
St. James	24	231	134	1,269	3	n/a	161	747
St. John the Baptist	48	307	297	1,223	14	533	362	830
St. Mary	94	322	197	1,196	26	715	324	622
Terrebonne	292	386	387	1,812	31	528	758	669
Region 4: Lafayette	1,099	274	2,460	1,484	79	352	3,674	603
Acadia	164	337	182	1,630	6	392	352	562
Evangeline	70	311	119	1,283	3	n/a	196	581
Iberia	135	313	470	2,002	13	434	627	856
Lafayette	393	246	927	1,484	43	384	1,377	570
St. Landry	126	274	394	1,139	8	455	528	629
St. Martin	84	241	237	1,467	3	n/a	331	613
Vermilion	127	270	131	1,521	3	n/a	263	437
Region 5: Lake Charles	555	258	772	1,164	35	367	1,376	456
Allen	53	289	35	611	2	n/a	92	358
Beauregard	82	277	42	918	2	n/a	129	349
Calcasieu	317	233	636	1,258	26	388	987	492
Cameron	11	176	0	0	2	n/a	13	189
Jefferson Davis	92	374	59	1,136	3	n/a	155	493

Geographic Distribution of Chlamydia by Race/Ethnicity Louisiana, 2016

	White		Black/African American		Hispanic/Latinx		Total†	
	Cases	Rate*	Cases	Rate*	Cases	Rate*	Cases	Rate*
Louisiana**	7,786	282	22,426	1,492	1,120	474	31,727	678
Region 6: Alexandria	713	356	1,274	1,558	52	440	2,066	676
Avoyelles	71	265	187	1,546	1	n/a	261	635
Catahoula	17	259	31	1,024	0	0	48	484
Concordia	21	185	98	1,235	0	0	120	602
Grant	80	466	43	1,259	5	460	128	572
La Salle	40	320	10	555	4	n/a	55	365
Rapides	281	347	735	1,746	20	483	1,046	790
Vernon	171	483	113	1,616	22	470	319	631
Winn	32	343	57	1,298	0	0	89	619
Region 7: Shreveport	728	247	3,182	1,517	81	420	4,023	740
Bienville	28	371	96	1,665	0	0	124	894
Bossier	199	235	416	1,523	29	349	651	516
Caddo	270	240	1,889	1,554	32	459	2,204	886
Claiborne	19	260	86	1,043	0	0	105	651
De Soto	29	183	144	1,458	2	n/a	176	648
Natchitoches	64	308	261	1,621	6	660	335	855
Red River	9	186	56	1,665	3	n/a	68	795
Sabine	36	222	42	1,045	4	n/a	88	367
Webster	74	300	192	1,425	5	700	272	685
Region 8: Monroe	578	280	2,411	1,824	37	437	3,033	856
Caldwell	19	238	11	665	1	n/a	31	307
East Carroll	2	n/a	32	647	0	0	34	468
Franklin	37	279	92	1,428	0	0	129	635
Jackson	37	347	56	1,228	1	n/a	95	601
Lincoln	75	294	422	2,172	13	941	511	1,070
Madison	5	128	130	1,804	2	n/a	137	1,188
Morehouse	31	240	217	1,754	0	0	248	951
Ouachita	270	295	1,205	2,065	16	460	1,496	953
Richland	36	292	129	1,764	0	0	165	808
Tensas	10	513	8	322	0	0	18	392
Union	22	142	92	1,614	2	n/a	116	516
West Carroll	34	384	17	1,005	2	n/a	53	477
Region 9: Hammond/Slidell	1,195	270	1,468	1,507	86	335	2,772	477
Livingston	328	266	104	1,198	12	237	450	321
St. Helena	6	129	29	528	0	0	35	333
St. Tammany	442	221	406	1,355	37	265	900	355
Tangipahoa	334	403	753	1,921	31	563	1,120	857
Washington	85	279	176	1,253	6	630	267	577

*Rates per 100,000 persons in parish. Rates derived from numerators less than 20 may be unreliable and are not available (n/a) for numerators less than 5.

