An Epidemiologic Profile of HIV and AIDS in South Carolina 2019

Division of Surveillance and Technical Support
Bureau of Disease Control
South Carolina Department of Health and
Environmental Control

Executive Summary

In June 1981, the CDC published a report which documented five cases of Pneumocystis carinii pneumonia in otherwise healthy young men in Los Angeles, California; these would be considered the first cases of AIDS identified in the United States. That report would prompt AIDS case reports from other areas of the U.S. such as New York, San Francisco, and in 1982, South Carolina.

Since 1986, more than 30,619 people have been diagnosed with HIV infection (including AIDS) in South Carolina through December 2018. During 1985-1990 an average of 860 cases were diagnosed each year. In the subsequent three years (1991-1993), newly diagnosed HIV/AIDS cases averaged 1,306. The increase during this period was in part due to the artificial rise in AIDS cases as a result of the change in case definition in 1993. For the past five years, the average number of newly diagnosed cases has been about 767 per year. According to the CDC however, many more people are infected but have not been tested.

Some of the changes over time in numbers of new cases are largely the result of reporting patterns or targeted testing initiatives. The initial steep rise in the epidemic reflects the early years when less was known about the transmission of HIV and effective medical treatments did not exist. As a result, infection rates increased and more HIV-infected individuals went on to develop AIDS. Most experts believe that when more was learned about HIV and the behaviors involved in its spread, effective prevention strategies reduced the overall number of new infections, and medical treatment, for some individuals, postponed the onset of AIDS. In more recent years, however, there is concern nationally that the epidemic may grow, particularly among young men who have sex with men.

Since 1994, new anti-retroviral drugs and strengthened care services have contributed to a decline in overall AIDS deaths. This decline is illustrated by the 123 AIDS related deaths in 2018, a 46 percent decrease from the 229 deaths in 2009. It is important to note that despite the decline in deaths due to AIDS and the apparent stabilization of the number of new HIV/AIDS cases diagnosed annually, the prevalence of HIV infection (the number of people estimated to be living with HIV/AIDS) is continuously increasing. The number of people living with HIV/AIDS (PLWHA) at the end of each year has increased 28 percent from 2009 to 2018. It is also important to note there are differences among certain populations in the number and rate of new and prevalent infections, as this profile will indicate.

Figure 1.01 shows total incidence (the number of new cases within a specified time period), deaths, and prevalence of HIV/AIDS cases in South Carolina since 1999.

Figure 1.01: South Carolina HIV/AIDS incidence, prevalence, and deaths
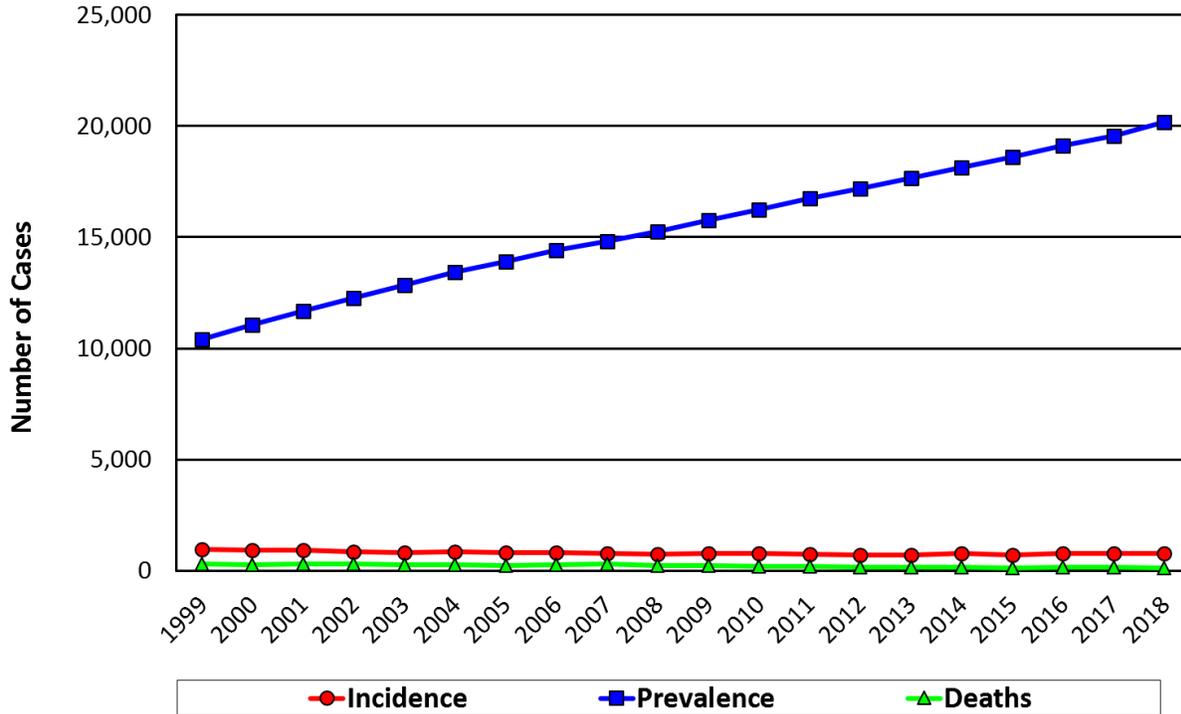
Note: number of cases diagnosed in S.C. only; excludes out of state cases returning to S.C.

The epidemic in South Carolina is predominantly driven by sexual exposure, primarily among men who have sex with men and heterosexuals at risk. Injecting Drug Use (which had been declining) appears to have leveled off, averaging 18 new cases per year over the past five years (2014-2018). However, the CDC reports Heroin use is on the increase across the US among men and women, most age groups, and all income levels. Therefore, the number of cases reporting Injecting Drug Use as a risk for HIV should be closely monitored.

African-Americans are disproportionately affected by HIV/AIDS and are over-represented among all risk populations.

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Overview of Epidemiologic Profile

The purpose of this Epidemiologic Profile is to provide information to the S.C. HIV Planning Council (HPC) on the number and characteristics of people becoming HIV infected. The HPC has a primary responsibility to review the Epidemiologic Profile and ensure that HIV prevention services and resources are directed by DHEC to the populations and geographic areas with the greatest disease burden.

This Epidemiologic Profile includes a list of definitions and describes the data sources used, the limitations of each data type, and presents the data in order to answer the following questions:

What are the socio-demographic characteristics of the population?

What is the impact of HIV/AIDS on the population?

Who is at risk for becoming infected with HIV?

What is the geographic distribution of HIV infection? *

What are the patterns of service utilization of people living with HIV/AIDS?

What are the characteristics of people who know they are HIV-positive but who are not in HIV primary care?

These questions will be explored through analyses of currently living with HIV/AIDS (prevalence) and newly diagnosed (incidence) HIV/AIDS cases; a description of seroprevalence data from HIV counseling and testing sites and other studies; a summary of other risk behavior profiles and community-based HIV risk assessment information; and a discussion of related sociodemographic, health and risk behavior indicators.

Definitions

AIDS – Acquired Immunodeficiency Syndrome, the end stage of HIV infection characterized by life-threatening or severely disabling disease.

HIV – Human Immunodeficiency Virus, the cause of HIV infection.

HIV/AIDS – Includes those people with HIV infection, as well as those who have progressed to AIDS. Unless noted, most HIV data in this profile includes people diagnosed with AIDS.

HIV Only – Includes only people with HIV infection who did not develop AIDS within 365 days of report of positive HIV test.

Health Professional Shortage Area (HPSA) – A Department of Health and Human Services (HHS) designation system to identify areas facing a critical shortage of primary medical, dental, or mental health care professionals.

Incidence – The number of new HIV/AIDS cases newly diagnosed and reported each year. Incidence cases may be combined in two or three year periods.

Incidence Rate – Number of new cases occurring during a period of time, divided by the annual average population, multiplied by 100,000. It is a measure of the frequency with which an event occurs in a population over a period of time. It is also a measure of risk of getting the disease.

Natural Breaks (Jenks) – Is a data classification method designed to determine the best arrangement of values into different classes. This is done by seeking to minimize each class's average deviation from the class mean, while maximizing each class's deviation from the means of the other groups (used primarily in maps).

Other Risks – In relation to Risk Exposures, the term "Other" or "Other Risks" is used to describe a group of risks which include such categories as: hemophilia, blood transfusion, and perinatally acquired infection.

PLWHA – People Living With HIV/AIDS – See Prevalence below.

Prevalence – The number or proportion of people estimated to be living with ***Diagnosed and Reported*** HIV/AIDS at the end of a particular period of time (e.g. year).

NOTICE: ***Beginning with the 2016 Epidemiologic Profile (2015 data), Prevalence numbers are based on Last Known Residence. This is a change from previous years Prevalence numbers, which were based on Residence at Time of Diagnosis.***
This change makes comparisons with Epidemiologic Profiles prior to 2016 inaccurate and should not be done.

Prevalence Rate – Total number of living HIV/AIDS cases (both old and new cases) during the year of report, divided by the annual average population multiplied by 100,000. It is the proportion of people in a population who have a particular disease or attribute at a specified point in time (or specified period of time).

Rates are used to:
- measure the frequency of disease (in this case, HIV/AIDS) or other outcomes of interest,
- describe the distribution of disease occurrence in human populations,
- allow comparison of the risk of disease or burden of disease across populations,
- characterize the risk of disease for a population, and
- identify determinants of disease.

They may also be used to help:
- prioritize prevention programs among competing causes,
- identify target groups for intervention,
- acquire funding for resources, and
- compare events across geopolitical boundaries.

Note: All rates are per 100,000 population, unless otherwise stated.

Types and Quality of Data

Because no one epidemiologic data set will provide a complete picture of HIV/AIDS in the community, or the state for that matter, we have assembled data from several categories and sources. Data from a variety of categories provide a more accurate picture of past, present and future HIV/AIDS infection trends. Keeping in mind that not all data are equal, data sources must be considered in the context of their objectives, strengths and limitations; who the target populations are; how the data were collected; and the validity of the data.

As described above, several data sets are used to illustrate the South Carolina populations diagnosed with HIV/AIDS and to characterize the nature of risk-taking behaviors. All of these data sets share limitations or have similar types of bias introduced, in that most are reported by third parties, largely providers, who must seek information from the affected individual as to illness, transmission mode, and demographic characteristics. These reports are limited both by the willingness of providers to ask about these factors and that of clients to report on personal behaviors. These data are also limited in their ability to broadly characterize populations. For instance, STD (sexually transmitted disease) or HIV/AIDS case report data can only characterize people with STD or HIV who seek treatment, or data on estimated condom use among women cannot characterize all women but only those who agree to participate in selected behavioral surveys. Individuals who seek treatment for STD (and who are offered HIV testing) may be very different from those individuals who do not. However, each of the data sets referred to in this profile provide information to describe the relative risk and impact of this disease on the people of South Carolina.

The following summarizes data sources, and limitations, used by the data work-group to complete the South Carolina Epidemiologic Profile of HIV/AIDS.

Selected Data Source Description and Limitations:

DHEC, Enhanced HIV/AIDS Reporting Surveillance System (eHARS)

All health care providers, hospitals, and laboratories in South Carolina are required to report people diagnosed with confirmed HIV infection and/or AIDS. Each year approximately one-third of new cases are reported from county health departments, one-third from hospitals, one-fifth from physicians, and the remainder from state/federal facilities (including prisons) and laboratories. DHEC's surveillance system, eHARS, serves various functions: 1) monitoring the incidence and demographic profile of HIV/AIDS; 2) describing the modes of transmission among people with HIV/AIDS; 3) guiding the development and implementation of public health intervention and prevention programs; and 4) assisting in evaluating the efficacy of public health interventions. It is the principal source of knowledge regarding trends in the number and characteristics of HIV-infected people. It includes people in all age, gender, race/ethnic, and mode-of-HIV-exposure groups; and it provides a historical perspective in trends dating to the earliest recognition of the AIDS epidemic.

This profile primarily presents data on the total infection/disease spectrum: HIV infection including AIDS (not AIDS alone). Because of the long and variable period from HIV infection to the development of AIDS, trends in AIDS cases data do not represent recent HIV infections or all HIV-infected people. AIDS surveillance data do not represent people whose HIV infection is not recognized or diagnosed. AIDS cases have declined nationwide; however, because AIDS surveillance trends are affected by the incidence of HIV infection, as well as the effect of treatment on the progression of HIV disease, future AIDS trends cannot be predicted.

Because trends in new diagnoses of HIV infection are affected when in the course of disease a person seeks or is offered HIV testing, such trends do not reflect the total incidence of HIV infection in the population. In addition, because not all persons with HIV in the population have been diagnosed, these data do not represent total HIV prevalence in the population. Interpretation of these data is complicated by several factors, ranging from a person having both HIV then AIDS diagnoses in the same year, varying time between reporting HIV and AIDS cases, and numerous reasons why the number of new HIV diagnoses changed (increased, decreased, or stable).

Some data is provided on HIV infection-only (people reported with HIV infection who do not have an AIDS diagnosis within 365 days of being diagnosed with HIV). This data, while highly dependent on people seeking or receiving HIV testing early in their infection stages, provide an opportunity to compare people presumably infected more recently with those infected as long as ten or so years ago (AIDS diagnosis).

Risk categories are assigned similar to the methods described above in HIV Counseling and Testing. There are some slight differences in the type of categories between HIV/AIDS surveillance reports and HIV Counseling and Testing reports. In South Carolina, about 34 percent

of adult/adolescent HIV infection/AIDS cases reported in 2016 did not have risk categories reported. These cases are defined as "No Identified Risk"- (NIR). The proportion of NIR cases has been increasing nationally as well. The primary reason for incomplete risk information is that reports from laboratories do not include risk and an increasing proportion of cases result from heterosexual transmission but are not able to be defined in CDC's definition of heterosexual transmission. For example, people who report having multiple heterosexual partners or who have sex for money/drugs but the status of their partners is not known, are not classified as "heterosexual", they are "No Identified Risk".

DHEC, Sexually Transmitted Diseases Management Information System (STD*MIS)

Health care providers and laboratories are required by law to report certain sexually transmitted diseases (including syphilis, chlamydia, gonorrhea, chancroid, hepatitis) to DHEC. A sexually transmitted disease, other than HIV infection, represents a visible and immediate health problem that stems from unprotected intercourse with an infected partner. Research from several studies strongly indicates that STDs increase the possibility of acquiring and transmitting HIV infection. The emerging problem of heterosexual HIV transmission in the South closely parallels that of syphilis and gonorrhea. Gonorrhea, syphilis, and chlamydia incidence and prevalence data are used by programs to: 1) monitor local, and state trends; 2) identify high-risk groups and geographic areas in which unsafe sexual behaviors occur, 3) guide the development and implementation of public health intervention and prevention programs; and 4) assist in evaluating the efficacy of public health interventions.

Considering the short incubation periods for these infections, gonorrhea, syphilis, and chlamydia incidence represent recent consequences of unsafe sexual behavior and point to populations who are potentially at very high risk for acquiring and transmitting HIV infection. Unfortunately, an often unrecognized aspect of STDs, including bacterial STDs, is how frequently people with these infections have no symptoms or do not recognize symptoms. Most studies of STDs are conducted in health-care settings specifically for people who do recognize symptoms; therefore, these studies usually overestimate the proportion of infected people who are symptomatic. Studies of STD screening in non-health-care settings (e.g., jails, workplaces, and communities) or health-care settings where STD treatment is not the primary function (e.g., family-planning clinics) suggests that most people with gonorrhea or chlamydia are asymptomatic.

Limitations: STD data lack much information that would help to better understand HIV risk, such as mode of transmission. Also, bias is introduced for some diseases, such as chlamydia, where screening of asymptomatic people is done much more frequently in women than in men. For example, all women <25 years attending family planning and STD clinics in county health departments are routinely screened for chlamydia and gonorrhea. Also, there may be bias in that the majority of reports are from public clinics; the personal nature of STDs may affect providers' willingness to report. This may account, in part, for the likelihood of some STDs to occur at much

higher rates among African-Americans who are more likely to seek care in public clinics, where there is more complete reporting.

HIV Counseling and Testing Program Data from DHEC Clinics

Counseling and testing data, while highly informative about people who seek counseling and testing, does not tell us anything about people who do not seek testing or choose not to test. All states provide HIV counseling and testing services and maintain data to quantify HIV counseling and testing services delivered in publicly-funded sites and to determine the characteristics of people receiving those services. These data are used by prevention programs to plan and target services for high-risk individuals. The type of data collected in South Carolina includes the counseling and testing site type, number of clients tested and number positive for each risk group, number tested, number positive by type of test site, and number tested and number positive by race/ethnicity gender, and age group. Clients receive confidential counseling and testing in each of the 46 county health department clinics.

The counseling and testing data system is standardized and has been in place for several years. Data in this Epi-Profile reflect number of individual clients tested during a specific period of time. People who received multiple tests during the report period are only counted once. It includes people tested in family clinics, maternity clinics, TB, STD clinics and people voluntarily requesting services or referred through partner counseling services. Approximately one third of the total of newly diagnosed and reported people with HIV infection each year is from DHEC counseling and testing sites. People tested in other settings, such as physician offices, hospitals, state facilities, etc. are not included in the DHEC counseling and testing database.

To determine a client's level of risk, each person is assigned a risk status: men who have sex with men (MSM), injection drug use (IDU), or heterosexual contact with a person at risk for or infected with HIV. Since most clients acknowledge multiple risks, risk status is determined by using the CDC's hierarchy of risk. This process assigns the client's "highest" risk. The highest possible risk in the hierarchy is sex with a person with HIV/AIDS, while the least significant risk is "no acknowledged risk". A person is only represented in their highest risk category regardless of how many risks the client acknowledges.

The CDC's hierarchy of risk includes a category for the combined risks of MSM and IDU; in previous HIV/AIDS Epidemiologic Profiles, the combined risks of MSM and IDU have been grouped and reported within the single category of 'Injection Drug Use'. This report leaves the combined risks of MSM and IDU as a stand-alone category. This CDC risk hierarchy can limit interpretability of data; it also does not reflect associated risks such as other non-injecting substance use, i.e. crack-cocaine.

Counseling and testing data in South Carolina and nationally is distinct from blinded, HIV seroprevalence surveys which generate an estimate of HIV seroprevalence that is unbiased by

client self-selection. The DHEC counseling and testing system only includes clients who seek out counseling and testing services or agree to be tested after consultation with a counselor at a clinic site. However, for those clinic sites in which clients can obtain services other than counseling and testing for HIV, and in which all or nearly all clients actually receive HIV testing, (for example, maternity and STD clinics), data for those sites approximates the reliability of the blinded surveys.

Ryan White HIV/AIDS Program Services Report

The Ryan White HIV/AIDS Program Services Report (RSR) is an annual report that captures information regarding the services provided by all Ryan White funded entities. The RSR is divided into sections including: service provider information; client information; service information; and medical information. Providers report on all clients who received services eligible for Ryan White Parts A, B, C or D funding, regardless of the actual funding source used to pay for those services. The South Carolina Ryan White Part B contractors complete the RSR and submit the data directly to Health Resources and Services Administration (HRSA).

South Carolina Community Assessment Network (SCAN)

Its purpose is to provide basic reference data for a variety of users. The primary use of SCAN is to enumerate and characterize mortality attributed to HIV infection. The data were also used to compare trends in HIV infection mortality with other leading causes of death and to characterize the impact of HIV infection on mortality. Data on causes of death are based on information recorded by hospitals, physicians, coroners, midwives and funeral directors. Recorded information may be inaccurate or incomplete due to underreporting of certain causes of deaths, the number of HIV-related deaths and the conditions may be underestimated. Vital statistics data are not as timely as AIDS case reports due in part to processing time.
SCAN is also used to enumerate and characterize birth attributes.

