

Austin Public Health

2019 Critical Health Indicators Report



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Executive Summary

Travis County is ranked as the 5th most populous county in Texas and is home to over one million people. Every day Austin Public Health staff perform activities to prevent disease, promote health, and protect the well-being of all people who live and visit Austin and Travis County.

The 2019 Critical Health Indicators Report represents Austin Public Health Department's efforts to gather, analyze, and present information on adverse health conditions that reveal the overall well-being of the county's population. This report provides an updated overview of the community's health noted in three prior reports published in 2012, 2015, and 2017. The report notes many successes in preventing disease and protecting the health of the community. Fewer people are smoking tobacco products. Lung cancer deaths rates are steadily decreasing. The incidence rates for human immunodeficiency virus and tuberculosis are their lowest levels in the past ten years. Fewer people are sickened with acute hepatitis A and B viruses, evidence that vaccinations work.

In spite of the successes, a number of challenges persist. About 9% of the adult population has been told they have diabetes. More than half of Travis County adults are considered overweight or obese. A quarter of births are to mothers who received late or no prenatal care. Too many residents of our community die by suicide. Many diseases disproportionately strike people based on their racial or ethnic group or their social economic status.

Austin Public Health continues to be committed in addressing these public health challenges. On behalf of the Austin Public Health, I am pleased to share with you the 2019 Critical Health Indicators Report. I hope this report generates questions and discussions on how to best improve the health status of the population and to ensure our vision that *"Everyone will have an optimal quality of life, health, and well-being"*.

Respectfully,



Adrienne Sturup
Director
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Acknowledgements

This report was prepared by Austin Public Health.

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1.0 Demographic Characteristics

In 2010, Austin was ranked as the 14th largest city in the United States. In 2018, eight years later, the City of Austin was ranked as the 11th most populated city in the United States. From 2010 to 2018, the City of Austin population increased 22%. The City of Austin is ranked as the 4th most populous city in Texas. Travis County is ranked as the 5th most populous county in Texas.

Table 1.1 shows selected demographic characteristics for the populations of the City of Austin, Travis County, and the State of Texas. Almost one million people are estimated to have resided in the City of Austin in 2017. The City of Austin population comprised about 3% of the State of Texas population. The Travis County population comprised about 4% of the State of Texas population.

For the City of Austin and Travis County, a similar percentage, from 21 to 23%, of the population is younger than 18 years of age. A majority (75%) of people living in Austin and Travis County are white; most are non-Hispanic. In 2017, Blacks and Asians comprised 7.6% and 7.0% of the City of Austin population, respectively.

The percentage of the City of Austin and Travis County populations who are foreign born is 18.4% and 17.8% respectively. These percentages are slightly higher compared with the Texas population (16.9%) and the United States population (13.5%). Spanish is spoken at home for about 24% of the populations five years of age and older in the City of Austin and Travis County compared with 29.5% of the population five years of age and older in Texas.

Table 1.2 shows aspects of educational attainment and poverty level for populations of Austin, Travis County and Texas. Generally, the City of Austin and Travis County populations have attained a higher level of education. The percentages of the City of Austin and Travis County populations 25 years of age or older who have attained a bachelor's, graduate, or professional degree are over 47% compared with 28% of the Texas population 25 years of age or older. The poverty status for racial/ethnic groups in the City of Austin ranges from 11.4% among Whites alone to 24.3% among Blacks alone.

Table 1.1. Selected Population Demographic Characteristics, City of Austin, Travis County, and Texas, 2017

Population Characteristic	City of Austin		Travis County		Texas
	Number	%	Number	%	%
	916,906	100	1,176,584	100	100
Sex					
Male	463,869	50.6	593,319	50.4	49.7
Female	453,037	49.4	583,265	49.6	50.3
Age Group					
Under 18 years	194,414	21.2	267,205	22.7	26.3
65 years and over	76,788	8.4	104,344	8.9	11.7
Race					
White	687,777	75.0	881,405	74.9	74.6
Black/African American	69,848	7.6	97,298	8.3	12.0
American Indian/Alaska Native	4,208	0.5	5,446	0.5	0.5
Asian alone	64,049	7.0	75,333	6.4	4.5
Other/Two or more races	91,024	10.0	117,102	9.9	8.5
Ethnicity					
Not Hispanic or Latino	600,197	65.5	778,186	66.1	61.1
Hispanic or Latino (of any race)	316,709	34.5	398,398	33.9	38.9
Language Spoken at Home					
Population 5 years and over	855,399	93.3	1,098,067	93.3	92.8
Only English spoken at home	578,071	67.6	750,835	68.4	64.7
Spanish spoken at home	206,526	24.1	262,579	23.9	29.5
Asian or Pacific Island languages	34,938	4.1	41,916	3.8	2.8
Place of Birth					
Born in the United States	748,174	81.6	967,620	82.2	83.1
Foreign Born	168,732	18.4	208,964	17.8	16.9

Source: U.S. Census Bureau, 2013-2017 American Community Survey 5-year estimates

Table 1.2. Population Poverty Status over the Last 12 Months and Education Attainment, City of Austin, Travis County, and Texas, 2017

Population Characteristic	City of Austin		Travis County		Texas
	Number	%	Number	%	%
	916,906	100	1,176,584	100	100
Educational Attainment					
Population 25 years and over	622,293	67.9	795,223	67.6	63.6
No high school diploma	71,322	11.5	89,336	11.2	17.2
High school graduate, includes equivalency	101,269	16.3	135,671	17.1	25.1
Some college or Associates degrees	144,978	23.3	192,840	24.2	29.0
Bachelor's degrees	191,713	30.8	240,380	30.2	18.8
Graduate or professional degrees	113,011	18.2	136,996	17.2	9.9
Poverty Status					
Race/Ethnicity	% Below Poverty Level		% Below Poverty Level		% Below Poverty Level
White alone		11.4		10.4	13.8
Black alone		24.3		21.6	19.6
Asian alone		13.0		12.5	10.8
Hispanic or Latino origin (of any race)		19.8		18.1	20.9

Source: U.S. Census, 2013-2017 American Community Survey 5-year estimates

Poverty Status Source: U.S. Census, 2018 American Community Survey 1-year estimate

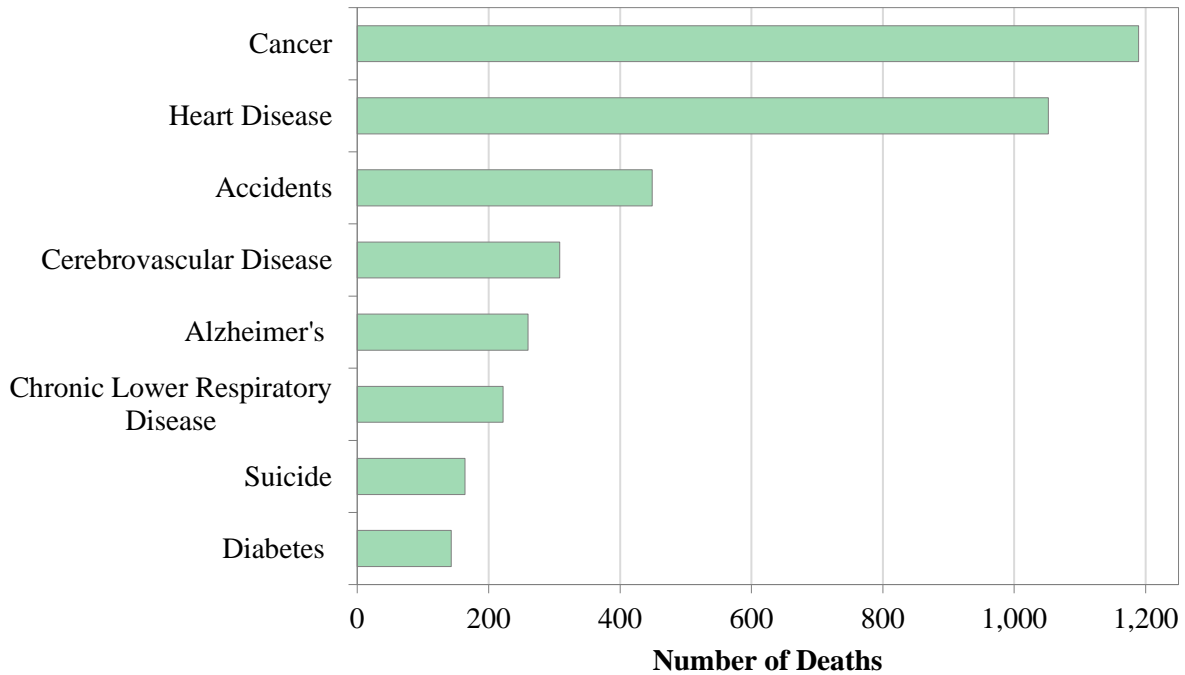
2.0 Leading Causes of Death

The following section summarizes information related to the leading causes of death for Travis County residents from 2015 to 2017. Differences in leading causes of death demonstrate the underlying health disparities that exist within the county. Understanding of the leading causes of death is critical to helping focus prevention efforts. Many of the rates provided in the following graphs have been age-adjusted to prevent the influence of the underlying age distribution of the county's population.

Mortality

In Travis County in 2017, there were a total of 5,656 deaths. Cancer and heart disease are the top two leading causes of death for Travis County as shown in Figure 2.1. In 2017, cancer accounted for 21.0% of total deaths and heart disease for 18.6%. These values differ from Texas as a whole where heart disease is the leading cause of death followed by cancer and cerebrovascular disease. Compared to data from 2015, Alzheimer's has surpassed chronic lower respiratory diseases to be the fifth leading cause of death for Travis County.

Figure 2.1. Leading Causes of Death, Travis County, 2017



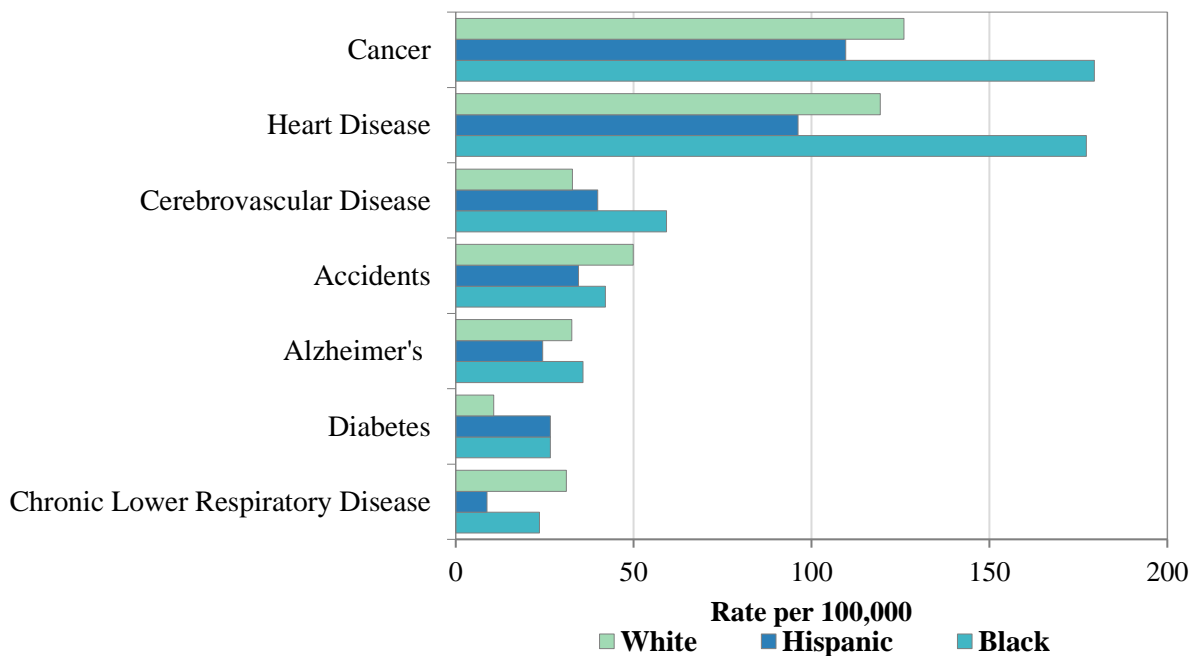
Source: CDC WONDER Online Database, Age-Adjusted rates use 2000 standard population

Race/Ethnicity: 2015-2017

While cancer and heart disease persist as the first and second leading causes of death for each racial and ethnic group respectively, Blacks have a 42.5% increased mortality rate from cancer than Whites and a 48.5% increased mortality rate from heart disease compared to Whites. Additionally, Blacks have an 84.2% increased rate of mortality due to heart disease compared to Hispanics.

As shown in Figure 2.2 when compared to Whites and Hispanics, Blacks also had much higher rates of cerebrovascular disease. For Whites the third leading cause of death is accidents while for Blacks and Hispanics the third leading cause is cerebrovascular disease. Suicide is within the top leading causes of death for Whites but not for Blacks nor for Hispanics.

Figure 2.2. Age-Adjusted Mortality Rates per 100,000 Population for Leading Causes of Death by Race/Ethnicity, Travis County, 2015-2017

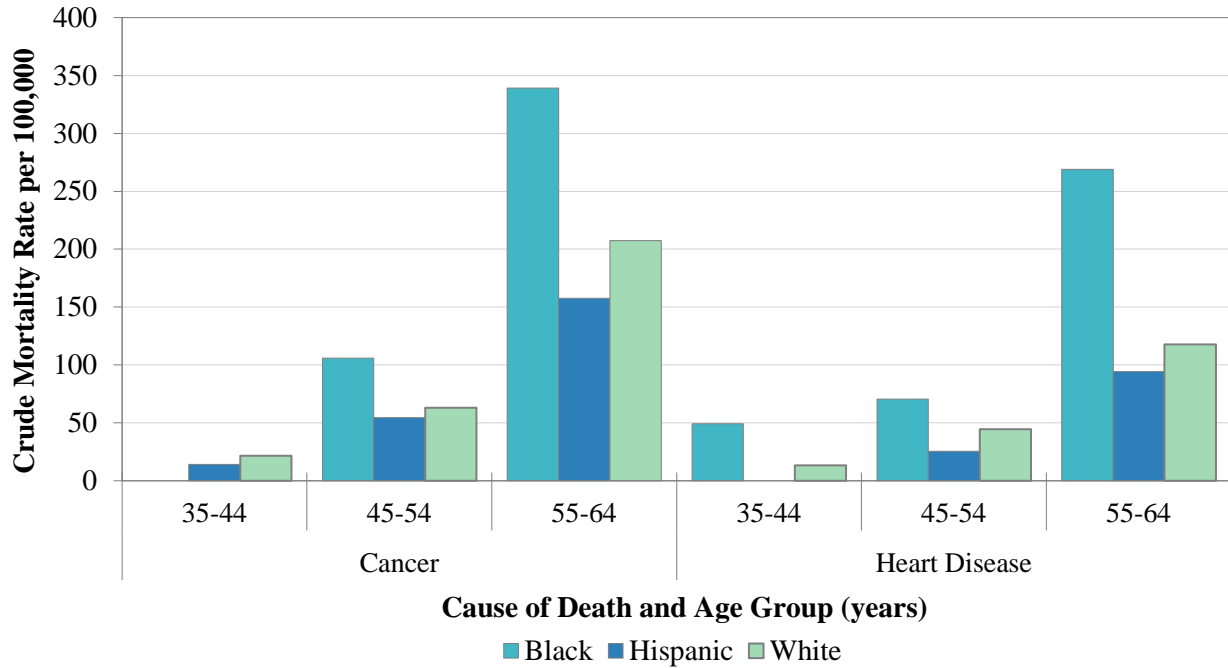


Source: CDC WONDER Online Database, Age-Adjusted rates use 2000 standard population

Figure 2.3 shows the mortality rates related to cancer and heart disease for various racial and ethnic groups for persons 35 to 64 years of age in Travis County. Blacks in Travis County have higher mortality rates from cancer and heart disease at younger ages than Whites or Hispanics. In the 35-44 year age group, Blacks have a mortality rate of 49.3 per 100,000 from heart disease (compared to 13.3 per 100,000 for Whites and a suppressed value for Hispanics). Within the 45-54 year age group, the cancer related mortality rate for Blacks (105.8) is nearly double the rate for Whites (63.2) or Hispanics (54.5) at the same age.

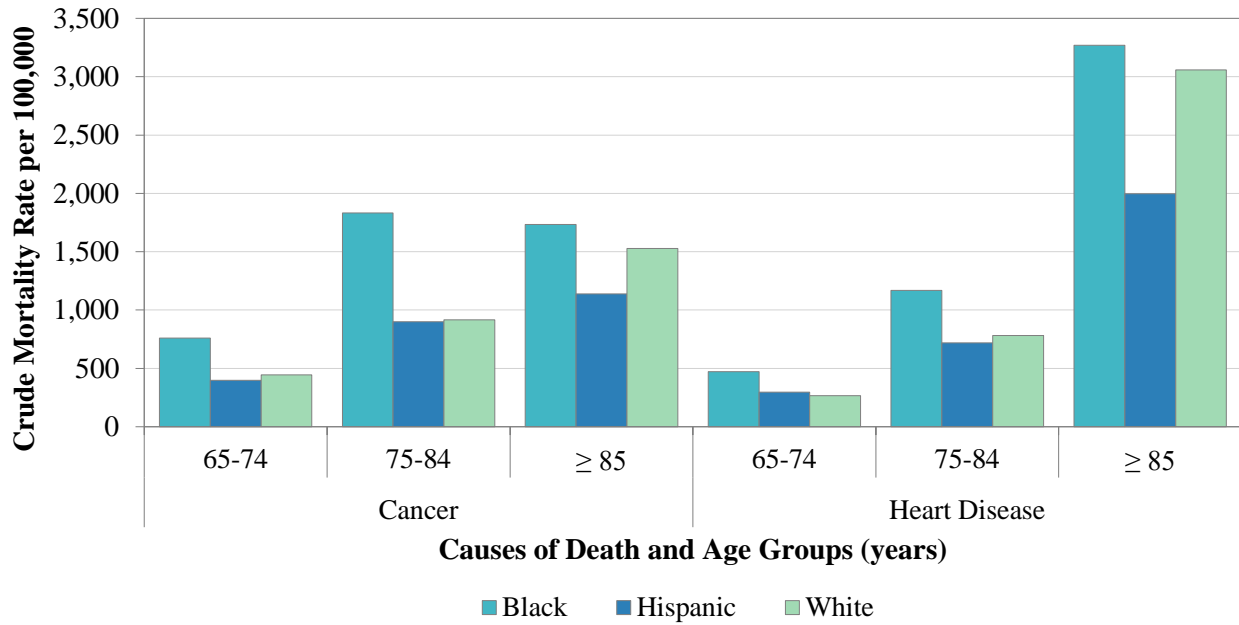
Figure 2.4 shows as the mortality rates related to cancer and heart disease for persons 64 to 85 years and older. Blacks consistently have higher rates of mortality from cancer and heart disease compared to Whites and Hispanics for these age groups.

Figure 2.3. Crude Morality Rates per 100,000 Population by Age (35-64 years) and Race for Cancer and Heart Disease, Travis County, 2015-2017



Source: CDC WONDER Online Database

Figure 2.4. Crude Morality Rates per 100,000 Population by Age (≥ 65 years) and Race/Ethnicity for Cancer and Heart Disease, Travis County, 2015-2017

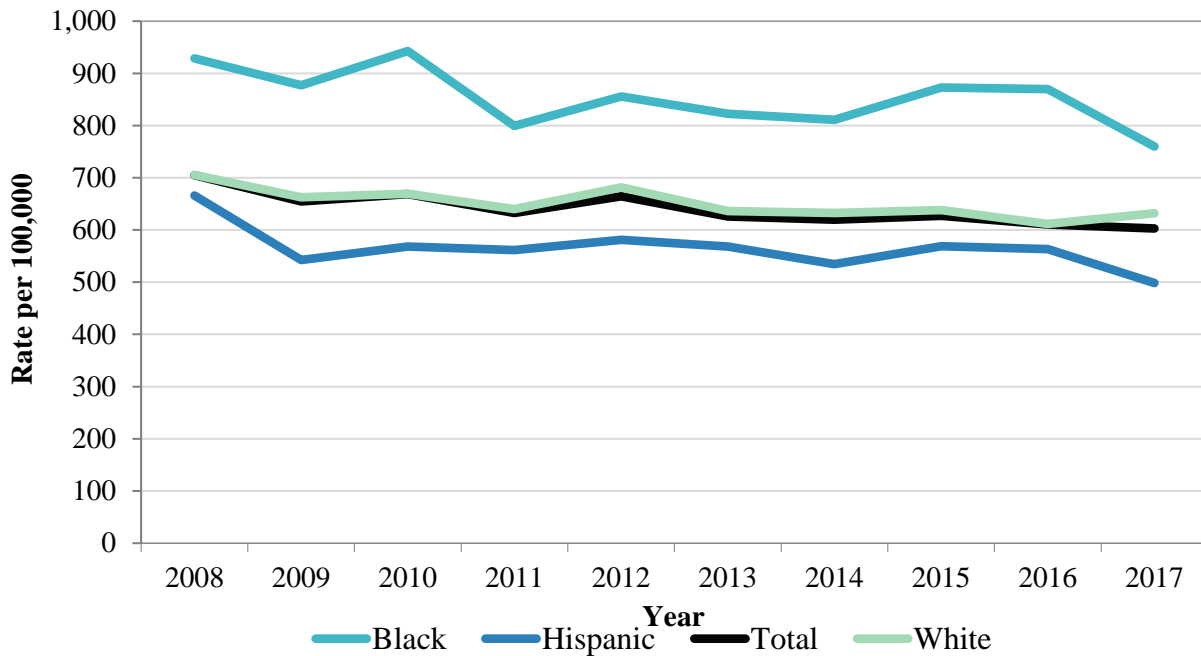


Source: CDC WONDER Online Database

Mortality Trends

Figure 2.5 shows that age-adjusted all-cause mortality rates for all races have fluctuated over time. When comparing only 2008 to 2017, mortality within each racial/ethnic group has decreased however the percentage decrease varies by race. Blacks and Hispanics have had the largest percent decreases in mortality from 2008 to 2017 (18.2% and 25.1% respectively). Whites have had a smaller percentage decrease in mortality (10.4%) from 2008 to 2017.

Figure 2.5. Age-Adjusted All-Cause Mortality Rates by Race/Ethnicity, Travis County, 2008-2017

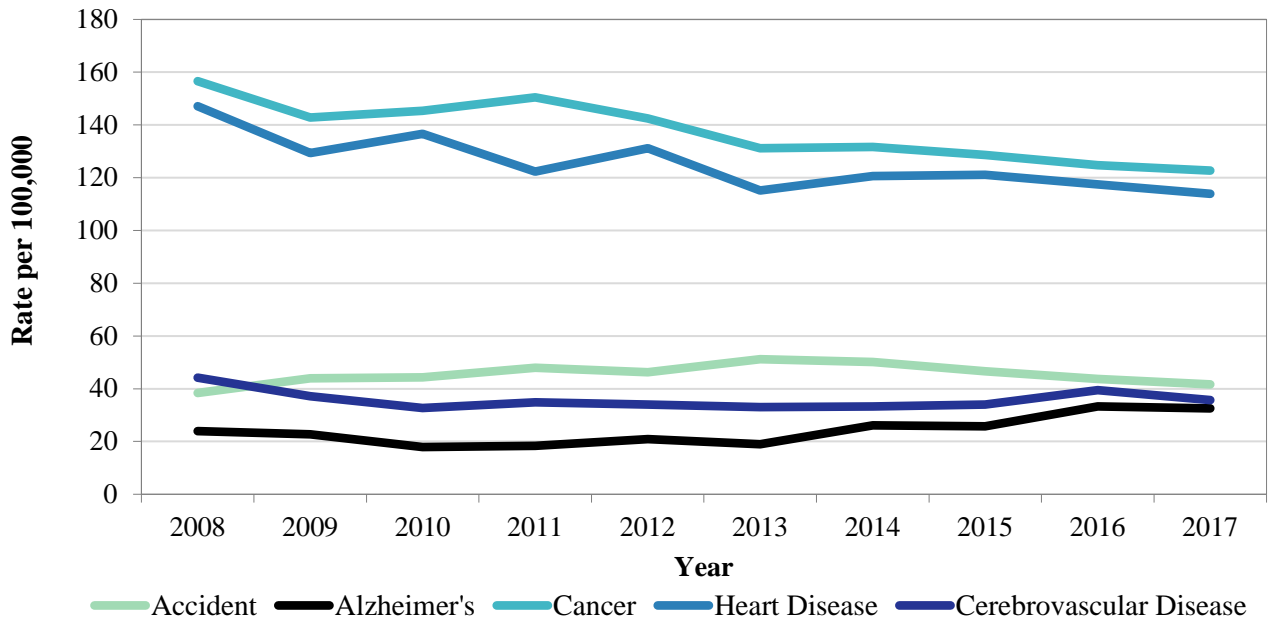


Age-Adjusted rates use 2000 standard population
Source: CDC WONDER Online Database

Figure 2.6 shows how mortality trends have changed in Travis County over the past ten years. While cancer and heart disease remain the leading causes of mortality, there has been a decrease in mortality rates from both of these diseases over time. There has also been a slight but steady increase in Alzheimer’s related mortality over the past ten years from 23.9 in 2008 to 32.6 in 2017.

