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For SOCW 4360-001 Spring 21 Only

NACOGDOCHES COUNTY, TX

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# COMMUNITY HEALTH NEEDS ASSESSMENT REPORT

December 31, 2020

F. Marie Hall Institute For Rural And Community Health,  
Texas Tech University Health Sciences Center





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# INTRODUCTION

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This Community Health Needs Assessment (CHNA) report was conducted for Nacogdoches County in order to gain a better quantitative understanding of the state of citizens' health and to identify the health needs of Nacogdoches County and the surrounding areas. This report does not include community input, surveys or other qualitative research typical of more comprehensive CHNAs. The findings from this report can serve as guidance, however, for informing public health policies and building capacity, with the ultimate goal of improving health outcomes for Nacogdoches County.

The planning for this report began in June 2020 in collaboration with Stephen F. Austin University. Many data collection methods were used including secondary data analysis from state, federal, and local agencies who collect county-level data.

The completion of this assessment was a collaborative team effort of the F. Marie Hall Institute for Rural and Community Health, the Department of Research, Reporting and Data Management (R2DM) at the Texas Tech University Health Sciences Center.

This quantitative research project collected data on a variety of community issues, taking both traditional health needs and social determinants of health into consideration.

The culminating result of this study was the identification of the most pressing health issues that impact residents of Nacogdoches County. The information collected can be used to better inform community investments, to guide health improvement initiatives, and to advance population health management strategies in Nacogdoches County.

# METHODOLOGY

In this health assessment report, we compare Nacogdoches County, TX against all other U.S. counties and, for clarity's sake, with one specific rural county in the state: Walker County, Texas.

After analysis of our rural Texas data set, we determined that Walker County was the clear choice to set as a benchmark competitor for analysis of health outcomes and access in Nacogdoches County. Both counties share a number of striking similarities. Both are non-metro/rural East Texas counties. Both are located in adjacent Public Health Regions and are relatively close to each other geographically. The populations of both counties are also similar in both size and density, and both counties benefit from the presence of a state university. This is likely as close as one can get in public health to an apples-to-apples public health comparison, so we hope you find the differences between these two East Texas counties illuminating.

|                                        | Nacogdoches County | Walker County |
|----------------------------------------|--------------------|---------------|
| <b>Rural-Urban Continuum Code 2013</b> | 5, Non-Metro       | 4, Non-Metro  |
| <b>Population (2019 est)</b>           | 65,204             | 72,971        |
| <b>Total Area (Sq Total Area</b>       | 981.19             | 801.50        |
| <b>Population Density (Sq Mi)</b>      | 68.2               | 86.5          |
| <b>Housing Unit Density (Sq Mi)</b>    | 29.0               | 30.7          |
| <b>Region</b>                          | East Texas         | East Texas    |
| <b>Public Health Region</b>            | 5                  | 6             |
| <b>University</b>                      | Steven F Austin    | Sam Houston   |

Many state and federal government sources were used to obtain the most current data in the preparation of this report. Specifically, estimates using the U.S. Census American Community Survey 5 year (ACS) 2014-2018 were used for many categories as that is the most up-to-date information available. As ACS one-year reports only survey select areas, the five-year survey shows the best overall picture for a smaller county. The ACS is a survey conducted by the U.S. Census Bureau as a continuous measurement throughout the decade until the Decennial Census results are released. State of Texas statistics such as cancer, birth, health professionals and education may use a slightly different population count than the ACS; therefore, there may be marginal differences.

# SUMMARY

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Nacogdoches is a non-metropolitan county in East Texas with 60% of its population identifying as Non-Hispanic White, 19% identifying as Hispanic, and 17% identifying as Black.

The county contains 48% males and 52% females. The largest age demographic is 20-24 and make up 13% of the population. Population projections and migration patterns suggest a downward trend in population in the coming decades within the county.

Nacogdoches has the highest overall age-adjusted all-cause mortality rate when compared to Walker County and Texas. Black individuals have the highest mortality rates in Nacogdoches and across the comparative locations in this report.

Relative to its comparative peers (Walker County, State of Texas and the U.S. per capita deaths), Nacogdoches has a higher rate of motor vehicle fatalities per capita and motor vehicles fatalities involving alcohol. Nacogdoches also has the highest number of suicides per capita and firearm fatalities per capita when compared to these regions.

Nacogdoches citizens have limited opportunities to exercise and a higher rate of obesity compared to the average Texan. Slightly more people in Nacogdoches County identify as having poor or fair health relative to Walker County and the State of Texas. Nacogdoches also has substantially more pollution than the State of Texas overall. In regards to distress, Nacogdoches County has substantially more people experiencing frequent mental and physical distress as compared to Walker County, Texas, and the US.

Food insecurity is a problem in Nacogdoches County. Residents experience more difficult access to healthy food opportunities and more people describe themselves as food insecure compared to the State of Texas and the United States. Nacogdoches has the highest percentage of children on free or reduced lunch relative to its comparison geographies.

When comparing Nacogdoches to Walker County and Texas, Nacogdoches County's newborns are more likely to be underweight. They are also more likely to be premature compared to newborns in Walker County. Nacogdoches County has a lower rate of overall premature births when compared to the State of Texas. The greatest number of new mothers in Nacogdoches County is in the age range of 20-29. Of the mothers that are between 15-19 years, Nacogdoches has a higher rate than Texas and Walker Counties. The educational status of mothers in Nacogdoches show that the county has a higher rate of mothers with less than a high school education. The rate of unmarried mothers is about equal to Walker County and lower than the state rate.

Nacogdoches County, compared to Walker County, has significantly more licensed healthcare beds per capita compared to Walker County, yet Nacogdoches also had a higher number of preventable hospital stays compared to Texas and the United States.

While Texas famously has the highest uninsured rate in the nation, Nacogdoches County has considerably more people without health insurance than the state average.

Nacogdoches has the highest unemployment rate amongst its competitor locations as well as a higher percentage of people opting to not be a part of the labor force. Nacogdoches has a larger proportion of its people in poverty than Texas and the United States overall. Over 80% of the Native American population in Nacogdoches live in poverty. Over 40% of Black individuals in the county live in poverty as well. These poverty numbers are substantially larger than its comparison locations. Poverty across sex and age is also substantially higher in Nacogdoches compared to Texas and the United States. Of its competitors, Nacogdoches also has the most children ages 5 to 17 living in poverty.

Reading and math scores as well as general educational attainment are lower in Nacogdoches compared to Texas and the United States. Computer ownership and internet subscriptions are the lowest in Nacogdoches County among the compared geographies.

Nacogdoches has substantially lower median income and per capita income compared to the United States and Texas. Income inequality is higher in Nacogdoches compared to both Texas and the United States. The median value of owner-occupied homes is also the lowest among its peers.

Nacogdoches has the highest proportion of people on SNAP food assistance among its peers. The amount of people utilizing social security income is lower but cash public assistance is higher in Nacogdoches than in Walker County, Texas, or the U.S. average.

Nacogdoches also leads in many categories of per capita confirmed child abuse.

In conclusion, the long-established relationship between socioeconomic challenges and poor health outcomes is made especially clear in Nacogdoches County. Racial disparities in the county are also stark and suggest the need for additional community investments and attention.

# RESULTS

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## RESULTS SECTION 1: COMMUNITY DESCRIPTION

It is imperative for any public health program to have a clear understanding of the characteristics of the population it serves. Variables such as the rate of population growth, ethnic and age composition, and the status of vulnerable populations are necessary for the planning and development of community health programs and services.

### Geography and Population

|                 |                     |
|-----------------|---------------------|
| Texas           | 261,237.71 sq miles |
| Nacogdoches Co. | 946.54 sq miles     |
| Walker Co.      | 784.17 sq miles     |

According to estimates from the United States Census Bureau Quickfacts 2019, Nacogdoches County has a population estimate of 65,204, with 68.8 persons per square mile. By comparison, Walker County's population estimate was 72,971, showing a slight difference in county populations.

In comparison, Walker's population per square mile was 86.5 persons. Walker showed a population increase of 5,110 people since the 2010 census. Whereas Nacogdoches showed a smaller increase of 680 people since 2010. Texas' population estimate as of July 2019 was 28,995,881, according to the 2010 Census it was 25,145,561, gaining an increase of 3,850,320 persons.

Nacogdoches' growth numbers lag considerably behind both the state and the nation at 1.1%. Since the 2010 census, Texas has added 15.3% more people from 2010 to 2019.

### Race, Age, and Gender

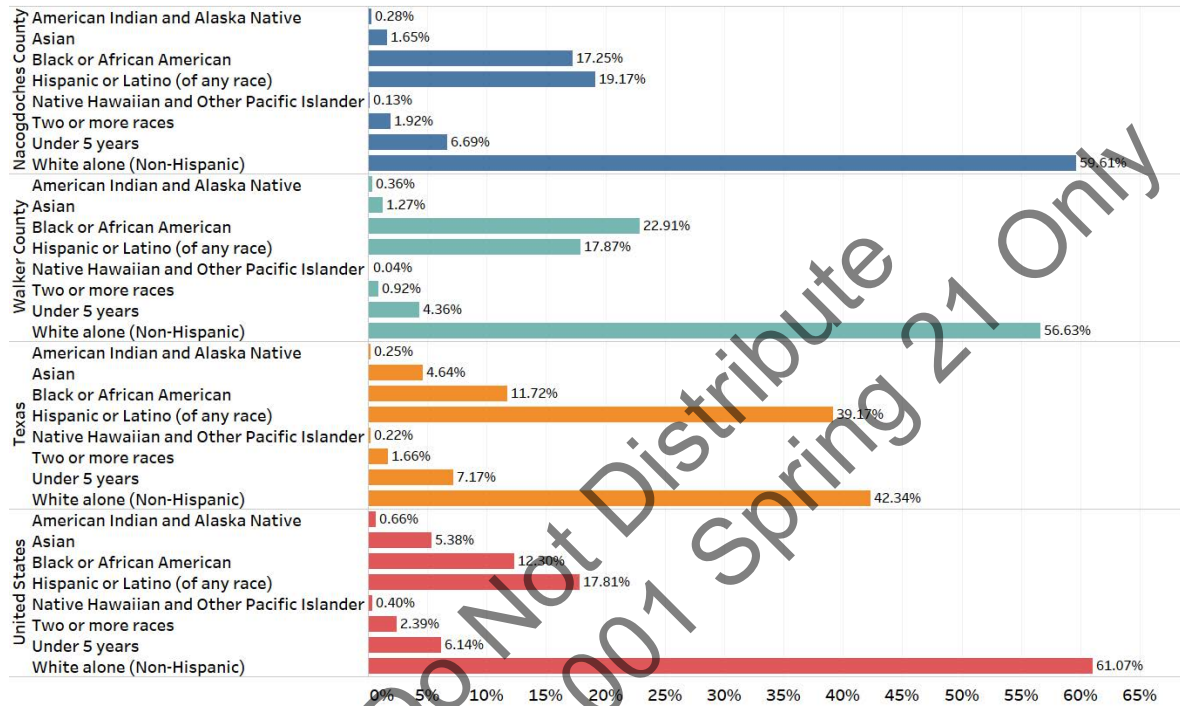
We compared population statistics for Nacogdoches County, Walker County, Texas and the United States by referencing the 2018 American Community Survey, 5 year estimates. The following graphs detail population breakdowns of race, sex, and age.

The racial/ethnic distribution of Nacogdoches County is as follows:

- 59.6% of the Nacogdoches population identifies as Non-Hispanic White
- 19.2% of their population is Hispanic
- 17.3% is African American

- 1.7% is Asian, 0.3% are Native American
- 0.0% are Native Hawaiian or Pacific Islander
- 0.1% is some other race
- 1.7% accounts for two or more races

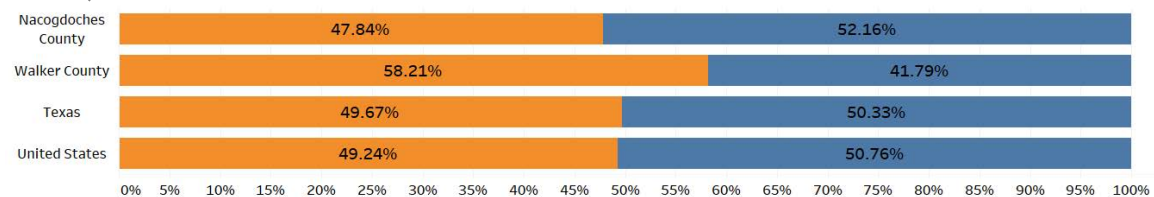
Percent Population by Race Across Location



Raw Population by Race Across Location

|                                            | Nacogdoches County | Walker County | Texas      | United States |
|--------------------------------------------|--------------------|---------------|------------|---------------|
| American Indian and Alaska Native          | 182                | 256           | 68,452     | 2,135,479     |
| Asian                                      | 1,082              | 911           | 1,292,813  | 17,367,169    |
| Black or African American                  | 11,311             | 16,393        | 3,269,253  | 39,715,917    |
| Hispanic or Latino (of any race)           | 12,565             | 12,787        | 10,921,556 | 57,517,935    |
| Native Hawaiian and Other Pacific Islander | 83                 | 26            | 62,735     | 1,279,598     |
| Two or more races                          | 1,256              | 656           | 463,123    | 7,705,755     |
| White alone (Non-Hispanic)                 | 39,079             | 40,510        | 11,807,263 | 197,181,177   |

Gender Pct Across Location



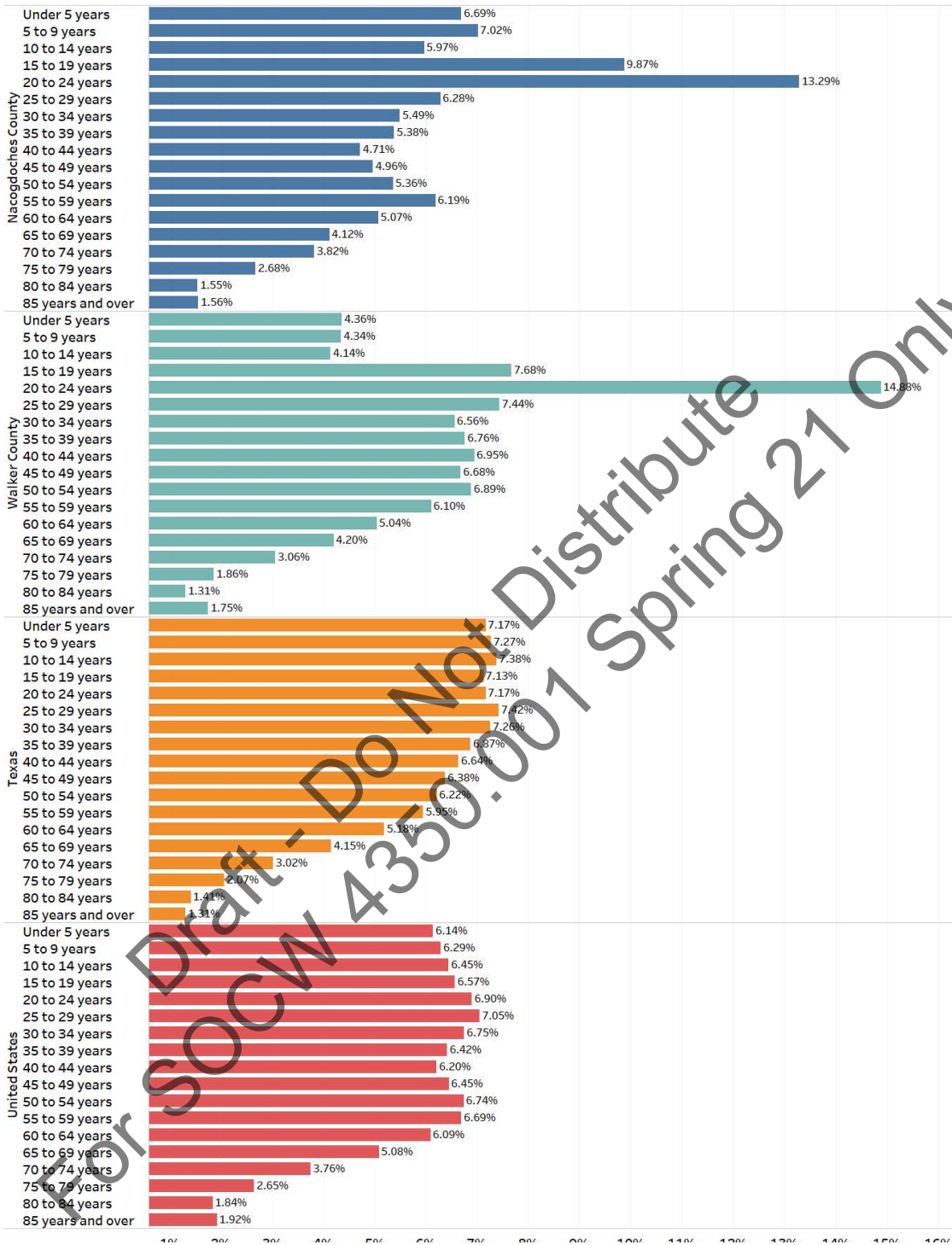
The median age of Nacogdoches County is 30.6 years. According to the ACS 5-year 2018 estimate, 13.2% of the population fell within the 20 to 24 age range, 21.9% were in the 25 to 44 age range, 21.6% were in the 45-64 age range, and 29.5% were aged 19 and under. Only 13.7% were 65 or older, while the national average is 15%.

As both Nacogdoches and Walker counties are university towns, we see that there is a large percentage of the population that is aged 20 to 24.

## Raw Population by Age Across Location

|                          | Nacogdoches<br>County | Walker<br>County | Texas     | United<br>States |
|--------------------------|-----------------------|------------------|-----------|------------------|
| <b>Under 5 years</b>     | 4,385                 | 3,120            | 1,998,869 | 19,836,850       |
| <b>5 to 9 years</b>      | 4,600                 | 3,108            | 2,028,151 | 20,311,494       |
| <b>10 to 14 years</b>    | 3,913                 | 2,959            | 2,057,414 | 20,817,419       |
| <b>15 to 19 years</b>    | 6,473                 | 5,491            | 1,987,192 | 21,204,226       |
| <b>20 to 24 years</b>    | 8,712                 | 10,647           | 1,998,210 | 22,286,970       |
| <b>25 to 34 years</b>    | 7,719                 | 10,015           | 4,094,297 | 44,567,976       |
| <b>35 to 44 years</b>    | 6,618                 | 9,805            | 3,767,582 | 40,763,210       |
| <b>45 to 54 years</b>    | 6,766                 | 9,702            | 3,511,040 | 42,589,573       |
| <b>55 to 59 years</b>    | 4,056                 | 4,367            | 1,658,878 | 21,611,374       |
| <b>60 to 64 years</b>    | 3,324                 | 3,608            | 1,445,748 | 19,675,357       |
| <b>65 to 74 years</b>    | 5,203                 | 5,197            | 2,000,715 | 28,535,419       |
| <b>75 to 84 years</b>    | 2,769                 | 2,269            | 971,168   | 14,497,679       |
| <b>85 years and over</b> | 1,020                 | 1,251            | 365,931   | 6,205,483        |

Population by Age Across Location

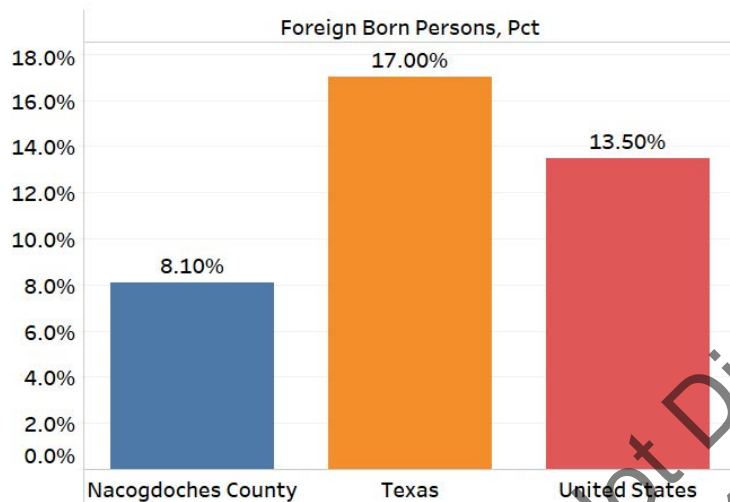


## Foreign-Born

The U.S. Census defines the foreign-born population as anyone who is not a U.S. citizen at birth. This includes those who have become U.S. citizens through naturalization. The

native-born population is composed of anyone who is a U.S. citizen at birth, including people born in the United States, Puerto Rico, a U.S. Island Area (American Samoa, Guam, the Commonwealth of the Northern Mariana Islands, and the U.S. Virgin Islands), or abroad to a U.S. citizen parent or parents.

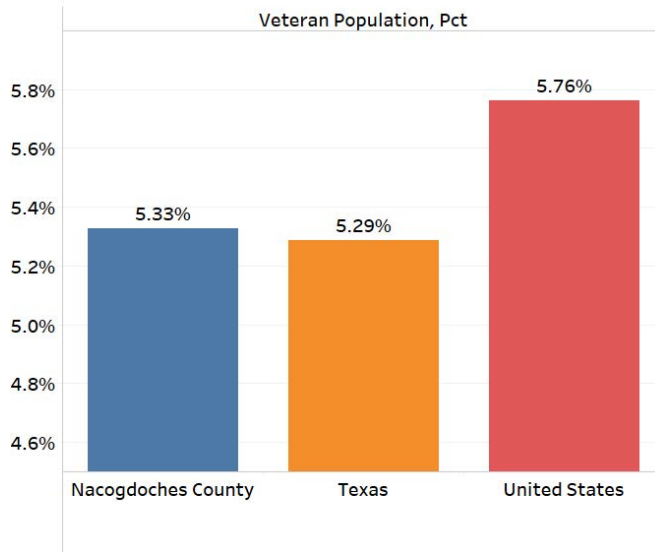
According to the Census, Nacogdoches County had 8.1% of persons who were foreign-born, as compared to 17% in Texas, and 13.5% in the United States.



## Veterans

According to the 2018 American Community Survey (ACS) 5-year, Veterans are calculated based on the civilian population 18 years and over. The Census defines “Veteran” as a person 18 years old or over who has served in the Armed Forces (even for a short time), but is not now serving on active duty in the U.S. Army, Navy, Air Force, Marine Corps, or the Coast Guard, or who served in the U.S. Merchant Marine during World War II. People who served in the National Guard or Military Reserves are classified as veterans only if they were ever called or ordered to active duty, not counting the four to six months for initial training or yearly training camps.

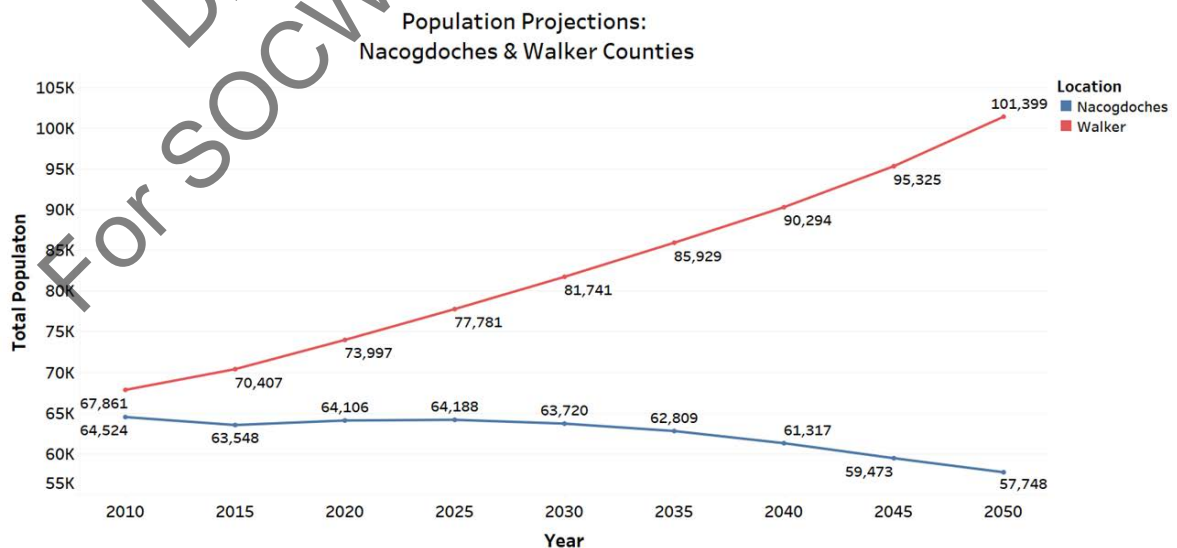
According to 2014-2018 American Community Survey 5-year Estimates, 5.3% of Nacogdoches County’s population were veterans compared to 5.3% in Texas and 5.8% in the United States.