U.S. Department of Health and Human Services (DHHS): National Survey on Drug Use and Health (NSDUH)

The National Survey on Drug Use and Health is an annual nationwide survey involving interviews with approximately 70,000 randomly selected individuals aged 12 and older. The Substance Abuse and Mental Health Services Administration (SAMHSA), which funds NSDUH, is an agency of the U.S. Public Health Service in the U.S. Department of Health and Human Services (DHHS). Supervision of the project comes from SAMHSA's Center for Behavioral Health Statistics and Quality (CBHSQ).

Through a competitive bidding process, SAMHSA selected Research Triangle Institute (RTI) to conduct the NSDUH through 2014. RTI has successfully conducted the survey since 1988. RTI's role in this long-term national effort includes study design, sample selection, data collection, data processing, analysis, and reporting.

Data from the NSDUH provide national and state-level estimates on the use of tobacco products, alcohol, illicit drugs (including non-medical use of prescription drugs) and mental health in the United States. To assess and monitor the nature of drug and alcohol use and the consequences of abuse, NSDUH strives to:

- provide accurate data on the level and patterns of alcohol, tobacco and illegal substance use and abuse;
- track trends in the use of alcohol, tobacco, and various types of drugs;
- assess the consequences of substance use and abuse; and
- identify those groups at high risk for substance use and abuse.

A scientific random sample of households is selected across the United States, and a professional RTI interviewer makes a personal visit to each selected household. After answering a few general questions during the in-person visit by the interviewer, one or two residents of the household may be asked to participate in the survey by completing an interview. Since the survey is based on a random sample, each selected person represents more than 4,500 United States residents.

Participants complete the interview in the privacy of their own home. A professional RTI interviewer personally visits each selected person to administer the interview using a laptop computer. Individuals answer most of the interview questions in private and enter their responses directly into the computer so even the interviewer does not know the answer entered. For some items, the interviewer reads the question aloud and enters the participant's response into the computer.

Each interview data file – identified only by a code number – is electronically transmitted to RTI on the same day the interview is conducted. Combined with all other participants' answers, the data are then coded, totaled, and turned into statistics for analysis. As a quality control measure, participants may receive a telephone call or letter from RTI to verify the interviewer completed the interview with them in a professional manner.

Youth Risk Behavior Surveillance System (YRBSS)

The Youth Risk Behavior Survey (YRBS) was developed cooperatively by the Centers for Disease Control and Prevention (CDC), several federal agencies, and state departments of education to measure the extent to which adolescents engage in health risk and health enhancing behaviors. The system consists of national, state, and local school-based surveys. In South Carolina, the YRBS consists of questionnaires administered to middle school (6th-8th grade) and high school (9th-12th grade) students in the public-school system. A two-stage sampling process is used to provide a state-wide sample at each level. In the first stage, regular public schools with any of the target grades are sampled with probability proportional to the school enrollment. In the second stage, intact classes are sampled randomly and all students in these classes are eligible to participate. The overall response rate is calculated as the percentage of sampled schools that

participate multiplied by the percentage of sampled students that complete useable surveys. If this overall response rate is 60% or greater, the resulting data are weighted to be representative of the state as a whole.

There are 367 private K-12 schools in South Carolina; however, none of them are included in the survey. Also, while schools are randomly selected for participation some may choose not to participate. The survey includes questions about injury and violence, tobacco use, alcohol and other drug use, sexual risk behaviors, physical activity, and nutrition behaviors (the specific questions can vary from year to year).

This survey is conducted by S.C. Healthy Schools at the Department of Education, and relies heavily on surveillance methods and self-reports; so it depends on how well respondents understand the questions and how well they can accurately and honestly answer the question. However, the questionnaire has demonstrated good test-retest validity and the data are edited, checked and weighted. These data are representative of only public middle school students (grades 6-8) or public high school students (grades 9-12) in South Carolina.

What are the sociodemographic characteristics of the population?

The HIV epidemic in the United States, and in South Carolina, is a composite of multiple, unevenly distributed epidemics in different regions and among different populations. These populations may comprise people who practice similar high-risk behavior, such as injecting drugs or having unprotected sex with an infected person. Although race and ethnicity are not risk factors for HIV transmission, they are markers for complex underlying social, economic, and cultural factors that affect personal behavior and health. Low socioeconomic status is associated with increased disease morbidity and premature mortality. Unemployment status is correlated to limited access to health care services, resulting in increased risk for disease. This section provides background information on South Carolina's populations and contextual information, i.e. education, poverty level, housing, etc., for assessing potential HIV impact. The social, economic, and cultural context of HIV infection must be considered when funding, designing, implementing and evaluating HIV prevention programs for diverse populations.

The State

South Carolina lies on the southeastern seaboard of the United States. Shaped like an inverted triangle, the state is bounded on the north by North Carolina, on the southeast by the Atlantic Ocean, and on the southwest by Georgia. It ranks 40th among the 50 states in size and has a geographic area of 30,061 square miles. South Carolina has a diverse geography that stretches from the Blue Ridge Mountains in the northwest corner to the beaches along the Atlantic coast. Manufacturing is the state's leading industry, followed by tourism and forestry.

Populations

Based on Census Bureau data, the total number of South Carolinians is 5,084,127 (2018 estimate). Of this total, 67 percent are Caucasian, 27 percent are African-American, and 6 percent are of Hispanic origin. Fifty-one percent are female and 49 percent are male. 67 percent of the population distribution in South Carolina is defined as metropolitan; 33 percent is non-metropolitan.
(Figure 1.02).

Figure 1.02: Selected demographic information South Carolina and United States

	South Carolina	United States
Population	5,084,127	327,167,434
Proportion of Persons Living in Non-Metropolitan Areas	33%	14%
Median Age	39.4	38.1
Racial/Ethnic Distribution of Pop.		
White	67%	72%
Black	27%	13%
Hispanic	6%	18%
Educational Attainment		
High school grad. or higher	88%	88%
Bachelor's degree or higher	28%	33%
Unemployment Rate	5.3	4.9
Median Household Income	$ 52,306	$61,937

Sources: U.S. Census Bureau.

Education & Earnings

Educational attainment is strongly correlated with poverty, and South Carolina continues to rank low in percent of people over 25 years of age who have bachelor's degrees or higher (28 percent). An estimated 12 percent of the population has less than a high school education. By race, 9 percent of the white population, and 16 percent of the African American population, over the age of 25 in South Carolina have an educational attainment of less than a high school diploma.

In comparison, African-Americans and people of African-American origin have lower per capita incomes, averaging 51 percent below the state's mean income, while whites earned 18 percent above the state's mean income. (Figure 1.3)

Figure 1.03: S.C. Median Income by Race and Ethnicity in S.C.

Median Income (2018 Inflation-Adjusted Dollars)	Estimate (USD)	Relative to African-Americans
Native Hawaiian / Other Pacific Islander	$71,947	2.1
Hispanic or Latino Origin (of any race)	$42,280	1.2
African-American	$34,576	1
American Indian / Alaska Native	$46,740	1.4
Asian	$69,149	2.0
White	$61,600	1.8
South Carolina Overall	$52,306	1.5

Poverty Level

Despite the economic strides made in recent years, South Carolina remains among states with the highest percentage of people who live below the poverty level. According to US Census Bureau data, in South Carolina approximately 15.3 percent of individuals and 10.8 percent of families live below the poverty level.

Figure 1.04: Percent of each racial/ethnic pop. living below federal poverty level

White (n=356,462): 10.7%
Black (n=331,947): 25.4%
Hispanic (n=77,115): 27.0%
Other (n=62,627): 17.4%

POVERTY GAPS

Data Source: U.S. Census Bureau, American Community Survey.
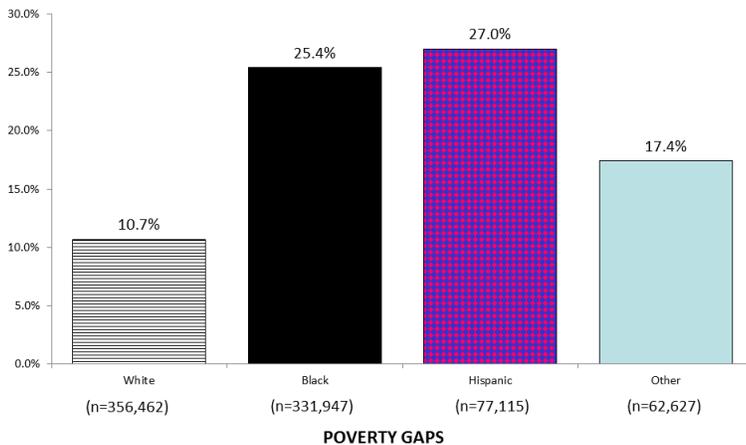
An estimated 25.4 percent of African-American South Carolinians were below the poverty level in 2018, compared to 27.0 percent of people of Hispanic descent, 10.7 percent among whites and 17.4 percent of people categorized as 'Other', which includes Asian, Pacific Islanders and Native Americans (Figure 1.04).

Insurance/Access to Primary Care

According to US Census Bureau data, 10.5 percent of South Carolinians do not have health insurance. In South Carolina, all or part of 45 (out of 46) counties are designated as Health Professional Shortage Areas (HPSA). An estimated 1,253,951 South Carolinians live in HPSAs; or approximately 27.1 percent of the South Carolina's population, compared to 17.7 percent of the total U.S. population.

Employment

South Carolina's unemployment rate at mid-year 2018 was 5.3 percent, slightly higher than the US rate of 4.9 percent. The median household income in South Carolina was $52,306 ($9,631 below the US median income of $61,937).

Housing

According to the US Census, 68.7 percent of the state's homes were owned. The S.C. Council on Homelessness estimates there were 5,050 homeless adults and children in 2016.

Summary

South Carolina, as many southern states, ranks high for poverty, low educational attainment and uninsured population compared to other US states. These factors can affect one's ability to access prevention and health care services and adhere to regimens for treatment and care of diseases that may lead to more severe consequences.

What is the impact of HIV/AIDS on the population?

In the United States, HIV/AIDS remains a significant cause of illness, disability, and death, despite declines in new AIDS cases and deaths. Current surveillance activities provide population-based HIV/AIDS data for tracking trends in the epidemic, targeting and allocating resources for prevention and treatment services, and planning and conducting program evaluation activities.

In South Carolina, AIDS cases have been reported since 1981, and confirmed cases of HIV infection have been reportable since February 1986. During the calendar year of 2017, according to the CDC HIV/AIDS Surveillance Report, South Carolina ranked 6th among states, the District of Columbia, and U.S. dependent areas with an AIDS case rate of 8.6 per 100,000 population. The epidemic is continuing to grow with an average of 64 cases of HIV infection reported each month during 2018. The incidence rate in South Carolina for 2018 is 15.1 per 100,000 population. As of December 31, 2018, there are an estimated 20,166 South Carolina residents living with diagnosed HIV infection (including AIDS).
This section summarizes the overall toll of the epidemic in South Carolina based on total reported HIV/AIDS cases and deaths.

Gender

Figure 2.01 shows the impact of HIV on the men and women in South Carolina. Men are disproportionately affected by HIV/AIDS. Men make up 48 percent of South Carolina's total population but comprise 71 percent of PLWHA (prevalence). HIV/AIDS diagnosed cases during the two-year period 2017-2018 gives an estimate of more recent infections or potentially emerging populations.

Figure 2.01: S.C. Disproportionate HIV impact by sex

SEX	S.C. Total Population, 2018 est.		Total Estimated Living With HIV/AIDS, 2018		Total HIV/AIDS Diagnosis, 2017-2018	
	No.	%	No.	%	No.	%
Male	2,463,326	48%	14,402	71%	1,197	77%
Female	2,620,801	51%	5,764	29%	349	23%
Total	5,084,127		20,166		1,546	

Figure 2.02 shows the rate per 100,000 population for males and females diagnosed with HIV/AIDS from 2009 to 2018, as well as how the case rate fluctuates from year-to-year for both men and women.

Women have seen the sharpest decline in the rate of newly diagnosed HIV/AIDS during the last ten years, with the rate decreasing by 12 percent from 2009 (7.4) to 2018 (6.6), and while the rate may fluctuate from year to year, on average, women have had a One percent, per year, decrease in the rate for new cases.

Men, however, have not seen the same decline in the rate of new cases as women have, with the rate decreasing by 11 percent from 2009 (27.3) to 2018 (24). For males, the rate has more pronounced fluctuations; however, despite these fluctuations, the average change over the last ten years has been one percent, per year.

Figure 2.02: S.C. HIV/AIDS case rate per 100,000 for males and females, 2009-2018
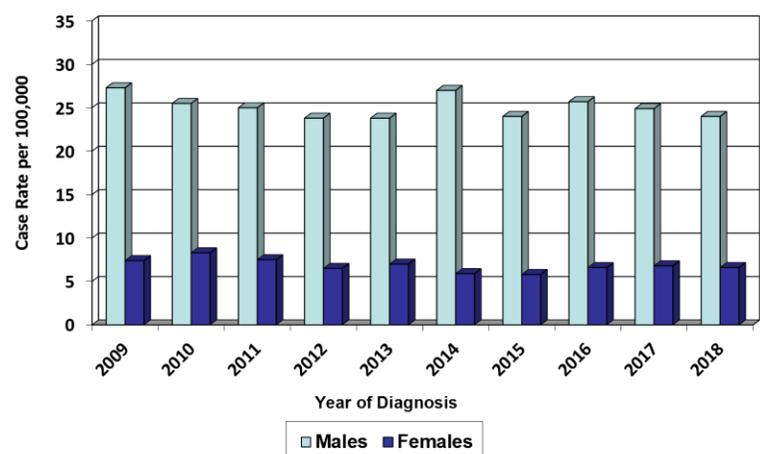
Race/Ethnicity

African-Americans are disproportionately impacted by HIV/AIDS in South Carolina. African-Americans comprise 27 percent of the state's total population, yet 68 percent of the total people living with HIV are African-American. Five percent of total cases are Hispanics, who comprise six percent of the state's population (Figure 2.03).

Figure 2.03: Proportion of persons living with HIV/AIDS by race/ethnicity, 2018
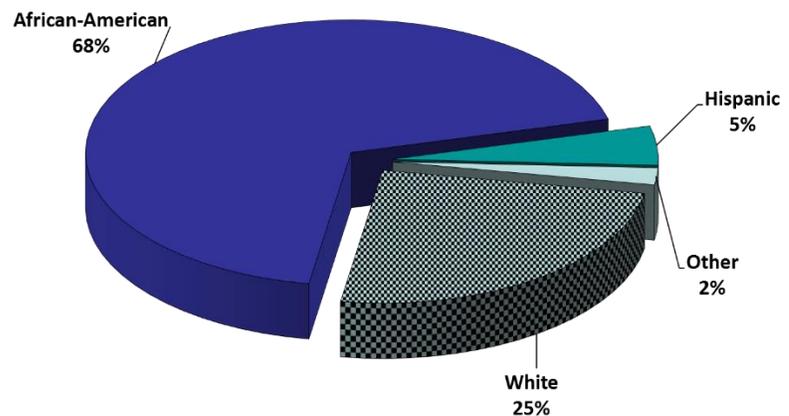
African-American men, who comprise only 13 percent of the state's population, make up the largest proportion of both PLWHA in 2018 and new diagnosis in 2017-2018 (46 percent and 48 percent respectively).

African-American women, who similarly, comprise only 15 percent of the population, make up 22 percent of PLWHA in 2018 and 16 percent of new diagnosis in 2017-2018. Whites, who comprise the largest proportion of the population in South Carolina (32 percent males; 33 percent females), make up 25 percent of PLWHA in 2018 (20 percent males; five percent females) and 24 percent of new diagnosis in 2017-2018 (19 percent males; five percent females), (Figure 2.04).

Figure 2.04: Disproportionate HIV impact by race/ethnicity/gender, S.C.

Race/Ethnicity & Gender	SC Total Population		Total Persons Living With HIV/AIDS, 2018		Total HIV/AIDS Diagnosis, 2017-2018	
	No.	%	No.	%	No.	%
Black Males	648,968	13%	9,199	46%	720	48%
Black Females	739,504	15%	4,464	22%	233	16%
White Males	1,601,501	32%	3,975	20%	281	19%
White Females	1,679,865	33%	958	5%	74	5%
Hispanic Males	156,585	3%	796	4%	106	7%
Hispanic Females	139,461	3%	217	1%	18	1%

Each year the number of people living with HIV/AIDS continues to grow. Case rates per 100,000 by race and gender show the disparate burden of HIV among African-Americans. As Figure 2.05 shows, the rate per 100,000 population in 2018 is about six times higher for black males than for white males, and about Eleven times higher for black females compared to white females.

Figure 2.05: S.C. HIV/AIDS prevalence rates by race/gender, 2009-2018
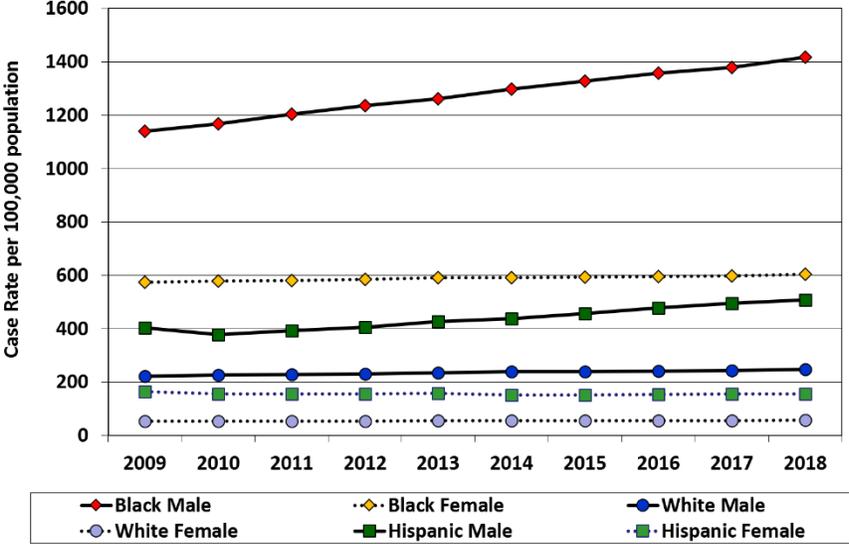
In South Carolina, the trend in the number and rate of people newly diagnosed with HIV/AIDS each year has been declining, with a twelve percent decrease in the rate per 100,000 population between 2009 (17.1) and 2018 (15.1). However, during this ten-year time period, there have been high and low fluctuations from one year to the next: the 2018 rate is three percent lower than the rate in 2017 (15.5). There are also important differences in the rates among race/gender populations (Figure 2.06).

While women in general have seen a decline in the rate of newly diagnosed HIV/AIDS, African-American women specifically have seen a 19 percent decrease between 2009 (19.4) and 2018 (15.7) and on average, had a one (1.4) percent, per year, decrease in the rate for new cases. While white women have also seen decrease over the same time period: five percent decrease from 2009 (2.2) to 2018 (2.1), white women averaged a one (1.4) percent, per year, increase in the rate for new cases. Hispanic female saw 23 percent decrease in Incidence 2009 (6.6) and 2018 (5.1).

Men have seen similar decline in the rate of newly diagnosed HIV/AIDS as women. African-American men had a twenty percent decrease in the rate between 2009 (68.2) and 2018 (54.6) and have averaged two percent (1.9), per year, decrease in the rate for new cases. The rate for white men decreased fourteen percent (over the same time period (10.3 to 8.9) and have also averaged one-half percent (0.6), per year, decrease in the rate for new cases.