** Louisiana total includes cases with unknown parish.

† The totals include cases with other and unknown race.

Geographic Distribution of Gonorrhea by Race/Ethnicity Louisiana, 2016								
	White		Black/African American		Hispanic/Latinx		Total†	
	Cases	Rate*	Cases	Rate*	Cases	Rate*	Cases	Rate*
Louisiana**	2,143	78	8,381	558	167	71	10,783	230
Region 1: New Orleans	462	116	2,323	644	87	95	2,900	323
Jefferson	130	56	646	561	47	74	835	191
Orleans	301	249	1,601	693	36	164	1,953	499
Plaquemines	3	n/a	16	342	0	0	19	81
St. Bernard	28	97	60	598	4	n/a	93	204
Region 2: Baton Rouge	200	58	1,375	486	9	33	1,600	234
Ascension	47	56	82	296	3	n/a	136	112
East Baton Rouge	115	57	1,152	559	5	28	1,284	287
East Feliciana	5	48	23	268	0	0	28	142
Iberville	13	83	51	321	1	n/a	65	197
Pointe Coupee	7	52	16	204	0	0	23	104
West Baton Rouge	12	83	37	367	0	0	49	190
West Feliciana	1	n/a	14	202	0	0	15	98
Region 3: Houma	225	88	535	503	9	44	786	194
Assumption	6	40	17	253	0	0	23	101
Lafourche	61	81	77	583	2	n/a	141	143
St. Charles	24	70	70	510	1	n/a	95	180
St. James	5	48	44	417	1	n/a	50	232
St. John the Baptist	13	83	116	478	2	n/a	131	300
St. Mary	15	51	56	340	2	n/a	73	140
Terrebonne	101	133	155	726	1	n/a	273	241
Region 4: Lafayette	279	69	925	558	16	71	1,227	201
Acadia	36	74	68	609	1	n/a	105	168
Evangeline	15	67	44	474	2	n/a	62	184
Iberia	34	79	157	669	4	n/a	195	266
Lafayette	104	65	375	600	7	63	491	203
St. Landry	32	70	160	463	0	0	192	229
St. Martin	25	72	80	495	1	n/a	106	196
Vermilion	33	70	41	476	1	n/a	76	126
Region 5: Lake Charles	141	66	281	424	6	63	428	142
Allen	10	55	8	140	1	n/a	19	74
Beauregard	15	51	7	153	1	n/a	23	62
Calcasieu	94	69	240	475	4	n/a	338	168
Cameron	1	n/a	0	0	0	0	1	n/a
Jefferson Davis	21	85	26	501	0	0	47	150

