

Building a Healthier Mississippi from the Ground Up

*State Health Assessment
and Improvement Plan*

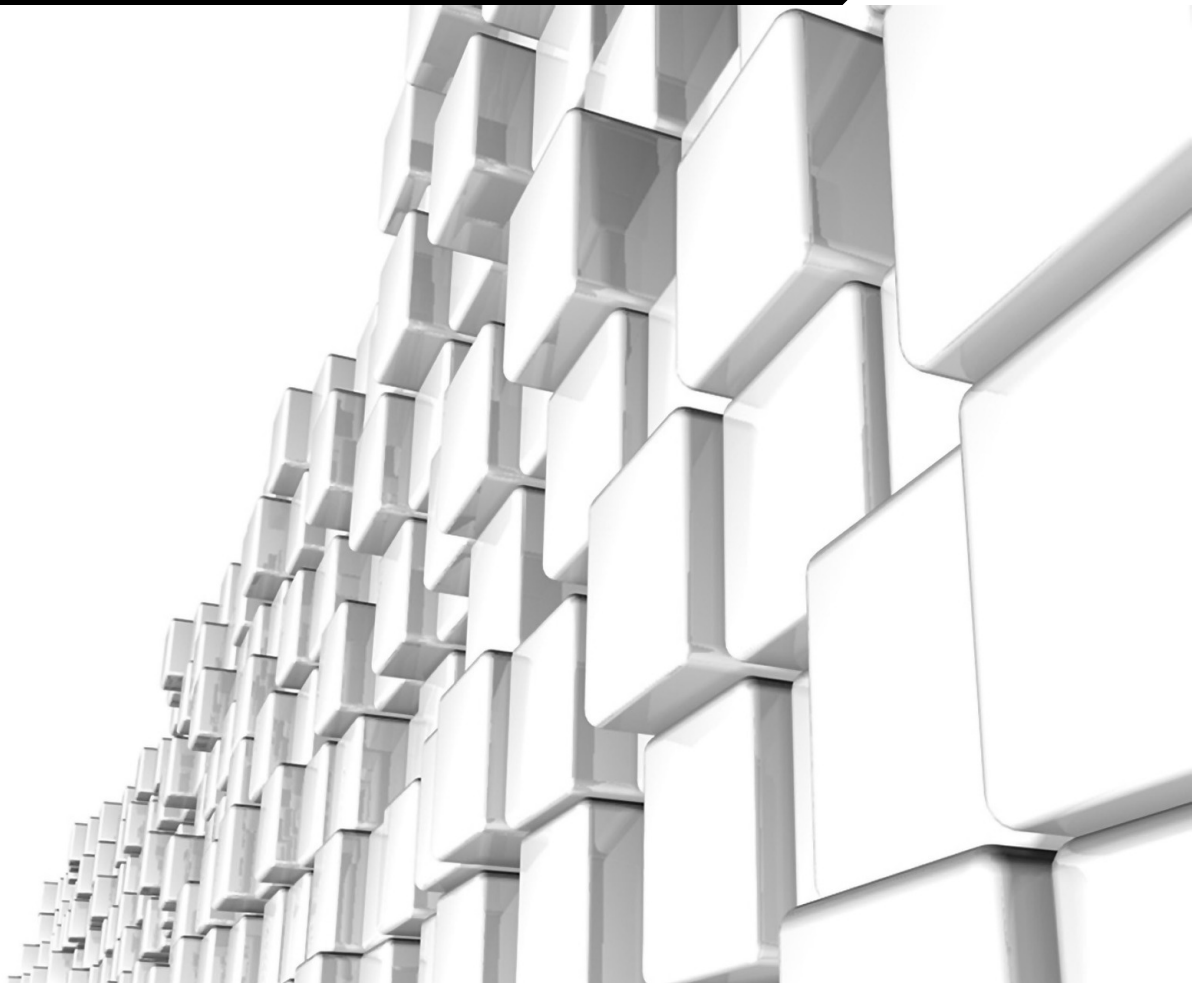


TABLE OF CONTENTS

<i>Mortality</i>	4
General Mortality	4
Heart Disease	5
Hypertension.....	7
Cancer	8
Stroke	10
COPD	11
Unintentional Injury	13
Motor Vehicle Accidents.....	14
Diabetes	16
Pneumonia and Influenza	17
Alzheimer’s Disease	19
Chronic Kidney Disease.....	20
Suicide.....	21
Infant Mortality	23
Fatal Occupational Injuries (Overall)	24
Homicide.....	25
<i>Chronic Disease</i>	26
Persons told they have Diabetes.....	26
Ever Diagnosed with Asthma	27
Overweight and Obesity.....	28
Cancer	29
Acute Binge Drinking	30
<i>Access to Care</i>	35
Health Care Coverage	35
Health Care Cost Limitations (Under-Insured).....	36
Adult Dental Visits.....	37
<i>Infectious Disease</i>	38
Chlamydia.....	38
Gonorrhea	39
HIV	40
Syphilis	41

Tuberculosis	42
<i>MCH Indicators</i>	<i>44</i>
Low Birth Weight.....	44
1 st Trimester Prenatal Care	44
Premature Birth.....	45
Teen Births (15-19).....	46
<i>Demographic and Social economic status (SES) Factors</i>	<i>47</i>
Education by Race.....	47
Age	48
<i>immunizations</i>	<i>49</i>
Vaccination Rates	49
Influenza.....	49
Pneumonia.....	50
<i>Self Rated Health</i>	<i>52</i>
Fruit Consumption.....	52
Vegetable Consumption.....	52
Physical Activity	53
Poor Mental Health Days	55
Poor Physical Health Days.....	55
Smoking Prevalence	56
Personal Health Rating	57
<i>References</i>	<i>59</i>

MORTALITY

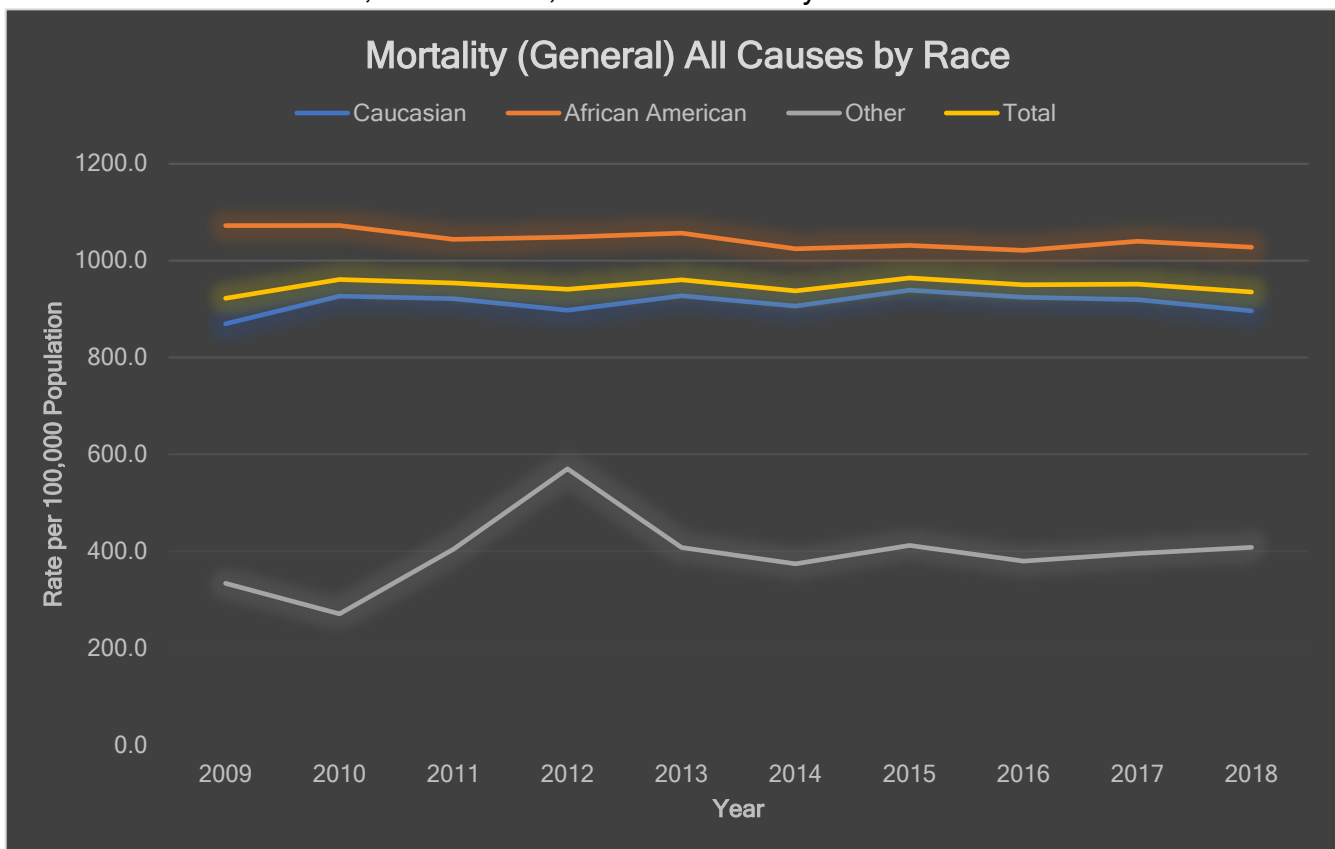
This section provides statistical evidence of mortality rates in Mississippi. Included are infant mortality and overall mortality, along with the leading causes of death. All are shown by race and gender.

General Mortality

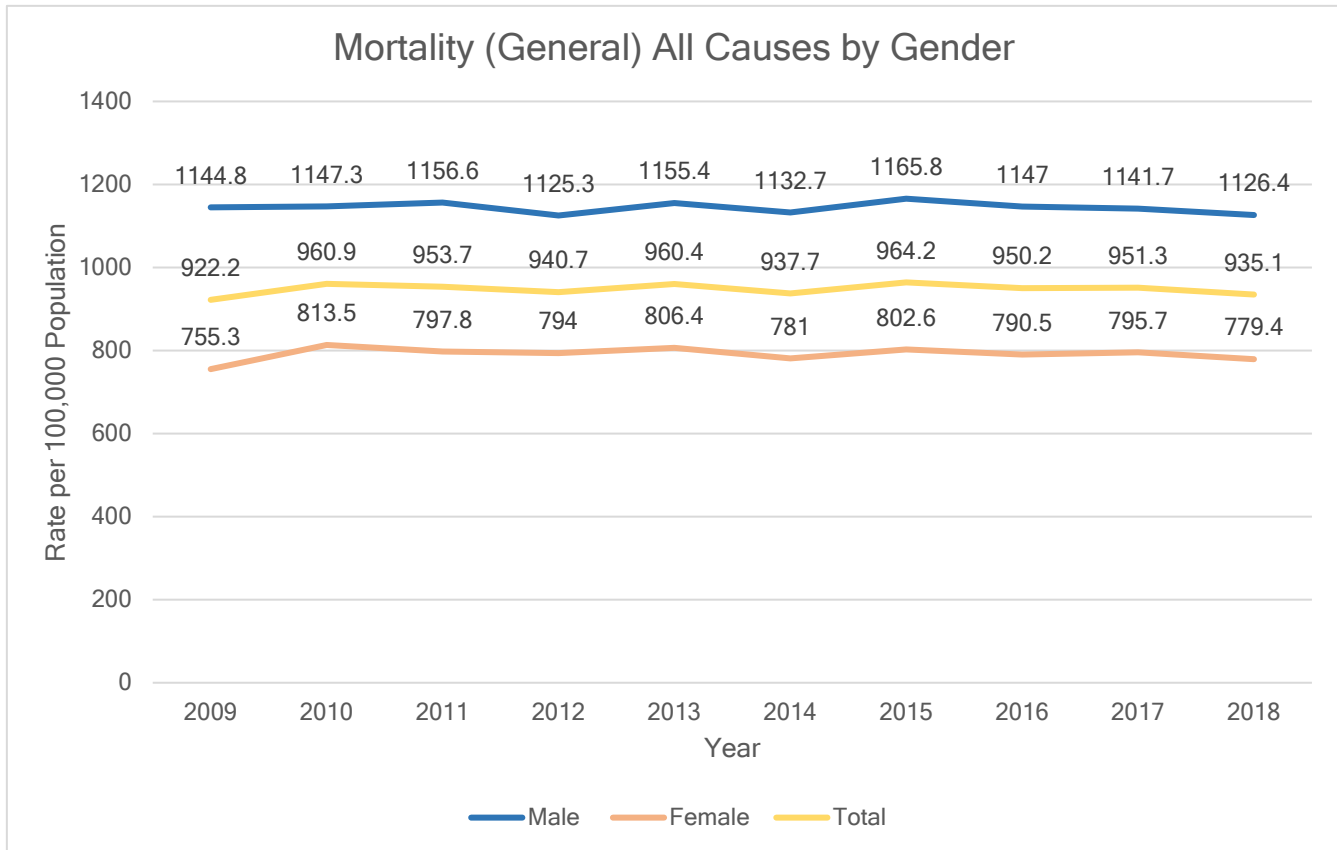
General mortality is the overall mortality rates for all deaths in Mississippi regardless of cause of death.

Key findings from the data show:

- The 2018 age-adjusted total mortality rate in Mississippi was 935.1/100,000 people. The overall mortality rate from 2009 (922.2/100,000 population) to 2018 (935.1/100,000 population) stayed relatively consistent.
- In 2018, African American deaths occurred at a rate of 1027.8/100,000 population. This was **92.7** higher than the total mortality rate.
- For all years, the mortality rate of all other races was significantly lower than the rate for African Americans, Caucasians, and total mortality.



- In 2018, the mortality rate for males (1126.4/100,000 population) was **347** higher than females (779.4/100,000 population) and **191.3** higher than mortality by all genders.
- The mortality rate for males was higher for every year between 2009 to 2018, compared to females.



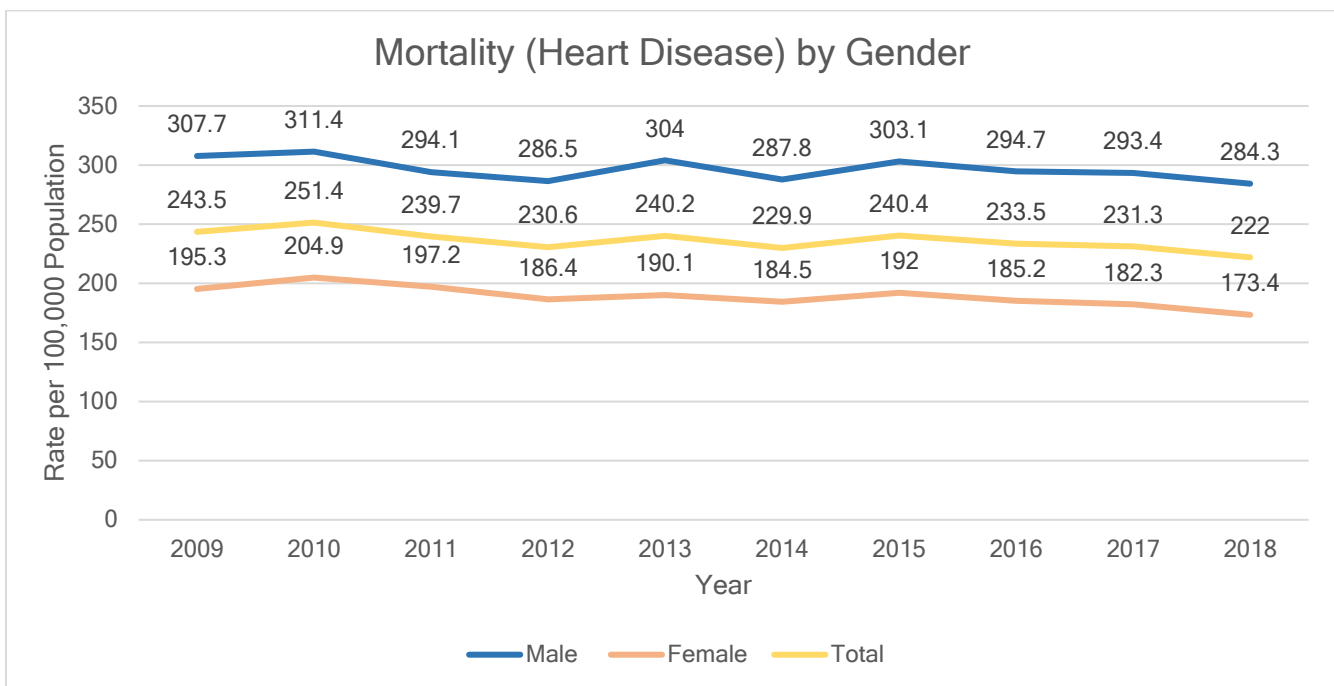
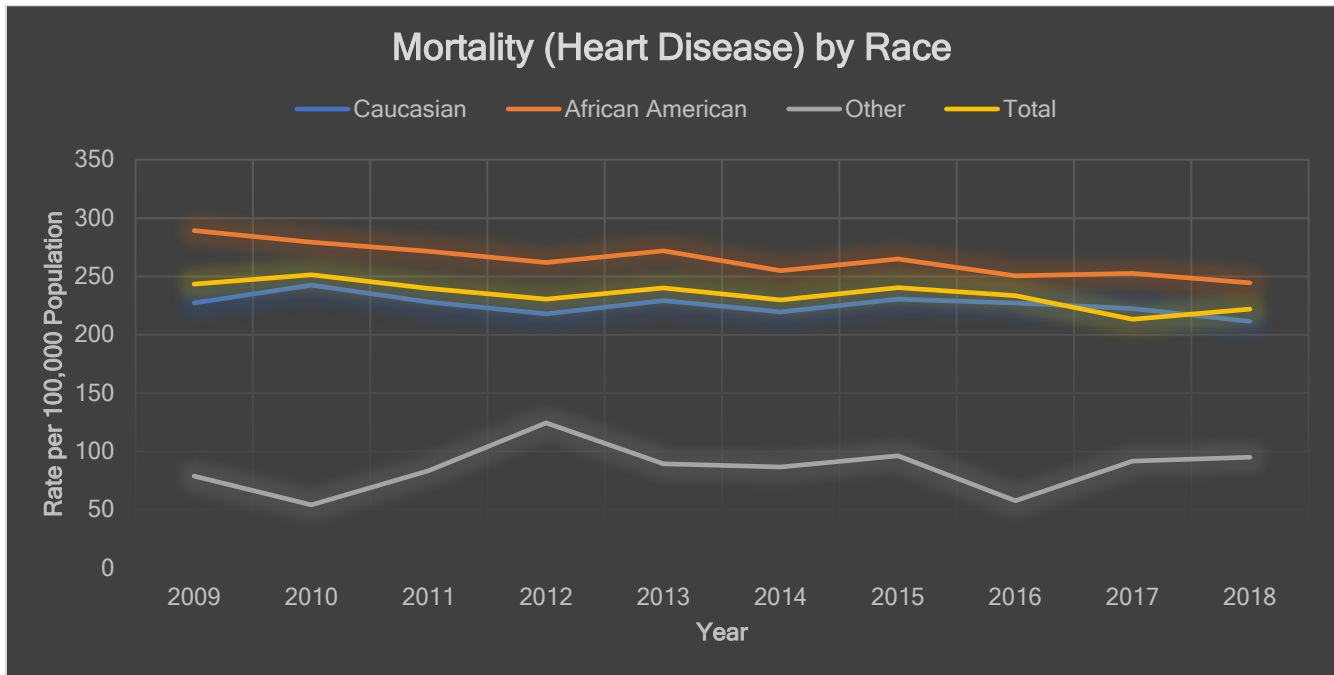
Heart Disease

Heart disease is a type of cardiovascular disease that includes various forms of diseases affecting the heart, as well as the blood vessels in the heart. The variety of diseases that are forms of heart disease includes, but are not limited to: hypertensive heart disease, pulmonary heart disease, and heart failure. The most common and preventable type of heart disease is coronary heart disease.

Key findings from the data show:

- The mortality rate for the State of Mississippi in 2018 was 222/100,000 population. This was a slight decrease from 2009, when it was 243.5/100,000 population.

- The mortality rate of 244.5 /100,000 population for heart disease in African Americans declined since 2009. However, this rate was still higher than that of Caucasians and total mortality, which were 211.5 and 222 /100,000, respectively.
- Males had a heart disease mortality rate (284.3/100,000 population) that was 110.9 higher than that of females (173.4/100,000 population).



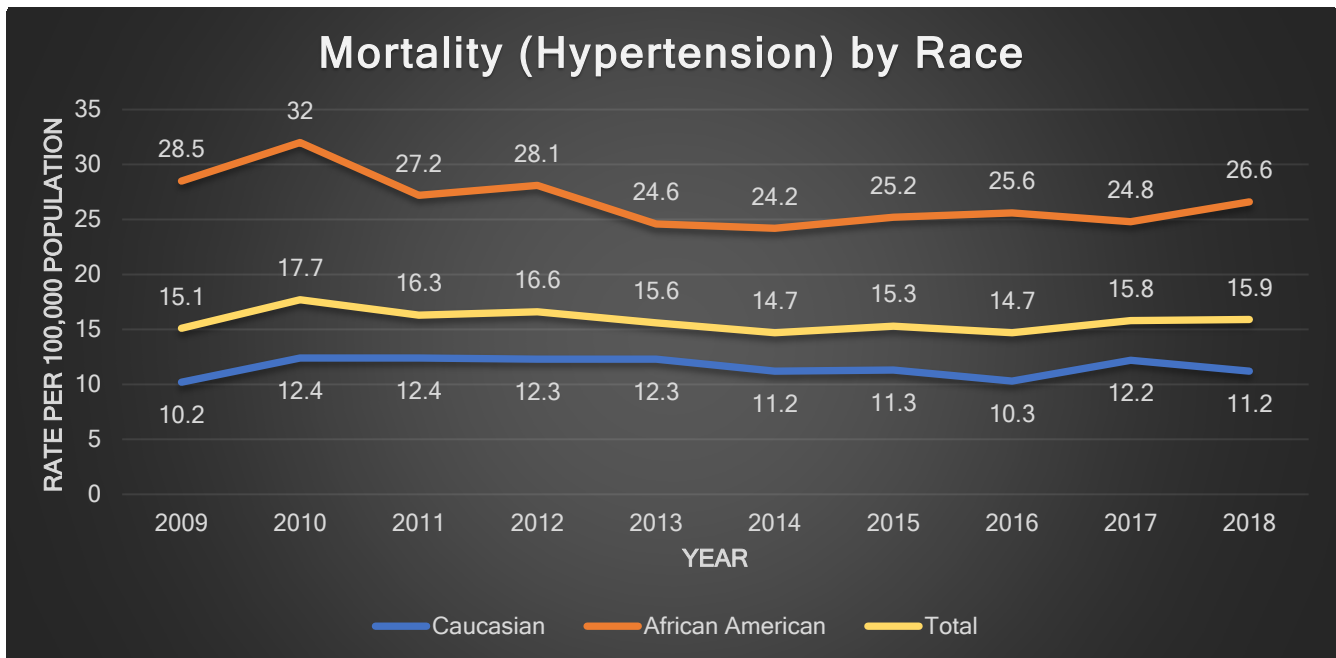
Hypertension

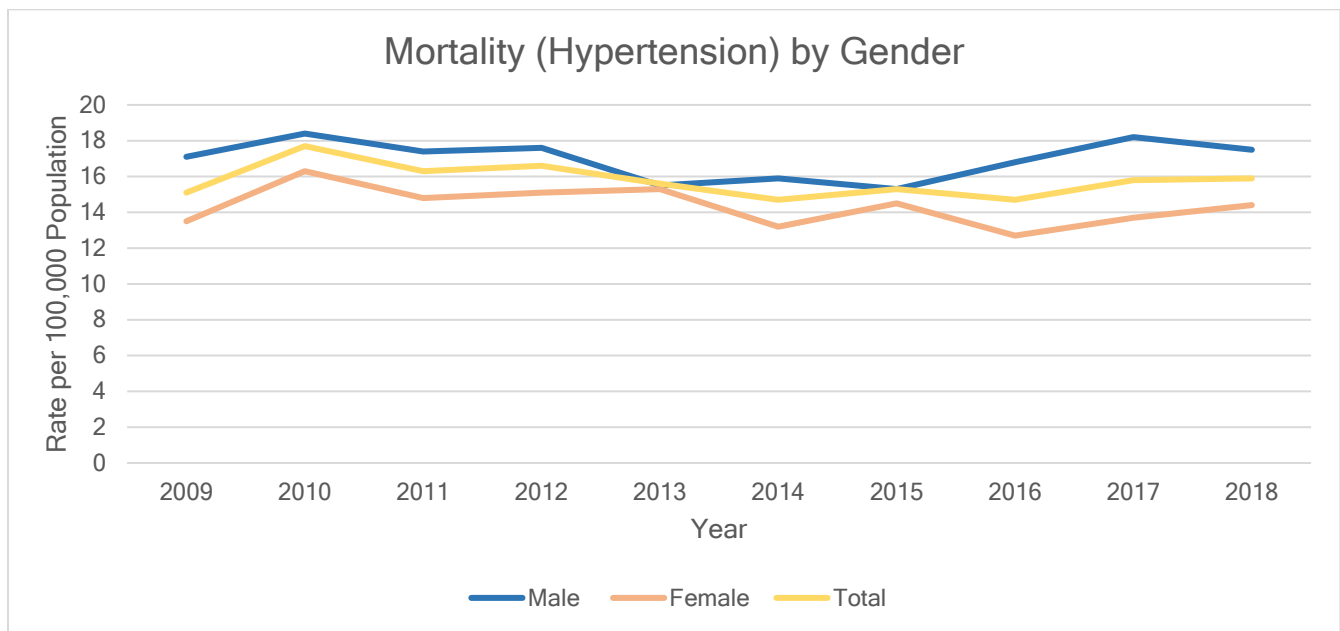
High blood pressure or hypertension increases the risk of heart disease and stroke.

Hypertension risk factors include obesity, drinking too much alcohol, smoking, and family history.

Key findings from the data show:

- African Americans consistently had higher rates of mortality due to hypertension than any other race (26.6/100,000 population in 2018).
- From 2014-2018, there was a slight upward trend in hypertension rates for African Americans.
- Males showed higher overall rates of hypertension than females.
- In 2018, males had a rate of 17.5/100,000 population for hypertension while females had a rate of 14.4/100,000 population.



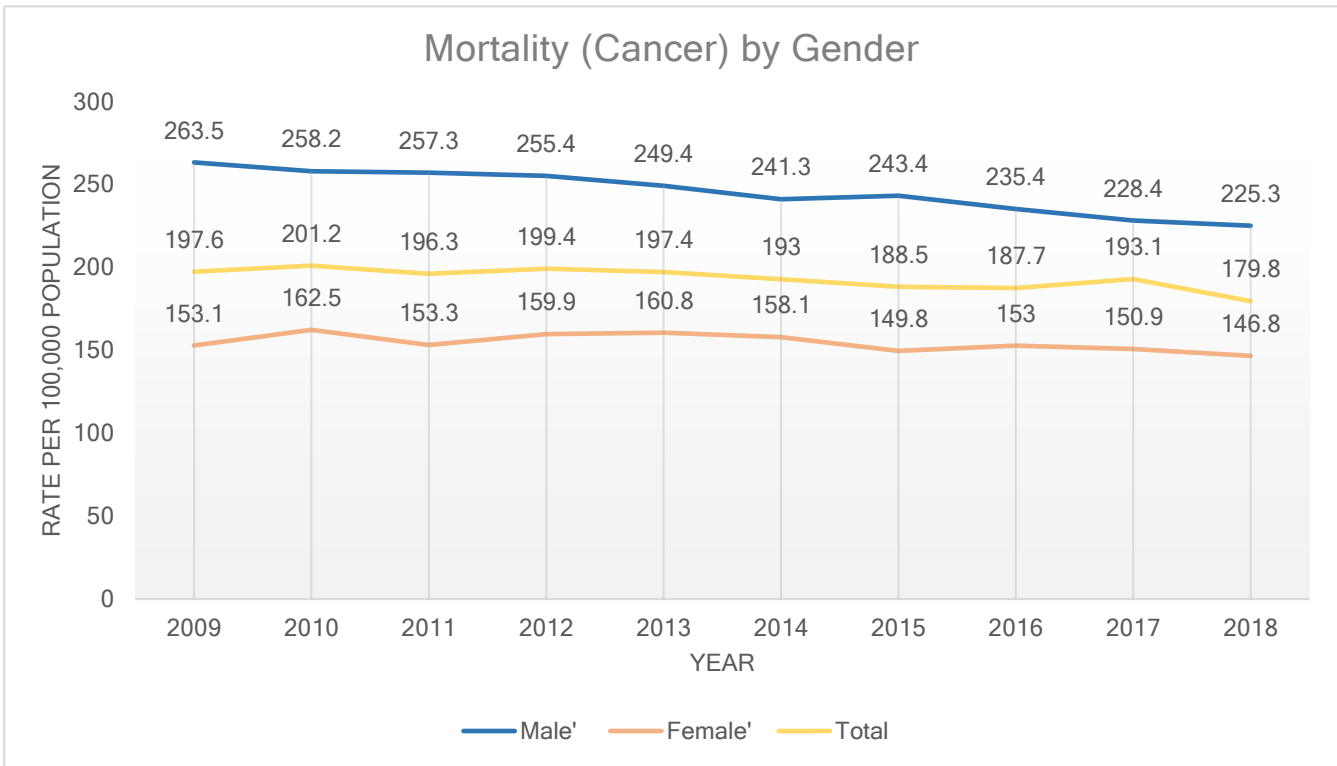
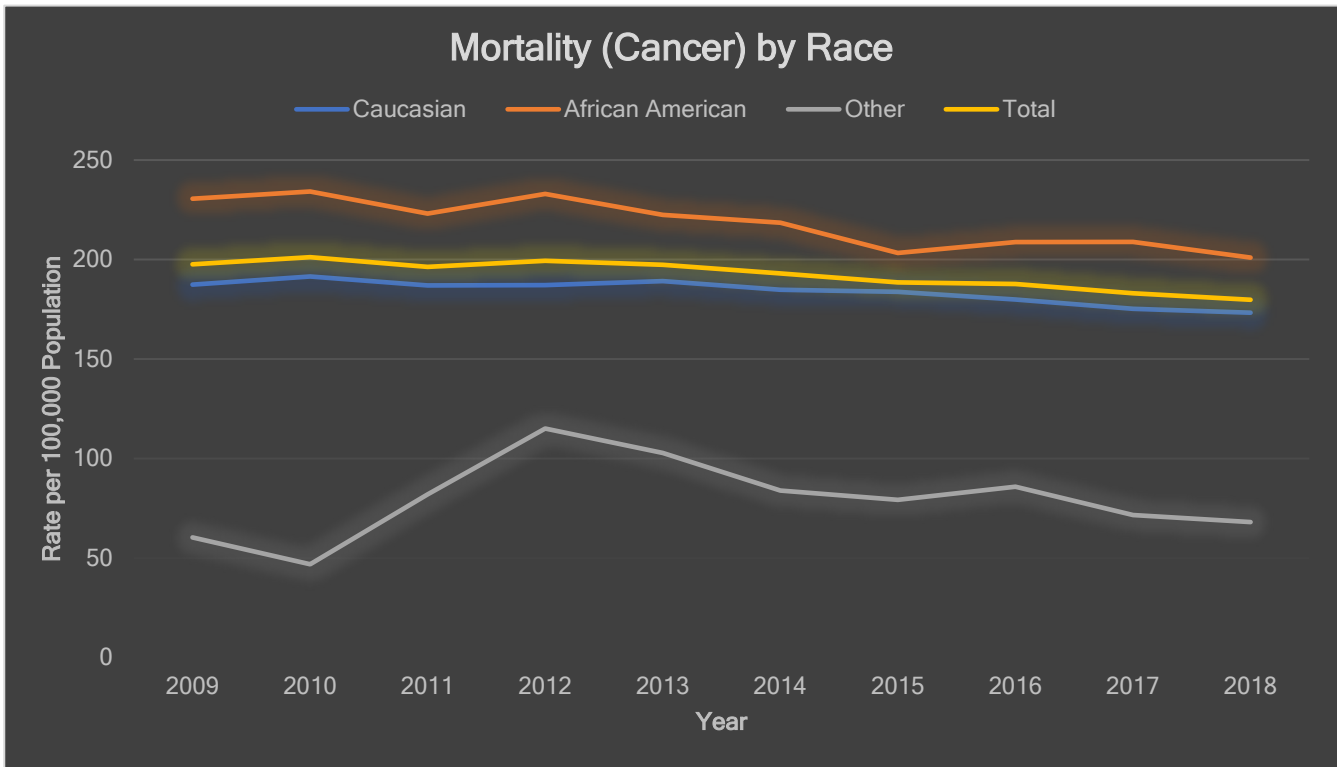


Cancer

Malignant neoplasms, commonly known as cancer, is a term used for diseases in which abnormal cells divide without control and invade other tissues. Cancer is not just one disease but many diseases. Screening for cervical, colorectal, and breast cancers, some of the most common types of cancers, helps find these diseases at an early, often highly treatable stage.