Figure 2.06: S.C. HIV/AIDS incidence rates by race/gender, 2009-2018
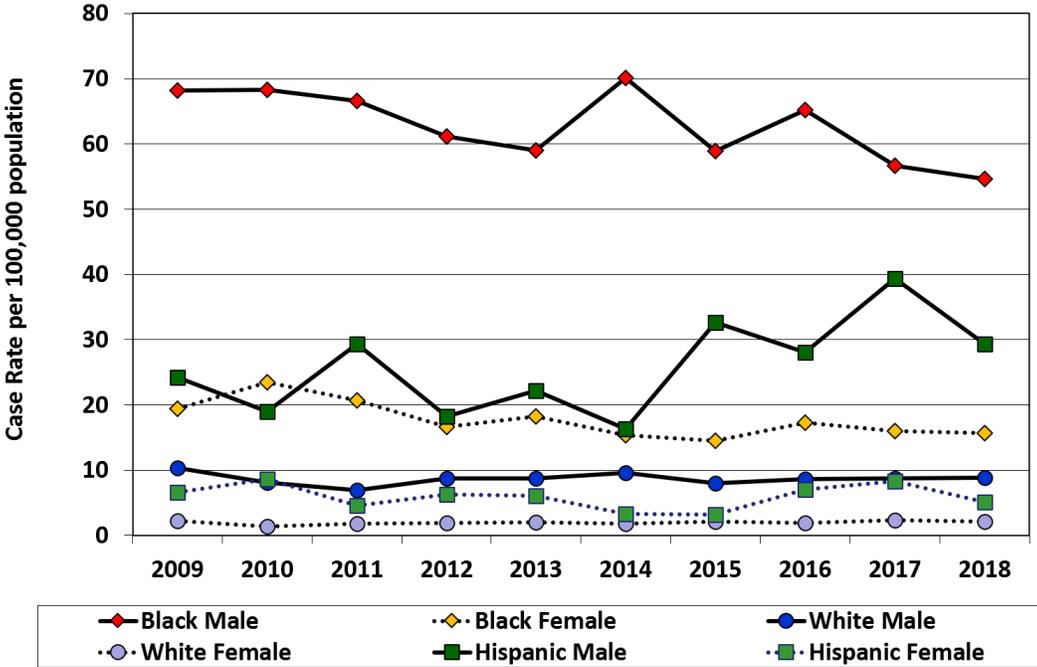
Age

When analyzing HIV/AIDS data by age, the differences between the two measures (incidence and prevalence) become pronounced. With incidence, 65 percent of new cases diagnosed in 2017-2018 are under the age of 40, and with 2018 prevalence, 72 percent are over the age of 40. For incidence, people age 20-29 comprise the largest proportion, 39 percent of newly diagnosed cases (20-24 18 percent and 25-29 21 percent), and people 30-39 comprise 22 percent. People under the age of 20 comprise just over four percent of new diagnosis.

For prevalence, 22 percent are age 40-49, 31 percent are age 50-59, and 19 percent are age 60+. (Figure 2.07).

Figure 2.07: Disproportionate S.C. HIV impact by age

Age Range	SC Population		Total Persons Living with HIV/AIDS, 2018		Total HIV/ AIDS Diagnosis, 2017-2018	
	No.	%	No.	%	No.	%
<15 Years	918,200	18%	99	0.5%	5	0.3%
15-19 Years	323,894	6%	70	0.3%	67	4%
20-24 Years	332,074	7%	595	3%	271	18%
25-29 Years	354,451	7%	1,613	8%	324	21%
30-39 Years	635,513	12%	3,512	17%	339	22%
40-49 Years	615,445	12%	4,352	22%	272	18%
50-59 Years	671,091	13%	6,179	31%	188	12%
60+ Years	1,233,459	24%	3,746	19%	80	5%

Figure 2.08 shows the HIV/AIDS incidence rates by age groups. From 2014 to 2018, the average change in rate for the 15-19, 20-24, and 50-59 age groups decrease (2.4, 0.6, and 2.8 percent per year respectively), while the other age groups had increases: the 25-29 age group averaged 8.4 percent, the 30-39 age group (1.8 percent), the 40-49 age group (1.7 percent), and the 60+ age group (0.9 percent).

Figure 2.08: S.C. HIV/AIDS Incidence case rate by age, 2014-2018
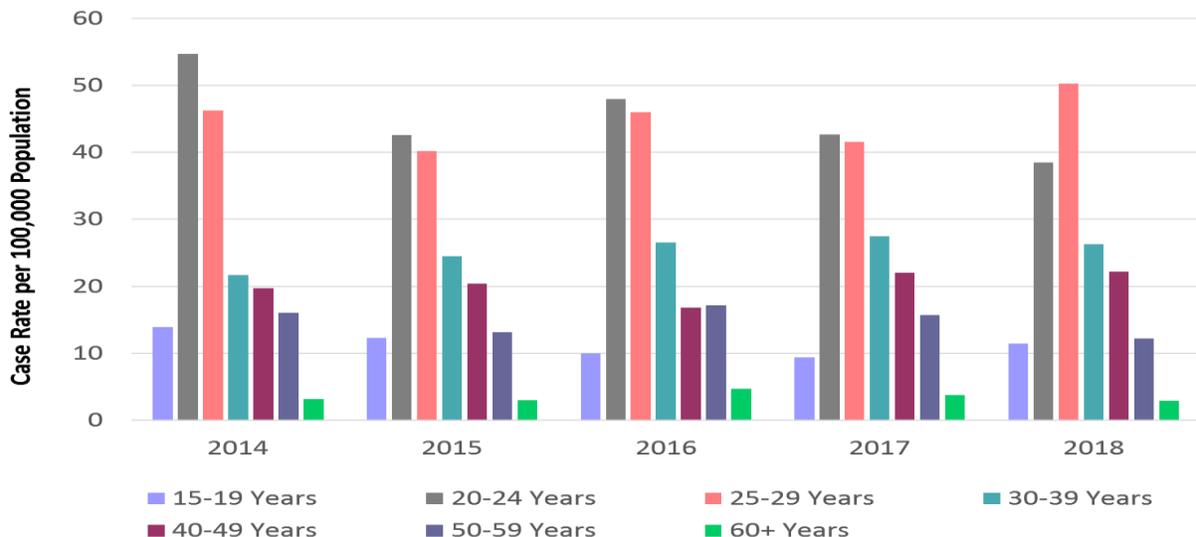
Risk Exposure

Of the cases with an identified risk factor, men who have sex with men was the highest reported risk factor in 2018 for PLWHA (55 percent). Heterosexual contact accounted for 30 percent of reported risk factors. Nine percent reported a risk of injecting drug use (IDU). Four percent reported the combined risks of MSM and IDU (Figure 2.09).

Figure 2.09: Proportion of persons living with HIV/AIDS by risk exposure, 2018

N=15,912

Men who have sex with men (MSM), 55%
Injecting Drug User (IDU), 9%
MSM & IDU , 4%
Heterosexual , 30%
Other , 2%
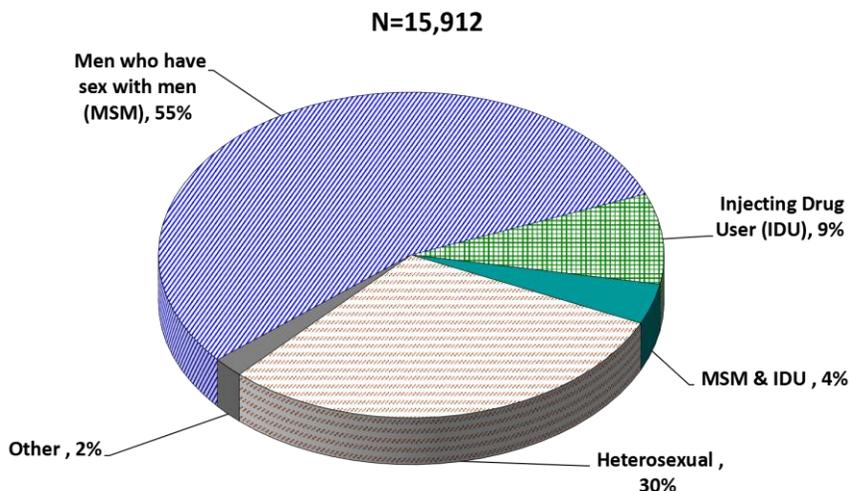
Note: Total excludes cases with no risk identified.

The risk category 'Other' includes blood transfusion, hemophilia, and perinatal transmission; all of which account for a very small proportion of PLWHA (2 percent). Of the total estimated number of PLWHA in 2018 (21 percent had no risk identified).

Figure 2.10: Proportion of HIV/AIDS cases diagnosed 2017-2018 by risk exposure

N=1,038

Men who have sex with men (MSM) 77%
Injecting Drug User (IDU) 3%
MSM & IDU 1%
Heterosexual 18%
Other <1%
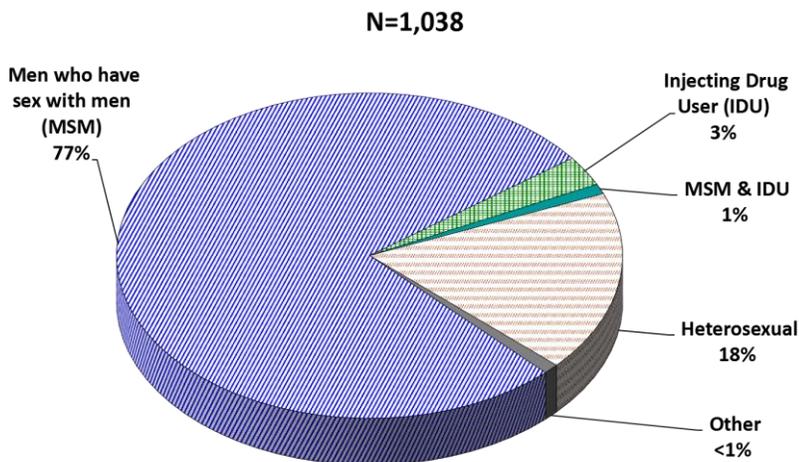
Note: Total excludes cases with no risk identified.

Figure 2.10 shows reported risk for people newly diagnosed with HIV/AIDS during 2017-2018. The proportion of new cases with a reported risk of MSM was 77 percent and with a reported risk of heterosexual contact was 18 percent; IDUs made up three percent and the combined risk of MSM and IDU one percent. Thirty-three percent of new cases have no risk identified. Over time, the proportion of cases with no risk identified in a given year decreases as risks are determined through follow-up surveillance activities.

The race/gender profile of newly diagnosed cases in 2017-2018 with no risk reported is reflective of the total proportion of HIV/AIDS cases by race/gender (Figure 2.11).

**Figure 2.11: New S.C. HIV/AIDS cases (2017-2018)
Race/Ethnicity and Gender: Proportion of No Risk Identified
Compared to Proportion of Reported Cases**

Race/Gender (Adult/Adolescent Cases)	New HIV/AIDS Cases 2017-2018	
	% with No Risk Identified (N=455)	% Cases Reported (N=1,432)
Black Male	42%	50%
Black Female	31%	16%
White Male	11%	20%
White Female	9%	5%
Hispanic Male	6%	7%
Hispanic Female	2%	1%

Note: Primary reasons for risk exposure information not reported were explained in the South Carolina HIV/AIDS Surveillance System section of the introduction.

Of reported risks for newly diagnosed cases in 2017-2018: among African-American men, most cases were attributed to MSM contact (92 percent), heterosexual risk (seven percent), and IDU (one percent). For white men, most cases were attributed to MSM contact (86 percent), IDU (six percent), the combined risk of MSM and IDU (four percent), and heterosexual risk (three percent). Of Hispanic men with reported risk factors, most cases were attributed to MSM contact (87 percent),

Figure 2.12: Proportion of Male HIV/AIDS cases by exposure category, diagnosed 2017-2018

Legend: Other, Hetero, MSM & IDU, IDU, MSM

Categories: White, African-American, Hispanic

Excludes persons with no risk reported.

heterosexual risk (eight percent), IDU (four percent) and the combined risk of MSM and IDU (one percent) (Figure 2.12). Twenty-six percent of men diagnosed in 2017-2018 had no indicated risk.
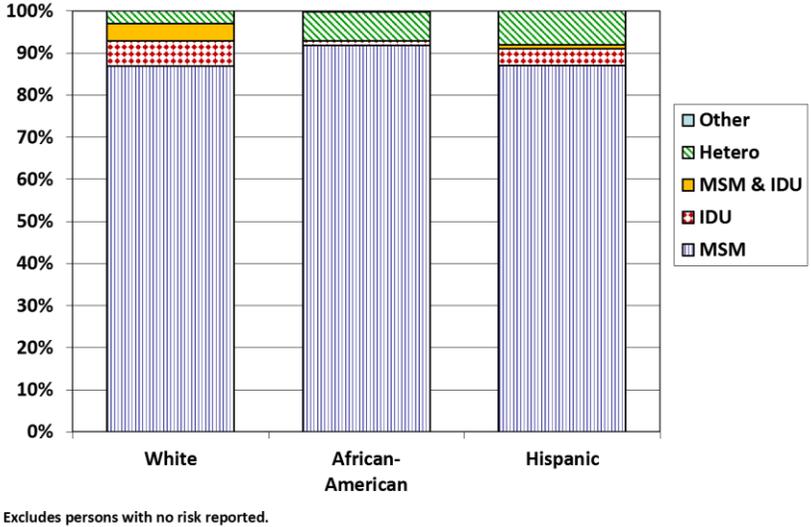
Among women diagnosed during 2017-2018 Heterosexual contact is the most often reported risk (92 percent). Ninety-six percent of African-American women reported Heterosexual contact as their risk, while 100 percent of Hispanic women and 80 percent of white women reported a risk of Heterosexual contact. White women report Injecting Drug Use more often (20 percent) than Hispanic women (zero percent), and African-American women (two percent), (Figure 2.13). Fifty-eight percent of women diagnosed in 2017-2018 had no indicated risk.

**Figure 2.13: Proportion of Female HIV/AIDS cases by exposure category, diagnosed 2017-2018**
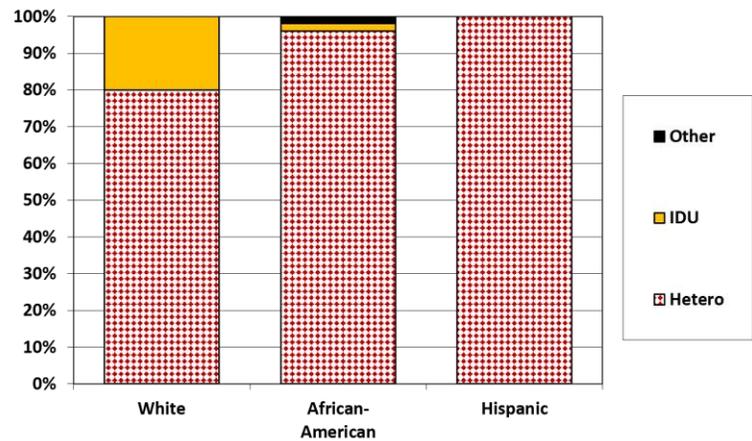
Excludes persons with no risk reported.

Figure 2.14: Proportional distribution of male HIV/AIDS cases by exposure category, diagnosed 2007-2018
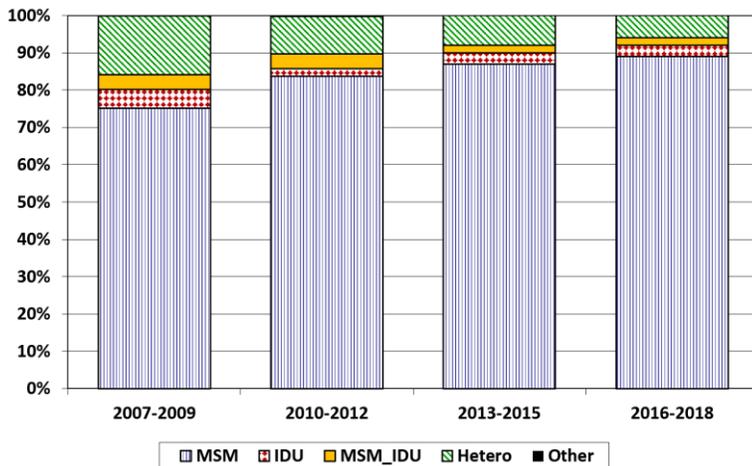
Excludes persons with no risk reported.

Figures 2.14 and 2.15 show the proportion of total HIV/AIDS cases diagnosed during four periods from 2007 to 2018 by sex and risk exposure category for males and females in South Carolina. Heterosexual Contact has decreased 62 percent from 2007/2009 to 2016/2018 as a reported risk for men, while the reported risk of MSM has increased 18 percent over the same time period.

The proportion of reported risks for women is consistent across all of the time periods. Heterosexual contact is consistent at 88-91 percent, IDU at 8-10 percent, and Other at 1-2 percent.

Figure 2.15: Proportional distribution of female HIV/AIDS cases by exposure category, diagnosed 2007-2018
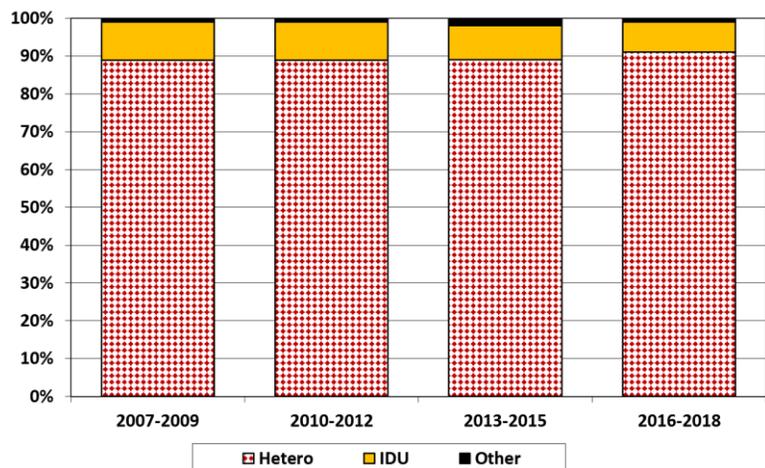
Excludes persons with no risk reported.

Residence

People living with HIV/AIDS are widespread throughout the state. Figure 2.16 shows the 2018 prevalence rate and Figure 2.17 shows the three-year average (2016-2018) incidence rate for African-Americans. Thirty-three percent of South Carolina counties have a prevalence rate greater than the state prevalence rate for African-Americans (984.1). Thirty-three percent of South Carolina counties have a three-year average (2016-2018) incidence rate for African-American greater than the state three-year average incidence rate for African-Americans (36.2).