Geographic Distribution of Gonorrhea by Race/Ethnicity Louisiana, 2016

	White		Black/African American		Hispanic/Latinx		Total†	
	Cases	Rate*	Cases	Rate*	Cases	Rate*	Cases	Rate*
Louisiana**	2,143	78	8,381	558	167	71	10,783	230
Region 6: Alexandria	177	88	466	570	8	68	660	216
Avoyelles	25	93	62	513	2	n/a	89	216
Catahoula	1	n/a	4	n/a	0	0	5	50
Concordia	8	71	27	340	0	0	37	186
Grant	15	87	13	381	0	0	28	125
La Salle	4	n/a	2	n/a	1	n/a	7	47
Rapides	81	100	303	720	3	n/a	390	295
Vernon	26	73	34	486	2	n/a	66	131
Winn	17	182	21	478	0	0	38	264
Region 7: Shreveport	164	56	1,012	483	12	62	1,194	220
Bienville	6	79	23	399	0	0	29	209
Bossier	35	41	120	439	3	n/a	160	127
Caddo	78	69	648	533	7	100	735	295
Claiborne	6	82	25	303	0	0	31	192
De Soto	4	n/a	44	446	0	0	48	177
Natchitoches	9	43	73	453	0	0	83	212
Red River	3	n/a	14	416	1	n/a	18	211
Sabine	5	31	11	274	0	0	17	71
Webster	18	73	54	401	1	n/a	73	184
Region 8: Monroe	168	81	954	722	5	59	1,129	319
Caldwell	7	88	9	544	0	0	16	159
East Carroll	0	0	8	162	0	0	8	110
Franklin	3	n/a	21	326	1	n/a	25	123
Jackson	15	141	24	526	0	0	39	247
Lincoln	18	71	125	644	3	n/a	146	306
Madison	1	n/a	37	514	0	0	38	330
Morehouse	14	109	89	719	0	0	103	395
Ouachita	87	95	541	927	1	n/a	631	402
Richland	14	114	56	766	0	0	70	343
Tensas	2	n/a	6	241	0	0	8	174
Union	5	32	34	596	0	0	39	173
West Carroll	2	n/a	4	n/a	0	0	6	54
Region 9: Hammond/Slidell	326	74	508	522	12	47	849	146
Livingston	114	92	32	369	1	n/a	149	106
St. Helena	0	0	8	146	0	0	8	76
St. Tammany	111	55	125	417	5	36	242	95
Tangipahoa	75	90	272	694	4	n/a	351	269
Washington	26	85	71	506	2	n/a	99	214

*Rates per 100,000 persons in parish. Rates derived from numerators less than 20 may be unreliable and are not available (n/a) for numerators less than 5.

**The Louisiana Strata include cases with unknown parish.

† The totals include cases with other and unknown race.

Geographic Distribution of Primary & Secondary Syphilis by Race/Ethnicity Louisiana, 2016								
	White		Black/African American		Hispanic/Latinx		Total†	
	Cases	Rate*	Cases	Rate*	Cases	Rate*	Cases	Rate*
Louisiana**	184	7	552	37	11	5	750	16
Region 1: New Orleans	52	13	159	44	5	5	216	24
Jefferson	13	6	51	44	1	n/a	65	15
Orleans	38	31	103	45	3	n/a	144	37
Plaquemines	1	n/a	3	n/a	0	0	4	n/a
St. Bernard	0	0	2	n/a	1	n/a	3	n/a
Region 2: Baton Rouge	15	4	102	36	0	0	117	17
Ascension	2	n/a	1	n/a	0	0	3	n/a
East Baton Rouge	9	4	89	43	0	0	98	22
East Feliciana	0	0	3	n/a	0	0	3	n/a
Iberville	0	0	2	n/a	0	0	2	n/a
Pointe Coupee	1	n/a	2	n/a	0	0	3	n/a
West Baton Rouge	3	n/a	5	50	0	0	8	31
West Feliciana	0	0	0	0	0	0	0	0
Region 3: Houma	19	7	33	31	1	n/a	56	14
Assumption	1	n/a	1	n/a	0	0	2	n/a
Lafourche	6	8	6	45	1	n/a	13	13
St. Charles	1	n/a	1	n/a	0	0	2	n/a
St. James	1	n/a	3	n/a	0	0	4	n/a
St. John the Baptist	1	n/a	5	21	0	0	6	14
St. Mary	0	0	4	n/a	0	0	4	n/a
Terrebonne	9	12	13	61	0	0	25	22
Region 4: Lafayette	32	8	36	22	1	n/a	69	11
Acadia	2	n/a	1	n/a	0	0	3	n/a
Evangeline	0	0	2	n/a	0	0	2	n/a
Iberia	3	n/a	4	n/a	1	n/a	8	11
Lafayette	15	9	20	32	0	0	35	15
St. Landry	3	n/a	5	14	0	0	8	10
St. Martin	1	n/a	4	n/a	0	0	5	9
Vermilion	8	17	0	0	0	0	8	13
Region 5: Lake Charles	9	4	12	18	0	0	21	7
Allen	1	n/a	0	0	0	0	1	n/a
Beauregard	0	0	0	0	0	0	0	0
Calcasieu	5	4	12	24	0	0	17	9
Cameron	0	0	0	0	0	0	0	0
Jefferson Davis	3	n/a	0	0	0	0	3	n/a