### Population Projection

The Office of the State Demographer for the State of Texas distributes the most widely used population projections for Texas. This population data was last updated in 2018. The Texas State Data Center and Office of the State Demographer is housed at University of Texas San Antonio. The current projections are of the population of Nacogdoches County and the entire state, respectively, for each year from 2010 through 2050. The total population encompasses all races.

These projections, like all projections, involve the use of certain assumptions about future events that may or may not occur. Projected Population changes for Nacogdoches County show a steady decrease and population projections for Walker County show a steady increase over the next 30 years.



## Migration Patterns

The U.S. Census American Community Survey calculated the following for in- and out-migration for Nacogdoches County, Texas, and the United States.

The population moving within Nacogdoches County was 12.7%. The population moving from a different county into Nacogdoches was 8.8%. Those who moved from outside of Texas and into Nacogdoches County accounted for 1.2%. Those who moved to Nacogdoches County from outside of the United States accounted for 0.2%.

Nacogdoches County was higher when persons moved in the same county when compared to Texas and the United States. Those moving in from a different state were about half of the population that moved into Texas and the United States respectively, and those moving into the county from abroad were much lower than Texas and the United States populations who moved.

These results give further credence to the aforementioned population projections. Nacogdoches County had more migration within the county and Walker County had more migration to the county.

Migration Patterns Across Location



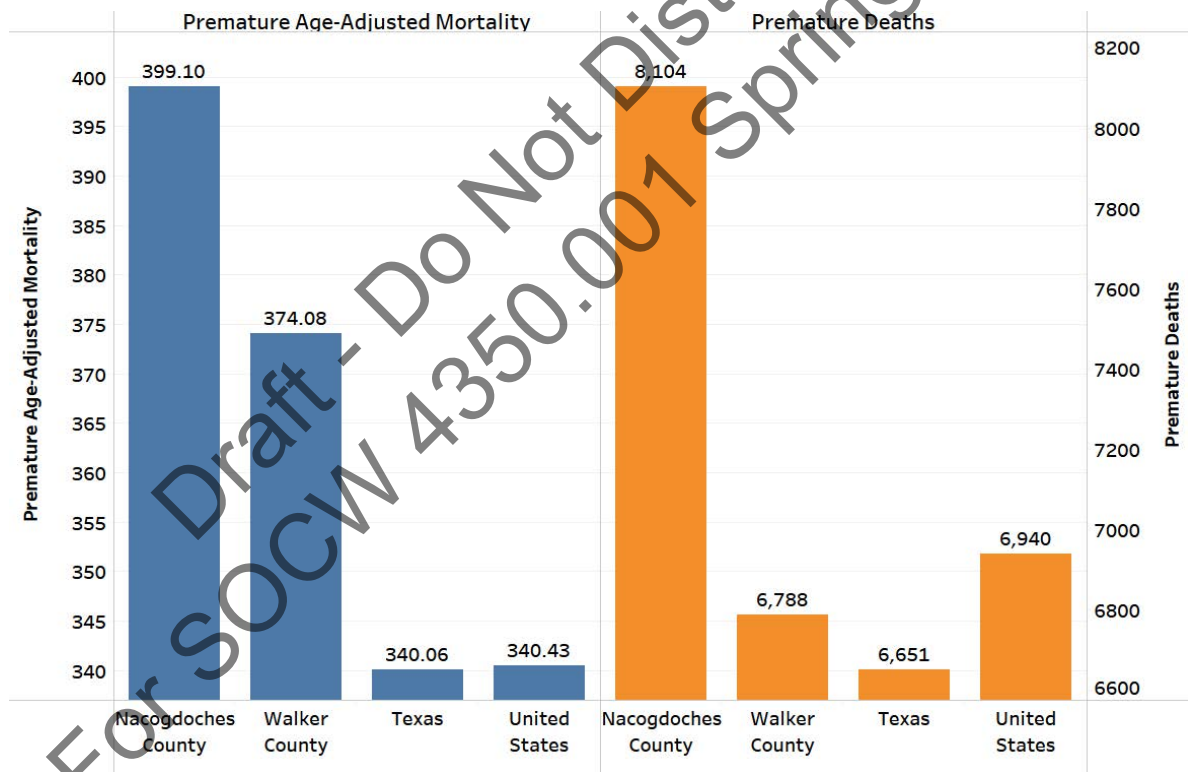
## RESULTS SECTION 2: MORTALITY AND MORBIDITY

### Premature Deaths

Premature deaths includes all deaths among people under age 75 and the rates are per 100,000 age-adjusted to the U.S. 2000 population.

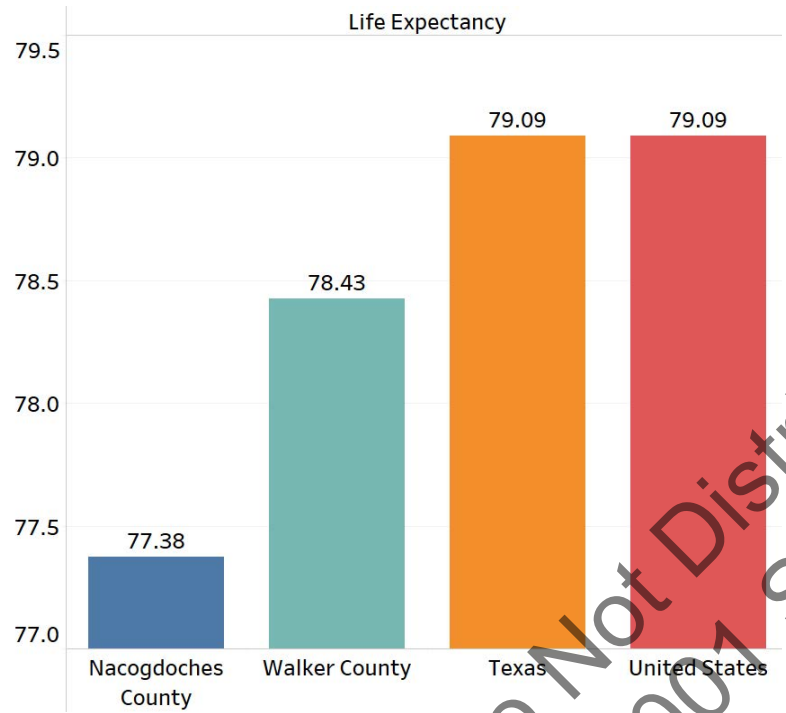
Nacogdoches had significantly more years of potential life (YPLL) lost or "premature deaths" than Texas and the United States. Nacogdoches County had 8,104 YPLL while Texas had 6,651 and the United States had 6,940. Comparing Nacogdoches to Walker County, Nacogdoches had 1,316 more years of potential life lost.

All Texas counties ranged from 3,372 to 25,880 YPLL with a mean YPLL of 8494 and a median YPLL of 8287. Other East Texas counties similar in size as Nacogdoches had the following YPLL: Harrison County had 9,278, San Patricio County had 8,714, and Coryell County had 7,103. In Nacogdoches County, the premature death rate was higher than all counties listed with the exception of San Patricio.



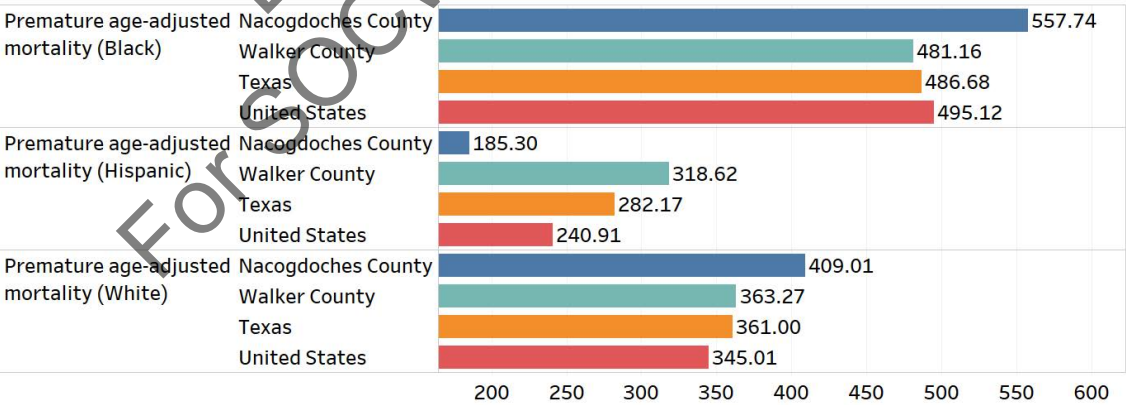
The life expectancy in Nacogdoches County is 77.4 years. A comparison sample of East Texas counties indicated the following life expectancies: Harrison County = 76.33, San Patricio County = 76.21, Walker County = 78.43, and Coryell County = 77.50.

In Nacogdoches County, the life expectancy rate was lower than Walker and Coryell but higher than Harrison and San Patricio counties. The overall life expectancy rate for Texas and the United States was 79.09 years, therefore Nacogdoches has a lower life expectancy than the overall State of Texas and the United States.



Nacogdoches County was the worst of its peer competitors in regards to premature mortality of both Black and White residents.

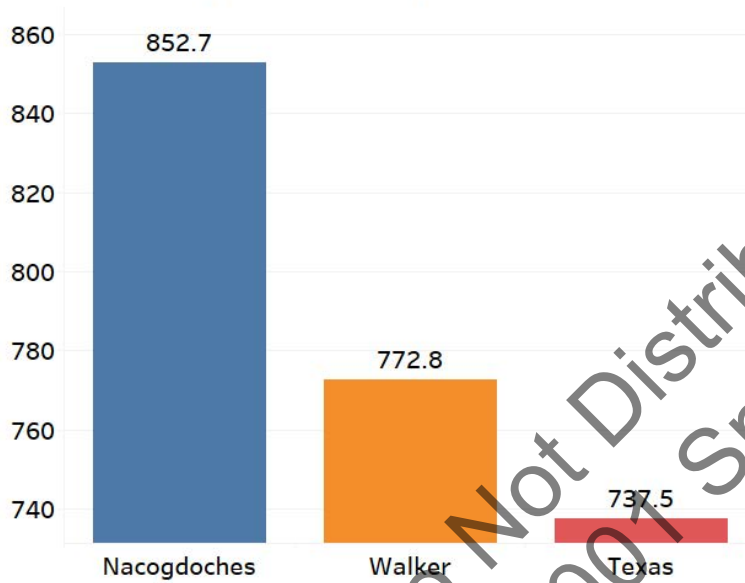
#### Premature Age-Adjusted Mortality by Race



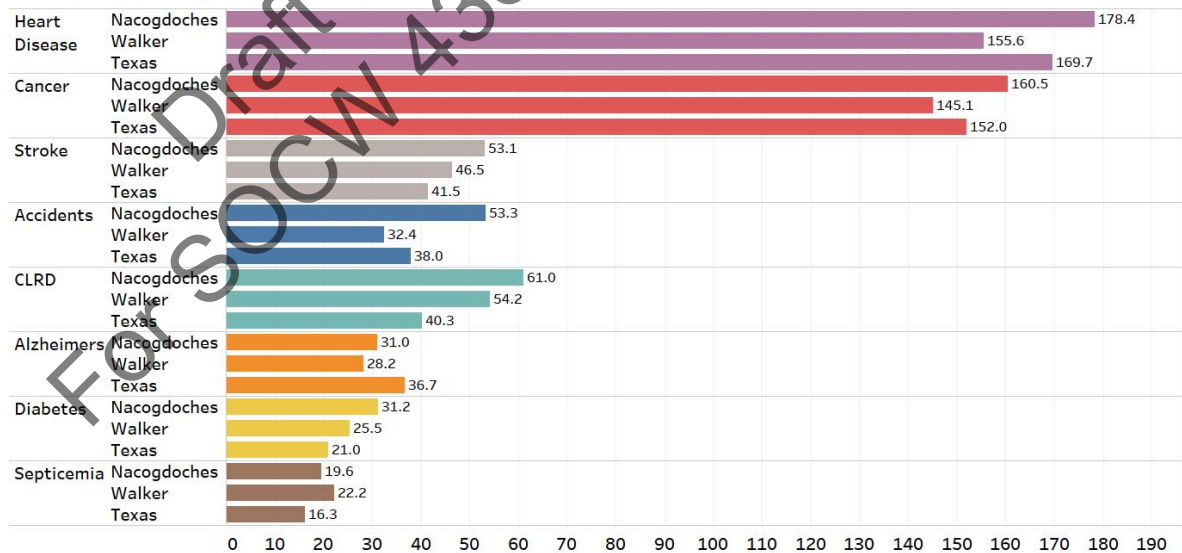
## All-Cause Mortality

All-cause mortality includes all deaths reported. Nacogdoches County had the highest overall age-adjusted mortality rate when compared to both Walker County and the State of Texas. In other words, considerably more people die per capita in Nacogdoches than its competitor locations.

### Overall Age-Adjusted Mortality Rate Across Location

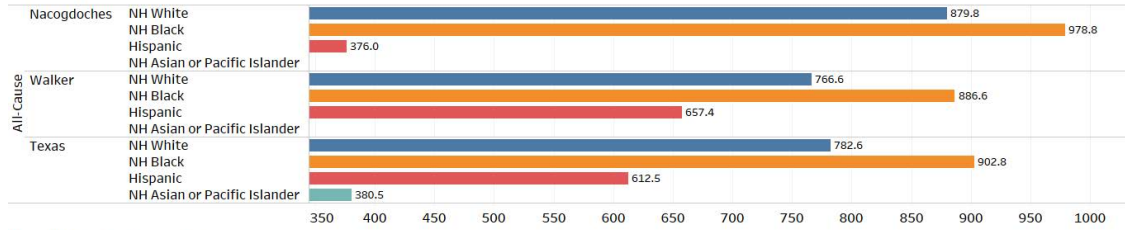


### Per Capita Mortality by Type and Location



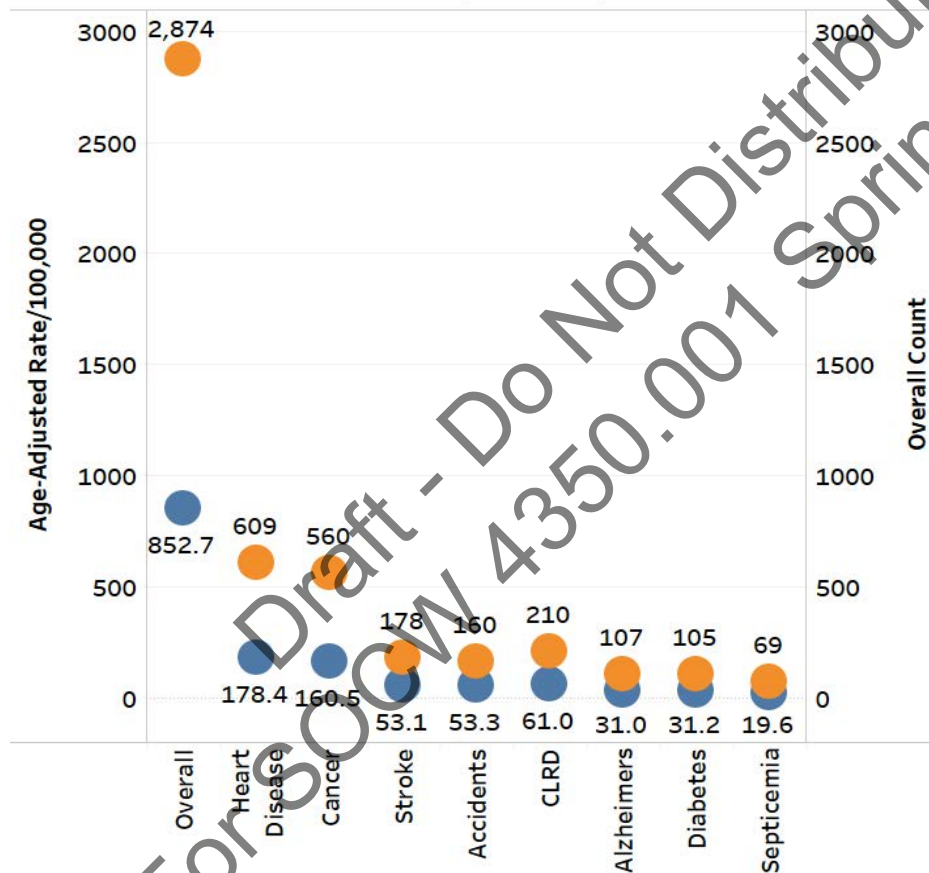
In Nacogdoches, the death rate by all causes was highest among non-Hispanic Blacks followed by non-Hispanic Whites, and then Hispanics.

Age-Adjusted Mortality Rate by Location and Race



No bar indicates not enough data

Nacogdoches Death Count and Rate (2014-2018)



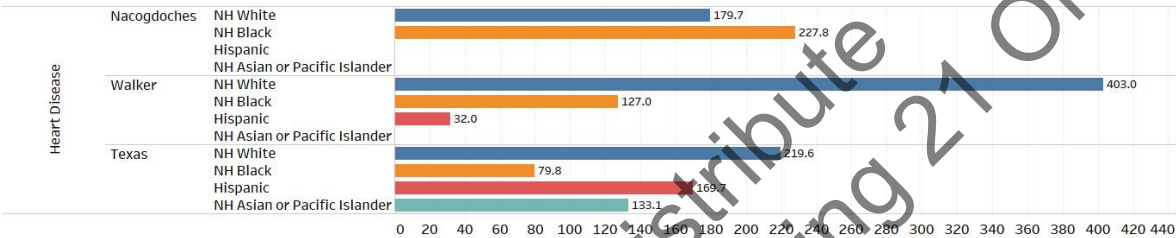
The top eight causes of death for Texas in 2016 were as follows: 1. Heart Disease 2. Cancer 3. Stroke 4. Accidents 5. Chronic Lower Respiratory Disease 6. Alzheimer's Disease 7. Diabetes 8. Septicemia

The following graphs depict how Nacogdoches County compares against the other locations in regards to the top mortality causes. Please note some charts below have no data for certain populations. The data for those populations was either unavailable or reported as unreliable.

Heart Disease

In Nacogdoches County, heart disease rates were highest among Non-Hispanic Blacks followed by Non-Hispanic Whites. The Non-Hispanic Black rate in Nacogdoches County was higher than the rate in Walker County and Texas.

Age-Adjusted Mortality Rate by Race, Location, and Type

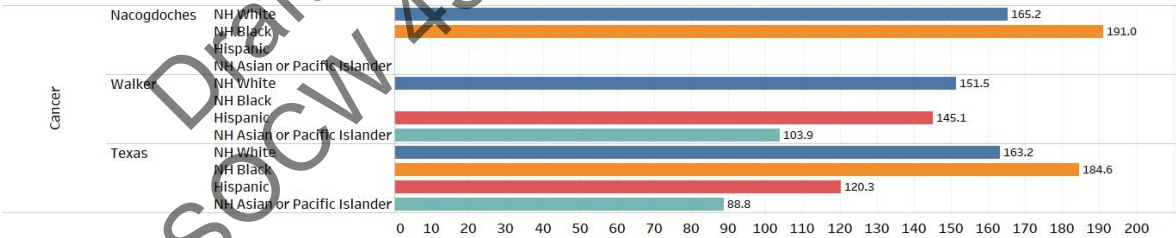


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Cancer

In Nacogdoches County, Black individuals had the highest rate of cancer deaths, followed by Whites. Both of these rates were higher than the state's rate. The White cancer mortality rate was highest in Nacogdoches County, and this rate was higher than that of Walker County.

Age-Adjusted Mortality Rate by Race, Location, and Type

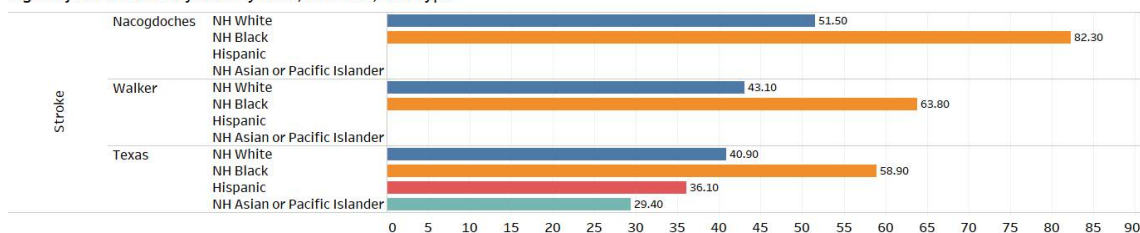


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Stroke

Black individuals had the highest rate of stroke based mortality in Nacogdoches County and across all comparative locations and race categories. Non-Hispanic White individuals in Nacogdoches County compared to the Non-Hispanic Whites in the comparison locations had the highest stroke based mortality.

Age Adjusted Mortality Rate by Race, Location, and Type

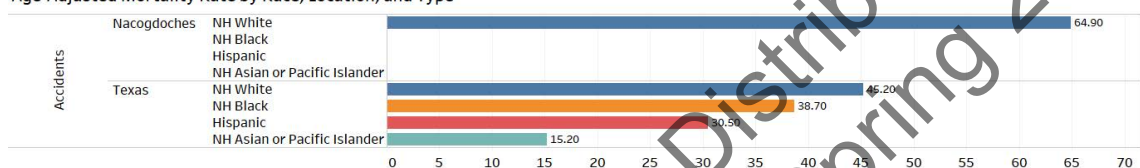


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## Accidents

Nacogdoches had the highest Accident mortality rate for Non-Hispanic Whites than the other locations.

Age-Adjusted Mortality Rate by Race, Location, and Type



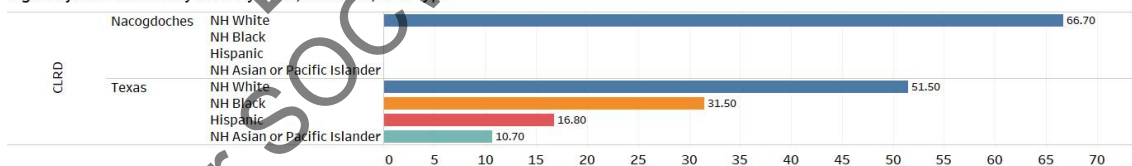
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## Chronic Lower Respiratory Disease

Chronic Lower Respiratory Disease (CLRD) consists of three overlapping chronic lung diseases: chronic bronchitis, emphysema, and asthma.

Nacogdoches had the highest CLRD mortality rate for Non-Hispanic Whites compared to the other locations, both within and across race categories

Age-Adjusted Mortality Rate by Race, Location, and Type

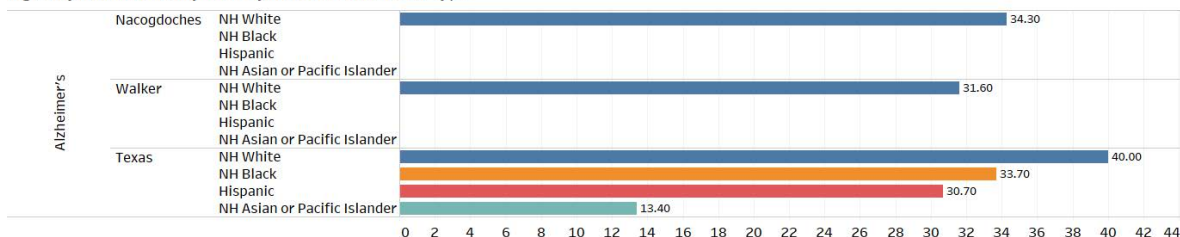


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## Alzheimer's

The Alzheimer's disease death rate for Nacogdoches County was ranked higher than Walker County but lower than the State of Texas.

Age-Adjusted Mortality Rate by Race, Location, and Type



No bar indicates not enough data

## Diabetes

The diabetes death rate for Non-Hispanic Whites in Nacogdoches was higher than Non-Hispanic Whites in all other locations. Similarly, the Non-Hispanic Black diabetes death rate was highest overall in Nacogdoches County, higher when compared to Walker and Texas, and highest when compared to all other diabetes death rates across location and race.