Figure 2.16: S.C. HIV/AIDS Prevalence Rate

2018 HIV/AIDS
African-American Rate
per 100,000 population
433.6 - 727.5
727.6 - 1094.5
1094.6 - 1581.1
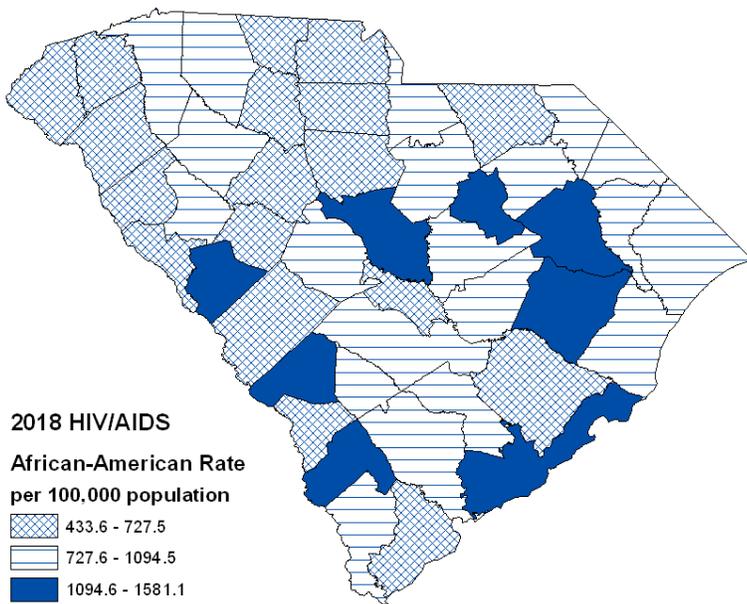
Figure 2.17: S.C. HIV/AIDS Incidence Rate:
Three Year Average

2016-2018 HIV/AIDS
African-American Rate
per 100,000 population
12.9 - 24.2
24.3 - 39.1
39.2 - 58.5
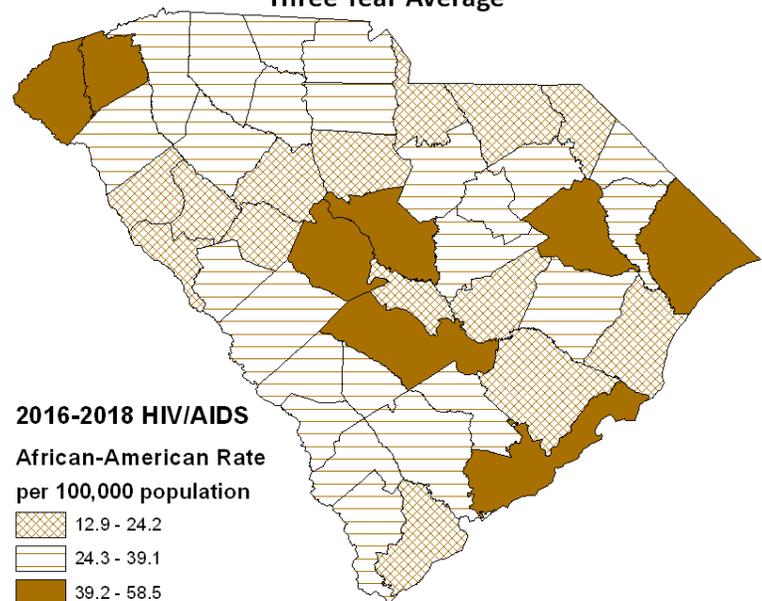
While the HIV/AIDS rate for whites in South Carolina is significantly lower than for African-Americans, the distribution throughout the state is not dissimilar. Figure 2.18 shows the 2018 prevalence rate and Figure 2.19 shows the three-year average (2016-2018) incidence rate for whites. Thirty-three percent of South Carolina counties have a prevalence rate greater than the state prevalence rate for whites (150.4). Forty-three percent of South Carolina counties have a three-year average (2016-2018) incidence rate for whites greater than the state three-year average incidence rate (5.3).

Figure 2.18: S.C. HIV/AIDS Prevalence Rates

2018 HIV/AIDS

White Rate
per 100,000 population

50.1 - 121.6
121.7 - 187.1
187.2 - 277.5
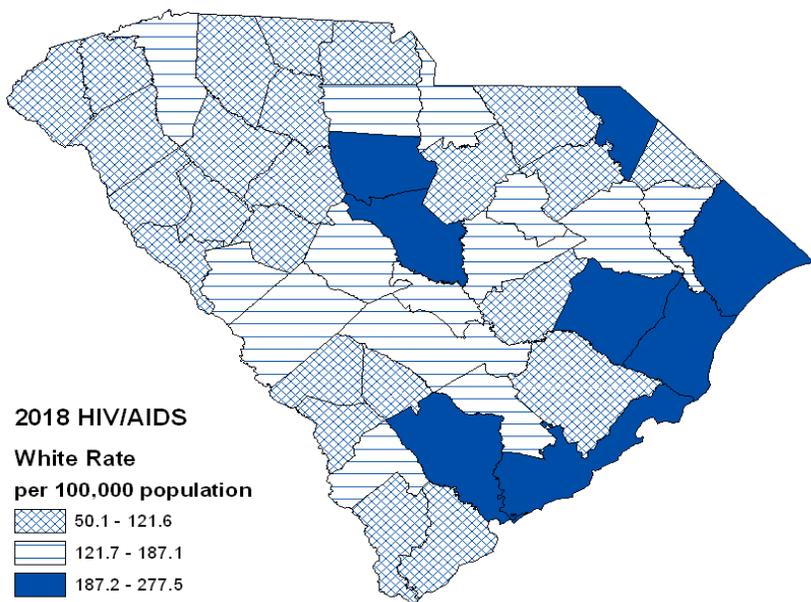
Figure 2.19: S.C. HIV/AIDS Incidence Rate: Three Year Average

2016-2018 HIV/AIDS

White Rate
per 100,000 population

0.0 - 3.3
3.4 - 10.7
10.8 - 18.9
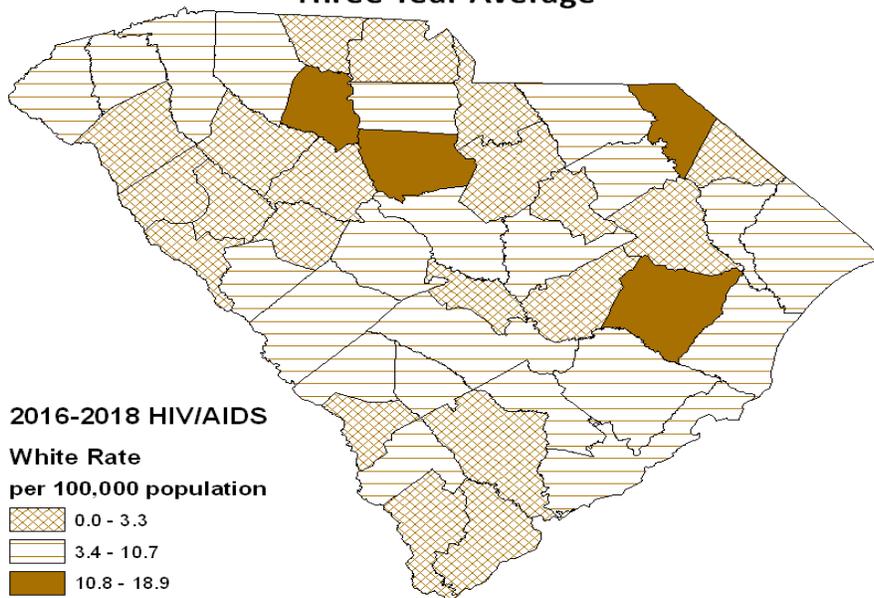
Mortality

Note*: 2018 was the last year of data available when this report was published.* With the advent of combination therapies and the use of prophylaxis, people with HIV are living longer and delaying the progression of AIDS, which is the advanced stage of the disease. These medications have also led to the decrease in AIDS-related deaths.

Large declines in AIDS mortality nationally essentially occurred during 1996-1997. Officials at the Centers for Disease Control and Prevention (CDC) cautiously attributed the sudden drops in deaths to new antiretrovirals, protease inhibitors, combination therapies, and increased prophylaxis for opportunistic illnesses. However, the initially reported gains were tempered by reports of demographic differentials that suggested only certain groups were benefiting from these new therapies.

The largest decline in deaths in South Carolina was in 1997, with AIDS related deaths dropping to 317 from 532 the previous year (not on graph). Since 1997, the number of AIDS deaths per year has continued to decline; however, there are fluctuations in the number of AIDS deaths from year to year. Reasons for this may include delay in diagnosis of HIV infection until severe symptoms arise, difficulty in adherence to prescribed medical treatments, and development of viral resistance to therapy (Figure 2.20).

Figure 2.20: Deaths Due to AIDS (HIV) in South Carolina, 1999-2018
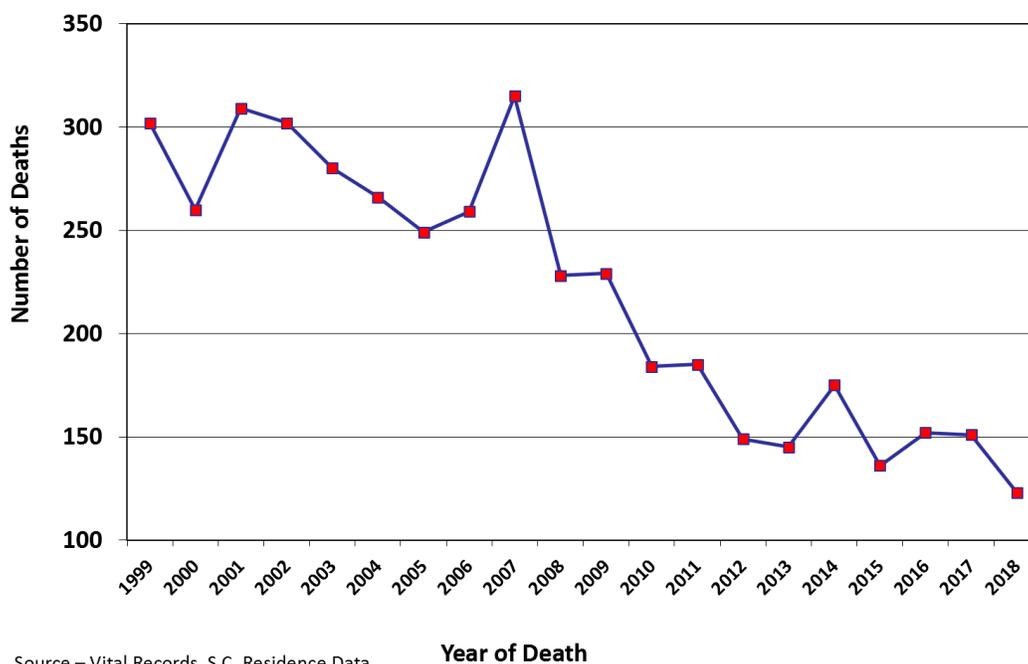
Source – Vital Records, S.C. Residence Data.

In addition to representing 46 percent of PLWHA (2018), African-American males accounted for the majority of people who died from AIDS (45 percent) in 2018. African-American females accounted for 27 percent of AIDS related deaths followed by white males (15 percent). By age group, the majority of deaths occurred among people age 45 and older (75 percent) (Figure 2.21).

Figure 2.21: Characteristics of persons who died of AIDS, 2018

	Number	Percent
Race/Sex		
Black Male	55	45%
Black Female	33	27%
White Male	18	15%
White Female	14	11%
Hispanic/Other Male	2	2%
Hispanic/Other Female	1	1%
Age Group		
<19	0	0%
20-24	0	0%
25-34	9	7%
35-44	22	18%
45-54	45	37%
55-64	29	24%
65+	18	15%

Source – Vital Records, S.C. Residence Data.

Who is at risk for becoming infected with HIV?

HIV can be transmitted via blood coming in contact with an infected person's blood, breast milk, or sexual fluids. The people most likely to become infected with HIV are those who engage in high-risk behaviors which place them at greater risk. Transmission happens most often during sexual or drug-using activity, and the frequency of the high-risk behavior combined with HIV prevalence in sexual or drug-using networks determines a person's risk for becoming infected. In order to accurately target STD/HIV prevention and treatment activities, it is important for community planning groups (and program providers) to have information on the number and characteristics of people who become newly infected with HIV and people whose behaviors or other exposures put them at various levels of risk for STD and HIV infection. This section summarizes HIV infection among population groups at high risk for HIV infection, sexually transmitted disease data, and behavioral data.

Characteristics of HIV/AIDS in People at Highest Risk

Analysis of characteristics of people with HIV/AIDS helps identify people at greatest risk for becoming infected. Risk for infection can be determined by assessing the frequency of high-risk behavior (e.g., unprotected sex, needle-sharing) in combination with the estimated prevalence of HIV/AIDS and incidence of HIV/AIDS.

Figure 3.01 shows the number of people in South Carolina living with HIV/AIDS at the end of each year by reported risk. MSM comprise the greatest number of people living with HIV, followed by heterosexuals. IDU, MSM and IDU, and other risks comprise fewer numbers.

Figure 3.01: Number of people living with HIV/AIDS by year and reported risk, 2014-2018
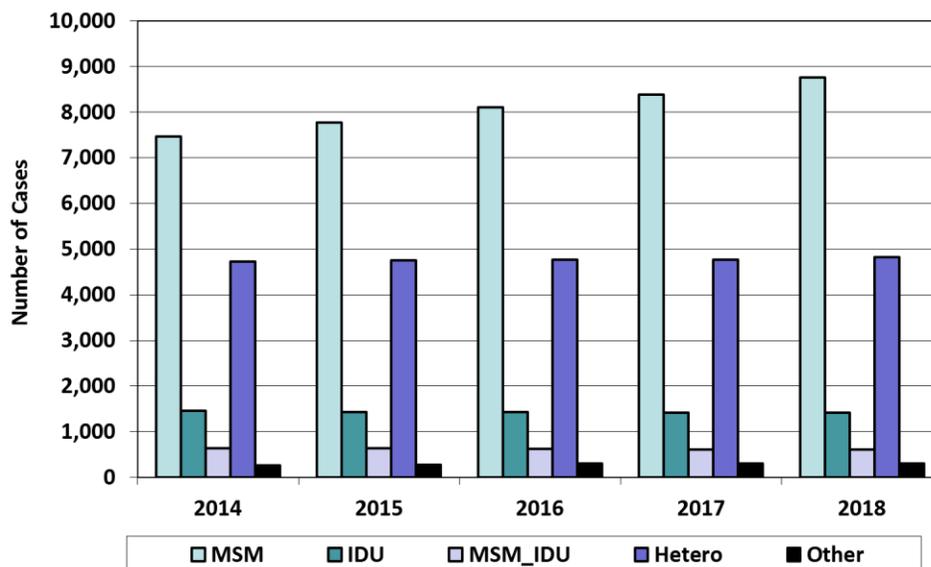
Excludes persons with no risk reported.

Figure 3.02 is a graph of the number of each reported risk for newly diagnosed cases, by year. Similar to the prevalence graph above, MSM is the most often reported risk among newly diagnosed cases; followed by heterosexual contact, IDU, combined MSM and IDU, and other risks.

Figure 3.02: Number of new HIV/AIDS cases by year of diagnosis and reported risk, 2014-2018
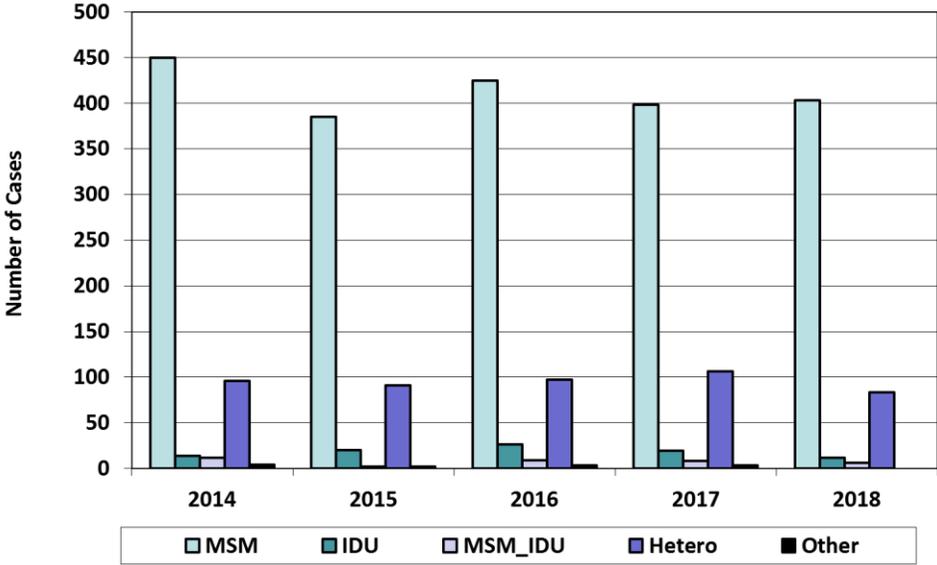
Excludes persons with no risk reported.

Based on data in this profile, the following primary populations have been identified as being at the highest risk of HIV/AIDS: men who have sex with men (MSM), high-risk heterosexuals, injecting drug users (IDUs), and men who have sex with men and injecting drug use. Women will be described in the heterosexual and injecting drug user section, and teenagers/young adults will be described within each population category.

Men who have Sex with Men

Estimates of Men Who Have Sex with Men Behavior in South Carolina

According to the U.S. Census Bureau, there are an estimated 1,441,853 males in South Carolina between the ages of 15-60, which is the age range when people are most sexually active. Review of literature and other state profiles, indicates that the estimated percentage of men who have sex with men (MSM) ranges from 1.0 percent to 12.9 percent. This would mean the number of MSM in South Carolina could be estimated to between 24,512 and 185,999.

Characteristics of men who have sex with men

Of PLWHA in South Carolina with a reported risk, the largest proportion is men who have sex with men (55 percent). MSM also accounted for the highest proportion (77 percent) of recently diagnosed cases.

The majority of MSM cases diagnosed during 2017-2018 were African-American (62 percent). White men accounted for 25 percent of the new cases and 13 percent were Hispanic or other races. (Figure 3.03)

Figure 3.03: Proportion of men diagnosed with HIV/AIDS in 2017-2018 who reported a risk of MSM by race/ethnicity
(N=787)

White 25%

African-American 62%

Hispanic/Other 13%
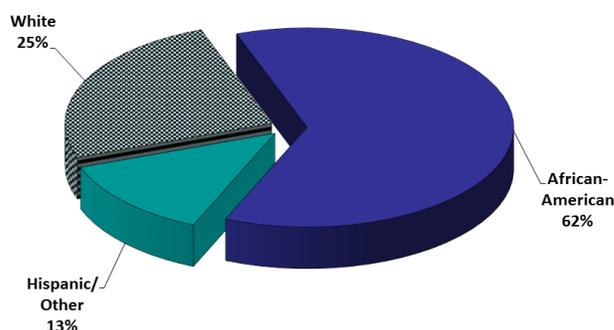
Figure 3.04: Percent of MSM HIV/AIDS cases diagnosed 2017-2018 by age group & race/ethnicity
N=801
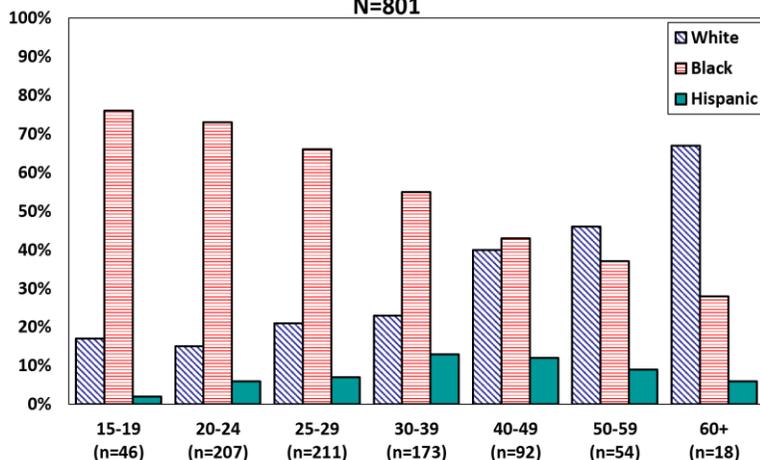
Total N includes race/ethnicity not included in graph.

The majority of MSM diagnosed during 2017-2018, were 20-29 years of age (52 percent); 22 percent were 30-39 years of age, eleven percent were 40-49 years of age, and nine percent were 50+ years of age. For men recently diagnosed, African-Americans accounted for the highest proportion for each age group below the age of 50, and whites accounted the highest proportion over the age of 50 (Figure 3.04).

Of men who have sex with men living with HIV/AIDS in 2018, 59 percent were African-American, 33 percent were White, and five percent were Hispanic. The majority of MSM living with HIV/AIDS, were over the age of 40 (59 percent), with the highest percentage in the 50-59 age group (28 percent). 23 percent were 30-39 years of age, and eighteen percent are below the age of 30. African-Americans accounted for the highest proportion for each age group below the age of 50 and whites the highest proportion over the age of 50 (Figure 3.05).