Key findings from the data show:

- The 2018 cancer mortality rate for the State of Mississippi was 179.8/100,000 population. This was a decline for the years 2009-2018.
- The rate of cancer mortality for African Americans, Caucasians, and the total have all decreased since 2009. These rates were 209, 173.3, and 179.8/ 100,000 population, respectively.
- The cancer mortality rate for other races declined in 2018 (68.1/100,000 population) after a spike in 2012 (115.1/100,000 population).
- The cancer mortality rate declined for males since 2009 (263.5/100,000 population) to 2018 (225.3/100,000 population).

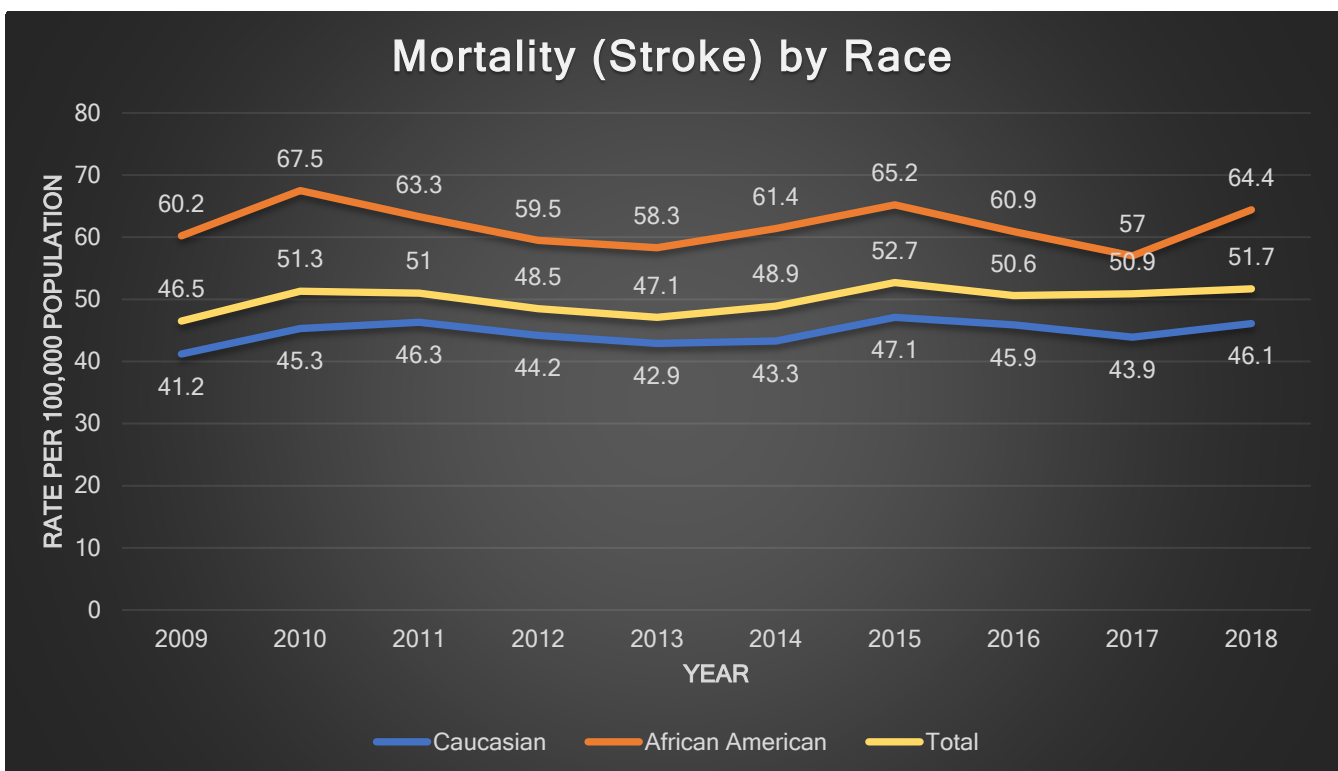


Stroke

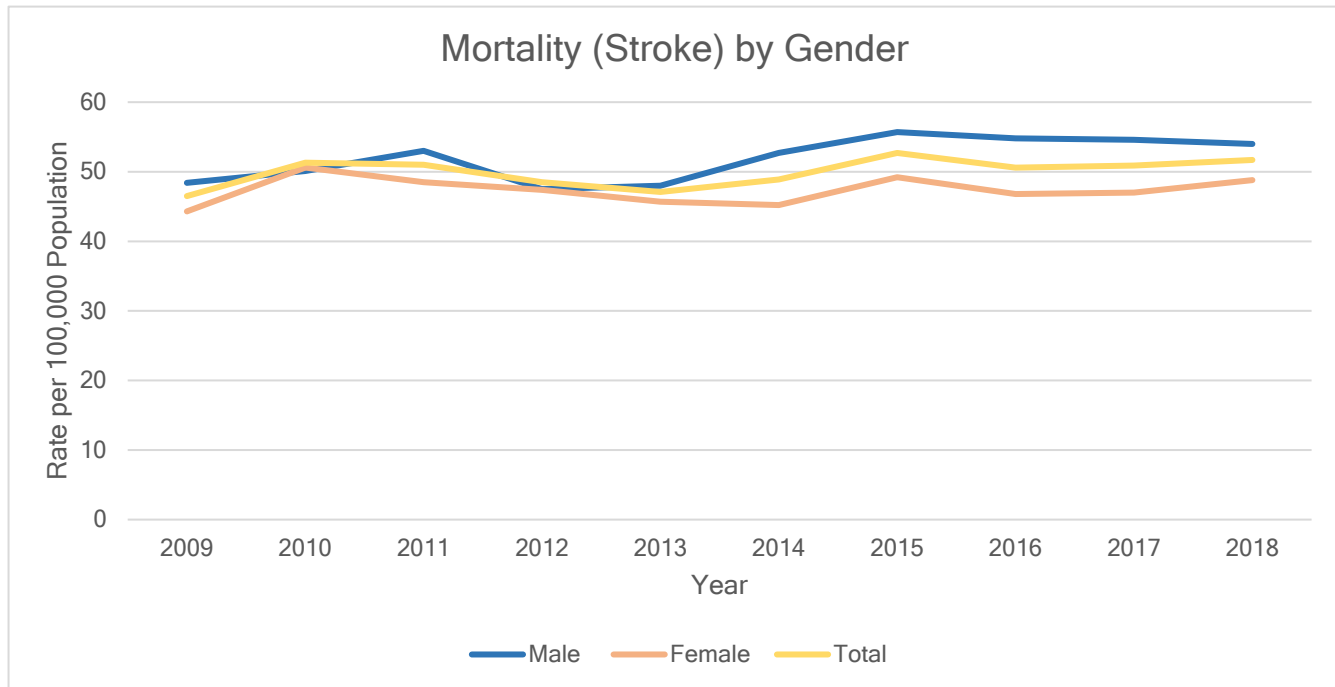
Stroke results from obstruction of a blood vessel in the neck or brain. This either deprives the brain of oxygen or leads to a ruptured blood vessel, resulting in tissue hemorrhage. Stroke is usually manifested as sudden onset of paralysis, weakness, or numbness on one side of the body, loss of speech or difficulty talking, partial loss of the field of vision, and dizziness or loss of consciousness.

Key findings from the data show:

- The 2018 stroke mortality rate for Mississippi was 51.7/100,000 population. This was an increase for the time period 2009-2018.
- The stroke mortality rate for African Americans was higher than that of Caucasians and total rate for each year in the 2009-2018 time-range. In 2018, the stroke mortality rate was 64.4/100,000 population.
- The stroke mortality rate for Caucasians increased from 2009 (41.2/100,000 population) to 2018 (46.1/100,000 population).



- The male and female stroke mortality rate increased between 2009 (48.4 and 44.3/100,000 population) and 2018 (54 and 48.8/100,000 population), respectively.
- The lowest stroke mortality rate for both males and females was seen in 2009. For males this was 48.4/100,000 population and females 44.3/100,000 population.



COPD

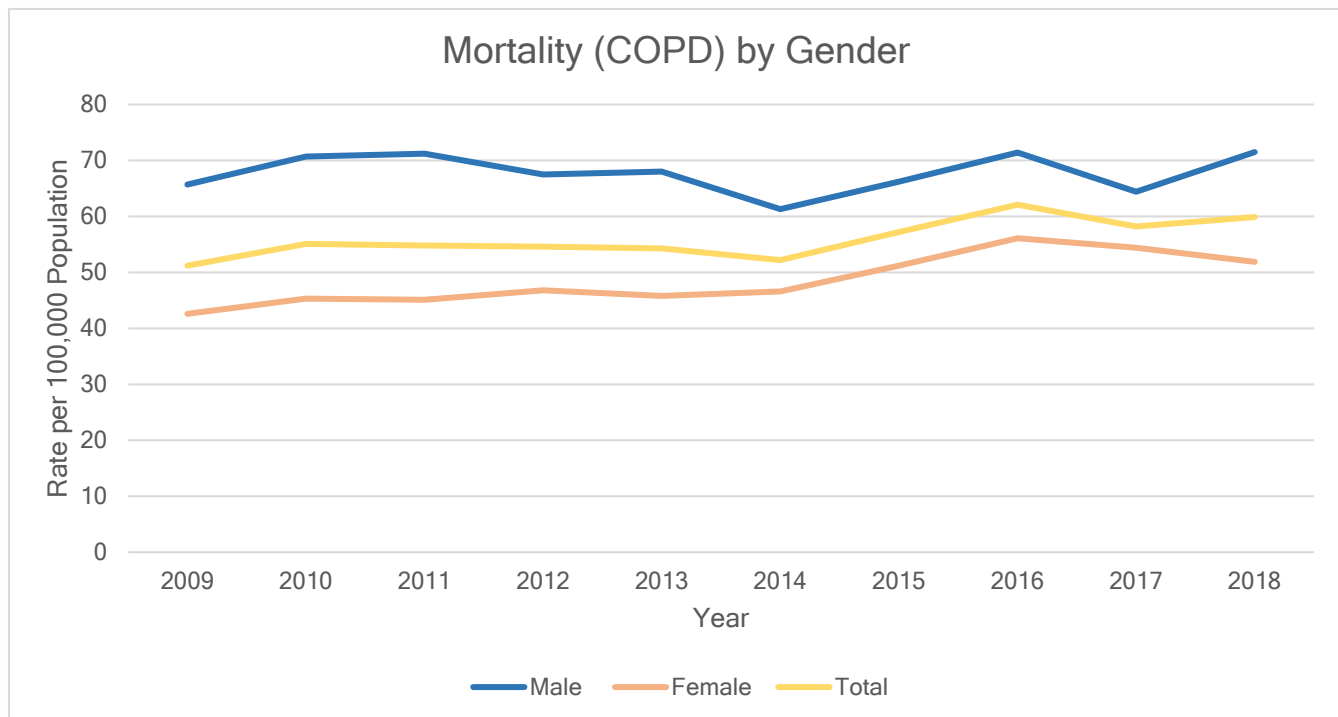
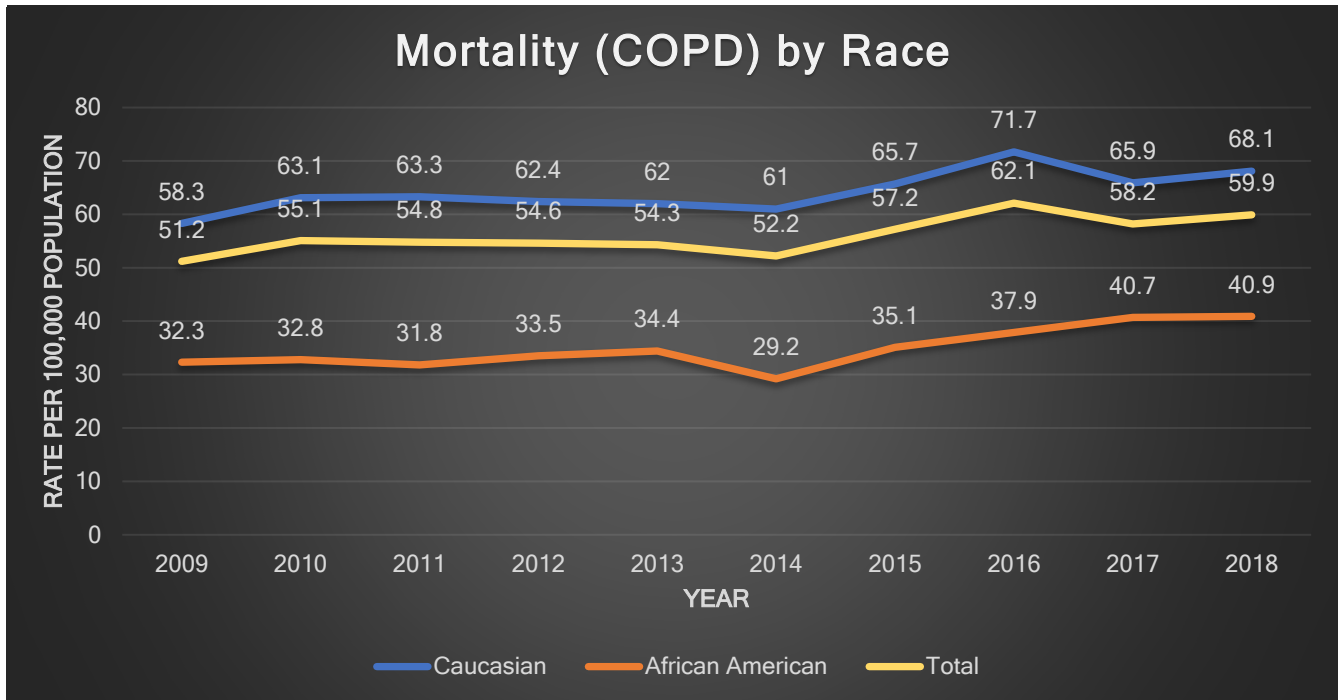
COPD refers to a group of lung diseases that make it hard to breathe over time. Emphysema and chronic bronchitis are the most common COPD conditions, and frequently coexist.

Key findings from the data show:

- The COPD age-adjusted mortality rate for Mississippi increased from 2009 (51.2/100,000 population) to 2018 (59.9/100,000 population).
- The COPD mortality rate increased for both African Americans and Caucasians from 2009 (32.2 and 58.3/100,000 population) to 2018 (40.9 and 68.1/100,000 population), respectively.
- Caucasians had the highest mortality rate for COPD in all years between 2009-2018.
- The COPD mortality rate increased for both males and females from 2009 to 2018. For males, this rate was 65.7/100,000 population in 2009 and 71.5/100,000 population in

2018. For females, in 2009 the rate was 42.6/100,000 population to 51.9/100,000 population in 2018.

- There was an increase in both male and female deaths attributed to COPD from 2014 to 2016. For males this increase was an increase of 10.1 and females this was 9.5/100,000 population.

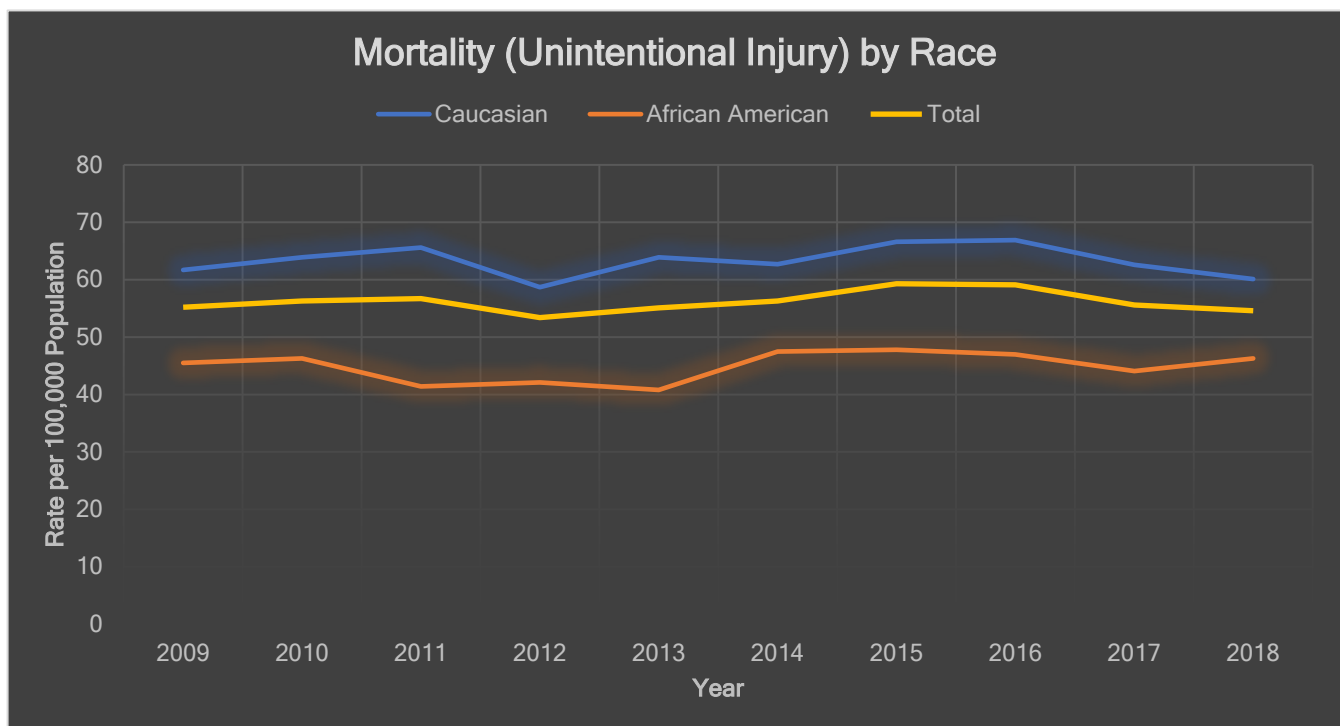


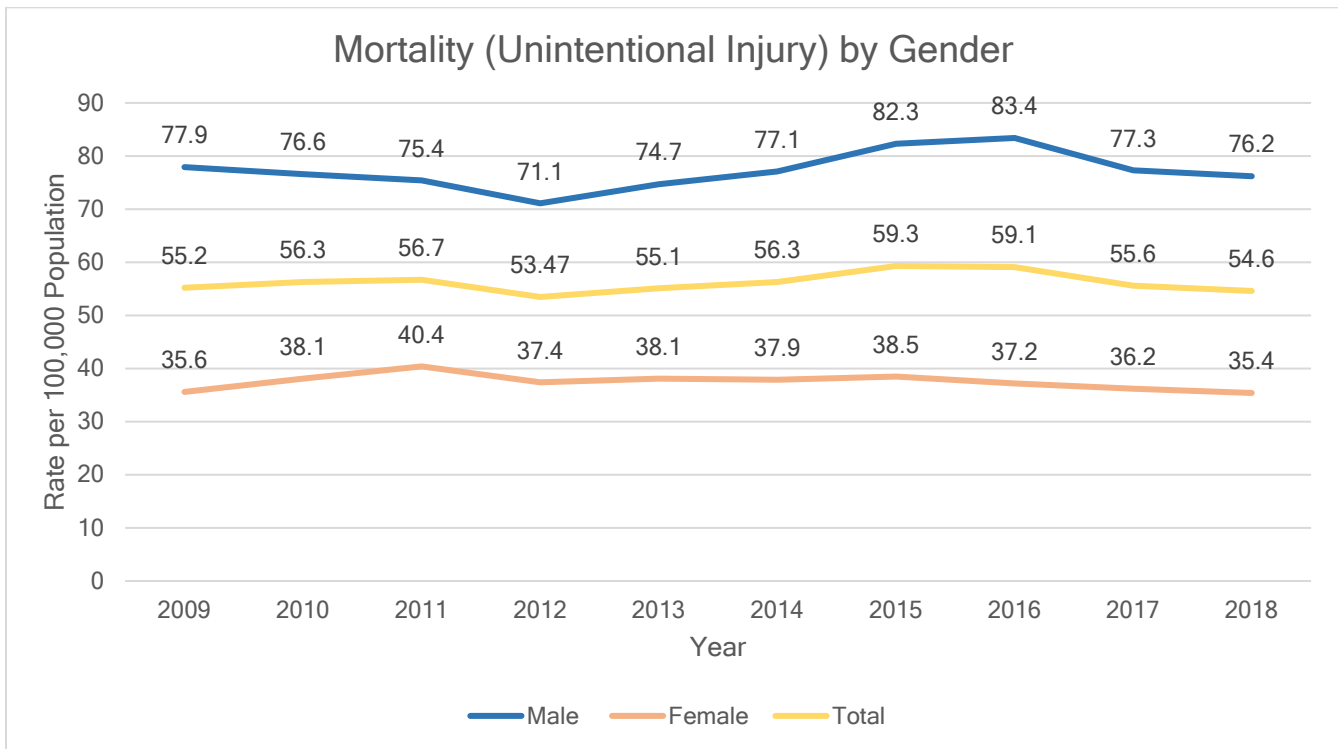
Unintentional Injury

Unintentional injuries are events that are not deliberate, unplanned, or done with purpose. The most common unintentional injuries result from motor vehicle accidents, falls, fires, drowning, poisonings, and oxygen deprivation.

Key findings from the data show:

- The unintentional injury mortality rate for Mississippi remained relatively consistent from 2009 to 2018. In 2018, the rate was 54.6/100,000 population.
- The mortality rate for unintentional injury was consistently higher for Caucasians compared to African Americans. These rates were 60.1 and 46.3/100,000 population, respectively.
- The unintentional injury mortality rate for males and females remained consistent from 2009-2018. Males had a higher unintentional mortality rate consistently, with a rate of 76.2/100,000 population. This rate for females was 35.4/100,000 population.





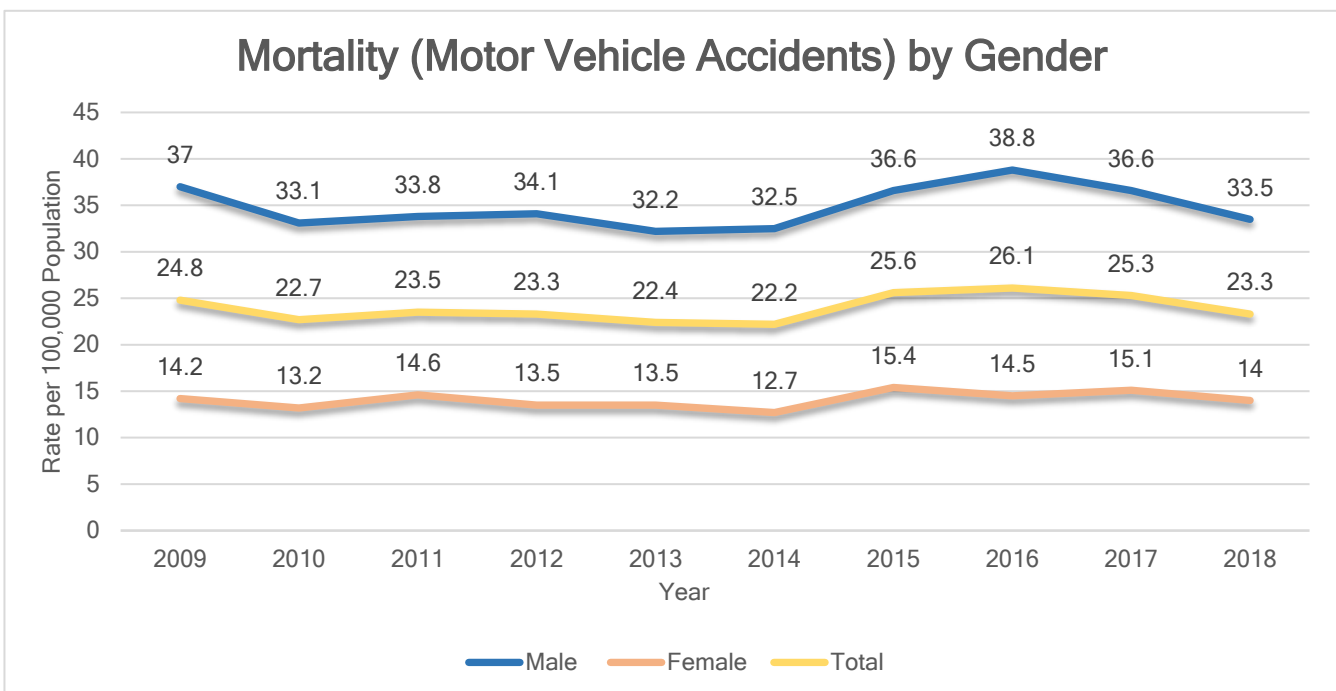
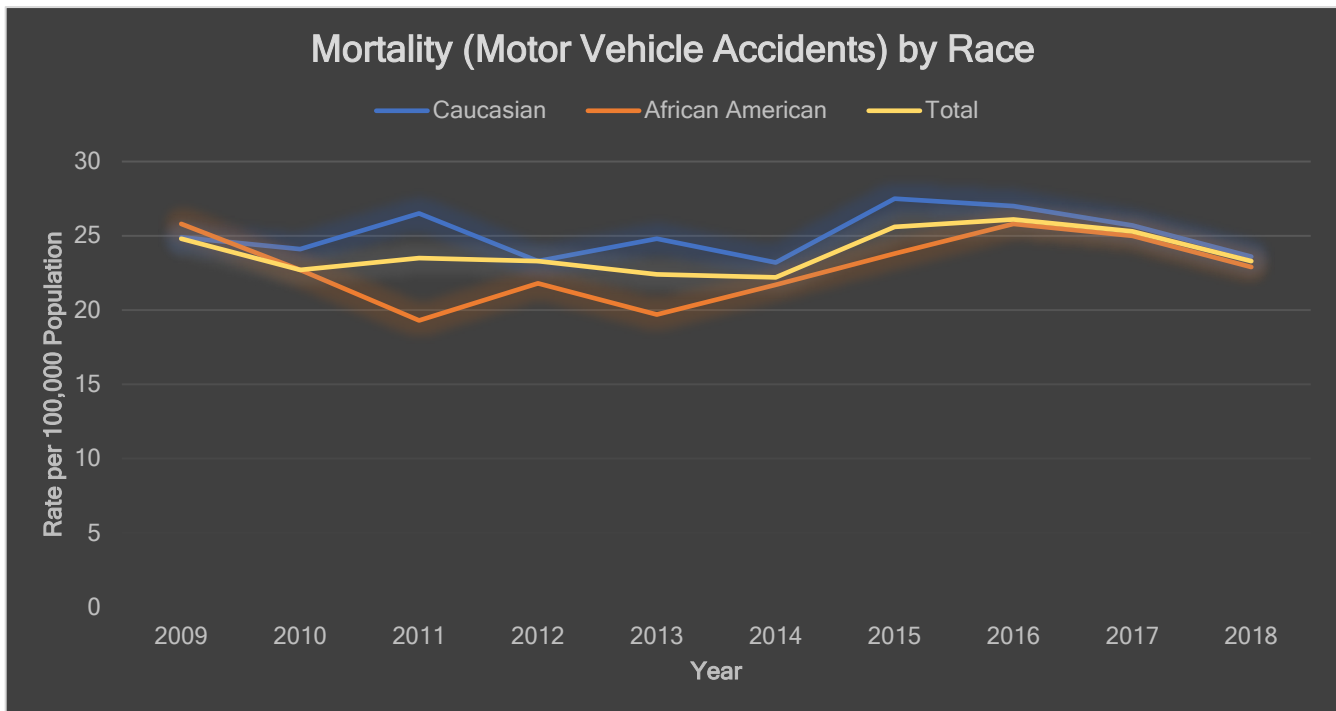
Motor Vehicle Accidents

Motor vehicle accident is an unintended collision of at least one motor vehicle with a stationary object or person, resulting in injuries, death, or loss of property.