Age-Adjusted Mortality Rate by Race, Location, and Type

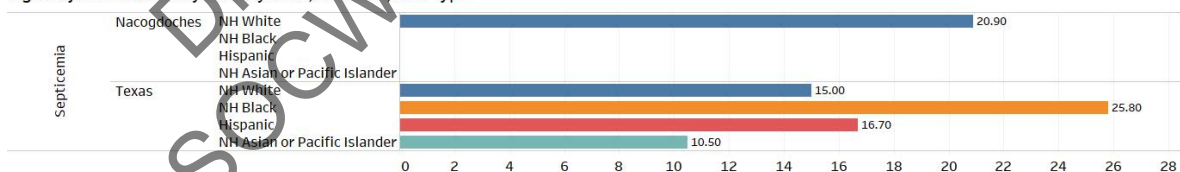


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## Septicemia

Non-Hispanic Whites had a higher death rate from septicemia in Nacogdoches County compared to both Walker County and Texas.

Age-Adjusted Mortality Rate by Race, Location, and Type



No bar indicates not enough data

## Overall Cancer

Both Nacogdoches and Texas had downward trends in regards to their Age-Adjusted Cancer rates from 2014 to 2017, though Texas had a slightly higher overall age-adjusted rate.

Overall Age-Adjusted Cancer Rates



Overall Age-Adjusted Cancer Rates Across Location

|                    | Year  |       |       |       |       |
|--------------------|-------|-------|-------|-------|-------|
|                    | 2013  | 2014  | 2015  | 2016  | 2017  |
| Nacogdoches County | 382.2 | 395.6 | 384.0 | 355.2 | 346.7 |
| Walker County      | 445.5 | 438.1 | 387.0 | 462.4 | 415.5 |
| Texas              | 414.9 | 413.0 | 409.1 | 402.5 | 400.1 |

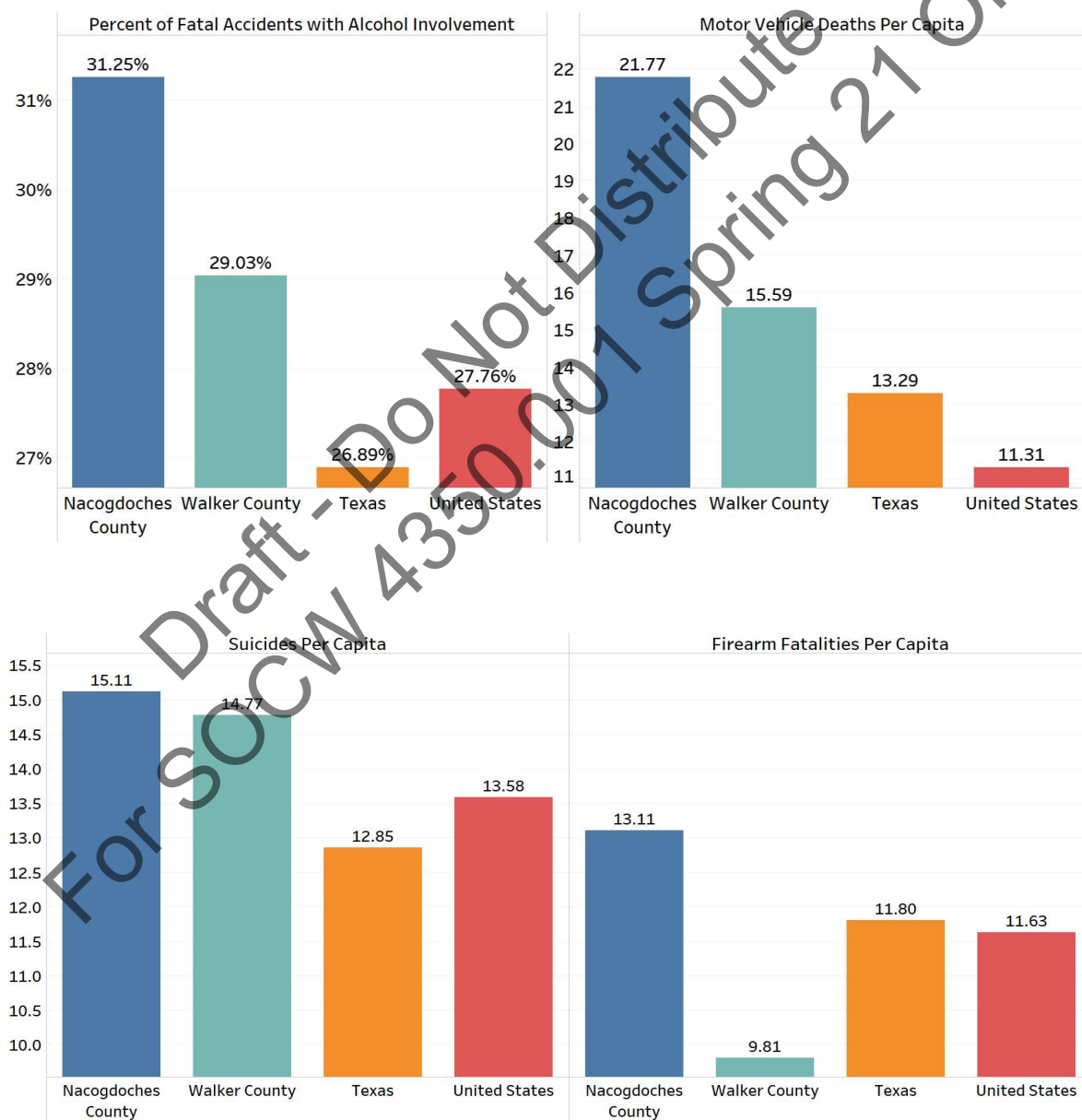
Cancer Age-Adjusted Rates



## Injury Deaths

Fatal accidents involving alcohol, suicide, firearms, and motor vehicles are all considered injury deaths. In 2018, unintentional injury deaths were the third leading cause of death in the United States. According to County Health Rankings, unintentional injuries are a substantial contributor to premature death, especially for those under 45 years of age. Further, injuries account for 29% of all emergency department visits.

Compared to the other locations in the report, Nacogdoches County had the highest proportion of accidents involving alcohol, motor vehicle deaths per capita, suicides per capita, and firearm fatalities per capita.



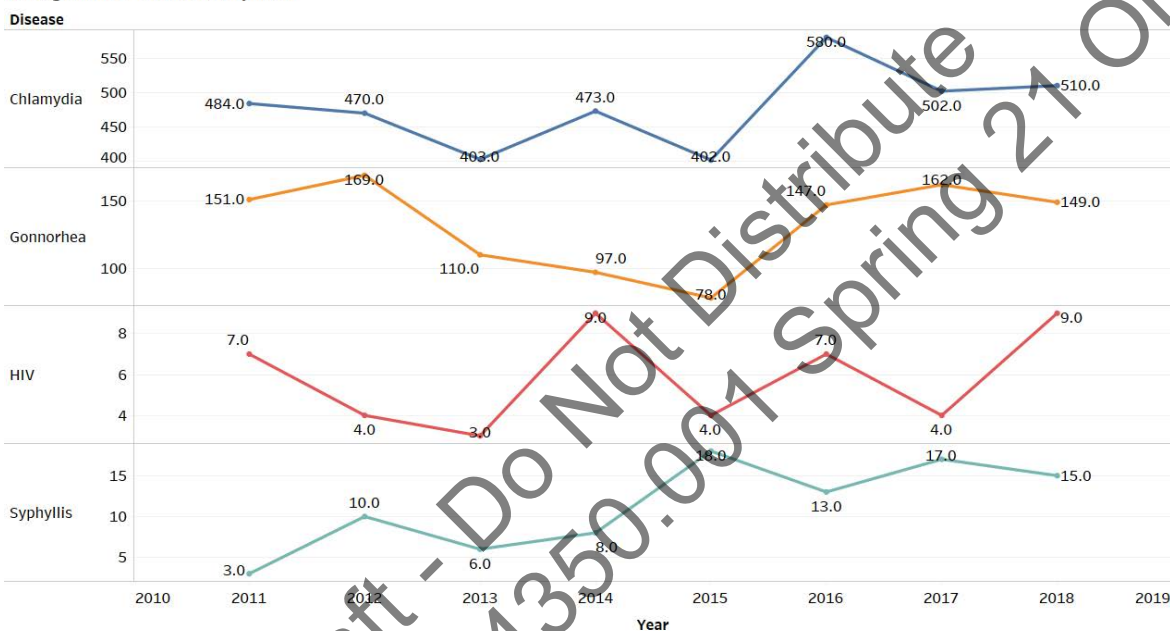
## Communicable Diseases

Communicable diseases are illnesses caused by an infectious agent or its toxins that occurs through the direct or indirect transmission of the agent or its products from an infected individual or via an animal, vector or the inanimate environment to a susceptible animal or human host.

We were able to obtain data on this topic for Nacogdoches on STDs, HIV, and West Nile Virus.

### Sexually Transmitted Diseases (STDs)

Nacogdoches - STD Cases by Year



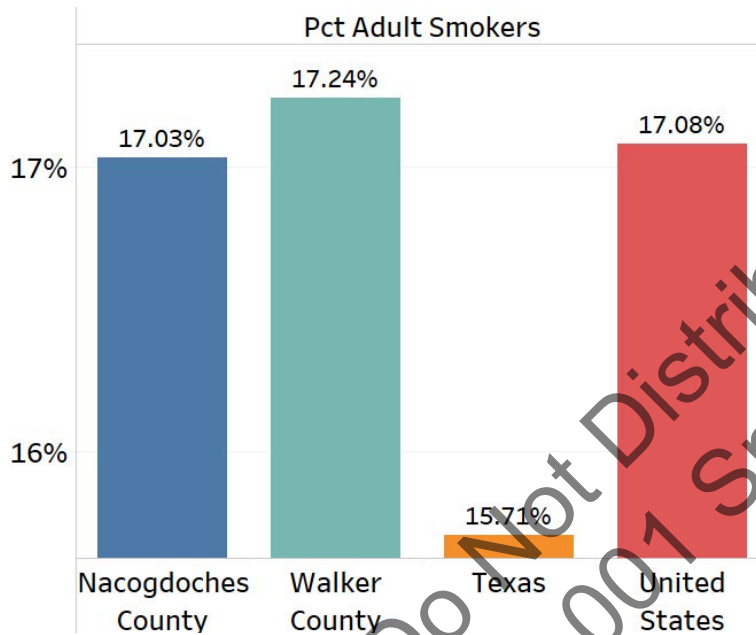
### Other Communicable Diseases

| Location    | Mosquito | Avian | Equine | Sentinel Chicken | West Nile Fever | West Nile Neuro Invasive Disease | Presumptive Viremic Blood Donor |
|-------------|----------|-------|--------|------------------|-----------------|----------------------------------|---------------------------------|
| Nacogdoches | 0        | 0     | 0      | 0                | 0               | 0                                | 0                               |
| Walker      | 0        | 0     | 0      | 0                | 0               | 1                                | 0                               |
| Texas       | 1,021    | 6     | 19     | 0                | 38              | 108                              | 24                              |

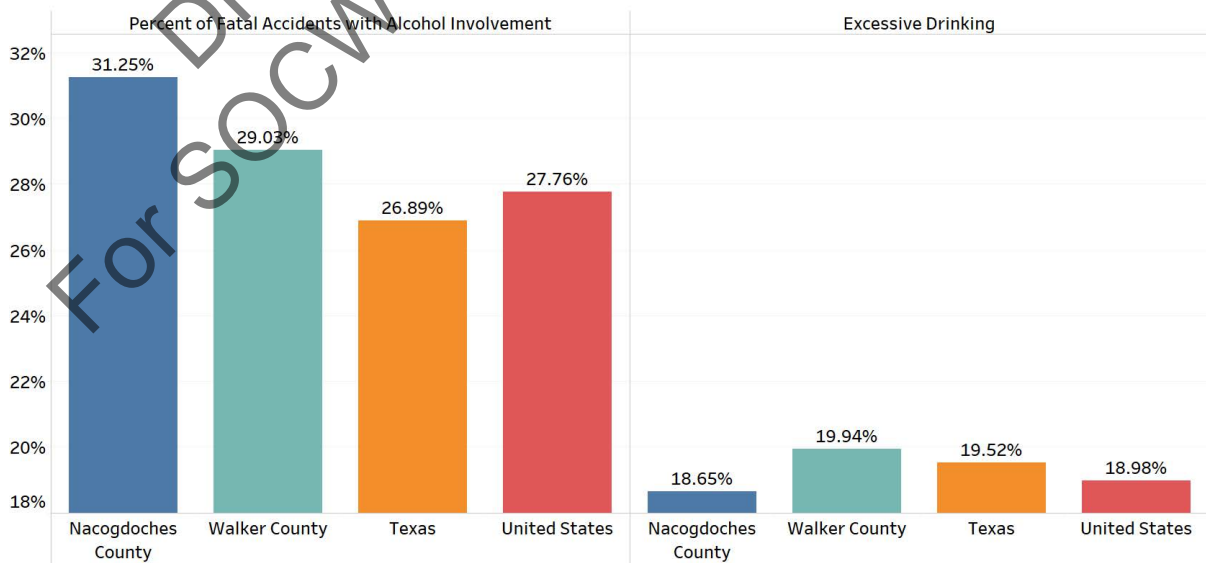
## Quality of Life

Quality of Life is affected by many factors. Variables such as smoking, alcohol, lack of exercise, food insecurity, and air quality all play a factor in the overall health outcomes of a person and their community. The following results will view and discuss those factors.

First, smoking adults were slightly more plentiful in Nacogdoches compared to Texas.

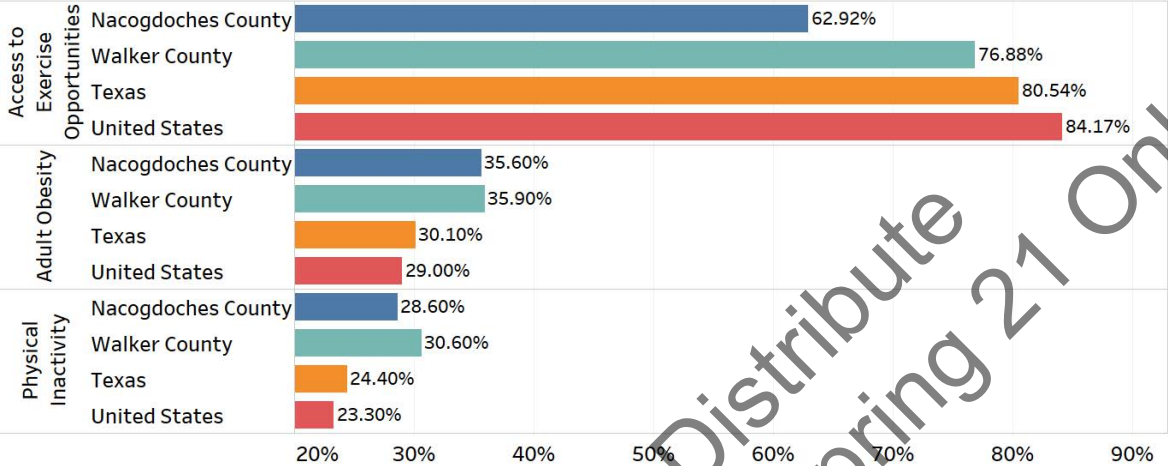


Though Nacogdoches has a relatively high number alcohol impaired deaths, it is slightly lower than all other locations in overall self-reported binge drinking.

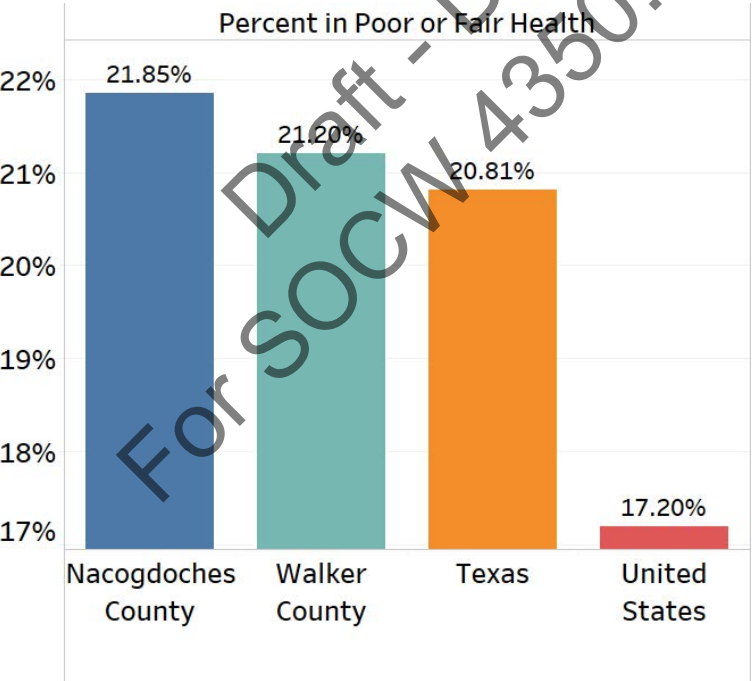


Exercise is an important component of a healthy lifestyle and one of the key elements in preventing both physical and mental diseases and distress. Exercise opportunities are low in Nacogdoches County. Obesity and physical inactivity rates in Nacogdoches are higher than those in Texas and the United States.

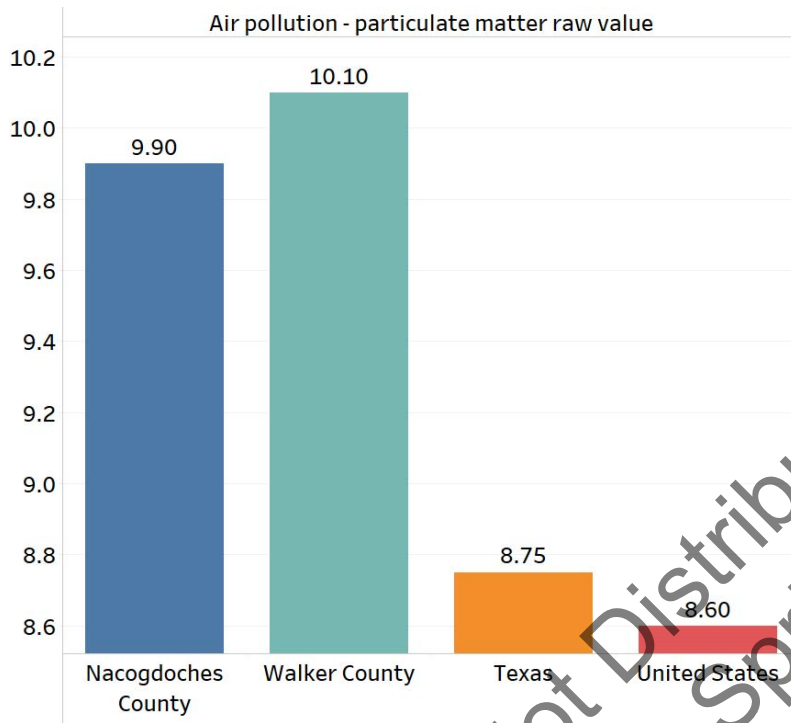
Exercise and Obesity



Nacogdoches has a larger percentage of people who report having poor or fair health when compared to all other locations in this report.



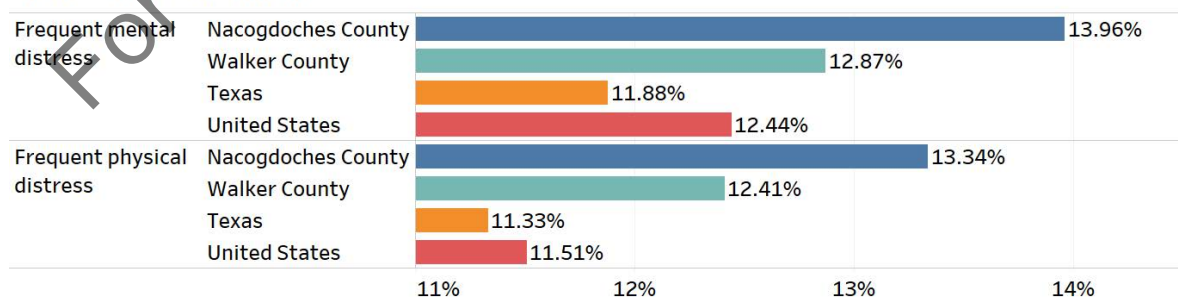
Nacogdoches has substantially more air pollution than Texas and the United States overall.



According to County Health Rankings, Frequent Mental Distress is the percentage of adults who reported 14 or more days in response to the question, "Now, thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?" Frequent Physical Distress is the percentage of adults who reported 14 or more days in response to the question, "Thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good?"

Nacogdoches had the highest percentage of adults in both distress categories compared to Walker County, the State of Texas, and the United States.

#### Distress Across Location



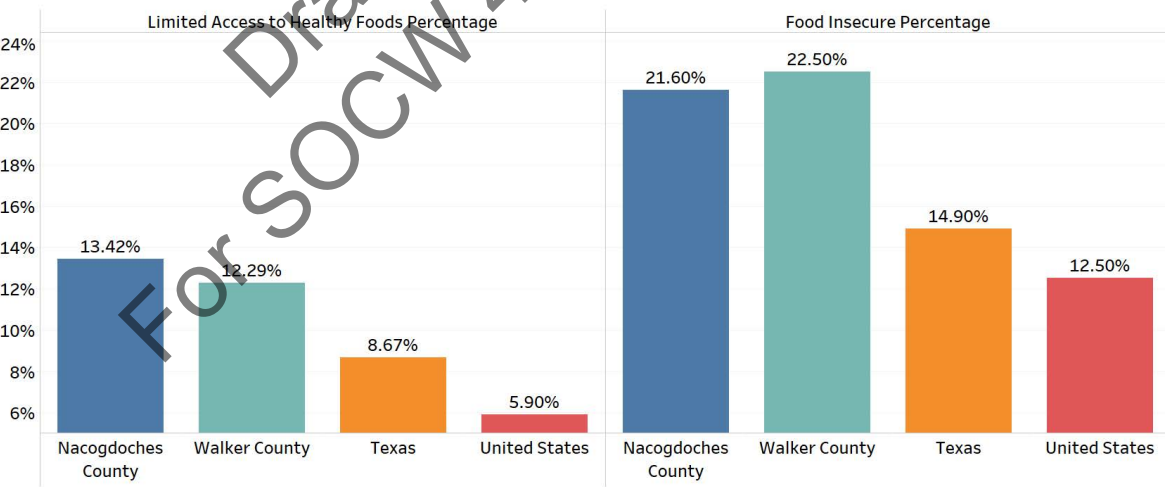
Food insecurity results in many health problems such as obesity, diabetes, and other related comorbidities. It also causes lack of nutrition and this will truly present a problem for a pregnant mother, child, and older adults.

There are state and federal programs to aid people who are food insecure. SNAP is a supplemental nutrition assistance program, free and reduced lunches available for those children at a certain poverty threshold and TANF is a temporary assistance program for needy families. WIC, the Special Supplemental Nutrition Program for Women, Infants, and Children, is a federal assistance program that partners with other services and programs to supplement the healthcare and nutrition of low-income pregnant women, breastfeeding women, and children under the age of five. Some of these programs and their statistics are mentioned in other parts of this assessment.

Regarding food bank and food pantry presence, Nacogdoches County is the Regional East Texas Food Bank. The Nacogdoches Senior Center also provides food to seniors in need.

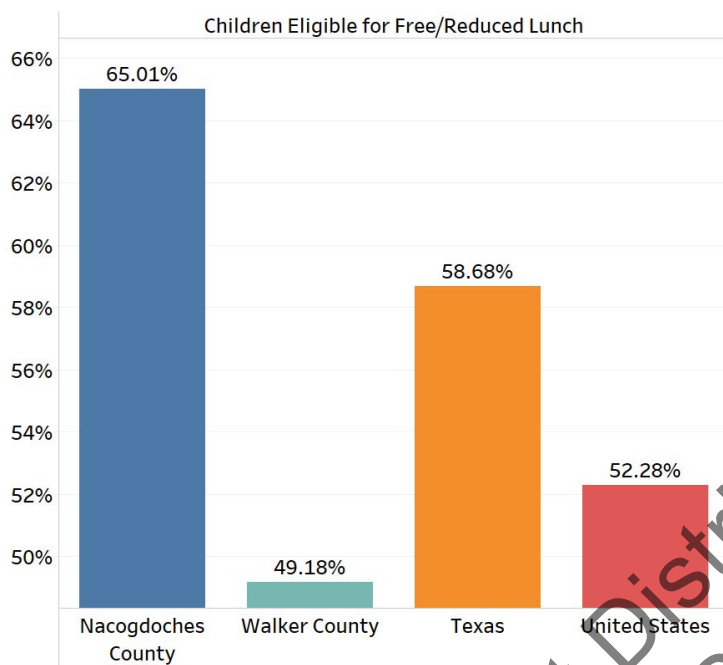
Nacogdoches has several grocers. Brookshire, Kroger, and Walmart are all located in the central parts of town and there is a second Brookshire store on the south side of town. There are many convenience stores as well as Dollar General and Family Dollar who also sell food. Generally convenience stores and stores like Family Dollar and Dollar General carry a less nutritious variety of foods.