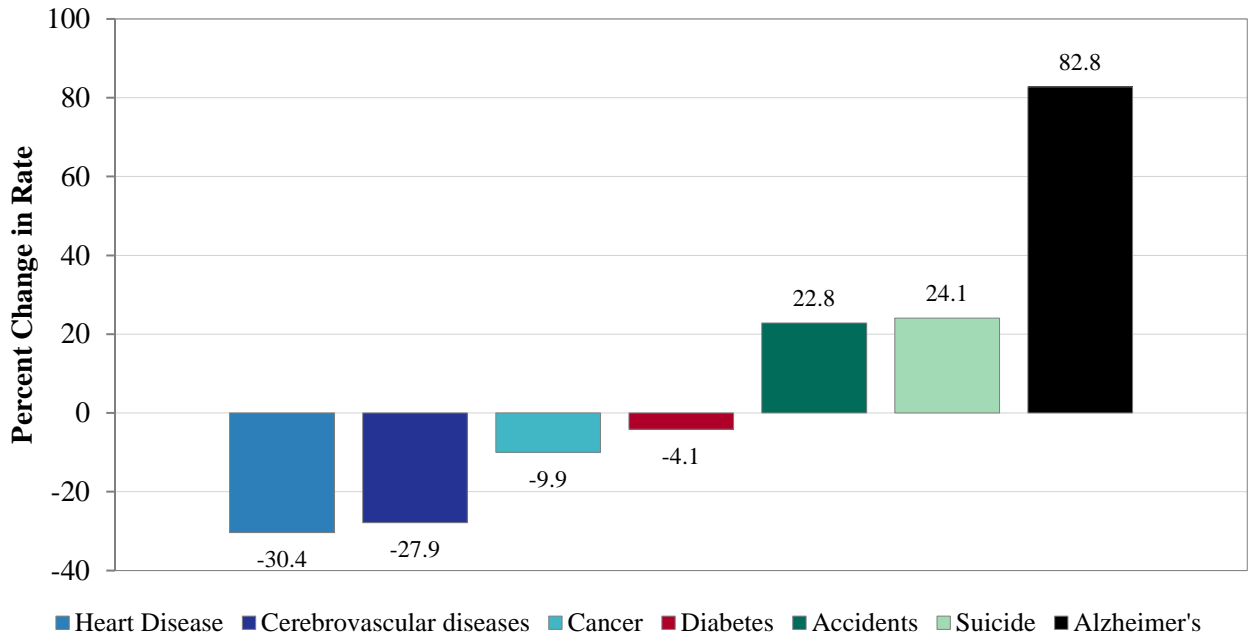
While cancer, heart disease, accidents, and cerebrovascular disease persist across this ten-year period as top leading causes of death, the fifth leading causes have fluctuated between chronic lower respiratory diseases, Alzheimer’s, and suicide. Figure 2.7 shows how mortality patterns of selected diseases have shifted over time. Since 2000 in Travis County, there have been reductions in the percentage of deaths related to heart disease, cerebrovascular disease, and cancer. At the same time, there has been a slight percentage increase in deaths attributed to Alzheimer’s, accidents and suicides.

Figure 2.6. Age-Adjusted Mortality Rates by Cause of Death, Travis County, 2008-2017



Age-Adjusted rates use 2000 standard population
 Source: CDC WONDER Online Database

Figure 2.7. Percent Change in Incidence Rates for Selected Causes of Death in Travis County from 2000-2017



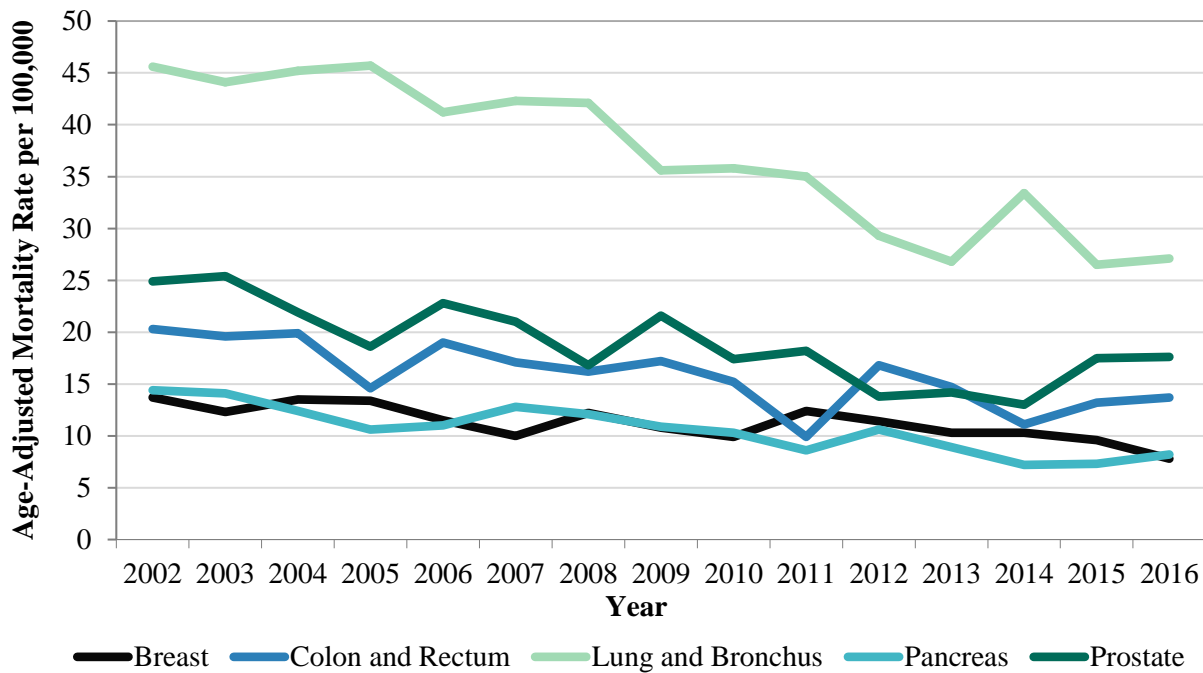
Source: CDC WONDER Online Database

3.0 Cancer

Cancer is the leading cause of death in Travis County. In 2016, there were 3,886 newly diagnosed cancer cases and 1,147 total cancer related mortalities in Travis County. Cancer exists in a variety of different types, many of which can be screened for or prevented. Cancer leads to abnormal cell growth which can spread to other parts of the body and be harmful to bodily systems.¹

Figure 3.1 shows the trend in age-adjusted mortality rates for selected cancers within Travis County. The overall highest rates of cancer mortality are attributable to lung and bronchus cancers. Although lung and bronchus cancers have the highest rates of mortality in Travis County, the mortality related to these types of cancers has decreased 40% from 2002 to 2016. Additionally, there has been a slight decline in mortality related to breast cancer over the 15-year period. In comparison to mortality rates from 2002, mortality related to all of these leading types of cancer has declined. As of 2016, Travis County is experiencing fewer deaths from each of these types of cancers compared to data collected from 2002.

Figure 3.1. Age-Adjusted Cancer Mortality Rates, Travis County, 2002-2016



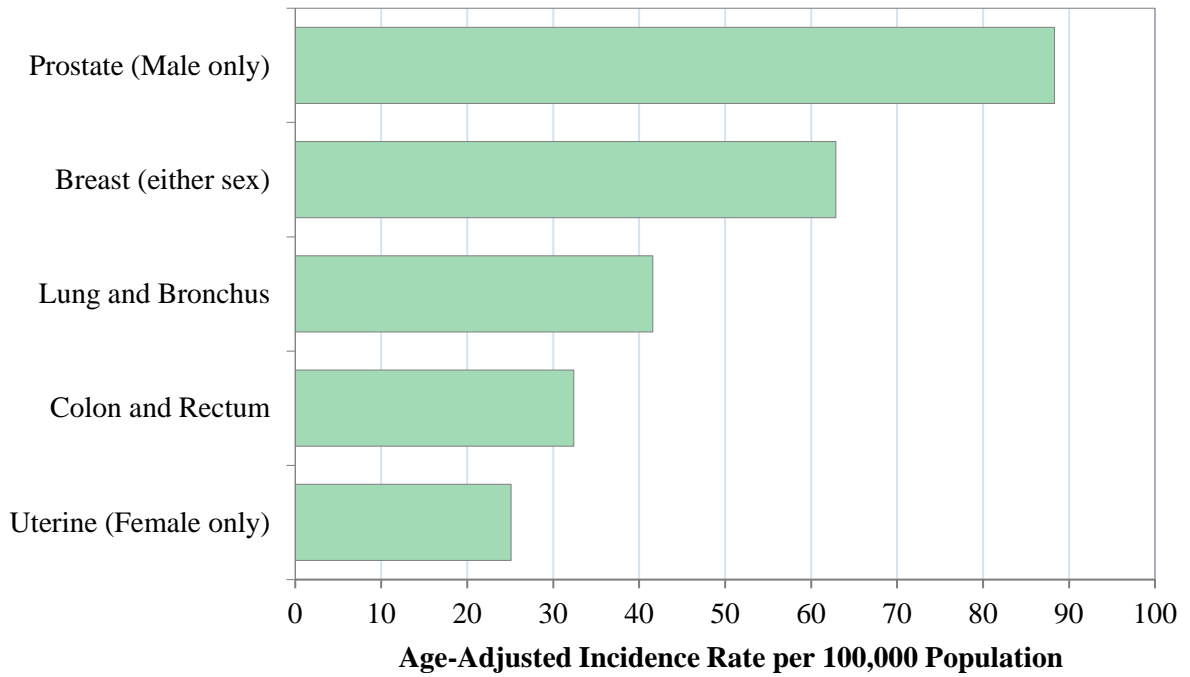
Age-adjusted rates use a US 2000 standard population
 Source: Texas Cancer Registry Cancer Mortality

Figures 3.2 and 3.3 examine the incidence rates and the mortality rates of certain common types of cancer. Incidence refers to the number of new cases of cancer within a certain time period while mortality refers to the number of deaths attributable to a certain type of cancer. In Travis County, prostate cancer and breast cancer have the highest rates of new cases over time. While there is higher incidence of prostate and breast cancer, these types of cancers have

¹ <https://www.cdc.gov/cancer/dpcp/prevention/index.htm>

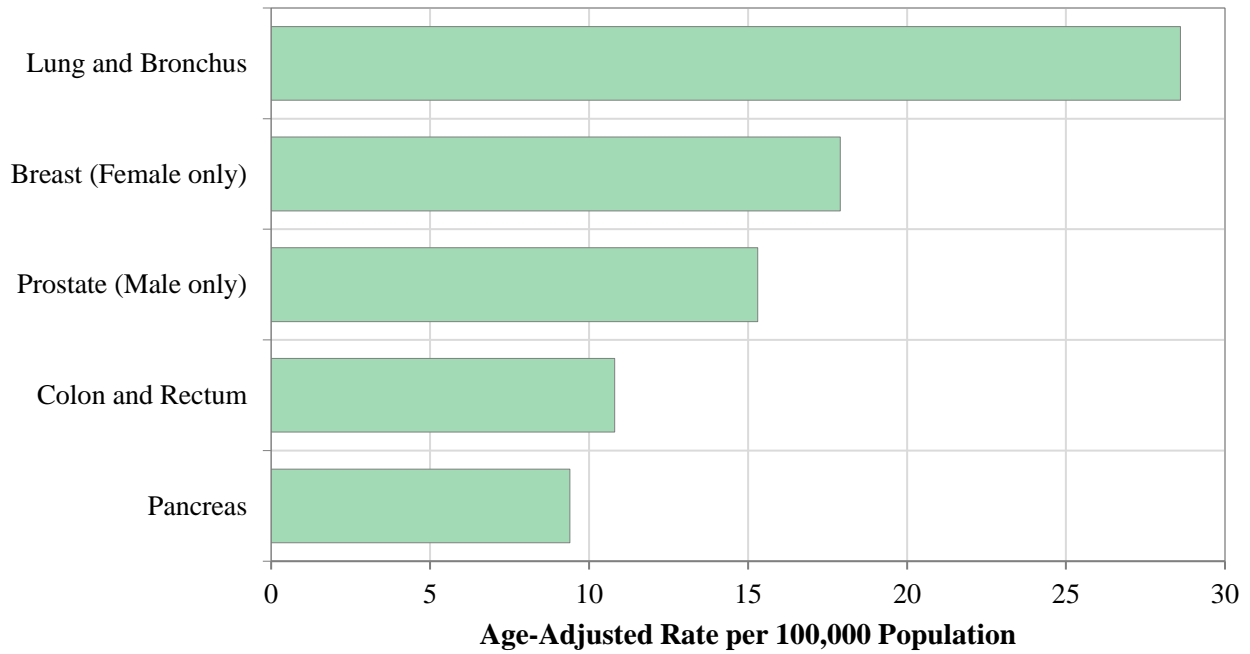
slightly lower rates of associated mortality. Similarly, lung and bronchus cancers have lower incidence rates but much higher rates of mortality. Uterine cancer may have high incidence but is not a leading contributor to cancer related mortality. A type of cancer may have high incidence but lower mortality due to the availability of screening tests and treatment methods to manage that type of cancer and prevent mortality.

Figure 3.2. Age-Adjusted Incidence Rates for Common Cancers, Travis County, 2012-2016



Age-Adjusted rates use 2000 standard population
Source: Texas Cancer Registry Cancer Incidence

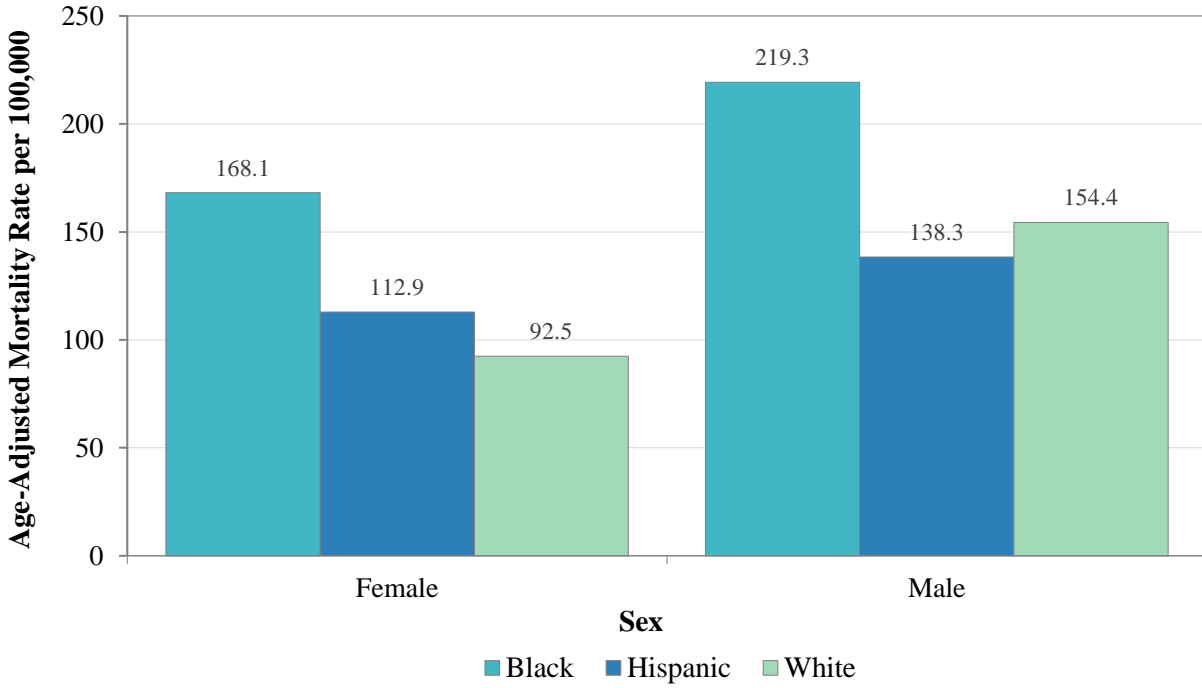
Figure 3.3. Age-Adjusted Mortality Rates for Selected Cancers, Travis County, 2012-2016



Age-Adjusted rates use 2000 standard population
Source: Texas Cancer Registry Cancer Mortality

Figure 3.4 breaks down cancer related mortality by both sex and race/ethnicity while still adjusting for age. Regardless of sex, Blacks in Travis county experience higher rates of cancer related mortality compared with Whites or Hispanics. White females have the lowest cancer related mortality overall followed by Hispanic females. Black males have more than two times the cancer related mortality as White females. This data can indicate health disparities that persist within the county.

Figure 3.4. Age-Adjusted Cancer Mortality Rates by Sex and Race/Ethnicity, Travis County, 2016



Age-Adjusted rates use 2000 standard population
Source: Texas Cancer Registry Cancer Mortality

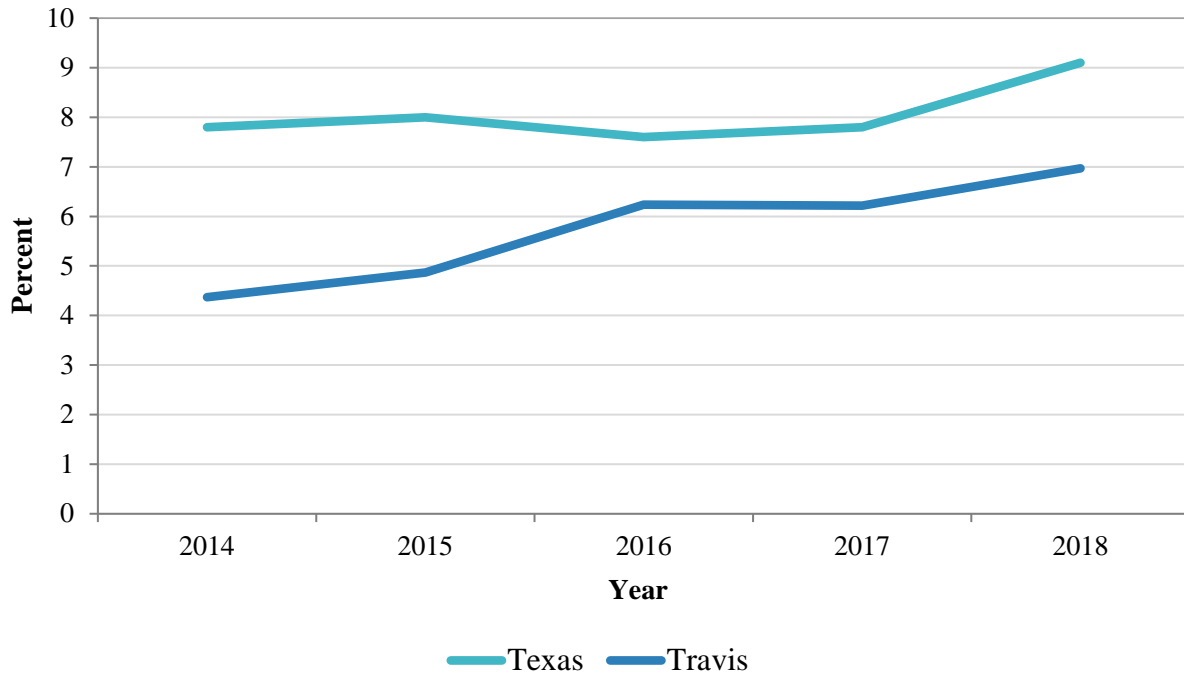
4.0 Chronic Disease Conditions

Cardiovascular Disease

Cardiovascular disease refers to a variety of disorders that affect the heart and blood vessels. Heart disease, stroke, hypertension, and heart failure are all classified into the category of cardiovascular disease. The Behavioral Risk Factor Surveillance System (BRFSS) survey captures information related to cardiovascular diseases in a number of ways. Participants are randomly selected within Travis County and Texas to participate in the survey and provide a snapshot of health for Travis County and Texas as a whole. Within the survey data, the prevalence of cardiovascular disease is calculated to include any person who has been diagnosed by a doctor as having had a heart attack, myocardial infarction, angina, coronary heart diseases, or a stroke. Data was combined from 2014-2018 to provide a larger sample size.

Figure 4.1 shows that the prevalence of cardiovascular disease in both Texas and in Travis County has increased from 2014 compared to 2018. While the prevalence of cardiovascular disease in Travis County is lower than that of Texas, from 2014 to 2018 the prevalence for Travis County has increased over 50%. The prevalence in Texas has increased 17% during the same time period.

Figure 4.1. Cardiovascular Disease Prevalence among Adults, Travis County and Texas, 2014-2018



Source: Texas Behavioral Risk Factor Surveillance System (BRFSS) 2014-2018

Table 4.1 summarizes select demographic characteristics for cardiovascular disease in Travis County and Texas. In general, the prevalence of cardiovascular disease in Travis County adults is lower compared with adults in Texas. For both Travis County and Texas, higher prevalence is

seen with increased age. Employed individuals have lower prevalence. Prevalence decreases as education level increases. Additionally, with increasing household income, there is a decrease in prevalence of cardiovascular disease.

Table 4.1. Prevalence Estimates of Cardiovascular Disease among Adults by Select Demographic Characteristics, Travis County and Texas, 2014-2018

Demographic Characteristics	Travis County	Texas
	(%)	(%)
Overall	5.7	8.1
Sex		
Male	6.3	8.8
Female	5.1	7.3
Age Group (years)		
18 to 44	1.6	2.2
45 to 64	7.2	9.8
≥ 65	19.5	22.9
Race/Ethnicity		
Whites	6.4	10.0
Blacks	5.9	9.3
Hispanics	4.5	5.4
Education		
Less than High School	6.0	11.3
High School Graduate	5.8	8.1
Some College	7.6	8.7
College Graduate	3.9	4.9
Employed		
Yes	3.0	3.9
No	10.3	13.9
Household Income		
< \$25,000	8.0	11.5
\$25,000 to < \$75,000	6.0	7.6
≥ \$75,000	3.4	4.4
Health Insurance		
Insured	3.5	5.3
Uninsured	4.0	4.8

Source: Texas Behavioral Risk Factor Surveillance System (BRFSS) 2014-2018

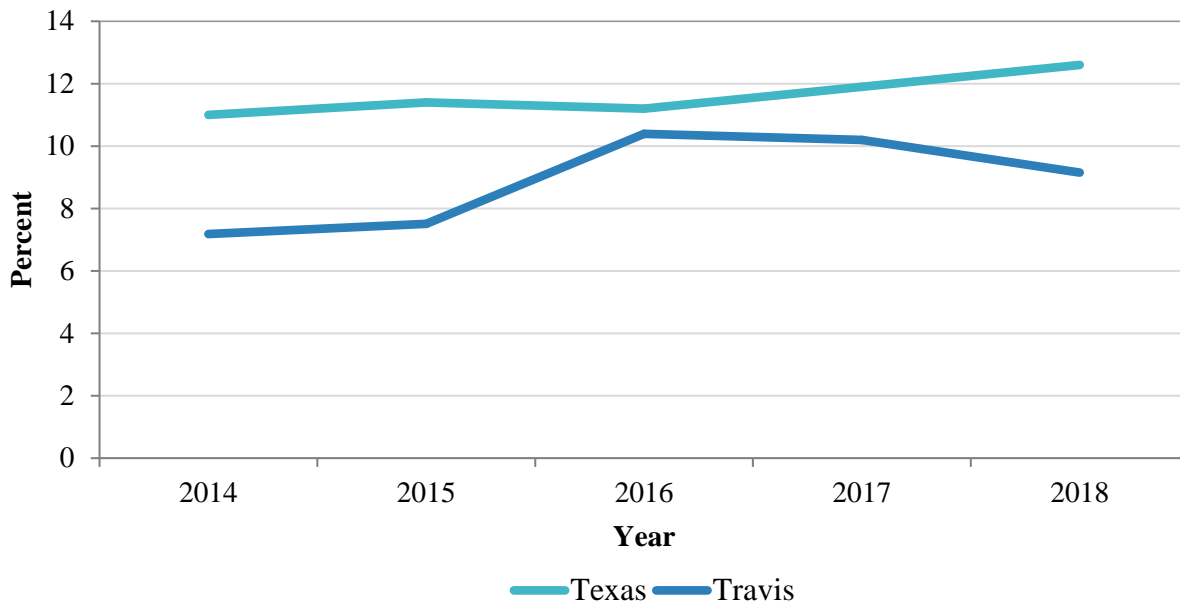
Diabetes

Diabetes is a chronic disease that affects approximately 30.3 million adults in the United States. In the last 20 years the number of adults with diabetes has doubled. Diabetes inhibits the body's ability to create or use insulin, a hormone which helps to regulate blood sugar levels. The disease presents in two different types: with type 1, the body does not make insulin at all, while in type 2 the body creates insulin but does not use it efficiently enough to control blood sugar levels. Type 2 diabetes is more commonly seen in adults and can be delayed or prevented through lifestyle modifications. Complications from diabetes can lead to other disorders such as heart and kidney disease. While there is not a cure for diabetes, treatment is available to help manage the disease.²

Data on diabetes prevalence was available from the Behavioral Risk Factor Surveillance System (BRFSS) survey. To account for smaller sample sizes, data was combined from 2014-2018 to provide better estimates of diabetes prevalence locally. The examined prevalence data is self-reported survey data that asks participants if a doctor has ever told them they have diabetes. Women with gestational diabetes were excluded from the data for Texas and Travis County. Survey data is intended to serve as estimates of the total population.

Diabetes prevalence in Travis County and Texas is shown in Figure 4.2. Texas overall has a higher prevalence of diabetes in comparison to Travis County. In Texas, prevalence increased from 11.0% in 2014 to 12.6% in 2018. In comparison, Travis County had a prevalence of 7.2% in 2014 and a prevalence of 9.2% in 2018. Prevalence in Travis County peaked at 10.4% in 2016 and decreased the following two years.