Key findings from the data show:

- The Mississippi motor vehicle accident mortality rate decreased from 2009 to 2018 with rates of 24.8 and 23.3/100,000 population, respectively.
- The rates decreased for both African Americans and Caucasians from 2009 to 2018, with Caucasians having a slightly higher rate than African Americans. Caucasians had a rate of 23.6/100,000 population and African Americans had a rate of 22.9/100,000 population in 2018.
- There was an increase in deaths for both African Americans and Caucasians from 2014 to 2015. African Americans increased from 21.7/100,000 population in 2014 to 23.8/100,000 population in 2015. Caucasians increased from 23.2/100,000 population in 2014 to 27.5/100,000 population in 2015.

- Males had a significantly higher rate of mortality for motor vehicle accidents compared to females. This rate was 33.5/100,000 population for males and 14/100,000 population for females.

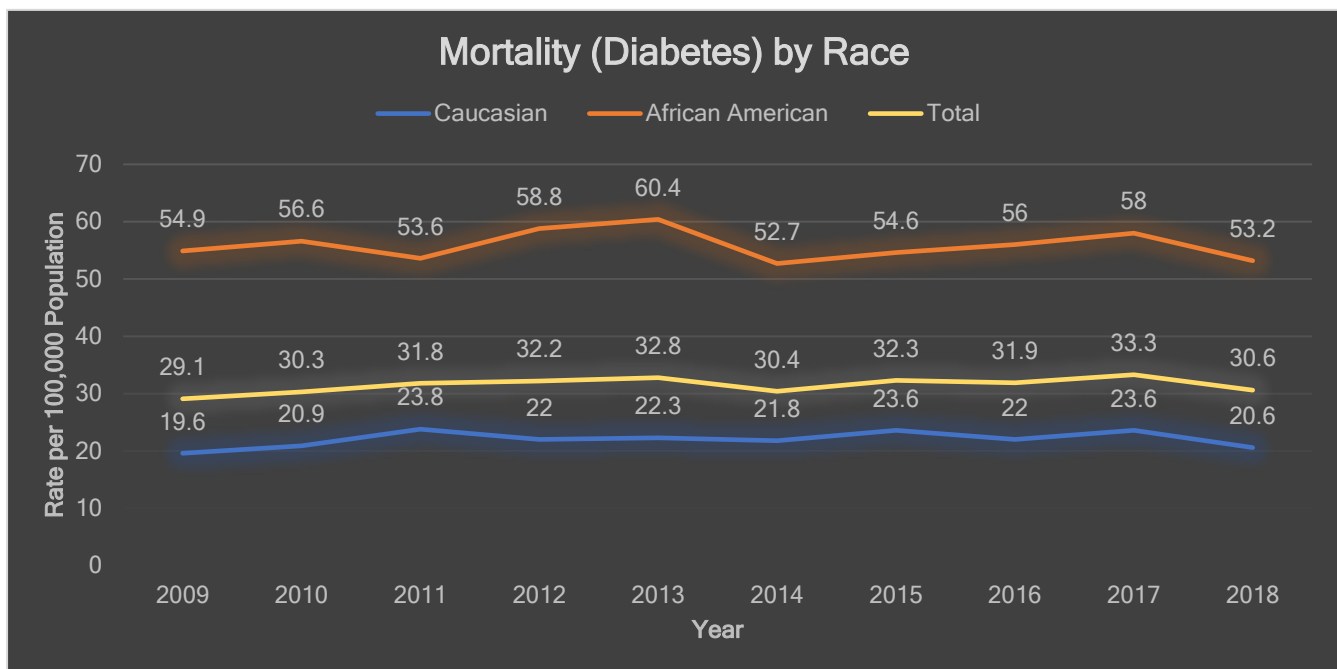


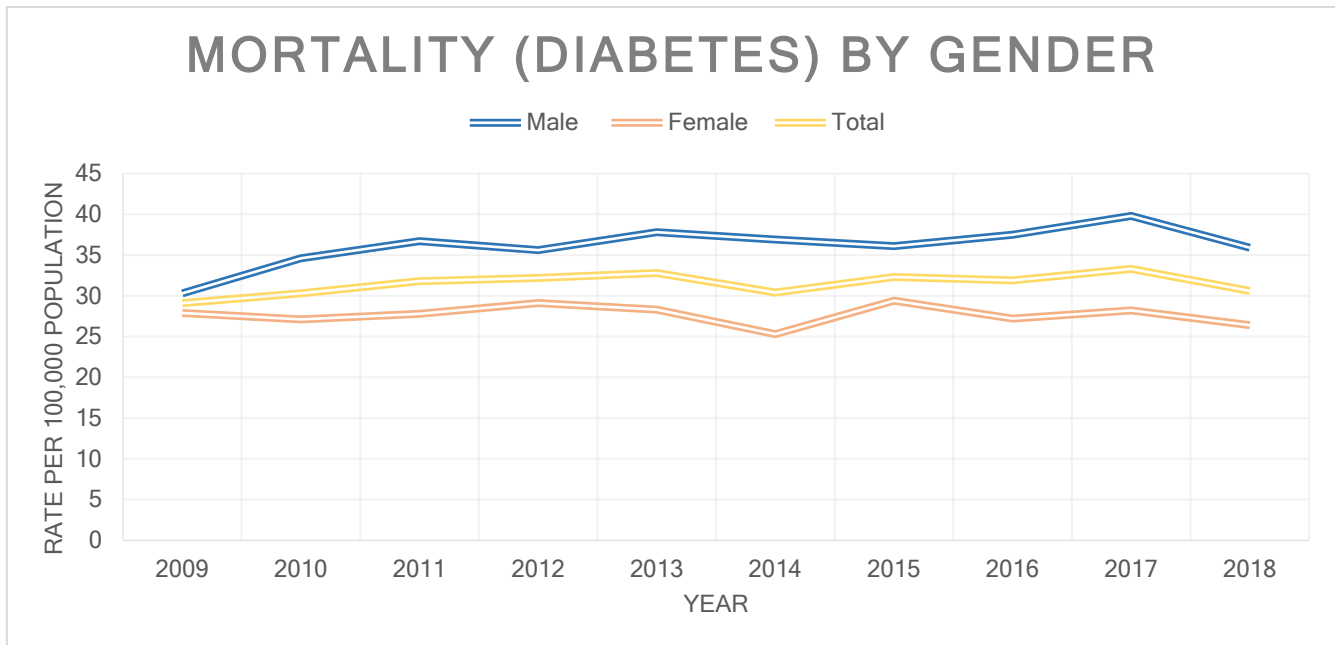
Diabetes

Diabetes is a group of diseases marked by high levels of blood glucose resulting from defects in insulin production, insulin action, or both. Diabetes can lead to serious complications, including heart disease, blindness, kidney failure, lower-extremity amputations, and premature death.

Key findings from the data shows:

- In 2018, the mortality rate for diabetes in Mississippi was 30.6/100,000 population. This mortality rate was relatively consistent since 2009, with each year having a rate in the low 30's.
- The mortality rate for diabetes in African Americans was higher than that of Caucasians for the entire time range of 2009-2018. In 2018, this rate was 52.3/100,000 population for African Americans, for Caucasians this was 20.6/100,000 population.
- Deaths attributed to diabetes, while similar for both males and females in 2009, increased in the following years for males, with the highest rate being seen in 2017 (39.8/100,000 population).
- In 2018, the mortality rate for diabetes in males was 35.9/100,000 population compared to females of 26.4/100,000 population.





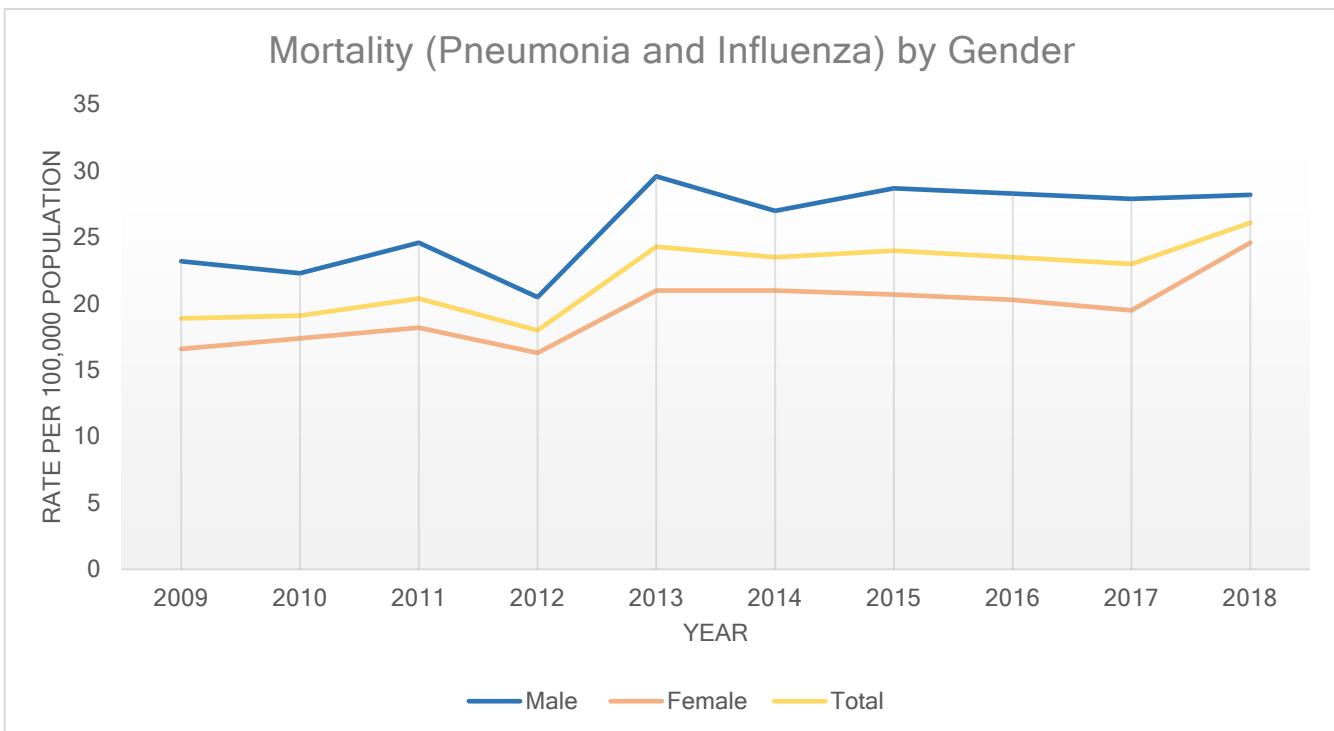
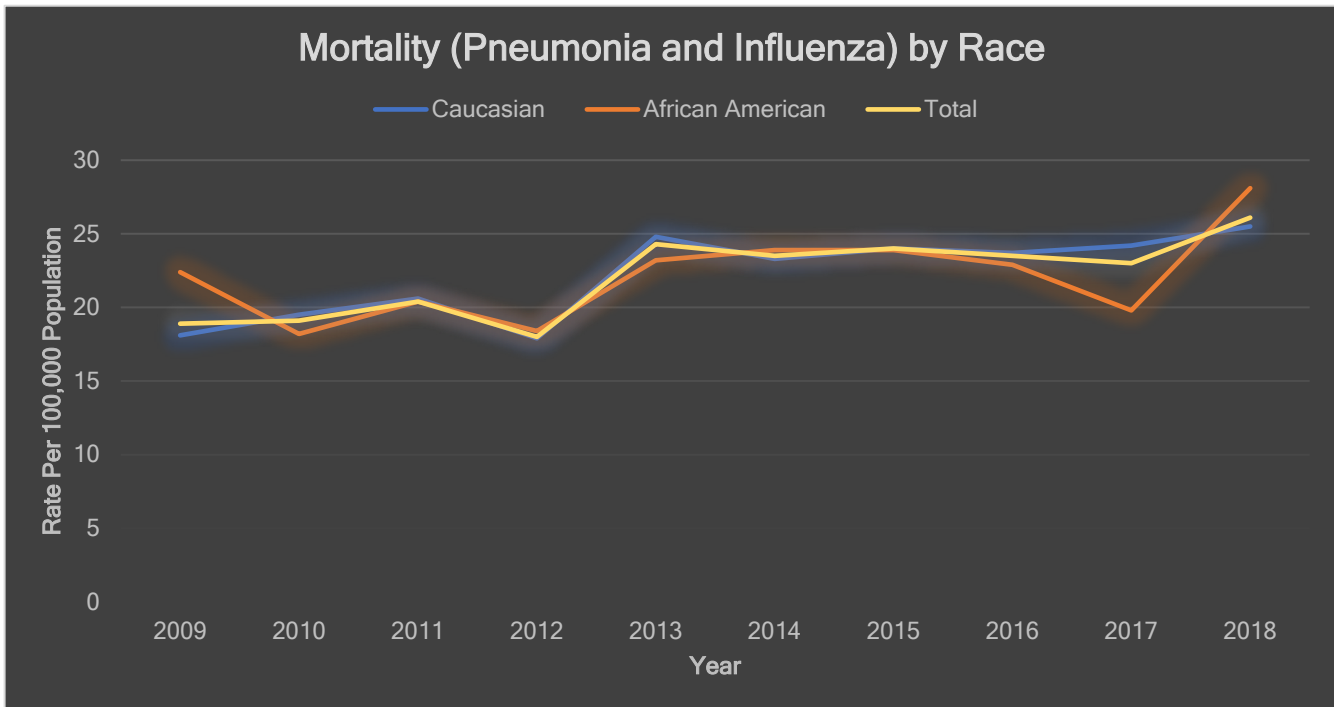
Pneumonia and Influenza

Pneumonia and Influenza (flu) are infectious conditions that affect the lungs, leading to death in a small proportion of cases. Certain populations, such as those over 65 years of age, infants, pregnant women, and those with impaired immune systems, are at higher risk for severe complications from pneumonia and influenza, including death.

Key findings from the data show:

- In 2018, the mortality rate for pneumonia and influenza in Mississippi was 26.1/100,000 population. This was higher compared to the 2009 rate, which was 18.9/100,000 population.
- The 2018 rate for African Americans (28.1/100,000 population) was similar to that of Caucasians (25.5/100,000 population).
- In 2013, both African Americans (23.2/100,000 population) and Caucasians (24.8/100,000 population) experienced an increase in deaths attributed to pneumonia and influenza.

- The mortality rate for pneumonia and influenza was similar for males (28.2/100,000 population) and females (24.6/100,000 population). These both increased from 2009, when the rate for males was 23.2/100,000 population and females was 16.6/100,000 population.

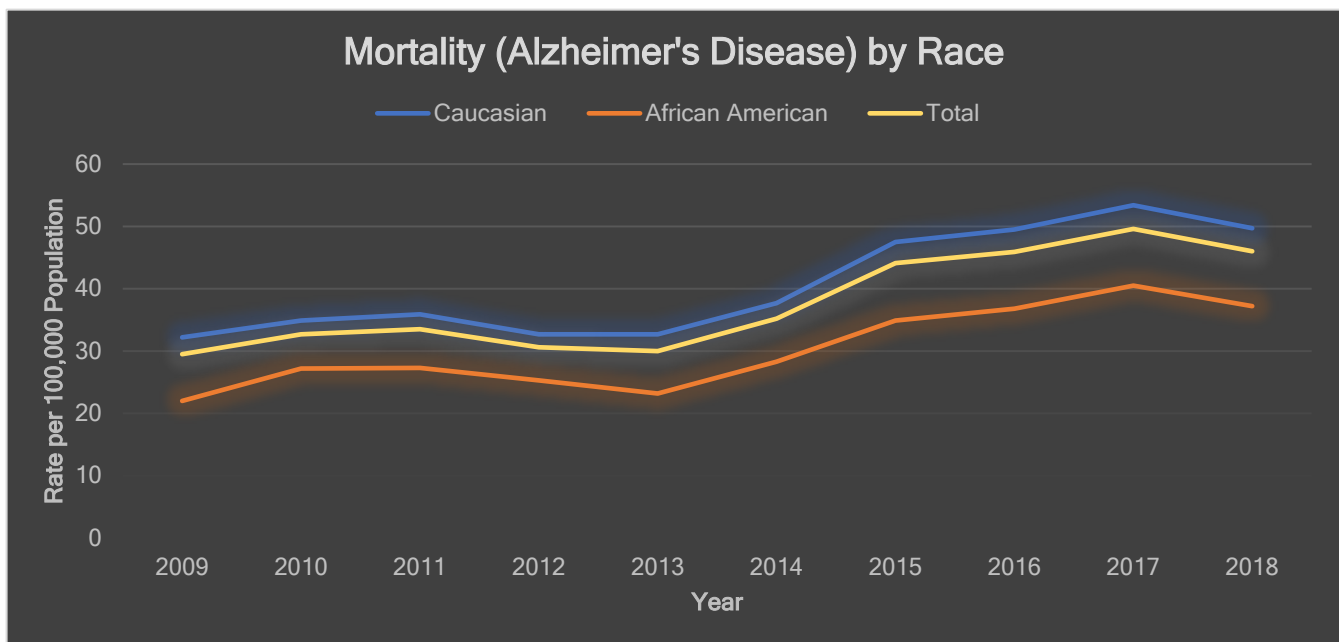


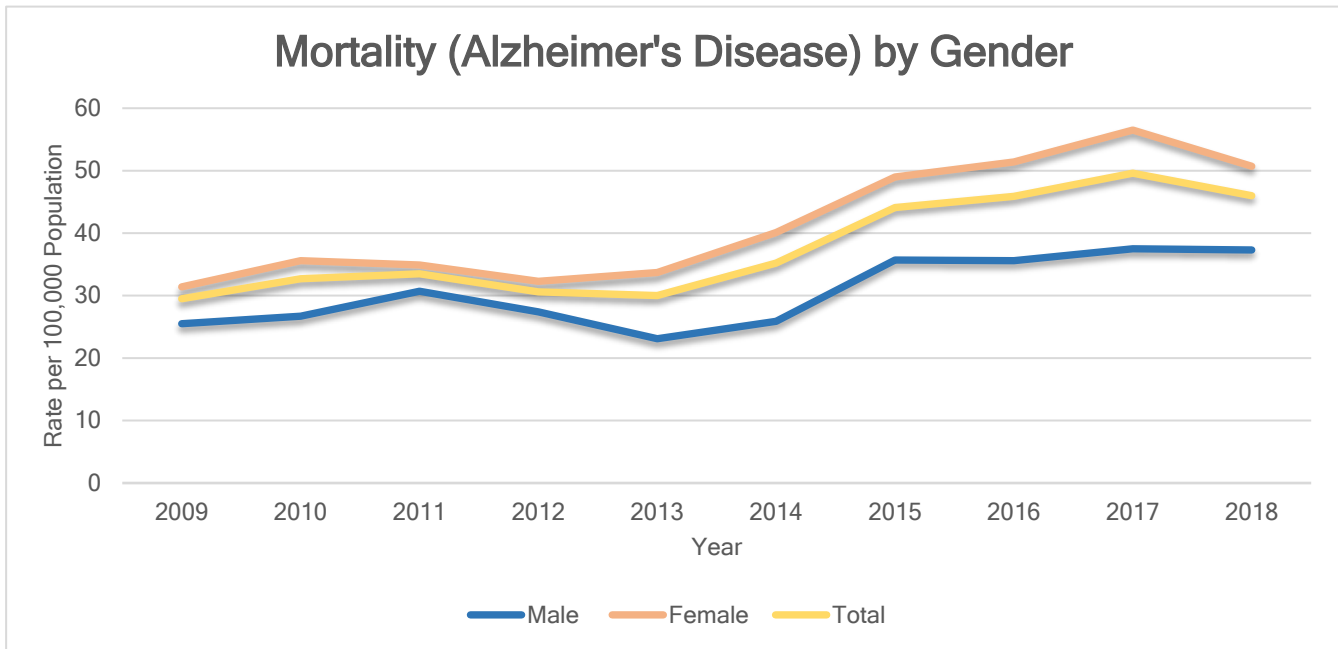
Alzheimer's Disease

Alzheimer's Disease is the most common form of dementia. It is characterized by worsening memory and changes in behavior. It generally affects the elderly, but early onset forms of the disease can appear in the 40's and 50's.

Key findings from the data show:

- The 2018 mortality rate for Alzheimer's in Mississippi was 46/100,000 population. This was an increase from 2009 when the rate was only 29.5/100,000 population.
- In 2018, the rate for African Americans was 37.2/100,000 population. This was lower than Caucasians of 49.7/100,000 population. Both identified races followed a similar trajectory, with a decrease in 2013 followed by increases in rates.
- The rate of Alzheimer's Disease mortality in 2018 was higher in females (50.7/100,000 population) than males (37.3/100,000 population).
- From 2009 to 2018 both males and female rates followed a similar mortality trajectory, with females consistently having higher rates.





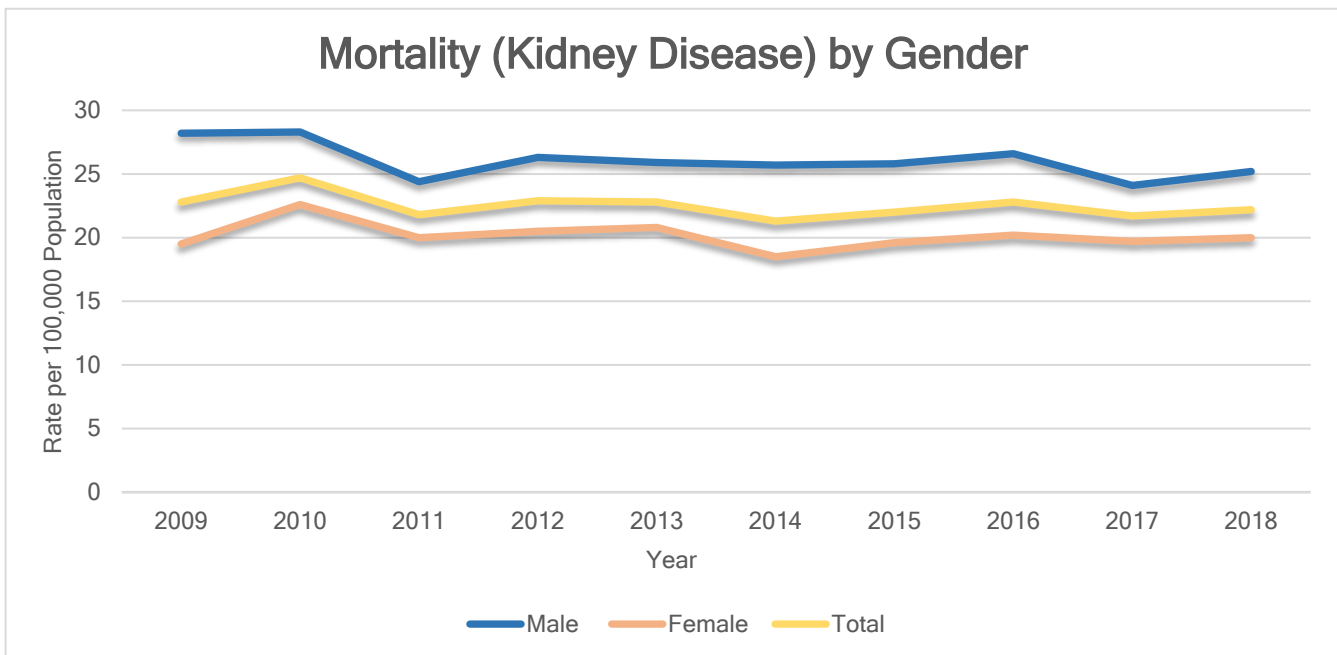
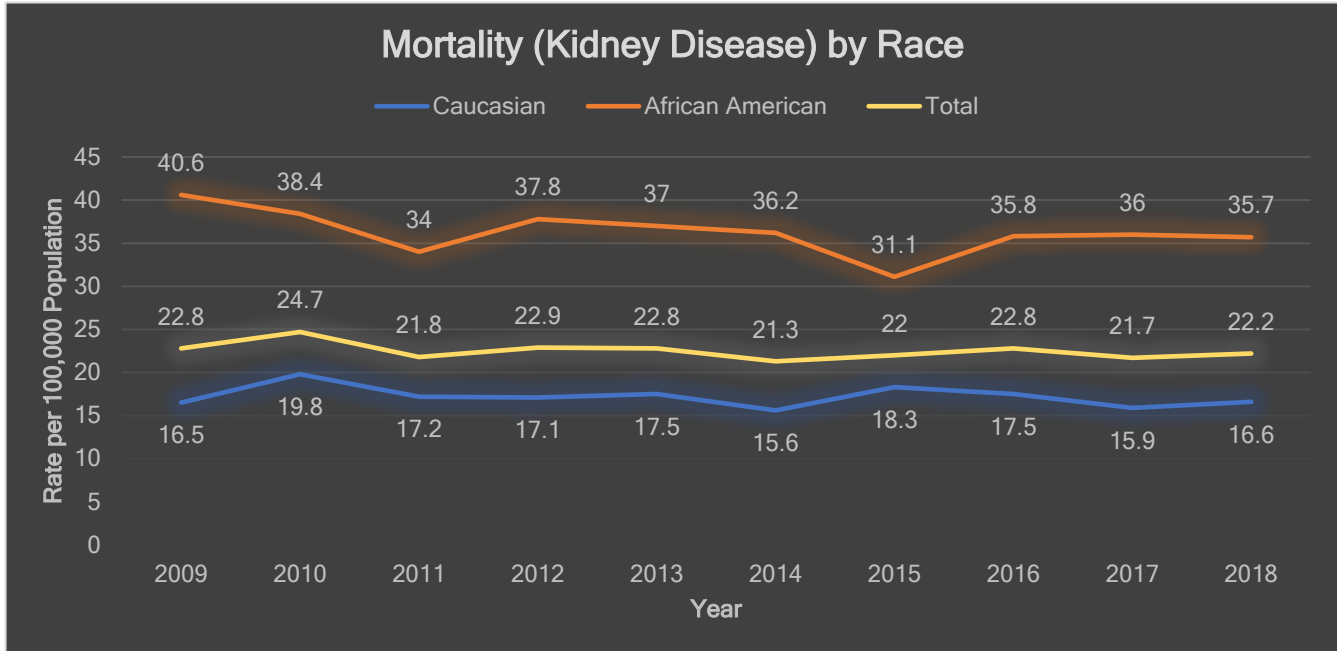
Chronic Kidney Disease

Chronic kidney disease is a condition characterized by a gradual loss of kidney function over time. Chronic kidney disease may be caused by diabetes, high blood pressure, and other disorders. Kidney disease can lead to kidney failure.

Key findings from the data show:

- The kidney disease mortality rate for Mississippi remained relatively consistent from 2009 to 2018. In 2018, the rate was 22.2/100,000 population.
- In 2018, there were differences in mortality between African Americans and Caucasians, with African Americans having higher rates. African Americans had a rate of 35.7/100,000 population compared to Caucasians at 16.6/100,000 population.
- African Americans had higher rates for every year from 2009 to 2018. The largest difference in rates was in 2009, with African Americans having rates of 40.6/100,000 population and Caucasians having a rate of 16.5/100,000 population.
- Males had a higher mortality rate at 25.2/100,000 population compared to females at 20/100,000 population in 2018.

- Males had rates higher than females for all years between 2009 and 2018.