Limited Access to Healthy Foods measures the percentage of the population that is low income and does not live close to a grocery store. Food Insecurity estimates the percentage of the population who did not have access to a reliable source of food during the past year. Nacogdoches performed poorly relative to its comparative peers in both of these aforementioned nutrition-related categories.



Limited Access to Healthy Foods measures the percentage of the population that is low income and does not live close to a grocery store. Food Insecurity estimates the percentage of the population who did not have access to a reliable source of food during the past year.

Nacogdoches, relative to its comparative locations, had the highest number of children on free or reduced lunch.

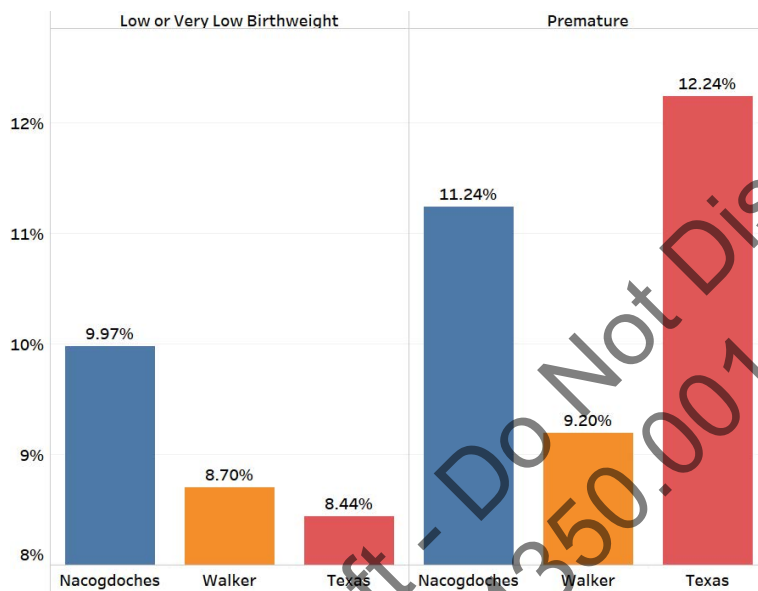


## RESULTS SECTION 3: MATERNITY

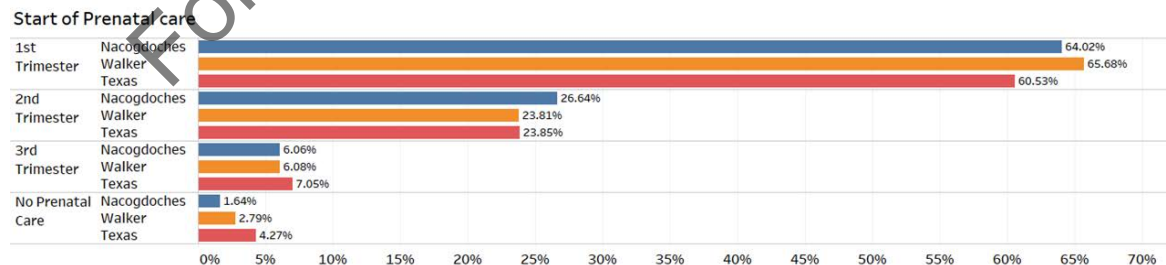
### Births

There were 792 births in Nacogdoches County in 2017 according to the Texas Department of State Health Services. In contrast, Walker County had 609 births.

In Nacogdoches County, the percent of premature births, 11.24%, exceeded that of Walker County, 9.20%, and was slightly lower than the State of Texas, 12.24%. The percentage of births categorized as a low weight birth were highest in Nacogdoches, 9.97%, compared to Walker, 8.7%, and the State of Texas, 8.44%.

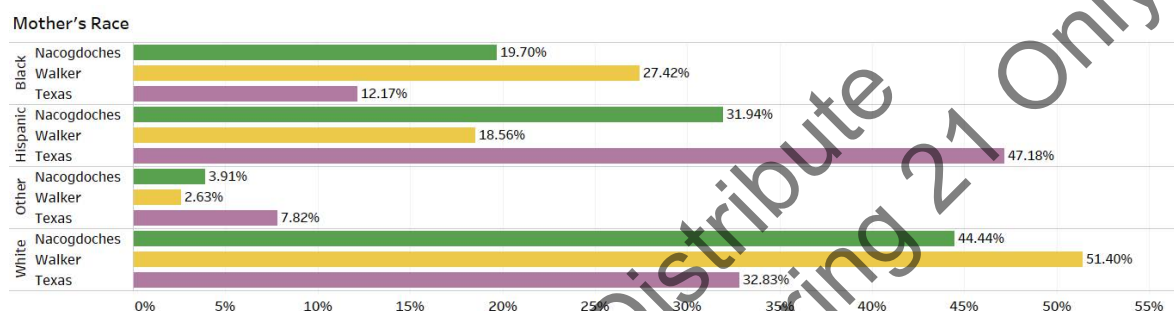


Start of Prenatal Care was observed across trimesters. Walker County had a slightly higher prenatal care start rate than Nacogdoches and the state in the 1st trimester. Nacogdoches has the highest rate of 2nd trimester prenatal care. For the 3rd trimester, both Nacogdoches and Walker were comparable and lower than Texas' rate of prenatal care. For mothers who had no prenatal care Nacogdoches had the lowest rate of care at 1.64%. This contrasts with Walker County's 2.79% and Texas' 4.27%.



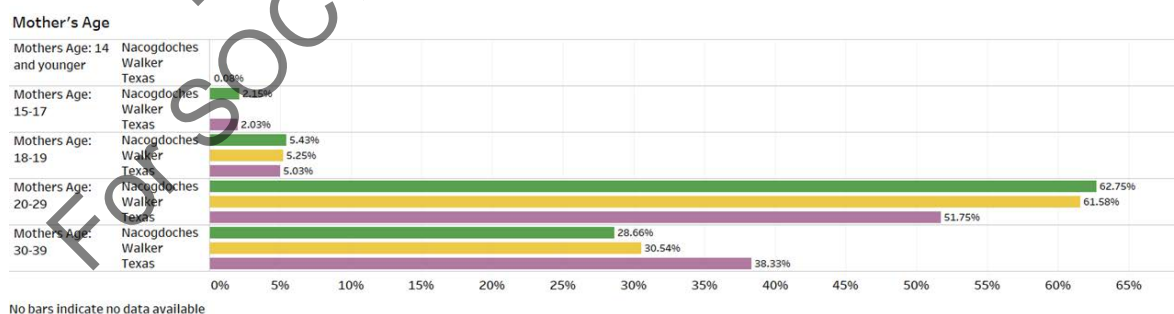
Demographics and social determinants of health are important factors to consider. We looked at the mother's race, age, and education in Nacogdoches County and its comparison locations.

The racial breakdown of mothers giving birth in Nacogdoches was highest among Non-Hispanic Whites followed by Hispanics and Non-Hispanic Blacks. Overall, Walker County had a higher population of Non-Hispanic White and Black mothers giving birth and a lower percent of Hispanics and Other Race mothers giving birth. Texas overall had the highest number of Hispanic mothers giving birth followed by Non-Hispanic White, Non-Hispanic Black, and Other Races.



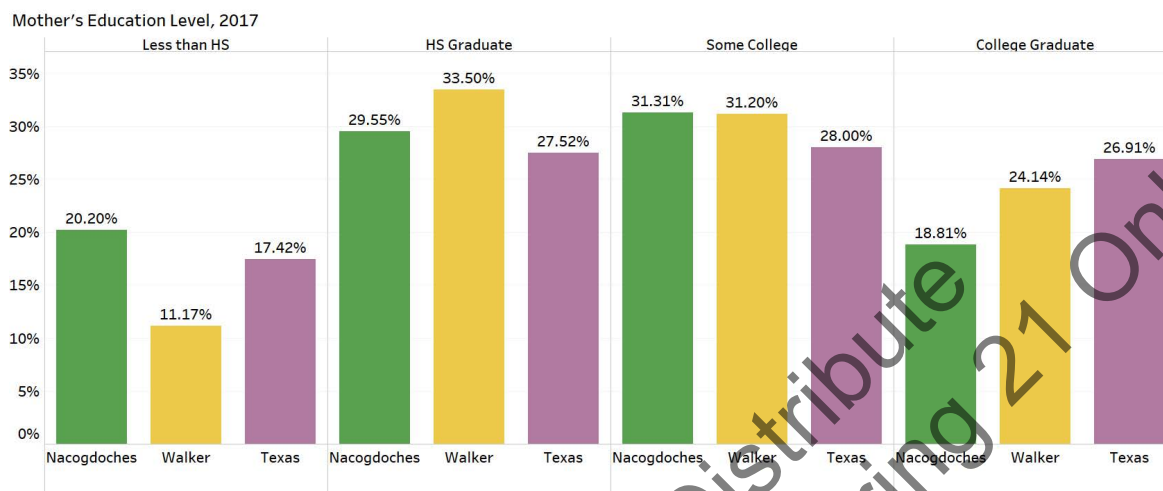
Upon reviewing the distribution of the data, we find that Nacogdoches mothers were more likely to give birth younger than its comparison locations. Specifically, mothers aged 20-29 were more likely to be found in Nacogdoches compared to Texas and Walker County. Mothers aged 30-39 were more likely to be found in Walker County and Texas overall as opposed to Nacogdoches County.

Though some of the teenaged mother data was suppressed, Nacogdoches led in births for mothers aged 15-19 relative to its competition, Walker County and Texas. This indicates that teenage mothers are slightly more plentiful per capita in Nacogdoches than Texas and likely Walker County as well.

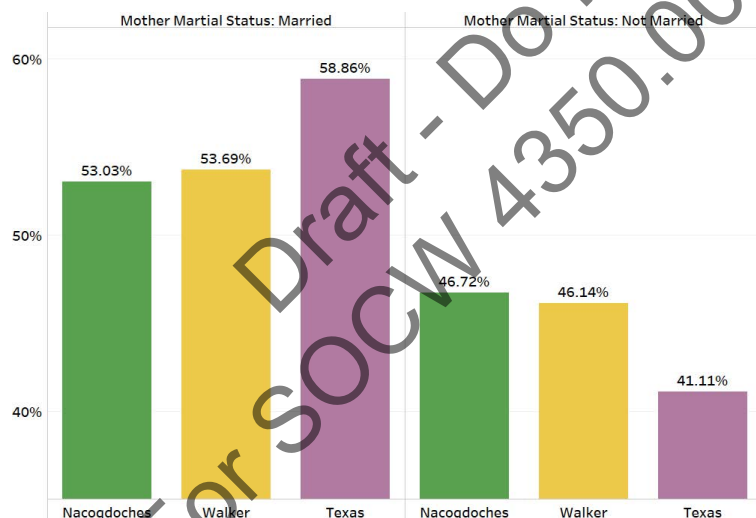


The education of mothers may be crucial in the pre- and post-natal care of their newborn. The highest education completed breakdown indicated that Nacogdoches had the highest rate of mothers who did not complete their high school education.

Walker had the highest rate of HS graduates. Nacogdoches and Walker are nearly equal in the population of mothers with some college education. In regards to college graduates, Nacogdoches had the lowest graduation rate. Stated otherwise, mothers in Nacogdoches were less likely to have higher education and more likely to have some college or less.



Regarding marital status, new mothers in Nacogdoches were the least likely to be married relative to the other observed areas.



### Assistance for New Mothers and Children

Women, Infants, and Children program (WIC) is the Special Supplemental Nutrition Program for women, infants, and children. This program provides federal grants to states for supplemental foods, health care referrals, and nutrition education for low-income

pregnant, breastfeeding, and non-breastfeeding postpartum women, and to infants and children up to age five who are found to be at nutritional risk

In 2017, Texas was awarded \$535,210,651 in grant funding from the USDA: a Food Grant for \$339,583,316 and Nutrition Service Associates (NSA) Grant for \$195,627,038. This money assists with the WIC program. Nacogdoches has one WIC Clinic. The table below shows the number of WIC recipients by category in Nacogdoches County compared to the State of Texas.

Average Monthly WIC participants by County for Fiscal Year 2018

|             | Infant  | Children | Pregnant | Postpartem | Breastfeeding | Total   | Number Served | Percent Served |
|-------------|---------|----------|----------|------------|---------------|---------|---------------|----------------|
| Nacogdoches | 548     | 1,302    | 232      | 69         | 365           | 2,516   | 2,404         | 51.10%         |
| Texas       | 188,427 | 356,436  | 64,116   | 35,850     | 99,518        | 745,347 | 1,138,341     | 39.60%         |
| Walker      | 389     | 922      | 147      | 19         | 328           | 1,805   | 1,707         | 51.40%         |

## RESULTS SECTION 4: ACCESS TO CARE

### Medical Facilities and Care

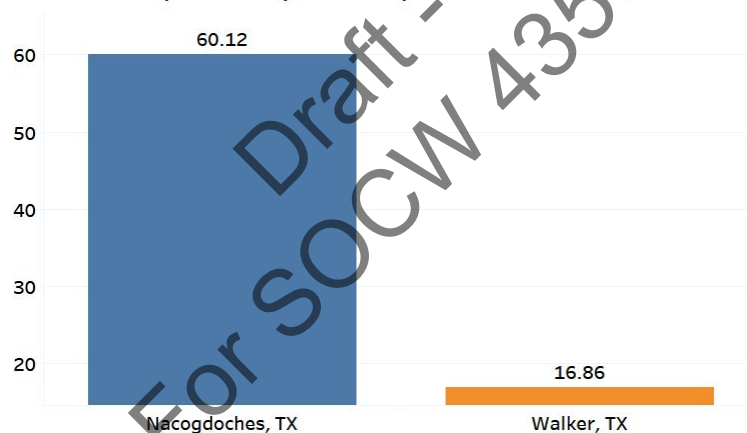
Nacogdoches has several medical facilities. It is the home of two acute care facilities, Nacogdoches Medical Center and Nacogdoches Memorial Hospital. Nacogdoches Memorial is a Level III trauma center and Nacogdoches Medical Center is designated as a Level IV trauma center. Nacogdoches Memorial has 128 medical/surgical beds, 16 ICU beds, 10 antepartum beds, and 14 psychiatric beds. Nacogdoches Medical Center has 142 medical/surgical beds and 11 ICU beds. Both hospitals are in the Deep East Texas Regional Advisory Council. The closest Trauma I facility is located in Tyler, Texas. UT Health East Texas Tyler Regional Hospital is approximately 1.5 hours away by car.

There is also a special hospital in the county. Cecil R. Bomar Rehabilitation, a 21 bed facility, is a full service Joint Commission certified rehabilitation center. Additionally, there is a primary care, dental, and mental health Federally Qualified Health Center and a Rural Health Clinic.

The medical transportation program is available for all who are served by Medicaid, Children with Special Health Needs Care and Transportation for Indigent Cancer Patients. These programs are available to all the above who do not have any other means of transportation for medical care.

On a positive note, Nacogdoches has more licensed hospital beds per capita compared to its peer, Walker County.

**Licensed Hospital Beds per 10k Population**



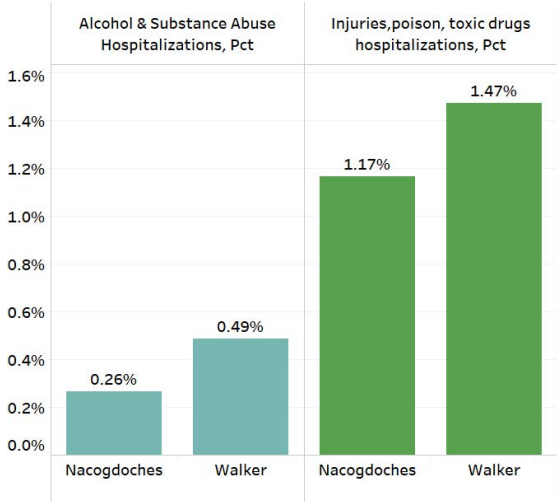
Licensed Beds: The maximum number of beds for which a hospital holds a license to operate. Many hospitals do not operate all of the beds for which they are licensed.

### Specific Hospitalizations

Comparisons were made between Nacogdoches and Walker counties for inpatient

hospitalizations. For both alcohol and substance abuse hospitalizations and injuries, poisons, and toxic drug hospitalizations, Nacogdoches held a lower rate as indicated by the graph below.

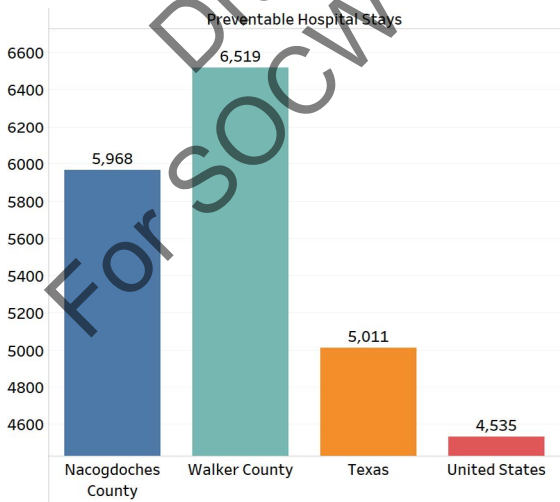
Specific Hospitalizations



Preventable Hospitalizations

Preventable hospitalizations are hospital stays that may have been unneeded if a patient received better care in an outpatient setting.

Nacogdoches had a lower number of preventable hospital stays than Walker County but a higher number of stays compared to Texas and the United States.

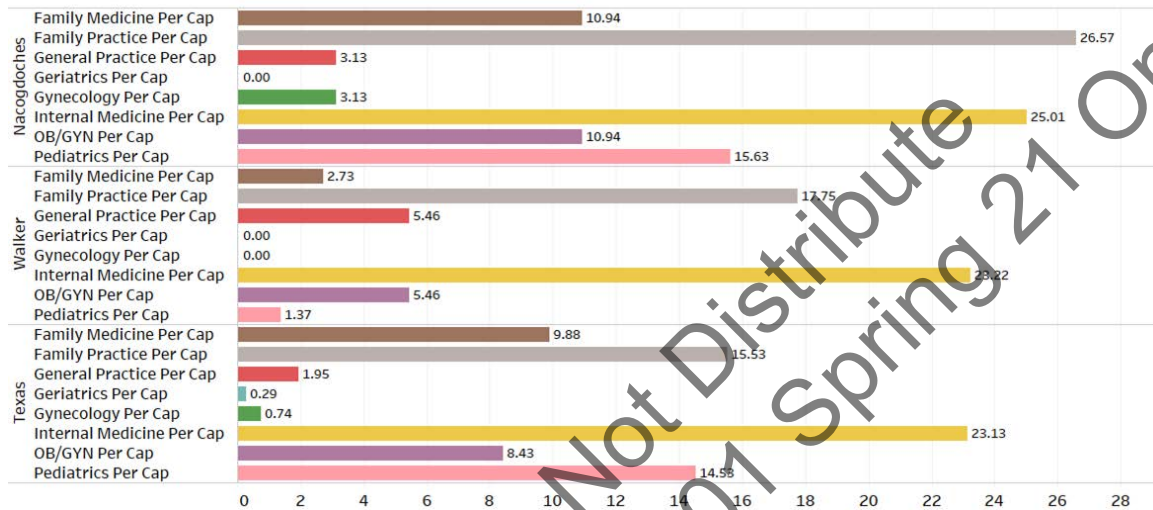


## Physical Health

Texas accounts for 8 subcategories for Primary Care Physicians (PCPs). Nacogdoches has 59 Total PCPs. The greatest number of PCPs in Nacogdoches are Family Practitioners. Nacogdoches County has 19 more PCPs per capita compared to Walker County.

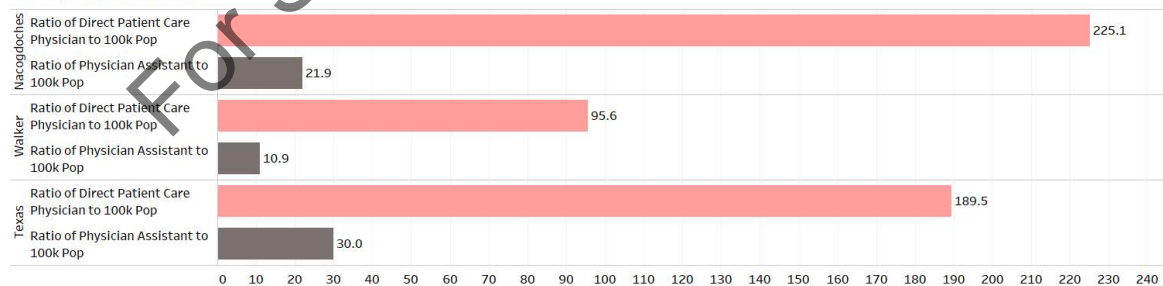
According to the Texas DSHS, the 2019 provider to 100,000 patient population ratio for Nacogdoches was 92.2. For Walker County and Texas it was 51.9 and 75.8 respectively.

### PCP Per Cap



Direct Patient Care Physicians are all physicians in the county that practice medicine and work directly with patients. This includes PCPs and all other medical specialties. It does not include researchers, administrators, teachers, residents, fellows, federal, military, retired, or not-in-practice physicians. There were 144 Direct Patient Care Physicians in Nacogdoches in 2019. Per capita, Nacogdoches County had the highest number of Direct Patient Care Physicians compared to Walker County and Texas. The Number of Physician Assistants per capita was twice as high in Nacogdoches compared to Walker County but lower than the state rate overall.

### Direct Patient Care Physician's and Physician Assistant's, 2019 Per Capita Across Location

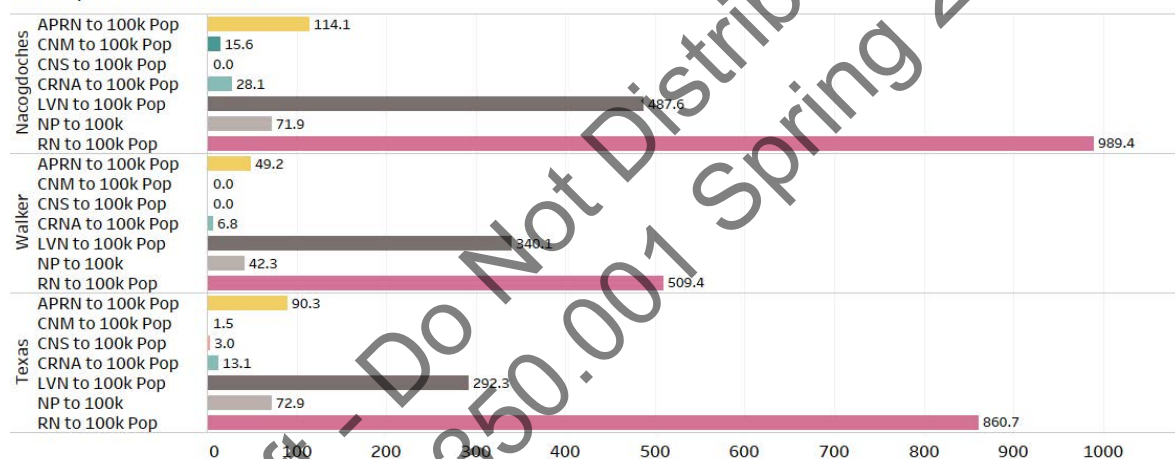


For the benefit of understanding the different types of Registered Nurses (RN), the RN categories were broken down by specialty of nursing. Advanced Practice Nurse (APRN) is a broad category which includes Clinical Nurse Specialist (CNS), Certified Registered Nurse Anesthetist (CRNA), Certified Nurse Midwife (CNM), and Nurse Practitioner (NP). The RN total is the total number of RNs which include APRNs, the category for Licensed Vocational Nurse (LVN) is separate.

