

2022

Andrews County Community Health Profile



ANDREWS COUNTY
HEALTH DEPARTMENT

03/28/2022

ANDREWS COUNTY COMMUNITY HEALTH PROFILE

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According to the County Health Rankings & Roadmaps program, Andrews County ranks in the highest quartile in health outcomes in Texas and in the higher middle range for health factors in Texas (University of Wisconsin Population Health Institute & Robert Johnson Foundation, 2021). An initial Community Health Assessment (CHA) was conducted to provide a health profile of Andrews for the development of a Community Health Improvement Plan (CHIP). A Community Health Improvement Plan (CHIP) is recommended to be developed every three to five years to address new or increased needs. Andrews County has been long overdue for an updated Community Health Improvement Plan and therefore have placed the development of one as a goal for the upcoming year.

Healthy People 2030 objectives were used in strategizing the different areas of health to look at for this assessment. Therefore, social determinants and health indicators were selected to be the two types of objectives to provide a comprehensive analysis. The most recent data for these factors were taken from various governmental agencies and research organizations. The remainder of this summary report are the results of the findings.

Demographics for Andrews County

To get an understanding of the community, a current demographic profile for Andrews County was conducted to assess population trends, prevalent race and ethnicities, and age compositions. According to the Texas Demographic Bureau (2020), Andrews County's population as of 2020 was 18,610, which is an increase from previous years. Among this population approximately 30.42% is at or above the age of 65 and 9.88% is 17 years or younger (Texas Demographic Bureau, 2020). The majority of Andrews County is Hispanic/Latino (55.9%) and White (39.80%) with the remaining racial compositions to include 0.5% Black/African American, 0.5% Asian, 0.5% American Indian/Alaskan Native, and 2% that are two or more races (Texas Demographic Bureau, 2020).

Social Determinants for Andrews County

While health care is a fundamental factor to health, it is a relatively weak health determinant (Frederick et al., 2014). Instead, studies have shown that health behaviors, genetics, health care, environmental, and economic factors drive health outcomes (Hernandez, 2016). Labeled as social determinants, these factors are key influencers to health outcomes that lead to health behaviors. Social determinants reveal the physical and social environment of people's lives and incorporate factors that think beyond just clinical medicine but all areas of health and quality of life. As more emphasis is being placed on health inequities, social determinants will be at the forefront of many objectives and considerations in public health to promote health and quality of life (Cutts et al., 2011).

The following are examples of social determinants of health that affect health equity both positively and negatively:

- Housing
- Transportation
- Economic stability
- Education
- Health care access and quality

Housing

Housing insecurity embodies multiple challenges. For example, difficulty paying rent, overcrowding, living with relatives, habitually moving, and spending a large portion of the household income on housing all adversely impact physical and mental health and make accessing health care more difficult (Frederick et al., 2014).

Most of the housing units in Andrews County are houses, representing about 76.91% of the housing units. Table 1 shows the housing options in Andrews County. Among the housing units in Andrews County, 74% are owned indicating that the rental property composes a small fraction of the housing market.

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Table 1.
Housing Units 2014-2018 in Andrews County

Total number of housing units ^b	6207
Multi-Unit Structures ^c	2.90%
Mobile homes	20.20%
Houses	76.91%
Homeownership ^d	74%

Note. Data from CDC/ATSDR Social Vulnerability Index 2018 Database Texas

^b A housing unit includes a house, an apartment, mobile home, group of rooms, or one room that is inhabited (or intended to be occupied) as a different living quarter

^c Multi-Unit Structures include housing with 10 or more units (apartment complexes, etc.)

^d Homeownership is the % of occupied housing units that are owned. Data source: 2015-2019 ACS 5-year estimate

Communities with a limited renter's market exacerbate the affordability of the few vacancies that are available. Consequentially, low-income populations are stuck with substandard housing. Examples of substandard housing conditions that pose health and safety risks are mold, deficient heating and cooling systems, water leaks, and vermin (Hernandez, 2016). In addition, people may be pushed to move in with others that can cause overcrowding. Overcrowding is identified as having more than two individuals staying in the same bedroom or more than one family living at one home (Cutts et al., 2011). Overcrowding can impact stress levels, mental health, sleep, relationships, and can increase the chance of infectious disease (Cardosa et al., 2004; Gove et al., 1979; Lepore et al., 1991). Andrews County has approximately 5508 households, from these households 7.4% are overcrowded, 6.4% are single-parent households, 3.1% have no vehicles available, and 0.5% of the population are living in group quarters such as nursing homes.

The limitation in the housing market in Andrews County may cause portions in the population to face household cost burdens. Households that are cost burdened are those that spend more than 30% of their income on housing and severely cost-burdened if more than 50% of household income is spent on housing. When households are cost-burdened because a large portion of their income is going towards housing, then that leaves less money for other needs like food, health care, clothing, and utilities (Kushel et al., 2006). Those that are low-income face greater threat to this risk than others.

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The following are the cost burdens for Andrews County as of 2020 according to data from the Harvard Joint Center of Housing Studies:

- Share of households (rented and owned) with cost burdens: **20.4%**
 - Among rented households, **28.1%** are cost burdened
 - Among homeowner households, **18.1%** are cost burdened
- Share of households (rented and owned) with severe cost burdens: **11%**
 - Among rented households, **21%** are severely cost burdened
 - Among homeowner households, **8.2%** are severely cost burdened

Transportation

Tables 2 and 3 show the number of vehicle crashes and fatalities for Andrews County reported by the Texas Department of Transportation (Texas Department of Transportation, 2020). The number of crashes and fatalities has fluctuated from 2018-2020, with 2019 being a year of high volume of crashes and fatalities. To note, 2020 was a year with a peak in unemployment and a large reduction in oil rig count which could contribute to the decrease in crashes and fatalities for Andrews County.

Table 2.			
<i>TXDOT Crashes and Injuries - Andrews County</i>			
Year	Fatal Crashes	Fatalities	Total Crashes
2018	9	9	380
2019	11	15	387
2020	3	4	329

Note. Data from the Texas Department of Transportation's Texas Motor Vehicle Crash Statistics

Table 3.			
<i>TXDOT DUI Crashes and Injuries - Andrews County</i>			
Year	Fatal Crashes	Fatalities	Total Crashes
2018	2	2	11
2019	2	2	24
2020	2	2	18

Note. Data from the Texas Department of Transportation's Texas Motor Vehicle Crash Statistics