Figure 4.2. Diabetes Prevalence among Adults, Travis County and Texas, 2014-2018

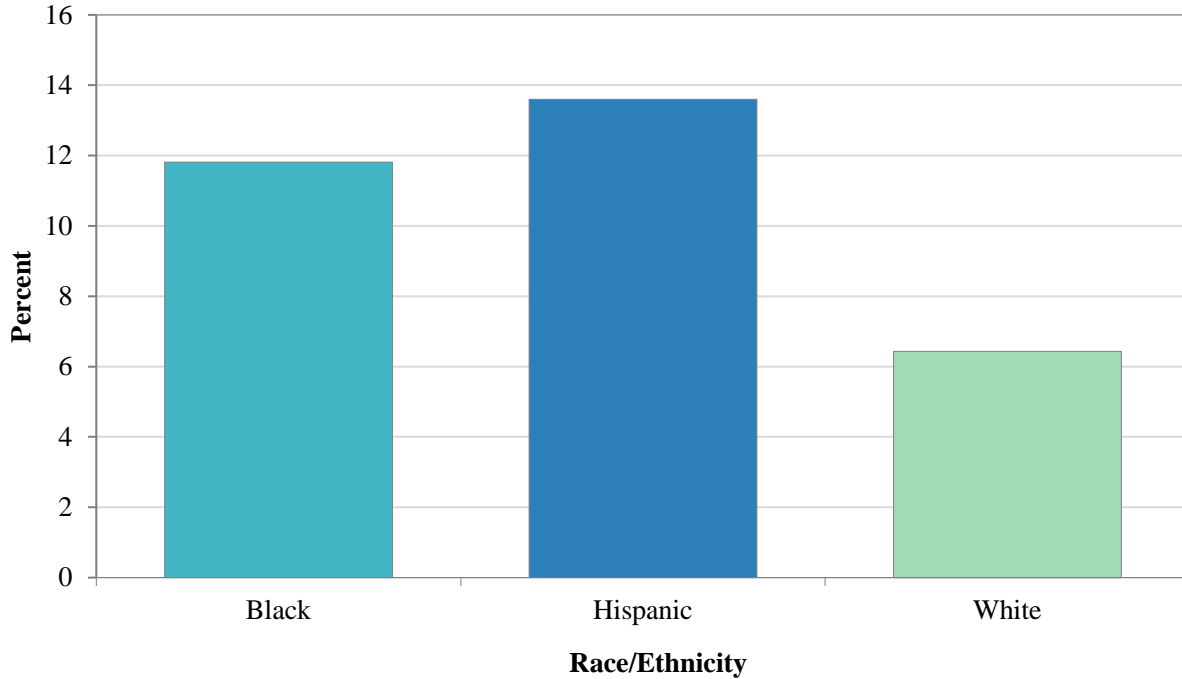


Source: Texas Behavioral Risk Factor Surveillance System (BRFSS) 2014-2018

² <https://www.cdc.gov/diabetes/basics/diabetes.html>

Both Blacks and Hispanics have much higher prevalence of diabetes compared to Whites in Travis County as shown in Figure 4.3. Hispanics have the highest prevalence of diabetes at 13.6% which is more than twice that of Whites at 6.4% in Travis County. Similar to other adverse health conditions, diabetes data indicates health disparities between races in Travis County.

Figure 4.3. Diabetes Prevalence by Race/Ethnicity, Travis County, 2014-2018



Source: Texas Behavioral Risk Factor Surveillance System (BRFSS) 2014-2018

Table 4.2 summarizes data related to diabetes prevalence for Travis County compared to Texas. Higher prevalence exists in those 65 years of age and older. The table also shows higher prevalence of diabetes in individuals with lower education levels, those who are unemployed, and those who make less than \$25,000 annually. Certain demographic and socioeconomic factors put individuals at an increased risk for diabetes.

Table 4.2. Prevalence Estimates of Diabetes among Adults by Select Demographic Characteristics, Travis County and Texas, 2014-2018

Demographic Characteristics	Travis County	Texas
	(%)	(%)
Total	8.8	11.6
Sex		
Male	10.0	12.2
Female	7.6	11.0
Age Group (years)		
18 to 44	2.9	3.0
45 to 64	13.4	17.5
≥ 65	23.0	26.7
Race/Ethnicity		
Whites	6.4	10.6
Blacks	11.8	14.9
Hispanics	13.6	12.6
Education		
Less than High School	17.3	18.7
High School Graduate	8.8	11.2
Some College	9.8	11.0
College Graduate	5.1	7.5
Employed		
Yes	6.0	7.2
No	13.8	17.9
Household Income		
< \$25,000	13.1	16.4
\$25,000 to < \$75,000	9.8	11.4
≥ \$75,000	5.2	7.4
Health Insurance		
Insured	6.3	9.1
Uninsured	7.7	7.4

Source: Texas Behavioral Risk Factor Surveillance System (BRFSS) 2014-2018

5.0 Chronic Disease Risk Factors

Tobacco

In the United States, cigarette smoking contributes to about one in every five deaths that occur each year. Overall, the life expectancy for people who smoke is at least 10 years shorter and the mortality rate is three times higher compared to those who do not smoke.³ Tobacco use also leads to increased risk of developing chronic disease such as cancer and respiratory disease. The Behavioral Risk Factor Surveillance System (BRFSS) survey assesses tobacco use across Texas. The survey examines the use of cigarettes, electronic nicotine delivery systems (ENDS), and smokeless tobacco. Survey participants are asked to report their smoking status into one of four categories: everyday use, occasional use, former smoker, or never used. Data from BRFSS was combined for years 2014-2018 to provide a larger sample size. The BRFSS defines a current smoker as a person who smokes every day or some days or has smoked at least 100 cigarettes in their lifetime.

In Travis County from 2014-2018, 12.4% of people identify as current smokers and 34.9% have tried smoking in their lifetime. Table 5.1 shows how smoking in Travis County and Texas varies across different demographic and socioeconomic groups. In Travis County:

- Current smoker prevalence is higher for males than for females
- Prevalence of current smokers decreases as education level increases
- Prevalence of current smokers decreases as income level increases
- The prevalence of current smokers amongst the uninsured is nearly twice the prevalence for those with insurance
- The 18-44 year age group has a higher prevalence of current smokers

³ https://www.cdc.gov/tobacco/data_statistics/fact_sheets/health_effects/tobacco_related_mortality/index.html

Table 5.1. Prevalence Estimates of Current Smoking and Ever Smoking among Adults by Select Demographic Characteristics, Travis County, 2014-2018

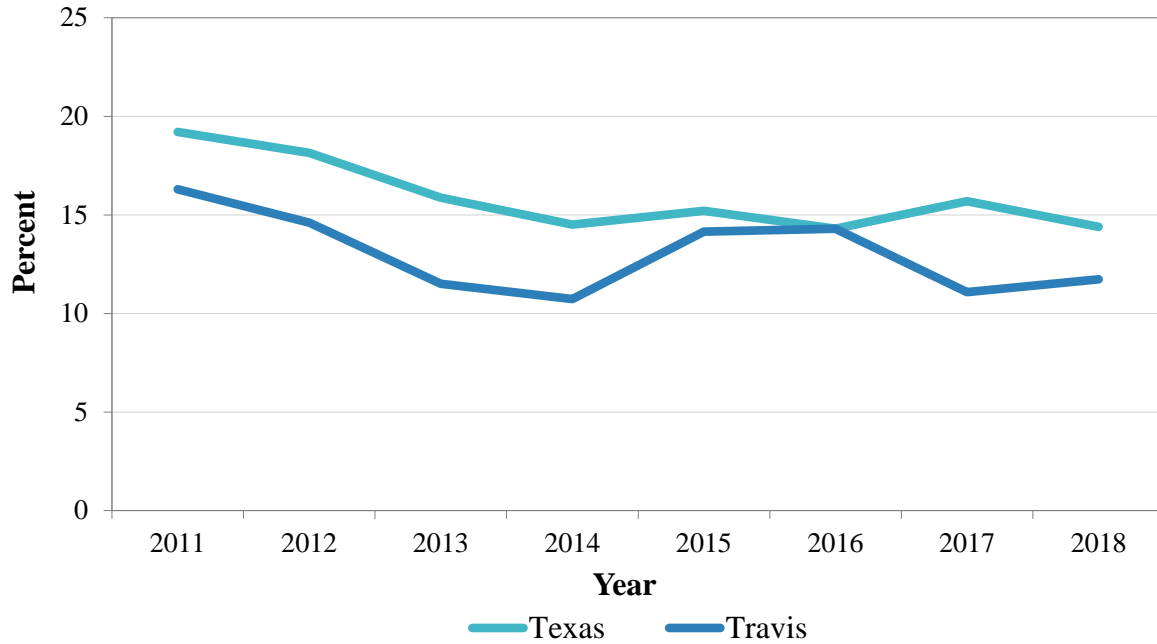
Demographic Characteristics	Current Smoker*		Ever Smoker*	
	Travis County	Texas	Travis County	Texas
	(%)	(%)	(%)	(%)
Total	12.4	14.8	34.9	36.2
Sex				
Male	14.9	17.5	42.1	43.8
Female	10.0	12.2	27.9	28.9
Age Group (years)				
18 to 44	14.8	16.1	30.9	30.3
45 to 64	10.9	16.7	36.6	40.7
≥ 65	6.7	7.9	48.9	46.3
Race/Ethnicity				
Whites	11.9	16.2	40.9	43.9
Blacks	18.1	16.2	40.0	30.7
Hispanics	11.3	13.2	24.4	30.0
Education				
< High School	12.9	19.6	30.9	39.2
High School Graduate	19.5	18.5	38.0	40.3
Some College	14.9	15.8	39.9	39.4
College Graduate	6.5	6.4	30.6	25.8
Employed				
Yes	13.2	15.7	36.2	36.2
No	11.3	13.7	33.1	36.5
Household Income				
< \$25,000	19.6	19.6	37.7	38.6
\$25,000 to < \$75,000	13.4	16.4	36.6	39.3
≥ \$75,000	8.5	9.6	35.9	33.2
Health Insurance				
Insured	11.4	14.3	32.7	33.7
Uninsured	21.2	22.1	34.0	36.7

Source: Texas Behavioral Risk Factor Surveillance System (BRFSS) 2014-2018

*Current smoker is defined as a person who smokes every day or some days or has smoked at least 100 cigarettes in their lifetime. Ever smoker is defined as a current smoker (every day or some days) or a former smoker.

In years past, Travis County has had a lower prevalence of current smokers than Texas as shown in Figure 5.1. However, in 2016 the current smoker prevalence in Travis County equaled that of Texas. From 2016-2017 there was a decrease in the prevalence of current smokers which has since continued to increase. When compared to 2011, current smoker prevalence in Travis County has decreased from 16.3% to 11.7% as of 2018.

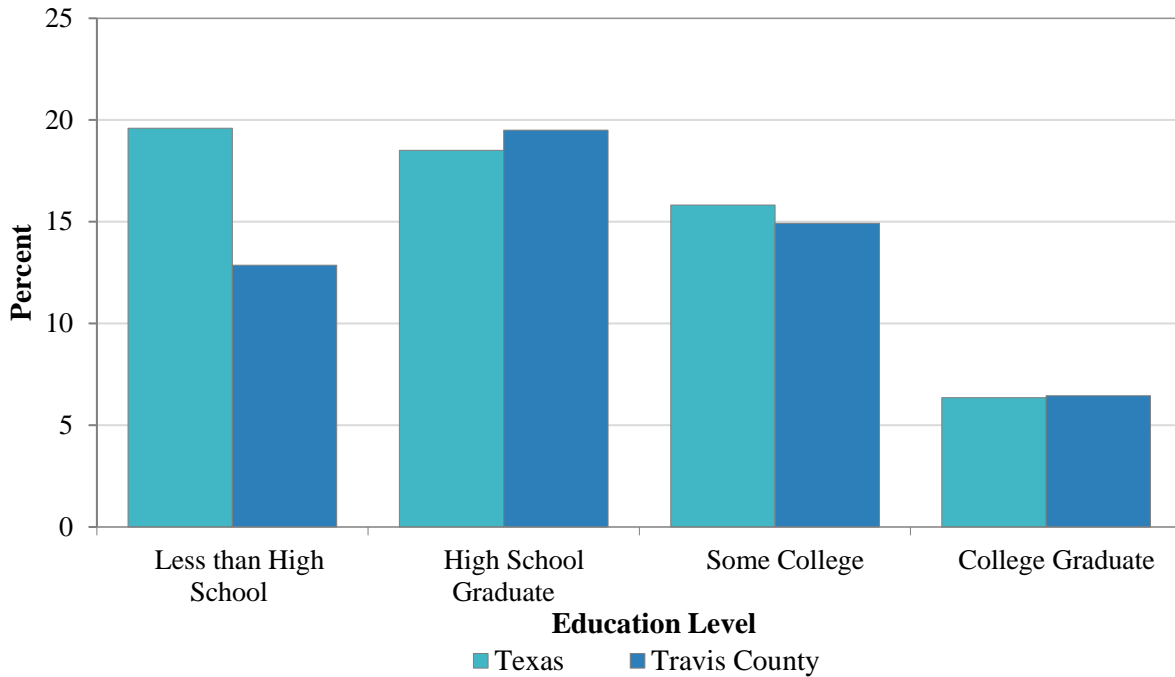
Figure 5.1 Current Smoker Prevalence among Adults, Travis County and Texas, 2011-2018



Source: Texas Behavioral Risk Factor Surveillance System (BRFSS) 2014-2018

Figure 5.2 shows the relationship between education level and smoking status. In both Texas and Travis County, there is a sharp decline in current smoker prevalence as education level increases. In Texas, the current smoking prevalence among those with less than a high school education is 19.6% compared to a prevalence of 6.4% for those who graduated college.

Figure 5.2. Current Smoker Prevalence by Education Level, Travis County and Texas, 2014-2018



Source: Texas Behavioral Risk Factor Surveillance System (BRFSS) 2014-2018

Electronic Nicotine Delivery Systems

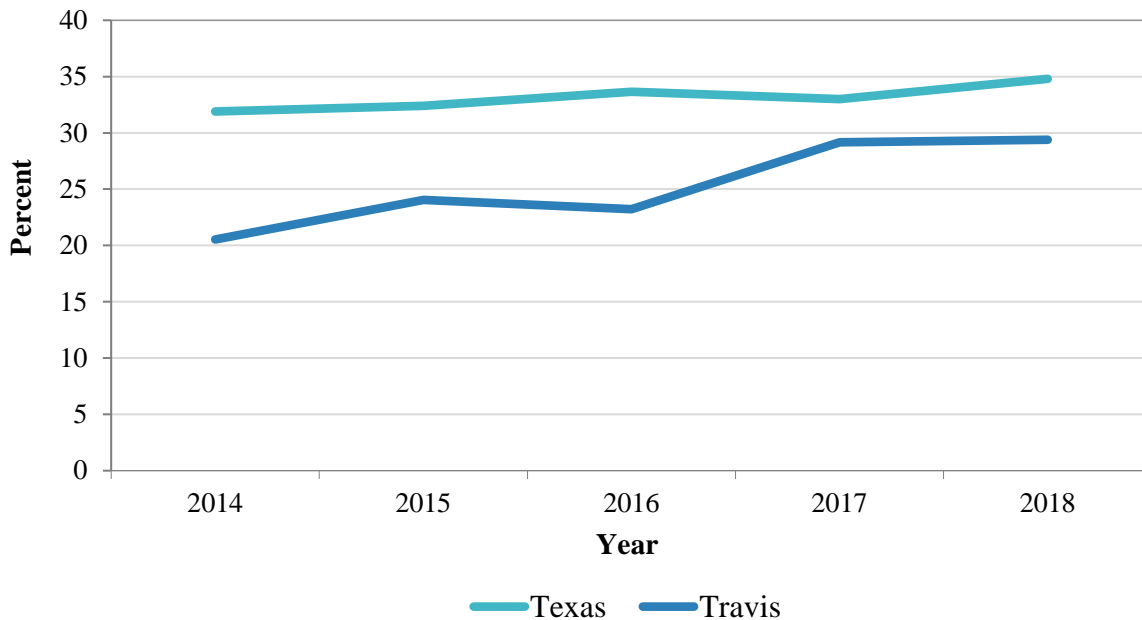
Use of electronic nicotine delivery systems (ENDS) such as e-cigarettes and vape pens has increased in recent years. BRFSS incorporated data related to ENDS use in Texas in 2016 and 2017. The data for these two years shows that in Travis County 22.5% of individuals reported ever having used an ENDS device and 8.3% reported current use. These numbers were nearly equal to those for Texas as a whole at 22.2% and 7.3% respectively. The use of ENDS in Texas has a higher prevalence among White, non-Hispanic males. Individuals with some college or a college degree have higher prevalence of use of these products in addition to people within the 18-44 age group.

Obesity

Body Mass Index (BMI) is a calculation tool used to classify a person's weight into various categories of health. When a person's BMI exceeds a recommended healthy level, that person's weight may meet the classification of overweight or obese. Obesity can lead to a variety of health problems such as heart disease, stroke, type 2 diabetes, and certain types of cancer.⁴ Data from the Texas Behavioral Risk Factor Surveillance System (BRFSS) was combined for years 2014-2018 to determine the prevalence of overweight and obesity for Travis County. The survey takes self-reported height and weight data to calculate BMI which serves as a measure to determine obesity.

Figure 5.3 shows the prevalence of obesity in adults in Travis County and Texas. Obesity prevalence is lower for Travis County adults compared with adults in Texas. However, obesity prevalence in Travis County has increased from 20.5% in 2014 to 29.5% in 2018.

Figure 5.3. Obesity Prevalence among Adults, Travis County and Texas, 2014-2018



Source: Texas Behavioral Risk Factor Surveillance System (BRFSS) 2014-2018

The prevalence of obesity within Travis County is broken down into various demographic and socioeconomic categories as shown in Table 5.2. This table shows:

- More than half of Travis County residents classify as either overweight or obese
- The prevalence of obesity for men is nearly equal to that of women
- Blacks and Hispanics have higher prevalence of obesity compared with Whites
- With increased level of education there is decreased prevalence of obesity
- With increased household income there is decreased prevalence of obesity

⁴ <https://www.cdc.gov/obesity/data/adult.html>

Table 5.2. Prevalence Estimates of Obesity, Overweight, and Normal Weight by Selected Demographic Characteristics, Travis County, 2014-2018

Demographic Characteristics	Travis County		
	Recommended	Overweight	Obese
	Range		
	BMI* < 25 (%)	25 ≤ BMI < 30 (%)	BMI ≥ 30 (%)
Total	40.8	34.2	25.0
Sex			
Male	35.8	39.4	24.7
Female	46.3	28.4	25.3
Age Group (years)			
18 to 44	45.7	33.1	21.2
45 to 64	33.6	34.6	31.8
≥ 65	38.0	37.9	24.1
Race/Ethnicity			
Whites	45.1	34.8	20.1
Blacks	32.0	31.1	36.9
Hispanics	31.3	34.6	34.0
Education			
Less than High School	29.1	34.8	36.1
High School Graduate	34.1	30.6	35.2
Some College	41.9	33.7	24.4
College Graduate	46.8	36.1	17.1
Employed			
Yes	38.9	36.0	25.1
No	44.2	31.5	24.3
Household Income			
< \$25,000	37.4	31.9	30.7
\$25,000 to < \$75,000	35.6	35.4	29.0
≥ \$75,000	43.8	36.3	19.9
Health Insurance			
Insured	42.6	34.6	22.8
Uninsured	35.2	31.1	33.6

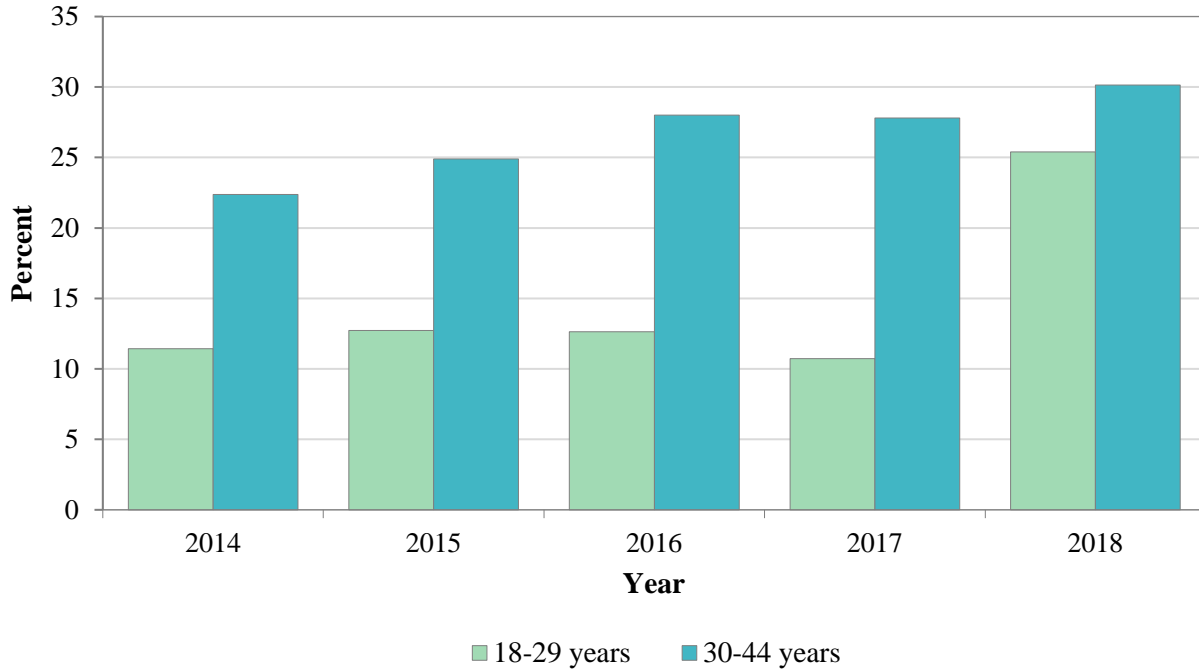
Source: Texas Behavioral Risk Factor Surveillance System (BRFSS) 2014-2018

*Body Mass Index. BMI below 18.5 is considered underweight. There is not sufficient data to present demographic characteristics for an underweight group.

Within Travis County, 34.2% of residents meet the classification of overweight and 25.0% classify as obese. From 2014-2016, the overweight prevalence for Travis County and for Texas were relatively equal. From 2016-2017 the overweight prevalence for Travis County decreased from 34.8% to 30.5% but then increased slightly again the following year.

Figures 5.4 and 5.5 show the relationship between obesity and age group and education level. For individuals ages 18-29 years, the prevalence has increased from 11.4% in 2014 to 25.4% in 2018 (figure 5.4). For individuals ages 30-44 years, there was also an increase in prevalence over time from 22.4% in 2014 to 30.1% in 2018. This data suggests earlier onset of obesity for residents in Travis County compared to years past.

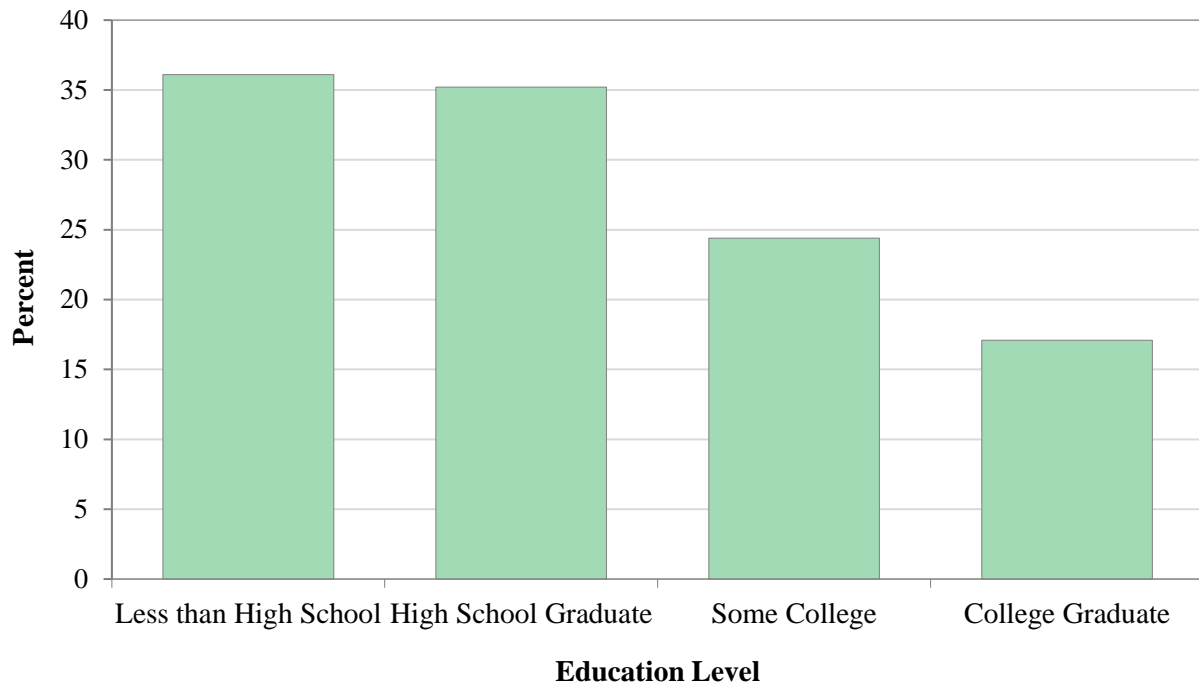
Figure 5.4. Obesity Prevalence among Adults in Travis County by Age Group and Year



Source: Texas Behavioral Risk Factor Surveillance System (BRFSS) 2014-2018

Figure 5.5 shows a sharp decline in obesity prevalence in Travis County with increase in education level. For college graduates the obesity prevalence is 17.1% compared with 36.1% for individuals who did not complete high school.

Figure 5.5. Obesity Prevalence among Education Levels, Travis County, 2014-2018



Source: Texas Behavioral Risk Factor Surveillance System (BRFSS) 2014-2018

6.0 Maternal and Child Health

Maternal and child health indicators are often used as community benchmarks to provide a glimpse into the health status of a population. This section presents birth and infant mortality data for a variety of maternal and infant characteristics. The data provides an understanding of the relationships between risk factors and infant mortality. However, it is also important to note that women with one risk factor will often also have additional risk factors.

Prenatal Care

During 2010 through 2016, women from Travis County gave birth to 15,494 to 16,386 babies annually. Late initiation of prenatal care or no prenatal care, both of which are often related to a mother's ability to access medical care, is an important risk factor for infant mortality. As noted in Table 6.1, about a quarter of births in Travis County are with no or late prenatal care. Typically, Black and Hispanic mothers are twice as likely to have late or not prenatal care compared with White mothers). In Travis County, about a third of all Hispanic and Black infants were born to mothers with late or no prenatal care.

Table 6.1. Percentage of Births with Late or No Prenatal Care[‡] by Race/Ethnicity, Travis County and Texas, 2010-2016

Race/ Ethnicity	Travis County							Texas
	2010	2011	2012	2013	2014	2015	2016	2010-2016 Average
White	16.5	16.6	14.6	13.0	15.7	15.1	15.0	27.8
Black	35.4	36.1	33.5	31.1	33.7	30.1	30.9	44.4
Hispanic	47.7	44.1	40.5	38.1	44.1	35.8	32.6	40.2
All Races*	33.0	31.0	28.1	26.0	26.9	25.9	24.2	36.0

Source: Center for Health Statistics, Department of State Health Services, Texas Births 2010-2016.

*The total includes other races and ethnicities.