Nacogdoches had the highest rate of nurses/100,000 population when compared to Walker County and Texas. They had a significantly higher number of APRNs in total. Nacogdoches CNM and CRNA rates were much higher and their rate of NPs was about equal to Texas and a little more than half the rate of Walker County. Nacogdoches has more medical facilities than Walker County which is probably the reason for the increased count of nursing staff.

#### Nurses, 2019

##### Per Capita Across Location



No bar indicates none of that profession within that locale

Many medical providers make up the medical care in Nacogdoches County. Nacogdoches County had a higher rate of CHWs, EMS personnel, and physical therapists than Walker County and Texas.

Dentist: There are 24 Dentists in Nacogdoches County. Nacogdoches County had a higher rate of dentists/100,000 at a rate of 37.5. This is compared to Walker County with a rate of 28.7. Overall Texas had a higher total number of dentists per 100,000. The Texas rate per 100,000 was 47.7.

Emergency Medical Service Providers: There is one Emergency Medical Service within the county, accounting for a total of 195 personnel. Nacogdoches County is located in Regional Advisory Council H and has two trauma centers. Nacogdoches has a higher rate of EMS providers per 100,000 than Walker County and the state of Texas

Pharmacies: Nacogdoches has 21 pharmacies compared to Walker County which has 16 active pharmacies.

Pharmacists: Nacogdoches County has 51 Registered Pharmacists and 142 pharmacy technicians. Nacogdoches County had a rate of 79.7 pharmacists/100,000. Walker County indicated they had no pharmacists and the rate of pharmacists overall for the state was 93.6/100,000.

Other Healthcare Providers: Other healthcare providers include Occupational therapists and Physical therapists. Nacogdoches and Walker counties had about the same rate of occupational therapists/100,000. The Texas rate was about double the rate of these counties. The rate of physical therapists/100,000 in Nacogdoches was about the same as Texas but twice as high as Walker County.

**Other Healthcare Workers, 2019**  
**Per capita Across Location**



No bar indicates no data available

## Mental Health

According to the National Institute of Mental Health, "Mental health care is essential. Mental illnesses contribute a substantial burden of disease."

In 2019, the National Institute of Mental Health estimated that 51.5 million adults aged 18 and older in the United States present with some form of mental illness. This number represented 20.6% of U.S. adults. The prevalence of having a mental health condition was higher among females than that of males.

The Centers for Disease Control and Prevention (CDC) stated that according to the National Health Survey, 11.2% of adults 18 years and older have regular feelings of nervousness or anxiety, and 4.7% have regular feelings of depression in the United States. 56.8 million have a primary diagnosis of mental, neurodevelopmental, and/or behavioral disorder, and there were an estimated 4.8 million emergency visits in the United States.

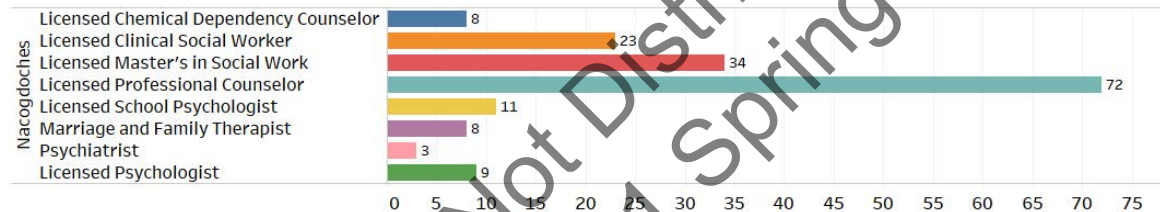
According to the Texas Department of State Health Services Nacogdoches County has a total of 168 licensed professionals who may serve in providing mental health care.

There are more Licensed Professional Counselors and Licensed Chemical Dependency Counselors than higher level mental health providers. There are only three Psychiatrists in the county. Psychiatrists may prescribe medications, provide inpatient treatment, and have other higher level privileges.

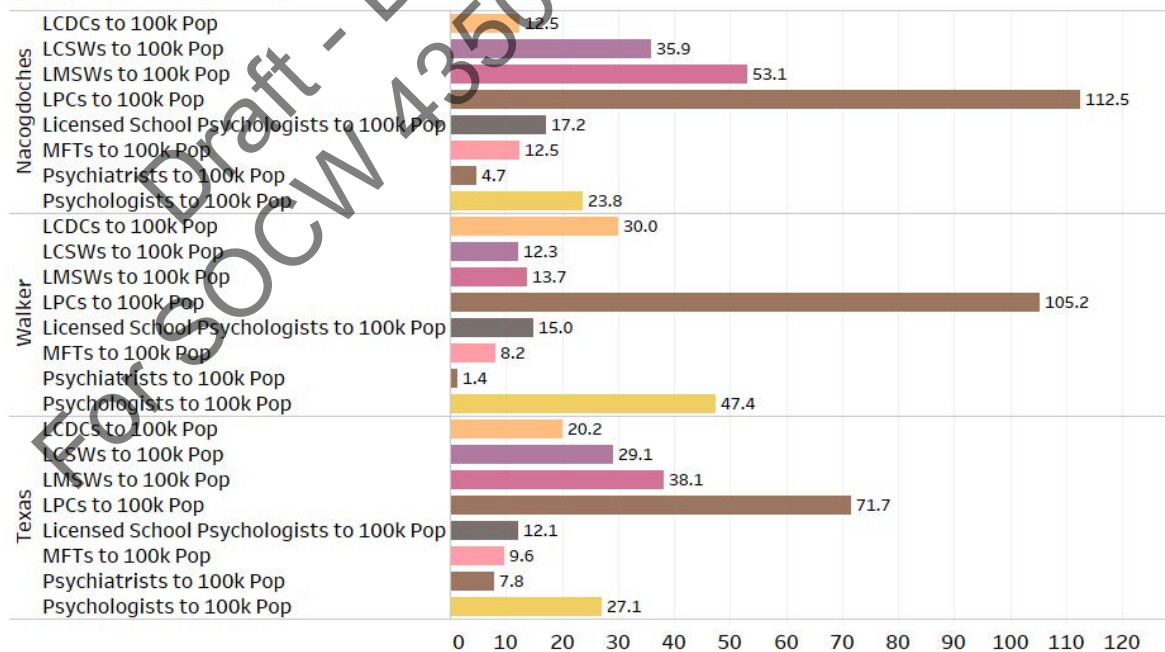
In total, Nacogdoches has 8 Licensed Chemical dependency Counselors, 23 Clinical social Workers, 34 professionals who have a Licensed Master's in Social Work degree, 72 Licensed Professional Counselors, 11 School Psychologists, 8 Marriage and Family Therapists, 3 Psychiatrists, and 9 Licensed Psychologists.

In 2019 Nacogdoches had a higher rate of LCSWs, LMSWs, LPCs, School Counselors, and MFTs per 100,000 when compared to Walker County and Texas.

**Mental Health Professionals - Nacogdoches, 2019**



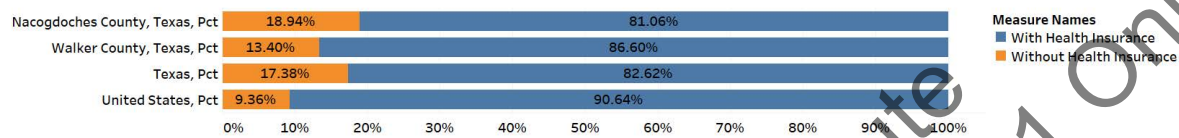
**Mental Health Professionals, 2019  
Per Capita Across Location**



## Health Insurance

Health Insurance plays an important role in access to care, comorbidities, mortality, and overall quality of life. The percentage of uninsured in Nacogdoches County was 18.94%, compared to Walker at 13.40% and Texas at 17.38%. Overall the rate of uninsured in the United States was 9.36%. The rate of uninsured in Nacogdoches is slightly higher than Texas and is 5.54% higher than Walker County. The uninsured rate in Nacogdoches is twice as high as the United States.

Percent With and Without Health Insurance Across Location



The state of Texas overall has a significant uninsured rate. It is important to understand the portion of the population that lacks health insurance.

Distribution of those who lack insurance across age appear to be monomodal with a bell shaped curve peaking around 26-34 for all locations except for the State of Texas where its peak is 19-25. The highest non-insurance rate for 26-34 year olds across locations was in Nacogdoches at 35.08%

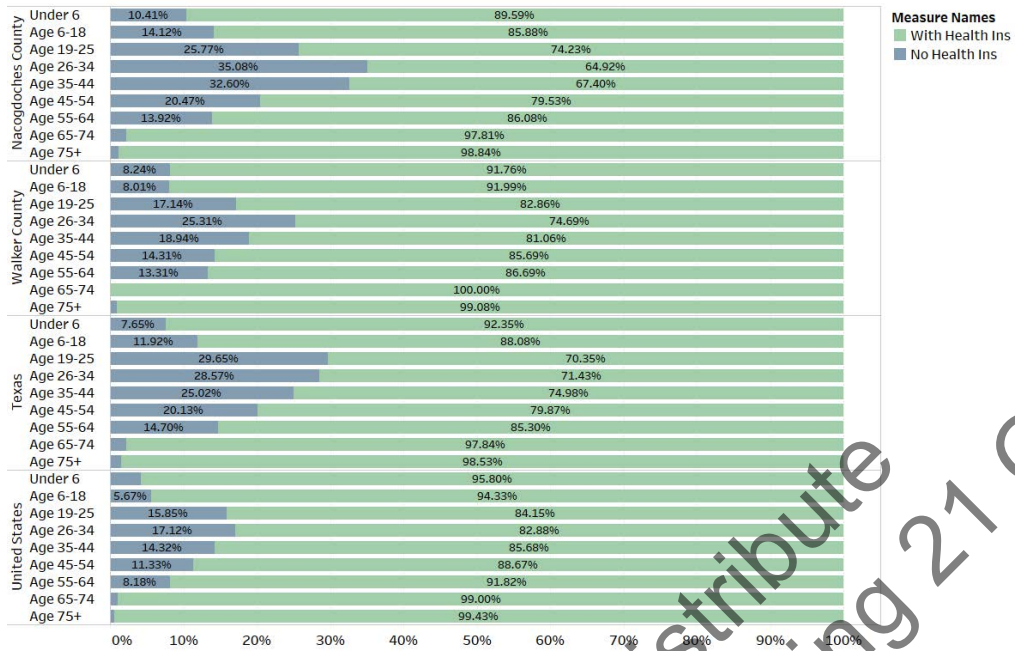
For children under 6 years old, 10.41% lacked health insurance. For 6-18 years, 14.12% did not have health insurance. For 19-25 years, 25.77% did not have health insurance. Those aged 26-34 years, 35.08% did not have health insurance. Those 35-44 years, 32.6% did not have health insurance. Ages 45-54 years, 20.47% did not have health insurance. Ages 55-64 years, 13.92% did not have health insurance. Ages 65-74 years, 2.9% did not have health insurance. Those over 75, 1.16% lacked health insurance.

The decrease in lack of insurance for those 65 years and older could be a result of their participation in Medicare. In Nacogdoches, those aged 65-74, 2.9% of individuals did not have health insurance. This decreased to 1.16% for those over the age of 75.

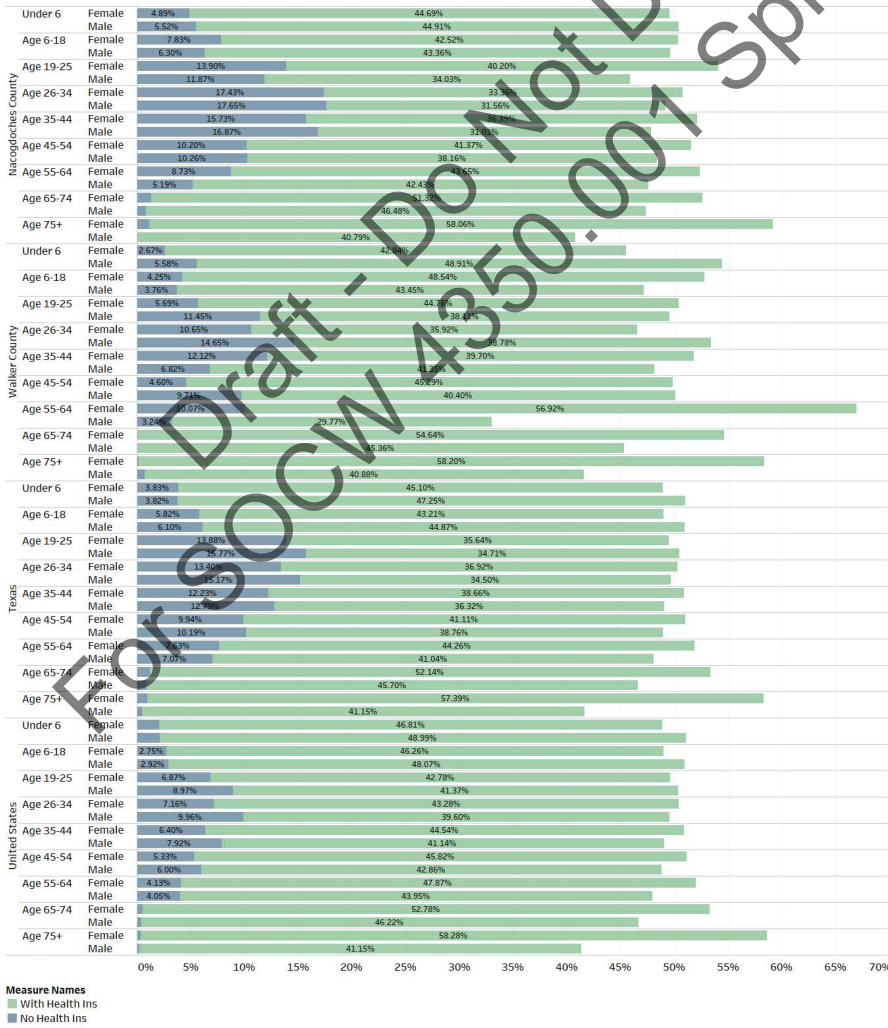
The increase of a lack of health insurance rates during the 20's and 30's age range is possibly attributed to a child leaving their parent's coverage, entering the workforce or college, and a lack of adequate health insurance coverage from their job or other means.

All of Nacogdoches County rates for the uninsured were higher than Walker County. Further, Nacogdoches had higher uninsured rates in almost all age groups compared to Texas as a whole.

Insurance by Age across Location



Insurance by Location, Gender, and Age

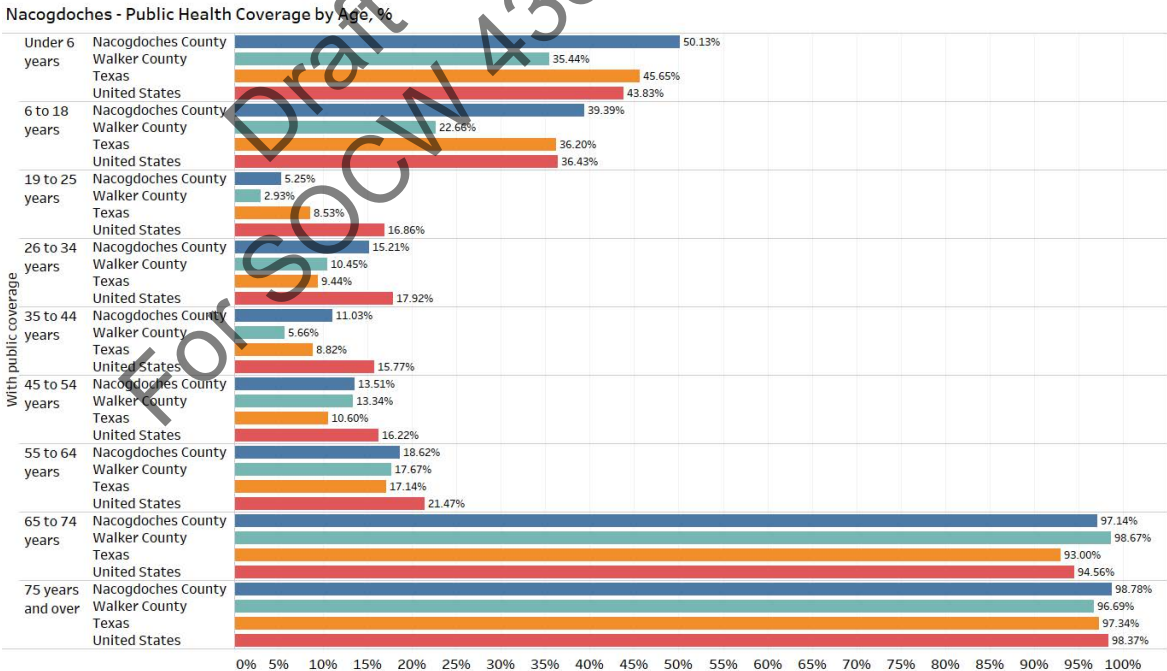


Public Health Insurance

According to the U.S. Census, public health insurance consists of several categories. It encompasses the federal programs such as Medicare, Medicaid and other medical assistance programs, VA and CHAMPVA Health Care; the Children’s Health Insurance Program (CHIP); and individual state health plans. According to the U.S. Census, Medicare, which is a Federal program, assists with paying health care costs for people 65 and older and for certain people under 65 with long-term disabilities. CHIP is a state-level program for those who are low income and do not qualify for Medicaid. There are also state-specific plans. There are states that have their own insurance plans for those who fit into certain categories such as low income, high risk, and uninsured. Veterans care is also considered a source of public health insurance. The Department of Veteran Affairs provides VA coverage to eligible veterans.

CHAMPVA is also through Veteran Affairs, its purpose is to pay the cost of medical care for veterans, their spouses, and family. The highest rate of public health insurance is in the population of 65 years and older. This is understandable as 65 years is the youngest age that a person can retire and receive Medicare benefits. Nacogdoches has the highest rate of children under five receiving public health insurance.

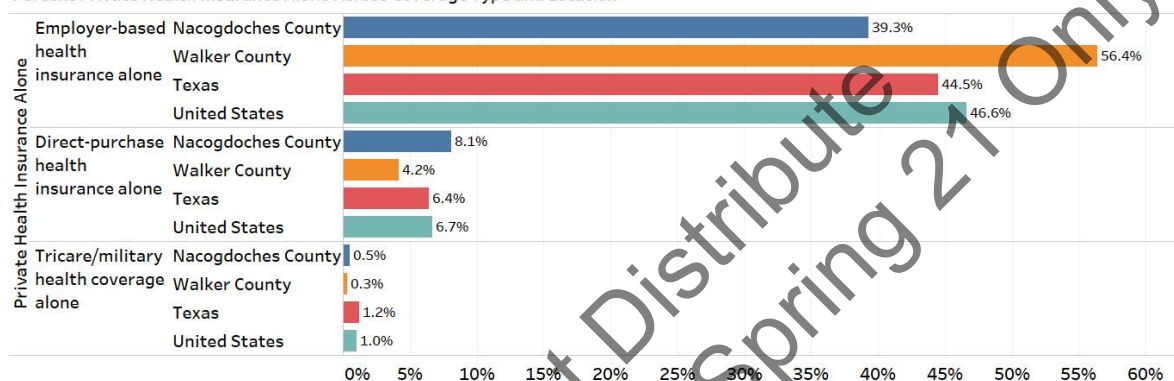
Those ages 6-18 years also have the highest rate in all four locations. For persons between 19 and 25 years the rate was lower than Texas and the US. This could be because many residents of Nacogdoches County may attend Stephen F. Austin and be insured on their parents' plans or in another form. Those aged 26-64 years of age had a higher rate of being publicly insured except when compared to the United States.



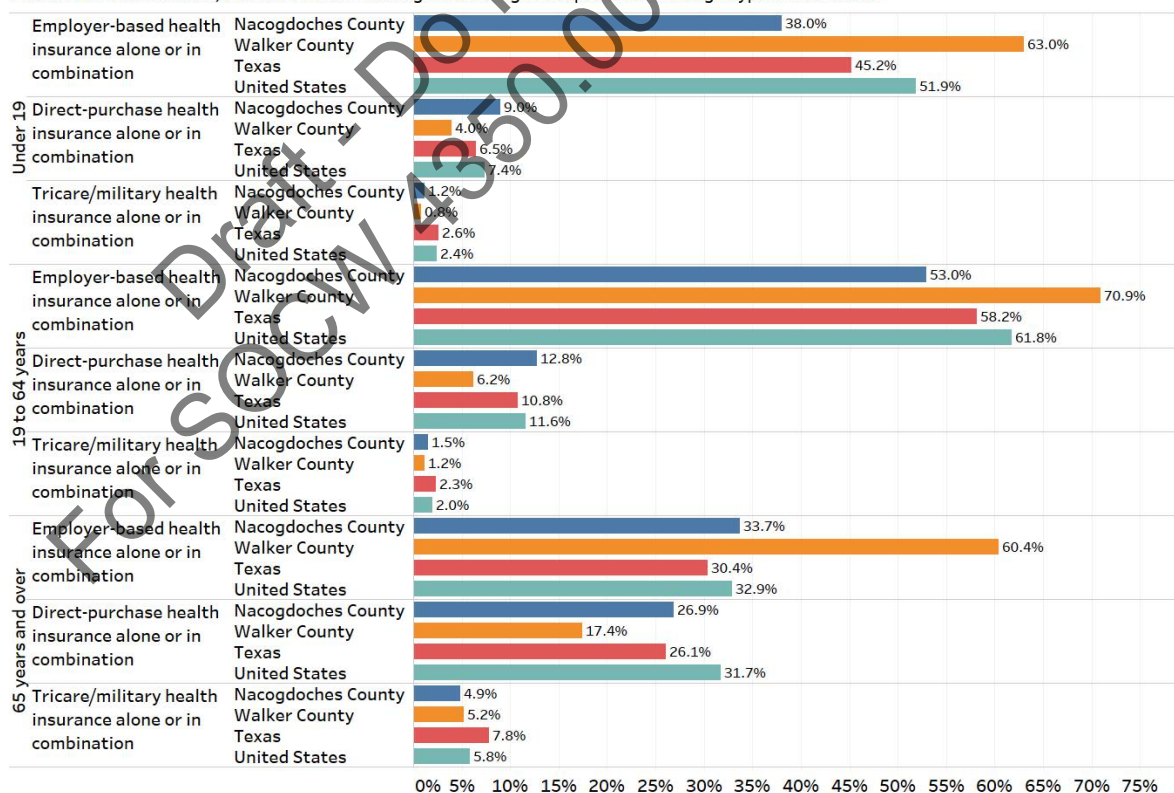
## Private Health Insurance

According to the U.S. Census, private health insurance is coverage provided by an employer or union, by an individual through a health insurance company or coverage through TRICARE. The categories of private insurance include: employee-based health insurance, own-employment based health insurance, direct-purchase health insurance which is purchased privately or through an exchange, and TRICARE which insures military families. The following graphs detail the private health insurance distribution across the locations studied.

Percent Private Health Insurance Alone Across Coverage Type and Location



Private Health Insurance, Percent Private Coverage in Each Age Group Across Coverage Type and Location



The Texas Department of Health and Human Services has many programs and services under Medicaid for both adults and children. Adults in Texas may qualify for Medicaid if they have a disability, care for children, are 65 years or older or take part in the Medicaid buy-in. CHIP and Children's Medicaid both cover services to keep kids healthy. They cover dental work, physician check-ups, medications and vaccines, mental health care, treatment for special needs, and other services. A child must be 18 years or younger, live in the state of Texas, be a citizen or legal resident, and meet income guidelines.

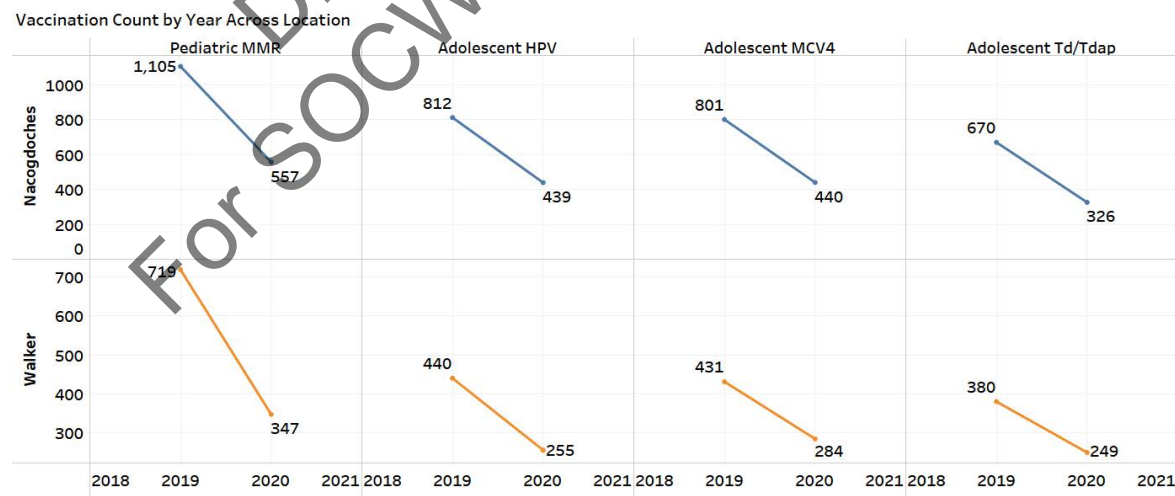
According to the Texas Health and Human Services Healthcare Statistics the number of recipients of Medicaid in Nacogdoches County is shown in the chart below.