Geographic Distribution of Primary & Secondary Syphilis by Race/Ethnicity Louisiana, 2016								
	White		Black/African American		Hispanic/Latinx		Total†	
	Cases	Rate*	Cases	Rate*	Cases	Rate*	Cases	Rate*
Louisiana**	184	7	552	37	11	5	750	16
Region 6: Alexandria	7	3	22	27	1	n/a	30	10
Avoyelles	0	0	1	n/a	0	0	1	n/a
Catahoula	0	0	0	0	0	0	0	0
Concordia	0	0	0	0	0	0	0	0
Grant	2	n/a	0	0	0	0	2	n/a
La Salle	0	0	0	0	0	0	0	0
Rapides	2	n/a	21	50	1	n/a	24	18
Vernon	3	n/a	0	0	0	0	3	n/a
Winn	0	0	0	0	0	0	0	0
Region 7: Shreveport	27	9	119	57	2	n/a	148	27
Bienville	2	n/a	2	n/a	0	0	4	n/a
Bossier	11	13	11	40	0	0	22	18
Caddo	11	10	95	78	2	n/a	108	43
Claiborne	0	0	1	n/a	0	0	1	n/a
De Soto	0	0	3	n/a	0	0	3	n/a
Natchitoches	1	n/a	3	n/a	0	0	4	n/a
Red River	0	0	1	n/a	0	0	1	n/a
Sabine	1	n/a	0	0	0	0	1	n/a
Webster	1	n/a	3	n/a	0	0	4	n/a
Region 8: Monroe	10	5	63	48	0	0	73	21
Caldwell	0	0	0	0	0	0	0	0
East Carroll	0	0	2	n/a	0	0	2	n/a
Franklin	0	0	1	n/a	0	0	1	n/a
Jackson	3	n/a	2	n/a	0	0	5	32
Lincoln	0	0	9	46	0	0	9	19
Madison	0	0	4	n/a	0	0	4	n/a
Morehouse	1	n/a	5	40	0	0	6	23
Ouachita	4	n/a	36	62	0	0	40	26
Richland	0	0	2	n/a	0	0	2	n/a
Tensas	0	0	1	n/a	0	0	1	n/a
Union	0	0	1	n/a	0	0	1	n/a
West Carroll	2	n/a	0	0	0	0	2	n/a
Region 9: Hammond/Slidell	13	3	6	6	1	n/a	20	3
Livingston	4	n/a	0	0	0	0	4	n/a
St. Helena	0	0	0	0	0	0	0	0
St. Tammany	6	3	2	n/a	1	n/a	9	4
Tangipahoa	1	n/a	2	n/a	0	0	3	n/a
Washington	2	n/a	2	n/a	0	0	4	n/a

*Rates per 100,000 persons in parish. Rates derived from numerators less than 20 may be unreliable and are not available (n/a) for numerators less than 5.

**The Louisiana Strata include cases with unknown parish.

† The totals include cases with other race/ethnicities.

Program Report Technical Notes

Report Format

The *2016 HIV/STD Surveillance Report* includes only HIV and STD surveillance data and does not include HIV/STD prevention and services data. This STD/HIV Program Report is divided into the following sections: Introduction, Chapter 1: Profile of the HIV Epidemic in Louisiana, Chapter 2: Linkage and Retention in HIV Care, Chapter 3: Perinatal HIV Exposure and Congenital Syphilis, Chapter 4: Profile of STDs in Louisiana, Chapter 5: HIV Co-Infection with STDs and Hepatitis C, and an Appendix which includes additional HIV and STD tables.