[‡]"Late prenatal care" is considered prenatal care started in the second or third trimester. Percent calculated for "Late or No Prenatal Care" is based on the total number of births.

Preterm Births

A baby born before 37 weeks of gestation is considered preterm. Preterm babies are at higher risk of disability and death. The causes of preterm births remain poorly understood. Behavioral, medical, social, personal and economic conditions may affect a woman’s risk of preterm birth.⁵ In Travis County, the annual percentage of premature births has been fairly consistent (10% to 11%) from 2010 to 2016. Premature births are more likely for Black mothers as noted in Table 6.2 and shown in Figure 6.1.

Table 6.2. Percentage of Preterm Births[†] by Race/Ethnicity, Travis County and Texas, 2010-2016

Race/ Ethnicity	Travis County							Texas
	2010	2011	2012	2013	2014	2015	2016	2010-2016 Average
White	9.3	9.3	10.0	9.9	9.5	8.9	8.7	10.7
Black	17.2	14.4	16.5	17.8	14.6	15.3	16.7	16.0
Hispanic	11.5	11.0	10.3	10.6	9.8	12.3	11.1	12.5
All Races*	10.8	10.4	10.6	10.9	10.0	11.1	10.5	12.2

Source: Center for Health Statistics, Department of State Health Services, Texas Births 2010-2016.

*The total includes other races and ethnicities.

[†] “Preterm” is considered <37 weeks gestation. Percent calculated for “Preterm” is based on the total number of births.

Low Birth Weight

Low birth weight is another important risk factor closely linked with infant mortality. Overall in Travis County, usually about 8% of births are low weight. Low birth weight is more frequently seen in infants born to Black mothers (Table 6.3 and Figure 6.1).

Table 6.3. Percentage of Low Birth Weight[§] Births by Race/Ethnicity, Travis County and Texas, 2010-2016

Race/ Ethnicity	Travis County							Texas
	2010	2011	2012	2013	2014	2015	2016	2010-2016 Average
White	6.8	6.3	7.2	7.3	6.9	6.3	6.6	7.3
Black	16.6	12.6	14.5	16.2	13.5	13.1	13.4	13.6
Hispanic	7.2	7.9	6.9	7.4	6.1	7.2	7.6	7.7
All Races*	7.9	7.6	7.8	8.2	7.2	7.5	7.9	8.3

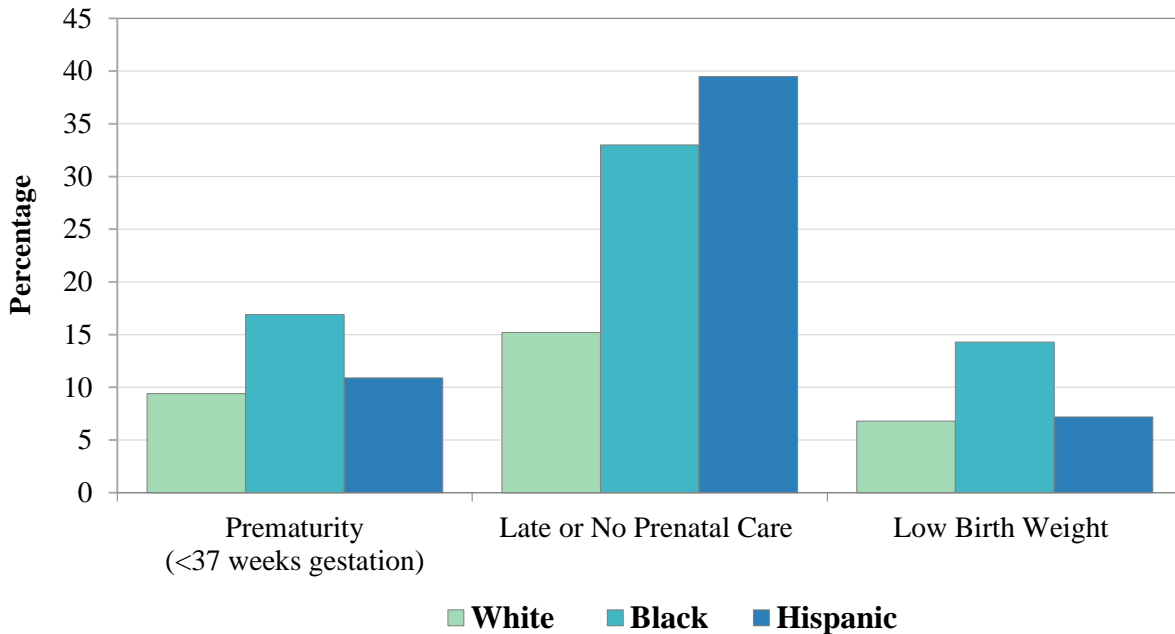
Source: Center for Health Statistics, Department of State Health Services, Texas Births 2010-2016.

*The total includes other races and ethnicities.

[§] “Low birth weight birth” is considered a birth weight of less than 2,500 grams (5 pounds, 8 ounces). Percent calculated for “Low Birth Weight” is based on the total number of births.

⁵ <https://www.cdc.gov/reproductivehealth/maternalinfanthealth/preterm.html>

Figure 6.1. Prenatal Risk Factors by Race/Ethnicity, Travis County, 2010-2016



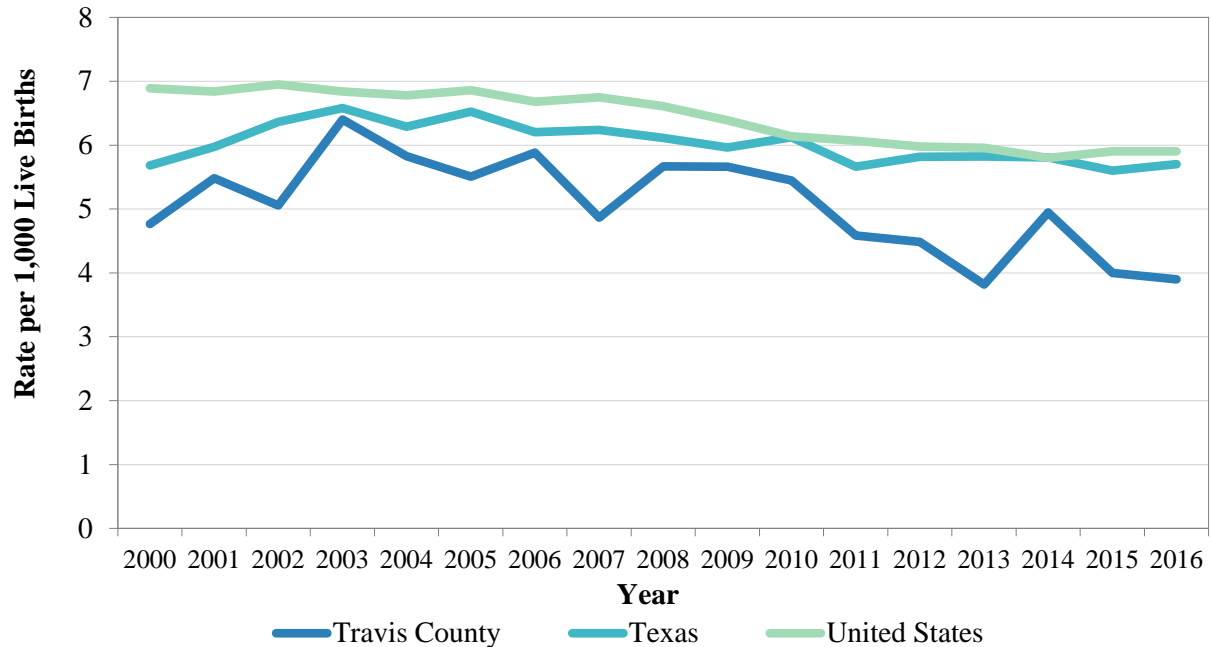
Source: Center for Health Statistics, Texas Department of State Health Services

Infant Mortality

The death of a baby before his or her first birthday is called infant mortality. The *infant mortality rate* is the number of infant deaths for every 1,000 live births. In general, the infant mortality is considered a summary measure of the health of a population, and the differential between infant mortality rates for babies born to White and Black mothers in the United States has been a focal point in public health for many years.

Infant mortality rates for Travis County, Texas and the United States are shown in Figure 6.2. The infant mortality rate in Travis County has been lower than either Texas or the national rate from 2000 through 2016. Over the 17-year period, the Travis County rate has varied between 3.8 and 6.4 deaths per 1,000 live births with the changes in the rate from year to year, but overall has been decreasing during the last 10 years.

Figure 6.2. Infant Mortality Rates per 1,000 Live Births, Travis County, Texas, and the United States, 2000-2016



Source: County and Texas data obtained from Center for Health Statistics, Texas Department of State Health Services National statistics obtained from United States Department of Health and Human Services (US DHHS), Centers of Disease Control and Prevention (CDC), National Center for Health Statistics (NCHS), Division of Vital Statistics (DVS). Linked Birth / Infant Death Records 2000-2016, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program, on CDC WONDER On-line Database.

Table 6.4 shows infant mortality rates by race/ethnicity for 2010 through 2016. Overall, the seven-year average infant mortality rates for Travis County is less than that of Texas. In Travis County and Texas, differences in infant mortality are observed in different racial/ethnic groups. Infant mortality rates are higher for Blacks than Whites and Hispanics as shown in Figure 6.3

Table 6.4. Infant Mortality Rates per 1,000 Live Births for Travis County and Texas, 2010-2016

Race/ Ethnicity	Travis County							Texas	
	2010	2011	2012	2013	2014	2015	2016	2010-2016 Average	2010-2016 Average
White	3.7	*	4.8	4.6	2.5	3.8	*	4.2	5.1
Black	*	*	13.6	*	7.6	*	*	9.9	11.3
Hispanic ¹	6.0	6.1	3.1	3.1	6.5	2.9	4.4	4.6	5.3
All Races*	5.4	4.6	4.5	3.8	4.9	4.0	3.9	4.5	5.8

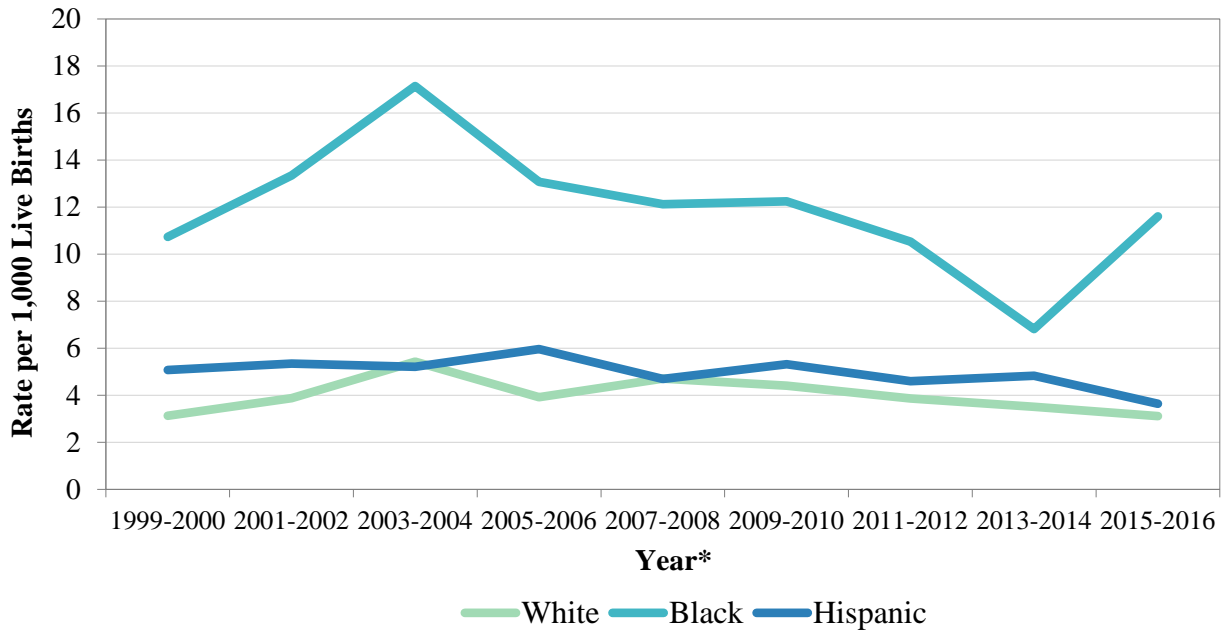
Source: Center for Health Statistics, Texas Department of State Health Services, Texas Births 2012-2014.

* Due to the misleading nature of very small numbers, rates are not presented when there were fewer than 21 cases in the numerator: <https://www.dshs.texas.gov/chs/vstat/vs13/technote.aspx#smallnum>

¹ For years 2010-2011: Non-Hispanic Other race/ethnicity category also includes cases with Unknown race/ethnicity. For years 2012-2016: Non-Hispanic Other race/ethnicity category also includes cases with Unknown race/ethnicity and Multiple race responses.

Nationally, the higher infant mortality rates seen in Black infants are primarily due to higher levels of preterm births and preterm-related causes of death,⁶ but also this are markers or symptoms of larger social, economic, and political issues facing our nation.⁷ Figure 6.3 shows infant mortality rates by race/ethnicity for 1999 through 2016. Infant mortality rates are highest for Blacks during this period; rates for Whites and Hispanics have remained steady. Although the rates for Blacks has been on the decline since 2003-2004 the infant mortality rate remains higher than the rates for Whites and Hispanics.

Figure 6.3. Infant Mortality Rates per 1,000 Live Births by Race/Ethnicity for Travis County, 1999-2016

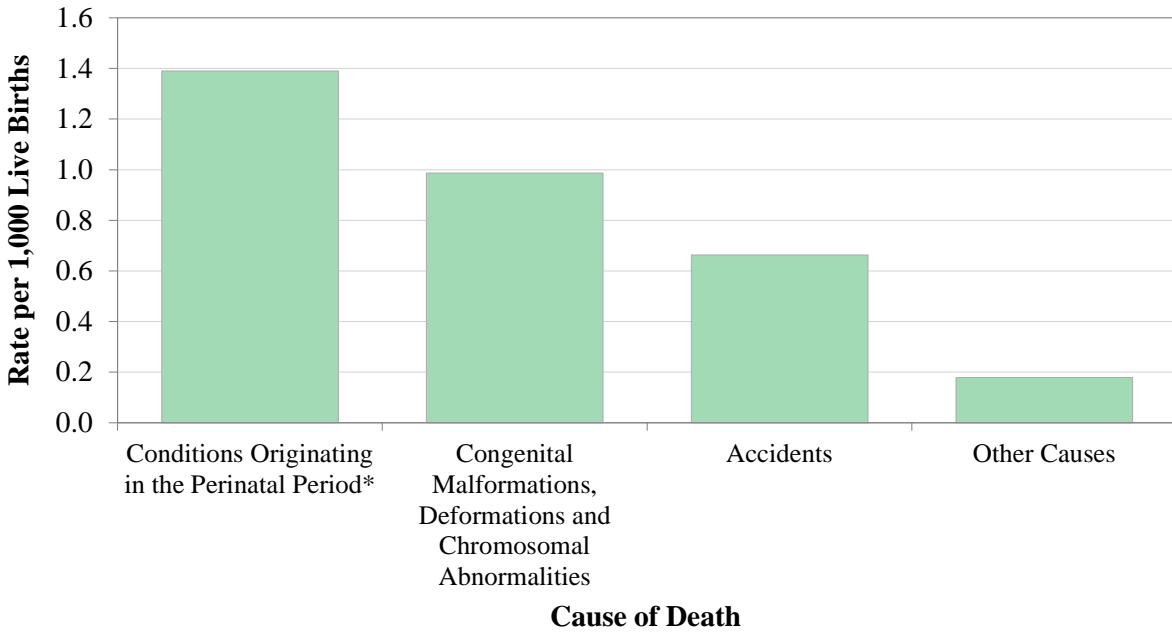


*Data was aggregated into 2-year increments to ensure rate stability
 Source: Center for Health Statistics, Texas Department of State Health Services

Selected causes of infant mortality are shown in Figure 6.4. Infant deaths are usually due to conditions originating in the perinatal period, congenital malformations, and accidents.

⁶ MacDorman MF, Mathews TJ. Understanding racial and ethnic disparities in U.S. infant mortality rates. NCHS data brief, no 74. Hyattsville, MD: National Center for Health Statistics. 2011
⁷ Russell S. Kirby. The US Black-White Infant Mortality Gap: Marker of Deep Inequities. *Am J Public Health.* 2017; 107(5): 644-645. Doi 10.2105/AJPH.2017.303735

Figure 6.4. Infant Mortality Rates per 1,000 Live Births for Selected Causes of Death for Travis County, 2012-2016



*Conditions originating in the perinatal period are complications of labor and/or delivery, short gestation, low birth weight and hypertension, diabetes, smoking and stress during pregnancy

Source: Center for Health Statistics, Texas Department of State Health Services

7.0 Human Immunodeficiency Virus

Human immunodeficiency virus (HIV) is spread through bodily fluids such as blood, semen, pre-seminal fluid, rectal fluids, vaginal fluids, and breast milk. In the United States, HIV is most commonly transmitted from person to person through unprotected anal or vaginal sex and through needle and syringe use. Less commonly, transmission also can occur through transfusion of blood or its components from infected persons. In addition, a mother can pass HIV to her baby during pregnancy, during labor, or through breastfeeding. HIV infection is diagnosed by testing blood or saliva for antibodies to the virus or by directly testing for the presence of the virus. HIV weakens a person's immune system leading to immunodeficiency; that is, the immune system is deficient in its ability to fight disease and infection. Acquired immunodeficiency syndrome (AIDS) is the late stage of infection with HIV. The time from HIV infection to the development of AIDS is extremely variable ranging from less than one year to over 15 years. No vaccine or effective cure exists for HIV. But with proper medical care, HIV can be controlled. Antiretroviral therapy (ART) is the medicine used to treat HIV. ART can prolong the lives of many people infected with HIV, keep them healthy, and greatly lower their chance of infecting others.⁸

Today, more options than ever are available to prevent HIV. Using condoms correctly every time you have sex, limiting your number of sexual partners, never sharing needles, and taking advantage of highly effective medicines such as pre-exposure prophylaxis (PrEP) and post-exposure prophylaxis (PEP) can reduce the risk of HIV infection. PEP is used after a person is potentially exposed to HIV, while PrEP is daily pill taken to prevent HIV for those at high risk for becoming infected with HIV.⁸

The Centers for Disease Control and Prevention estimates that 1,122,900 adults and adolescents were living with HIV at the end of 2015. Of those, 162,500 (15%) had not received a diagnosis. While HIV can affect anyone, certain groups are at higher risk due to particular risk factors. In 2017, 38,739 people received an HIV diagnosis in the US. The annual number of new HIV diagnoses remained stable between 2012 and 2016 in the United States (US) and dependent areas. However, annual new diagnoses have increased among some groups. In the United States, African Americans experience a highest burden of HIV compared with other races and ethnicities. Additionally, gay, bisexual, and other men who have sex with men (MSM) are considered most at risk of HIV infection. In 2015 young MSM, aged 13-24, accounted for the majority of new HIV diagnoses, with young African American MSM affected even more severely.⁹

Table 7.1 shows the number of new HIV and AIDS cases reported in Travis County during 2009 through 2018. The annual number of new HIV diagnoses ranged from 191 to 295. In 2015, the majority of new diagnoses were male (89.1%). The age group of 25-34 years old was the most impacted (40.3%), followed by the age group between 15-24 years old (23.4%). Additionally, most cases identified as Hispanic (42.4%), followed by White (32.2%), and then Black (16.3%).

⁸ <https://www.cdc.gov/hiv/basics/index.html>

⁹ <https://www.cdc.gov/hiv/statistics/overview/ataglance.html>

The number of cases of AIDS are those who were diagnosed in that year regardless of whether they were previously diagnosed as HIV only or if they were newly diagnosed and had already met the AIDS case definition.

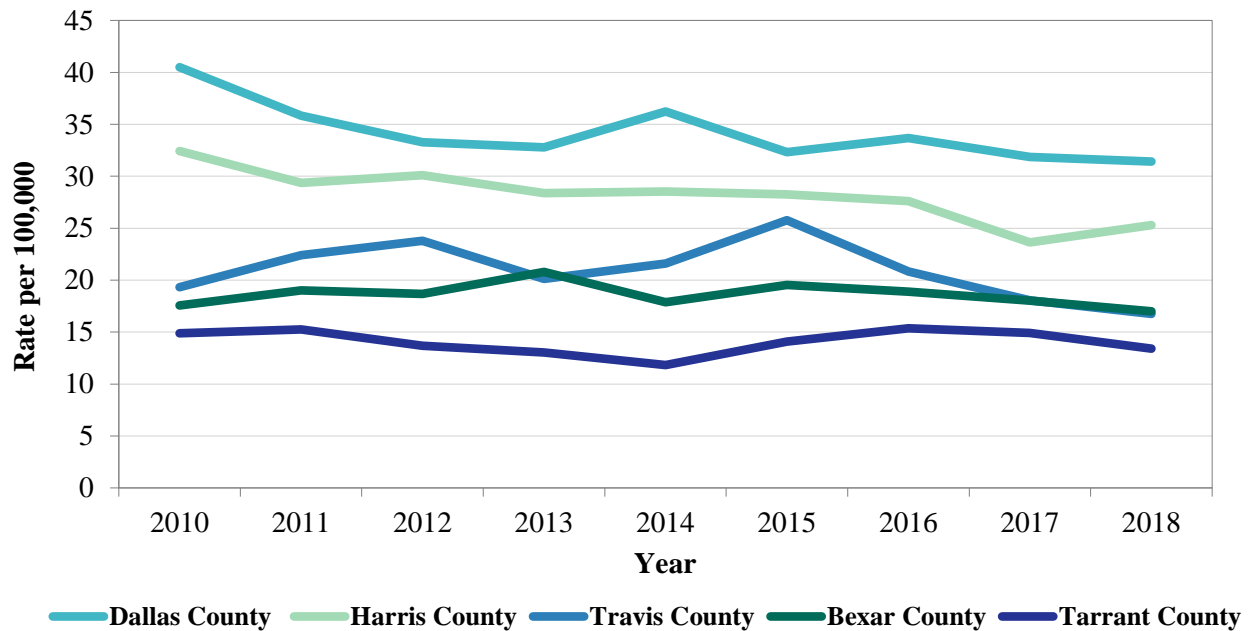
Table 7.1. Number of New HIV and AIDS Diagnoses, Travis County, 2009-2018

Diagnosis Year	HIV	AIDS
2009	191	150
2010	198	126
2011	235	121
2012	255	112
2013	223	111
2014	242	96
2015	295	99
2016	244	83
2017	216	77
2018	205	77
Total	2,113	1,052

Source: TB/HIV/STD Epidemiology and Surveillance Branch, Texas Department of State Health Services

Figure 7.1 shows the incidence rates per 100,000 population for new HIV infection diagnoses by county of residence for the five most populated counties in Texas. Consistently for the last nine years, rates in Travis County have been lower compared with Dallas and Harris counties and similar or higher compared with Bexar and Tarrant counties.

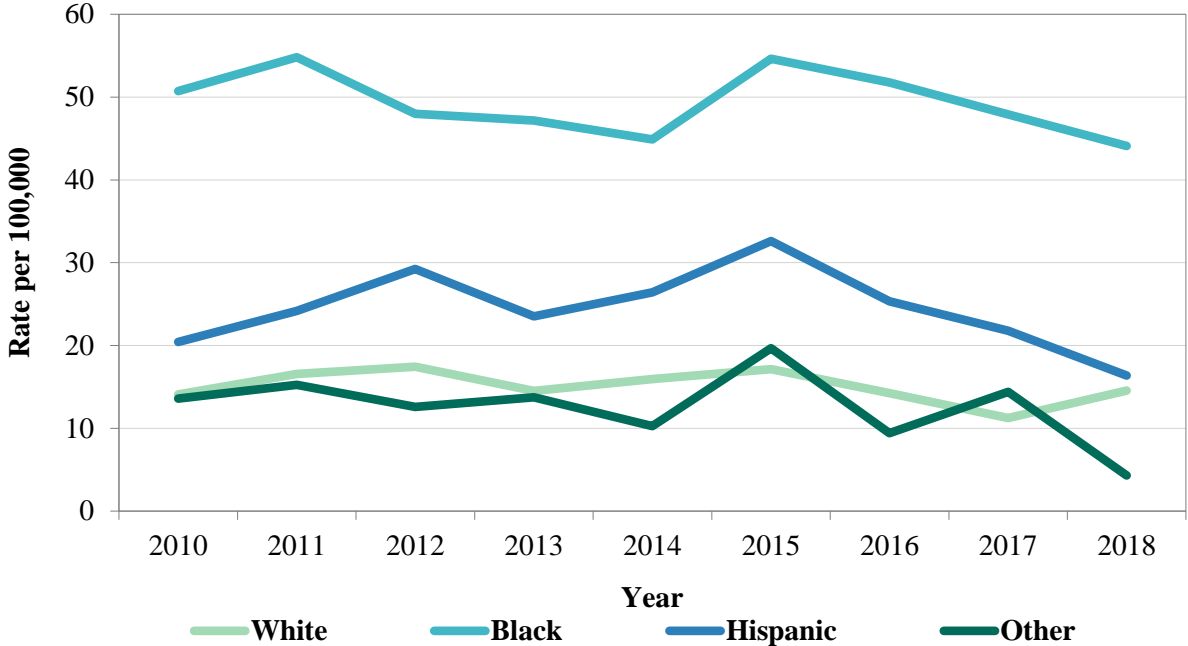
Figure 7.1. Incidence Rates per 100,000 Population for New HIV Infection Diagnoses by County of Residence, Bexar, Dallas, Harris, Tarrant, and Travis Counties, 2010-2018



Source: TB/HIV/STD Epidemiology and Surveillance Branch, Texas Department of State Health Services

Figure 7.2 shows the incidence rate of new HIV diagnoses. From 2010 through 2018, incidence rates for Blacks have been consistently higher compared with rates for Hispanics, Whites, and Others.