### Medicaid Enrollees - August 2020

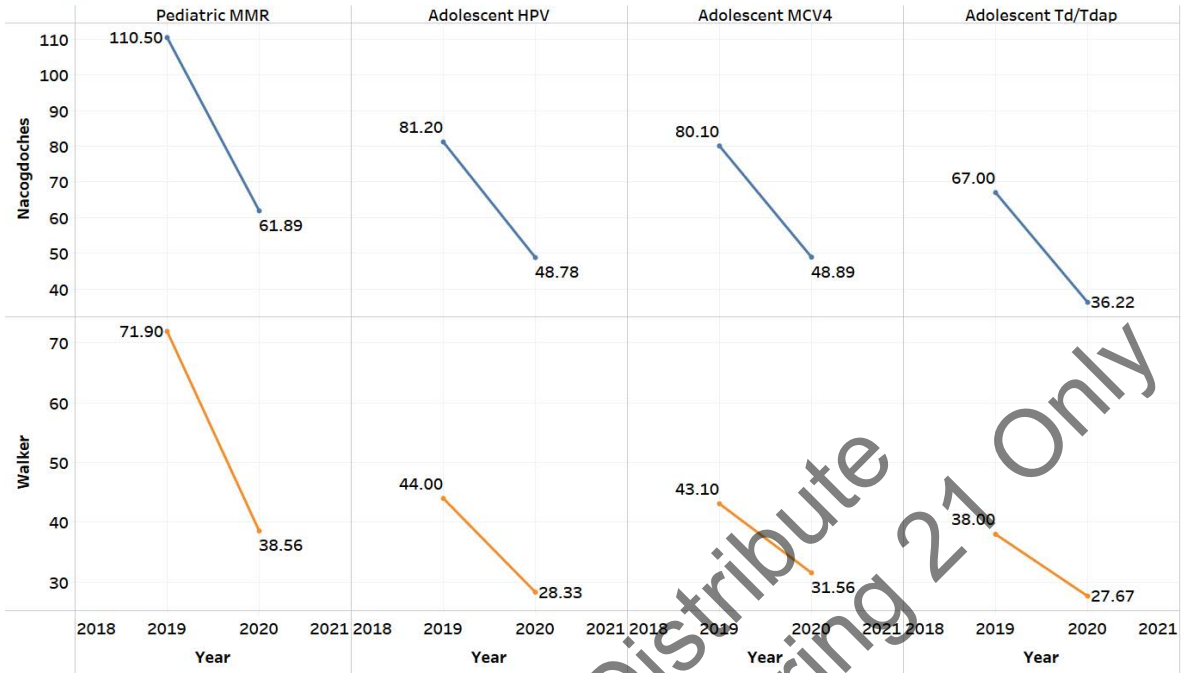
|                                 | Nacogdoches<br>County | Texas     |
|---------------------------------|-----------------------|-----------|
| Disabled & Blind                | 1,376                 | 413,362   |
| TANF Adults & Medically Needy   | 309                   | 147,802   |
| Breast and Cervical Cancer      | 13                    | 5,201     |
| Pregnant Women                  | 593                   | 206,663   |
| Children's Medicaid             | 7,665                 | 3,168,903 |
| Regular CHIP                    | 556                   | 313,787   |
| Medicaid Caseload               | 10,943                | 4,318,573 |
| Medicaid Age                    | 987                   | 976,640   |
| Medicaid Clients under 21 years | 8,131                 | 3,369,907 |
| Medicaid Clients over 21 Years  | 2,813                 | 948,666   |

### Vaccinations

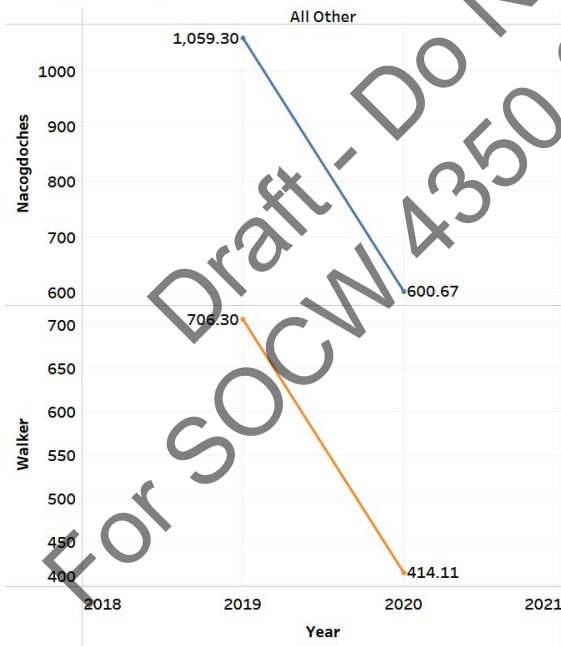
Vaccination rates went down for both Nacogdoches and Walker during 2020 possibly due to the COVID-19 pandemic and a decreased desire to go to a healthcare facility.



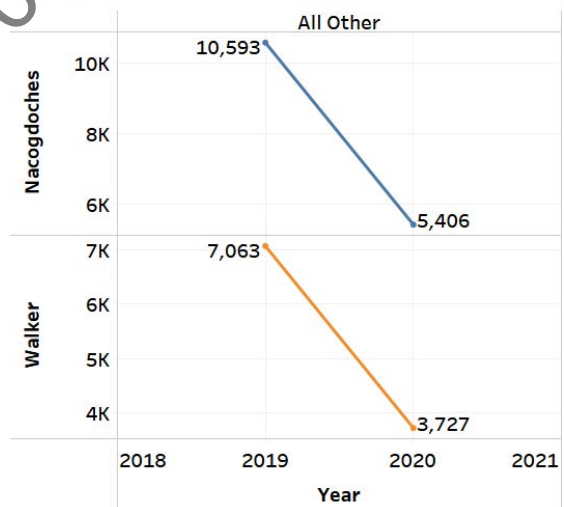
Average Monthly Vaccinations by Year and Location



Average Monthly Vaccinations by Year and Location



All Other Vaccinations Raw Count By Year Across Location



## RESULTS SECTION 5: SOCIAL FACTORS

According to Healthy People 2020, a branch of the Federal Office of Disease Prevention and Health Promotion, a range of personal, social, economic, and environmental factors contribute to individual and population health. For example, people with a quality education, stable employment, safe homes and neighborhoods, and access to preventive services tend to be healthier throughout their lives. Conversely, poor health outcomes are often made worse by the interaction between individuals and their social and physical environment.

Essentially, people who are able to take care of their health and live in an environment where healthcare can be easily accessed usually live longer and healthier lives. Results Section 5 breaks down these factors for Nacogdoches County, the comparative Walker County, the State of Texas, and the United States.

### Employment and Labor Force

Employment is a key factor in an individual's health outcome. According to the Robert Wood Johnson Foundation, “a good-paying job makes it easier for workers to live in healthier neighborhoods, provide quality education for their children, secure child care services, and buy more nutritious food—all of which affect health. Good jobs also tend to provide good benefits. Higher earning also translates to a longer lifespan—since 1977, the life expectancy of male workers retiring at age 65 has risen 5.8 years in the top half of the income distribution, but only 1.3 years in the bottom half.”

Employment Status relates to people 16 years old and over. From the American Community Survey 2019 Subject Definitions, “Employment status is key to understanding work and unemployment patterns and the availability of workers.”

The ACS defines Employment status below:

“Employed – This category includes all civilians 16 years old and over who either (1) were “at work,” that is, those who did any work at all during the reference week as paid employees, worked in their own business or profession, worked on their own farm, or worked 15 hours or more as unpaid workers on a family farm or in a family business; or (2) were “with a job but not at work,” that is, those who did not work during the reference week but had jobs or businesses from which they were temporarily absent due to illness, bad weather, industrial dispute, vacation, or other personal reasons.

Excluded from the employed are people whose only activity consisted of work around the house or unpaid volunteer work for religious, charitable, and similar organizations; also excluded are all institutionalized people and people on active duty in the United States Armed Forces.

Unemployed – All civilians 16 years old and over are classified as unemployed if they (1)

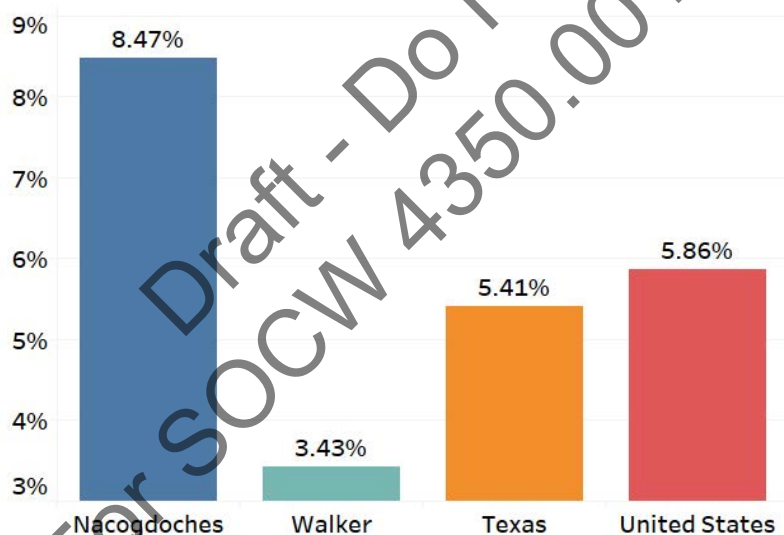
were neither “at work” nor “with a job but not at work” during the reference week, and (2) were actively looking for work during the last 4 weeks, and (3) were available to start a job. Also included as unemployed are civilians who did not work at all during the reference week, were waiting to be called back to a job from which they had been laid off, and were available for work except for temporary illness.

Examples of job seeking activities are: registering at a public or private employment office, meeting with prospective employers, investigating possibilities for starting a professional practice or opening a business, placing or answering advertisements, writing letters of application, and being on a union or professional register.”

The ACS defines the labor force as including all people classified in the civilian labor force, plus members of the U.S. Armed Forces (people on active duty with the United States Army, Air Force, Navy, Marine Corps, or Coast Guard). The civilian labor force consists of people classified as employed or unemployed.

Civilian Labor Force – Consists of people classified as employed or unemployed in accordance with the criteria described above. The first graph indicates the number of unemployed in all four geographies. Nacogdoches County had the highest unemployment rate. It was more than twice as high as Walker County and about 3% higher in both Texas and the US.

**Unemployment Rate Across Location**

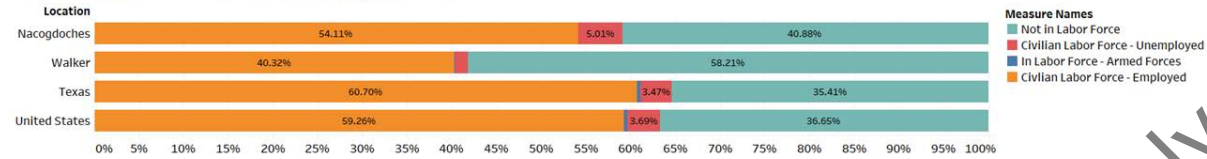


The graph below indicates the categories of persons in the workforce. People not in the workforce are those who are 16 years of age or older and not classified as members of the labor force. These people may be students, homemakers, seasonal or retired workers. The civilian labor force employed or nonemployed is described above and all others are armed forces. The percentage of people in the labor force in Nacogdoches was higher than Walker County but lower than Texas. Nacogdoches had a higher rate of

unemployment than Walker County, Texas, or the United States.

The civilian labor force unemployment rate for Nacogdoches County was 5.01%, higher than all other locations. Those considered not in the labor force equated to 40.88%, higher than the percentages in Texas and the United States.

Civilian Labor Force Rate Across Location and Employment Status

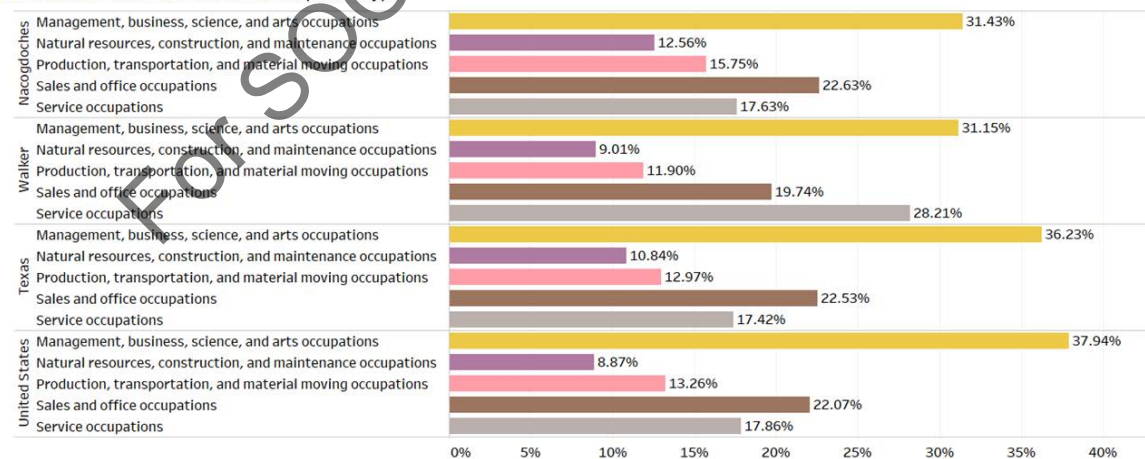


Civilian Labor Force Rate Across Location and Employment Status

| Location      | Civilian Labor Force - Employed | In Labor Force - Armed Forces | Civilian Labor Force - Unemployed | Not in Labor Force |
|---------------|---------------------------------|-------------------------------|-----------------------------------|--------------------|
| Nacogdoches   | 54.11%                          | 0.00%                         | 5.01%                             | 40.88%             |
| Walker        | 40.32%                          | 0.04%                         | 1.43%                             | 58.21%             |
| Texas         | 60.70%                          | 0.42%                         | 3.47%                             | 35.41%             |
| United States | 59.26%                          | 0.40%                         | 3.69%                             | 36.65%             |

The civilian labor force in Nacogdoches County consists of five categories. Nacogdoches County's highest employers are those working in Category 1-Management, Business, Science, and the Arts. Nacogdoches County and Walker County have about the same rate of people working in these occupations. The percentage is lower than the rate of Texas and the United States. Category 2-Natural Resources, Construction, and Maintenance Occupations and Category 3-Production, Transportation, Materials Movement, and Category 4-Sales and Office Occupations are highest in Nacogdoches County when compared to the other geographies analyzed. Category 5-Service Occupations were the highest in Walker County. Nacogdoches County, Texas, and the U.S. percent were about the same.

Civilian Labor Force Rates Across Occupation Type



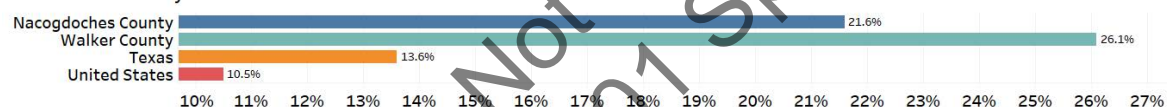
## Poverty

From the U.S. Census Bureau Glossary, “the Census Bureau uses a set of money income thresholds that vary by family size and composition to determine who is in poverty. If the total income for a family or unrelated individual falls below the relevant poverty threshold, then the family (and every individual in it) or unrelated individual is considered in poverty.”

Nacogdoches County has a 21.6% poverty level. When compared to Walker County, Walker County has a poverty level 4.5% higher than that of Nacogdoches. Overall both Nacogdoches and Walker counties have a poverty level nearly twice as high as the State of Texas.

According to Healthy People 2020, poverty is an important health issue. Although the U.S. Census uses dollar thresholds, socio-economic factors play a crucial part. Many factors may contribute to the inability to have sufficient resources, to include; marital status, education, social class and status, income, and geographic location. There is believed to be an increased risk of disease and premature death for people who are in poverty. Rural and urban areas are affected differently.

Percent in Poverty



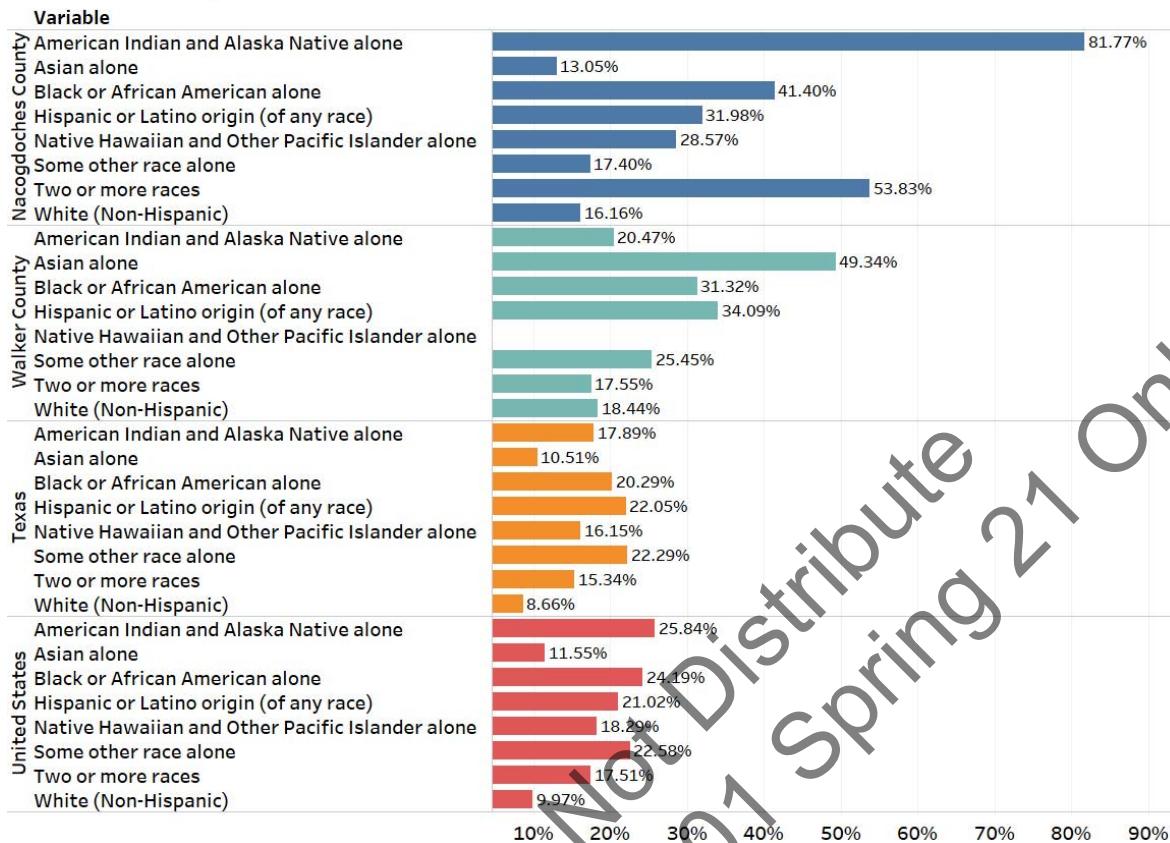
## Poverty by Race

The poverty estimates by race and gender are shown in the graphs below. Race was categorized by Hispanic, Non-Hispanic White, Non-Hispanic Black, and Non-Hispanic, and Other.

Though a small group within Nacogdoches County, American Indian and Alaska Native individuals had an 81.77% poverty rate.

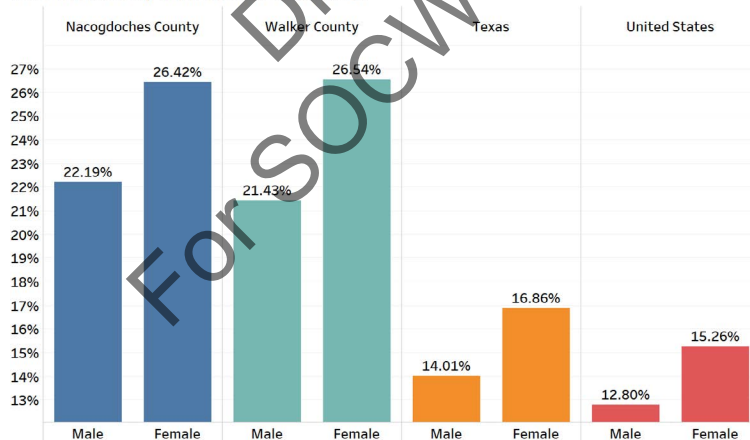
Black individuals had a higher poverty rate in Nacogdoches than other Black individuals in the comparison locations. Hispanic individuals in Nacogdoches had a higher poverty rate than those in that same race category in Texas and the United States.

### Percent in Poverty within Race Across Location



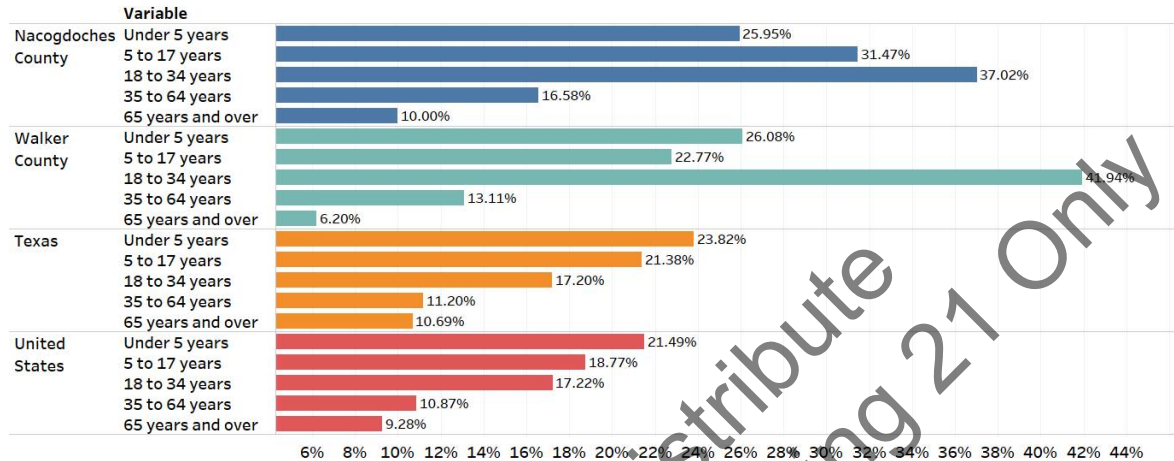
Poverty across sex was similar between Nacogdoches and Walker counties, but significantly higher both within and across sex when compared to Texas and the United States.