Figure 3.05: Percent of MSM living with HIV/AIDS by age/race, 2018 (N=8,759)
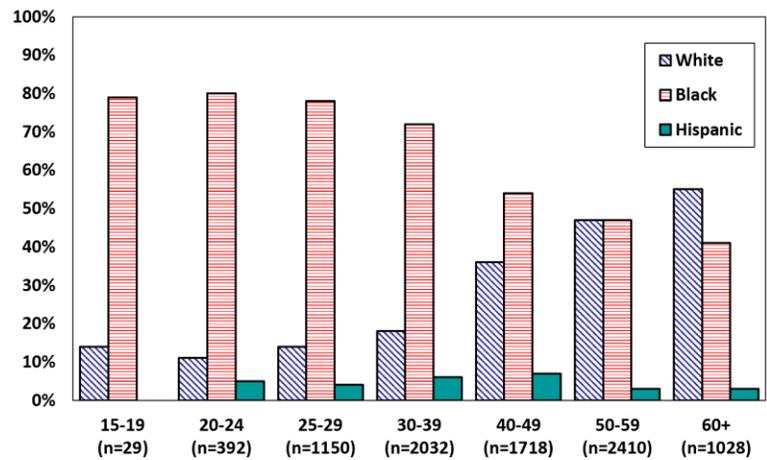
Total N includes "Other" race/ethnicity not included in graph.

Figure 3.06: S.C. HIV/AIDS MSM Prevalence

2018 HIV/AIDS

MSM Risk

Number of Cases

13 - 125

126 - 288

289 - 554

555 - 1630
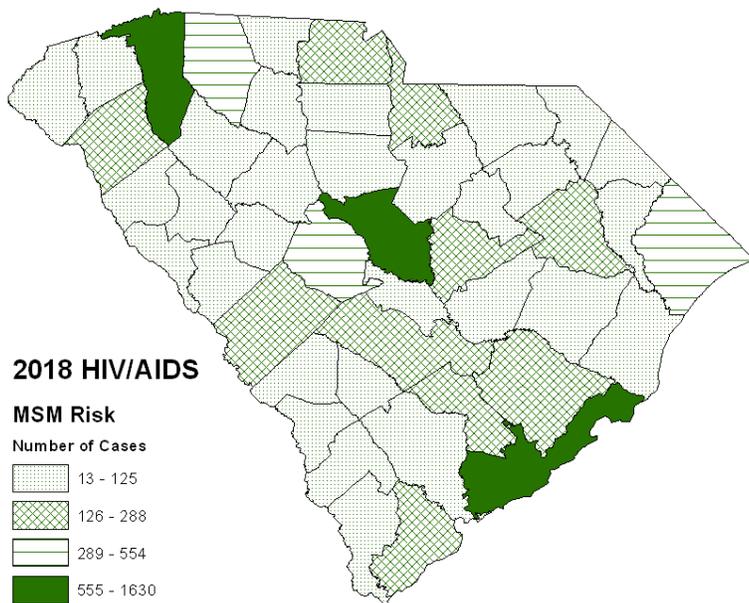
Richland County has the greatest number of MSM living with HIV/AIDS in 2018 (1,630), with Charleston (1,016) and Greenville (873) having the next highest numbers. Most South Carolina counties had fewer than 126 MSM living with HIV/AIDS (Figure 3.06).

Summary

Among men who have sex with men, African-American men account for over half the proportion of both living with HIV/AIDS (59 percent) and newly diagnosed HIV/AIDS cases (61 percent). And of men who have sex with men, ages twenty to forty, African-American men comprised 75 percent of cases living with HIV/AIDS and 65 percent of newly diagnosed HIV/AIDS.

High Risk Heterosexuals

Estimates of High-Risk Heterosexual Behavior in South Carolina

It is difficult to make an assessment of the number of people in South Carolina who engage in heterosexual contact that puts them at high risk for becoming infected with HIV. While there are some differences in the population of people with HIV/AIDS and the population of those with a non-HIV STD, most experts acknowledge that a diagnosis of an STD would suggest the individual is engaging in unsafe sexual practices. During 2018, 34,201 cases of chlamydia, 13,918 cases of gonorrhea and 415 cases of infectious syphilis were reported in South Carolina. More data on STDs, as well as other behavioral indicators such as teenage pregnancy and condom use, is described later.

In order for a case of HIV or AIDS to be considered as heterosexual transmission, it must be reported that the individual had heterosexual contact with a person who has documented HIV infection or AIDS, or had heterosexual contact with a person who is in a high risk group for HIV (MSM or IDU).

Characteristics of high risk heterosexuals

People with reported high-risk heterosexual contact comprise 30 percent of the total PLWHA at the end of 2018. Of PLWHA who reported a risk of heterosexual contact, over half were African-American women (54 percent), 26 percent were African-American men, 10 percent were white women, and three percent were white men.

Eighteen percent of people diagnosed during 2017-2018 reported high-risk heterosexual contact. Figure 3.07 shows that African-American men and women comprise a disproportionate 67 percent of recently diagnosed heterosexual HIV/AIDS cases. African-American women account for 47 percent of recent cases and 20 percent are African-American men. White women account for 15 percent while white men account for four percent. Hispanic men and women together account for eight percent of recent cases with a reported

Figure 3.07: Proportion of heterosexual HIV/AIDS cases by race/ethnicity, diagnosed 2017-2018 (N=189)

Excludes Unknown Race/Gender

risk of heterosexual contact (three percent men and five percent women).
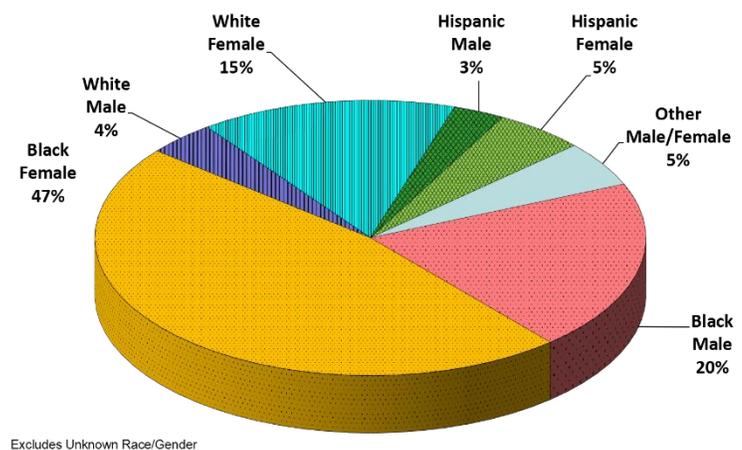
Figure 3.08: S.C. HIV/AIDS cases attributed to heterosexual transmission, by sex and year of diagnosis
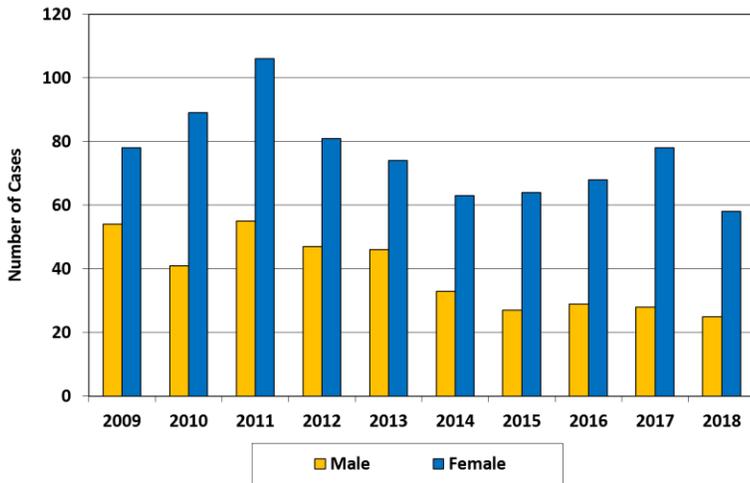
On average, the number of heterosexual cases diagnosed each year has decreased six percent per year from 2014 to 2018. Figure 3.08 shows the number of heterosexually acquired HIV cases in men and women in South Carolina from 2009 to 2018. During most of this period, the proportion of female cases averaged 50 percent higher than males.

The proportion of high-risk heterosexuals diagnosed in 2017-2018 was evenly distributed across the 20-59 age groups: 20-29 (21 percent), 30-39 (25 percent), 40-49 (23 percent), and 50-59 (22 percent). African-American women and men comprised the greatest proportion of cases in each age group (Figure 3.09).

Figure 3.09: Percent heterosexual S.C. HIV/AIDS cases diagnosed 2017-2018 by age/race/sex
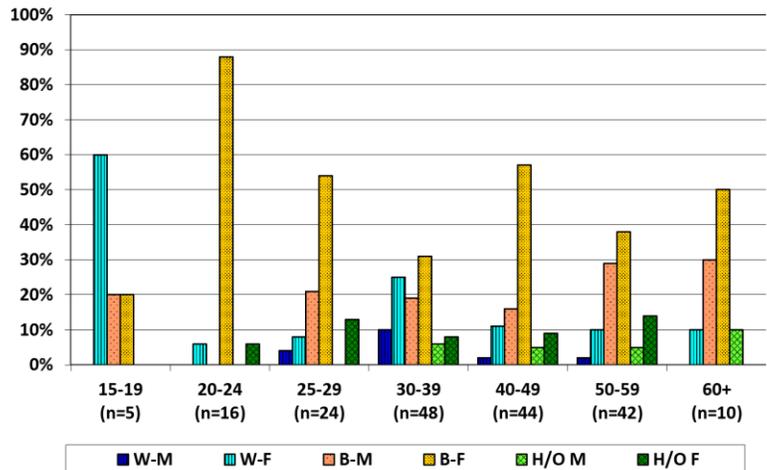
Of PLWHA in 2018 who reported a risk of heterosexual contact, 82 percent were age 40 and over; 40-49 (28 percent), 50-59 (33 percent), and 60+ (21 percent). African-American women comprised the greatest proportion (54 percent), followed by African-American men (26 percent). White men and women account for 13 percent and Hispanic/Other men and women account for seven percent of PLWHA who reported a risk of heterosexual contact (Figure 3.10).

Figure 3.10: Percent of heterosexuals living with HIV/AIDS by age group and race/ethnicity/gender, 2018
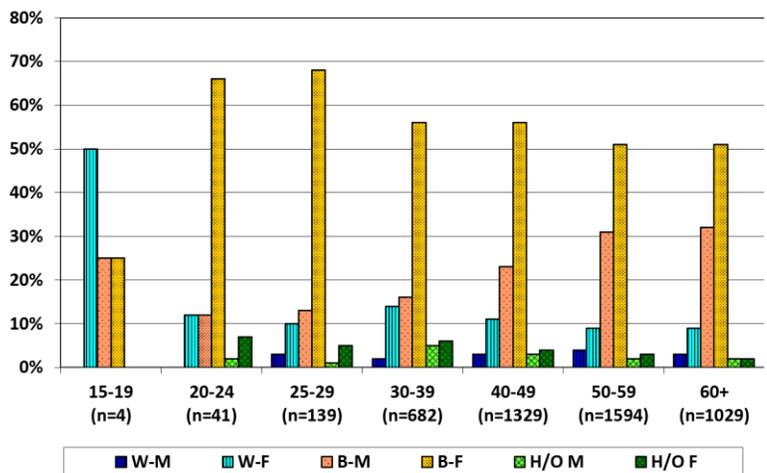
Figure 3.11: S.C. HIV/AIDS Prevalence

2018 HIV/AIDS
Heterosexual Risk
Number of Cases
- 4 - 73
- 74 - 168
- 169 - 423
- 424 - 757
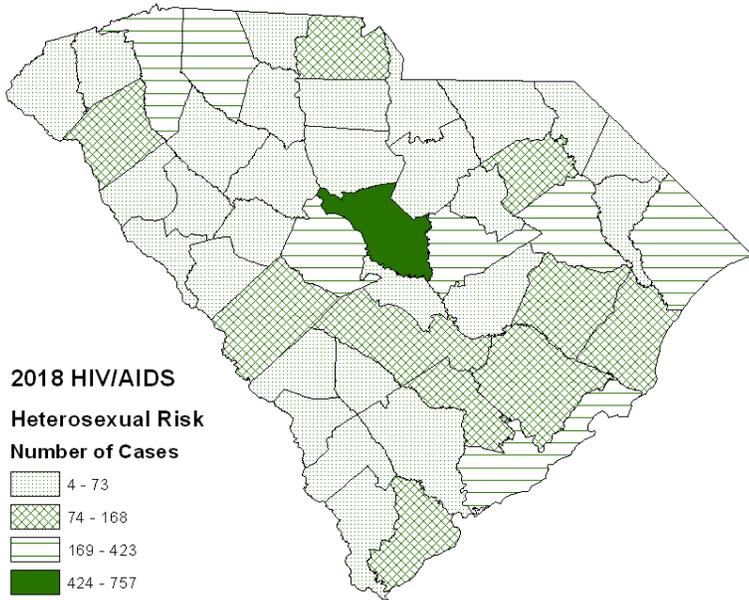
Figure 3.11 shows the counties with the highest prevalence of PLWHA due to heterosexual transmission. Richland county has the highest number of reported cases (757), followed closely by Charleston, Greenville, Florence, Horry, Sumter, and Lexington. Eighty-three percent of South Carolina counties each have less than 168 PLWHA who reported a risk of heterosexual contact.

Figure 3.12 shows the 2016-2018 case rate among women; an indicator for more recent heterosexual risk. Fairfield, Lee and Union counties have the highest case rates in the state (19.6 and 16.0 per 100,000 population respectively). Seventy percent of counties have case rates below 8.8 (the state rate is 6.7).

Figure 3.12: S.C. HIV/AIDS Incidence Rate: Three Year Average

2016-2018 HIV/AIDS
Female Rate
per 100,000 population
- 0.0 - 3.3
- 3.4 - 8.8
- 8.9 - 19.6
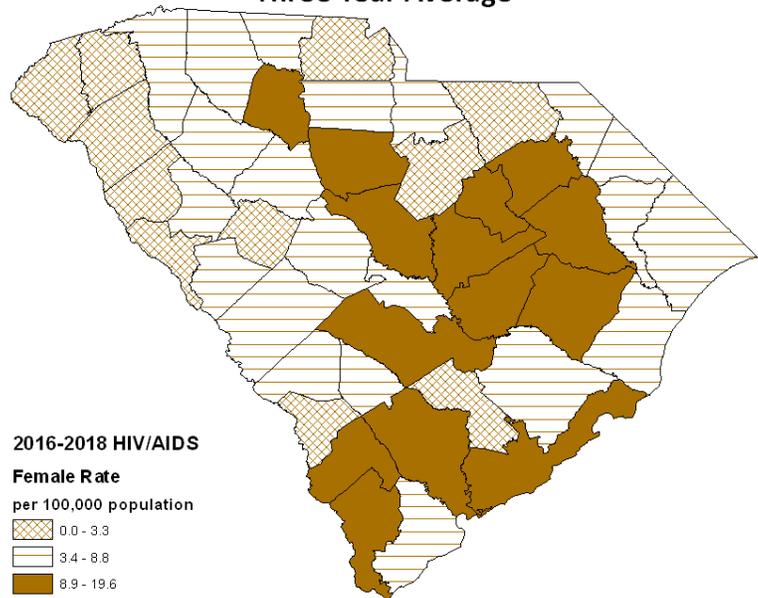
Summary

Among heterosexually exposed cases, African-American women account for half of newly diagnosed HIV/AIDS cases (47 percent) and African-American men account for 20 percent. Of people living with HIV/AIDS with a reported risk of heterosexual contact, African-American women account for 54 percent and African-American men account for 26 percent. Of people with a reported risk of heterosexual contact, African-American men and women age 20-59 account for six out of every ten PLWHA and six out of every ten people diagnosed in 2017-2018.

Injecting Drug Users

Characteristics of Injecting Drug Users (IDU)

Injecting drug users account for nine percent of reported risks for people living with HIV/AIDS in 2018 and three percent of people recently diagnosed with HIV/AIDS during 2017-2018.

Figure 3.13: Number of new HIV/AIDS cases due to Injecting Drug Use by gender, race and year of diagnosis
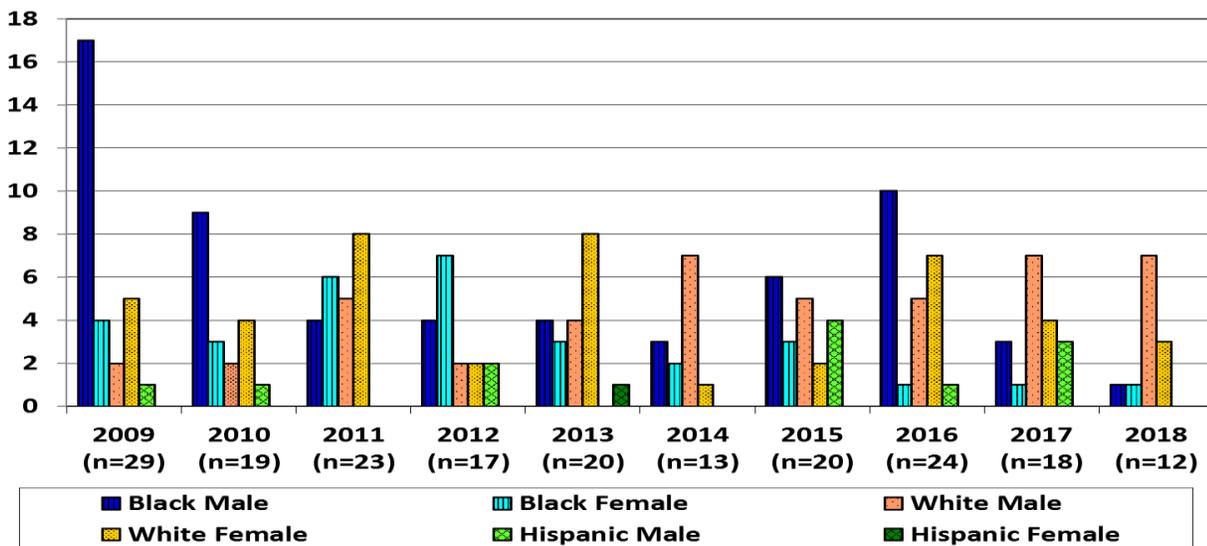
Figure 3.14: Number of HIV/AIDS cases due to injecting drug use by gender and year of diagnosis
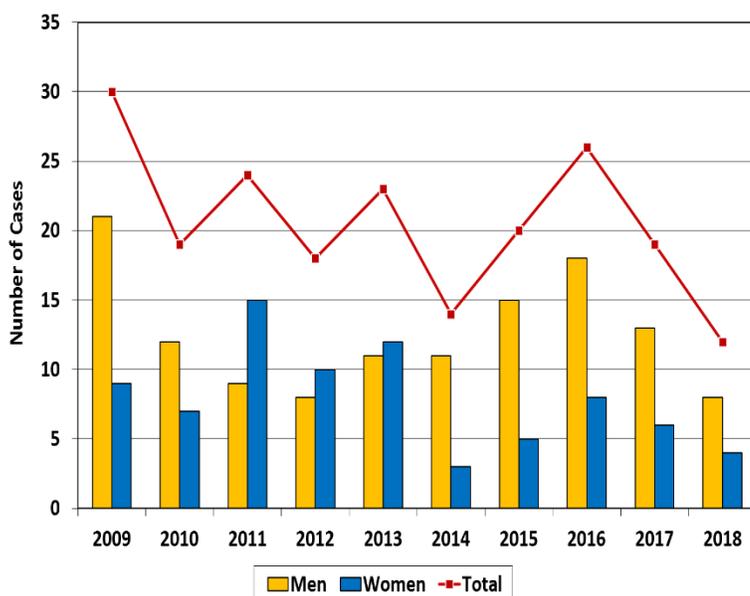
Over the past ten years, the number of new HIV/AIDS diagnosis with a reported risk of injecting drug use had been declining; however, the number of IDU reported risk increased in both 2015 and 2016. In light of the national opioid crisis, it is important to monitor this risk category closely. Men account for the largest proportion of those reporting injecting-drug-use as their risk. (Figure 3.14).

Figure 3.15 shows race and gender proportions of recently diagnosed (2017-2018) IDU cases. Men account for 68 percent: African-American men 13 percent, white men 45 percent, and Hispanic/other ten percent. African-American women accounted for six percent and white women 23 percent.