Tabulation of Data

This report includes all STD information entered at the STD/HIV Program office as of April 28, 2017 and all HIV information entered as of December 22, 2017. Chlamydia, gonorrhea, syphilis, congenital syphilis, HIV and AIDS cases diagnosed through 2016 are included in this report. The 2016 data are very complete and are not adjusted for a potential reporting delay. Due to reporting and collection delays for deaths among persons with an HIV diagnosis and pediatric HIV exposures, those data are reported only through 2015 to ensure complete data.

Census Data and Rate Calculation

For all rates calculated for years 2007–2016, mid-year estimates for populations were obtained from the U.S. Census Bureau. The census estimates for 2010 are from the census data completed in 2010. These populations are used to calculate changes in the population, and incidence and prevalence rates. All rates are calculated per 100,000 persons except for death rates, which are calculated per 1,000 persons, and congenital syphilis rates which are calculated per 100,000 live births. An example of how rates are calculated is as follows. For the HIV diagnosis rate in 2016 for the New Orleans Public Health Region 1, the 2016 Census populations for the four parishes within Region 1 are added together equaling a regional population of 897,170 persons. Then the number of new HIV diagnoses in Region 1 in 2016, 352 new diagnoses, is divided by the totaled population, 897,170 persons to get 0.0003923. This number is multiplied by 100,000 to result in an HIV case rate of 39.23 per 100,000 population for Region 1 in 2016.

Interpretation of HIV Data

HIV data are not without limitations. Although an HIV diagnosis is usually closer in time to HIV infection than is an AIDS diagnosis, data represented by the time of HIV diagnosis must be interpreted with caution. HIV data may not accurately depict trends in HIV transmission because HIV data represent persons who were reported with a positive confidential HIV test, which may first occur several years after HIV infection. In addition, the data are underreported because only persons with HIV who choose to be tested confidentially are counted. HIV diagnoses do not include persons who have not been tested for HIV.

Therefore, HIV diagnosis data do not necessarily represent characteristics of persons who have been recently-infected with HIV nor do they provide a true measure of HIV incidence. Demographic and geographic subpopulations are disproportionately sensitive to differences and changes in access to health care, HIV testing patterns, and targeted prevention programs and services. All of these issues must be considered when interpreting HIV data.

Interpretation of STD and Hepatitis Data

Similar to the limitations of the HIV data, STD data in this report represent only persons who have been tested for an STD. For many people, symptoms of an STD may not be obvious or may be ignored and a person does not seek STD testing.

The Hepatitis C virus (HCV) data described in *Chapter 5 – HIV Co-Infection with STDs and Hepatitis C* was provided by the Louisiana Department of Health – Office of Public Health – Infectious Disease Epidemiology Program on October 2, 2017. The Infectious Disease Epidemiology Program has been tracking HCV diagnoses

made in Louisiana since 1990, when HCV first became a reportable disease under the Louisiana Sanitary Code. In 2016, the case definition of chronic HCV was expanded to include persons that only had a positive HCV antibody test result. Also in that year, chronic HCV became a laboratory-only reportable disease as oppose to a physician-reportable disease. These changes alone caused a large increase in the number of confirmed HCV cases reported from 2015 to 2016. As a result, the HIV/HCV co-infection analyses presented in this report are limited to HCV diagnoses made and reported in 2016.

HIV and AIDS Case Definition Changes

Most recently, the HIV surveillance case definitions were revised in 2008 for adults and adolescents (age ≥ 13 years).^{xxxvi} A single case definition was created that incorporates AIDS and an HIV classification system. HIV infection is now categorized into four stages based on severity. Stage 1 is HIV infection with no AIDS-defining conditions and either the CD4+ T-lymphocyte count is >500 cells/ μ l or the lymphocyte percentage is $\geq 29\%$. Stage 2 is HIV infection with no AIDS-defining conditions and either the CD4+ T-lymphocyte count is between 200-499 cells/ μ l or the lymphocyte percentage is between 14-28%. Stage 3 is AIDS where one of the following three conditions is met: CD4+ T-lymphocyte count is <200 cells/ μ l, or the lymphocyte percentage $<14\%$, or there is documentation of an AIDS-defining condition. An AIDS-defining condition supersedes the CD4 count or percentage. Stage 4 is an unknown stage where no information has been collected on AIDS-defining conditions, CD4 count, or percentage. Once a person is classified as Stage 2 or 3, they cannot be reclassified at a lower stage.^{xxxvii}