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Employment

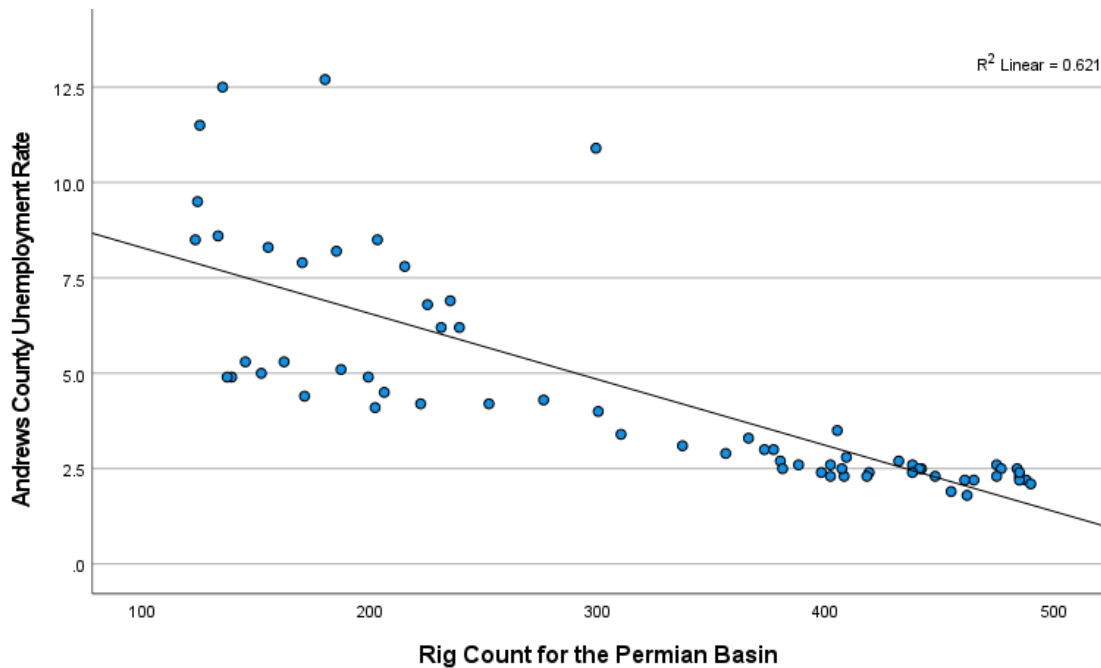
According to data from the U.S. Bureau of Labor Statistics, as of July of 2021 Andrews County has 8,613 citizens in the labor force and of that amount, 8,077 were actively employed leaving 6.2% of the labor force unemployed. This rate is higher than the state and national average unemployment rate but based on the monthly unemployment rates the trend shows to be on the decline since its surge in 2020 (U.S. Bureau of Labor Statistics, 2021). Andrews County's unemployment rate hit its peak in 2020, with the month of May of 2020 being the highest at 12.7% (U.S. Bureau of Labor Statistics, 2021). This coincides with the earlier periods of the COVID-19 pandemic in the United States where lockdowns were present causing many layoffs and furloughs on a state and national level.

Andrews County's unemployment hasn't always scored above the state and national averages. In fact, the unemployment rate has been consistently lower from 2011-2019 (U.S. Bureau of Labor Statistics, 2021). Part of this is due to the oil and gas market, which accounts for a large portion of jobs and influx of new residents to the area. Andrews County is part of the Permian Basin which has the most productive areas for oil and gas in the United States (U.S. Department of the Interior, 2018). Since the 1980s, the Permian Basin has experienced a cycle of oil booms and busts that wreaks havoc on its economy. In 2018, the US Geological Survey performed an assessment and found the natural gas resources for the Wolfcamp Shale in the Permian Basin providence was the largest reservoir of oil found in the history of the United States (Gaswirth et al., 2018). However big the oil boom, the market also comes with its busts, which has shown to be correlated to Andrews County unemployment rate. A linear regression analysis was performed to examine the relationship between the Andrews County's monthly unemployment rates and the monthly oil rig counts in the Permian Basin from 2016 to July 2021. A statistically significantly negative relationship was found between unemployment and rig count, which indicates that as the number of oil rigs increases, the unemployment rate decreases. In other words, jobs and economic security is heavily dependent on the oil and gas industry. This relationship is displayed in Figure 1.

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Figure 1.

Andrews County Unemployment Rate by Permian Basin Oil Rig Count (2016-2021)



Note. Total rig count was taken from U.S. Energy Information Administration’s Drilling Productivity Report for the monthly rig count from 2016 – July 2021. Unemployment rate was taken from the monthly unemployment rate for Andrews County from the U.S. Department of Labor

Poverty

In the United States, being in poverty is officially defined as having an income below a federally determined poverty threshold (U.S. Census Bureau, 2021). Poverty thresholds were developed in the 1960s and are adjusted annually to account for inflation (U.S. Census Bureau, 2021). They represent the Federal Government’s estimate of the point below which a family of a given size has cash income insufficient to meet basic needs (U.S. Census Bureau, 2021). For Andrews County, 10.2% of all persons in Andrews County live in poverty and 12.70% of children were living in poverty, which is lower than the state average as displayed in Table 4.

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Table 4.
Poverty Rate – Andrews County

	% All persons living in Poverty (2019)	% Children living in Poverty (2019)
Andrews County	10.20%	12.70%
Texas	13.60%	19.20%

Note. Most recent data in 2019 from U.S. Department of Agriculture Economic Research Service

Workforce

The workforce for Andrews County was assessed using the latest 2021 data from the Texas Workforce Commission. Natural Resources and Mining make up the largest percentage at 21.6% with Trade, Transportation and Utilities, Education and Health Services, and Construction following at 18.84%, 17.54%, and 17.26%. Most of the employment for Andrews County is from the private sector, representing 80% of the workforce (Texas Workforce Commission, 2021). Analyzing the latest data of average weekly wages for the 1st quarter of 2021 shows that Andrews County had a higher average wage than the state average but lower than the Permian Basin (Texas Workforce Commission, 2021). A decrease in weekly average wages was seen from the quarters from the past year for Andrews, the Permian Basin, and Texas overall. Although Andrews County's average weekly wage had a larger decrease from the previous quarters than the Permian Basin and state of Texas. Looking toward the future, the projected fastest growing industry in the Permian Basin is the management and technical consulting services industry, which is predicted to increase by 66.45% by 2028 (Texas Workforce Commission, 2021).

Education Access and Quality

Education and health have long had a synergistic relationship. Education plays an integral role in the development of health inequalities through various mechanisms. Poor education attainment is linked with poor health outcomes because of its influence on income, healthy behaviors, resources, healthy neighborhoods, and other socioeconomic factors (Ro et al., 2016). In addition, evidence indicates that education is a powerful factor in preventative health measures (Feinstein et al., 2006). Therefore, promoting quality education will help with instilling positive health behaviors, cultivate environments, nurture social relationships, and improve overall community well-being.

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Andrews Independent School District is the only school district within Andrews County. Andrews ISD consists of 6 schools with 3 public elementary schools, 1 middle school, 1 high school, and 1 alternative high school. There are currently no charter or private schools in Andrews County. Table 5 displays a student profile for Andrews County. As of the 2019-2020 school year, Andrews ISD had a total of 4,352 students enrolled. Most of the students were Hispanic and Latino by making up 68.50% and White students followed with 28.40% of the student population. Of those 4,352 Andrews ISD students, 42% of the students were identified as being at risk of dropping out of school, 48% were categorized as economically disadvantaged, and 13.20% were not proficient in English as shown in Table 5.