Figure 3.15: Proportion of injecting drug users diagnosed with HIV/AIDS 2017-2018 by race/sex

N=31

N includes unknown race/gender
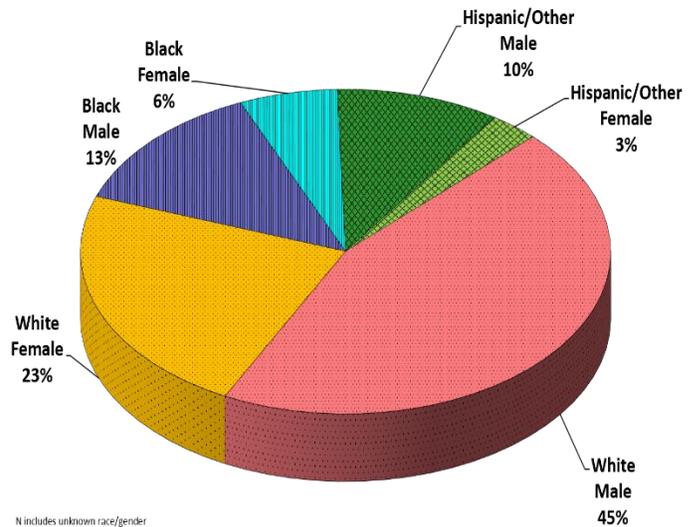
Figure 3.16: Percent of injecting drug users diagnosed with HIV/AIDS 2017-2018 by age group, race, and gender
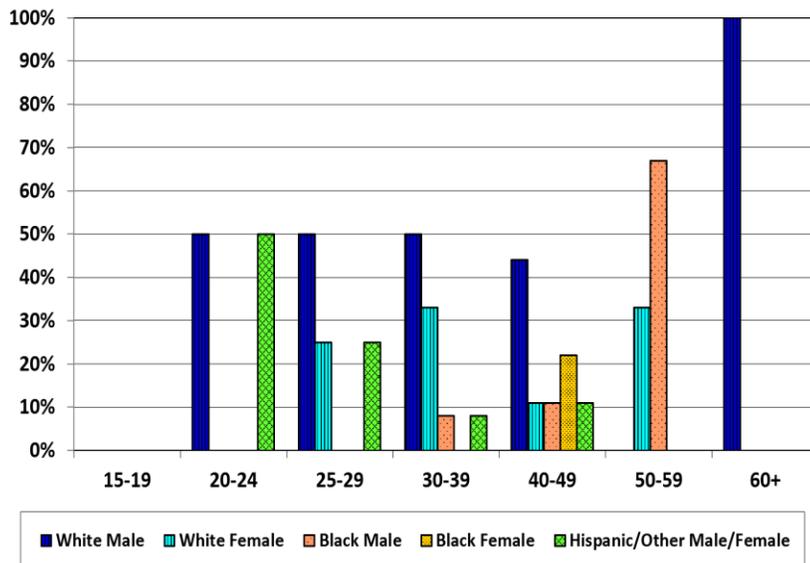
Figure 3.16 shows that 42 percent of IDU cases diagnosed in 2017-2018 are over the age of 40: 40-49 29 percent, 50-59 10 percent, and 60+ 3 percent. Of those reporting IDU as their risk, 19 percent were age 20-29, and 39 percent were age 30-39.

Of PLWHA with IDU as an identified risk factor, most (92 percent) are 40 years of age and older. African-Americans account for the greatest proportion of cases over the age of 40, with African-American men accounting for 45 percent and African-American women accounting for 27 percent.

Within the 20-39 age groups, white women account for the greatest proportion (32 percent)

Figure 3.17: Percent of IDU persons living with HIV/AIDS by race/sex and age group, 2018 (N=1,414)

and white men the next highest proportion (23 percent), followed by African-American women 16 percent and African-American men 15 percent. (Figure 3.17).
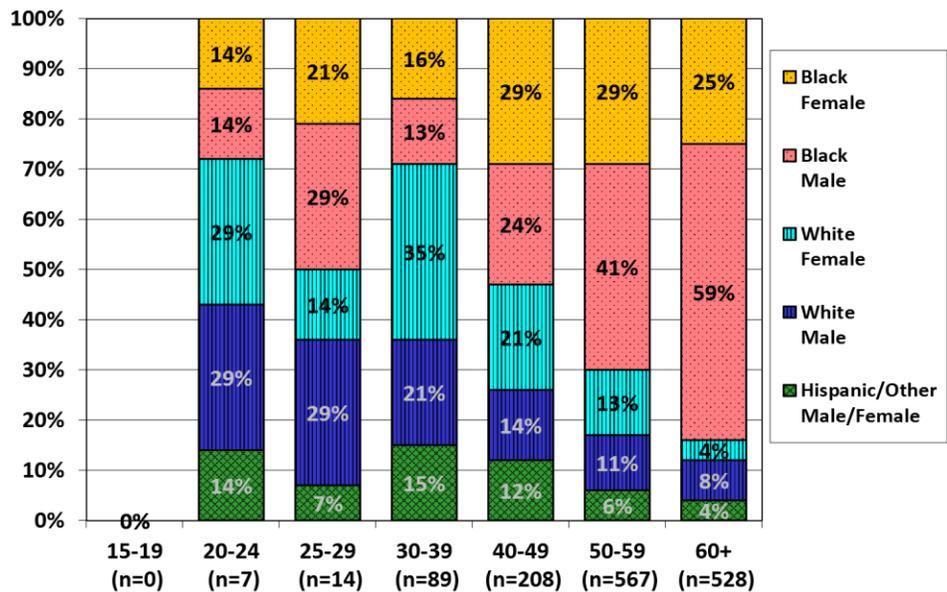
Figure 3.18 shows Richland County has the highest number of PLWHA with IDU as an identified risk factor. As with other risks, the more urban counties have the greatest numbers.

Figure 3.18: S.C. HIV/AIDS Prevalence of IDU Risk
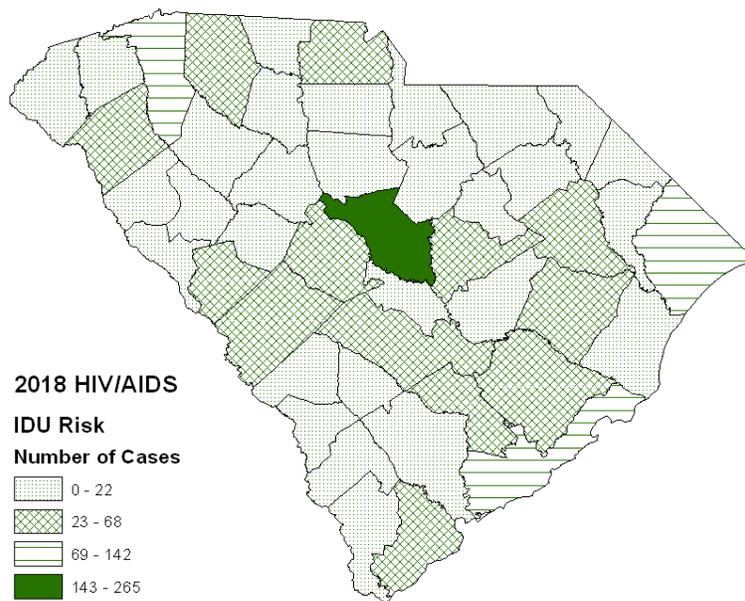
Other Populations at Risk

Other populations at varying risk for HIV are described below and include people with sexually transmitted diseases, infants and children, and pregnant teen age women.

People with Sexually Transmitted Diseases (STDs)

STDs are primary risk factors for HIV infection and a marker of high risk, unprotected sexual behavior. Many STDs cause lesions or other skin conditions that facilitate HIV infection. Trends in STD infection among different populations (e.g. adolescents, women, men who have sex with men) may reflect changing patterns in HIV infection that have not yet become evident in the HIV/AIDS caseload of a particular area.

Chlamydia

Over the past decade, reported cases of chlamydia have averaged about 28,000 per year. Some of this high number may be attributed to initiating routine screening for all young women attending family planning and STD clinics in health departments statewide. In 2018, there were 34,201 cases of chlamydia diagnosed in South Carolina. Among those cases with a reported race, 27 percent were African-American women and 12 percent were white women. African-American men comprised 15 percent of chlamydia cases, and white men accounted for four percent (Figure 3.19). Thirty-nine percent of chlamydia cases have 'Unknown' race and/or gender; this is attributed to the fact that these conditions are primarily reported by labs, which frequently do not collect a race.

Figure 3.19: South Carolina count of reported Chlamydia cases by year of diagnosis, 2009-2018

Of cases diagnosed in 2018, 86 percent were adolescents and adults under the age of 30. 15-19, 30 percent; 20-24, 37 percent; and 25-29, 18 percent. Persons age 30 and over accounted for 14 percent of chlamydia cases. Figure 3.20
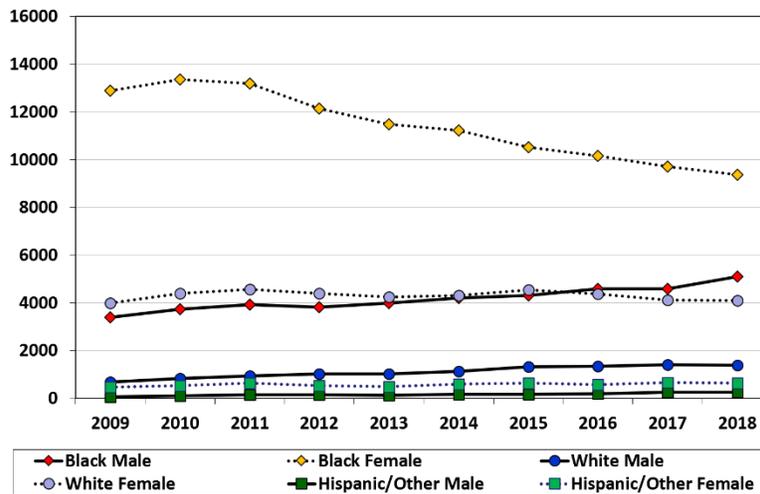
Figure 3.20: Proportion of 2018 Chlamydia cases by age group
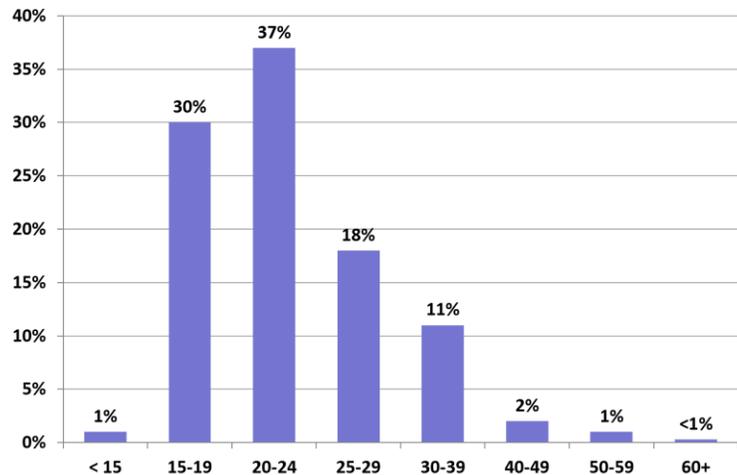
Gonorrhea

In 2018, 13,918 gonorrhea cases were diagnosed in South Carolina. Of cases with a reported race, African-American men and women account for 50 percent of reported cases; African-American women 24 percent and African-American men 26 percent. As with chlamydia, thirty-three percent of reported gonorrhea cases have an 'Unknown' race and/or gender. Figure 3.21 shows trends among reported race/gender by year.

Figure 3.21: South Carolina count of reported gonorrhea cases by year of diagnosis, 2009-2018
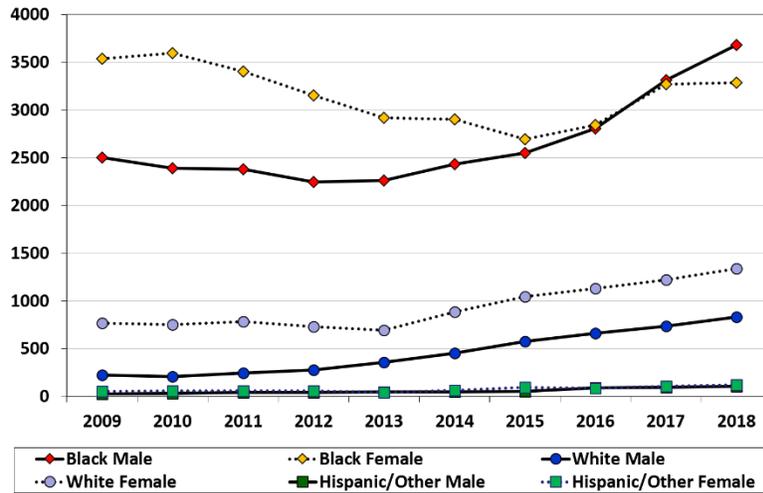
Figure 3.22: Proportion of 2018 Gonorrhea cases by age group
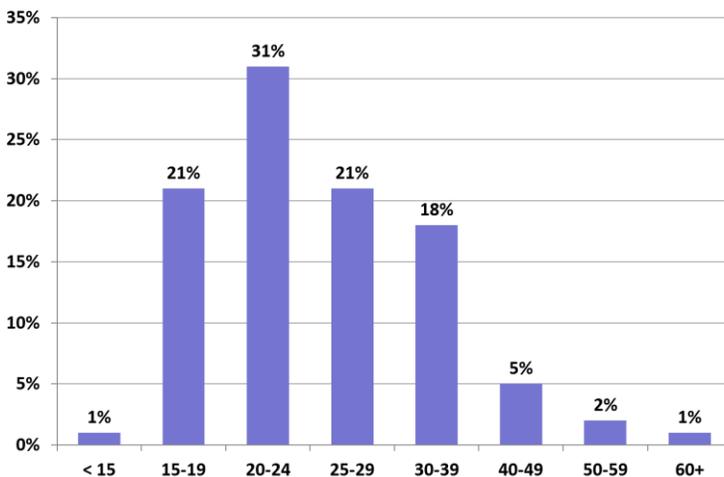
74 percent of Gonorrhea cases diagnosed in 2018 were between the ages of 15 and 29. Twenty-one percent of cases were age 15-19, thirty-one percent were age 20-24, and 21 percent were age 25-29. Persons age 30 and over accounted for 26 percent (Figure 3.22).

Infectious Syphilis

The number of infectious syphilis diagnosed each year in South Carolina has dramatically increased over the past ten years. In 2018, 415 cases of infectious syphilis were diagnosed; this is a 284 percent increase from 2009 (108 cases). On average, the number of infectious syphilis cases diagnosed each year has increased 18 percent per year over the last decade.

**Figure 3.23: South Carolina count of reported Infectious Syphilis cases by year of diagnosis, 2009-2018**

Legend: Black Male, Black Female, White Male, White Female, Hispanic/Other Male, Hispanic/Other Female
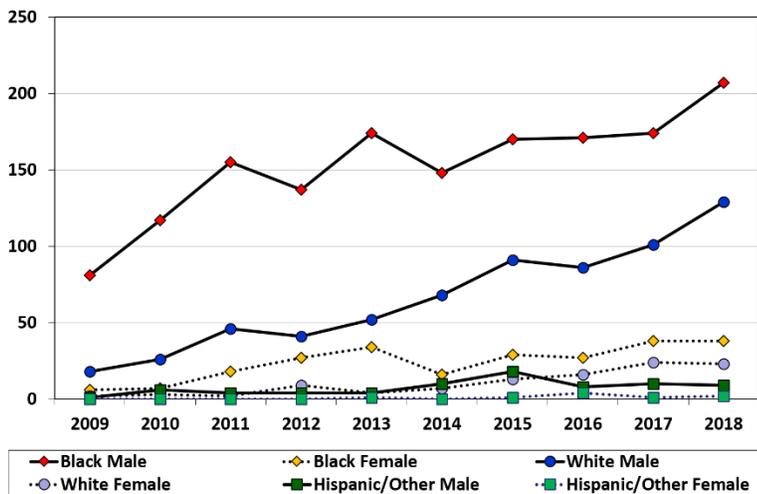
Figure 3.23 shows men continue to represent the majority of cases (85 percent): African-American men specifically, are most impacted, accounting for 50 percent of total cases, white men accounting for 31 percent, and Hispanic/other men two percent. Women account for 15 percent of the total infectious syphilis cases: African-American women comprised 9 percent, white women six percent, and Hispanic/other women less than one percent. Two percent of infectious syphilis cases have 'unknown' race.

Fifty-five percent of infectious syphilis cases diagnosed in 2018 were under the age of 30. Six percent age 15-19, Twenty percent were age 20-24, and 29 percent were age 25-29. Forty-five percent were over the age of 30; 26 percent 30-39, 11 percent 40-49, and 8 percent age 50+ (Figure 3.24).

Figure 3.24: Proportion of 2018 Infectious Syphilis cases by age group

Age group	Percent
< 15	0%
15-19	6%
20-24	20%
25-29	29%
30-39	26%
40-49	11%
50-59	7%
60+	1%
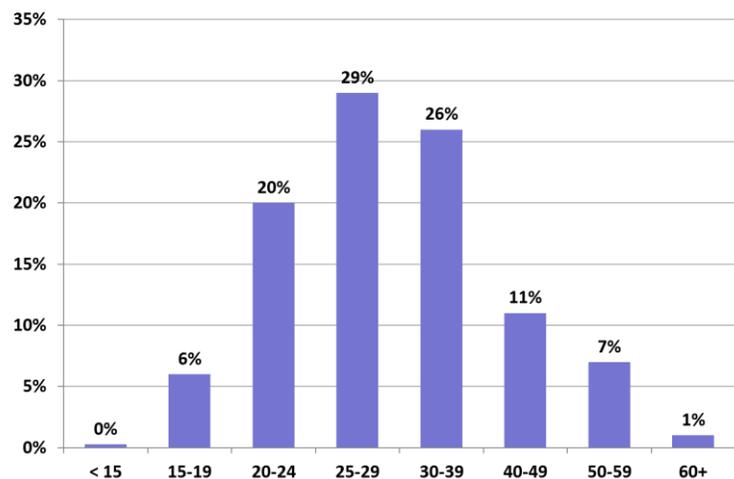
Infants and Children: (Children under 13 years of age)

Cumulatively, through December 2018, there have been 291 cases of HIV infection diagnosed among children less than 13 years of age; this represents one percent of the total reported AIDS and HIV infection cases.

Figure 3.25: Number of children <13 years old diagnosed with HIV/AIDS in South Carolina, 1999-2018
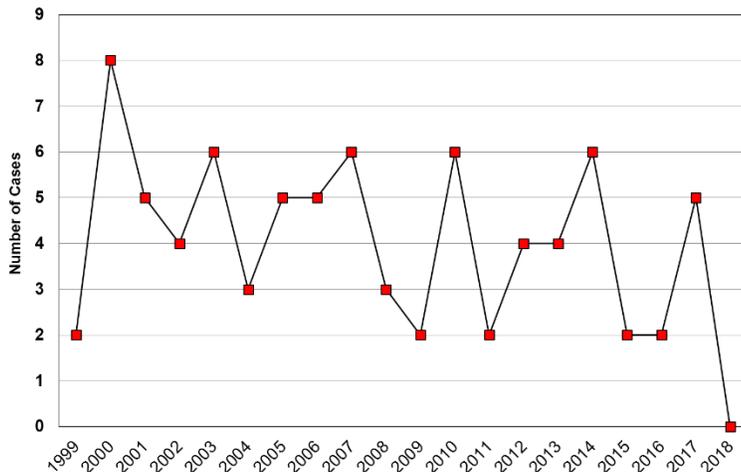
Most infants and children infected with HIV acquired it perinatally from their mother. There has been significant progress over the past twenty years in reducing the number of infants with perinatal acquired HIV infection (see Perinatally HIV exposed births below). When reporting small numbers of cases, trend graphs, such as the one in Figure 3.25, tend to display a lot of fluctuation over the given time period. The highest number of cases reported was 21 in 1993 (not on graph); the lowest number is zero case (2018). There was zero cases reported in 2018.