### Percent in Poverty within Sex Across Location

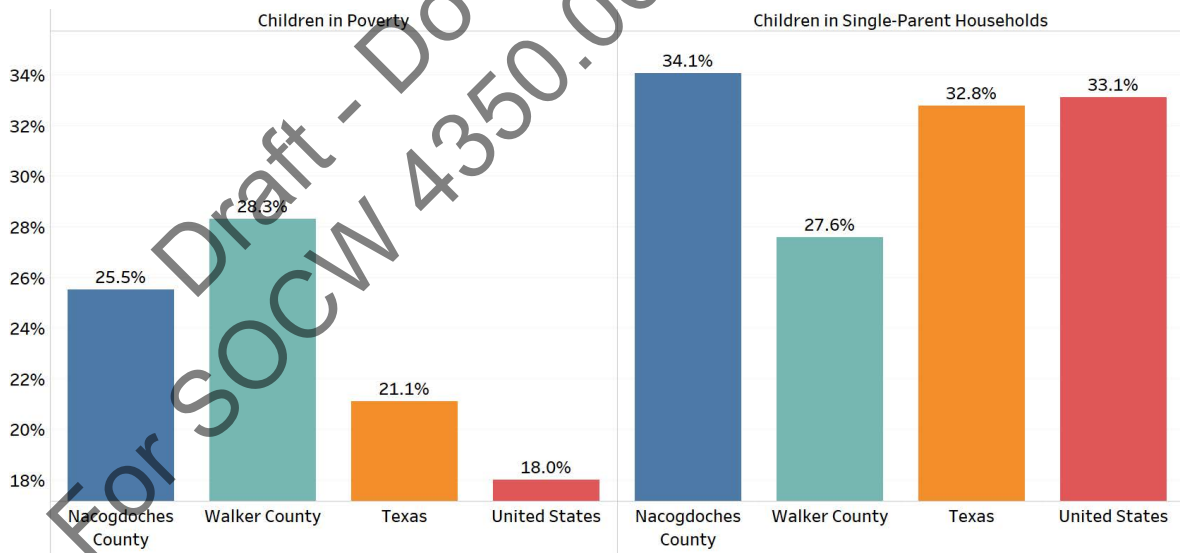


Nacogdoches County had the highest percent of 5-17 year olds in poverty when compared against Walker County, Texas, and the United States. For 18-34 year olds, the percent in poverty was still alarmingly high at 37.02% and substantially higher than that same age group in Texas and the United States.

Percent in Poverty within Age Across Location



Nacogdoches had a higher percentage of children in poverty than Texas and the United States and the highest number of children living in single-parent households compared to all other locations in this report.



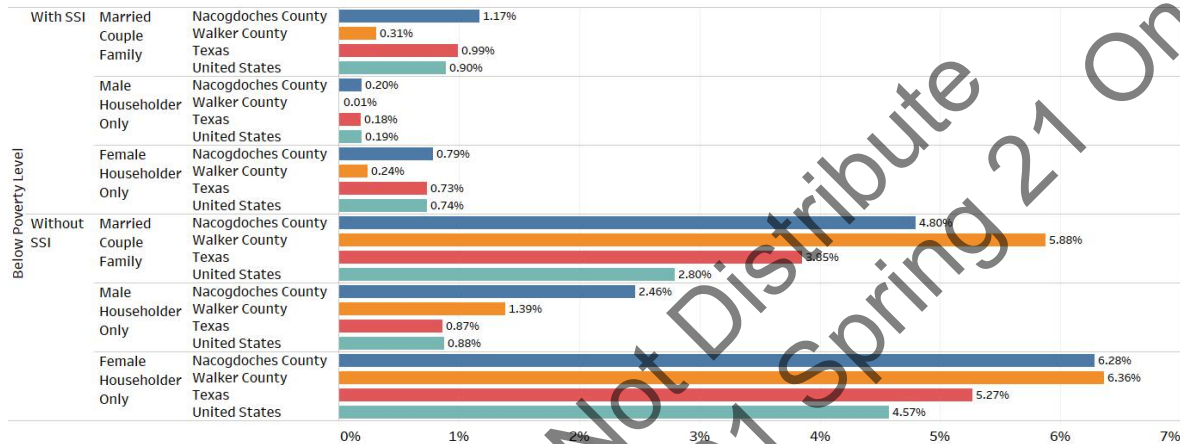
### Poverty and Supplemental Security Income

According to the Social Security Administration, Supplemental Security Income (SSI) is a Federal income supplement program funded by general tax revenues (not Social

Security taxes). It is to provide assistance to the blind, aged, and people with disabilities who have little or no income. It is cash to assist with food, clothing, and shelter.

Poverty rates for families in Nacogdoches County where the householder was female without SSI being the highest. The females without SSI was 6.28% as compared to females with SSI which was 0.79% poverty. Married couples not receiving SSI in Nacogdoches County had the second highest level of poverty. Male householders with or without SSI seemed to have the lowest rate of poverty.

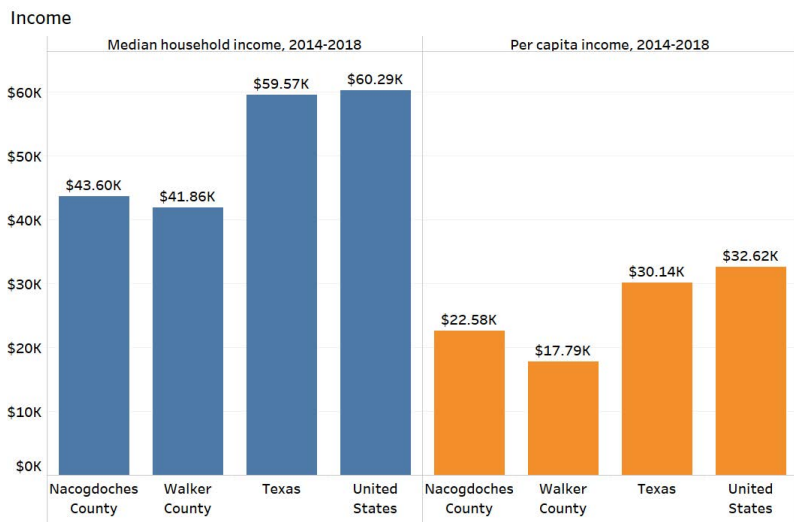
Below Poverty Households as a Percentage of All Family Households; Sorted by SSI Status and Household Type



## Income and Housing

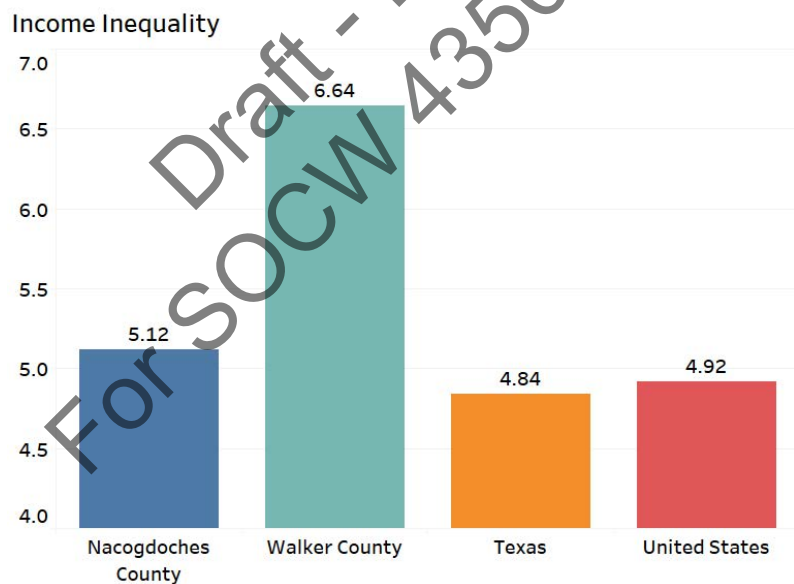
The median Household income for the years 2014-2018 was 43,600 in Nacogdoches County and 41,860 In Walker County. Both counties' household income was less than that of Texas and the United States. Nacogdoches per capita income for the same years was slightly higher than Walker County but remained lower than Texas and the United States per capita income.

The Census' definition of money income is as follows: The income received on a regular basis (exclusive of certain money receipts such as capital gains and lump-sum payments) before payments for personal income taxes, social security, union dues, medicare deductions, etc. It includes income received from wages, salary, commissions, bonuses, and tips; self-employment income from own non-farm or farm businesses, including proprietorships and partnerships; interest, dividends, net rental income, royalty income, or income from estates and trusts; Social Security or Railroad Retirement income; Supplemental Security Income (SSI); any cash public assistance or welfare payments from the state or local welfare office; retirement, survivor, or disability benefits; and any other sources of income received regularly such as Veterans' (VA) payments, unemployment and/or worker's compensation, child support, and alimony.



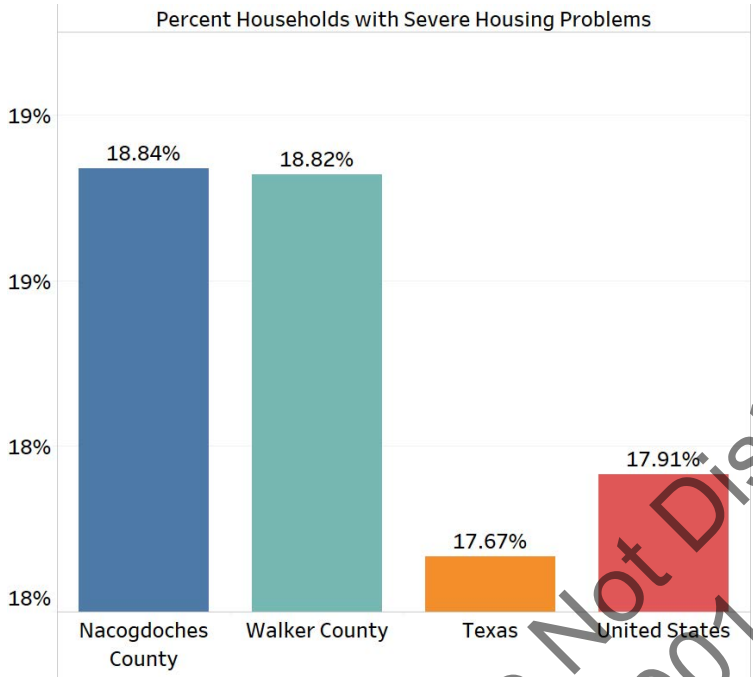
According to the RWJF, income inequality has a broad impact on health including increased mortality. It has been known to cause poor health and cardiac disease.

Income Inequality is the ratio of household income at the 80th percentile to that at the 20th percentile. A higher inequality ratio indicates greater division between the top and bottom ends of the income spectrum. Nacogdoches County has slightly higher income inequality than Texas and the United States, but lower than Walker County. The income inequity in Nacogdoches County is 5.1 which was higher than both Texas and the United States but lower than Walker County which had an income inequality rate of 6.6.

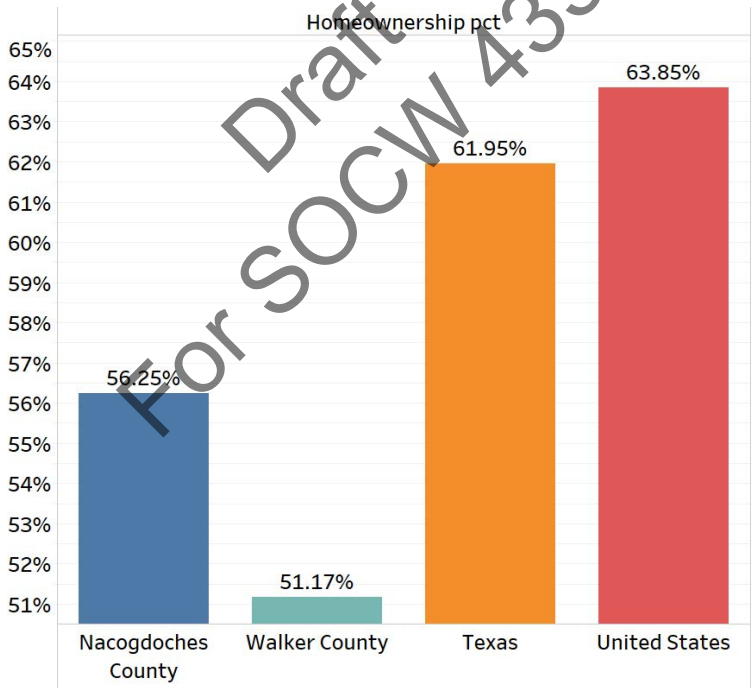


As defined by Robert Woods Johnson's County Health Rankings, Severe Housing

Problems is the percentage of households with one or more of the following housing problems: Housing unit lacks complete kitchen facilities; Housing unit lacks complete plumbing facilities; Household is overcrowded; or Household is severely cost burdened. Nacogdoches County has substantially higher severe housing problems compared to Texas and the United States.

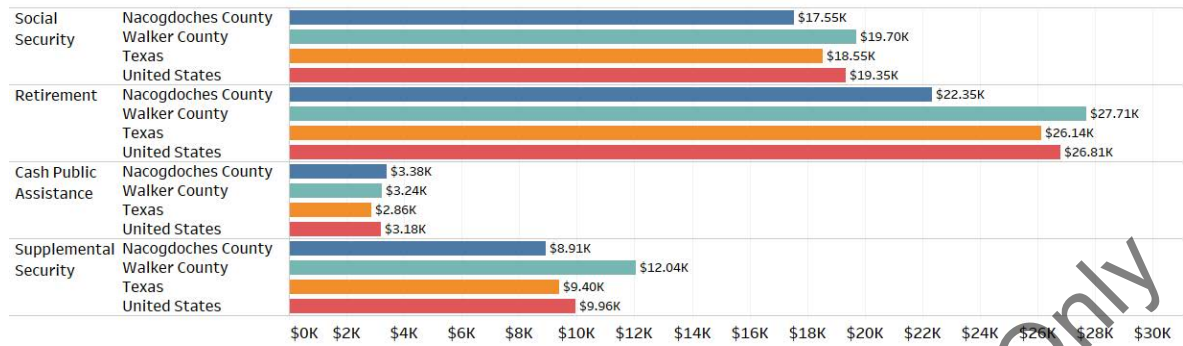


Nacogdoches has lower home ownership rates than Texas and the United States.



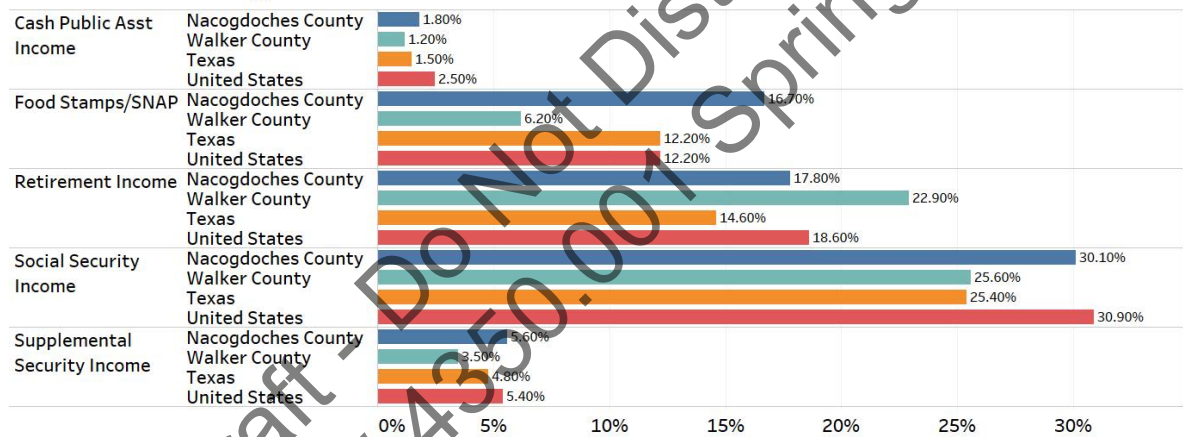
The following graphs detail the distribution of nontraditional income across locations.

Mean Nontraditional Income by Category

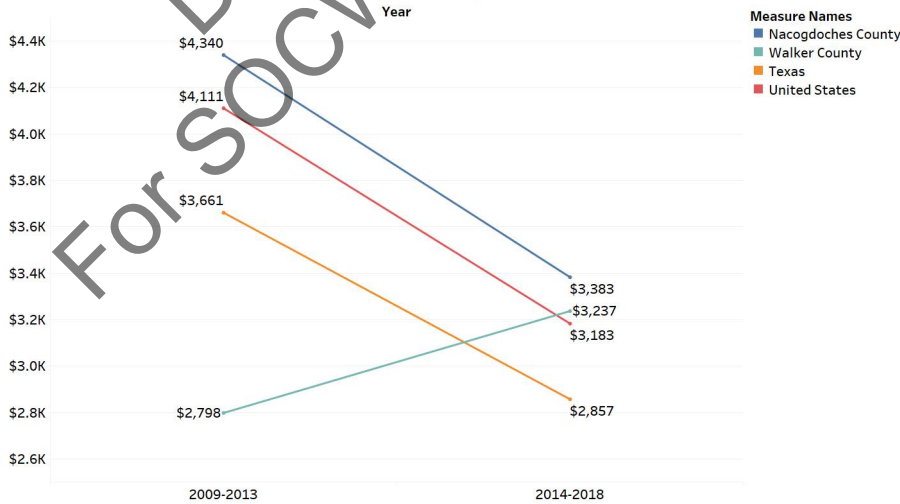


Nacogdoches has a higher percentage of Food Stamps / SNAP recipients and a high level of Social Security Income.

Percent Persons with Supplemental Income



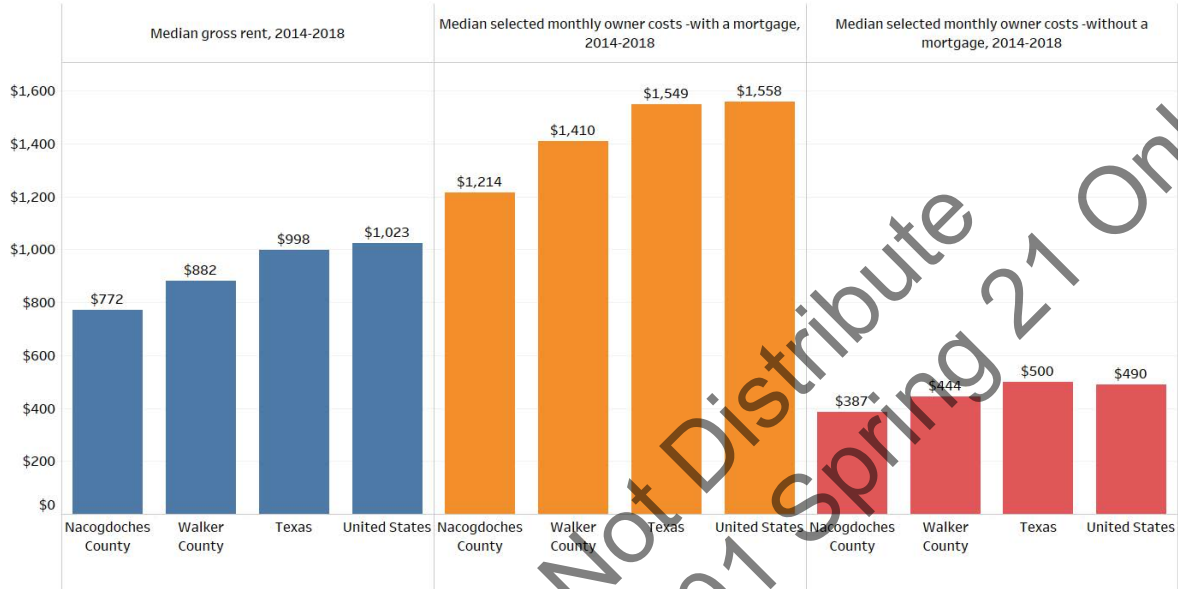
SSI and Cash Assistance Over Time (2018 Inflation Adjusted USD)



## Housing

There are 23,904 households in Nacogdoches County. The county had 2.52 persons per household as compared to the United States, which had 2.63. The average household size in Texas is 2.86. Median gross rent, median monthly owner costs with a mortgage and median monthly owner costs without a mortgage were lowest in Nacogdoches County.

Monthly Expenditures



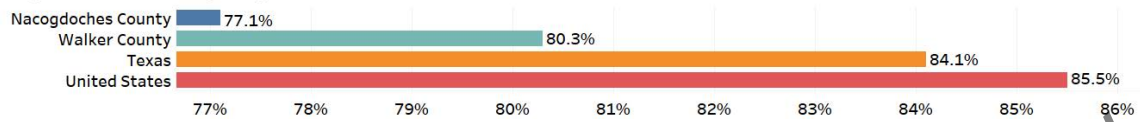
The median value of an owner-occupied home was lowest in Nacogdoches. The highest median value was the United States average.

Median Value of Owner-Occupied Homes, 2014-2018



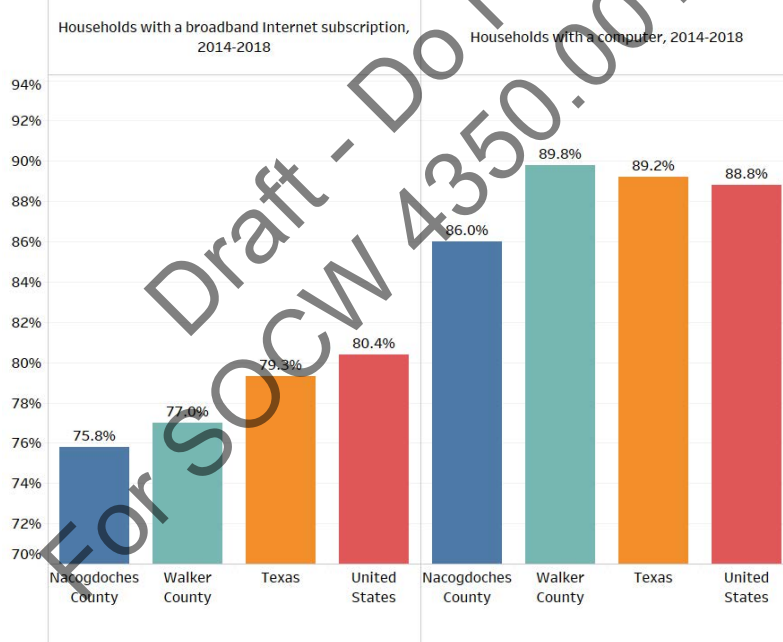
Nacogdoches County had the least amount of people living in the same home from the previous year. In Nacogdoches County, 77.1% of its population was living in the same household as 1 year ago. This contrasts with the state of Texas where 84.1 % of its population was living in the same household as 1 year ago, and in the United States where it was 85.5%.

Living in Same Home as 1 year ago, 2014-2018



Broadband and internet service are crucial in today's society. It is seen by some as another social determinant of health. Social determinants of health such as Lack of employment, education, and healthcare such as telemedicine or telemonitoring, due to no broadband connectivity or computer, can directly affect one's health outcome.

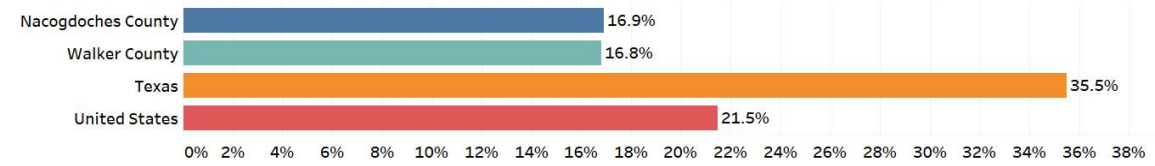
Regarding internet access, 75.8% have broadband internet subscriptions in Nacogdoches County. Walker County has about the same percentage of households with broadband. Both Texas and the United States have a higher percentage of households using broadband. Households with computers are about the same percentage in all geographies, with Nacogdoches having the least computers.



Language barrier can play a crucial part in understanding a healthcare provider and following directions to maintain one's health. English is the primary language spoken in households in Nacogdoches County. The rates of those speaking another language

were about the same in Nacogdoches as in Walker counties. Texas overall had double the rate of people speaking another language when compared to Nacogdoches and Walker counties.