Table 5.			
<i>Andrews ISD Student Profile - 2019-2020</i>			
Total	Enrollment = 4,352		
		Percent	Texas
Race/Ethnicity	Hispanic/Latino	68.50%	52.80%
	White	28.40%	27%
	Two or more	1.70%	2.50%
	Black or African American	0.60%	12.60%
	American Indian or Alaska Nat	0.40%	0.40%
	Asian	0.30%	4.60%
Program Enrollment	Bilingual/ESL	14.90%	20.60%
	Career & Technical	23.80%	27.60%
	Gifted & Talented	6.00%	8.10%
	Special Education	8.50%	10.50%
Risk Factors	At-Risk ^a	42.00%	50.60%
	Economically Disadvantaged ^b	48%	60.30%
	Limited English Proficiency	13.20%	20.30%

Note. Data from the Public Schools Explorer from the Texas Tribune that was originally derived from the Texas Education Agency (TEA).

^a TEA defines At-Risk as the portion of students that are at risk of dropping out of school. These are determined according to Texas state statutes.

^b Students that are economically disadvantaged are those that are eligible for a free or reduced-priced lunch or other public assistance.

Although there are no private or charter schools in Andrews County, Andrews ISD does offer various career and technical programs and opportunities to the students in the district. Career and technical education (CTE) enhance high school completion rates for at-risk students and can increase students' employment opportunities,

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postsecondary education achievement, and earnings (Dougherty, 2016). Andrews ISD offers 11 programs that covers 9 of the 14 Texas CTE Career clusters as shown in Table 6. In addition, Andrews High School has also partnered with Odessa College for students to attain an Associate Degree in Arts and Teaching. Admission to these programs is based on classification and age (Andrews Independent School District, n.d.). As of the 2019-2020 school year, 23.80% of students were enrolled in a CTE program.

Table 6. <i>CTE Programs Offered by Andrews ISD</i>	
Program	Texas CTE Career Clusters
Animal Science	Agriculture, Food, and Natural Resources
Environmental & Natural Resources	Agriculture, Food, and Natural Resources
Culinary Arts	Hospitality and Tourism
Teaching & Training	Education & Training
Cosmetology & Barbering	Human Services
Automotive	Transportation, Distribution, and Logistics
Welding	Manufacturing
Carpentry	Architecture and Construction Careers
Accounting and Finance	Business Marketing and Finance
Business Management	Business Marketing and Finance
Programming and Software Development	STEM

Evidence has shown that education increases employment opportunities as well as higher paying jobs (Egerter et al., 2011). This can be shown by median quarterly wages in Andrews County up until 2017 and 2018 in Table 7. In 2017 and 2018, those with less than a high school diploma had a higher 4th quarter median wage than those with a high school diploma and above. By the end of 2017 and duration of 2018, the oil field was at its peak in oil rigs in use. The peak in oil production can partly explain this paradox. By 2017, fracking was a common and popular method for oil extraction, and this technique significantly rose the demand for less educated male labor (Cascio & Narayan, 2020). Through the dramatic increase in demand for labor in the oilfield, employers were increasing the wages for people without diplomas, and consequently decreasing the incentive for attaining an education (Cascio & Narayan, 2020). This impact can be seen in the increase in dropout rates for Andrews County in 2017 and the end of 2018 shown in Figure 2.

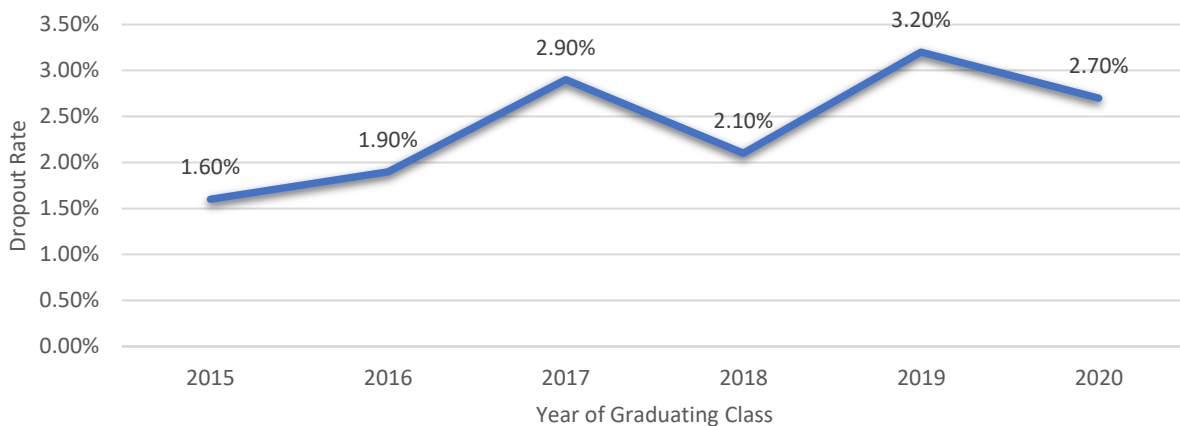
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Table 7.
Wage Comparison by Educational Achievement for Andrews County 2016-2018^a

Earnings Year- Andrews ISD	Median 4th Quarter Wages			Number Employed		
	2016	2017	2018	2016	2017	2018
Advanced Degree	17,677	\$16,958	\$17,589	29	28	27
Bachelor's Degree	13,331	\$13,725	\$14,455	130	115	112
Associate Degree	\$12,904	\$10,822	\$11,458	44	36	40
Some College	\$10,675	\$10,377	\$12,087	392	381	360
High School Graduate	\$9,749	\$10,616	\$15,149	238	231	251
Less Than High School Diploma	\$9,419	\$15,959	\$19,788	60	57	53

Note. Data from the Texas Education Agency's Wages report. Education attainment levels are the highest level of education achieved. The number of employed individuals is the number reported with wages from the Texas Workforce Commission between the ages of 25 and 30 for the earning years along with those who graduated high school or dropped out of school according to the Texas public school district. The college data in this table represent Texas public two-year or four-year colleges and do not account for out-of-state or Texas private higher education institutions (Texas Education Agency, 2021).

Figure 2.
Andrews ISD Dropout Rate 2015-2020



Note. Data collected from the Texas Education Agency's Four-Year Graduation and Dropout Data Report