Figure 7.2. Incidence Rate per 100,000 Population of New HIV Diagnoses, Travis County, 2010-2018

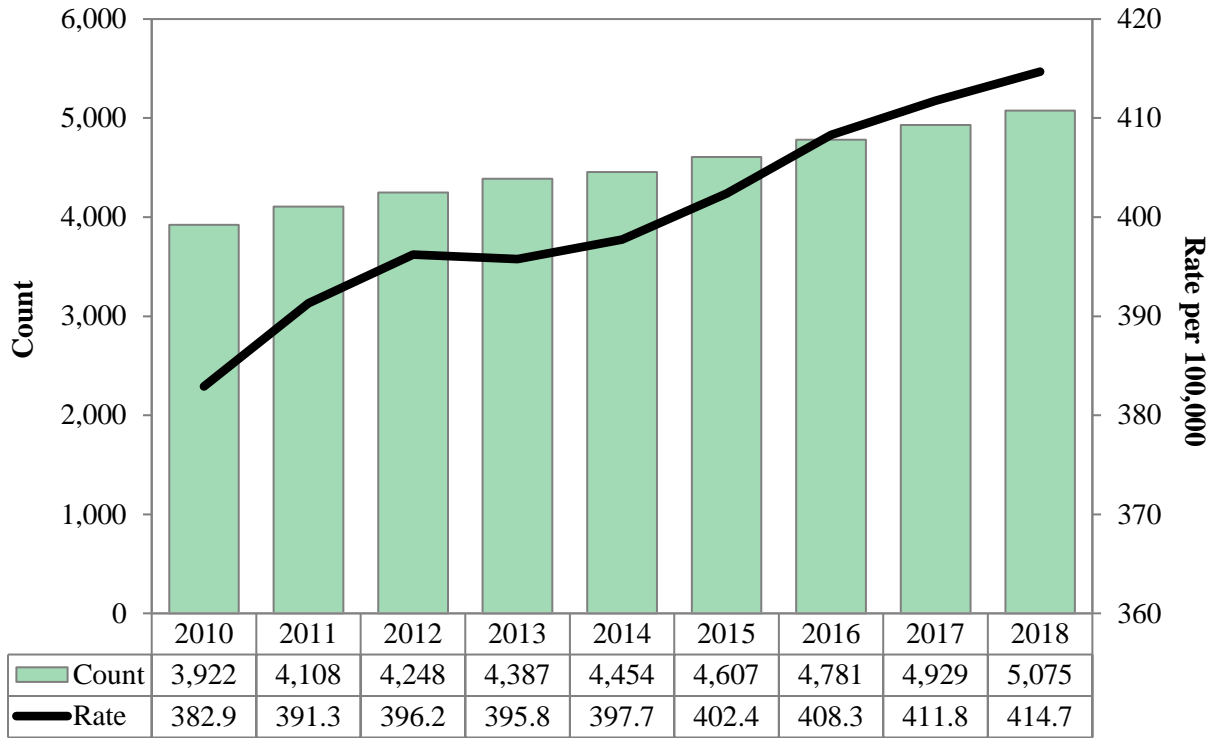


Source: TB/HIV/STD Epidemiology and Surveillance Branch, Texas Department of State Health Services

Through December 31, 2018, a total of 94,106 persons living with HIV (PLWH) resided in Texas. A majority (78.9%) of PLWH in Texas are male. The rate of PLWH for males in Texas in 2018 was 520.8 per 100,000, compared with 137.4 per 100,000 among females. In Texas, 36.8% of PLWH are Blacks followed by Hispanics (33.6%), and then Whites (24.3%). The prevalence rate in 2018 for Blacks was 1,007 per 100,000, followed by Hispanics (278 per 100,000) and Whites with (192 per 100,000).

Figure 7.3 shows the number of PLWH in Travis County and the prevalence rate per 100,000 population by year. The number of PLWH in Travis County has increased 29.4% over the past nine years, from 3,922 to 5,075. The PLWH prevalence rate increased 8%, from 382.9 per 100,000 in 2010 to 414.7 per 100,000 in 2018.

Figure 7.3. Number and Prevalence Rate per 100,000 Population of Persons Living with HIV, Travis County, 2010-2015



Source: TB/HIV/STD Epidemiology and Surveillance Branch, Texas Department of State Health Services

In 2018, 5,075 persons living with HIV resided in Travis County. Table 7.3 shows the percentage of PLWH in Travis County by sex, race/ethnicity, and exposure category. For males, the exposure category of MSM accounted for the largest proportion of PLWH at 80.9%. For Black males, this exposure category accounted for only 60.3% compared with 87.3% for White males. Intravenous drug use (IDU) accounted for over a quarter (25.5%) of females living with HIV compared with 5.5% for males living HIV. Overall, heterosexual sex accounted for 72.0% of females compared to 5.1% among males.

Table 7.3. Percentage of Persons Living with HIV by Sex, Race/Ethnicity and Exposure Category, Travis County, 2018

Sex	Race/ Ethnicity	Exposure Category					
		MSM (%)	IDU (%)	MSM/IDU (%)	Heterosexual (%)	Pediatric (%)	Other Adult (%)
Male							
	White	86.2	2.1	10.8	0.6	0.3	0.0
	Black	67.2	12.2	9.9	10.6	0.0	0.0
	Hispanic	83.7	3.6	6.8	5.9	0.0	0.0
	Other	91.6	0.0	8.4	0.0	0.0	0.0
Total		82.2	4.3	9.1	4.3	0.1	0.0
Female							
	White	-	36.1	-	63.9	0.0	0.0
	Black	-	22.4	-	74.6	2.9	0.0
	Hispanic	-	8.6	-	91.4	0.0	0.7
	Other	-	0.0	-	100.0	0.0	0.0
Total		-	20.8	-	77.6	1.6	-

Source: TB/HIV/STD Epidemiology and Surveillance Branch, Texas Department of State Health Services

8.0 Sexually-transmitted infections

Chlamydia

Chlamydial infections, caused by *Chlamydia trachomatis*, are the most commonly reported sexually-transmitted infections in the United States, Texas, and Travis County. Both men and women can get infected with *Chlamydia*. A lot of cases go unreported because most infected people are asymptomatic. In women, Chlamydia may result in pelvic inflammatory disease and ectopic pregnancies, potentially even causing permanent damage and making it difficult to get pregnant later on. Chlamydia could be easily treated with antibiotics.¹⁰

In 2018, a total of 145,874 Chlamydia cases were reported in Texas.¹¹ Since 2008, the annual number of cases in Travis County has increased from 5,471 to 9,028. Table 8.1 shows the number of reported Chlamydia cases in Travis County in 2018 by sex and race/ethnicity. For those with known race/ethnicity, Hispanics comprise about a third (29.7%) of the cases, with females representing more than half (57.9%).

Table 8.1. Number of Chlamydia Cases by Sex and Race/Ethnicity, Travis County, 2018

Race/Ethnicity	Sex			Total
	Male	Female	Unknown	
White	944	918	0	1,862
Black	569	707	-	1,276
Hispanic	993	1,691	-	2,684
Other*	131	130	-	261
Unknown**	1,121	1,779	45	2,945
Total	3,758	5,225	45	9,028

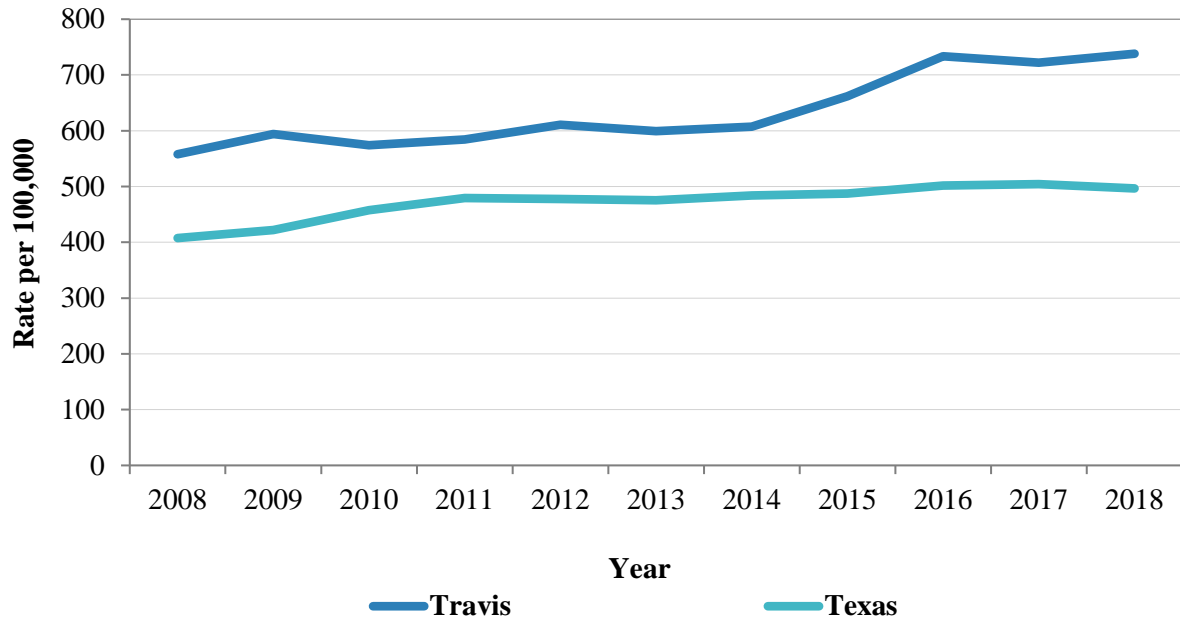
Source: TB/HIV/STD Epidemiology and Surveillance Branch, Texas Department of State Health Services
*Other race includes Asian, Native Hawaiian/Pacific Islander, American Indian/Alaska Native and, Multiracial.
**Note: A delay in updating the race/ethnicity field in the surveillance data for chlamydia and gonorrhea has resulted in a large number of cases with race/ethnicity as unknown in 2018. Numbers should be interpreted with caution.

Figure 8.1 shows the Chlamydia incidence rates per 100,000 population for Travis County and Texas for 2008 through 2018. During this period of time, incidence rates are higher each year in Travis County compared with Texas. The incidence rate for Travis County has increased from 557.9 cases per 100,000 population in 2008 to 738.1 cases per 100,000 population in 2018, a 24.4% increase. Texas experienced a similar increase (17.9%) during this period.

¹⁰ <https://www.cdc.gov/std/chlamydia/stdfacts-chlamydia.htm>

¹¹ Texas STD Surveillance Report, 2018 Annual Report, Texas Department of State Health Services

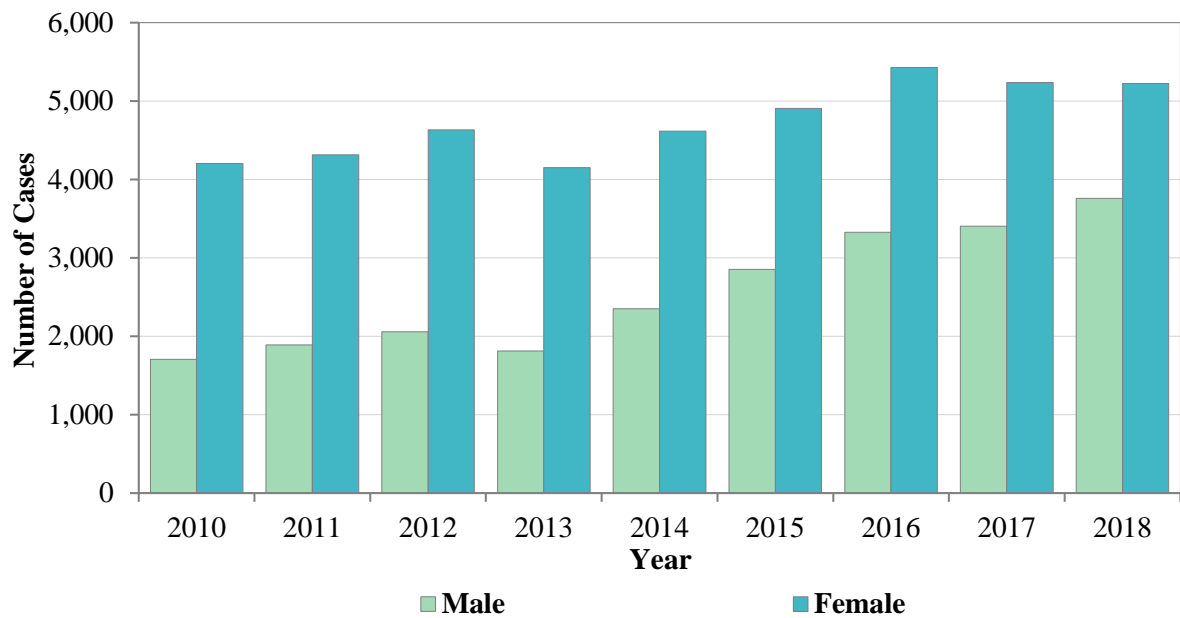
Figure 8.1. Chlamydia Incidence Rate per 100,000 Population, Travis County and Texas, 2008-2018



Source: TB/HIV/STD Epidemiology and Surveillance Branch, Texas Department of State Health Services

Figure 8.2 shows the number of cases in Travis County by sex for years 2010 through 2018. Each year, females comprise most of the cases ranging from 71.0% in 2010 to 58.0% in 2018.

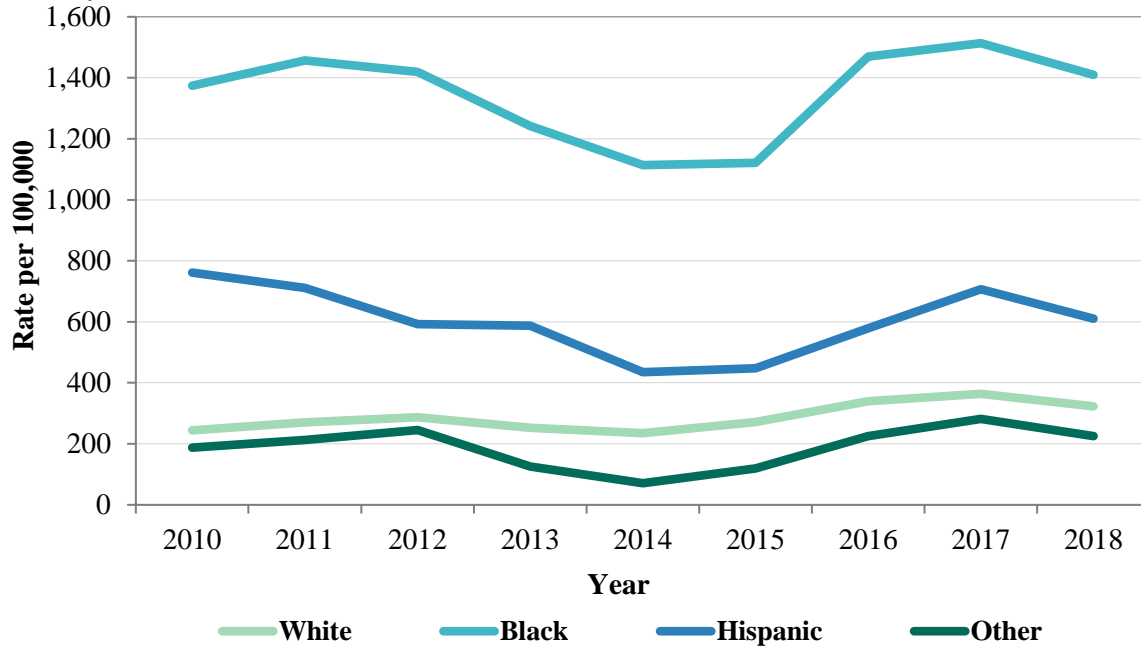
Figure 8.2. Number of Chlamydia Cases by Sex, Travis County, 2010-2018



Source: TB/HIV/STD Epidemiology and Surveillance Branch, Texas Department of State Health Services

Figure 8.3 shows the Chlamydia incidence rates by race/ethnicity. From 2010 through 2018, incidence rates for Blacks have been consistently higher compared with rates for Whites, Hispanics, and Others. The incidence rate in 2018 for Blacks was about four times higher compared with Whites.

Figure 8.3. Chlamydia Incidence Rate per 100,000 Population by Race/Ethnicity, Travis County, 2010-2018



Source: TB/HIV/STD Epidemiology and Surveillance Branch, Texas Department of State Health Services

Gonorrhea

Gonorrhea, caused by the bacteria *Neisseria gonorrhoeae*, is the second most common sexually-transmitted infection in the United States. Infections due to gonorrhea, like chlamydia, are a major cause of pelvic inflammatory disease. Additionally, studies have shown gonococcal infections facilitate the transmission of HIV infection.¹²

Transmission occurs through contact with discharges from mucous membranes of infected persons. The clinical illness differs between males and females. In males, gonococcal infection presents as a discharge from the urethra with dysuria or painful urination within two-seven days after exposure. In females, infection is followed by the development of mucopurulent cervicitis. The cervicitis is usually asymptomatic. Gonorrhea is effectively treated with antibiotics.¹²

In 2018, a total of 46,958 gonorrhea cases were reported in Texas. In 2018, a total of 3,420 gonorrhea cases were reported in Travis County. Table 8.2 presents the number of gonorrhea cases reported in 2018 by sex and race/ethnicity. A majority (72.7%) of cases were males. For males with a known race/ethnicity, Hispanics and Whites comprised more than half of the cases, with 28.6% and 27.9% of the cases respectively.

Table 8.2. Number of Gonorrhea Cases by Sex and Race/Ethnicity, Travis County, 2018

Race/Ethnicity	Sex			Total
	Male	Female	Unknown	
White	767	187	-	954
Black	437	204	-	641
Hispanic	700	278	0	978
Other*	83	16	0	99
Unknown**	498	242	8	748
Total	2,485	927	8	3,420

Data Source: TB/HIV/STD Epidemiology and Surveillance Branch, Texas Department of State Health Services

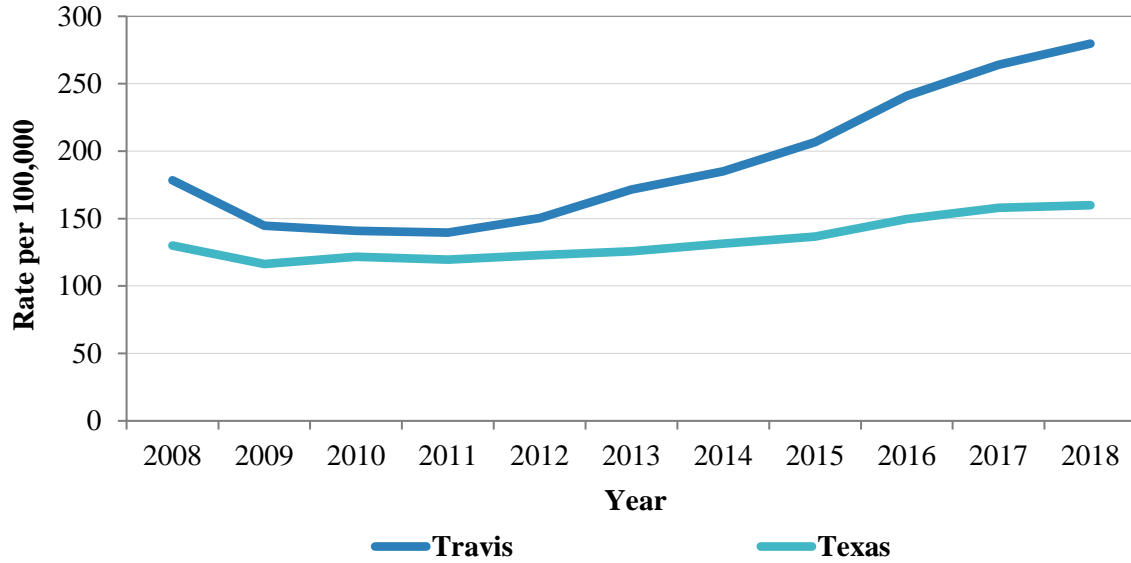
*Other race includes Asian, Native Hawaiian/Pacific Islander, American Indian/Alaska Native and, Multiracial.

**Note: A delay in updating the race/ethnicity field in the surveillance data for chlamydia and gonorrhea has resulted in a large number of cases with race/ethnicity as unknown in 2018. Numbers should be interpreted with caution.

Figure 8.4 shows the gonorrhea incidence rates for Travis County and Texas for years 2008 through 2018. During this period rates in Travis County were always higher compared with Texas. In 2017 and 2018, rates in Travis County were 40% and 42% higher, respectively, compared with Texas. In the five most populated counties in Texas, the incidence rate per 100,000 population in Travis County (279.7) is higher compared with Harris County (185.1), Tarrant County (156.0), and Bexar County (194.9), and lower compared with Dallas County (290.0).

¹² <https://www.cdc.gov/std/gonorrhea/default.htm>

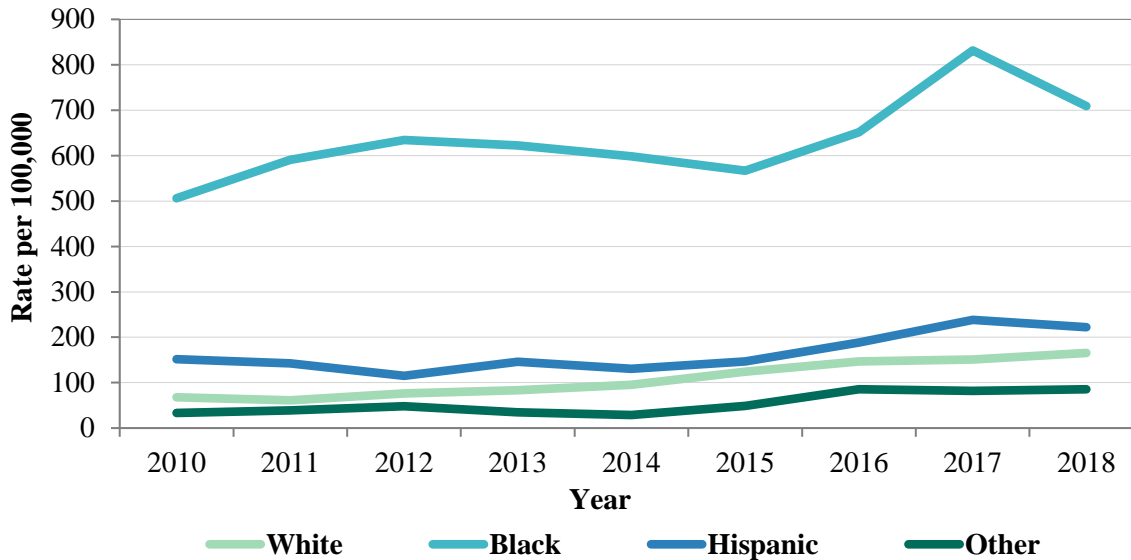
Figure 8.4. Gonorrhea Incidence Rates per 100,000 Population, Travis County and Texas, 2008-2018



Source: TB/HIV/STD Epidemiology and Surveillance Branch, Texas Department of State Health Services

Figure 8.5 shows gonorrhea incidence rates by race/ethnicity for 2010 through 2018. During this period, there was more than 100% increase among Whites in incidence rates comparing 2010 (67.8) to 2018 (165.5). However, incidence rates for Blacks in Travis County remained higher compared with Whites, Hispanics, and Others. In 2018 the incidence rate for Blacks (708.9) was over 4 times higher compared with Whites (165.5).

Figure 8.5. Gonorrhea Incidence Rates per 100,000 Population by Race/Ethnicity, Travis County, 2010-2018



Source: TB/HIV/STD Epidemiology and Surveillance Branch, Texas Department of State Health Services

Syphilis

Syphilis is caused by the bacteria *Treponema pallidum*. Syphilis in adults is categorized into four clinical stages. These stages are primary, secondary, latent, and late or tertiary syphilis. The primary stage is characterized by a single or multiple lesions or ulcers at the location where *Treponema pallidum* entered the body. Without treatment, the lesions may last several weeks. Secondary syphilis occurs several weeks or months after the primary stage. The secondary stage is characterized by a rash. Other signs and symptoms of this stage include fever, swollen lymph nodes, headaches, fatigue, and muscle aches. Latent or hidden syphilis is typically without symptoms of disease. Tertiary syphilis occurs several years after the primary stage. Tertiary syphilis is associated with damage to the central nervous system, cardiovascular system, and bones. Syphilis is spread by direct contact with sores during sexual contact. Transplacental infection of the fetus occurs during pregnancy with an infected woman. Syphilis is curable with the right antibiotics from your health care provider. However, certain damage due to the infection can be permanent.¹³

In 2018, a total of 2,528 primary and secondary (P&S) syphilis cases were reported in Texas.¹³ A total of 241 P&S syphilis cases were reported in Travis County that year. Table 8.3 shows the number of reported P&S syphilis cases reported in Travis County in 2018 by sex and age group. More than 90% of reported cases are males. More than half (56.4%) of the cases were between the ages of 15 to 34 years. In 2018, incidence rates per 100,000 population for males (35.2) was 17 times higher compared with females (3.6). Comparing 2015 and 2018 rates, both rates for males and females increased, the first one about 175% (12.7 vs. 35.2) while the rate for females increased more than 100% (1.6 vs. 3.6).