Language other than English spoken at home, Pct, 2014-2018

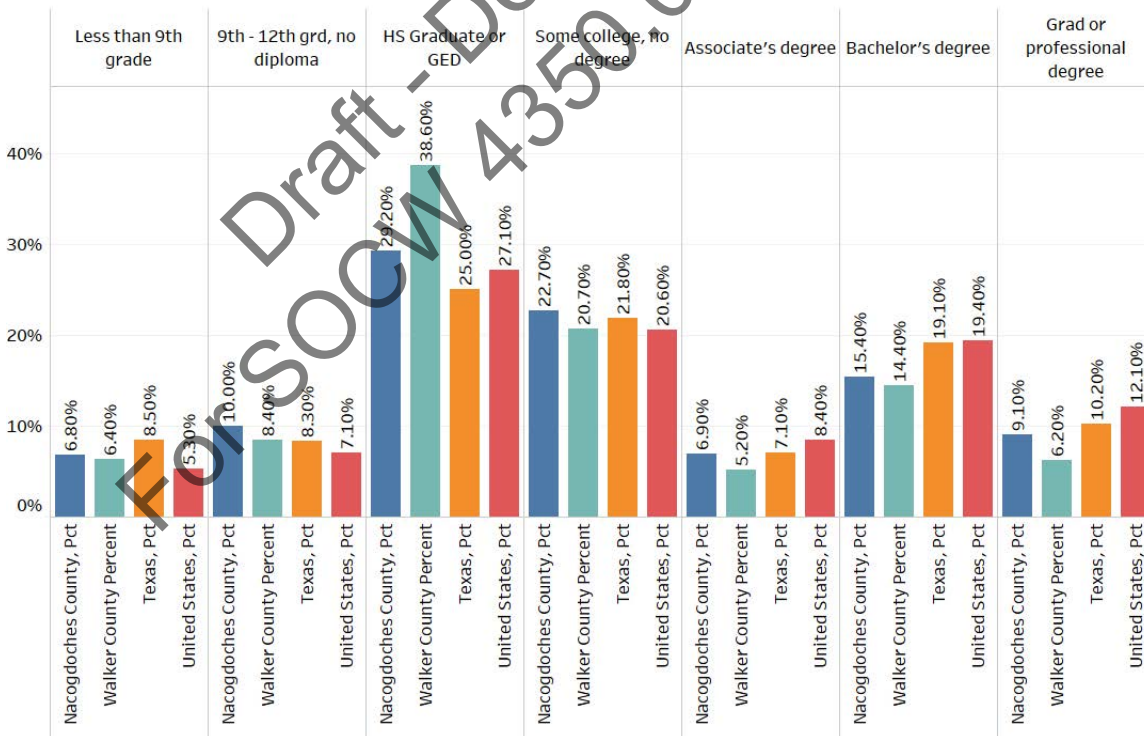


## Education

Education is a social determinant of health. Reading and health literacy, learning healthy behaviors, understanding health interventions, and implementing strong health programs in schools will result in a better long-term outcome. Education has a great impact on population health. Research has shown that educational attainment makes a difference in mortality and morbidity. Death rates are increasingly decreasing among Americans with higher levels of education.

Nacogdoches County has nine Public School Districts and is in the Education Service Area (ESC) 7. Additionally, Stephen F. Austin State University has a Charter School.

Degree Percentage



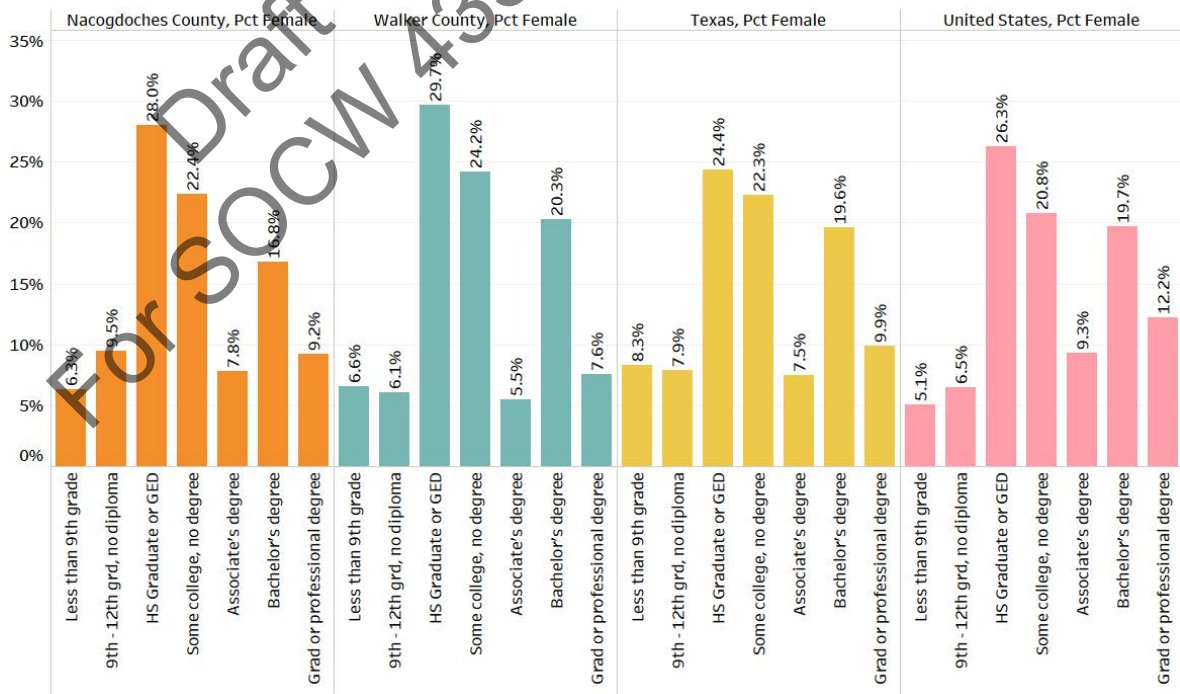
Educational attainments are important for a wide variety of health related topics and outcomes. Nacogdoches County has a less than 9th grade education rate of 6.80%. This is lower than the state average.

The following graphs show the distribution of highest education achieved across location by sex.

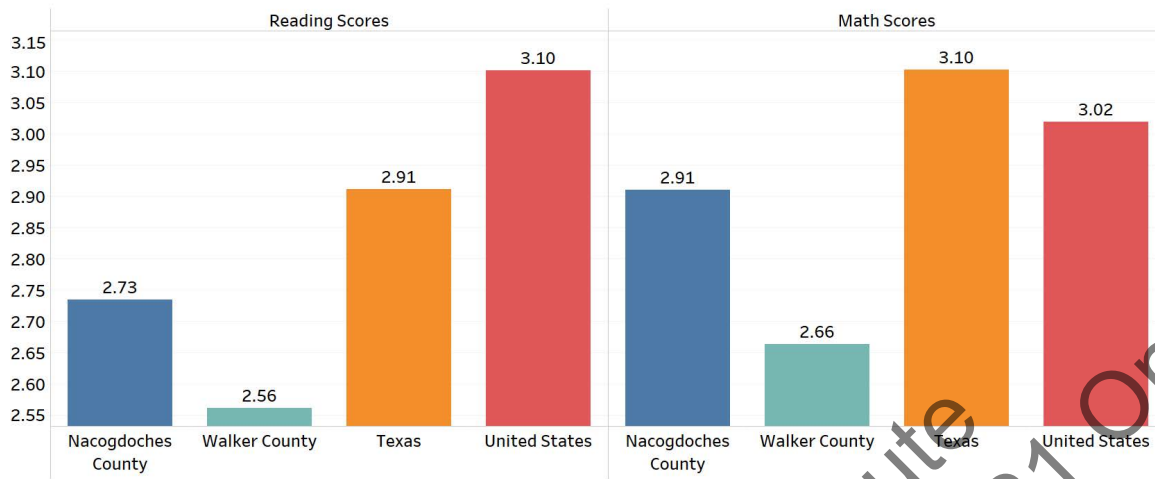
**Distribution of Highest Education Achieved for Males Across Location**



**Distribution of Highest Education Achieved for Females Across Location**



Nacogdoches has lower reading and math scores than Texas and the United States.



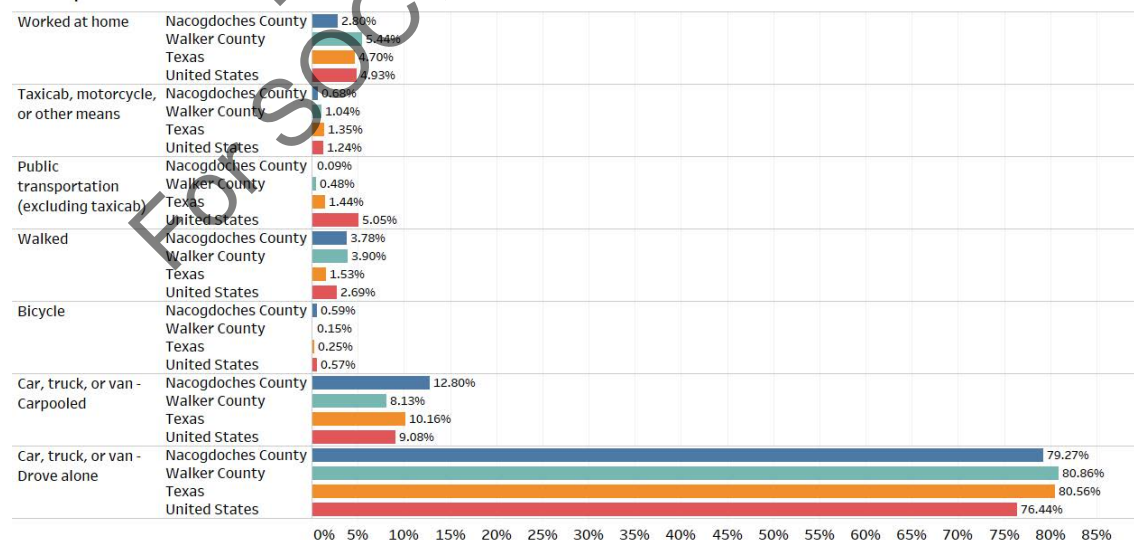
Average grade level performance for 3rd graders on English Language Arts and Math standardized tests.

## Transportation

Transportation is a crucial element as it is needed for people to get to work, access medical care, food security, and other important aspects of health and well-being. Without personal transportation, a trickle-down effect may occur. A lack of consistent personal or public transportation can lead to fewer employment prospects and possible lower-income poverty status, which can snowball into increased chances of long-term illnesses.

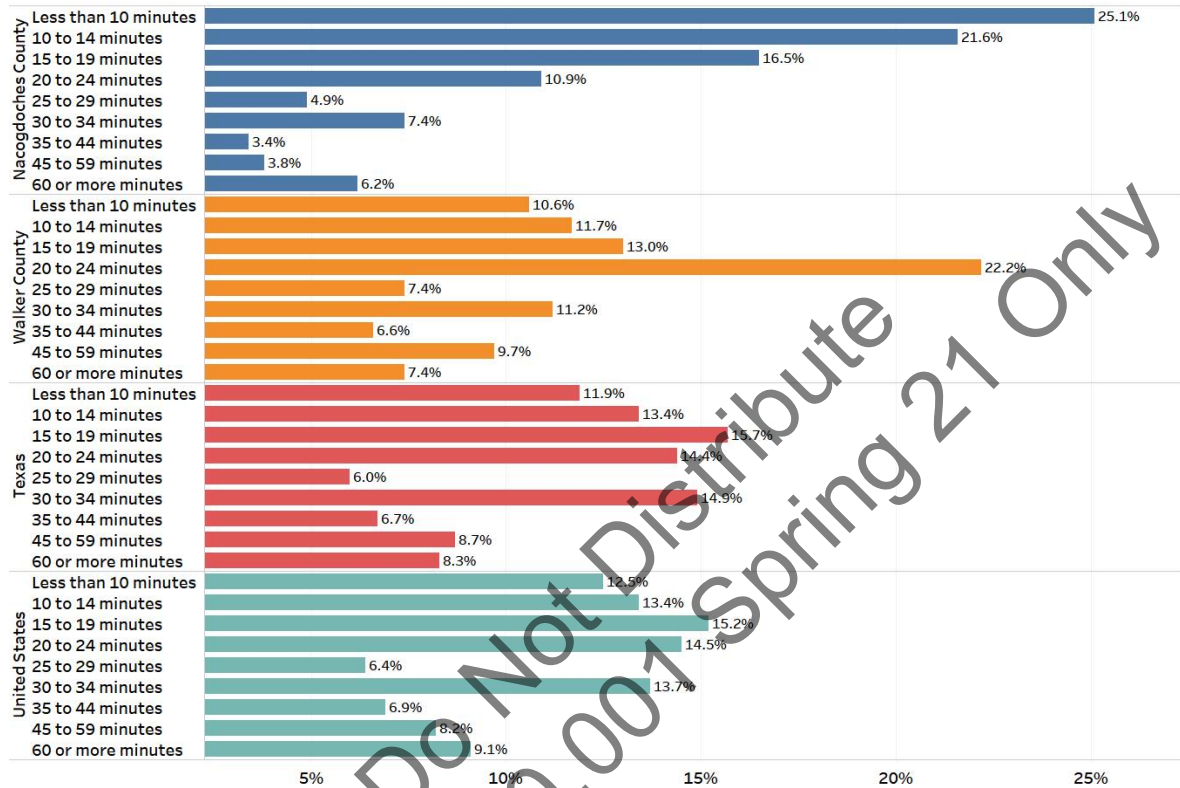
For persons who work from home this is not an issue. Those who rely on other means of transportation however are affected. Nacogdoches County has the smallest population working from home when compared to the other geographies. There are few who depend on public transportation in Nacogdoches County.

### Transportation To Work



Travel time to work is important to understand as well. It can be stressful when someone has a long commute over a longer period of time. The commute times in Nacogdoches County are in the graph below:

Travel Time to Work, Pct, Across Location



## Public Safety and Crime

Crime and incarceration have an effect on the health of the criminal and his or her family. Many of those incarcerated suffer from mental illness and/or substance abuse.

Nacogdoches County has one police department and one county sheriff's office. Most school districts have their own police department. Stephen F. Austin State University also has its own police department.

There is one county jail and no juvenile detention centers. There are no state prisons in Nacogdoches County. Most state prisons are in Walker County in the City of Huntsville. In 2019 the crime breakdown for Nacogdoches County is demonstrated in the charts below.

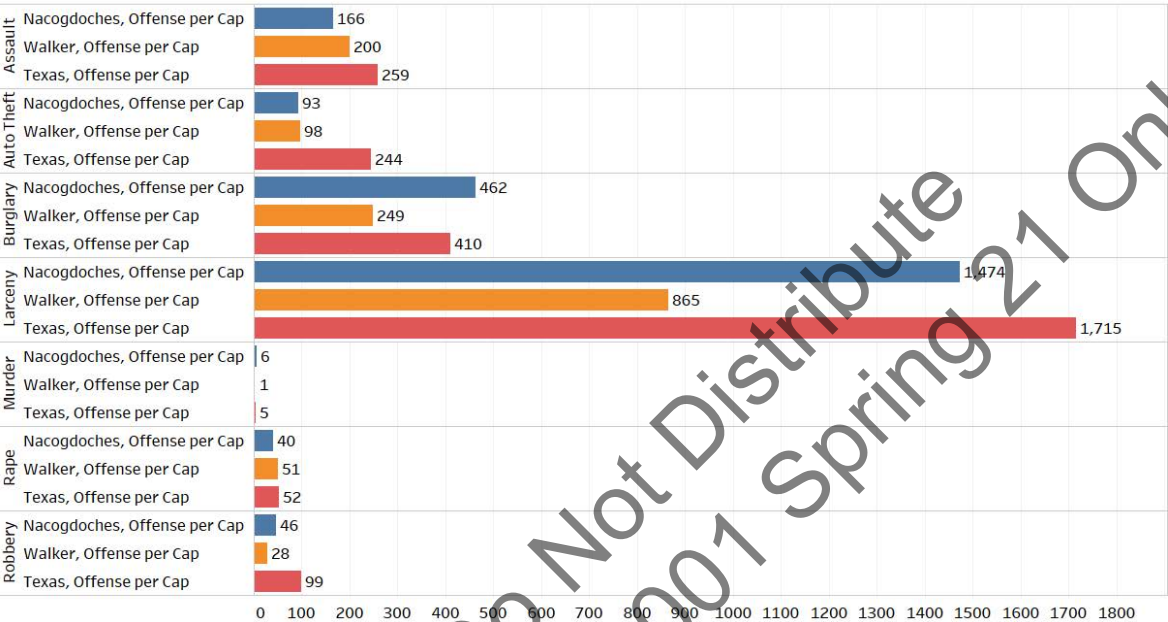
The crime rate for Nacogdoches County was based on the Nacogdoches PD and Sheriff Dept. reports to the Department of Public Safety (DPS). The information and crime report statistics are based on all police departments, the county sheriff, and DPS within

Nacogdoches County limits, which are reported to DPS Uniform Crime Reports.

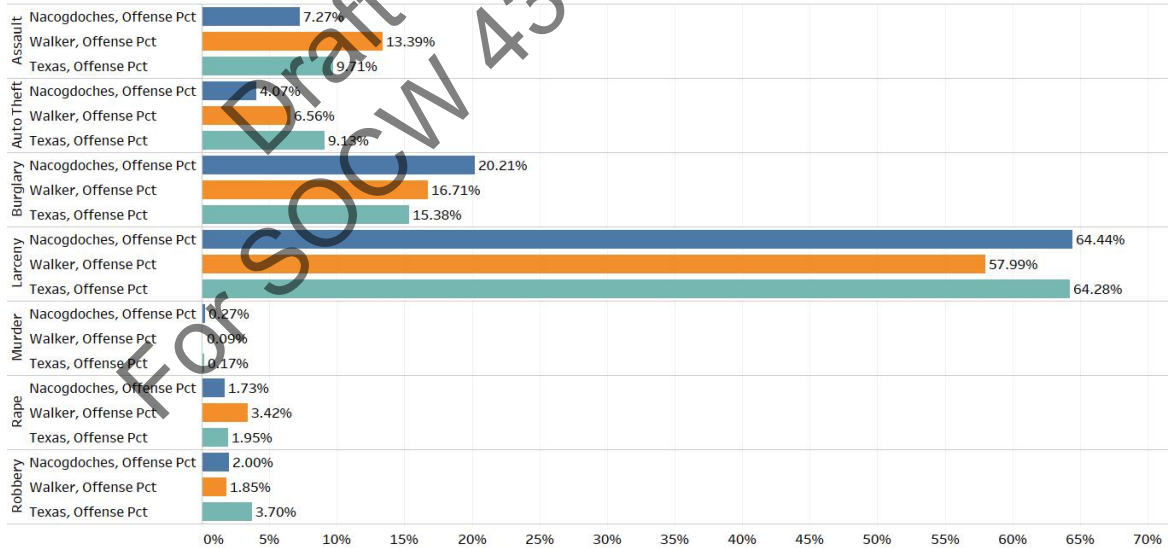
Nacogdoches had the highest rate of Burglaries and Larceny when compared to Walker County and Texas. There were six murders and 40 rapes reported.

Both Nacogdoches and Walker counties have crimestopper organizations.

Criminal Offenses per 100k



Percent of Total Offenses



Family Violence is a public health issue. It affects the victim's physical and mental health.

It may lead to chronic conditions if unaddressed. Domestic or Family Violence can affect any race or socioeconomic status. It is estimated that 1 in 3 women and 1 in 4 men may be victims of family violence during their lifetime. Reports indicate that minorities have a higher incidence of abuse. Poverty, lack of education, lack of work and even fears of deportation may prevent a victim from finding support.

In Texas, the Department of Family and Protective Services (DFPS) oversees both child and adult abuse cases. There is one DFPS office in Nacogdoches. In nearby Lufkin, the Family Violence Center of East Texas serves as a shelter and offers assistance to women in crisis. This is the closest shelter to Nacogdoches. In 2019, there were 122 validated domestic violence cases that involved women.

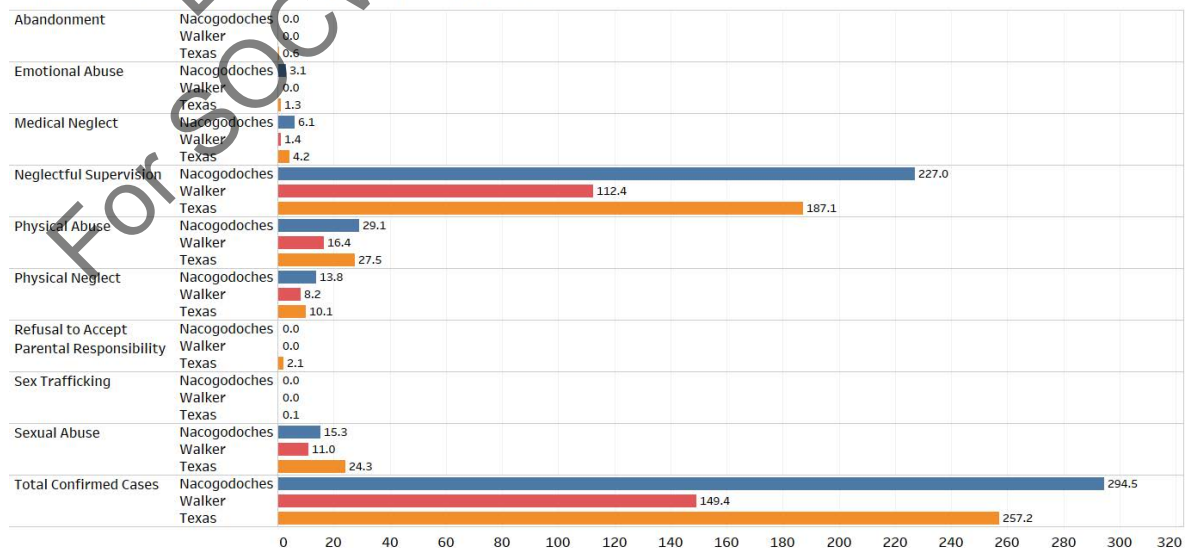
Victims Assistance Services serves to help address the needs of persons who have been violated. The Texas Department of Public Safety offers Victims Services Counseling.

### Child Abuse

Child Abuse has many long-term psychological and physical effects. Children who are abused may suffer from injury, cognitive impairment, academic problems, risky behaviors, poor adult health status for many diseases including heart, cancer, STDs, diabetes, asthma, and other diseases. Psychological conditions that may arise from abuse include depression, anxiety, substance abuse, self-directed violence and partner violence.

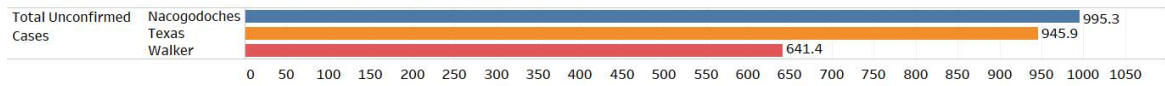
In 2019 in Nacogdoches County, there were 649 total Child Protective Services (CPS) investigations and 192 confirmed cases. Walker County had 468 unconfirmed cases and of those 109 were confirmed. Texas' total number of unconfirmed cases was 274,276 with 74,589 cases confirmed. Of the confirmed child abuse cases, Nacogdoches led all other locations in per capita emotional abuse, medical neglect, neglectful supervision, physical abuse, physical neglect, and total confirmed cases.

Confirmed Child Abuse Cases per Capita Across Location



Nacogdoches also led in per capita unconfirmed child abuse cases.

Unconfirmed Child Abuse Cases per Capita Across Location



Elder Abuse

Elder abuse comes in many forms, from physical violence to exploitation. It affects both the physical and mental health of the victim. It may result in depression, anxiety, post-traumatic stress disorder, physical injuries, malnutrition, as well as affecting pre-existing conditions, resulting in other health conditions, and premature death.

There were 248 Adult Protective Services (APS) in-home investigations and 367 Alleged Cases made in 2019 in Nacogdoches County. Investigations decreased by 137 cases from 2018 to 2019. There were 214 Validated Cases in 2019.

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Texas Department of Health and Human Services Vital Statistics

<https://hhs.texas.gov/about-hhs/records-statistics/data-statistics/healthcare-statistics>

Texas Department of Health and Human Services Medicaid

<https://hhs.texas.gov/about-hhs/records-statistics/data-statistics/healthcare-statistics>

<https://hhs.texas.gov/services/health/medicaid-chip/programs-services/medical-transportation-program>

Texas Department of Health and Human Services WIC

<https://hhs.texas.gov/doing-business-hhs/provider-portals/wic-providers/wic-general-information#potential-eligibles>

#### Local Sources:

Nacogdoches - Brazos Transit District

<http://www.btd.org/nacogdoches/>

Nacogdoches County Chamber of Commerce

<https://www.nacogdoches.org/>

Nacogdoches Senior Center

<https://www.nacseniorcenter.com/>

**Other Sources:**

Network for Public Health Law

<https://www.networkforphl.org/news-insights/broadband-access-as-a-super-determinant-of-health/>

County Health Rankings

<https://www.countyhealthrankings.org/>

<https://www.countyhealthrankings.org/explore-health-rankings/measures-data-sources/county-health-rankings-model/health-factors/social-and-economic-factors/community-safety/injury-deaths>

Robert Wood Johnson Foundation

<https://www.rwjf.org/en/library/research/2012/12/how-does-employment--or-unemployment--affect-health-.html>

National Center for Education Statistics

<https://nces.ed.gov/collegenavigator/>

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