School performance

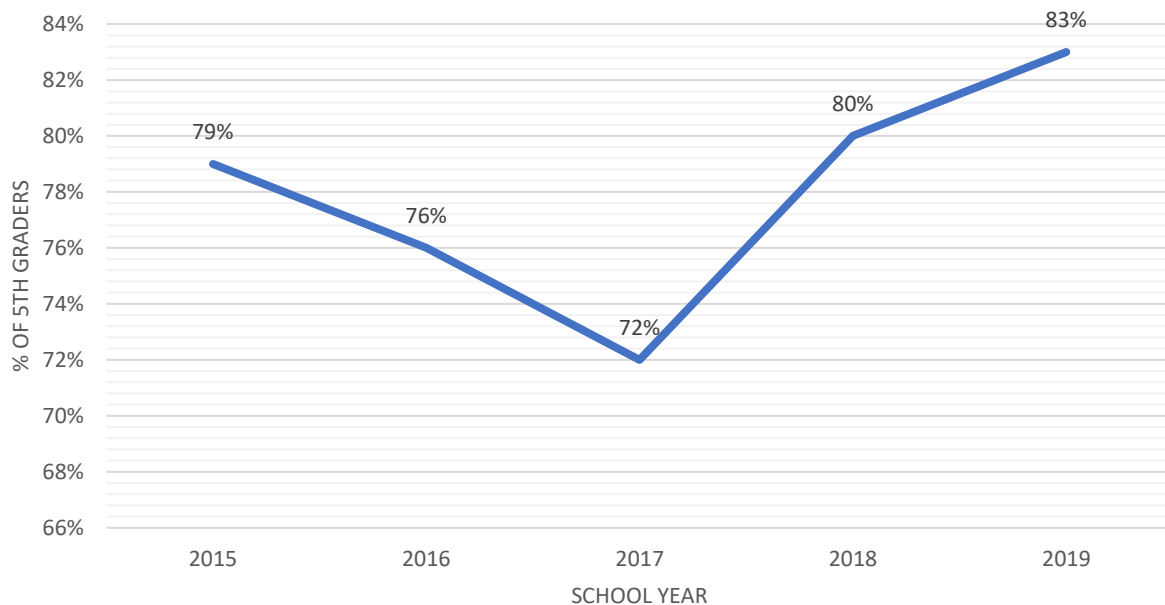
School performance is an indicator of future academic outcomes such as high school graduation (Hernandez, 2011). School performance scores not only measure a student's aptitude and readiness but also the opportunities and resources that is provided to the community. It's important to assess education development early on to close gaps that students develop as they progress from grade to grade (Hernandez,

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2011). Texas' standardize test is the State of Texas Assessments of Academic Readiness (STAAR) test which replaced the TAKS test in 2011. STAAR tests measure students on core subject areas of reading, writing, mathematics, science, and social studies beginning in 3rd grade and is a requirement for high school graduation. The purpose behind these standardized tests is to help examine student's knowledge and readiness to progress to the next grade. Figures 3 and 4 are graphical representations of the percentage of 5th graders that met the standards to be considered ready for the next grade in reading and math. 2016 and 2017 were years where more 5th graders struggled to meet standards. Table 8 and 9 are the most recent performance outcomes for 5th graders in reading and math broken down by ethnicity, and economic status.

Figure 3.

5th Graders that Met STAARS Standard for Reading 2015-2019

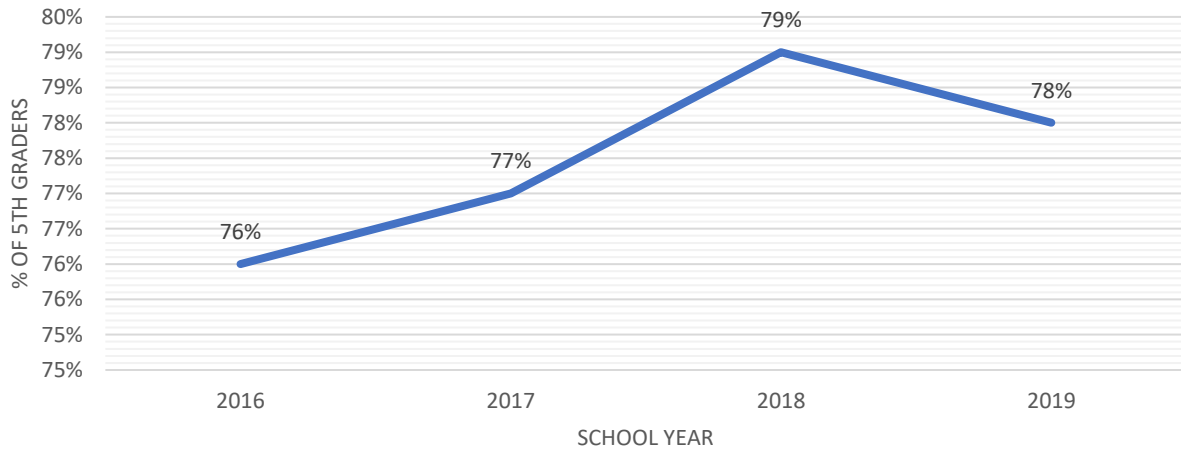


Note. Data collected from the Texas Education Agency's School Report Cards

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Figure 4.

5th Graders that Met STAARS Standard for Mathematics 2016-2019



Note. Data collected from the Texas Education Agency's School Report Cards

Table 8.

5th Grade STAAR Mathematics Results by Ethnicity and Economic Status - 2019

	African American	Hispanic	White	Economically Disadvantaged
Meeting Approaches Grade Level on 1st STAAR Administration	20%	66%	81%	49%
Met Standard at 2nd Administration	0%	8%	7%	11%
Students Requiring Accelerated Instruction (After 2nd Admin)	80%	26%	12%	40%

Note. Data collected from the Texas Education Agency's School Report Cards

Table 9.

5th Grade STAAR Mathematics Results by Ethnicity and Economic Status - 2019

	African American	Hispanic	White	Economically Disadvantaged
Meeting Approaches Grade Level on 1st STAAR Administration	40%	70%	86%	55%
Met Standard at 2nd Administration	0%	10%	8%	14%
Students Requiring Accelerated Instruction (After 2nd Admin)	60%	20%	6%	31%

Note. Data collected from the Texas Education Agency's School Report Cards

Health Care Access & Quality

Access to adequate health care is important to reducing health inequities.

Receiving routine health care through primary care providers, dentists, and mental

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health providers are preventative measures that are associated with improvement in care and quality of life (Watkins et al., 2021). Preventative care is linked with lower rates in disability, death, sickness connected with cancer, diabetes, influenza, chicken pox, pneumonia, vision issues, mental illness, and substance abuse (Watkins et al., 2021). With the rise in chronic diseases, preventative and routine health care is essential in minimizing the severity and burden that these chronic diseases pose (Watkins et al., 2021). With 10% of the population in Andrews County at or above the age of 65 and 30% under the age of 17, access to health care services is highly needed. There are many factors that contribute to the barriers people face to accessing health services including a shortage of health care resources, lack of health insurance, and lack of access to transportation (Office of Disease Prevention and Health Promotion [ODPHP], 2020).

Primary Care

Primary care is essential to connecting the gap between health insurance, getting the care needed for preventative services, and receiving that referral for a specialist (Steinbrook, 2009). Although vital, some areas are in short supply of primary care physicians and those that are, may be full and not accepting new patients or are selective based on patient's insurances (Steinbrook, 2009). With a population to primary care provider ratio of 2067.78 to 1, Andrews County is a Health Professional Shortage Area (HPSA) for Primary Care Physicians. The Health Resources and Services Administration (HRSA) and Texas Primary Care Office (TPCO) calculated a HPSA primary care score of 12 for Andrews County and 16 for Andrews Family Medicine (Health Resources & Services Administration Data Warehouse, 2021). These scores are assigned by a federally mandated scoring system that takes into consideration the population-to-provider ratio, percent of population below 100% of the Federal Poverty Level, and travel time to the nearest source of care outside the designated area (Bureau of Health Workforce, 2020). For primary care the HPSA score ranges from 1-25 and the higher the score the greater the need for primary care providers. In addition, the HRSA and TPCO estimated that to no longer be a HPSA, 1.245 full time primary care providers are needed for Andrews County as shown by the HPSA FTE Short number (Health Resources & Services Administration Data Warehouse, 2021). Table 10

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displays a breakdown of physicians and their specialties provided to Andrews County as of September 2021 according to the Texas Medical Board. Because of the high HPSA score, Andrews County qualifies for the Nurse Corps Loan Repayment Program (NCLRP), a program that can pay up to 85% of nursing student loan debt if they commit to working at least 2 years in a HPSA. This option provides opportunities to nurses, advanced practice registered nurses, and nurse faculty as well as attracts clinical professionals to Andrews County.