Table 8.3. Number of P&S Syphilis Cases by Sex, Age Group, and Race/Ethnicity, Travis County, 2018

Age Group (Years)	Sex										Overall Total
	Males					Females					
	White	Black	Hispanic	Other	Total	White	Black	Hispanic	Other	Total	
0-14	0	0	0	0	0	0	0	0	0	0	0
15-24	12	6	19	6	43	5	6	-	0	13	56
25-34	35	18	40	-	97	-	1	-	0	6	103
35-44	15	8	16	-	41	-	0	0	0	0	41
≥45	18	6	12	0	38	-	0	0	0	0	38
Total	86	38	87	12	219	11	7	-	0	22	241

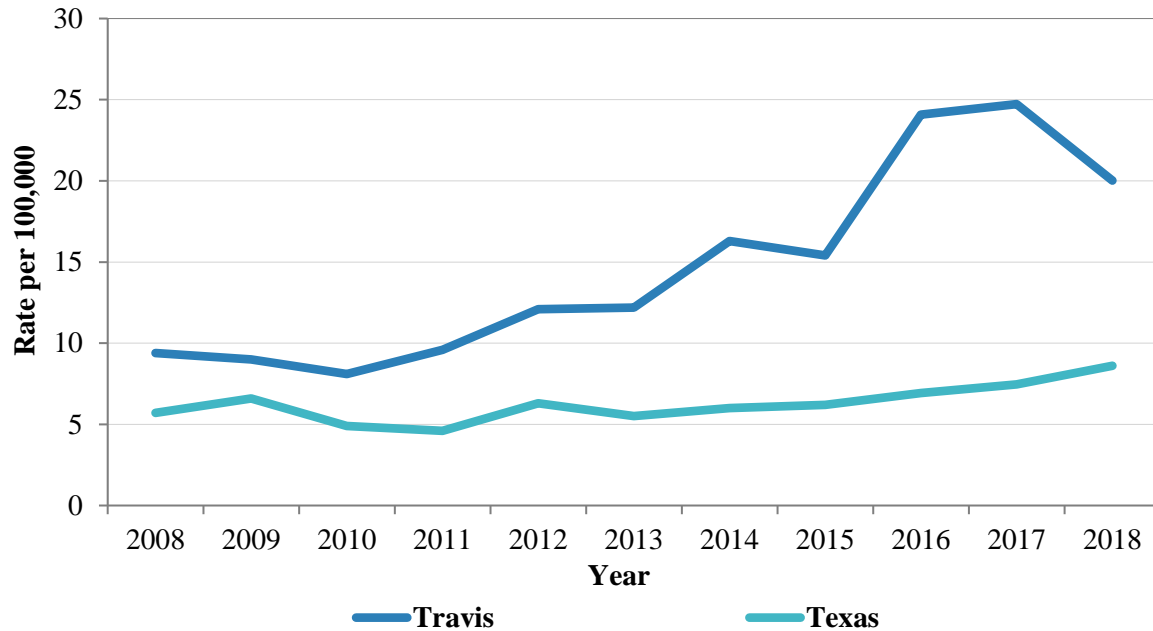
Source: Texas Department of State Health Services, 2018 Texas STD and HIV Epidemiologic Profile

Figure 8.6 shows the syphilis incidence rates per 100,000 population for Travis County and Texas for 2008 through 2018. During this time, the incidence rate in Travis County is higher

¹³ Texas STD Surveillance Report, 2018 Annual Report, Texas Department of State Health Services

compared with the rate for Texas. For the five most populated counties in Texas, the incidence rate in Travis County (20.0) was highest, compared with Harris County (12.0), Dallas County (14.6), Tarrant County (13.8), and Bexar County (13.7).¹⁴

Figure 8.6. P&S Syphilis Incidence Rates per 100,000 Population, Travis County and Texas, 2008-2018

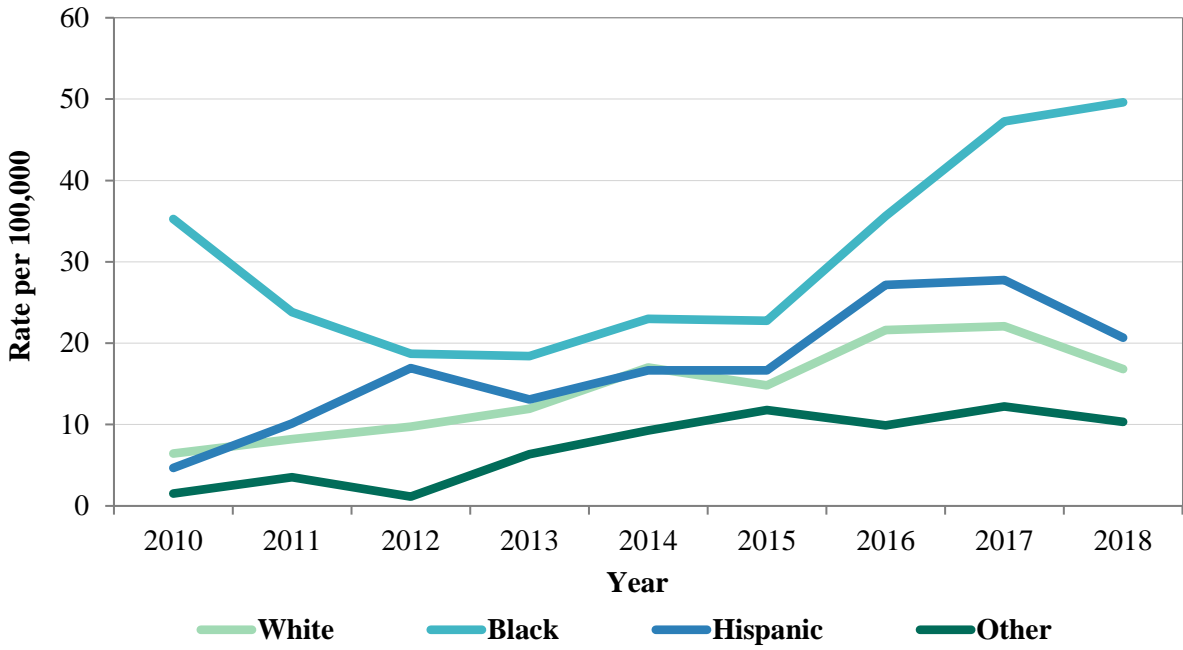


Source: TB/HIV/STD Epidemiology and Surveillance Branch, Texas Department of State Health Services

Figure 8.7 shows the syphilis incidence rates by race/ethnicity for 2010 through 2018. There has been a significant increase (343%) for Hispanics, from 4.7 cases per 100,000 in 2010 to 20.7 in 2018, and Whites (161%), from 6.4 cases per 100,000 in 2010 to 16.8 cases per 100,000 in 2018. For 2010 through 2018 Whites (6.4 vs. 16.8), Hispanics (4.7 vs. 20.7), and Others (1.5 vs. 10.3) experienced increases in syphilis incidence rates. However, Blacks still had higher overall rates when compared with White, Hispanics, and Others.

¹⁴ Texas STD Surveillance Report, 2018 Annual Report, Texas Department of State Health Services

Figure 8.7. P&S Syphilis Incidence Rates per 100,000 Population by Race/Ethnicity, Travis County, 2010-2018



Source: TB/HIV/STD Epidemiology and Surveillance Branch, Texas Department of State Health Services

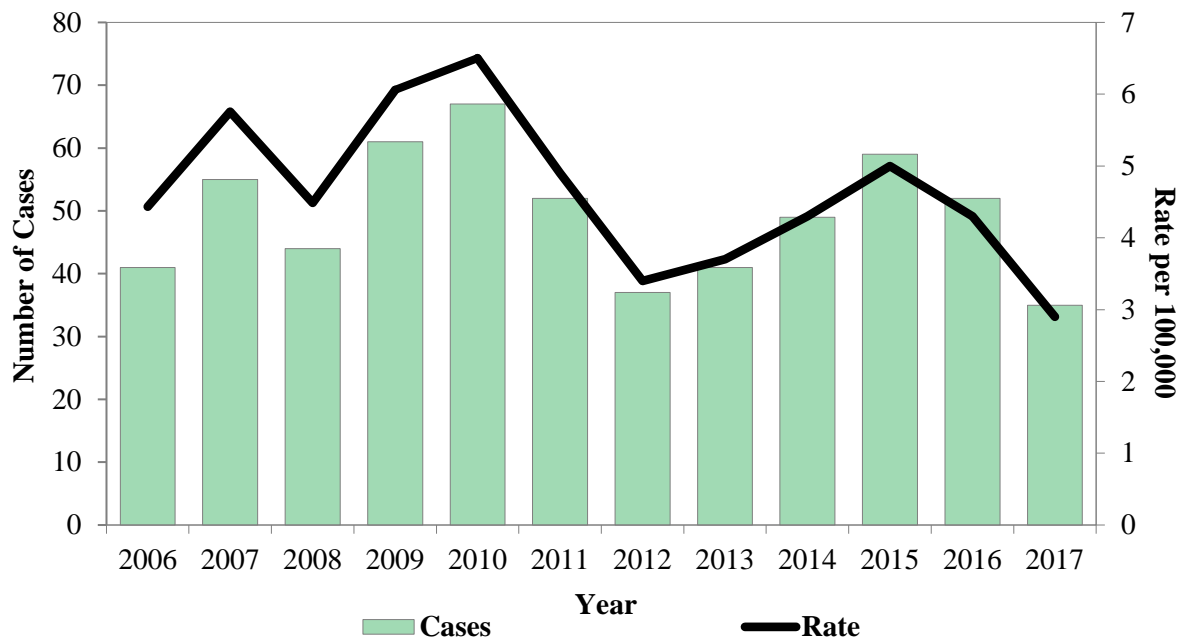
9.0 Tuberculosis

Tuberculosis (TB) is caused by a bacterium called *Mycobacterium tuberculosis* and is spread person to person through the air. The bacteria most often affect the lungs, but TB bacteria can affect any part of the body such as bones and the brain. Not everyone infected with TB bacteria becomes sick. As a result, two TB-related conditions exist: latent TB infection (LTBI) and TB disease.¹⁵ TB is curable and preventable, but if not treated properly, TB disease can be fatal.

When TB bacteria live in the body without making you sick, it is called LTBI. In most people who breathe in TB bacteria and become infected, the body is able to fight the bacteria to stop them from growing. People with latent TB infection do not feel sick. People with LTBI cannot spread TB bacteria to others. However, those with compromised immune systems, such as people living with HIV, malnutrition, diabetes, or people who use tobacco, have a much higher risk of progressing to active TB disease.¹⁵ People with TB disease are sick. They also may be able to spread the bacteria to people they spend time with every day.¹⁵

Figure 9.1 shows the number of active TB cases and incidence rates for Travis County from 2006 through 2017. In 2017, there were 35 TB cases in Travis County, a decrease of 59% from 2015 and an incidence rate decrease of 58.0%.

Figure 9.1. Number of Reported Tuberculosis Cases and Incidence Rates per 100,000 Population, Travis County, 2006-2017



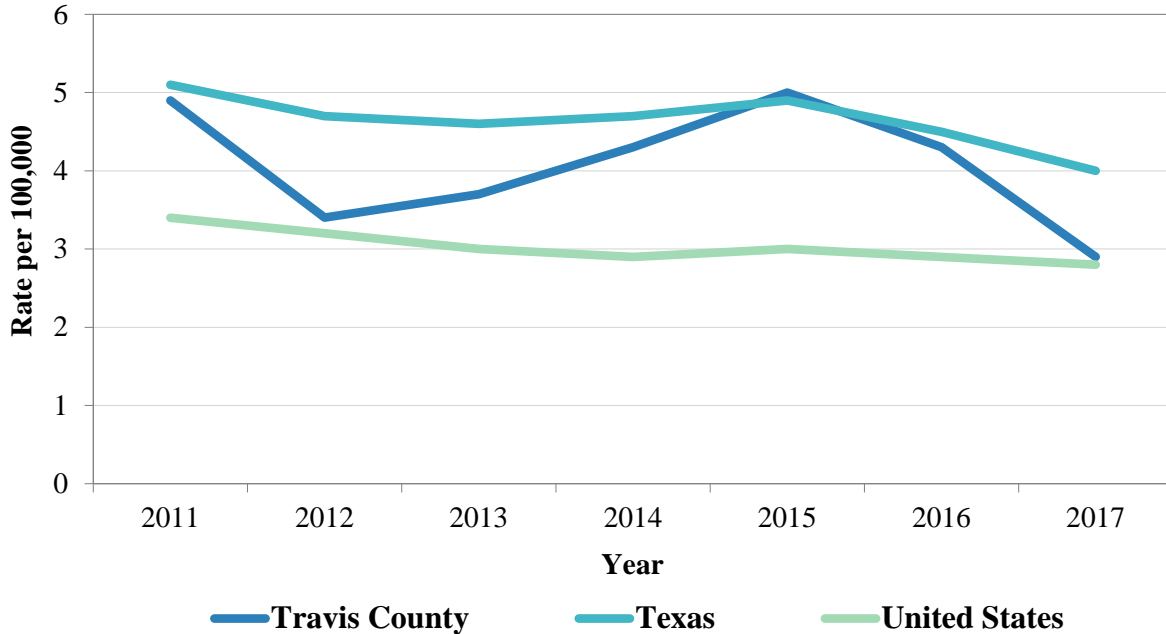
Source: TB/HIV/STD Epidemiology and Surveillance Branch, Texas Department of State Health Services

Figure 9.2 shows the incidence rates for Travis County, Texas, and the United States from 2011 to 2017. There were 1,127 cases of TB in Texas in 2017. The incidence rate of TB

¹⁵ <http://www.cdc.gov/tb/basics/default.htm>

Texas was 4.0 per 100,000 in 2017. The incidence rates for Travis County and Texas were higher when compared with the United States.

Figure 9.2. Tuberculosis Incidence Rates per 100,000 Population, Travis County, Texas, and United States, 2011-2017.



Source: TB/HIV/STD Epidemiology and Surveillance Branch, Texas Department of State Health Services; <https://www.cdc.gov/mmwr/volumes/67/wr/mm6711a2.htm>

Table 9.1 shows the sex, race/ethnicity, and age of the TB cases in Travis County during 2013 to 2017. Only 35 tuberculosis cases were reported in Travis County in 2017. This is the lowest number of cases reported annually during the past 15 years. The proportion of TB cases occurring in males, compared to females, and among people 45 years of age and older, compared to the other age groups, was consistently higher from 2013 to 2017. In 2017 a majority (62.9%) of TB cases were Hispanics. No cases were reported among White individuals during 2017.

Table 9.1. Demographic Characteristics of Tuberculosis Cases, Travis County, 2013-2017

Demographic Characteristic	Year									
	2013		2014		2015		2016		2017	
	No.	%	No.	%	No.	%	No.	%	No.	%
Sex										
Male	29	70.7	34	69.4	36	61.0	30	57.7	27	77.1
Female	12	29.3	15	30.6	23	39.0	22	42.3	8	22.9
Race/ Ethnicity										
White	9	22.0	8	16.3	6	10.2	3	5.8	0	0.0
Black	11	26.8	10	20.4	10	16.9	10	19.2	2	5.7
Hispanic	12	29.3	17	34.7	21	35.6	23	44.2	22	62.9
Other	9	22.0	14	28.6	22	37.3	16	30.8	11	31.4
Age Group (years)										
0 – 14	.	.	3	6.1	2	3.4	3	5.8	3	8.6
15 – 24	7	17.1	4	8.2	7	11.9	6	11.5	1	2.9
25 – 34	7	17.1	11	22.4	19	32.2	8	15.4	6	17.1
35 – 44	10	24.4	6	12.2	7	11.9	10	19.2	7	20.0
≥ 45	17	41.5	25	51.0	24	40.7	25	48.1	18	51.4
Total	41	100.0	49	100.0	59	100.0	52	100.0	35	100.0

Source: TB/HIV/STD Epidemiology and Surveillance Branch, Texas Department of State Health Services

In the United States, 69.8% of the reported TB cases in 2017 were born outside the United States.¹⁶ Table 9.2 shows the place of birth for tuberculosis cases in Travis County reported during 2011 to 2017. In Travis County, 74.3% of the reported TB cases in 2017 were born outside the United States.

Table 9.2. Place of Birth of Tuberculosis Cases, Travis County, 2013 - 2017

Place of Birth	Year									
	2013		2014		2015		2016		2017	
	No.	%	No.	%	No.	%	No.	%	No.	%
U.S.-born	14	34.1	23	46.9	11	18.6	15	28.8	9	25.7
Foreign- born	27	65.9	26	53.1	48	81.4	37	71.2	26	74.3
Total	41	100.0	49	100.0	59	100.0	52	100.0	35	100.0

Source: TB/HIV/STD Epidemiology and Surveillance Branch, Texas Department of State Health Services

¹⁶ <https://www.cdc.gov/mmwr/volumes/67/wr/mm6711a2.htm>

10.0 Vaccine-preventable Diseases

Immunizations or vaccines protect against a number of serious diseases. Widespread use of vaccines in the United States has eliminated or greatly reduced the occurrence of some infectious diseases. Table 10.1 shows the number of reported cases of selected vaccine-preventable diseases in Travis County for 2014 through 2018. During this period, no cases of diphtheria, measles, rubella, or tetanus were reported in Travis County.

Table 10.1. Number and Incidence Rates per 100,000 Population, Selected Vaccine-preventable Diseases, Travis County and Texas, 2016-2018

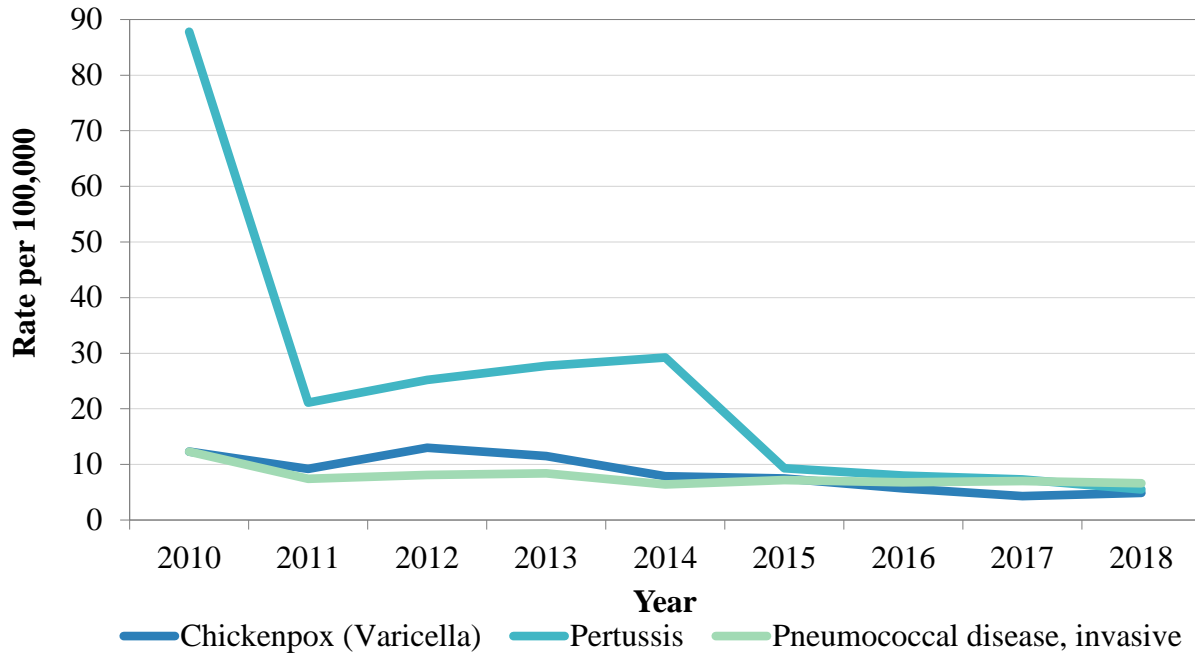
Disease	Travis County 2016		Travis County 2017		Travis County 2018		Texas 2018	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Chickenpox (Varicella)	69	5.7	53	4.3	61	4.9	972	3.3
Hepatitis A	9	†	12	†	12	†	88	0.3
Hepatitis B	23	1.9	6	†	2	†	102	0.3
Meningococcal disease, invasive	3	†	1	†	1	†	21	0.1
Mumps	19	†	32	2.6	8	†	264	0.9
Pertussis	96	8.0	90	7.3	69	5.5	1,168	4.0
Pneumococcal disease, invasive	82	6.8	86	7.0	81	6.6	2,029	6.9

†Rate not calculated, fewer than 20 cases reported annually, Population estimates – American FactFinder
Sources: Epidemiology and Disease Surveillance Unit, Austin Public Health– National Electronic Disease Surveillance System and the Texas Department of State Health Services Emerging and Acute Infectious Disease Unit

Chickenpox is a very contagious disease caused by the varicella-zoster virus (VZV). The virus causes a blister-like rash, itching, tiredness, and fever. Chickenpox spreads in the air through coughing or sneezing. Chickenpox can be serious, especially in babies, and people with weakened immune systems. It also can be spread by touching or breathing in the virus particles that come from chickenpox blisters. During 2016-2018, the annual number of reported chickenpox cases ranged from 53 to 69 in Travis County.

Figure 10.1 shows the annual incidence rates for chickenpox, pertussis, and invasive pneumococcal disease for 2010-2018. Since 2010, the incidence rate for pertussis has shown the greatest decrease compared with chickenpox and invasive pneumococcal diseases. In 2018, the incidence rates for these three diseases ranged from 5.0 to 7.0.

Figure 10.1. Incidence Rates per 100,000 Population for Chickenpox, Pertussis, Invasive Pneumococcal Disease by Year, Travis County, 2010-2018



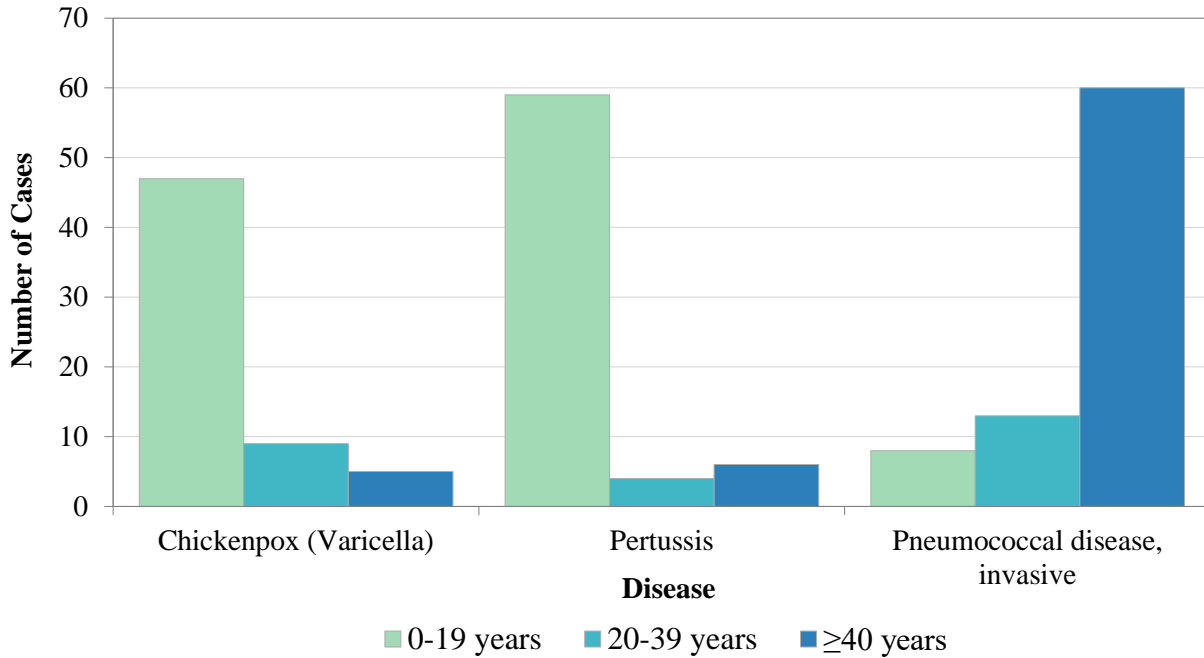
Source: Epidemiology and Disease Surveillance Unit, Austin Public Health– National Electronic Disease Surveillance System

Pertussis, also known as whooping cough, is a bacterial disease of the respiratory tract often spread from person-to-person by coughing or sneezing. Pertussis begins with cold-like symptoms then progresses to severe coughing or coughing fits over several weeks. In infants the cough may be minimal or absent, but they may develop apnea, or pause in their breathing pattern. Pertussis can cause serious illness in infants, children and adults. Incidence rates for pertussis are highest in children less than one year of age.

In 2010, 905 pertussis cases were reported in Travis County. Since 2015, the annual number of reported cases has been less than 200. During 2016 through 2018, the annual number of pertussis cases in Travis County ranged from 69 to 96 (Table 10.1). Pertussis was identified more frequently in children (Figure 10.2). In the past, the pattern for Texas was cyclical and peaked every 3 to 5 years.¹⁷

¹⁷ <https://www.dshs.texas.gov/idcu/diseases/pertussis/>

Figure 10.2. Number of Selected Vaccine-Preventable Diseases by Age Group, Travis County, 2018



Source: Epidemiology and Disease Surveillance Unit, Austin Public Health– National Electronic Disease Surveillance System

Similar to pertussis, varicella is more frequently reported in children (Figure 10.2). From 2010 to 2018, the incidence rate of varicella has decreased 60% (Figure 10.1).

Streptococcus pneumoniae bacteria, or pneumococcus, can cause many types of illnesses. These illnesses include pneumonia, meningitis, and bacteremia or blood stream infections. Persons less than two years of age and those 65 years of age and older have the highest rates of disease. In 2018, 82 cases of invasive *Streptococcus pneumoniae* infections or invasive pneumococcal disease were reported in Travis County, the majority of those cases were identified in adults aged 40 years or older (Figure 10.2).

11.0 Foodborne Diseases

Foodborne disease is a term used to collectively describe illnesses resulting from the consumption of contaminated foods. These diseases may be caused by bacteria, viruses, parasites, or toxins produced by these organisms. Contamination may occur during food production and preparation via inadequate sanitization, improper food handling, or holding food items at inadequate temperatures. The Centers for Disease Control and Prevention (CDC) estimate that one in six Americans, approximately 48 million people, have a foodborne illness each year.¹⁸

Table 11.1 shows the number of cases of various foodborne diseases reported in Travis County from 2016 through 2018 and reported in Texas for 2018. Generally, foodborne disease rates in Travis County are higher compared with rates for Texas.

Table 11.1. Number and Incidence Rate per 100,000 Population for Selected Foodborne Diseases, Travis County and Texas, 2016-2018

Disease	Travis County 2016		Travis County 2017		Travis County 2018		Texas 2018	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Amebiasis	27	2.3	30	2.5	30	2.4	123	0.4
Botulism‡	0		0		0		13	†
Campylobacteriosis	184	15.7	217	18.0	245	20.0	5,048	17.6
Cryptosporidiosis	45	3.8	29	2.4	38	3.1	987	3.4
Cyclosporiasis	28	2.4	28	2.3	51	4.2	353	1.2
Shiga toxin-producing <i>Escherichia coli</i> (STEC)	19	†	37	3.1	57	4.6	1,363	4.7
Listeriosis	0		0		1	†	54	0.2
Salmonellosis	285	24.3	223	18.5	264	21.5	5,888	20.5
Shigellosis	250	21.3	92	7.6	114	9.3	1,357	4.7
Vibriosis§	2	†	13	†	18	†	271	0.9

†Rate not calculated, fewer than 20 cases reported annually

‡Botulism includes: infant and wound botulism

§Vibriosis infections include: *Vibrio parahaemolyticus*, *Vibrio vulnificus*, and *Vibrio* other or unspecified.