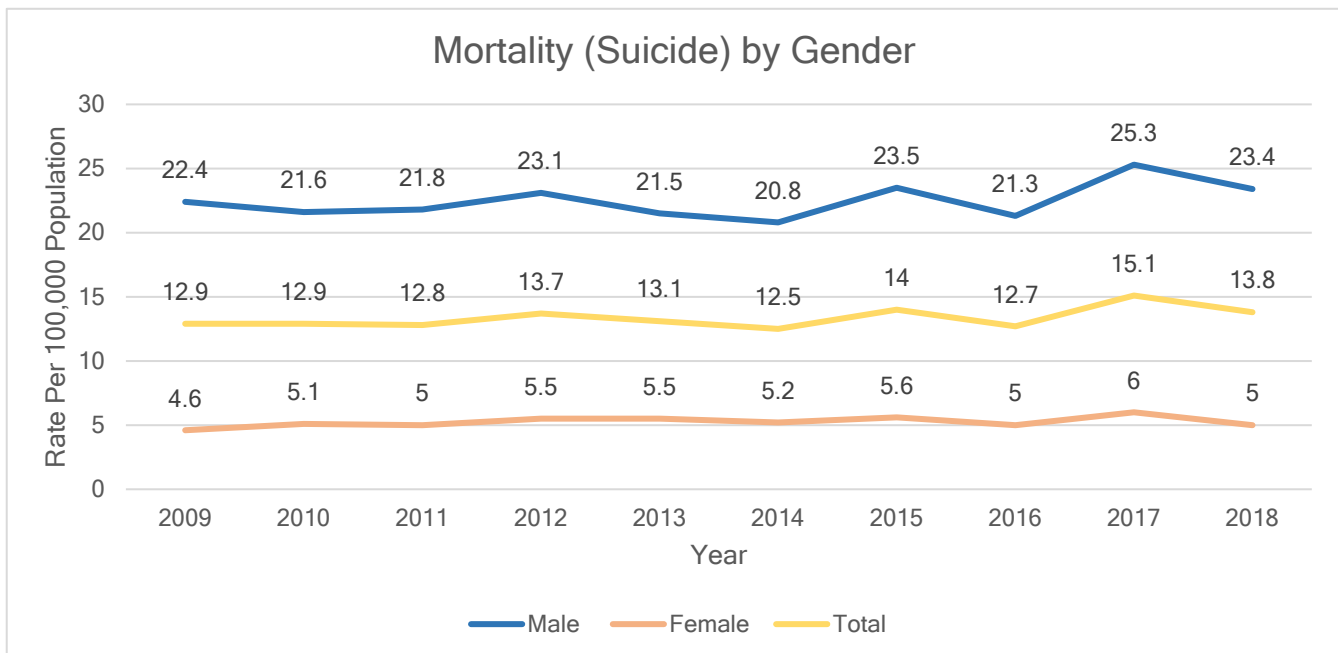
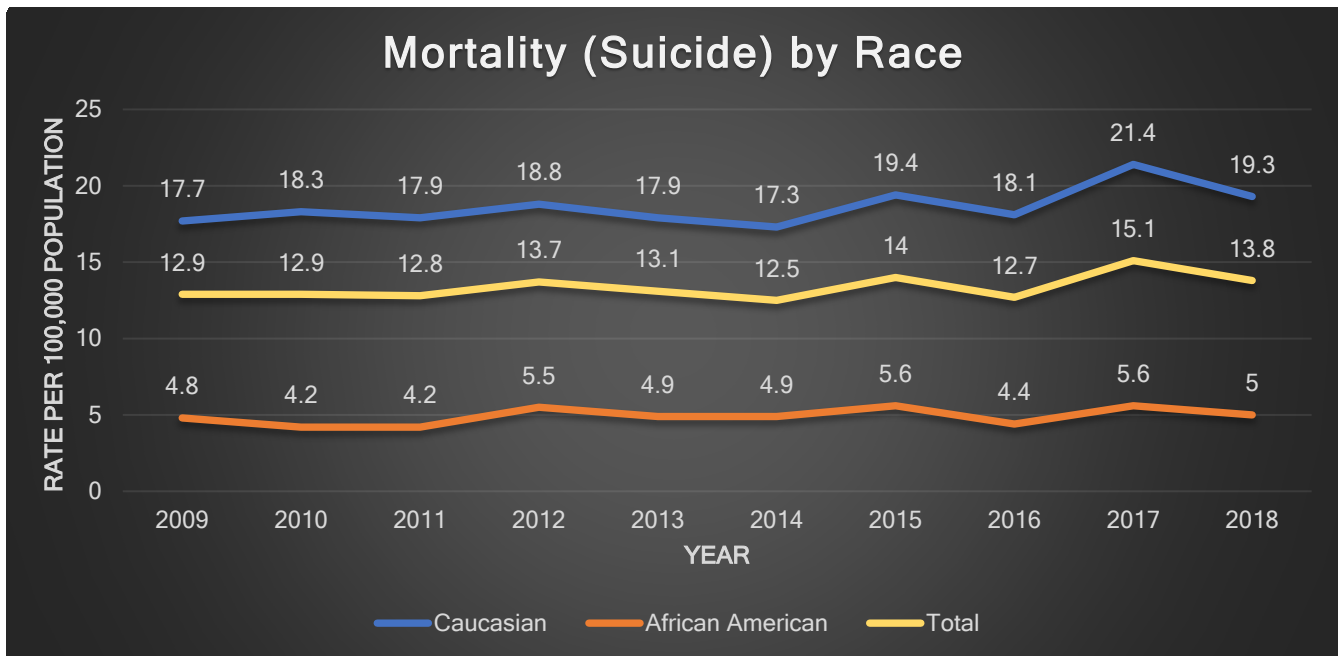
Suicide

Deaths attributed to taking one's life.

Key findings from the data show:

- The suicide mortality rate for Mississippi slightly increased from 2009 (12.9/100,000 population) to 2018 (13.8/100,000 population).

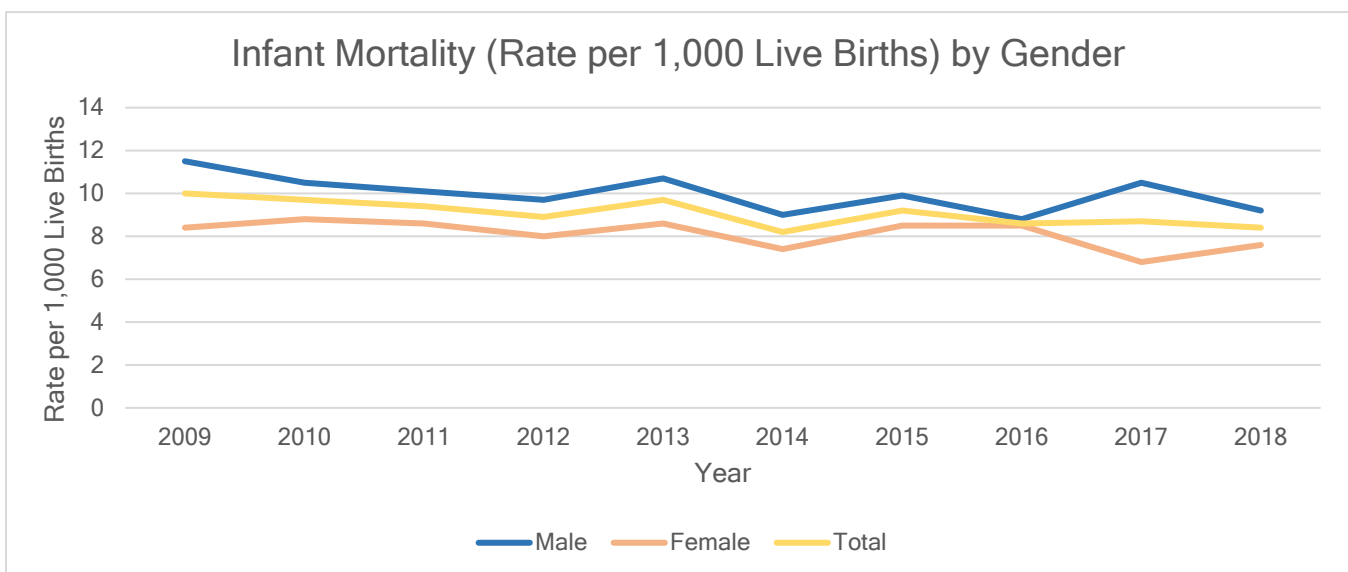
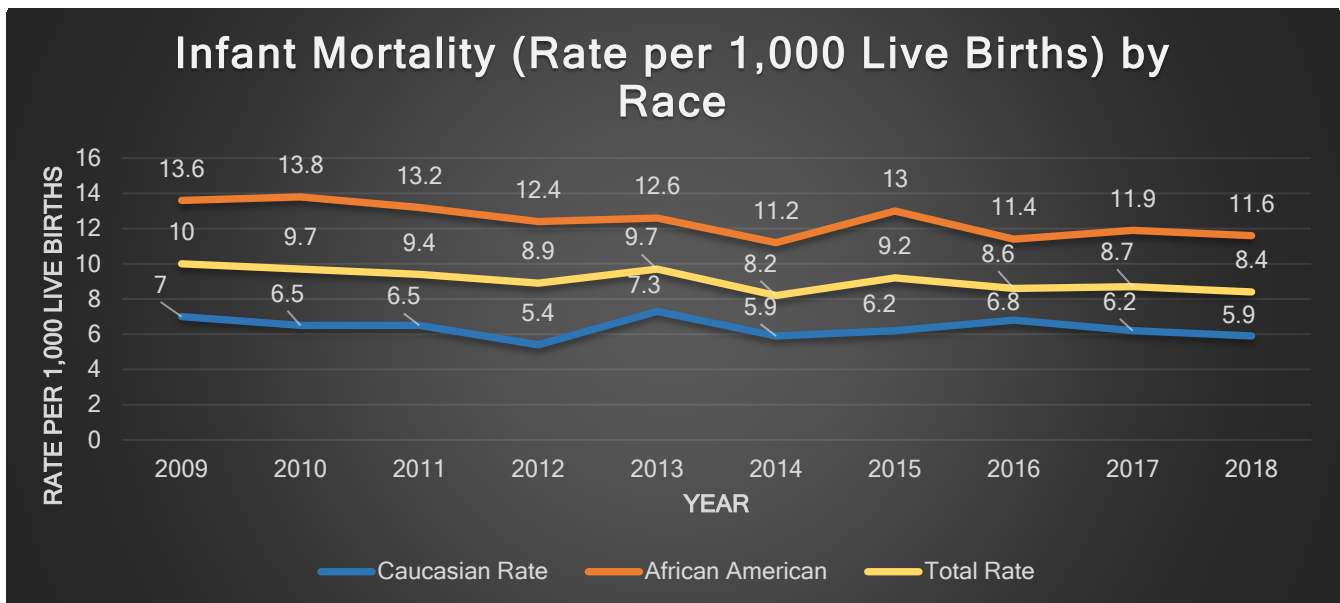
- In 2018, African Americans (5/100,000 population) had lower rates than Caucasians (19.3/100,000 population). This was true for all years shown.
- In 2018, males (23.4/100,000 population) had a higher rate than females (5/100,000 population).
- Between 2009-2018, males had mortality rates between 20 and 26/100,000 population.



Infant Mortality

The key findings from the data show:

- In 2018, the infant mortality rate for Mississippi was 8.4/1,000 live births.
- The rate of infant mortality (per 1,000 live births) was higher for African Americans compared to their Caucasian counterparts and the total rate.
- The African American rate was 11.6/1,000 live births, whereas the rate for Caucasians was 5.9/1,000 live births in 2018.
- The rate of infant mortality (per 1,000 live births) was higher for males compared to females and all births.

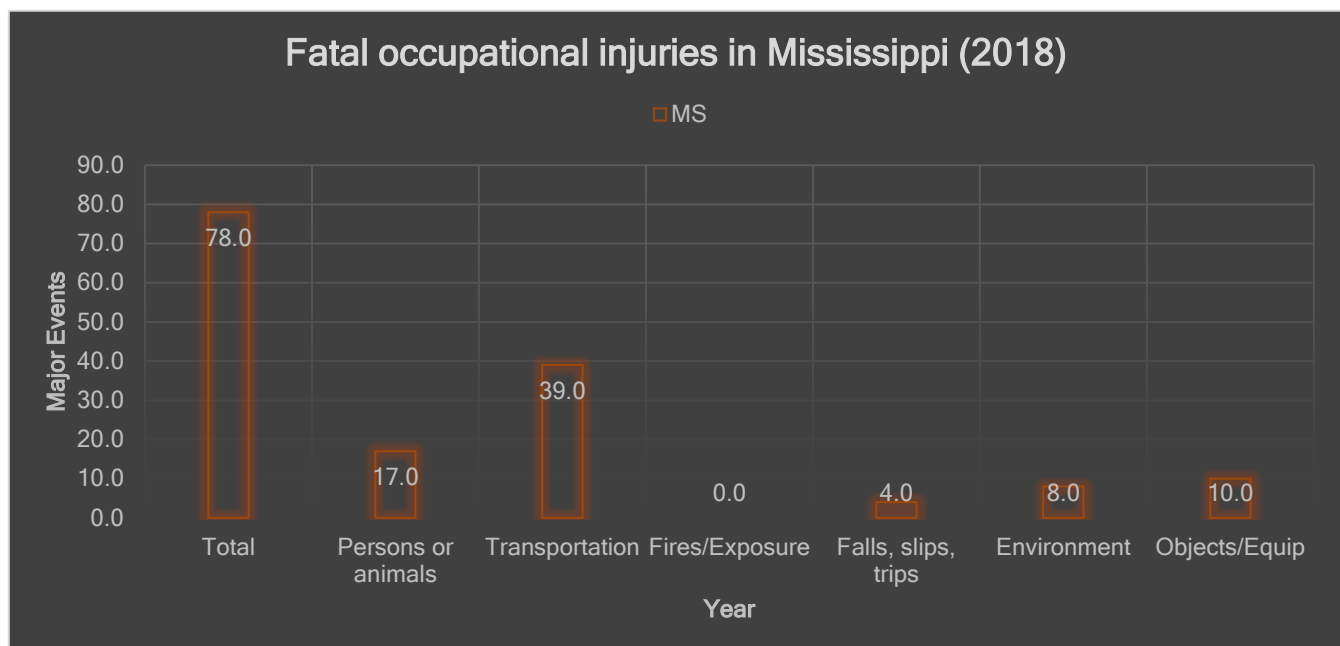
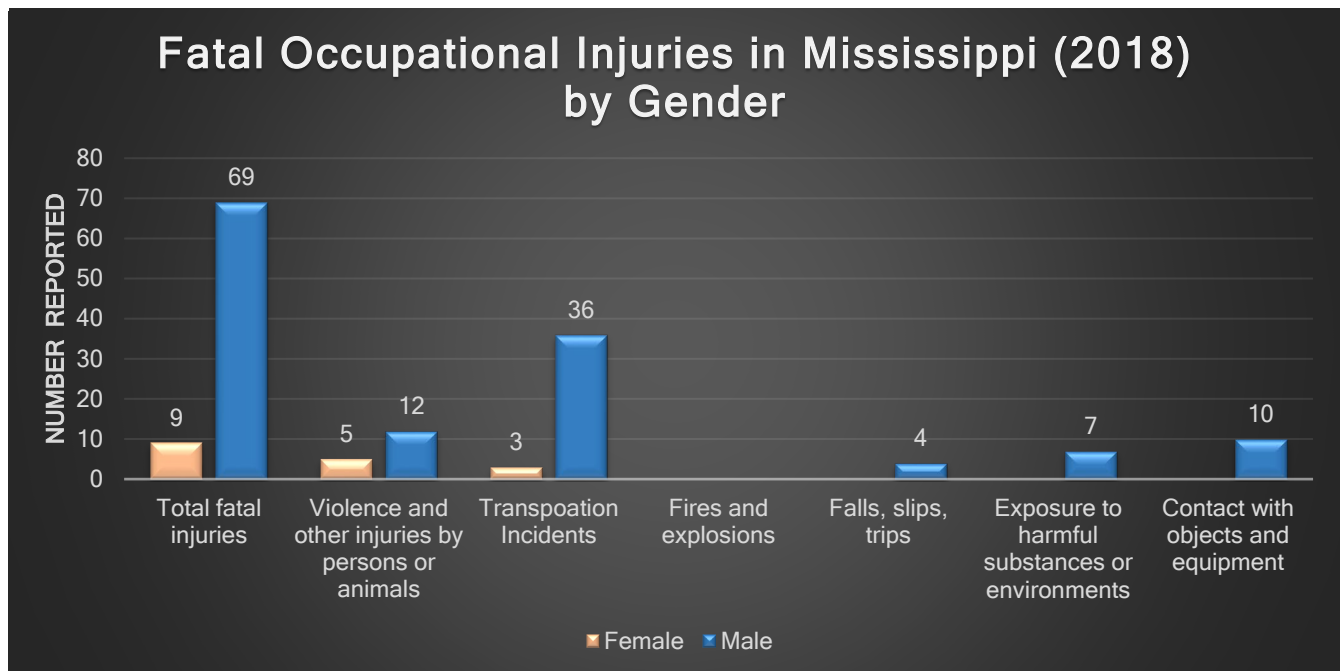


Fatal Occupational Injuries (Overall)

Deaths that occurred due to injuries sustained at work.

The key findings from the data show:

- In 2018, there were 78 recorded fatal occupational injuries.
- The number one type of fatal occupational injury involved transportation, followed by 'persons/animals', and 'objects/equipment'.
- Males are far more likely to be involved in fatal occupational injuries than females.

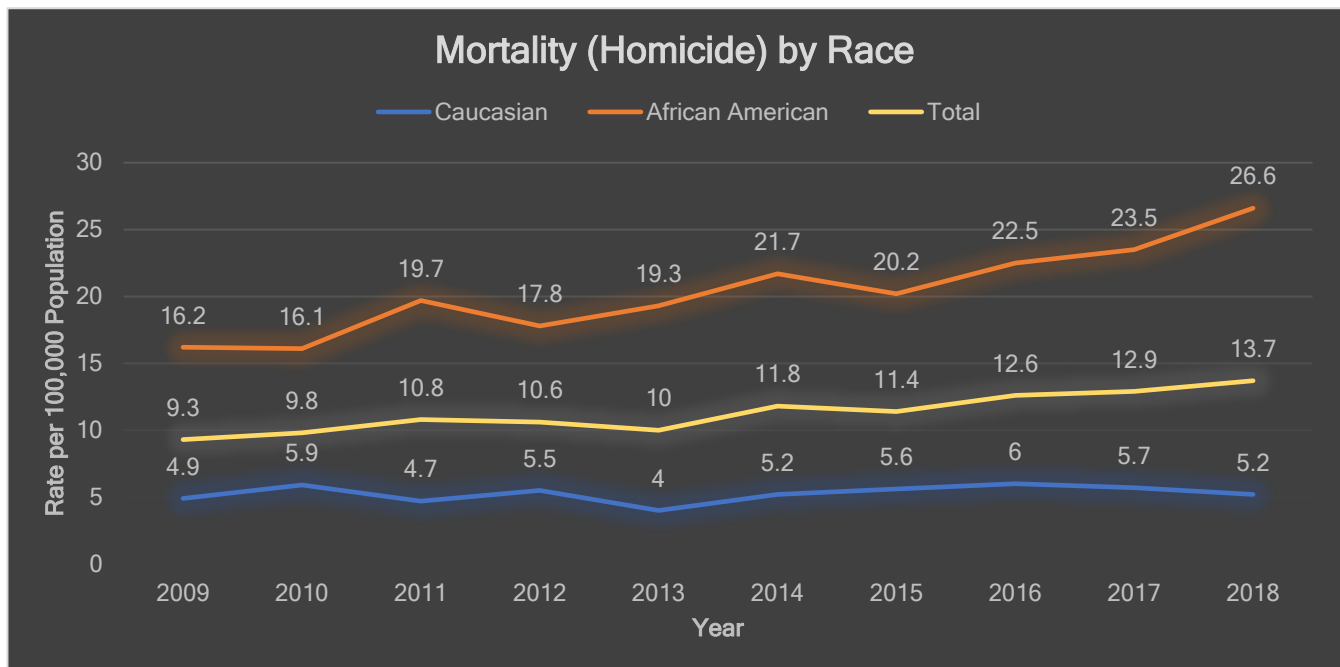


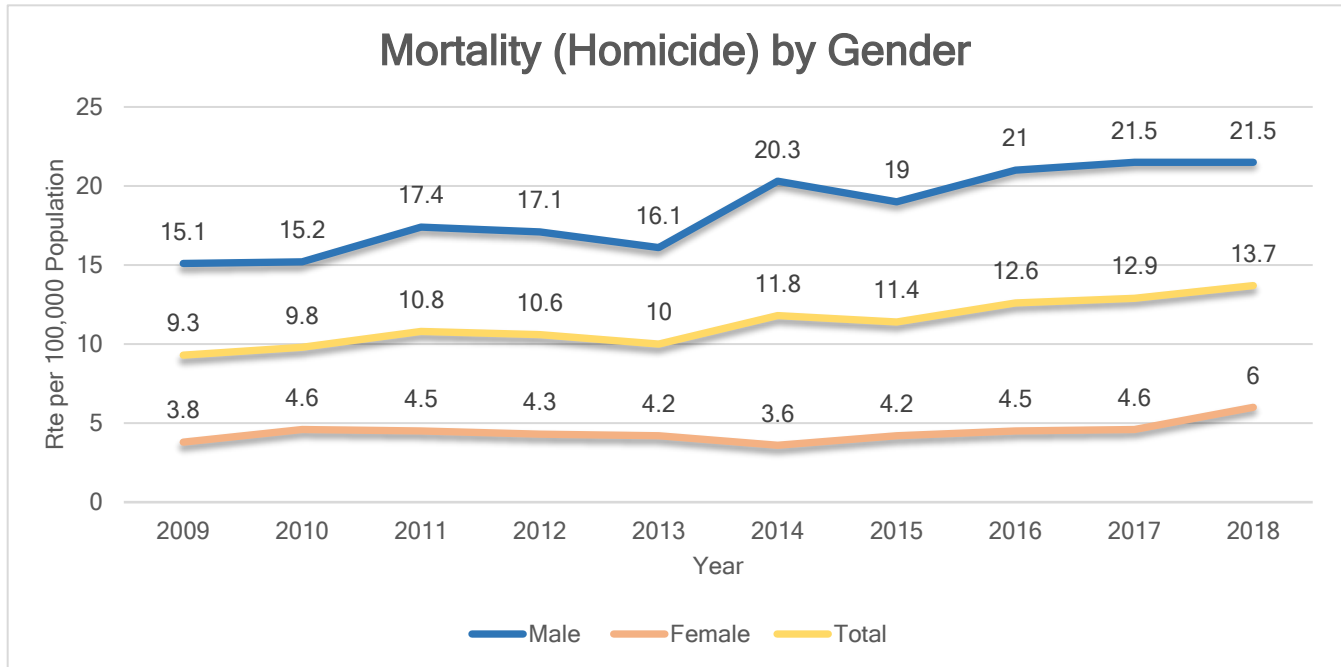
Homicide

The killing of one person by another, regardless of intention or legality (American Heritage, 2020).

The key findings from the data show:

- In 2018 the homicide mortality rate for Mississippi was 13.7/100,000 population.
- African Americans, in 2018, had a greater than 5x higher rate of homicides than Caucasians (26.6/100,000 population vs 5.2/100,000 population, respectively).
- Homicide mortality rates for African Americans trended upward, while rates for Caucasians slowly trended down.
- Males had significantly higher rates of homicide than females. This was true throughout the identified time period.
- In 2018, the homicide rate for females was 6/100,000 population. The rate for males was 21.5/100,000 population.





CHRONIC DISEASE

Chronic diseases are defined broadly as conditions that last one year or more, require ongoing medical attention, or limit activities of daily living, or both. Chronic diseases such as heart disease, cancer, and diabetes are the leading causes of death and disability in the United States. They are also leading drivers of the nation's \$3.5 trillion in annual health care costs (CDC, 2020).

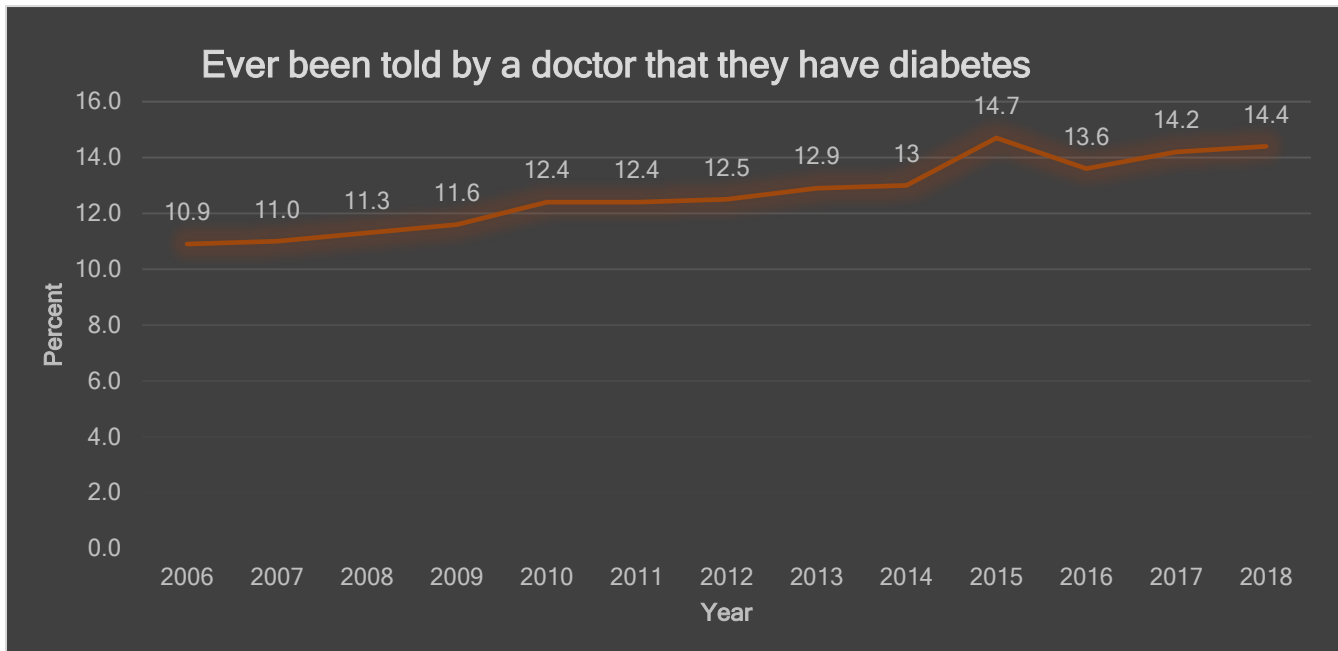
Persons told they have Diabetes

Diabetes is a group of diseases marked by high levels of blood glucose resulting from defects in insulin production, insulin action, or both. Diabetes can lead to serious complications, including heart disease, blindness, kidney failure, and lower-extremity amputations, and premature death.

The key findings from the data show:

- The age-adjusted percent of persons told they have Diabetes has trended upward over the defined time period (2018: 14.4%).

- 2006-2010 data should not be compared to 2011-2018 data as the methodology between the two time periods is different.
- The highest year in which people were told by a doctor they had diabetes was 2014 (14.7%).

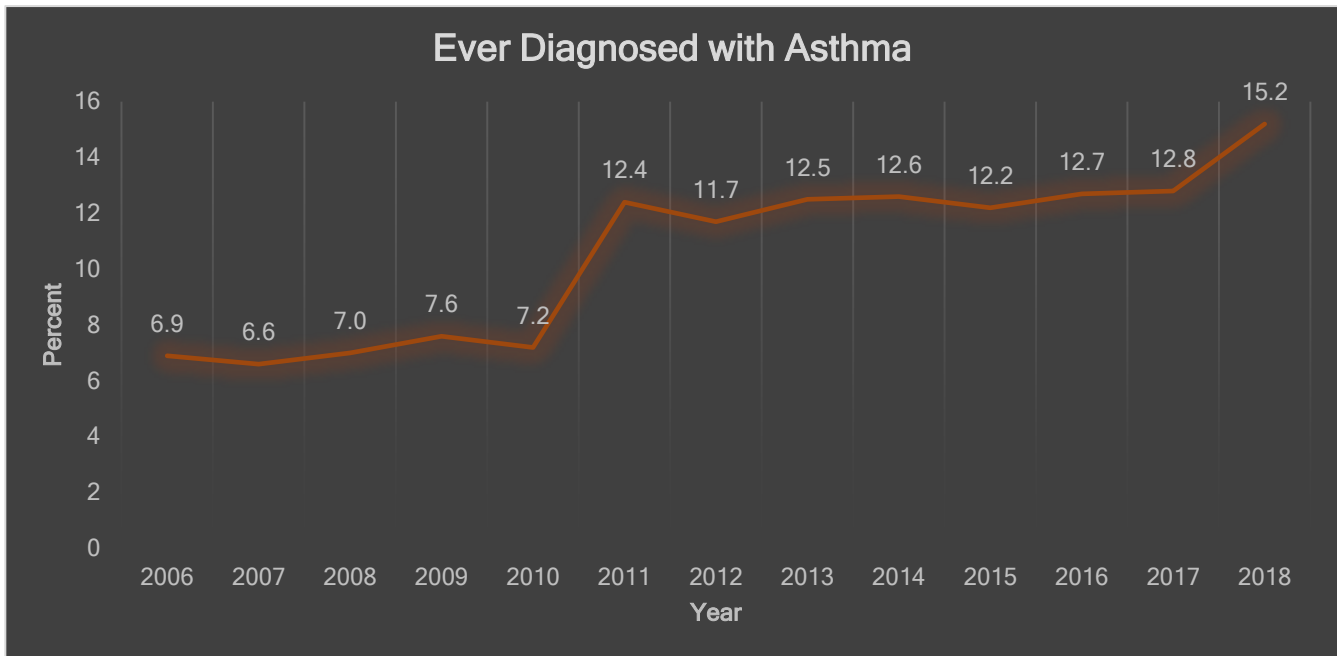


Ever Diagnosed with Asthma

Asthma is a disease that affects your lungs. It causes repeated episodes of wheezing, breathlessness, chest tightness, and nighttime or early morning coughing.

The key findings from the data show:

- During the time period identified, diagnosis of asthma trended upward, from a low of 6.2% in 2006 to a high of 15.2% in 2018.
- There was a significant increase in asthma diagnosis between 2010 (7.2%) and 2011 (12.4%).
- After the increase in 2011, diagnosis remained relatively consistent until the increase in 2018.