Table 10. <i>Primary Care Providers - Andrews County 2020</i>			
County	2020 Total Population	2020 Primary Care Physician Total	Ratio of 2020 Population to Primary Care Physician
Andrews County	18,610*	9**	2067.78

Note. Ratio calculated using Andrews County 2020 Population and number of primary care providers available in 2020.

*2020 Population collected from the Texas Demographic Center

**Texas Department of State Health Services' Health Professions Resource Center

Table 11. <i>Physicians in Andrews County</i>		
Specialty	MDs	DOs
Colon & Rectal Surgery	1	0
Emergency Medicine	1	1
Family Medicine	4	0
Family Practice	4	1
General Surgery	0	2
Obstetrics & Gynecology	1	0
Radiology	1	0
Total	12	4

Note. Data from Texas Medical Board as of September 2021

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Mental and Oral Health

Similar issues can be seen with access to mental health providers with a ratio of persons to mental health provider of about 6,203 to 1 and a HPSA Score of 18 (of max 25). To no longer be an HPSA, .9 full time mental health providers are required to be added. Lastly, for oral health, the ratio of persons to a dentist was about 6,203 to 1.

Table 12. <i>Mental Health Providers - Andrews County 2020</i>			
County	2020 Total Population	2020 Mental Health Providers Total	Ratio of 2020 Population to Mental Health Provider
Andrews County	18610*	3**	6,203.33

Note. Ratio calculated using Andrews County 2020 Population and number of mental health providers available in 2020

*2020 Population collected from the Texas Demographic Center

**Number of mental health providers collected from the County Health Rankings from the University of Wisconsin Population Health Institute and Robert Johnson Foundation. This measure used 2020 data from the National Provider Identification (NPI) data file from the National Plan and Provider Enumeration System (NPPES). This number includes marriage and family therapists and mental health providers that treat alcohol and other drug abuse were added to this measure.

Table 13. <i>Dentists - Andrews County 2020</i>			
County	2020 Total Population	2020 Dentist Total	Ratio of 2020 Population to Dentist
Andrews County	18,610*	3**	6203.33

Note. Ratio calculated using Andrews County 2020 Population and number of dentists available in 2020

*2020 Population collected from the Texas Demographic Center

**Number of dentists from the Texas Department of State Health Services' Health Professions Resource Center

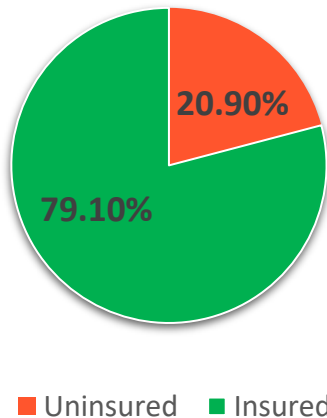
Health Insurance Coverage

Lack of health insurance coverage is a significant barrier to accessing needed health care and to maintaining financial security. Figure 5 shows that as of 2019, for persons under 65, 79.1% were insured, leaving 20.90% uninsured for residents of Andrews County. There is not a large difference between the uninsured percentage for

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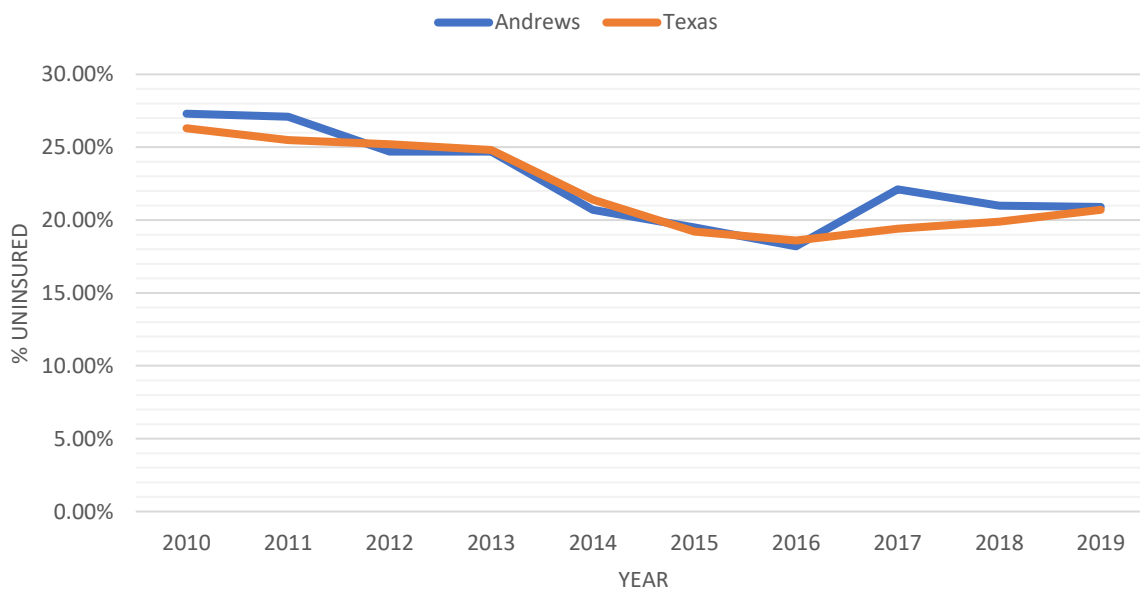
Andrews County compared to the state average except for in 2017 where there was an increase of uninsured people in Andrews County (see Figure 6).

Figure 5.
Health Care Coverage for Persons under 65 in Andrews County 2019



Note. Data from the U.S. Census Bureau, Small Area Health Insurance Estimates

Figure 6.
Uninsured Persons under 65: Andrews County vs Texas



Note. Data from the U.S. Census Bureau, Small Area Health Insurance Estimates

Health Indicators

Healthy People 2030 list health indicators as a subset of objectives to target for improving health and well-being. Most Health Indicators and outcomes address important factors that impact major causes of death and disease in the United States, and they help organizations, communities, and states across the nation focus their resources and efforts to improve the health and well-being of all people. The remaining sections of this report address these factors for Andrews County, which include:

- Health Outcomes
- Prevention Measures
- Unhealthy behavior
- Teen births
- Sexually Transmitted Infections
- COVID-19

Health Outcomes

Health outcome measures for Andrews County are listed in Table 14 which used data from the most recent BRFSS survey taken in 2017-2018 (CDC, 2021). The Behavioral Risk Factor Surveillance System (BRFSS) is a collaborative project between all the states in the United States (U.S.) and the Centers for Disease Control and Prevention (CDC). The BRFSS is an ongoing surveillance system with the objective to collect uniform, state-specific data on U.S. adults' health-related risk behaviors, chronic health conditions, and use of preventive services. Data is gathered using both landline and cellular telephone-based surveys with the use of the Computer-Assisted Telephone Interview (CATI) system (CDC, 2021). The results from the BRFSS show the top 5 health concerns found for Andrews County were high blood pressure among adults, high cholesterol, arthritis, oral health for adults over the age of 65, and mental health.