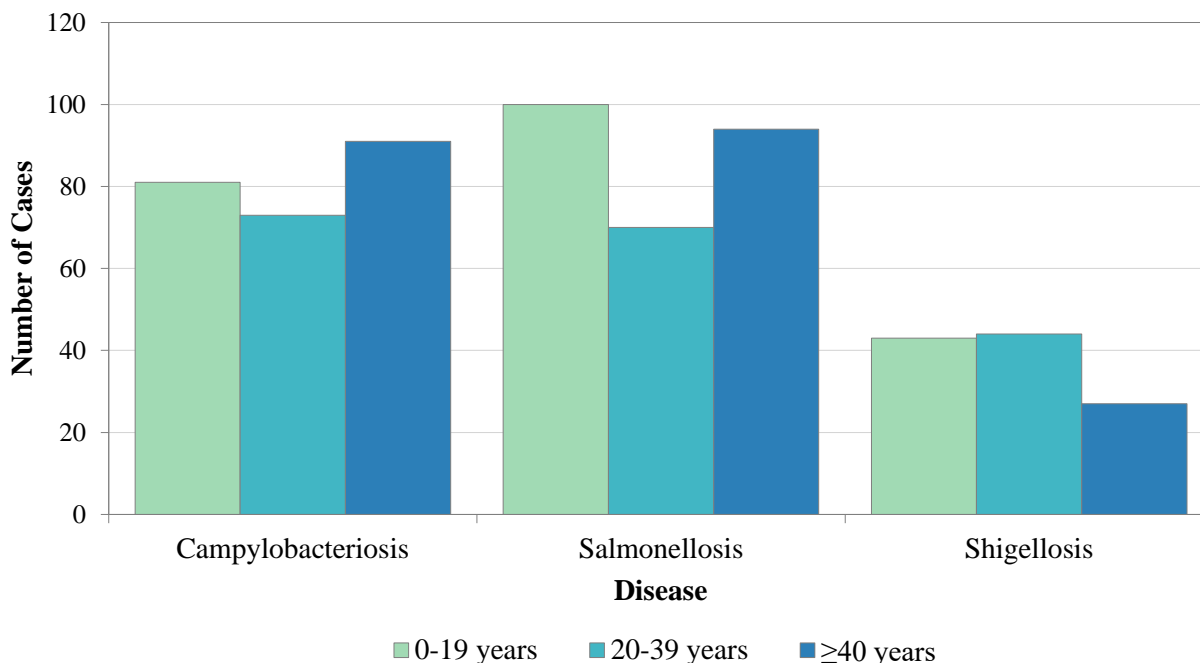
Sources: Epidemiology and Disease Surveillance Unit, Austin Public Health– National Electronic Disease Surveillance System and the Texas Department of State Health Services Infectious Disease Control Unit

¹⁸ <http://www.cdc.gov/foodborneburden/>

The higher rates in Travis County could reflect an increased disease burden or a higher proportion of persons with these diseases identified and reported as compared to Texas overall. Foodborne botulism and listeriosis are rarely reported in Travis County.

The most common foodborne diseases reported in Travis County and Texas were salmonellosis, campylobacteriosis, and shigellosis. All three diseases are caused by bacteria and result in a self-limiting diarrheal illness; however, in some persons, the diarrhea may be so severe that the patient needs to be hospitalized.

Figure 11.1. Number of Selected Foodborne Diseases by Age Group, Travis County, 2018



Source: Epidemiology and Disease Surveillance Unit, Austin Public Health– National Electronic Disease Surveillance System

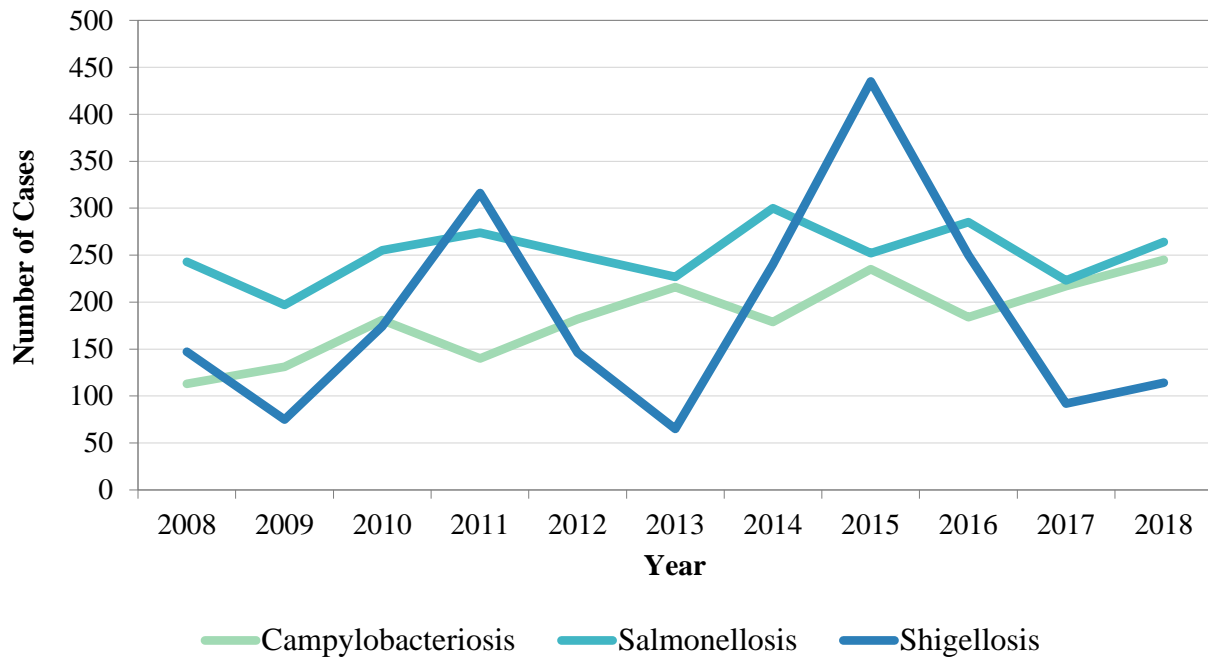
Commonly associated with consumption of contaminated food or water, or contact with infected animals, salmonellosis has been associated with many food items and animal exposures over the past several years. Nationally, salmonellosis is identified more frequently in children³ which is also the case in Travis County. From 200 to 300 salmonellosis cases are reported annually in Travis County (Figure 11.2). Nationally the number of salmonellosis cases have increased 13.1% from 2007 to 2017.¹⁹

Campylobacteriosis is usually associated with eating raw or undercooked poultry, raw milk dairy products, contaminated produce and drinking water. Figure 11.1 shows that campylobacteriosis does not vary by age group in Travis County; however, this is different from national trends which indicate higher risk among children.²⁰ Travis County has seen an increase in the number of campylobacteriosis cases reported annually from 2008 to 2018 (Figure 11.2).

¹⁹ Centers for Disease Control and Prevention, CDC WONDER, https://wonder.cdc.gov/nndss/nndss_weekly_tables_menu.asp?mmwr_year=2008&mmwr_week=52

²⁰ <https://www.cdc.gov/foodnet/reports/annual-reports-2014.html>

Figure 11.2. Number of Selected Foodborne Diseases by Year, Travis County, 2008-2018



Source: Epidemiology and Disease Surveillance Unit, Austin Public Health– National Electronic Disease Surveillance System

Shigellosis is associated with person-to-person transmission, consuming contaminated food or water and may also be transmitted by flies and sexual contact.²¹ Similar to salmonellosis, shigellosis is identified more frequently in children nationally²⁰ which is also the case in Travis County as shown in Figure 11.1. Travis County has seen a significant decrease in shigellosis cases from 2015 to 2018 as shown in Figure 11.2. This is similar to national trends which have shown a decrease from 2015 to 2017.²⁰

²¹ <https://www.cdc.gov/shigella/general-information.html>

12.0 Vector borne Diseases

The term “vectorborne disease” is commonly used to describe a disease transmitted to people by blood-sucking arthropods. The arthropods that most commonly serve as vectors of infectious agents include mosquitoes, fleas, and arachnids such as mites and ticks. The arthropod typically becomes infected with an infectious agent while feeding on infected vertebrates (e.g., birds, rodents, other larger animals, or humans). For almost all vectorborne diseases, the infectious agent must infect and multiply inside the arthropod before the arthropod is able to transmit the disease through its salivary glands. The most common vectorborne diseases in Texas and Travis County are carried by mosquitoes and fleas.

Table 12.1 shows the number of cases of various vectorborne diseases reported in Travis County for 2016 through 2018. The most commonly reported vector borne disease in Travis County is murine typhus, which is an infection caused by a flea-borne bacteria named *Rickettsia typhi*. These bacteria are transmitted to humans by the bite of an infected flea or by inoculation with flea feces containing *Rickettsia typhi*. During 2016-2018, 69 murine typhus cases were reported. Travis County experienced an outbreak of West Nile virus (WNV) in 2012, with a total of 153 cases. Since then, only a few West Nile virus cases have been reported each year in Travis County.

Table 12.1. Number and Incidence Rates per 100,000 Population for Selected Vectorborne Diseases, Travis County and Texas, 2013-2018

Disease	Travis County						Texas	
	2016		2017		2018		2018	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Dengue	6	0.5	2	0.2	1	0.1	20	0.1
Lyme disease	6	0.5	4	0.3	5	0.4	47	0.2
Malaria	4	0.3	12	1.0	15	1.2	144	0.5
Spotted fever rickettsiosis	3	0.3	3	0.2	1	0.1	76	0.3
Murine typhus	30	2.6	25	2.1	14	1.1	738	2.6
West Nile virus	3	0.3	0	0.0	4	0.3	146	0.5

Source: Infectious Disease Control Unit, Texas Department of State Health Services

Similar to West Nile virus, chikungunya, malaria and dengue are also spread by the bite of infected mosquitos. These three diseases are primarily associated with travel to endemic areas outside the United States. They are reported infrequently in Travis County. Other vectorborne diseases that are reported in Texas include Chagas’ disease, leishmaniasis, plague, and tularemia. These diseases are rarely reported in Travis County although in 2015 one case of Chagas’ disease and one case of leishmaniasis were reported in Travis County.

13.0 Unintentional Injury (“Accidents”)

Unintentional injuries – falls, motor vehicle crashes, poisonings, drownings, and other events sometimes called “accidents” – are a leading cause of death in Travis County.

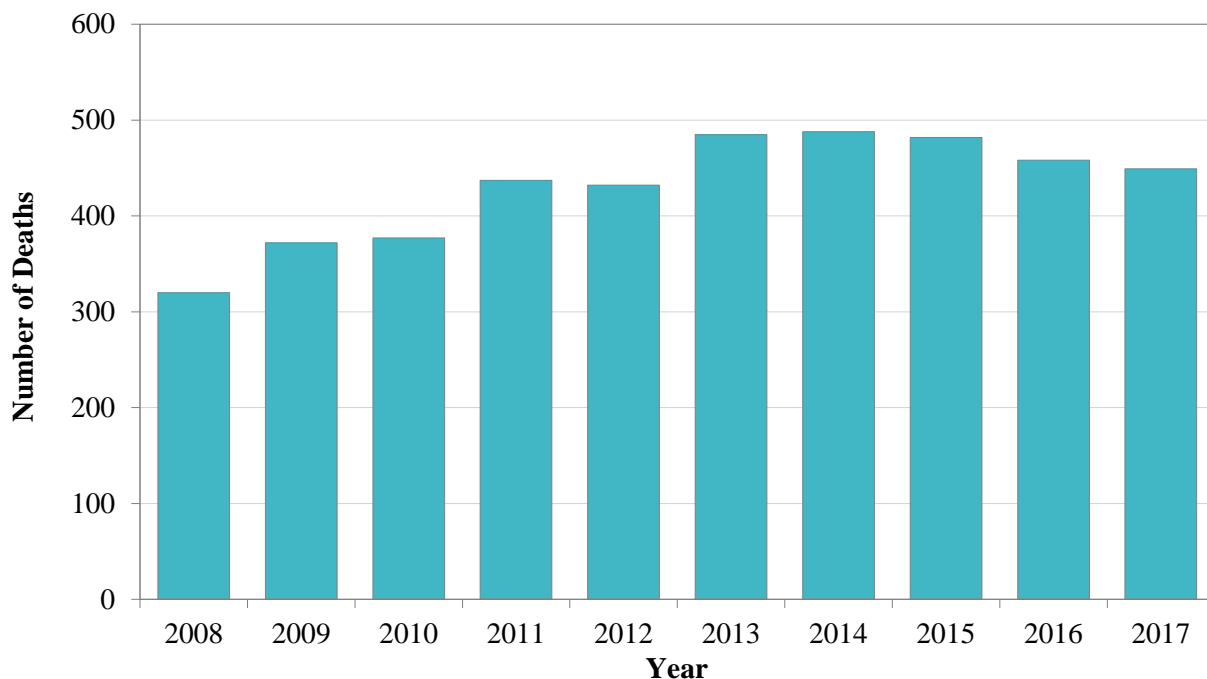
In Travis County, unintentional injuries are:

- The number one killer of residents aged 1-44 years (~66% of the county population)
- The third leading cause of death for all ages
- The biggest killer of children
- Responsible for the deaths of nearly 500 residents per year

Only cancer and heart disease take more lives than unintentional injuries.

As shown in Figure 13.1, the number of deaths due to unintentional injuries has increased in the last decade. The number of deaths ranged from a low of 320 in 2008 to a high of 488 in 2014; over 4,000 deaths due to unintentional injuries occurred during this 10-year period.

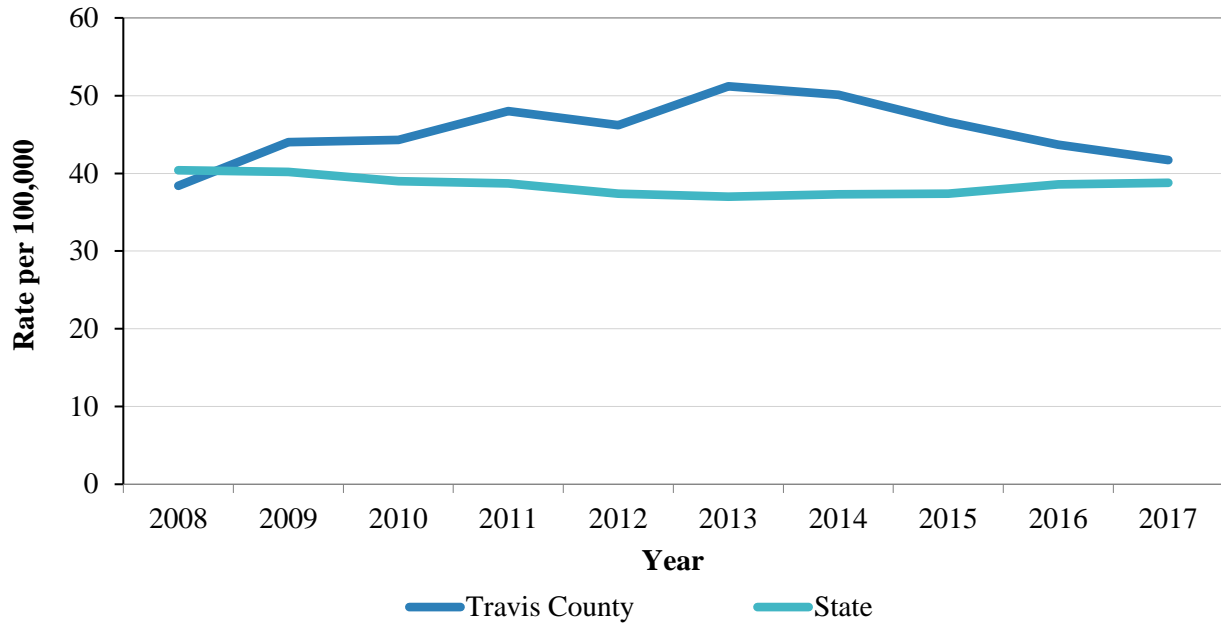
Figure 13.1. Number of Unintentional Injury Deaths, Travis County, 2008-2017



Source: CDC and NCHS. CDC WONDER Online Database. (ICD-10 Codes: V01-X59, Y85-Y86)

As shown in Figure 13.2, the age-adjusted unintentional injury mortality rate for Travis County has fluctuated over the past decade. Between 2008 and 2013, the age-adjusted rate increased 33% (from 38.4 to 51.2 per 100,000 population) however, between 2013 to 2017, the age-adjusted rate declined 19% (from 51.2 to 41.7 per 100,000 population). In recent years, the rate has been higher in Travis County compared with the rate for Texas.

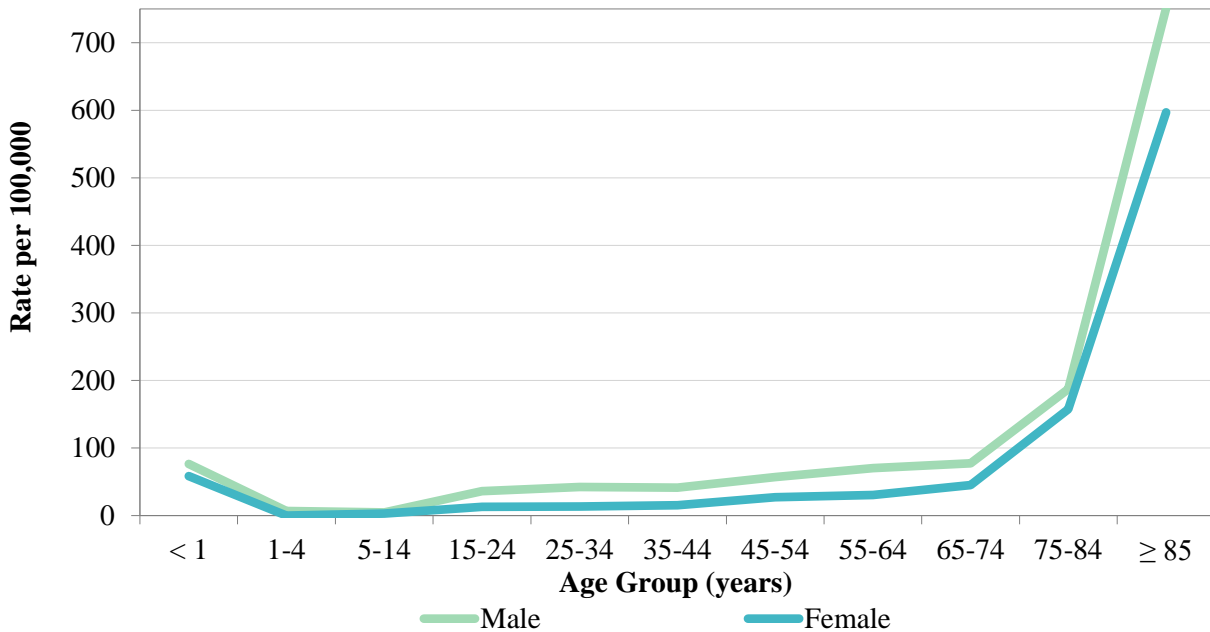
Figure 13.2. Age-adjusted Unintentional Injury Mortality Rate per 100,000 Population, Travis County, and Texas 2008-2017



Source: CDC and NCHS. CDC WONDER Online Database

As Figure 13.3 shows, in all age groups males have a higher mortality rate than females. Older adults have the highest unintentional injury mortality rate.

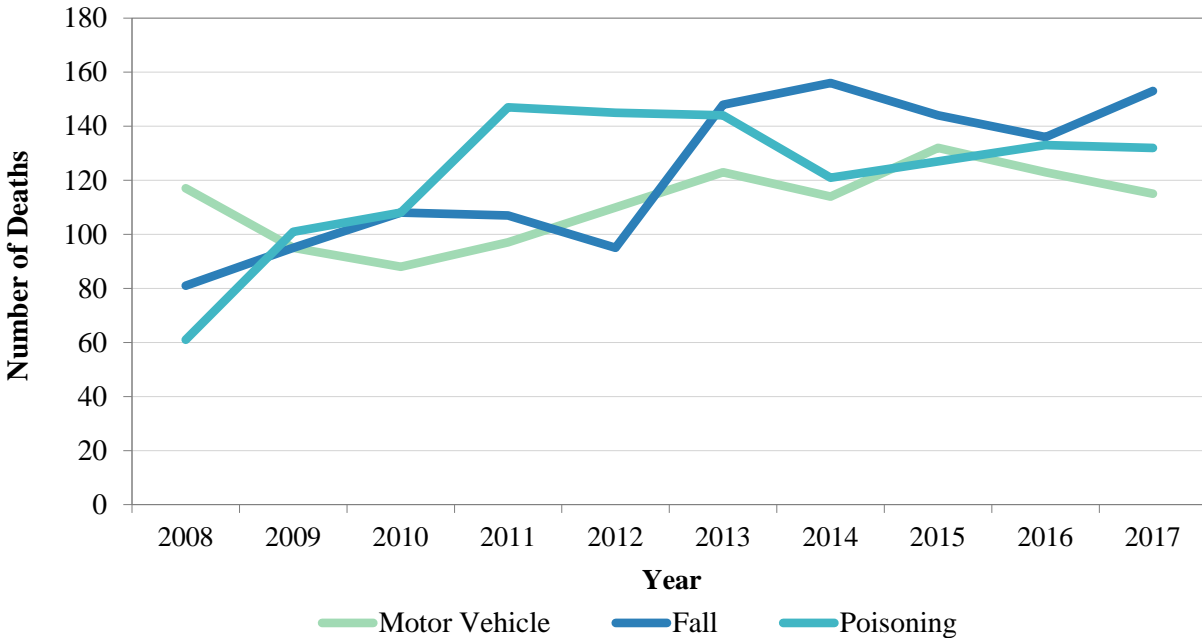
Figure 13.3. Unintentional Injury Mortality Rate per 100,000 Population by Sex and Age Group, Travis County, 2008-2017



Source: CDC and NCHS. CDC WONDER Online Database

Typically, the most common unintentional injury deaths result from motor vehicle crashes, falls, poisonings, suffocations, and drownings. However, for Travis County as a whole the top three causes of unintentional injury deaths are motor vehicle crash, poisoning, and fall. Figure 13.4 shows the trend of these top three causes in Travis County between 2008 and 2017. Each of these unintentional injury causes killed more than 1,000 residents during that 10-year period.

Figure 13.4. Top Three Causes of Unintentional Injury Deaths, Travis County, 2008-2017

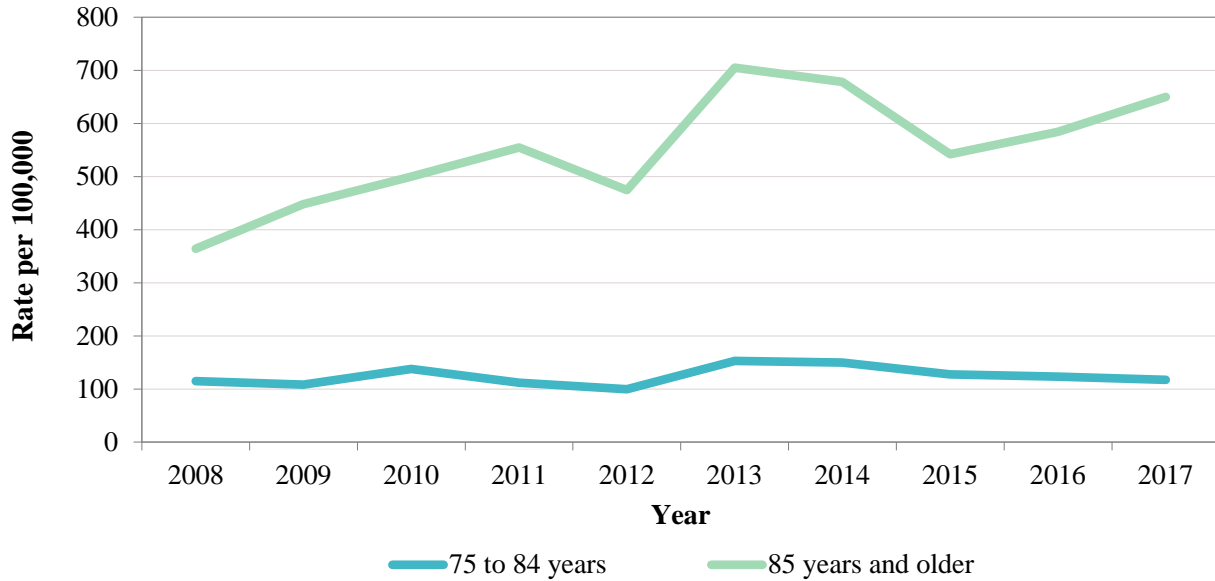


Source: CDC and NCHS. CDC WONDER Online Database
 Notation: ICD-10 Codes: Motor Vehicle (V02-V04, V09.0, V09.2, V12-V14, V19.0-V19.2, V19.4-V19.6, V20-V79, V80.3-V80.5, V81.0-V81.1, V82.0-V82.1, V83-V86, V87.0-V87.8, V88.0-V88.8, V89.0, V89.2); Fall (W00-W19); Poisoning (X40-X49)

Since 2008, the number of deaths resulting from falls and poisonings has generally increased and the number of deaths resulting from motor vehicle crashes has generally remained constant. In 2017, the rank order of unintentional injury deaths was related to falls (153 deaths), poisonings (132 deaths), and motor vehicles (115 deaths).

Those adults older than 75 years of age have the highest mortality rate from unintentional falls. As Figure 13.5 shows, the mortality rate increases with age, with those 85 years and older having the highest deaths rates. The unintentional fall injury mortality rate for those 85 years and older nearly doubled between 2008 and 2017 (364 to 649 per 100,000 population, respectively).