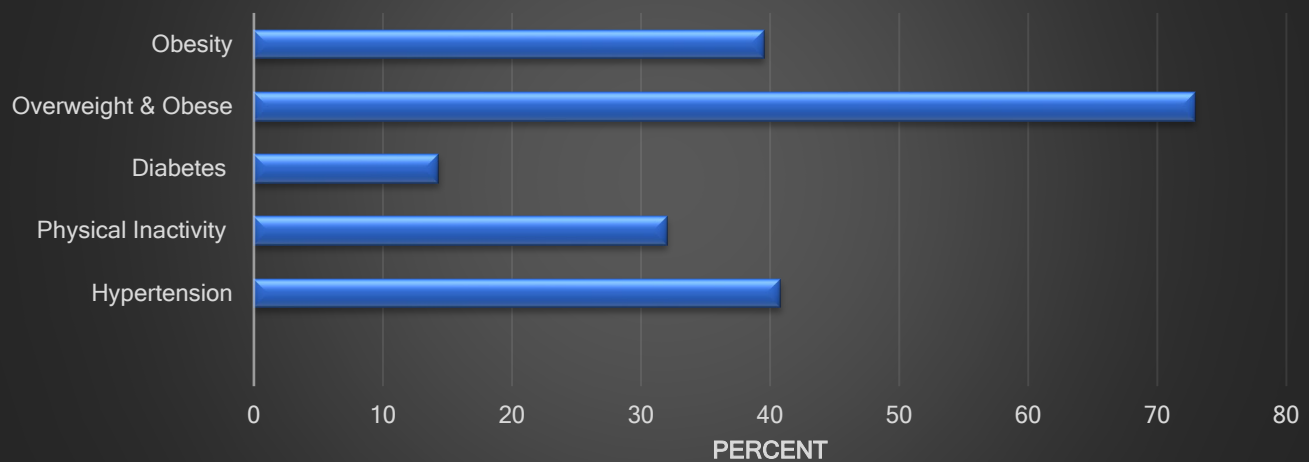
Overweight and Obesity

Overweight is defined as a body mass index (BMI) between 25.0 and 29.9. Obese is defined as a BMI above 30.0 and is divided into three categories; Class 1, Class 2, and Class 3. Adult rates of physical inactivity, overweight and obesity are significant and directly contribute to high rates of diabetes and hypertension. These are considered modifiable risk factors (CDC,2020).

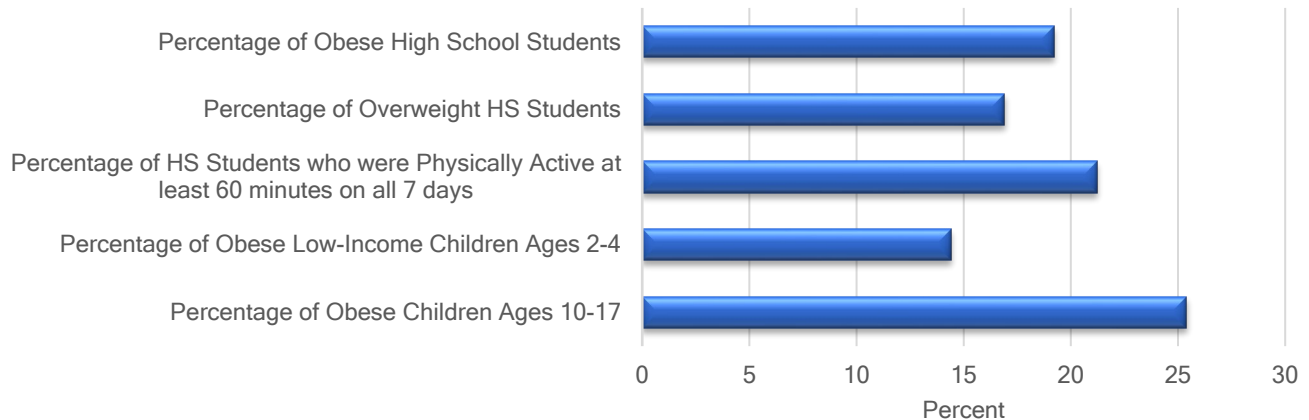
The key findings from the data show:

- Combined, 72.9% of the population was either overweight or obese.
- The percentage of obese low-income children (age 2-4) is 14.4%.
- Combined, the percentage of high school students who are either overweight or obese is 40.1%.
- 25.4 % of children ages 10-17 are considered obese.

Adult Obesity and Overweight Rates and Related Health Indicators for Mississippi (2018)



Children and Adolescent Obesity and Overweight Rates and Related Health Indicators for Mississippi

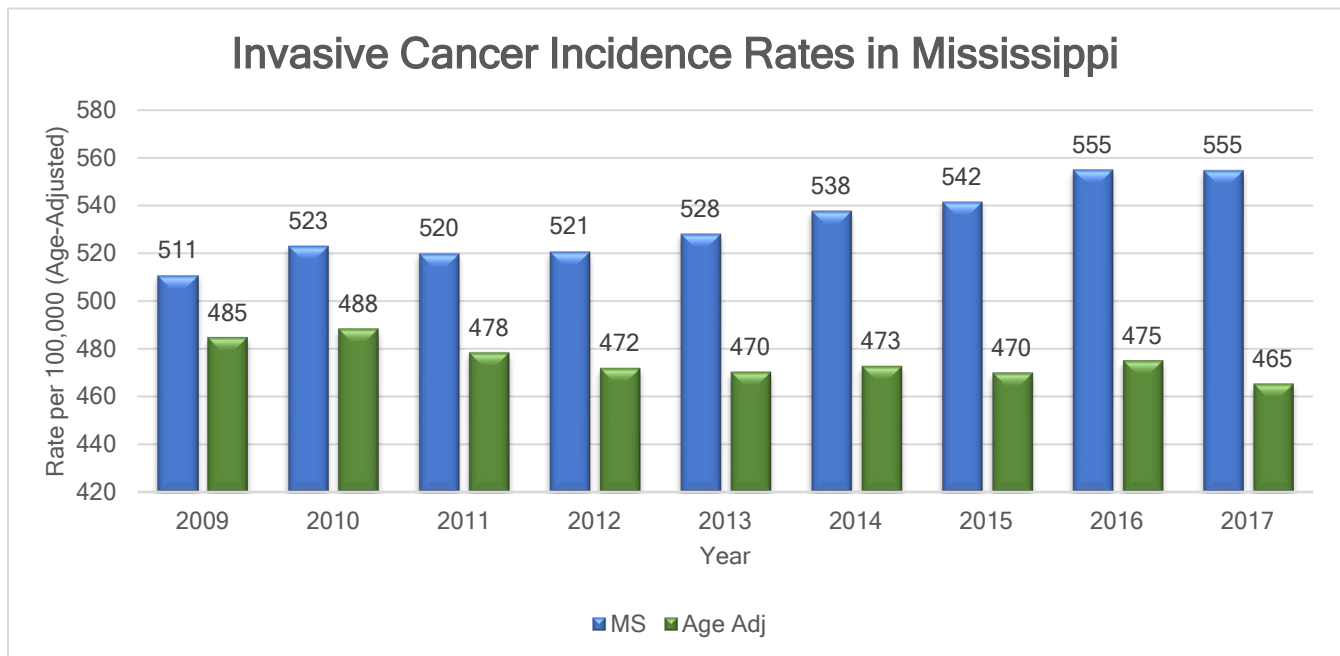


Cancer

Cancer is the name given to a collection of related diseases. In all types of cancer, some of the body's cells begin to divide without stopping and spread into surrounding tissues (National Cancer Institute, 2019).

The key findings from the data show:

- During the identified time period, crude rates of cancer trended upward, while age-adjusted rates showed a slight downward trend.
- The two most current years of data (2016-2017) showed the highest crude rates, both at 555/100,000 population.
- When age-adjusted rates are taken into consideration, 2010 had the highest rate with 488/100,000 population.



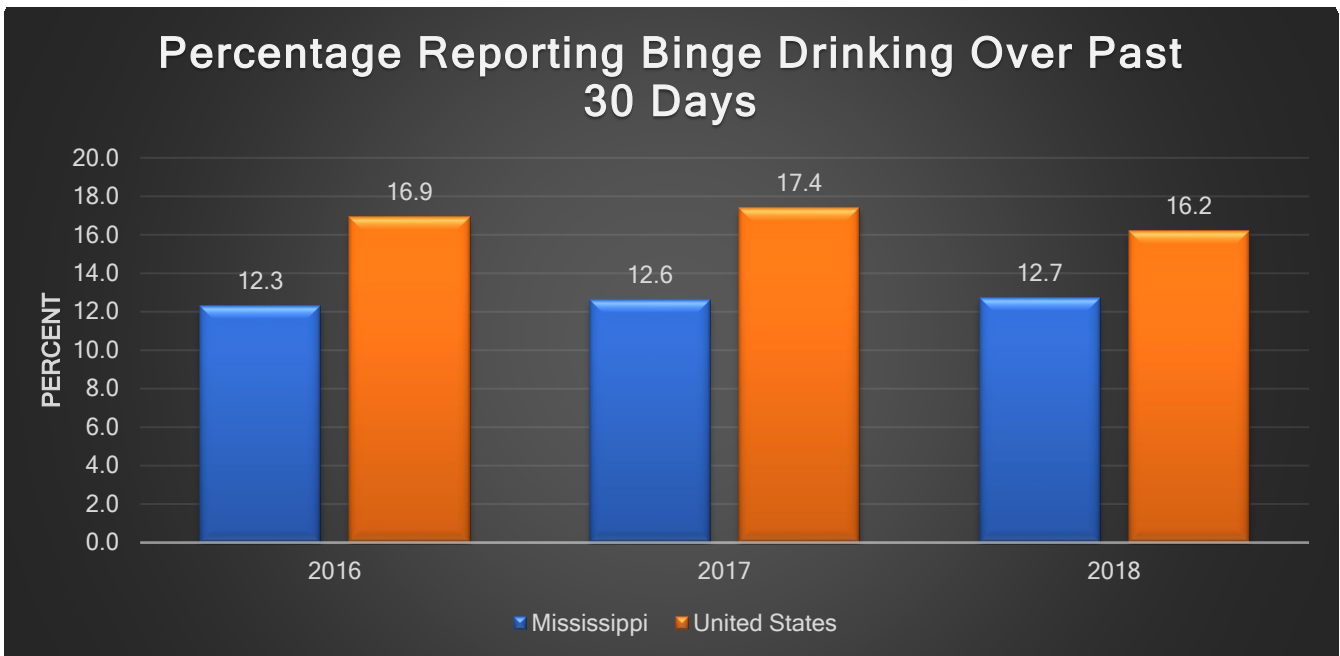
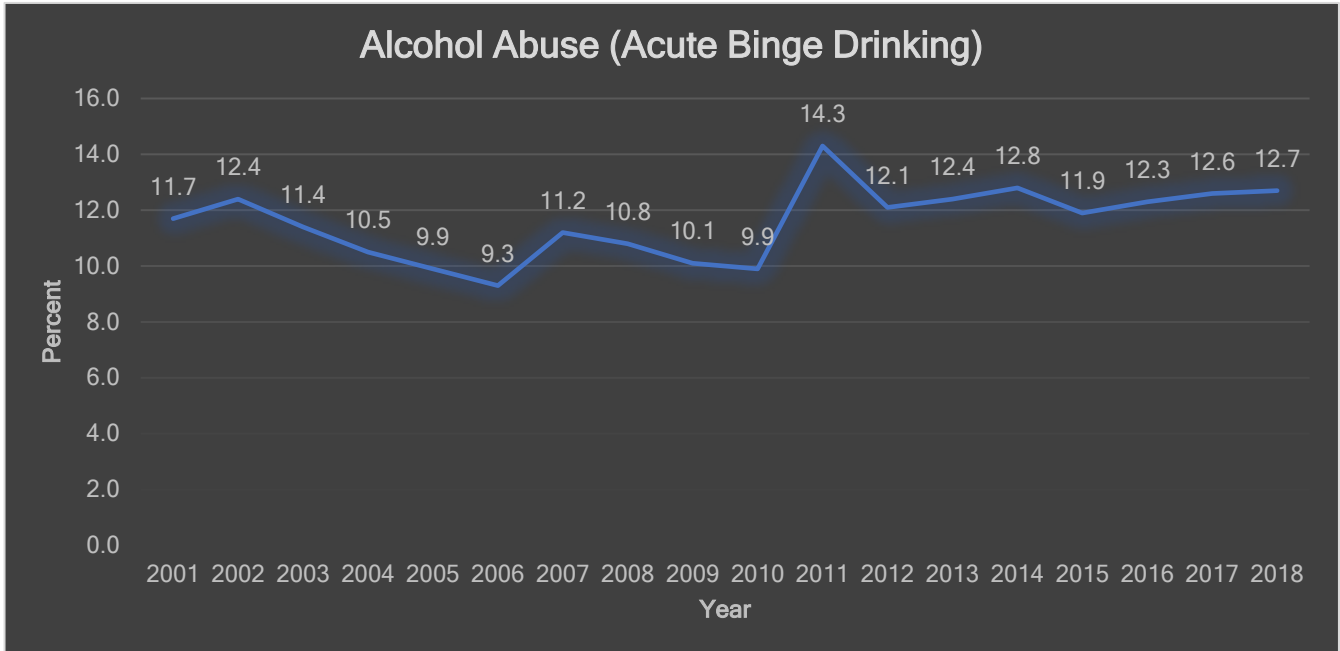
Acute Binge Drinking

Binge drinking is the most common, costly, and deadly pattern of excessive alcohol use in the United States. Binge drinking is defined as a pattern of drinking that brings a person's blood alcohol concentration (BAC) to 0.08 g/dl or above. This typically happens when men consume 5 or more drinks or women consume 4 or more drinks in about 2 hours. Most people who binge drink are not alcohol dependent (CDC, 2019).

The key findings from the data show:

- Since 2006, there was a consistent upward trend in the rate of acute binge drinking.
- In 2006, 9.3% of respondents indicated binge drinking, compared to a high of 14.3% in 2011.

- Over the three-year period, 2016-2018, those binge drinking within the past 30 days trended slightly upward, but remained below the national average.
- While the percentage of those reporting binge drinking during the past 30 days was similar for 2016-2019, the highest percentage reported was in 2018.

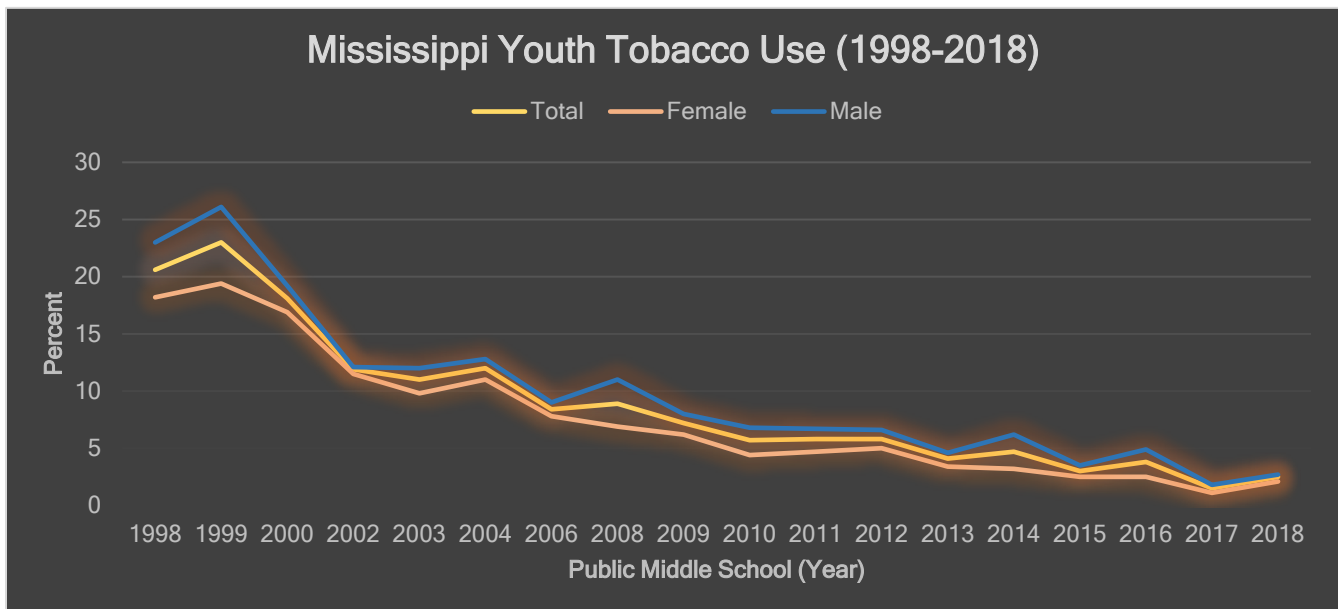


Youth Tobacco Use

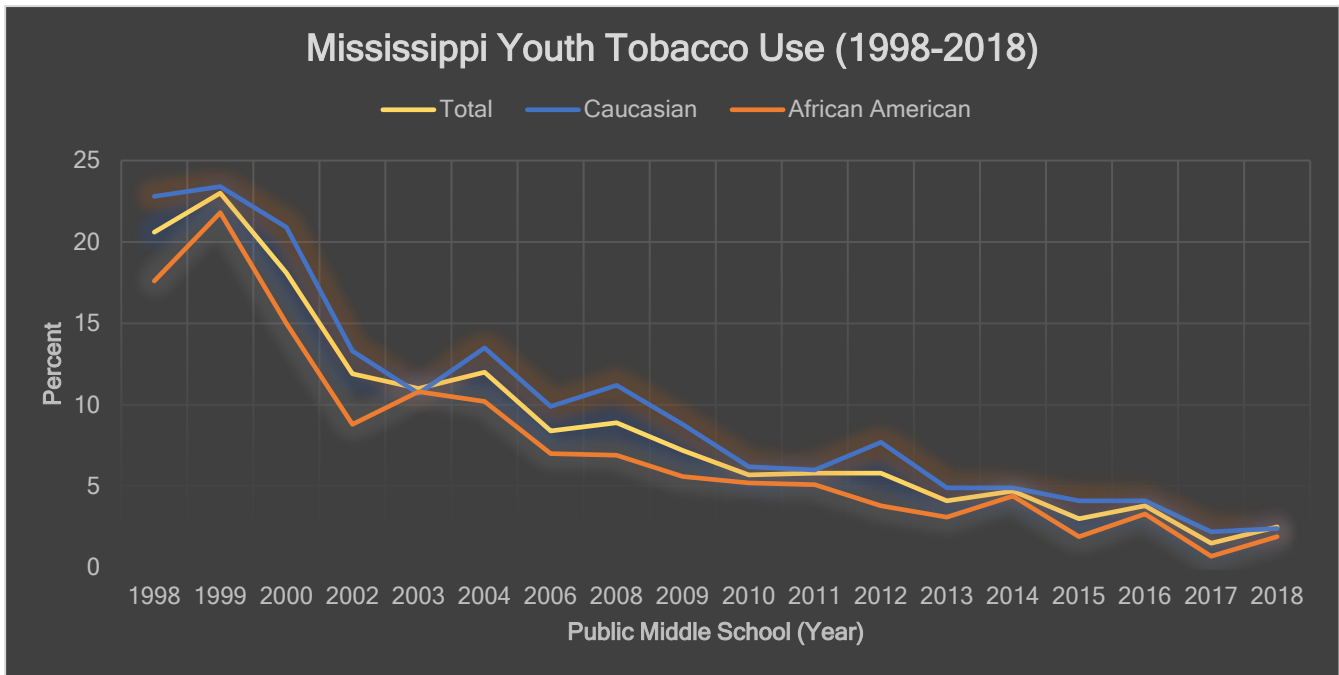
According to the CDC, if cigarette smoking continues at the current rate, 5.6 million American's younger than 18 will die of early smoking-related illnesses (CDC, 2019).

The key findings from the data show:

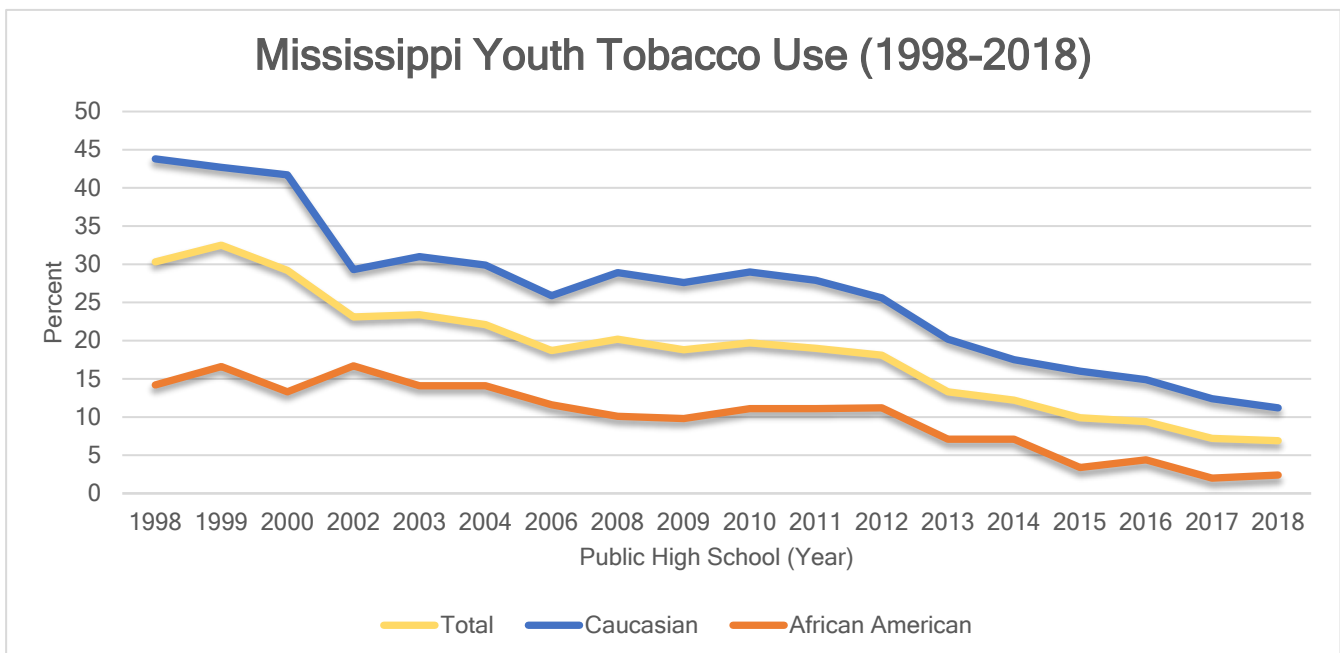
- Throughout the identified time period, tobacco use significantly declined for both male and female middle schoolers. (In 1998, males reported 23% and 18.2% for females. By 2018, those had dropped to 2.7% and 2.1%, respectively).
- Males had slightly higher tobacco use than females.
- Throughout the identified time period, tobacco use significantly declined for both male and female high schoolers. (In 1998, males reported 33.9% and 27.1% for females. By 2018, those had dropped to 7.9% and 6%, respectively).



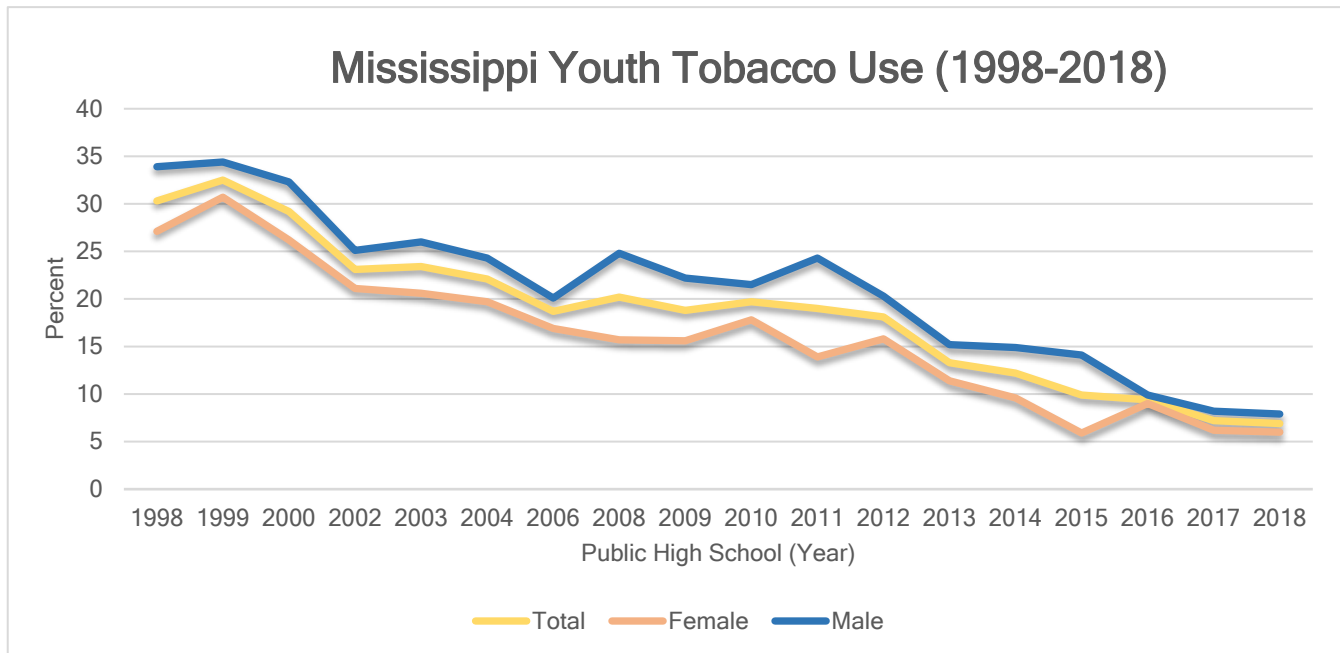
- Middle school tobacco use for both African Americans and Caucasians significantly dropped from 1998 to 2018. Percentages for African Americans dropped from 17.6% to 1.9% throughout the identified time period. Percentages for Caucasians dropped from 22.8% to 2.4% during the identified time period.



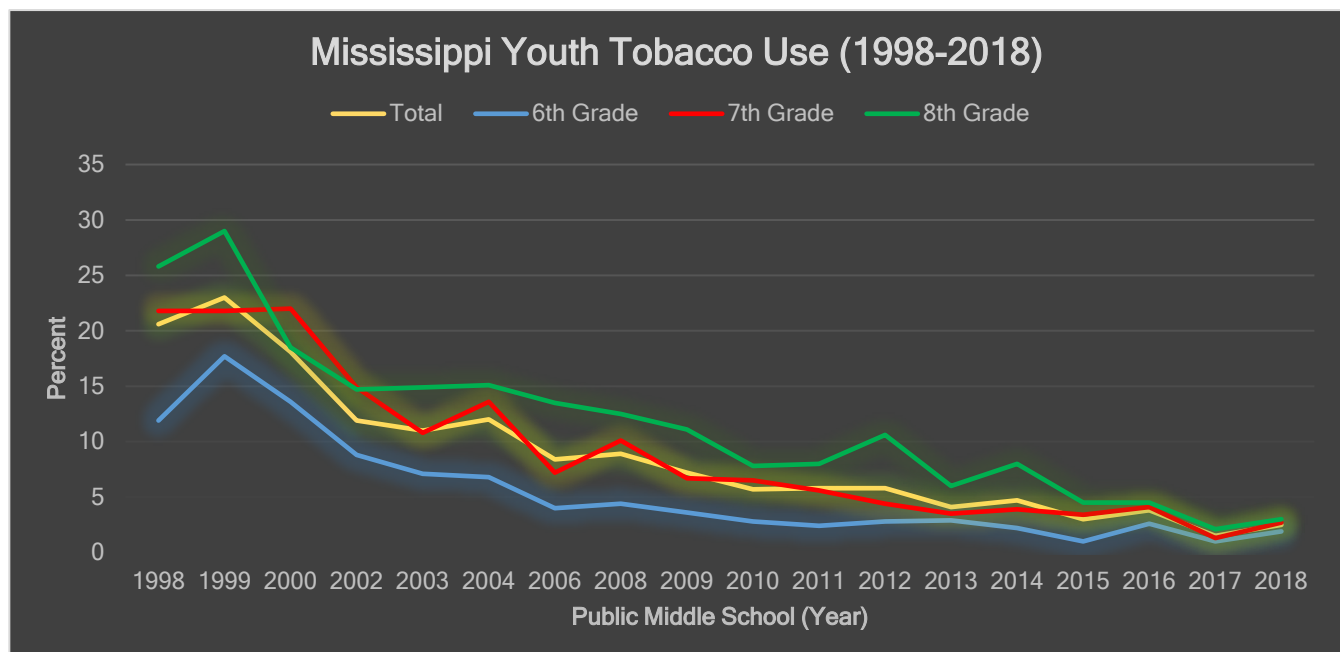
- High school tobacco percentages for both African Americans and Caucasians significantly dropped from 1998 to 2018. Percentages for African Americans dropped from 14.2% to 2.4% throughout the identified time period. Percentages for Caucasians dropped from 43.8% to 11.2% during the identified time period.
- Caucasians had significantly higher percentages of tobacco use than African Americans (2018: 11.2% vs 2.4%, respectively).

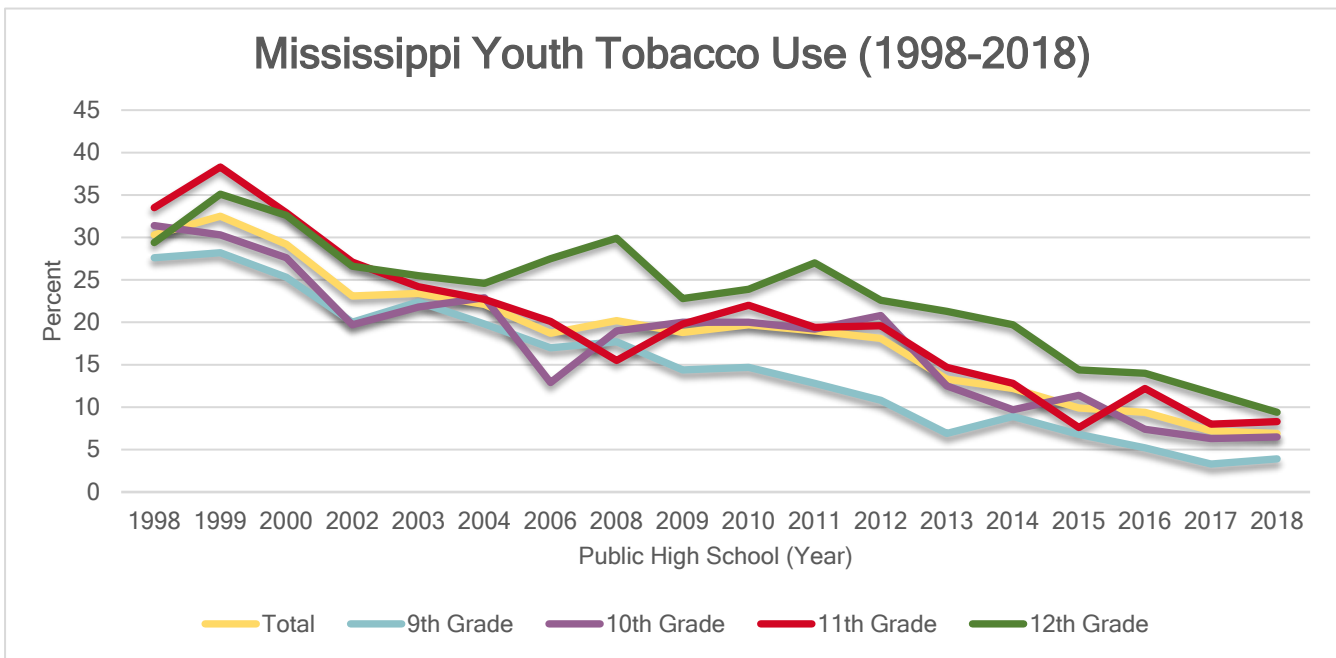


- Percentage of tobacco usage decreased for both males and females. In 1999, males had a rate of 34.4% and females had a rate of 30.7%. In 2018, the rates dropped to 7.9% and 6%, respectively.
- Males had consistently higher usage than females for all reported years.