The case definition for children less than 18 months of age has also been revised. The only category that was revised was “presumptively uninfected” with HIV. Additional laboratory criteria were added. In children age 18 months to <13 years, the surveillance case definition requires laboratory-confirmed evidence of HIV infection.

The definition of Stage 3 (AIDS) was further modified for all HIV-positive persons with laboratory results in 2014 and going forward. The new case definition relies only on the diagnosis of an OI or a CD4 count below 200. If the CD4 lymphocyte count is above 200 and the lymphocyte percentage is below 14%, this no longer meets the surveillance definition for Stage 3 (AIDS). If no CD4 lymphocyte count is available then a CD4 lymphocyte percent below 14% does meet the surveillance definition for AIDS.

Definitions of the HIV Transmission Categories

For the purposes of this report, HIV and AIDS cases were classified into one of several hierarchical transmission (risk) categories, based on information collected. Persons with more than one reported mode of exposure to HIV were assigned to the category listed first in the hierarchy. Definitions are as follows:

Men who have Sex with Men (MSM): Cases include persons whose birth sex is male who report sexual contact with other men, i.e. homosexual contact or bisexual contact. The CDC does calculate a risk of MSM for transgender women who report male sex partners, because the birth sex is collected as male.

Injection Drug User (IDU): Cases who report using drugs that require injection - no other route of administration of illicit drugs at any time since 1978.

High-Risk Heterosexual Contact (HRH): Cases who report specific heterosexual contact with a person who has HIV or is at increased risk for HIV infection, e.g., heterosexual contact with a homosexual or bisexual man, heterosexual contact with an injection drug user, and/or heterosexual contact with a person known to be HIV-infected.

Hemophilia/Transfusion/Transplant (Hemo/Transf): Cases who report receiving a transfusion of blood or blood products prior to 1985.

Perinatal: HIV infection in children that results in HIV transmission from an HIV-infected mother to her child.

Unspecified/NIR: Cases who, at the time of this publication, have no reported history of exposure to HIV through any of the routes listed in the hierarchy of exposure categories. These cases are traditionally marked as No Identified Risk factor (NIR). NIR cases include: persons for whom risk behavior information has not yet been reported and are still under investigation; persons whose exposure history is incomplete because they have died, declined risk disclosure, or were lost to follow-up; persons who deny any risk behavior; and persons who do not know the HIV infection status or risk behaviors of their sexual partners. For this report, all cases with an unspecified transmission category were assigned an imputed transmission category. Imputation procedures are described below.

HIV Imputed Transmission Category

Newly reported cases, especially HIV (non-AIDS) cases, are often reported without a specified risk exposure, thereby causing a distortion of trends in exposure categories. Thus, statistical procedures to provide or impute predicted values of transmission category were used. All data in the graphs and tables throughout the surveillance section of the report represent imputed transmission categories. Values for transmission category for cases with no known risk were estimated using a statistical procedure known as hotdeck imputation, similar to methods used by the U.S. Census on the American Community Survey (www.census.gov/acs/www/Downloads/tp67.pdf). The Louisiana hotdeck imputation method was locally developed and validated against the CDC methodology. Logistic regression models were developed to identify those variables that are highly correlated with either a) missingness or b) one of the three chief risk factors for HIV infection (MSM, IDU, HRH). Next, a profile for each case was constructed using information from these variables, including age, race, sex, parish of residence, incarceration history, substance use, and year of infection. Finally, a predicted value for risk was then obtained by matching cases with no known risk to cases with a known risk along this profile and substituting the missing risk value. Transmission categories are not imputed for STD data.

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