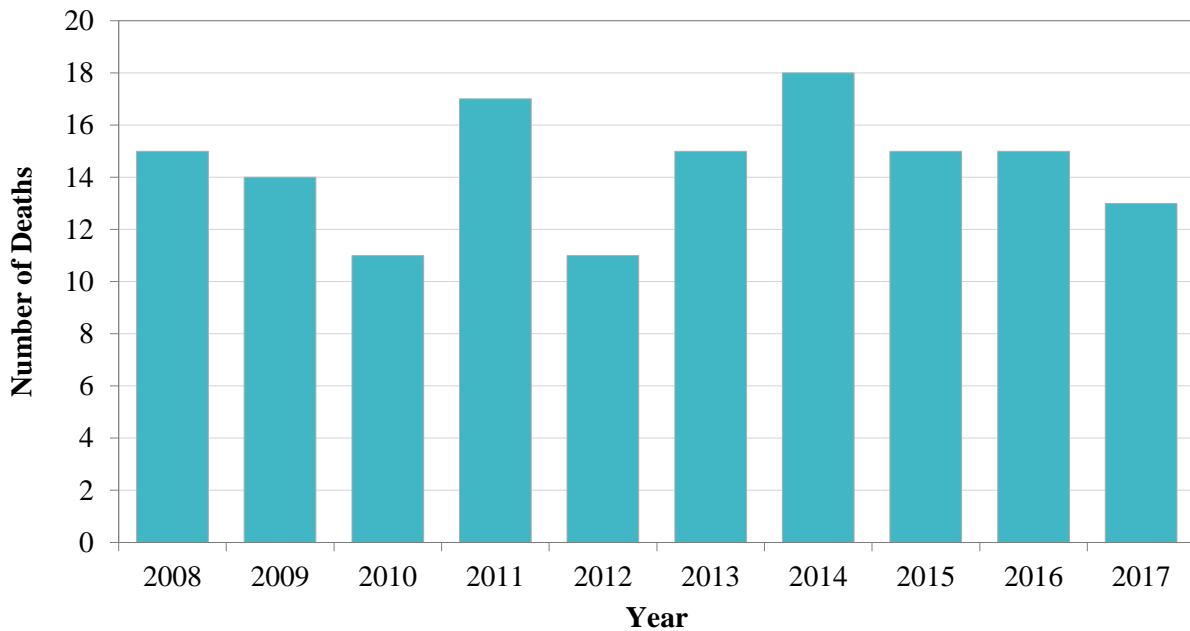
Figure 13.5. Unintentional Fall Mortality Rates per 100,000 Population, Adults 75 Years of Age and Older, Travis County, 2008-2017



Source: CDC and NCHS. CDC WONDER Online Database

During 2013-2017, drowning was responsible for the deaths of 76 Travis County residents. As Figure 13.6 shows, the number of deaths ranged from 11 (in 2010 and 2012) to 18 (in 2014). On average, there are 14 fatal drownings annually. Fatal drowning rates are higher for those aged 1-4 years of age and are higher for males compared with females (1.9 vs 0.7 per 100,000 population).

Figure 13.6. Number of Unintentional Fatal Drownings, Travis County, 2008-2017



Source: CDC and NCHS. CDC WONDER Online Database

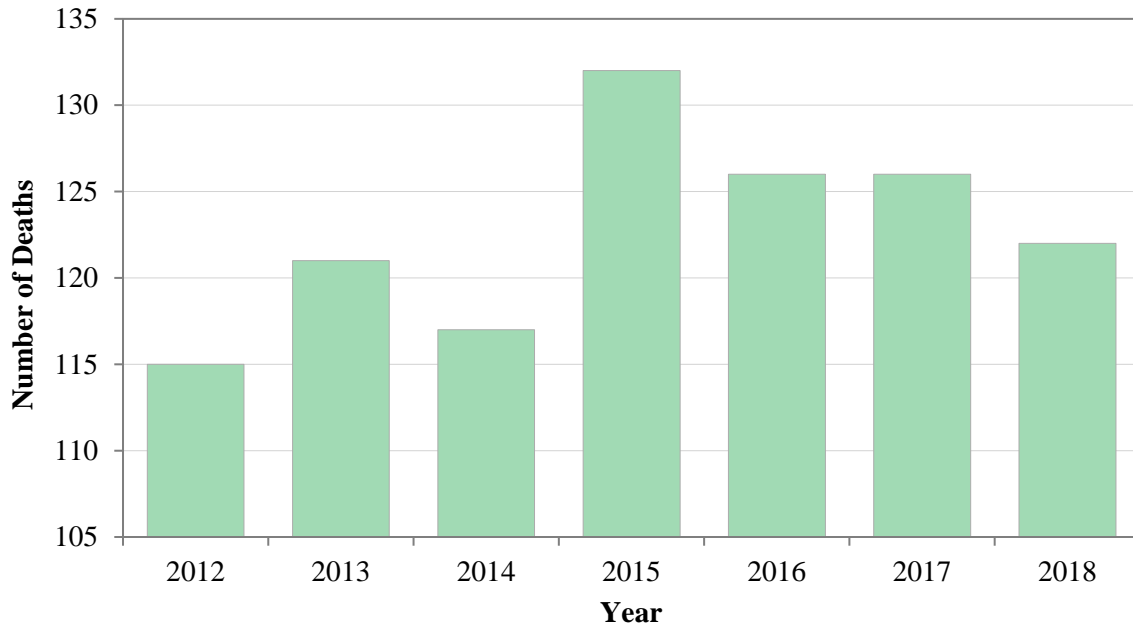
14.0 Suicide

The Office of Vital Records (OVR), Austin Public Health receives and reports birth and death records for the City of Austin. Currently, the City of Austin boundaries include areas of Travis, Hays, and Williamson Counties. City of Austin data on suicides represents a portion of data within all three counties but not these counties entirely.

Suicide is death caused by injuring oneself with the intent to die. In 2017, over 47,000 persons in the United States died by suicide. During 2012 through 2018, a total of, 859 suicides were reported in the City of Austin. The annual number of suicides ranged from 115 to 126.

Figure 14.1 shows the number deaths from suicides for the City of Austin for the period 2012 through 2018.

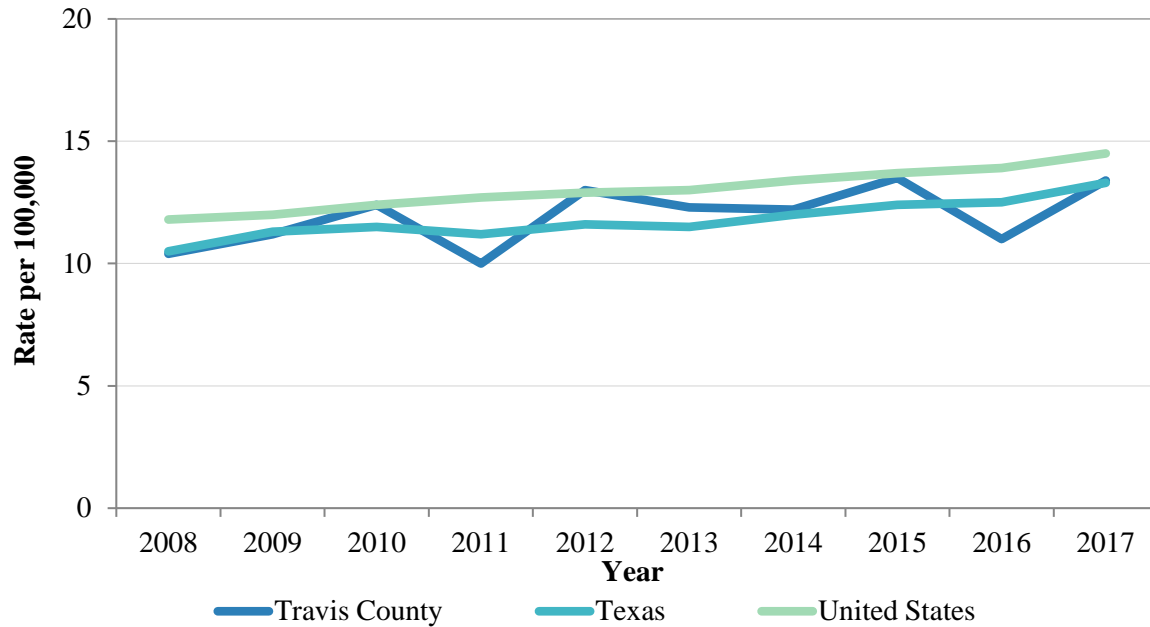
Figure 14.1. Number of Suicide Deaths by Year, City of Austin, 2012-2018



Source: Office of Vital Records, Austin Public Health

Figure 14.2 shows the crude mortality rates for suicides for Travis County, Texas, and the United States for 2008 through 2017. Generally rates were higher for the United States compared with Travis County and Texas. Rates for Texas and Travis County were similar.

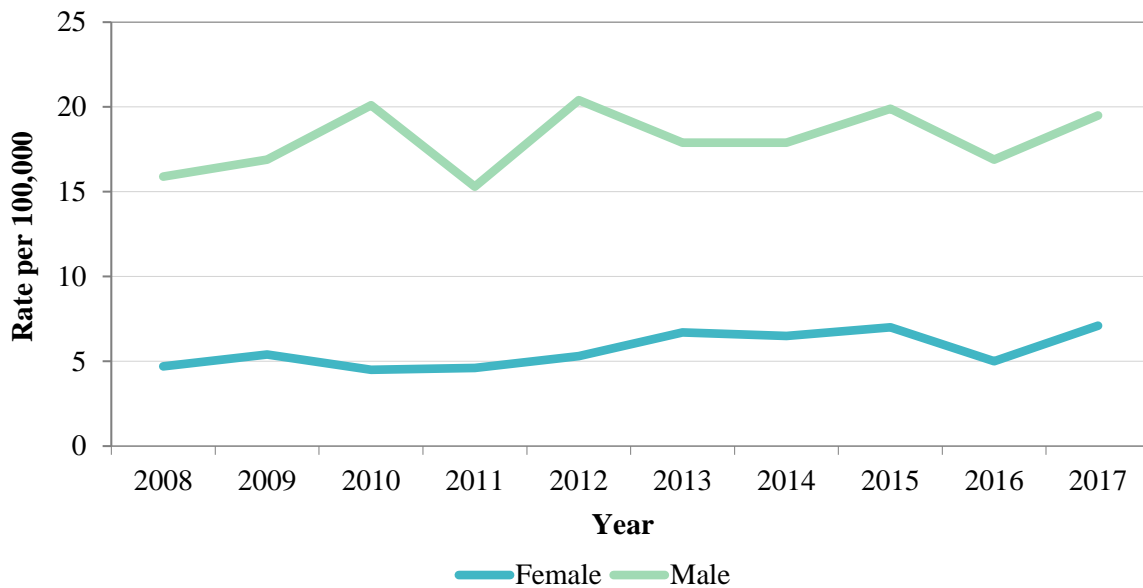
Figure 14.2. Suicide Death Rates per 100,000 Population, Travis County, Texas, United States, 2008-2017



Source: Centers for Disease Control and Prevention, National Center for Health Statistics, WONDER Online Database

Suicide rates vary by sex, age, and race/ethnicity. Rates are typically higher for males, higher for those over 40 years of age, and higher for Non-Hispanic Whites. Figure 14.3 shows the mortality rate for suicide by sex for Travis County. For males, rates ranged from 15.3 suicides per 100,000 population in 2011 to 20.4 suicides per 100,000 in 2012. For females, rates ranged from 4.5 suicides per 100,000 population in 2010 to 7.1 suicides per 100,000 in 2017.

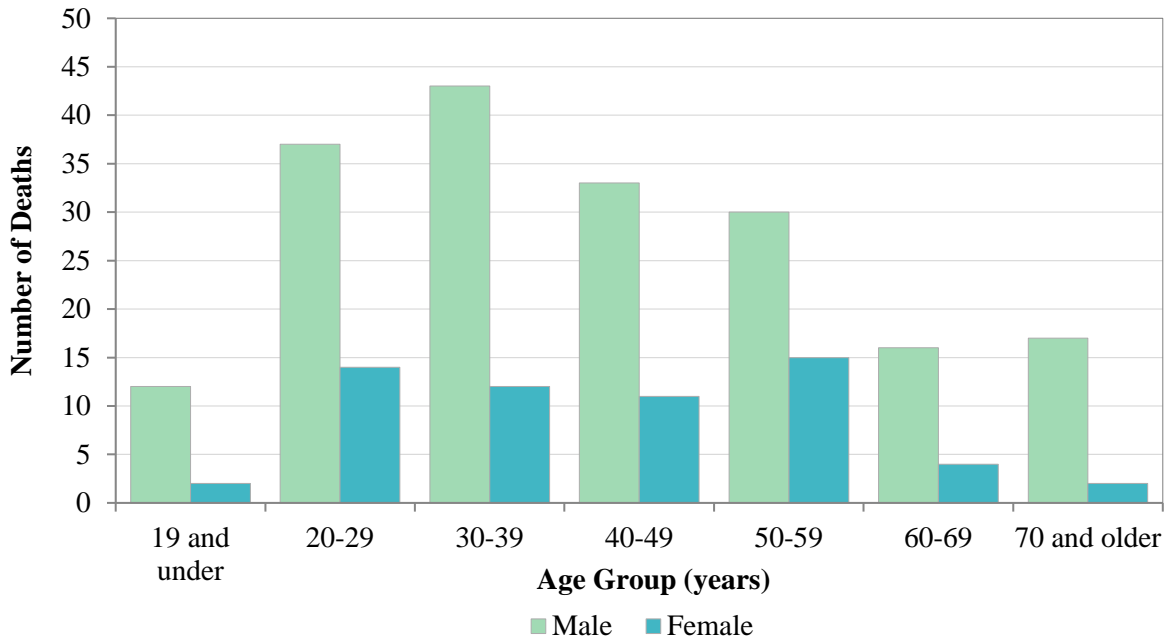
Figure 14.3. Suicide Death Rates per 100,000 Population by Sex, City of Austin, 2008-2017



Source: Centers for Disease Control and Prevention, National Center for Health Statistics, WONDER Online Database

Figure 14.4 shows the number of suicide deaths by age group and sex for the years 2017-2018. During these two years, 248 persons died by suicide. A majority (76%) of persons who died by suicide were males. Persons 50 years of age and older accounted for 34% of the suicides.

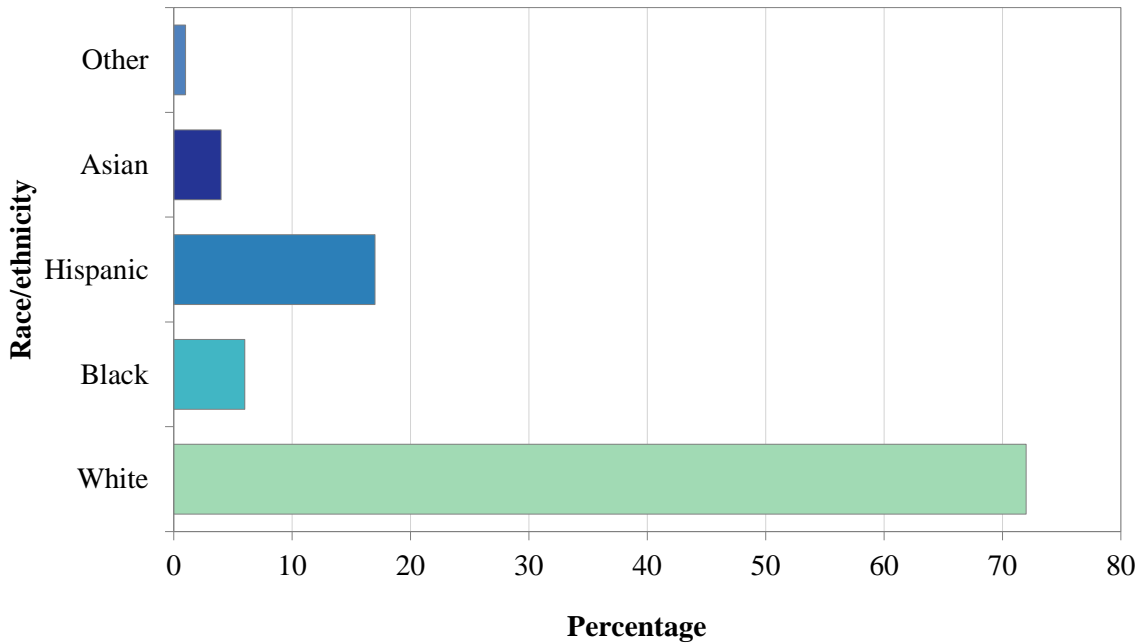
Figure 14.4. Number of Suicide Deaths by Age Group and Sex, City of Austin, 2017-2018



Source: Office of Vital Records, Austin Public Health

As shown in Figure 14.5, most (72%) suicides deaths reported in the City of Austin in 2017-2018 were Whites.

Figure 14.5. Percentage of Suicide Deaths by Race and Ethnicity, City of Austin, 2017-2018



Source: Office of Vital Records, Austin Public Health

Table 14.1 presents suicide deaths by method by sex. Over 40% (43%) of all suicides were associated with a firearm. Suicide by a firearm, however, was associated with 49% of males compared with 25% of females. Drug use was associated with 21.7% of female suicides compared with only 1.6% of male suicides. Overall strangulation, suffocation, or hanging was the suicide method for 35.9%.

Table 14.1. Number and Percentage of Suicides by Method of Self-inflicted Death by Sex, City of Austin, 2017-2018

Method	Male		Female	
	Number	%	Number	%
Drug use	3	1.6	13	21.7
Firearm discharge	92	48.9	15	25.0
Strangulation, suffocation, or hanging	68	36.2	21	35.0
Jumping from a high place	6	3.2	6	10.0
Other	19	10.1	5	8.3
Total	188	100.0	60	100.0

Source: Office of Vital Records, Austin Public Health

Glossary of Key Terminology

Age-adjusted mortality rate. A mortality rate statistically modified to eliminate the effect of different age distributions in the different populations.

BMI. Body mass index (BMI) is a measure of body fat based on height and weight that applies to adult men and women. BMI Categories: Underweight = <18.5; Normal weight = 18.5–24.9 ; Overweight = 25–29.9 ; Obesity = BMI of 30 or greater

BRFSS. Behavioral Risk Factor Surveillance System. The BRFSS is an on-going data collection program designed to measure behavioral risk factors in the U.S. adult, noninstitutionalized, civilian population. The objective of the BRFSS is to collect uniform, state-specific data on preventive health practices and risk behaviors that are linked to chronic diseases, injuries, and preventable infectious diseases. Data are collected from a random sample of adults (one per household) through a telephone survey.

Case. In epidemiology, a countable instance in the population or study group of a particular disease, health disorder, or condition under investigation. Sometimes, an individual with the particular disease.

Crude mortality rate. A mortality rate without adjustment.

Demographic information. The "person" characteristics--age, sex, race, and occupation--of descriptive epidemiology used to characterize the populations at risk.

Ethnicity. The classification of a person's ethnicity, i.e. Hispanic or non-Hispanic, is generally derived from how the person self-reported when asked.

Hispanic. Refers to a person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin regardless of race.

Health. A state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity.

Health indicator. A measure that reflects, or indicates, the state of health of persons in a defined population, e.g., the infant mortality rate.

Incidence rate. A measure of the frequency with which an event, such as a new case of illness, occurs in a population over a period of time. The denominator is the population at risk; the numerator is the number of new cases occurring during a given time period.

Low birth weight. A birthweight less than 5.5 pounds (2500 grams). Low birth weight is the single most important factor affecting neonatal mortality and is a determinant of post-neonatal mortality.

MMWR. The Morbidity and Mortality Weekly Report, a weekly scientific publication prepared and published by the CDC (US Centers for Disease Control and Prevention). MMWR contains data and reports on specific health and safety topics. The data are on specific diseases as reported

by state and territorial health departments. Note: the MMWR “Year” does not correspond to a calendar year, but a 52-week period established by the CDC.

Mortality rate. A measure of the frequency of occurrence of death in a defined population during a specified interval of time.

Mortality rate, infant. A ratio expressing the number of deaths among children less than one year of age reported during a given time period divided by the number of births reported during the same time period. The infant mortality rate is usually expressed per 1,000 live births.

Prematurity/Premature birth. It is a birth that is at least three weeks before a baby's due date. It is also known as preterm birth (or less than 37 weeks — full term is 40 weeks).

Population. The total number of inhabitants of a given area or country. In sampling, the population may refer to the units from which the sample is drawn, not necessarily the total population of people.

Prevalence. The number or proportion of cases or events or conditions in a given population.

Race. The classification of a person's race is generally derived from how the person self-reported when asked.

White. A person having origins in any of the original peoples of Europe, the Middle East, or North Africa.

Black. A person having origins in any of the Black racial groups of Africa.

American Indian or Alaska Native. A person having origins in any of the original peoples of North and South America (including Central America) and who maintains tribal affiliation or community attachment.

Asian. A person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam.

Native Hawaiian or Other Pacific Islander. A person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.

Rate. An expression of the frequency with which an event occurs in a defined population.

Risk factor. An aspect of personal behavior or lifestyle, an environmental exposure, or an inborn or inherited characteristic that is associated with an increased occurrence of disease or other health-related event or condition.

Surveillance. The systematic collection, analysis, interpretation, and dissemination of health data on an ongoing basis, to gain knowledge of the pattern of disease occurrence and potential in a community, in order to control and prevent disease in the community.

Trend. A long-term movement or change in frequency, usually upwards or downwards.

Appendix A. Number and Incidence Rate per 100,000 Population of Commonly Reported Conditions by Year, Travis County, 2016-2018^{1,2,3}

Condition	2016		2017		2018	
	Number	Rate	Number	Rate	Number	Rate
AIDS ⁴	81	6.7	77	6.3	77 ⁵	6.2
Amebiasis	27	2.3	30	2.5	30	2.4
Campylobacteriosis	184	15.7	217	18.0	245	20.0
Chicken Pox (Varicella)	69	5.7	53	4.3	61	4.9
Cryptosporidiosis	45	3.8	29	2.4	38	3.1
Cyclosporiasis	28	2.4	28	2.3	51	4.2
<i>Escherichia coli</i> , Shiga toxin-producing (STEC)	19	1.6	37	3.1	57	4.6
Gonorrhea ⁶	2,823	234.0	3,161	257.5	3,423	274.1
Hepatitis A, Acute	9	0.7	12	1.0	12	1.0
Hepatitis B, Acute	23	1.9	6	0.5	2	0.2
HIV ⁴	241	20.0	221	18.0	205 ⁵	†
Legionellosis	7	0.6	10	0.8	27	2.2
Lyme disease	5	0.4	4	0.3	5	0.4
Malaria	4	0.3	12	1.0	15	1.1
Mumps	19	1.6	32	2.6	8	0.6
Pertussis	96	8.0	90	7.3	69	5.5
Salmonellosis	285	24.3	223	18.5	264	21.2
Shigellosis	250	21.3	92	7.6	114	9.3
<i>Streptococcus</i> , invasive group A	34	2.8	52	4.2	78	6.2
<i>Streptococcus</i> , invasive group B	64	5.3	64	5.2	77	6.2
<i>Streptococcus pneumoniae</i> , invasive	82	6.8	86	7.0	81	6.6
Primary & Secondary Syphilis ⁶	282	23.4	296	24.1	245	19.6
Tuberculosis ⁷	52	4.3	35	2.9	44 ⁵	3.5
Typhus, murine	30	2.5	25	2.0	14	1.1

¹Rates per 100,000 population

²Population data from US Census Bureau, American Community Survey 1-year estimates

³Unless otherwise noted, data source is the National Electronic Disease Surveillance System

⁴Texas HIV Surveillance Report 2017 Annual Report, Texas Department of State Health Services

⁵Texas Department of State Health Services, TB/HIV/STD Section

⁶Texas STD Surveillance Report 2018 Annual Report, Texas Department of State Health Services















































†Data unavailable

Appendix B. List of Selected Disease Outbreaks, Austin Public Health, 2016-2018

Year	Disease	Setting	Number Ill
2016			
	Cyclosporiasis	Restaurant	15
	Norovirus	Long-term care facility	108
	Shigellosis	Body of water	7
	Shigellosis	Elementary school	11
	Salmonellosis	Day-care center	6
	Mumps	University	14
2017			
	Relapsing fever	Entertainment venue	11
	Norovirus	Long-term care facility	48
	Influenza	Long-term care facility	22
	Influenza	Elementary school	18
	Pertussis	Elementary school	5
	Pertussis	Day-care center	11
	Salmonellosis	Independent living center	7
	Mumps	University	20
2018			
	Influenza	Long-term care facility	39
	Salmonellosis	University dining room	10
	Shigellosis	Restaurant	3
	Cyclosporiasis	Restaurant	5
	Norovirus	Long-term care facility	29
	Shiga-toxin producing <i>Escherichia coli</i>	Raw milk cheese consumption	2
	Legionellosis	Independent living center	2
	Influenza	Independent living center	42
	Norovirus	Sport tournament	17

Source: Epidemiology and Disease Surveillance Unit, Austin Public Health


Appendix C: Leading Causes of Death by Age Group, Travis County, Texas, 2013-2017

Rank	Under 1	1 to 4	5 to 14	15 to 24	25 to 34	35 to 44	45 to 54	55 to 64	65 to 74	75 to 84	85 and over	All Ages
1	 144	 16	 27	 206	 342	 248	 516	 1,255	 1,497	 1,268	 1,749	 5,683
2	 83		 24	S 93	S 147	 163	 328	 737	 901	 1,034	 855	 4,943
3	 50			 42	 69	 135	 295	 313	 231	 367	 670	 2,362
4				 25	 53	S 131	S 148	 204	 228	 357	 573	 1,390
5					 46	 46	 142	 124	 203	 265	 431	 1,047
Other Death Causes	57	44	33	79	141	282	659	1,254	1,578	2,220	3,526	11,229
Total Deaths	334	60	84	445	798	1,005	2,088	3,887	4,638	5,511	7,804	26,654

Source: Centers of Disease Control and Prevention, National Center for Health Statistics. Underlying Cause Death on CDC WONDER Online Database

Notation: Number in cell represents number of deaths

Prepared September 2019

									S	
Alzheimer's Disease	Cerebro-Vascular Disease	Congenital Malformations	Disease of the Heart	Homicide	Liver Disease, Cirrhosis	Lower Respiratory Disease	Malignant Neoplasms (Cancer)	Perinatal Period	Suicide	Unintentional Injury