- In both middle and high school, tobacco use was positively correlated with grade level.
- In all grade levels, there was a dramatic decrease in tobacco use rates throughout the identified time period.





ACCESS TO CARE

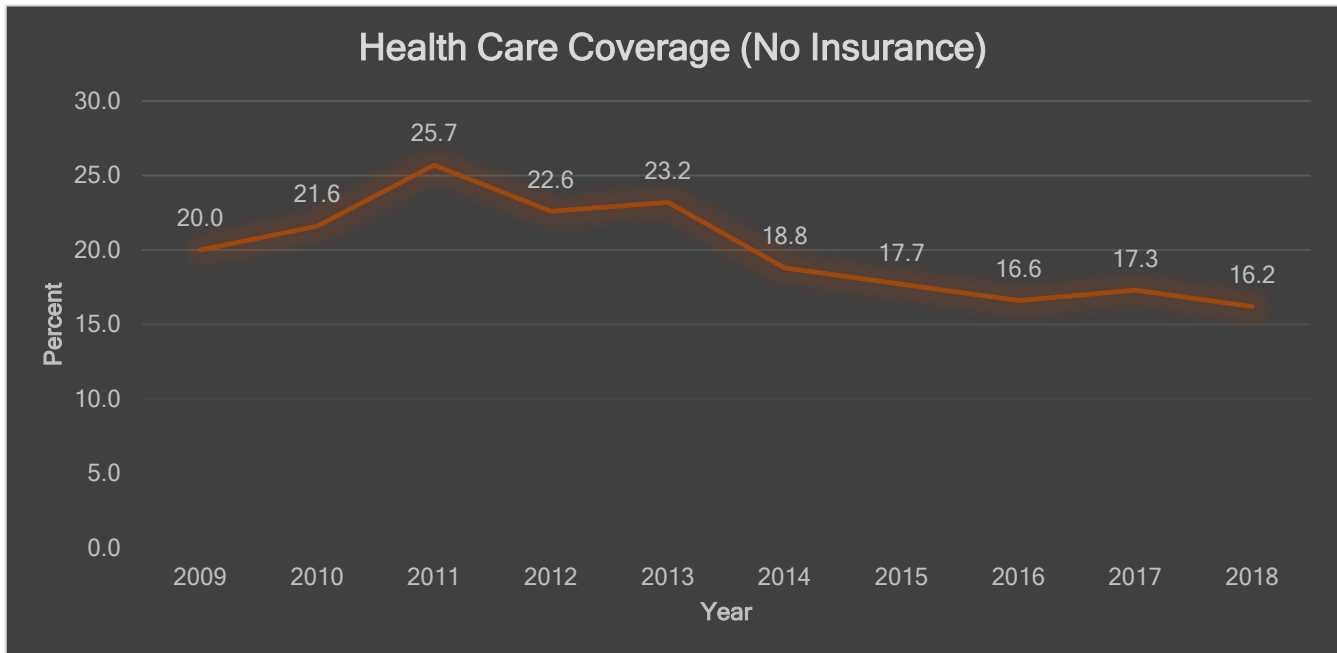
Access to care refers to the ability to get necessary healthcare without significant barriers. This not only refers to acute situations, but includes recommended preventative services across the spectrum of care. While typically thought of as whether or not individuals and families have health insurance, access to care issues are also impacted by disparities across the landscape of the social determinants of health.

Health Care Coverage

In this context, the presence or absence of health insurance.

The key findings from the data show:

- Since 2011, where 25% of the population was without health insurance, the number of uninsured has steadily dropped.
- African Americans had significantly higher percentages of being uninsured vs. Caucasians (2017: 22.6% vs 13.6%, respectively).
- In all districts, with the exception of District 6, African Americans had higher percentages of being uninsured.

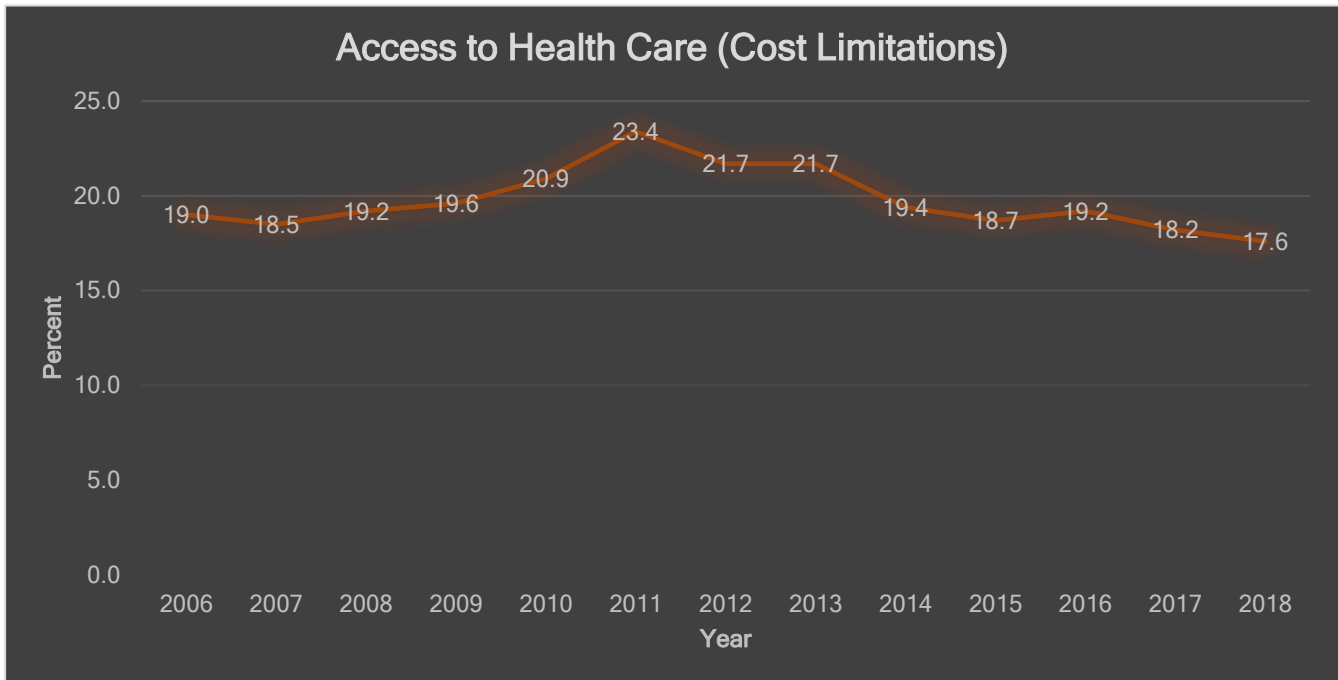


Health Care Cost Limitations (Under-Insured)

Defined as individuals/families who may have some level of health insurance, but still face financial obstacles to accessing the preventative and primary care they need to maintain optimal health.

The key findings from the data show:

- Throughout the identified timeframe, greater than 15% of respondents indicated they experienced cost limitations when trying to access various forms of healthcare.
- This metric peaked in 2011, when 23.4% of respondents indicated they experienced cost limitations to healthcare. Since then, there was a steady decrease in access to care due to cost limitations.
- Percentages were lowest in 2018, when 17.6% indicated cost limitations.

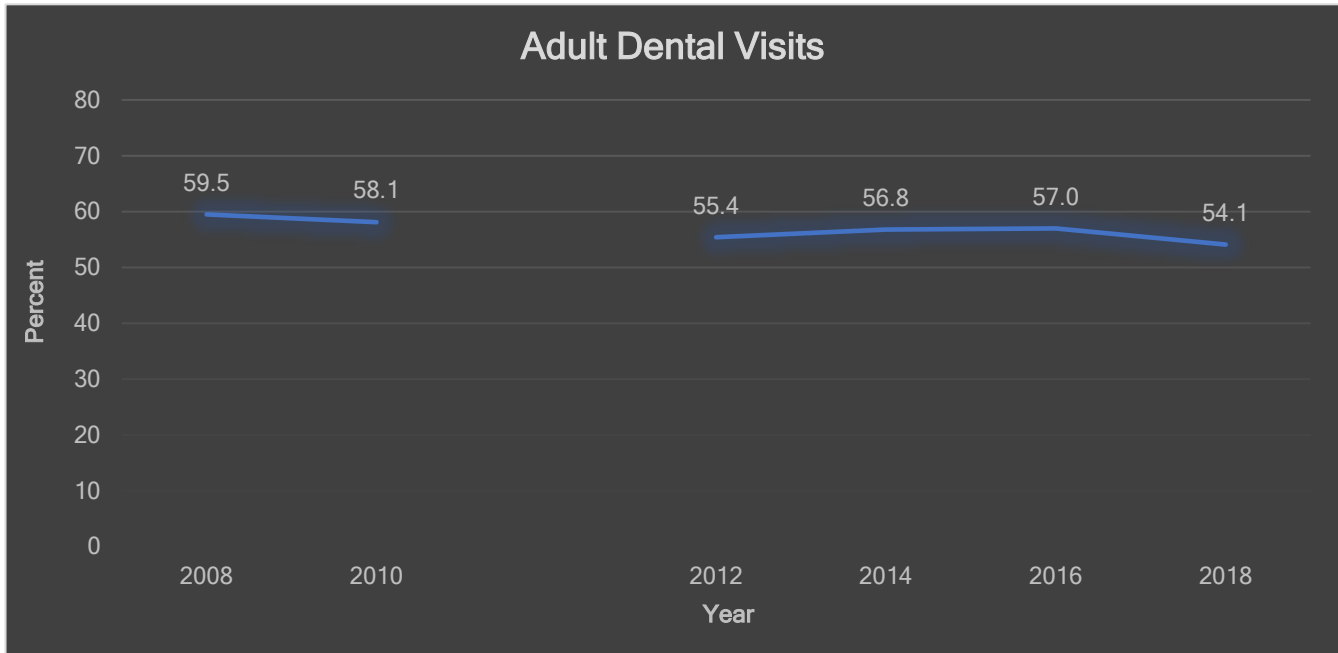


Adult Dental Visits

Preventative dental care contributes to positive health in all aspects. Acute dental health needs can quickly alleviate serious medical concerns. Both are key components to overall dental health.

The key findings from the data show:

- Throughout the entire time period identified, less than 60% of adults indicated they regularly visit the dentist.
- Positive tooth health contributes to physical, mental, emotional and social health.
- In 2018, 54.1% of adults partook in a dental visit.



INFECTIOUS DISEASE

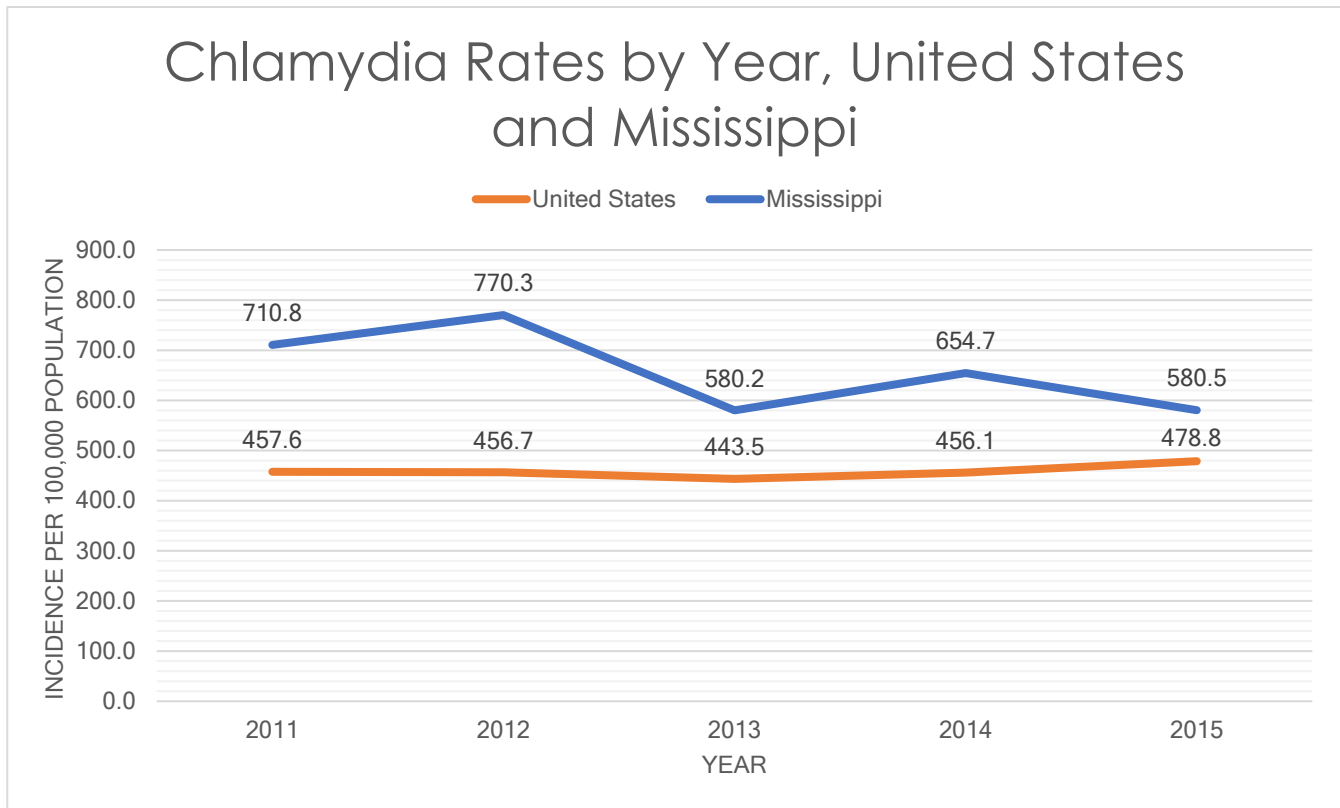
Infectious diseases are disorders caused by organisms – such as bacteria, viruses, fungi or parasites. Many organisms live in and on our bodies. They're normally harmless or even helpful. But under certain conditions, some organisms may cause disease. Some infectious diseases can be passed from person to person. (Mayo Clinic 2019)

Chlamydia

Chlamydia is a common sexually transmitted disease (STD) that can be easily cured. If left untreated, chlamydia can make it difficult for a woman to get pregnant. (CDC 2019)

The key findings from the data show:

- Over the identified time period, Chlamydia rates in Mississippi were higher than the national average.
- The 5-year state trend declined, going from a high of 770.3/100,000 population in 2012 to a low of 580.5/100,000 population in 2015.

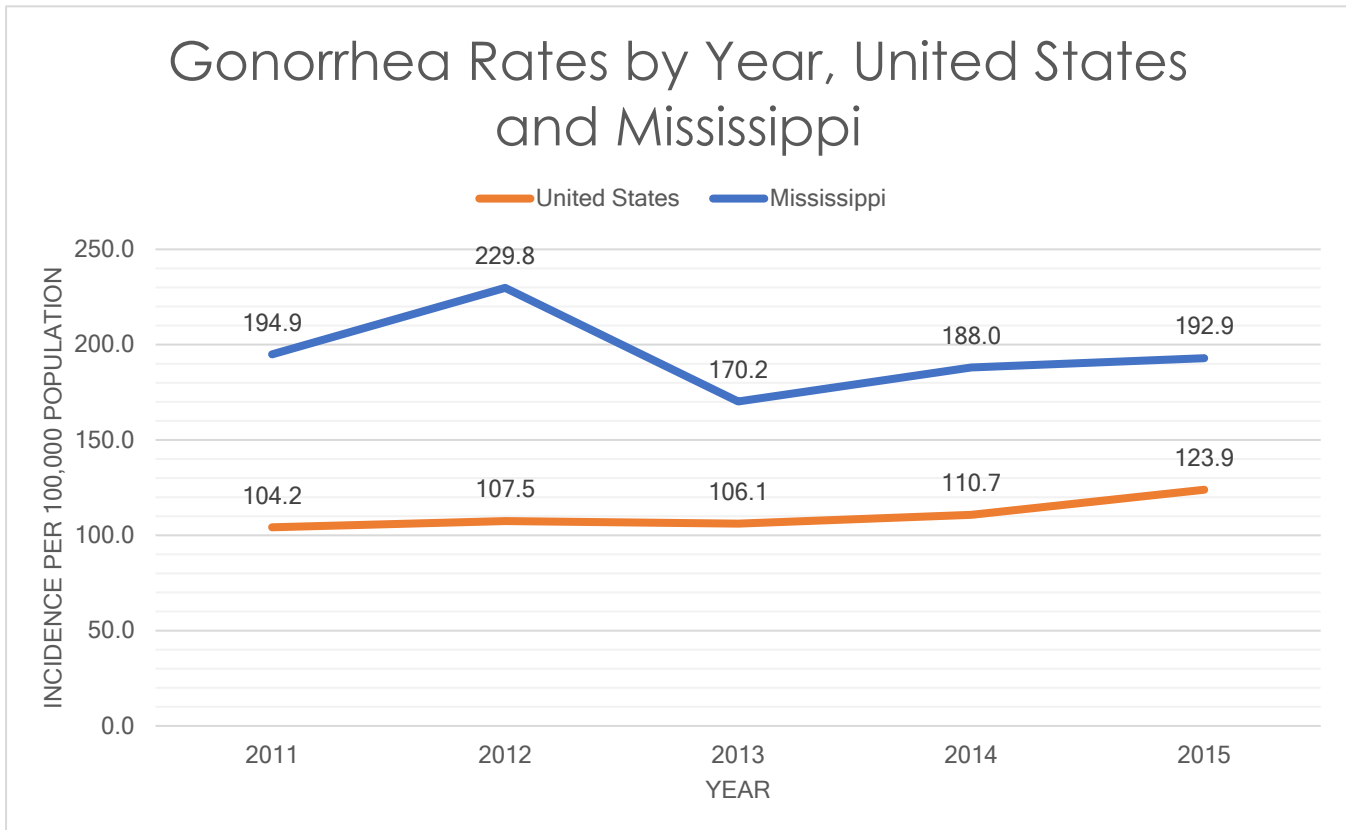


Gonorrhea

Gonorrhea is a sexually transmitted disease (STD) caused by infection with the *Neisseria gonorrhoeae* bacterium. *N. gonorrhoeae* infects the mucous membranes of the reproductive tract, including the cervix, uterus, and fallopian tubes in women, as well as the urethra in women and men. *N. gonorrhoeae* can also infect the mucous membranes of the mouth, throat, eyes, and rectum. (CDC 2019)

The key findings from the data show:

- Over the identified time period, Gonorrhea rates in Mississippi were significantly higher than the national average.
- The highest rate was seen in 2012, with a rate of 229.8/100,000 population. This was followed by a decline in 2013 to a rate of 170.2/100,000.
- The rate for 2013 was the lowest gonorrhea rate seen in Mississippi for the 5 years identified.

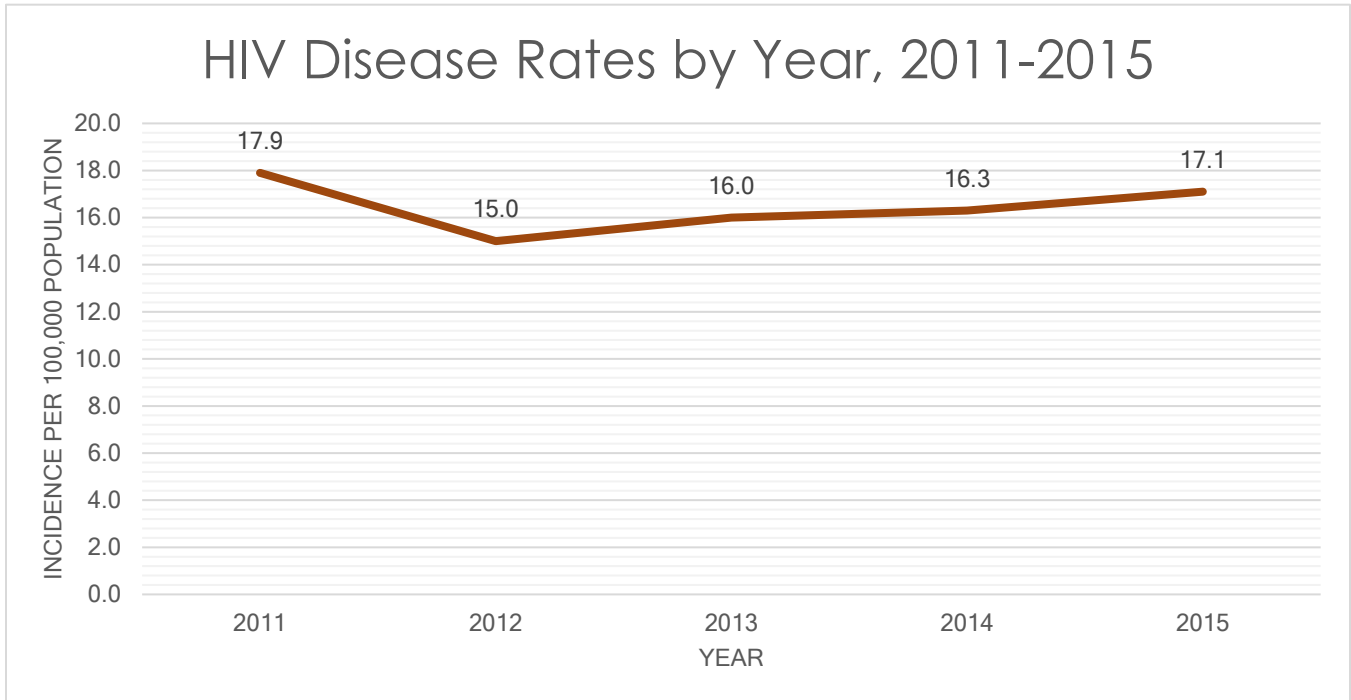


HIV

HIV stands for human immunodeficiency virus. It weakens a person's immune system by destroying important cells that fight disease and infection. No effective cure exists for HIV. But with proper medical care, HIV can be controlled. (CDC 2019)

The key findings from the data show:

- Since 2012, HIV rates trended slightly upward, from 15/100,000 population in 2012 to 17.1 /100,000 population in 2015.
- In 2011, Mississippi had 533 cases of HIV. In 2015, the number of cases was 511.

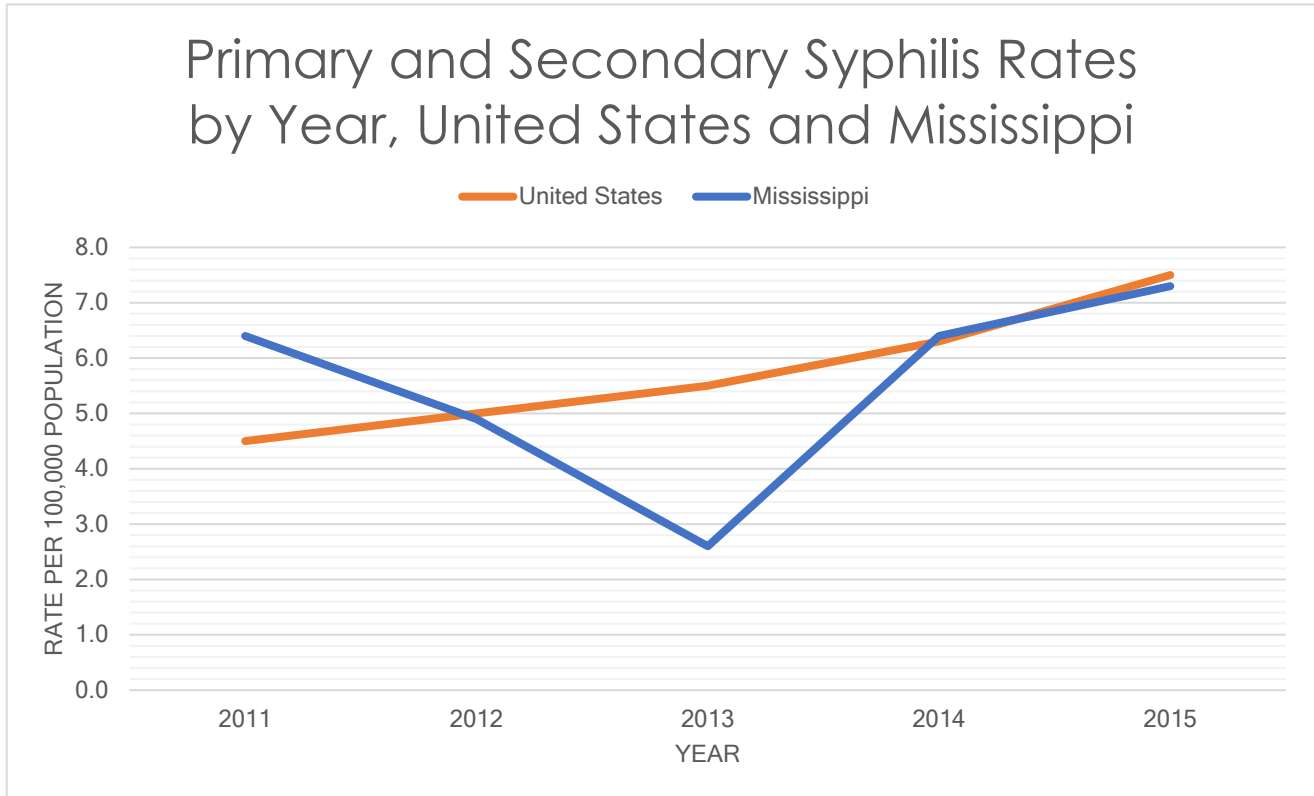


Syphilis

Syphilis is a sexually transmitted disease (STD) caused by the bacterium *Treponema pallidum*. Syphilis is passed from person to person through direct contact with a syphilitic chancre.

The key findings from the data show:

- During the identified time period Mississippi saw its lowest rate of Syphilis in 2013, at 2.6/100,000 population.
- In 2014 and 2015 the state rate was consistent with the national rate throughout the identified time period.



Tuberculosis

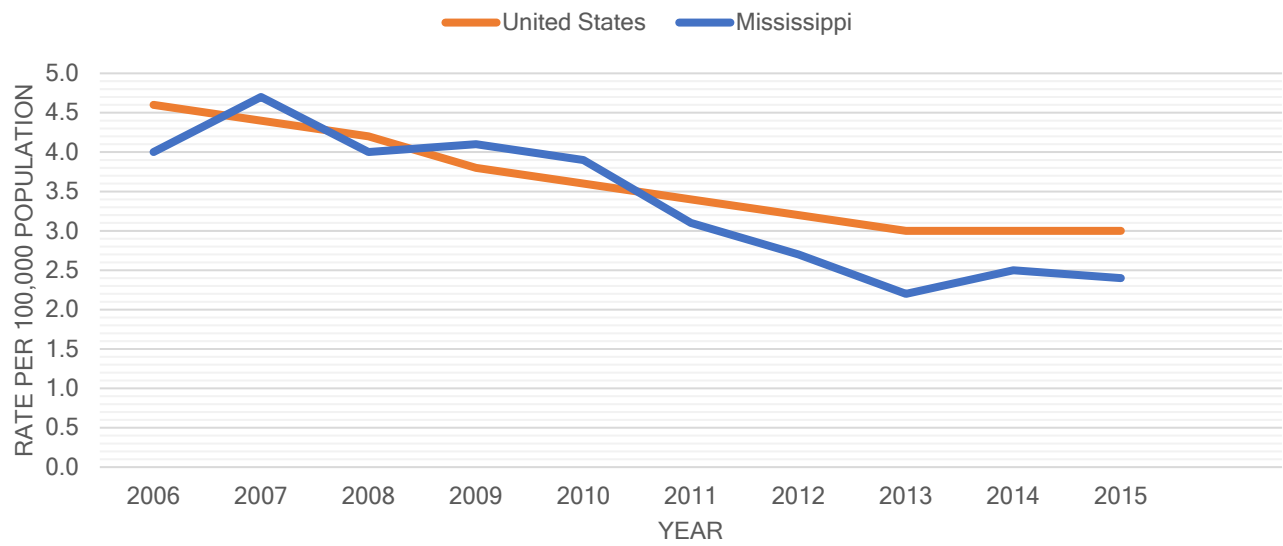
Tuberculosis (TB) is a potentially serious infectious disease that mainly affects your lungs. The bacteria that cause tuberculosis are spread from one person to another through tiny droplets released into the air via coughs and sneezes.

(Mayo Clinic 2019)

The key findings from the data show:

- Rates of Tuberculosis, at both the state and national levels, trended consistently down throughout the identified time period.
- Mississippi saw its highest rate in 2007 with a rate of 4.7/100,000 population (137 cases).
- The lowest state rate was experienced in 2013 with a rate of 2.2/100,000 population (65 cases).