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Table 14.
Health Outcomes for Andrews County from 2018

Measure	Age-Adjusted Prevalence	95% CI
High blood pressure among adults aged ≥ 18 years	32.20%	31.2-33.1
High cholesterol among adults aged ≥ 18 years who have been screened in the past 5 years	31.20%	30.5-31.9
Arthritis among adults aged ≥ 18 years	21.80%	20.9-22.7
All teeth lost among adults aged ≥ 65 years	15.60%	11.7-20.2
Mental health not good for ≥ 14 days among adults aged ≥ 18 years	13.80%	12.7-14.8
Physical health not good for ≥ 14 days among adults aged ≥ 18 years	13.10%	12.1-14.2
Diagnosed diabetes among adults aged ≥ 18 years	12.20%	11.5-12.8
Current asthma among adults aged ≥ 18 years	8.60%	8.1-9.1
Coronary heart disease among adults aged ≥ 18 years	6.60%	6.2-7.1
Chronic obstructive pulmonary disease among adults aged ≥ 18 years	6.50%	5.8-7.2
Cancer (excluding skin cancer) among adults aged ≥ 18 years	5.80%	5.6-6.0
Stroke among adults aged ≥ 18 years	3.10%	2.8-3.4
Chronic kidney disease among adults aged ≥ 18 years	2.90%	2.8-3.1

Note. Data from the results of the latest BRFSS survey taken in 2017-2018

Prevention Measures

Prevention Measures were also assessed from the data collected from the latest 2018 BRFSS survey, and results are shown in Table 15. As shown, low prevention measures and areas for improvement are:

- The use of preventative services among men and women 65 and older such as getting the flu shot, PPV shot, colorectal cancer screening, and mammograms for women
- Routine dental visits among adults
- Taking medications for adults with high blood pressure
- And Adults aged 50-75 getting a colonoscopy

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Table 15.
Prevention Measures for Andrews County from 2018

Measure	Prevalence	95% CI
Cervical cancer screening among adult women aged 21-65 years	82.50%	80.4-84.5
Cholesterol screening among adults aged ≥ 18 years	78.40%	76.9-80
Visits to doctor for routine checkup within the past year among adults aged ≥ 18 years	71.10%	70.2-72
Mammography use among women aged 50-74 years	70.50%	67.5-73.4
Fecal occult blood test, sigmoidoscopy, or colonoscopy among adults aged 50-75 years	56.60%	54.4-58.9
Taking medicine for high blood pressure control among adults aged ≥ 18 years with high blood pressure	55.90%	55.1-56.6
Visits to dentist or dental clinic among adults aged ≥ 18 years	54.10%	50.5-57.8
Older adult women aged ≥ 65 years who are up to date on a core set of clinical preventive services: Flu shot past year, PPV shot ever, Colorectal cancer screening, and Mammogram past 2 years	17%	14.4-19.9
Older adult men aged ≥ 65 years who are up to date on a core set of clinical preventive services: Flu shot past year, PPV shot ever, Colorectal cancer screening	16.60%	13.8-19.7

Note. Data from the results of the latest BRFSS survey taken in 2017-2018

Unhealthy behavior

Unhealthy behaviors are health indicators linked with the health and overall well-being of population. The latest 2018 BRFSS survey collected information shown on Table 16 to help portray the most common unhealthy behaviors in Andrews County that can be used to design public health interventions. Obesity is a high concern in Andrews with a prevalence of 36.2%, which is higher than the 2019 Texas prevalence of 34.8% and 2019 U.S. prevalence of 30.9%. Inadequate hours of sleep, and no leisure-time physical activity for adults are two other high areas of unhealthy behaviors.

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Table 16.
Unhealthy Behaviors for Andrews County from 2018

Measure	Prevalence	95% CI
Obesity among adults aged ≥ 18 years	36.20%	34.6-37.6
Sleeping less than 7 hours among adults aged ≥ 18 years	35.80%	34.6-36.9
No leisure-time physical activity among adults aged ≥ 18 years	30.30%	27.9-32.7
Binge drinking among adults aged ≥ 18 years	17.70%	16.9-18.5
Current smoking among adults aged ≥ 18 years	17.30%	15.4-19.2

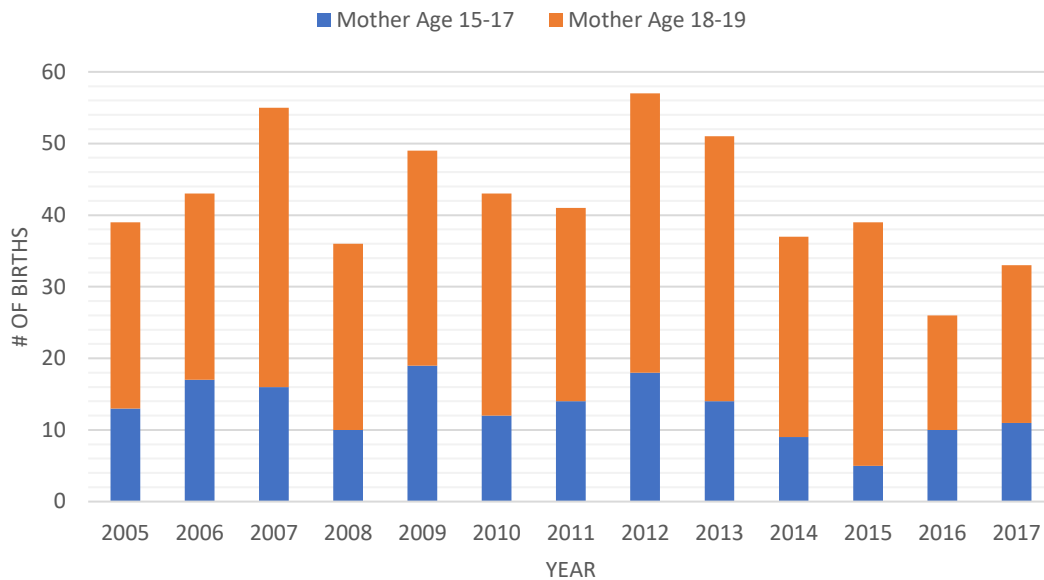
Note. Data from the results of the latest BRFSS survey taken in 2017-2018

Teenage Pregnancy

Teen pregnancy impacts various aspects of physical and quality of life. Evidence shows that teen pregnancy raises the risk of catching a sexually transmitted infection which not only affects the mother and child but families and communities as well (Meade & Ickovics, 2005). In addition, there is a strong relationship between teen pregnancies and adverse socioeconomic, behavioral, mental, and education outcomes (Akinbami et al., 2000). Most recent data from the Texas VSAT system for Andrews County is shown in Figure 7 for the number of teen births from 2005-2017. Most of the teen births were from mothers aged 18-19, and 2007 and 2012 were the years with the most teen births. Andrews County's teen pregnancy percentage over the years are higher in comparison to the state and national percentages as shown in Figure 8.