Perinatally HIV exposed births

The number of perinatally HIV exposed births averages around 67 per year, while perinatally acquired HIV cases average one per year. This translates into 1.2 percent of perinatally HIV exposed births testing positive for HIV. Figure 3.26 shows the number of perinatally HIV exposed births (values on left) and the rate by race of mother (values on right). In 2018, the exposure rate for African American women is 10 times higher compared to white women.

Figure 3.26: Perinatally HIV exposed births by year of birth and rate* by race and year of birth

* Rate per 1,000 live births
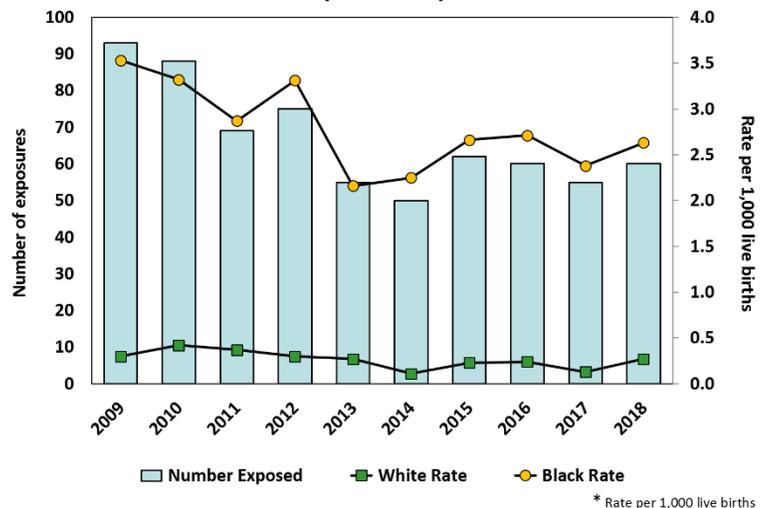
Teenage Pregnancy

Pregnancy birth and abortion rates, like STD rates, are indications of the extent of unprotected sexual activity in a population.

African-American girls between the ages of 10 and 14 have continued to have higher rates of live births than their white counter parts. However, the rate has decreased from 1.2 in 2009 to 0.4 per 1,000 live births in 2018.

Figure 3.27: South Carolina teens age 15 - 17 live birth rate
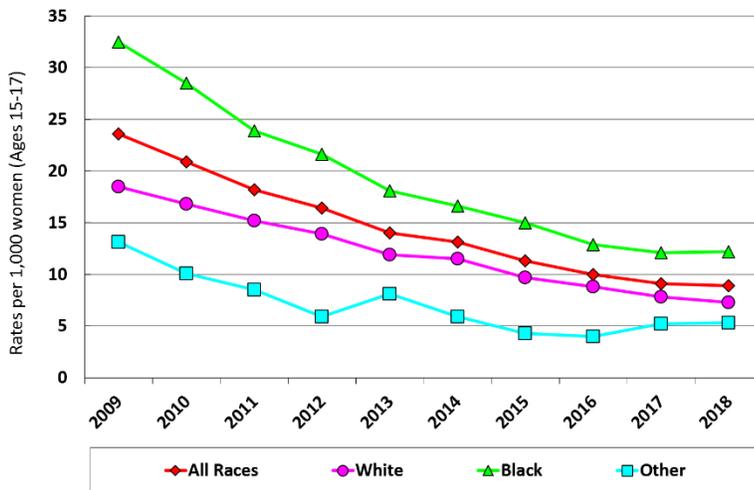
Source – SCDHEC, Vital Records, SC Residence Data

Teenage live births among 15-17-year-old South Carolinians have decreased from a rate of 23.6 per 1,000 live births in 2009 to 8.9 in 2018; a 62 percent decline (Figure 3.27). Similar data are also seen when viewing teen birth rates by racial/ethnic subgroups. The rate for white 15-17-year-old teens was 18.5 in 2009 and 7.3 in 2018, representing a 61 percent decline. The rate for African-American 15-17-year-old teens declined 63 percent from 32.5 per 1,000 live births in 2009 to 12.2 in 2018.

Figure 3.28 shows the teen birth rates (per 1,000 live births) for 18 and 19-year old. As with the 15-17 age group, African-American teenage girls continue to have higher live birth rate than other races. All races have seen an overall decrease in the live birth rates from 2009 (87.2 per 1,000 live births) to 2018 (41.6 per 1,000 live births).

Figure 3.28: South Carolina teens age 18 – 19 live birth rates
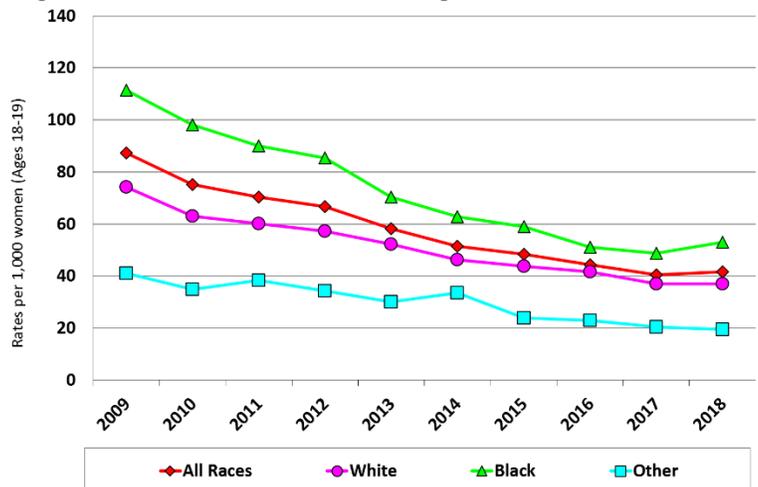
Source – SCDHEC, Vital Records, SC Residence Data

People Receiving HIV Counseling and Testing At County Health Departments

Data from local HIV counseling and testing sites (county health departments) generally reflect similar trends as HIV/AIDS surveillance data in terms of who is most likely to be HIV infected, risk category, and county of residence. As stated in the Introduction, the data reflects only those people tested voluntarily in local health departments. This data reflects the number of individuals tested, not the number of tests. In 2018, African-Americans comprised 64 percent of the total people tested, and 74 percent of the total positive. Men accounted for 33 percent of people tested and 83 percent of total positive. People 20-39 years of age represented the highest proportion tested (77 percent) and the highest proportion total positive people (73 percent). People over the age of 40 comprised 14 percent of the total people tested, and 22 percent of the total positive.

Public Health Regions (PHR) that accounted for the greatest proportion of people tested who were positive include those with the same urban counties of highest prevalence:
Lowcountry PHR (includes Charleston County) – 22 percent of total positives;
Midlands PHR (includes Richland County) - 37 percent of total positives tested;
Pee Dee PHR (includes Sumter and Florence counties) – 19 percent of total positives;
Upstate PHR (includes Greenville and Spartanburg Counties) – 20 percent of total positives

Other Behavioral/Risk Data

Behavioral Risk Factor Surveillance System (BRFSS)

Behavior Risk Factor Surveillance System is the world's largest random telephone survey of non-institutionalized population aged 18 or older that is used to track health risks in the United States. In 1981, the Centers for Disease Control and Prevention (CDC), in collaboration with selected states, initiated a telephone based behavioral risk factor surveillance system to monitor health risk behaviors. South Carolina began administering BRFSS in 1984. Several core questions address knowledge, attitudes, beliefs, and behaviors regarding sexually transmitted diseases, particularly AIDS.

The HIV/AIDS questions for the 2018 survey focused on respondents HIV/AIDS testing history. Results show that when asked about ever being tested for HIV themselves, 37.8 percent of respondents indicated ever being tested. African-Americans were more likely (55.5%) to have been tested than Caucasians (31%). Men are only slightly less likely to have been tested then women (37% versus 38.5%).

Youth Risk Behavior Survey (YRBS)

The YRBS has been conducted in SC high schools every other year since 1991 and in middle schools since 2005. The survey is part of a national effort to monitor priority health risk behaviors that contribute to the leading causes of death, disability, and social problems among youth and adults in the United States. Figure 3.29 shows the proportion of high school students who have been sexually active, report having had four or more lifetime partners, and report using a condom at last sexual intercourse (had intercourse in past 3 months). Number of partners and condom use are important because of the increased risk of exposure to HIV.

Figure 3.29: Proportion of high school students indicating sexual risks, 2007-2017

Source – SC Dept. of Education
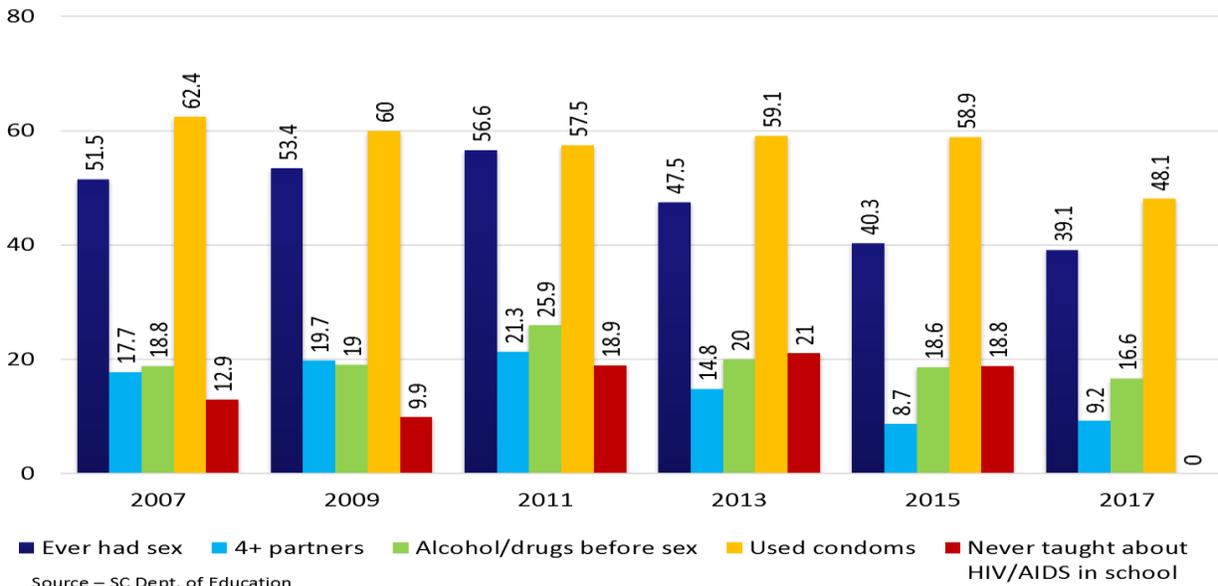
Substance Use

Drug use is known to be a major factor in the spread of HIV infection. The Centers for Disease Control (CDC) specifically includes Injection Drug Use (IDU) as a transmission category for the classification of cases that summarizes a person's possible HIV risk factor. IDU is considered a high risk because shared equipment (primarily used needles, but also other equipment) can retain HIV, which is drawn up into a syringe and then injected along with the drug by the next user of the syringe. Sharing equipment for using drugs can also be a means for transmitting hepatitis B, hepatitis C, and other serious diseases.

Additionally, non-injecting drug use, including methamphetamine or alcohol, is linked with unsafe sexual activity, which increases the risk of becoming infected with HIV or another sexually transmitted disease. Often, substance users have multiple sexual partners and do not protect themselves during sexual activity. Also, substance users may have an increased risk of carrying sexually transmitted diseases; this can increase the risk of becoming infected with HIV, or of transmitting HIV infection.

According to the South Carolina Department of Alcohol and Other Drug Abuse Services (DAODAS), Nine percent of discharged episodes in federal fiscal year 2018 reported active or historical injection use. Additionally, 55 percent of the discharged episodes reported using an illicit drug other than marijuana (20 percent Opiates, 20 percent Cocaine, and 15 percent Amphetamines).

What are the patterns of service utilization of HIV-infected people?

Ryan White Part B

In 1990, Congress enacted the Ryan White CARE Act to provide funding for states, territories and Eligible Metropolitan Areas to offer medical care and support services for people living with HIV disease who lack health insurance and financial resources for their care. Congress reauthorized the Ryan White CARE Act in 1996 and 2000 to support Titles I through IV, Special Projects of National Significance (SPNS), the HIV/AIDS Education Training Centers and the Dental Reimbursement Program, all of which are part of the CARE Act. The legislation was reauthorized again in 2006 when it became the Ryan White HIV/AIDS Treatment Modernization Act and finally in 2009 with the Ryan White HIV/AIDS Treatment Extension Act.

Ryan White Part B funding is used to assist States and Territories in developing and/or enhancing access to a comprehensive continuum of high quality, community-based care for low-income individuals and families living with HIV.

Figure 4.01: Characteristics of Ryan White Part B clients compared to S.C. persons living with HIV/AIDS in 2018

	Ryan White Part B Clients, N=10,347	Persons Living with HIV/AIDS, N=20,069
Race/Ethnicity		
White, not-Hispanic	22%	25%
Black, not-Hispanic	73%	68%
Hispanic	4%	5%
Other	1%	2%
Sex		
Male	67%	71%
Female	32%	29%
Transgender	<1%	---
Age Group		
< 24	5%	---
25-44	37%	---
45+	58%	---

During 2018, 10,347 clients received services through the Ryan White Part B funds. Figure 4.01 presents the distribution of Part B clients by race/ethnicity, sex and age as well as for PLWHA in South Carolina through December 2018. Clients served through Part B are representative of the population affected with HIV/AIDS in all categories.

HRSA has directed that states should allocate funds for essential core services including:
1) Primary Medical Care consistent with Public Health Service (PHS) Treatment Guidelines;
2) HIV Related Medications;
3) Mental Health Treatment;
4) Substance Abuse Treatment;
5) Oral Health; and
6) Medical Case Management.

Figure 4.02 shows a breakdown of Ryan White Part B clients who received six of the core services through funding and the average number of visits per clients. Among the 10,347 clients who received services, the majority of clients obtained medical case management services (n=8,942) followed by medical care, Medication Assistance (utilization of HIV related medications is described in the ADAP section), mental health services, dental care and substance abuse services.

Figure 4.02: South Carolina Ryan White Part B Service Utilization by Service Type, 2018

	No. of clients receiving service	No. of visits per category	Avg. no. of visits per client
Medical Care	7287	25035	3
Oral/Dental Care	1531	3508	2
Mental Health	1406	3772	3
Substance Abuse	1854	2284	1
Medical Case Management	8942	118021	13

Of those services utilized most by clients (visits/clients), medical case management services were among the highest (13 visits per clients), followed by medical care (three visits per client), mental health services (three visits per client), dental care (two visits per client), and substance abuse (one visit per client).

Additional services obtained by clients in 2018 included health education/risk reduction, case management (non-medical), housing services, medical transportation, food bank/home delivered meals, referral for health care and supportive services, and psychological support services.

AIDS Drug Assistance Program (ADAP)

The South Carolina AIDS Drug Assistance Program (S.C. ADAP) operates under the Ryan White HIV/AIDS Treatment Modernization Act to provide access to medications that treat HIV disease and to prevent the serious deterioration of health arising from HIV disease in eligible individuals. The S.C. ADAP provides medication assistance via the following service tiers: 1) Direct Dispensing to provide medications via mail-order through a contracted pharmacy; 2) Insurance Assistance to reimburse costs for private insurance premiums, copayments, and deductibles; and 3) Medicare Assistance to provide support for Medicare Part D copayment and deductible costs. S.C. ADAP enrollment and services are centrally managed by the S.C. Department of Health and Environmental Control.

Currently there are 115 drugs on the approved S.C. ADAP Formulary including 50 HIV antiretroviral drugs. In the past, once an antiretroviral medication received FDA approval, it was automatically added to the S.C. ADAP formulary. With the new development of extremely expensive therapies, such drugs are added as appropriate, after a thorough medical and fiscal review and in compliance with ADAP performance measures. Fuzeon, Selzentry, and Vitekta currently require prior authorization for approval. As of April 1, 2014, prior authorization is not required for abacavir-containing medications or ribavirin. There are no restrictions or caps on the number of antiretroviral medications per client.

Eligibility for S.C. ADAP includes verified HIV-positive status, South Carolina residency, and an income criteria requirement measured according to the Federal Poverty Guidelines (FPL). Eligibility for the ADAP direct dispensing service tier and for the ADAP insurance assistance service tier is 550 percent of FPL. Eligibility for the Medicare Assistance service tier is also 550 percent of FPL and applies for individuals who do not qualify for the Medicare Part D Full Low-income Subsidy (FLIS). Expenditures are carefully monitored, and projections are reviewed monthly.

Figure 4.03 lists the characteristics of clients enrolled in ADAP during 2018. Clients served through ADAP have a similar distribution to that of PLWHA in South Carolina. The majority of the clients are non-Hispanic African American (70 percent), male (74 percent) and age 45 and over (51 percent).

Figure 4.03: Characteristics of ADAP clients compared to S.C. persons living with HIV/AIDS in 2018

	ADAP Clients, N=5,565	Persons Living with HIV/AIDS, N=20,166
Race/Ethnicity		
White, not-Hispanic	22%	25%
Black, not-Hispanic	70%	68%
Hispanic	6%	5%
Sex		
Male	74%	71%
Female	25%	29%
Transgender	1%	N/A
Age Group		
< 13	<1%	--
13-24	4%	--
25-44	45%	--
45-64	46%	--
65+	5%	--

Figure 4.04: 2018 ADAP Patient Profile Compared to Persons Living with HIV/AIDS

	S.C. HIV/AIDS Prevalence N=20,166	Direct Dispensing N=3,051	Insurance Program N=2,831	Medicare Part D Assistance N=317
Race/Ethnicity				
White, not-Hispanic	25%	16%	26%	51%
Black, not-Hispanic	68%	73%	70%	45%
Hispanic	5%	10%	2%	2%
Sex				
Male	71%	76%	73%	77%
Female	29%	23%	26%	23%

Figure 4.04 shows a similar list of characteristics by Service Type. Men comprise the largest proportion across all three service types. ADAP's Direct Dispensing served the largest number of clients and has a similar distribution to that of PLWHA in South Carolina. African-Americans also comprise the largest proportion within the Insurance Program and Medicare Part D Assistance.

Figure 4.05 shows a breakdown of SC ADAP clients who received each of three types of services that support access to medications and the average number of services per client. The majority of SC ADAP enrollees received prescriptions, via mail order for uninsured clients and at retail pharmacies with insurance copayment/deductible assistance from SC ADAP. The SC ADAP paid health insurance premiums for enrollees with access to private insurance and supported out-of-pocket costs for enrollees with Medicare Part D coverage.

Figure 4.05: South Carolina ADAP Service Type, 2018

	Number of clients receiving service	Number of visits per category	Average number of Services per client
Prescription Refills: (Direct Dispensing & Insurance Copayments/Deductibles)	5246	79683	15
Premiums: Health Insurance Premiums (including Pre-existing Condition Plans)	1510	13801	9
Medicare Copayments/Deductibles*	329	6732	20

*Insurance Copayments and Deductibles are associated with specific prescriptions and are reported as Refills/Medications.

HIV Continuum of Care

Methodology

The HIV Continuum of Care is a metrics developed by the Center for Disease Control and Prevention (CDC) as a way to monitor and report on the objectives outlined in the National HIV/AIDS Strategy for the United States, specifically: linked to care, received any care, retained in care, and viral suppression. Although the CDC developed the Continuum of Care metrics, each state has the discretion to modify the variables used in the metrics to meet a specific need. For the South Carolina Epidemiologic Profile, the following methodology was used.