Tuberculosis Rates by Year, United States and Mississippi



MCH INDICATORS

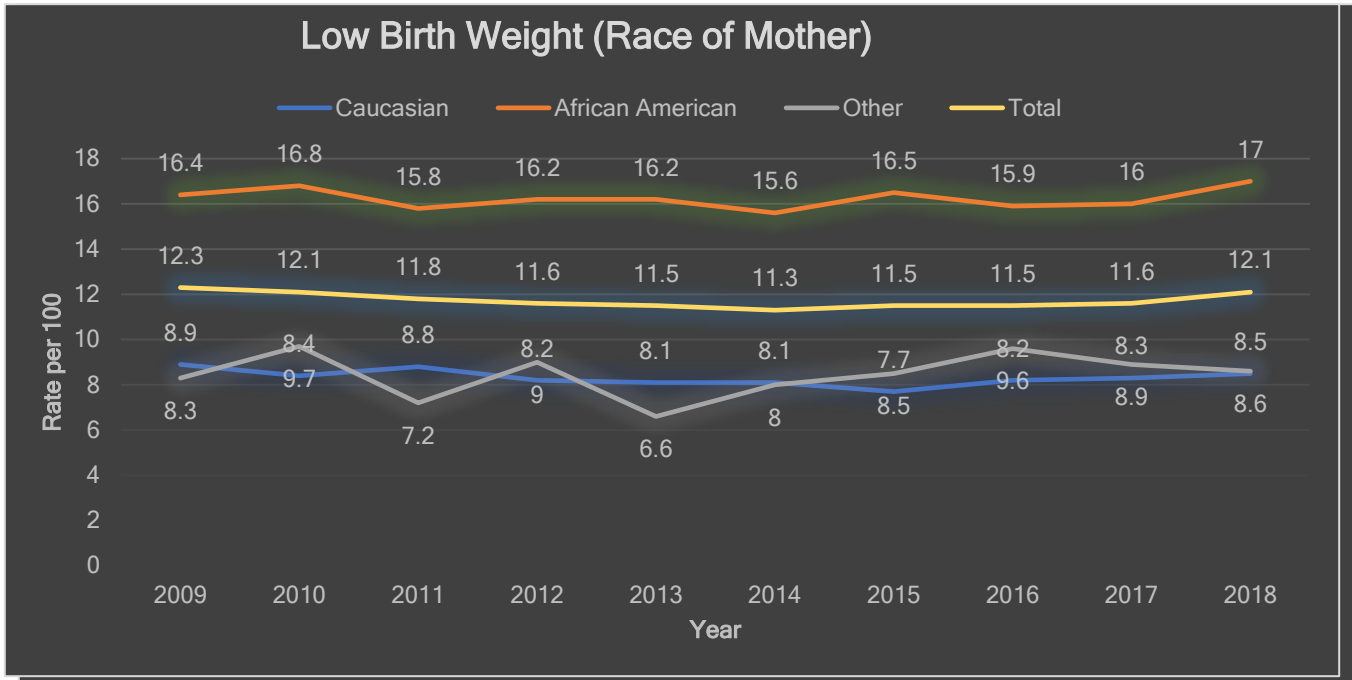
Maternal Child Health (MCH) Indicators are a standardized set of metrics used to identify high risk pregnancies, so that interventions can be implemented to mitigate the likelihood of poor birth outcomes and protect the health of mom and baby.

Low Birth Weight

Babies born at less than 2,500 grams.

The key findings from the data show:

- In 2018, the low birth weight rate in Mississippi was 12.1/100 births.
- Throughout the time period, African Americans had the highest rates of low birth weight deliveries.
- In 2018, the African American rate of low weight births was 17/100 births, compared to Caucasians 8.5/100 births.

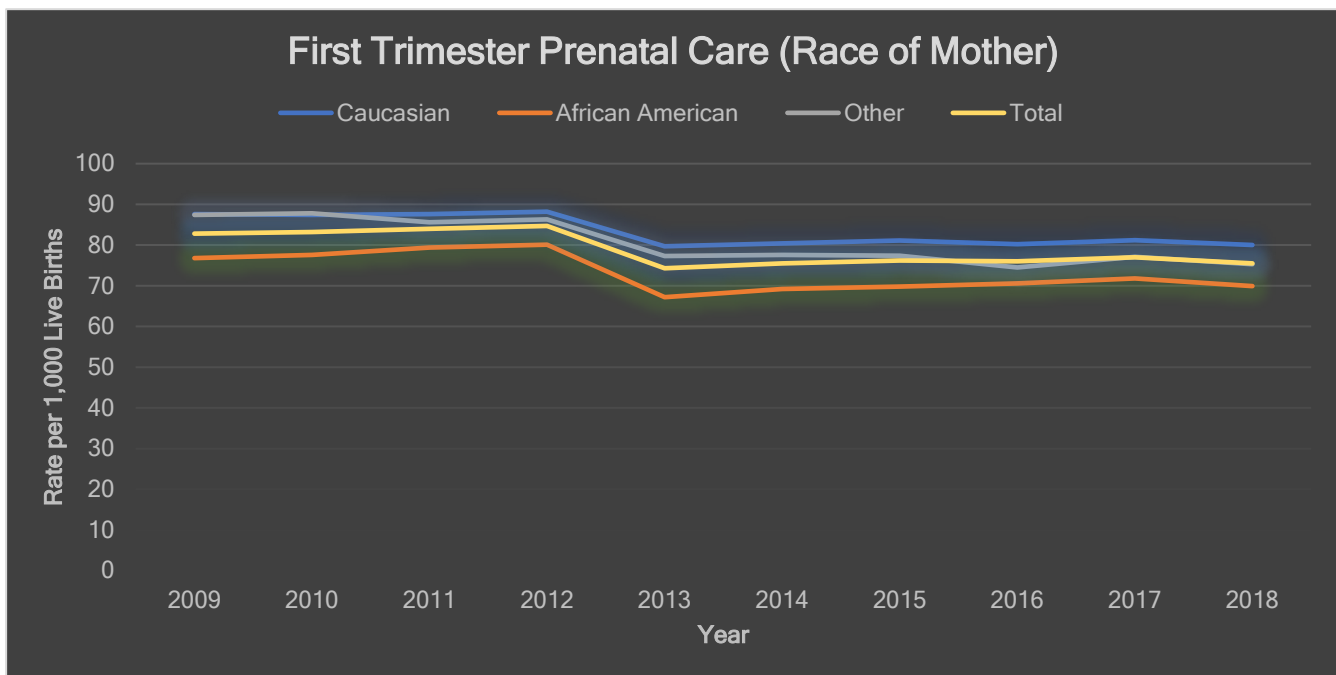


1st Trimester Prenatal Care

Appropriate and consistent prenatal care is one of the most effective ways of ensuring positive birth outcomes.

The key findings from the data show:

- The rate in Mississippi for first trimester care was 75.5/1,000 live births, in 2018.
- Although similar, African Americans still had the lowest rates of 1st Trimester Prenatal Care (2018: 69.9/1000 live births vs. 80/1000 live births for Caucasians).
- African Americans and Caucasians both showed a decrease in prenatal care from 2012 to 2013. For African Americans this went from 80.1/1,000 live births in 2012 to 67.2/1,000 live births in 2013. For Caucasians this went from 88.2/1,000 live births in 2012 to 79.7/1,000 live births in 2013.

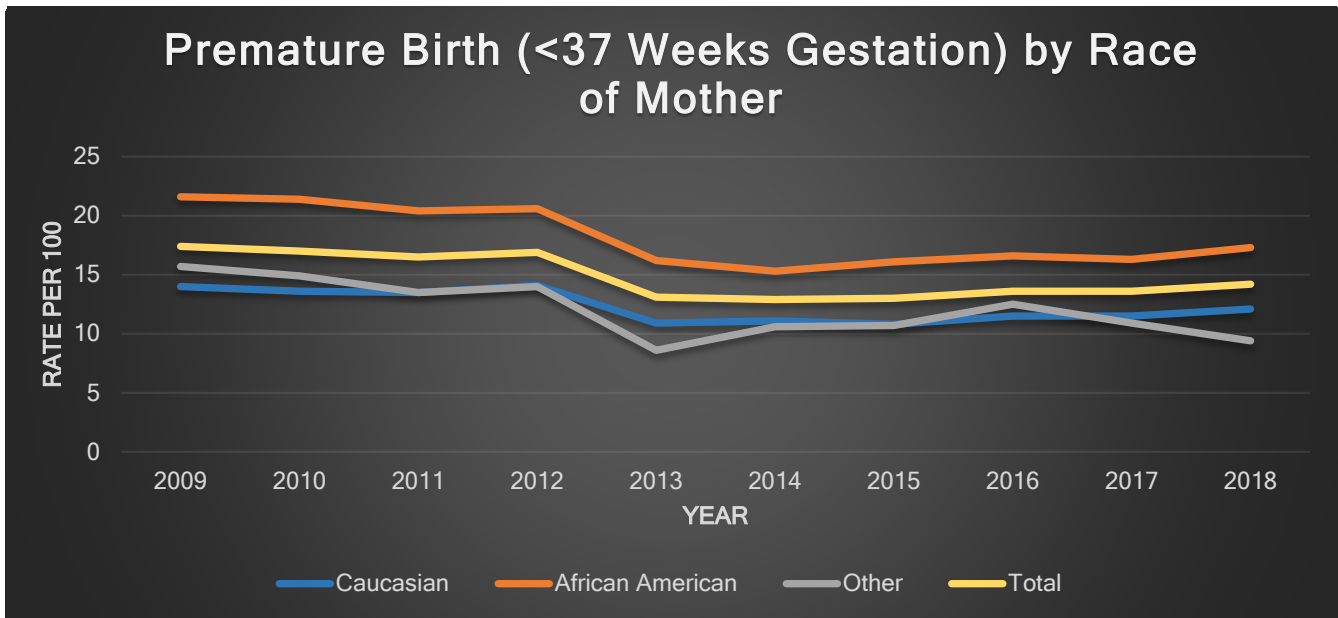


Premature Birth

Premature Birth is defined as delivery prior to 37 weeks gestation. This has been directly linked to lower health outcomes.

The key findings from the data show:

- In 2018, the premature birth rate for Mississippi was 14.2/100 live births.
- Throughout the entire time period, African Americans had the highest rates of premature births (2018: 17.3/100 for African Americans vs. 14.2/100 overall).
- The 10-year trend for premature births overall declined.

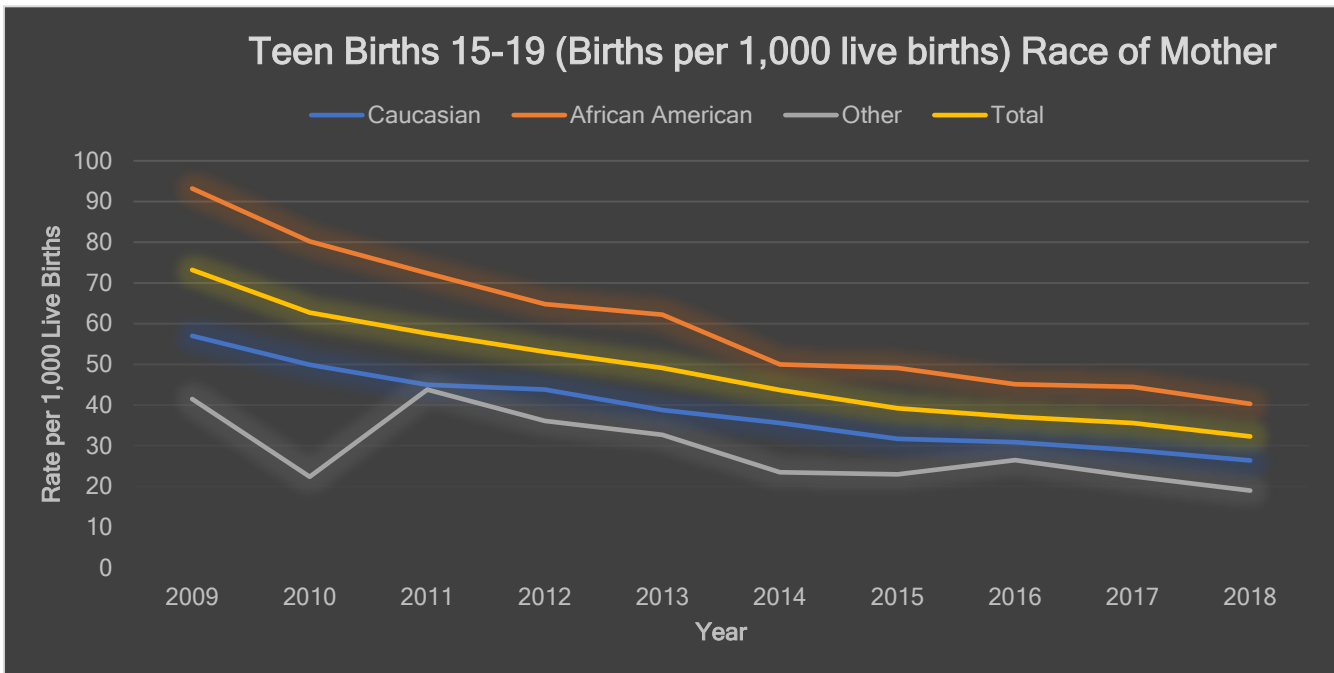


Teen Births (15-19)

Babies born to mothers between 15 and 19 years old. Teen births produce many challenges for both mom and baby. They include lower overall birth outcomes and health disparities due to barriers across the spectrum of the social determinants of health.

The key findings from the data show:

- In 2018 the teen birth rate for Mississippi was 32.3/1,000 live births.
- African Americans had the highest rates in 2009 with 93.2/1,000 live births.
- African Americans represented the group with the highest overall rates of teen births throughout the identified time period.
- The overall trend for teenage births in Mississippi declined for the time period shown.



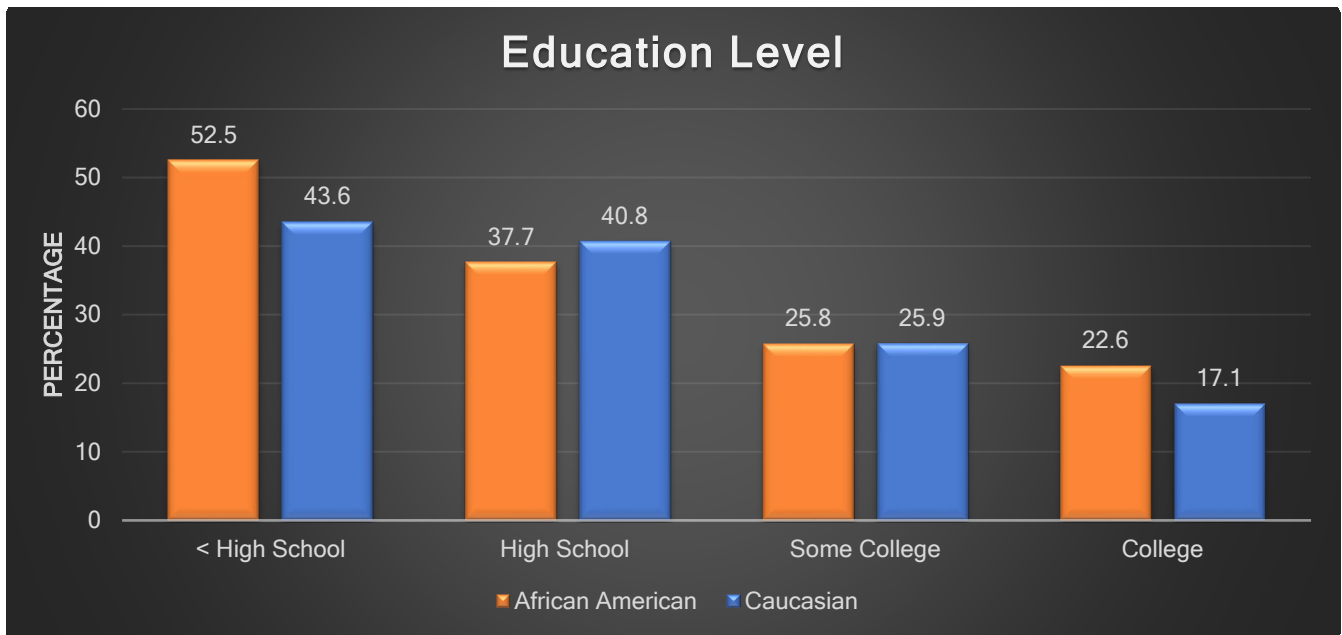
DEMOGRAPHIC AND SOCIAL ECONOMIC STATUS (SES) FACTORS

This section refers to metrics that often comprise a large portion of the social determinants of health (SDOH). These are often determined by race, ethnicity, culture, and biology. Disparities in these areas are often seen as root cause issues in overall health disparities across the spectrum.

Education by Race

The key findings from the data show:

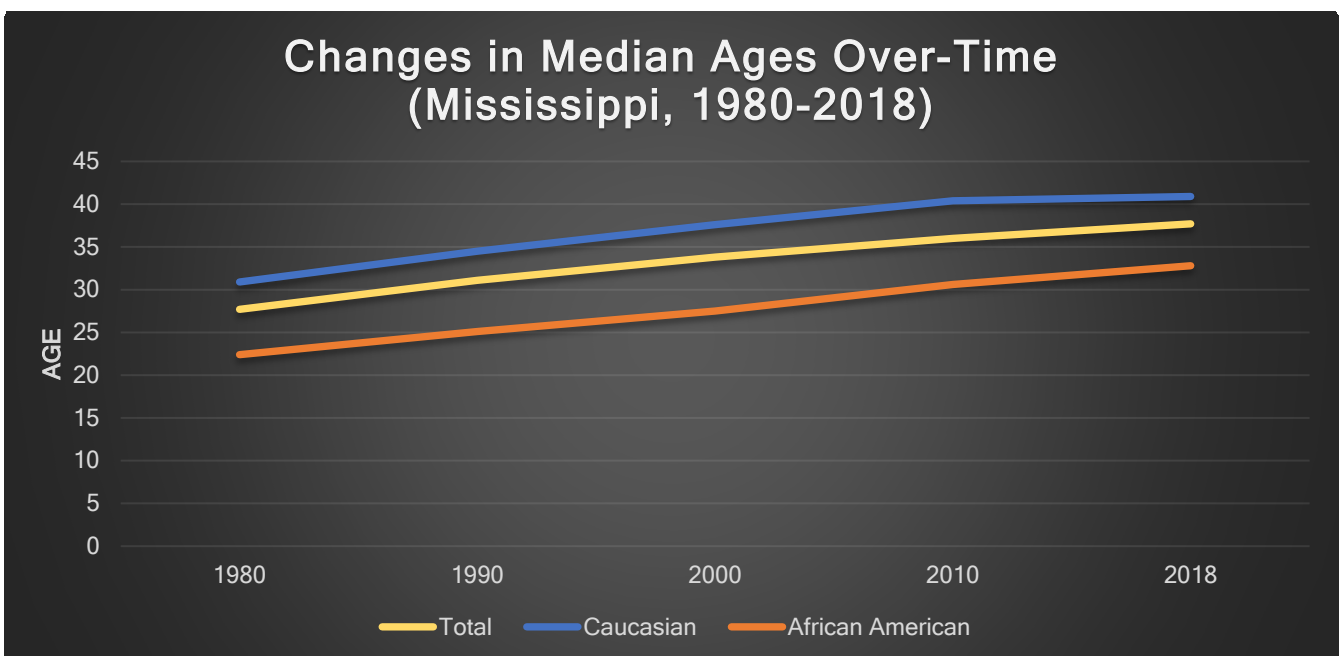
- More African Americans had less than a high school education as compared to Caucasians, at 52.5% vs 43.6%, respectively.
- More African Americans indicated college level education as opposed to Caucasians, at 22.6% vs 17.1% respectively.



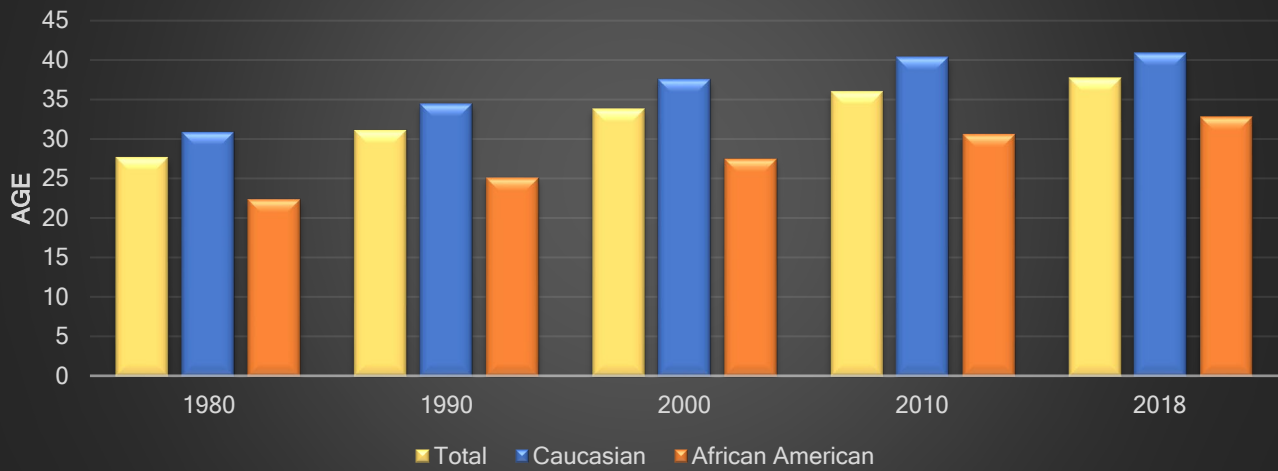
Age

The key findings from the data show:

- Overall, Caucasians on average were older than African Americans.
- Median age increased for Caucasians from 30.9 years to 40.9 years from the time period 1980 - 2018.
- Median age increased for African Americans from 22.4 years to 32.8 years from the time period 1980-2018.



Changes in Median Ages Over-Time (Mississippi, 1980-2018)



IMMUNIZATIONS

Immunizations are one of the greatest overall accomplishments in the field of public health and medicine. Getting immunized and remaining current is one of the very best protective health behaviors, saving countless lives every year.

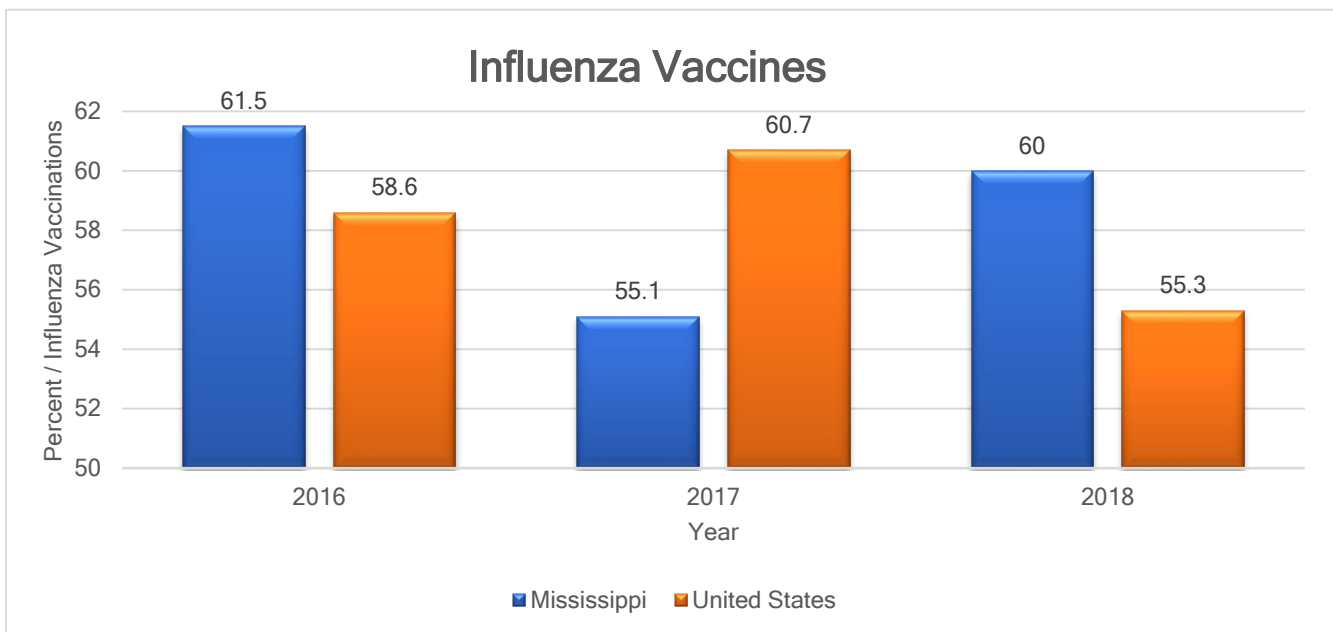
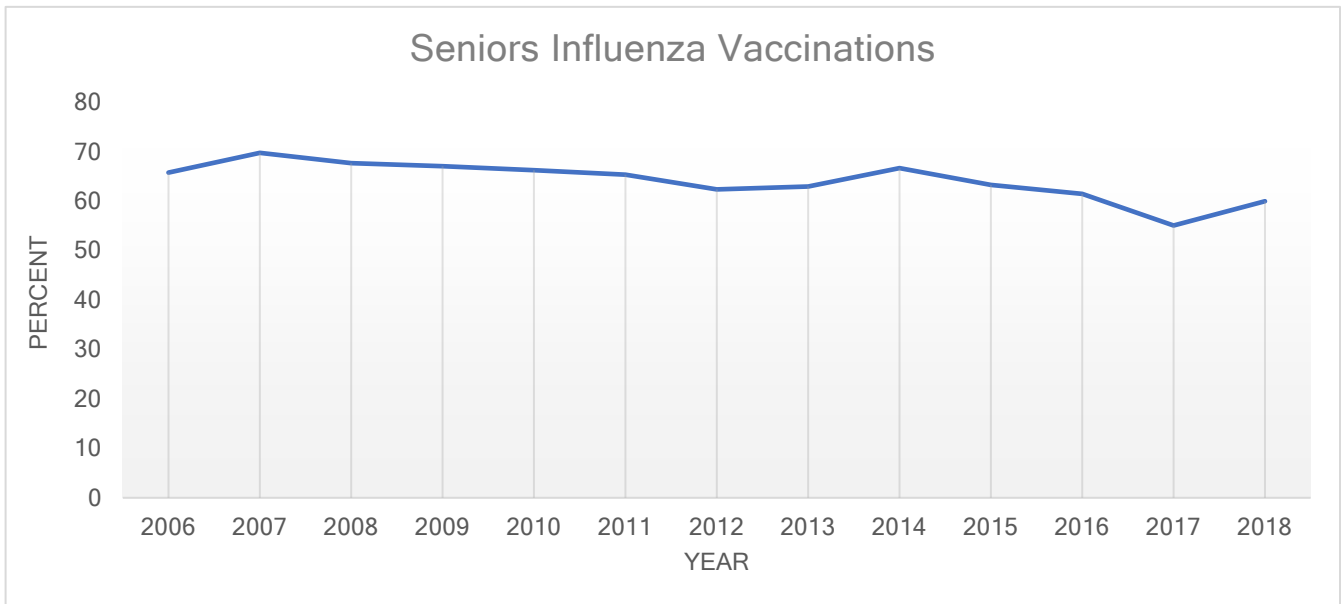
Vaccination Rates

Based on the disease, rates of vaccination play a key role in herd immunity, thereby protecting the entire population and not just those who are vaccinated.

Influenza

The key findings from the data show:

- Throughout the identified time period, percentages of senior influenza vaccinations ranged from 55.1% to as high as 69.8%.
- There has been a slight decline from 2006 (65.8%) to 2018 (60%).
- From 2016-2018, overall influenza immunization percentages ranged from 55.1% to 61.5%, and are in line with national trends.
- In 2017, Mississippi had lower influenza vaccinations than the United States.