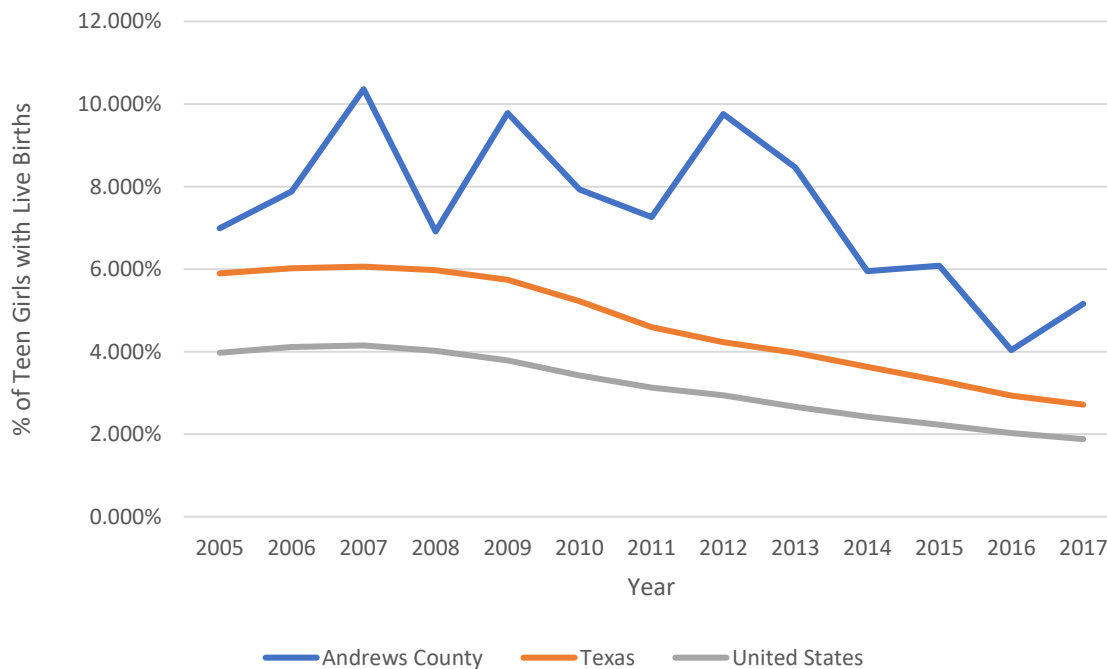
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Figure 7.
Teen Births for Andrews County 2005-2017



Note. Data from the Texas Department of State Health Services' Vital Statistics (VSAT) system

Figure 8.
Percentage of teen girls with live birth by region 2005-2017



Note. Data from the Texas Department of State Health Services' Vital Statistics (VSAT) system

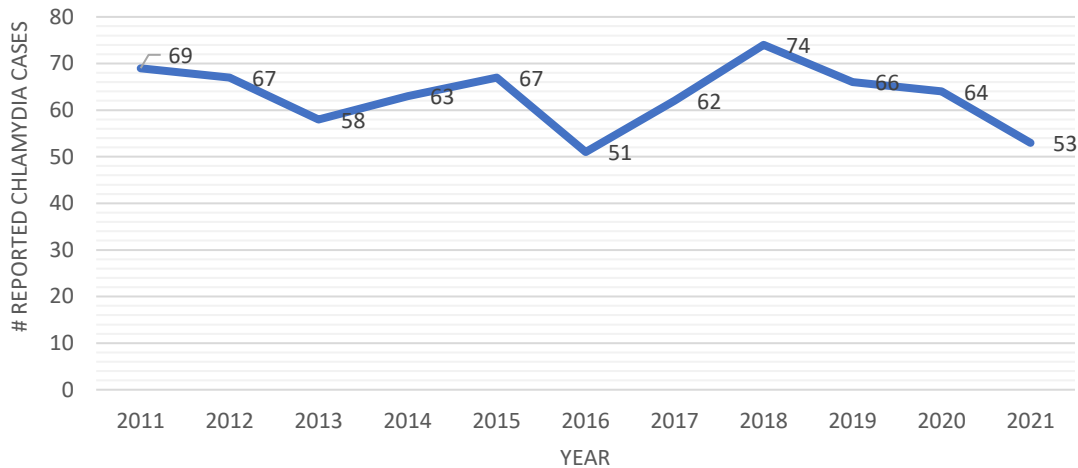
Sexually Transmitted Infections

Sexually Transmitted Infections (STIs) are linked with high-risk health behaviors and is a significant public health threat by being the most prevalent type of infections in the United States (CDC, 2019). According to the CDC, chlamydia infections reached an all-time high in 2018 in the United States and continue to increase along with other types of STIs like gonorrhea and syphilis (CDC, 2019). If left untreated, STIs can cause severe health complications such as ectopic pregnancy, certain cancers, premature death, pelvic inflammatory disease, increased risk of getting HIV, and infertility (Meade & Ickovics, 2005). Along with severe health risk, STIs place a heavy financial burden for the American healthcare system. The direct medical costs associated with STIs and their complications estimated to be around \$16 billion in 2018 (CDC, 2021). Trends have shown that STIs disproportionately impact younger persons with 45.5% of the new infections in the United occurring among people aged 15-24 (CDC, 2021). Andrews County mirrors these trends.

The STI that impacts Andrews County the most is chlamydia ranging from around 51-74 cases annually from 2011-2021 with 2018 having the peak number of infections (see Figure 9). Gonorrhea and syphilis are other STIs present within the county (see Figures 10 and 11). The highest number of reported chlamydia and gonorrhea cases in Andrews occur among young people ages 15-24, with females being more affected than males (see Figures 12 and 13). To compare chlamydia, gonorrhea, and syphilis with the state and national rate, cases per 100,000 persons were calculated and displayed in Figures 14-17. Andrews County infection rate for all three STIs has fluctuated from 2011-2019. Most noticeably, early non-primary and non-secondary syphilis rate for Andrews County was higher than the state and national rate in 2016 and the primary and secondary syphilis dramatically increased from 2018 to 2019 to be significantly higher than the state and national rate (see Figures 16 and 17). The gonorrhea rate for Andrews peaked in 2013 to be higher than the national rate and matched the state rate. Although chlamydia is the STI with highest number of cases in Andrews County, the rate of chlamydia reports to be lower compared to the state and national rate.