- o All persons with reported diagnoses of HIV infection (regardless of stage of disease) through year-end 2018, who were alive at year-end 2018
- o All ages
- o Last known state of residence is South Carolina
- o CD4 and viral load tests (used as a surrogate for evidence of HIV care)
- o 'Linked to care' is defined as "persons with a CD4 or viral load test within 3 months after HIV diagnosis, among persons newly diagnosed with HIV infection in 2018"
- o 'Received Any Care' is defined as "persons with ≥1 CD4 or viral load test result during 2018"
- o 'Retention in Continuous Care' is defined as "persons who had ≥2 CD4 or viral load test results at least 3 months apart during 2018"
- o 'Viral Suppression' is defined as "persons who had a Viral Load <=200 copies/mL at most recent test during 2018"

NOTE: *Because the HIV Continuum of Care in this Epidemiologic Profile uses a different methodology from the CDC methodology, this Continuum of Care should **not** be used for comparison with national or other states' Continuum of Care.*

HIV Continuum of Care – Diagnosed Prevalence

The National HIV/AIDS Strategy objectives of received any care, retained in care, and viral suppression in this epidemiologic profile use Diagnosed Prevalence (all people living with diagnosed HIV/AIDS). The objective Linked to Care uses incidence data (only people newly diagnosed with HIV/AIDS in 2018) and is discussed later.

Figure 5.01 shows the number and percentage of PLWHA engaged in each step of the HIV continuum of care. Of the 20,166 PLWHA, 69 percent had at least one CD4 or viral load test during 2018; 53 percent of PLWHA had two or more CD4 or viral load tests at least three months apart during 2018; and 59 percent of PLWHA had a Viral Load <=200 copies/mL at most recent test during 2018.

Figure 5.01 Number and percentage of persons engaged in each step of the HIV continuum of care, 2018
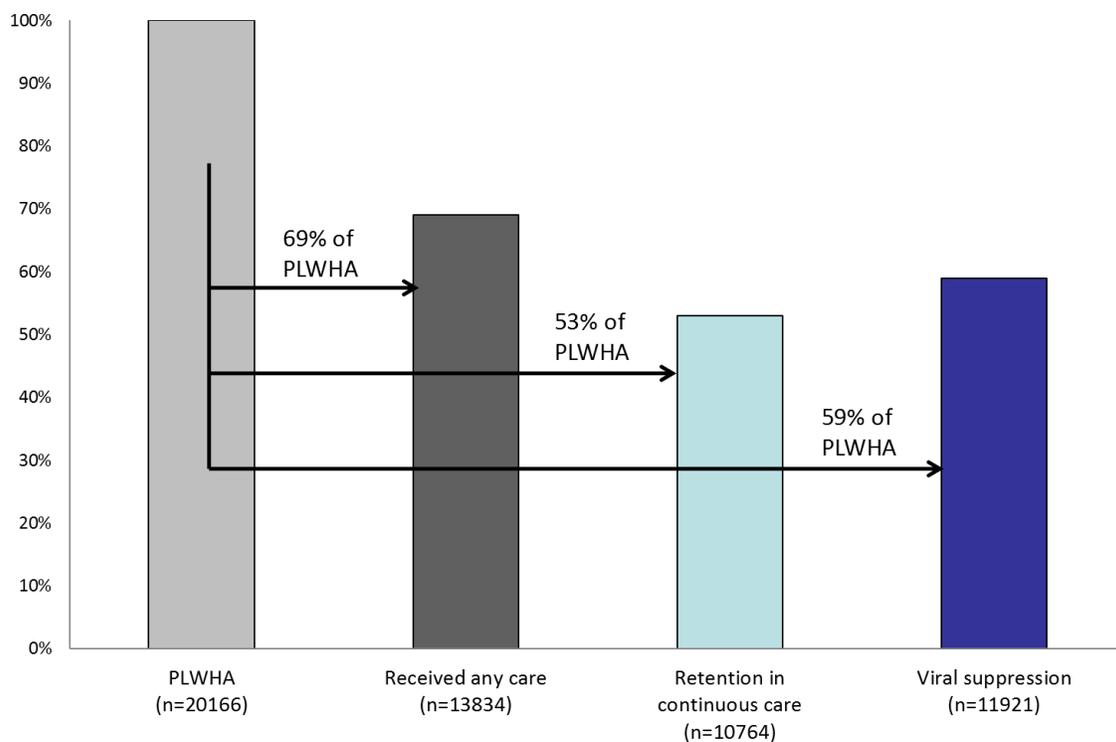
The following figures show the HIV continuum of care stratified by stage of HIV diagnosis, gender, race/ethnicity, age group, and transmission category (risk).

Figure 5.02: Percentage of PLWHA engaged in each step of the HIV continuum of care, by diagnosis (2018)
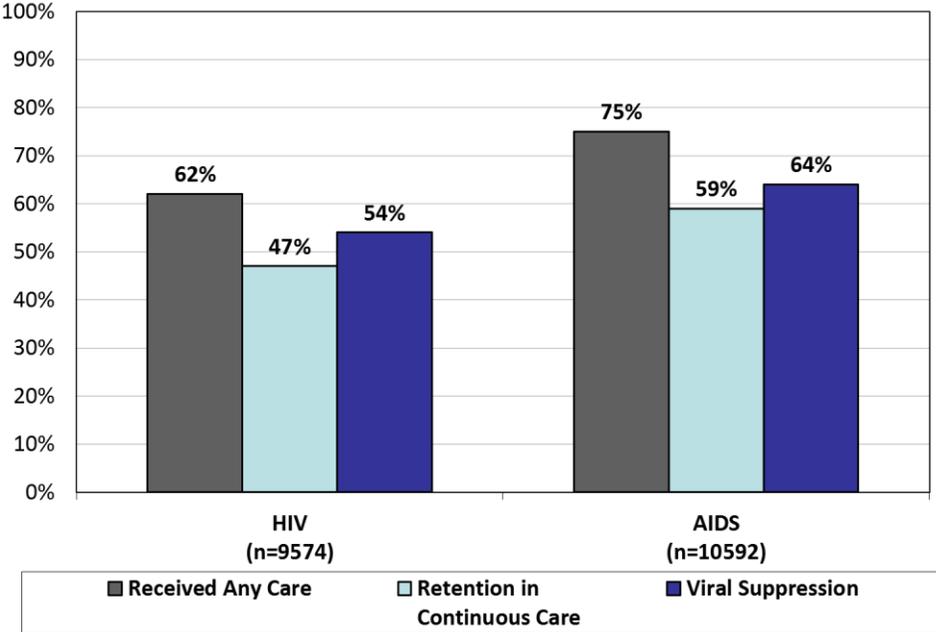
Figure 5.03: Percentage of PLWHA engaged in each step of the HIV continuum of care, by gender (2018)
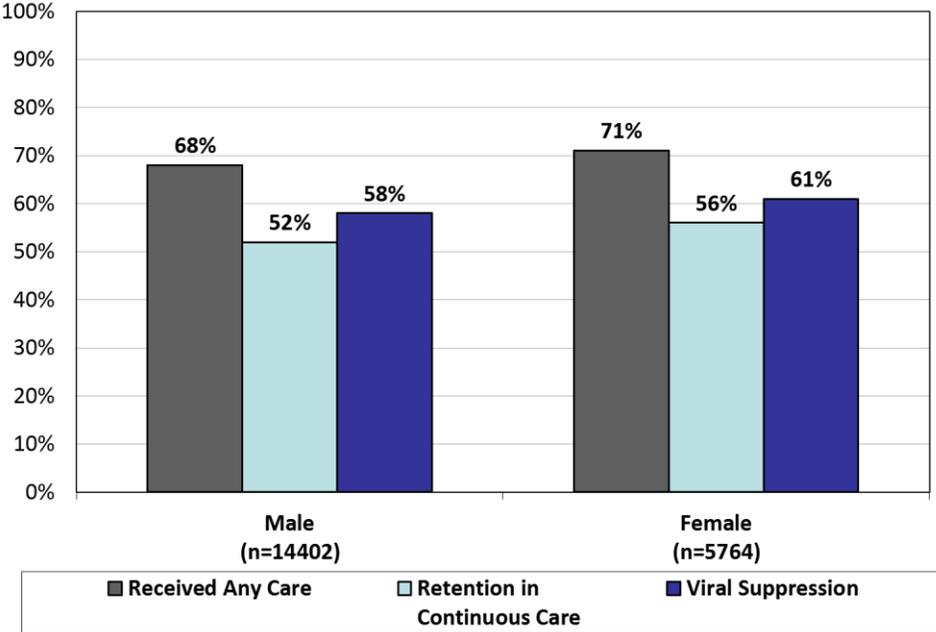
Figure 5.04: Percentage of PLWHA engaged in each step of the HIV continuum of care, by race/ethnicity (2018)
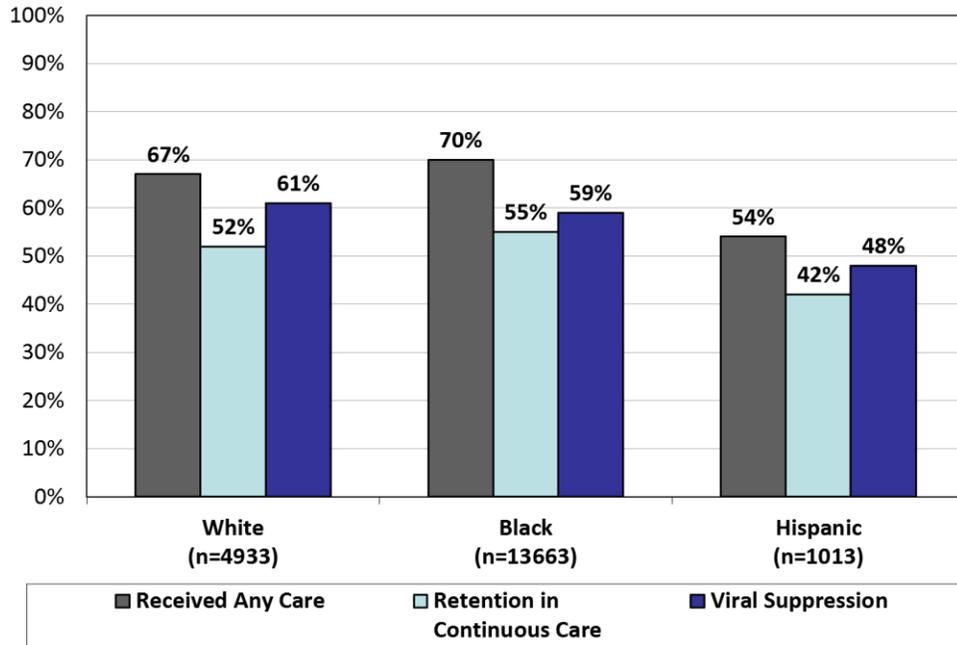
**Figure 5.05: Percentage of PLWHA engaged in each step of the HIV continuum of care, by age group (2018)**
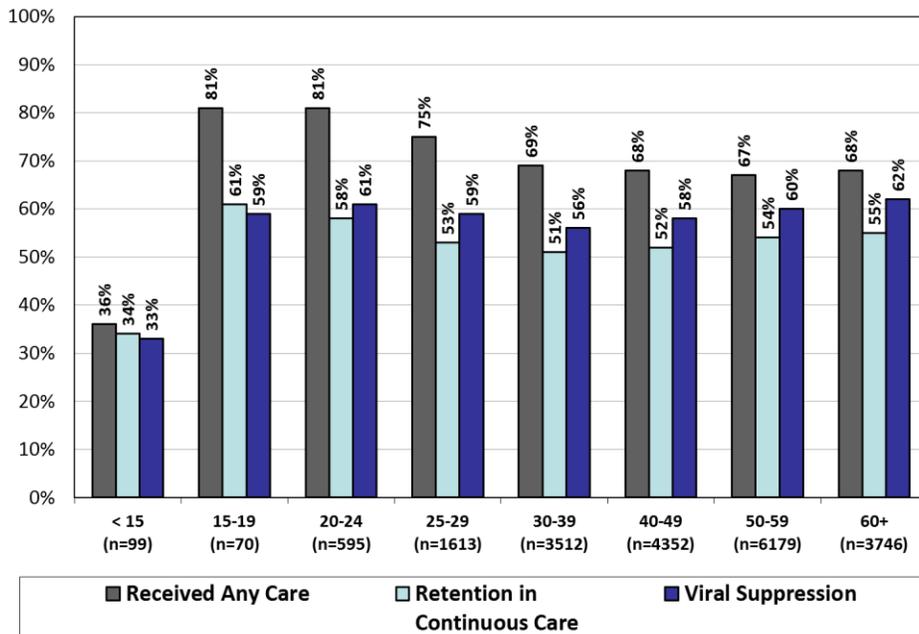
Figure 5.06: Percentage of PLWHA engaged in each step of the HIV continuum of care, by reported risk (2018)
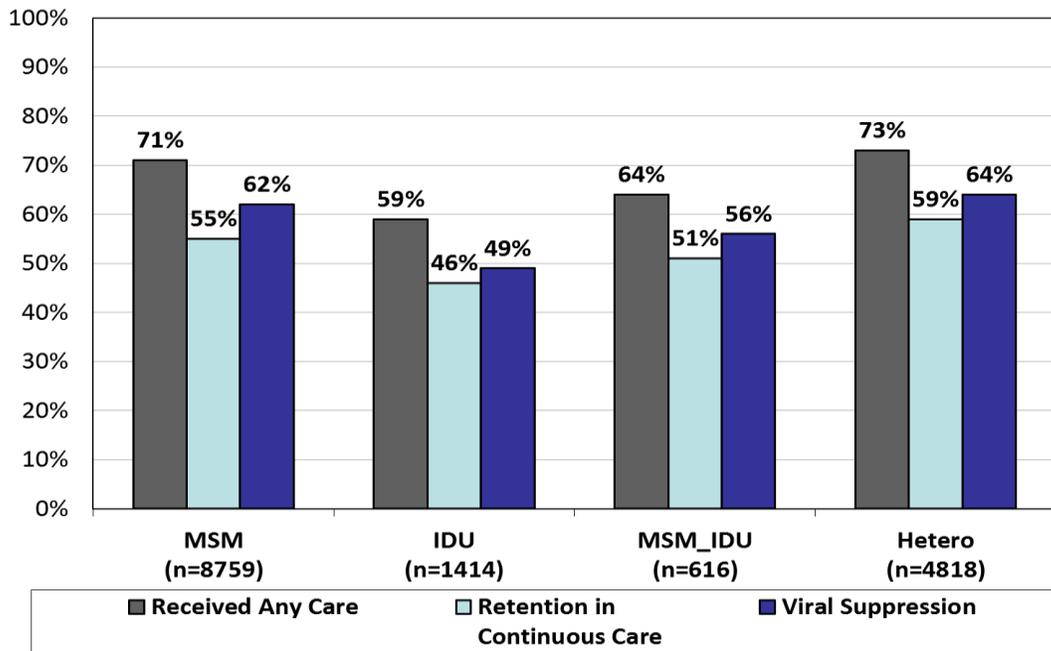
HIV Continuum of Care – Linked to Care

To optimize HIV outcomes, prompt linkage to HIV medical care is necessary, ideally ensuring that persons enter HIV medical care very soon after initial HIV diagnosis. A person is considered linked to HIV medical care if there is at least one CD4 or viral load test result within three months of the initial diagnosis. Figure 5.07 shows the percentage of people diagnosed in 2018 who were linked to care within 3, 6, and 12 months of diagnosis.

Figure 5.07: Percentage of persons linked to care within 3, 6, and 12 months after HIV diagnosis among total number of persons diagnosed with HIV infection in 2018
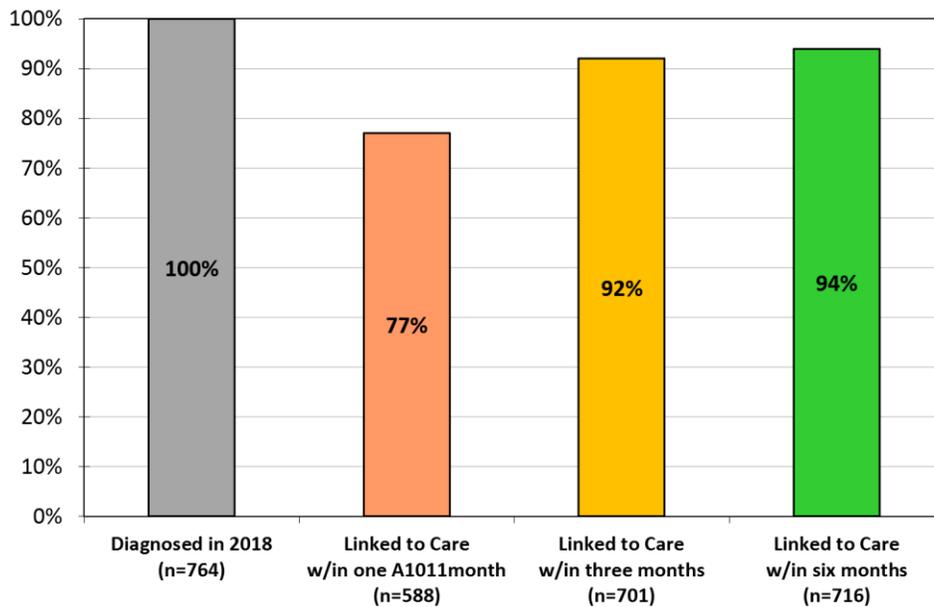
In July 2015, the new National HIV/AIDS Strategy 2020 changed the 'linked to care' objective from linkage within 90 days to linkage within 30 days. This change generated much discussion because, within the first 30 days, there is no accurate way to distinguish between a lab test done as part of the diagnosis confirmation process and a lab test done at a follow-up medical visit.

Figure 5.08 shows a break-down of the timing between the date of diagnosis and the lab test used to determine if the person was linked to care within 90 days.

Of the 764 people linked to care within 90 days of diagnosis, 16 percent had a lab date the same as the date of diagnosis; 29 percent had a lab date between one and seven days of diagnosis; 39 percent had a lab date between eight and 30 days of diagnosis; 14 percent had a lab date between 31 and 60 days of diagnosis; and two percent had a lab date between 61 and 90 days of diagnosis.

Figure 5.08: Of Persons linked to care within 3 months of diagnosis: timing of test date relative to diagnosis date.
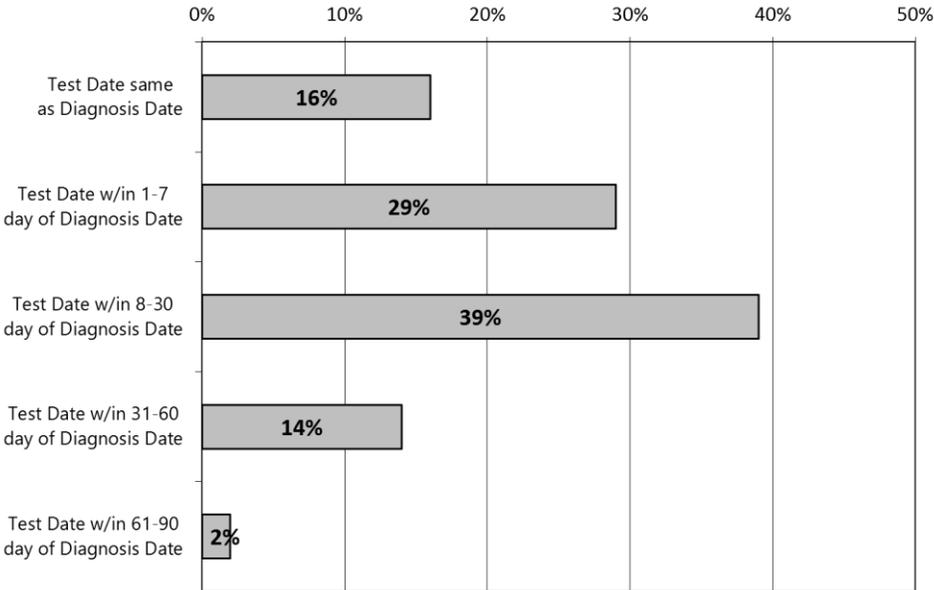
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