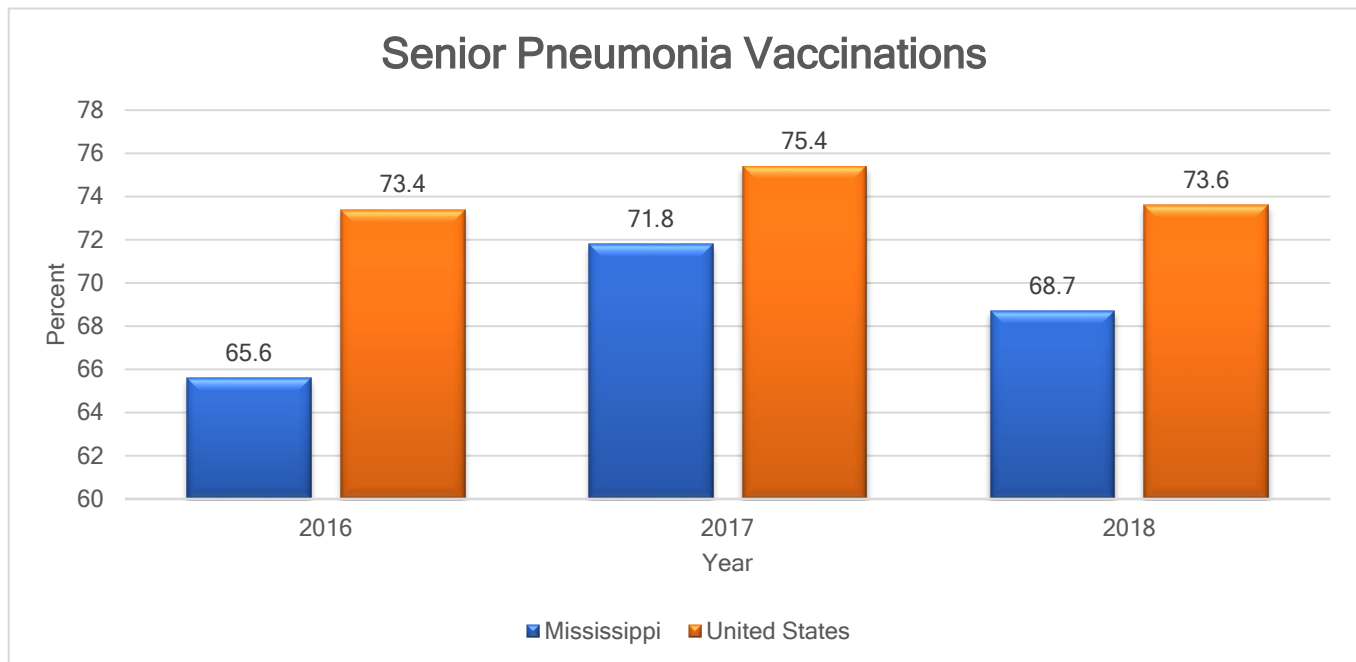
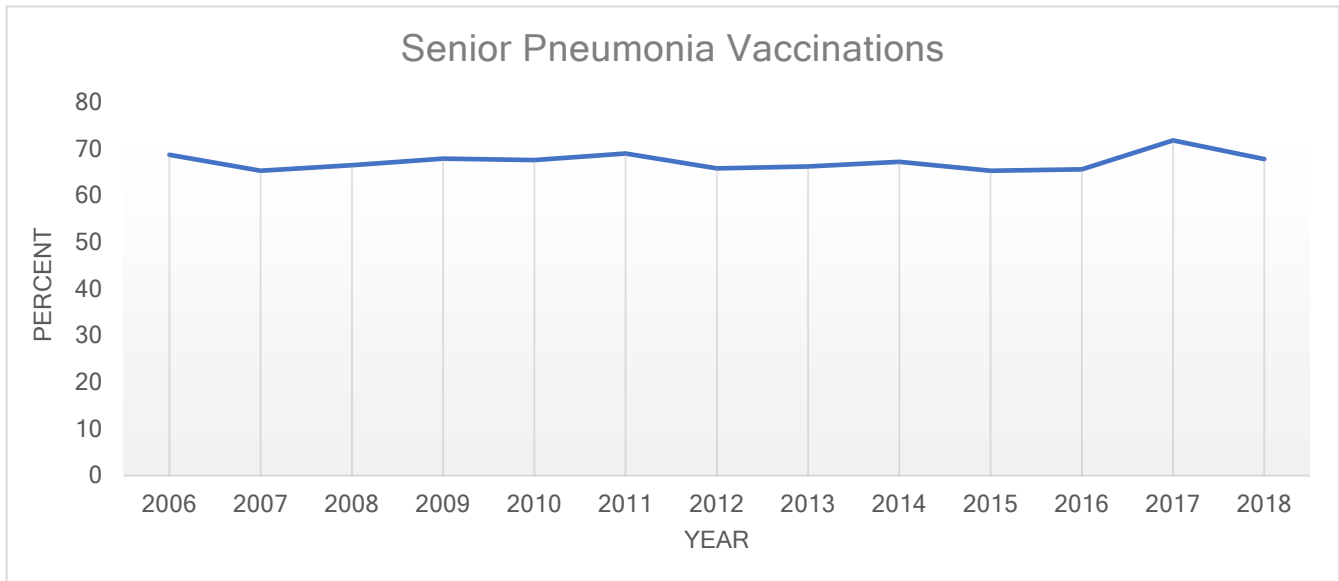


Pneumonia

The key findings from the data show:

- Senior pneumonia vaccination rates stayed consistent over the identified time period, from a low of 65.3% in 2007 and 2015 to a high of 71.8% in 2017.

- Over the time period 2016-2018, senior pneumonia vaccination rates fell well below the national rates.



SELF RATED HEALTH

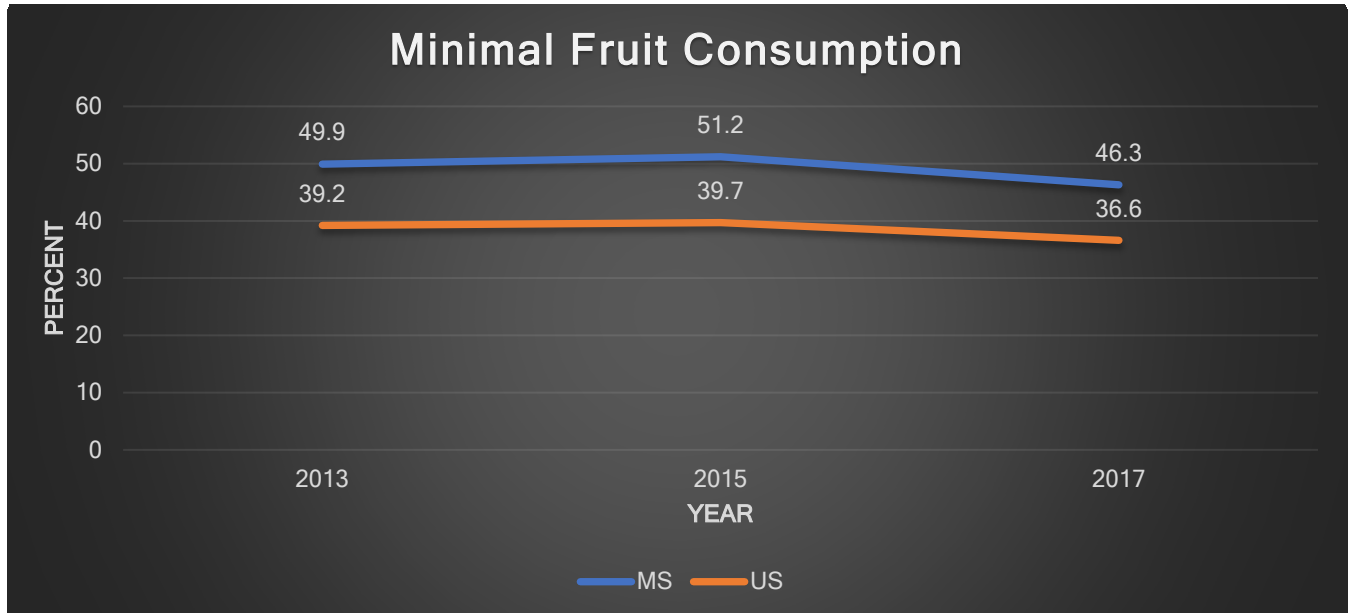
Respondent's own views of their overall health, adherence or lack thereof to healthy behaviors, and participation in risky behaviors to determine a subjective view of personal health.

Fruit Consumption

A healthy diet that includes minimum recommended amounts of fruits (in general 1 ½ to 2 cups/day) is one of the most modifiable healthy behaviors, with the most overall impact on positive health outcomes.

The key findings from the data show:

- Throughout the time period identified, Mississippi residents had a higher rate of fruit consumption than that of the US.
- At its peak in 2015, 51.2% of respondents indicated they consistently consume the minimum recommended amount of fruits.

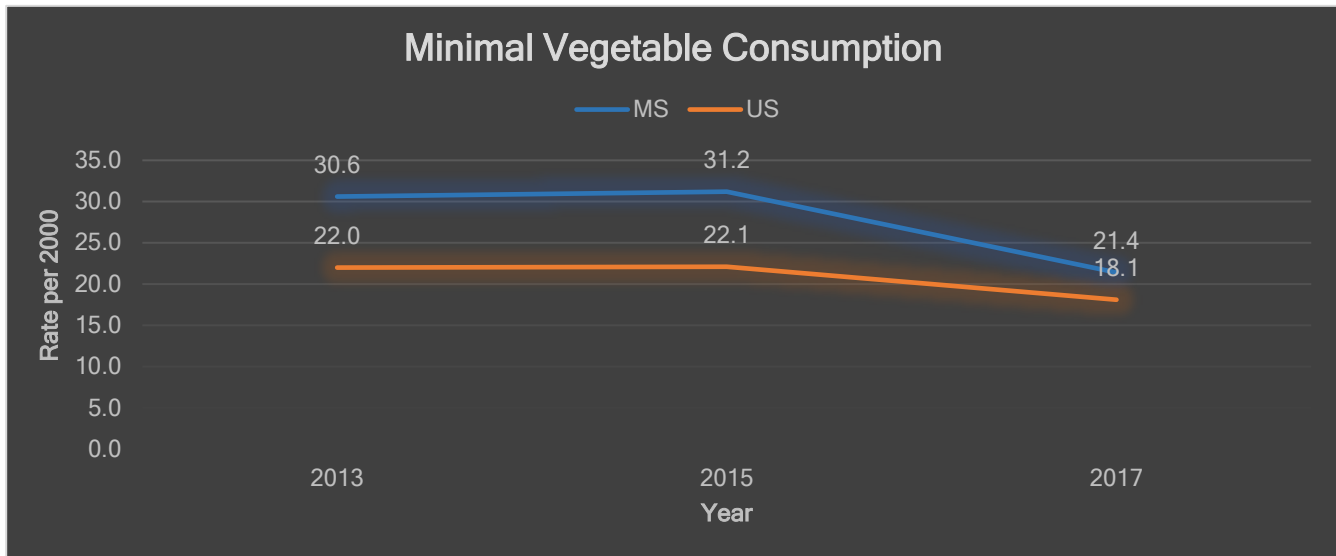


Vegetable Consumption

A healthy diet that includes minimum recommended amounts of vegetables (in general 2 to 3 cups/day) is one of the most modifiable healthy behaviors with the most overall impact in positive health outcomes.

The key findings from the data show:

- Throughout the time period identified, Mississippi residents had a higher rate of vegetable consumption than that of the US.
- The rate of vegetable consumption declined sharply between 2015-17, from 31.2/2000 to 21.4/2000.



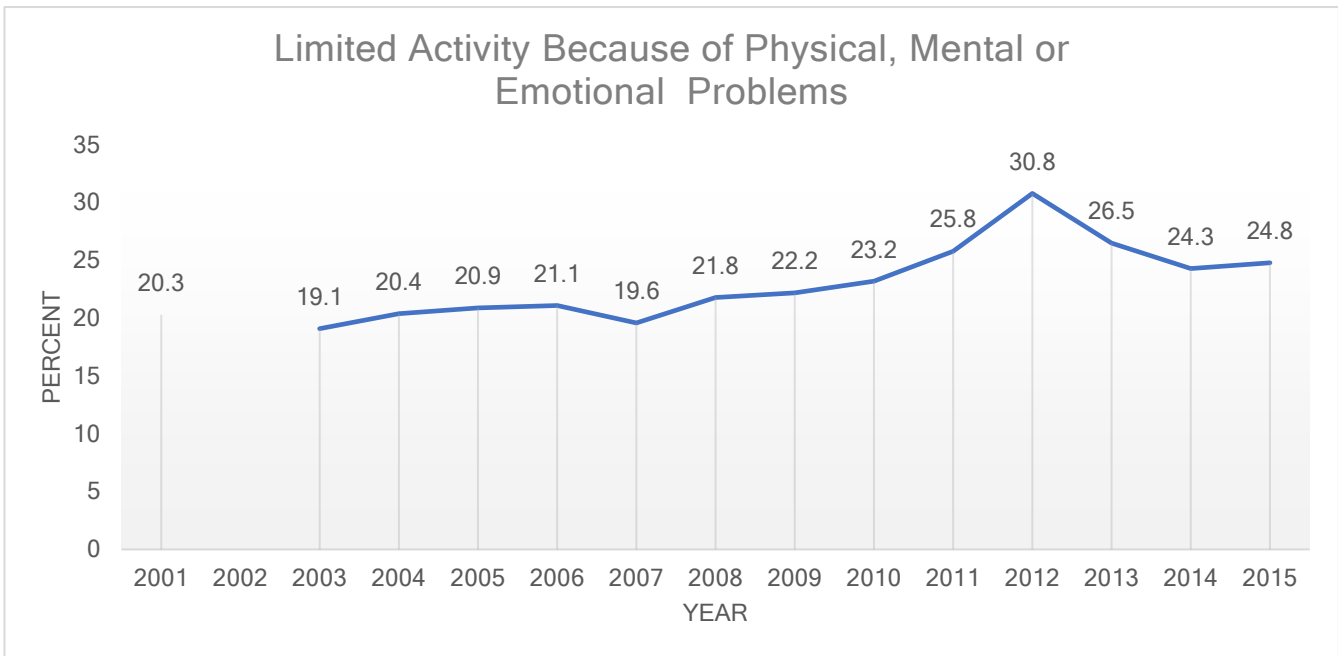
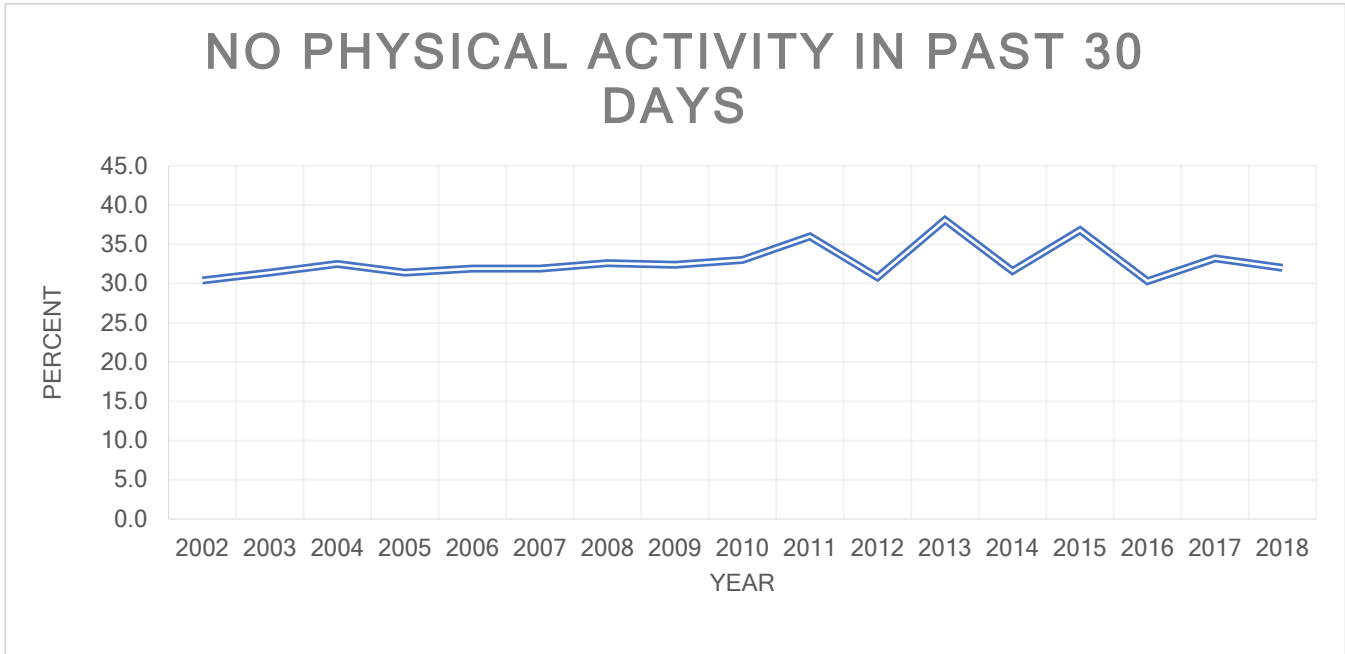
Physical Activity

Physical activity is imperative for overall physical and mental health. It is also one of the easiest health behaviors to accomplish in a variety of ways. Measurements of physical activity are self-perceived and defined as levels of inactivity over a specified time period. Measurements are overall, and by level of education.

The key findings from the data show:

- Throughout the time period, Mississippi showed a higher percentage of individuals being inactive than the US average. In 2018, 32% of MS respondents indicated no activity for 30 days vs. the national rate of 23.8%.
- The largest disparity of physical activity levels between African Americans and Caucasians is in the lowest education level category. 52.5% of African Americans with less than a high school education report being inactive for a thirty day period.
- The 14-year trend shows a consistent increase in the number of respondents who had reduced activity levels because of either physical, mental, or emotional problems.

Anything that contributes to a reduction in the ability to carry out day-to-day activities can have a detrimental effect on overall health.

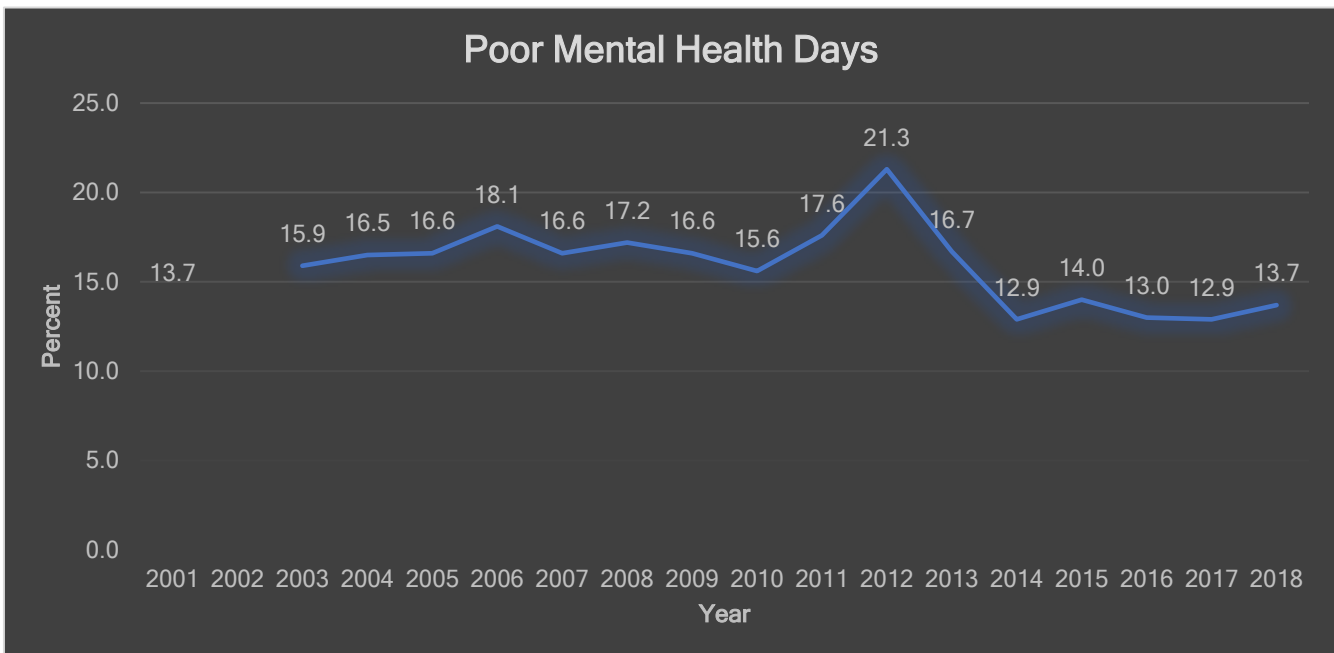


Poor Mental Health Days

Self-reported health status is a general measure of health-related quality of life used in the County Health Rankings and Roadmap. This self-measurement is usually reported over 'the last 30 days' and is part of the Behavioral Risk Factor Surveillance System (BRFSS).

The key findings from the data show:

- In 2018, the percentage of those reporting poor mental health days was 13.7%
- Self-reported poor mental health days was at its lowest rate in 2014 (12.9%) and at its highest rate in 2012 (21.3%).



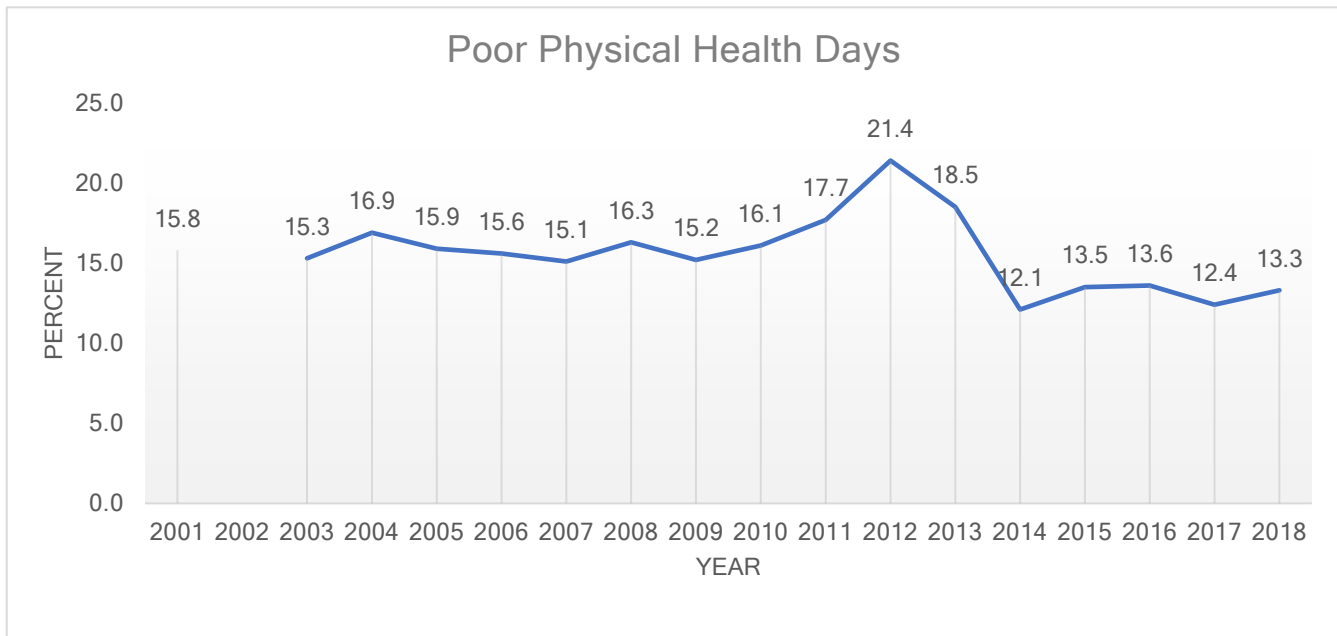
Poor Physical Health Days

Self-reported health status is a general measure of health-related quality of life and is used in the County Health Rankings and Roadmap. This self-measurement is usually reported over 'the last 30 days' and is part of the Behavioral Risk Factor Surveillance System (BRFSS).

The key findings from the data show:

- In 2018, 13.3% of people reported poor physical health days.

- Self-reported poor physical health days was at its lowest rate in 2014 (12.1%) and at its highest rate in 2012 (21.4%).
- A peak was seen in 2012 for both poor mental and physical health days.

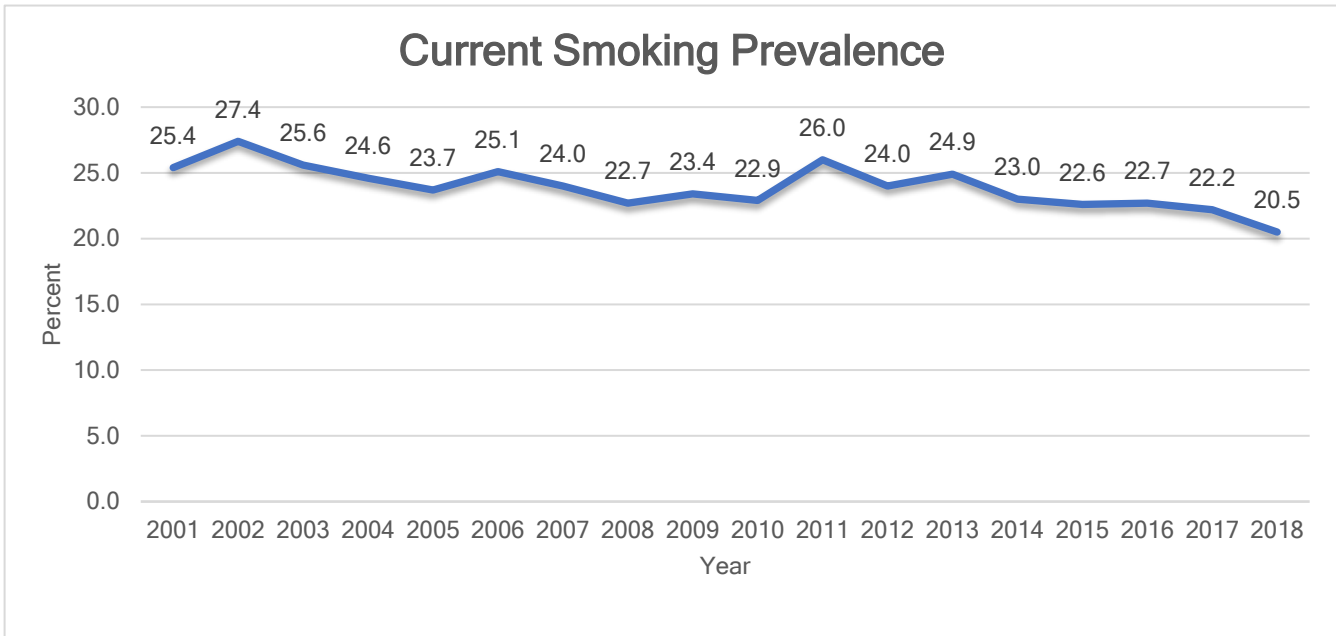


Smoking Prevalence

Tobacco use is one of the most harmful behaviors for overall health outcomes and is a leading cause of chronic disease and mortality.

The key findings from the data show:

- Over the 17-year time period, the percentage of those who smoke was on a slight downward trend (from a peak of 26% in 2011 to 20.5% in 2018).
- Mississippi middle school youth had higher rates of use than the US average in cigarette, smokeless tobacco, and cigar use.
- In the middle school age group, Caucasians had higher overall rates of use than African Americans.



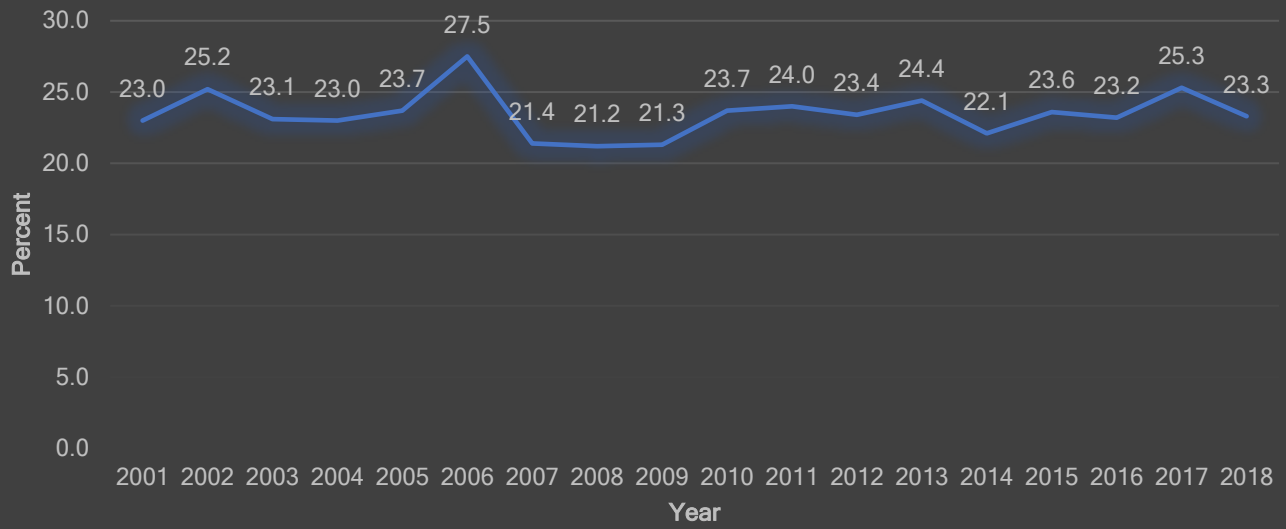
Personal Health Rating

Self-reported health status is a general measure of health-related quality of life used in the County Health Rankings and Roadmap. This self-measurement is usually reported over 'the last 30 days' and is part of the Behavioral Risk Factor Surveillance System (BRFSS).

The key findings from the data show:

- In 2018, 23.3% of respondents reported their personal health as fair or poor.
- Self-perceived fair or poor personal health rating was at its lowest in 2008 (21.2%) and at its highest in 2006 (27.5%).

Personal Health Rating (Health Status) Fair or Poor



REFERENCES

- Mayo Clinic (2019, January 30) *Tuberculosis*. Symptoms and Causes. <https://www.mayoclinic.org/diseases-conditions/tuberculosis/symptoms-causes/syc-20351250>
- Mayo Clinic (2020). *Infectious Diseases: Overview*. <https://www.mayoclinic.org/diseases-conditions/infectious-diseases/symptoms-causes/syc-20351173>
- National Institute of Health (2020). *Cancer*. National Cancer Institute. <https://www.cancer.gov/publications/dictionaries/cancer-terms/def/cancer>
- The American Heritage Dictionary of the English Language (2020). The American Heritage Dictionary entry: Homicide. <https://ahdictionary.com/word/search.html?q=homicide>
- The Centers for Disease Control and Prevention (2019, May). *Chlamydia*. Sexually Transmitted Diseases. <https://www.cdc.gov/std/chlamydia/default.htm>
- The Centers for Disease Control and Prevention (2020, June 30). *Defining Adult Overweight and Obesity*. <https://www.cdc.gov/obesity/adult/defining.html>
- The Centers for Disease Control and Prevention (2019, June 26). *Excessive alcohol use*. National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP). <https://www.cdc.gov/chronicdisease/about/costs/index.htm>
- The Centers for Disease Control and Prevention (2019, March 11). *Gonorrhea*. Sexually Transmitted Diseases. <https://www.cdc.gov/std/gonorrhea/default.htm>
- The Centers for Disease Control and Prevention (2020, March 23). *Health and economic costs of chronic diseases*. National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP). <https://www.cdc.gov/chronicdisease/about/costs/index.htm>
- The Centers for Disease Control and Prevention (2019, March 30). *HIV*. Sexually Transmitted Diseases. <https://www.cdc.gov/std/hiv/default.htm>
- The Centers for Disease Control and Prevention (2019, December 9). *Youth tobacco prevention*. Smoking and tobacco use. https://www.cdc.gov/tobacco/basic_information/youth/index.htm