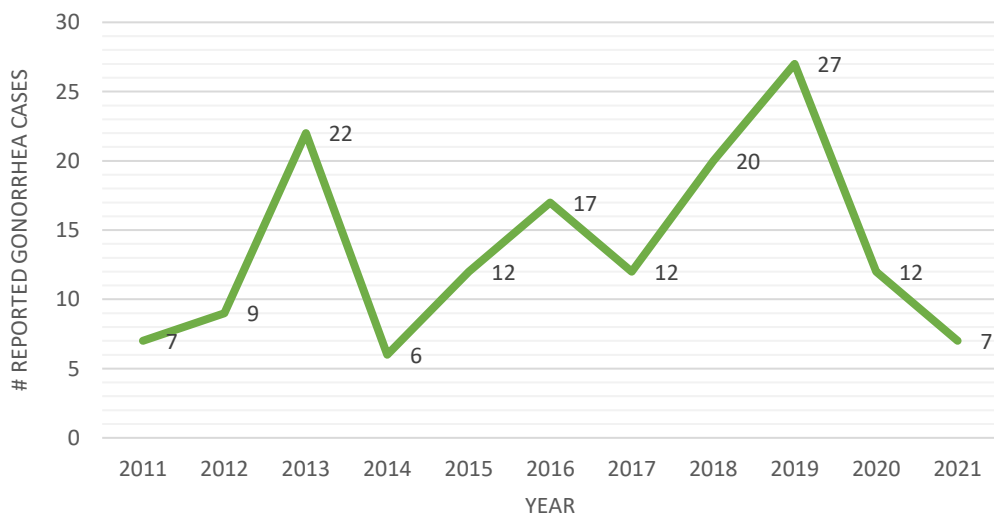
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Figure 9.
Chlamydia Cases for Andrews County 2011-2021



Note. Data from Texas Department of State Health Services TB/HIV/STD Epidemiology and Surveillance Branch for 2011-2018 data. 2019-2021 data collected from the ABS EPHIMS database

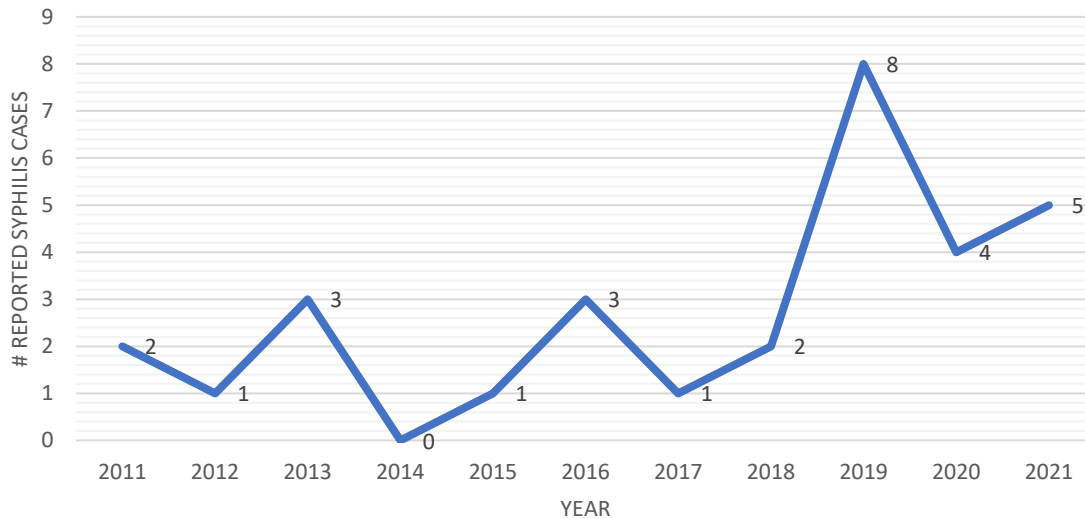
Figure 10.
Gonorrhea Cases for Andrews County 2011-2021



Note. Data from Texas Department of State Health Services TB/HIV/STD Epidemiology and Surveillance Branch for 2011-2018 data. 2019-2021 data collected from the ABS EPHIMS database

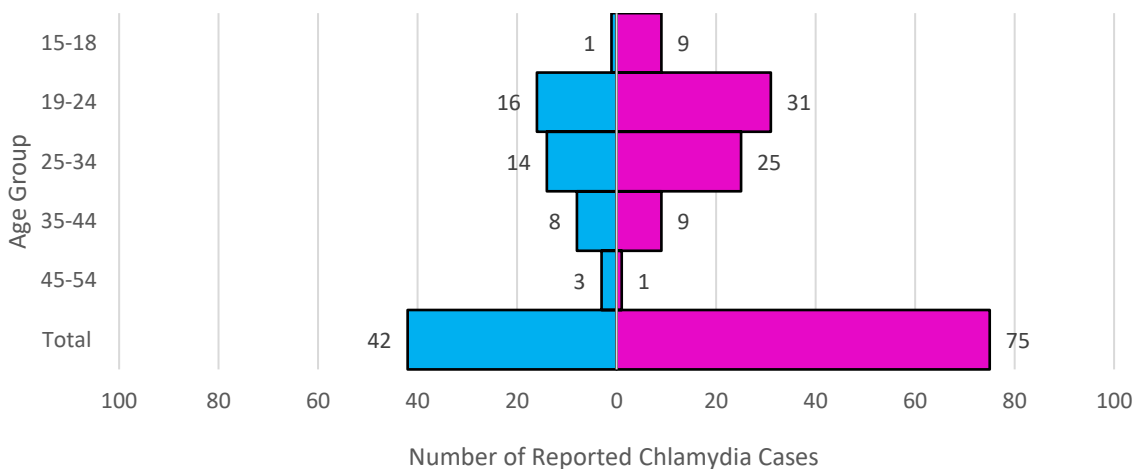
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Figure 11.
Syphilis Cases for Andrews County 2011-2021



Note. Data from Texas Department of State Health Services TB/HIV/STD Epidemiology and Surveillance Branch for 2011-2018 data. 2019-2021 data collected from the ABS EPHIMS database

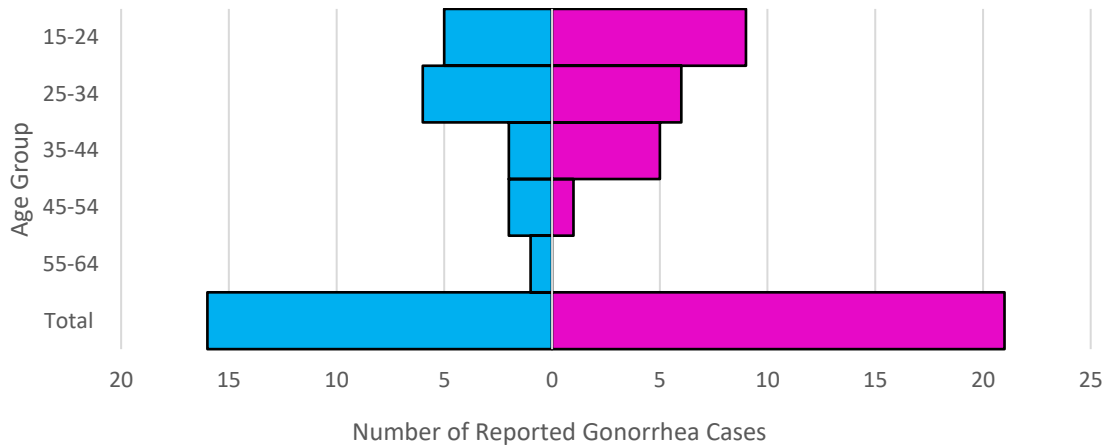
Figure 12.
Chlamydia by Age and Sex 2020-2021



Note. Data from the ABS EPHIMS surveillance system

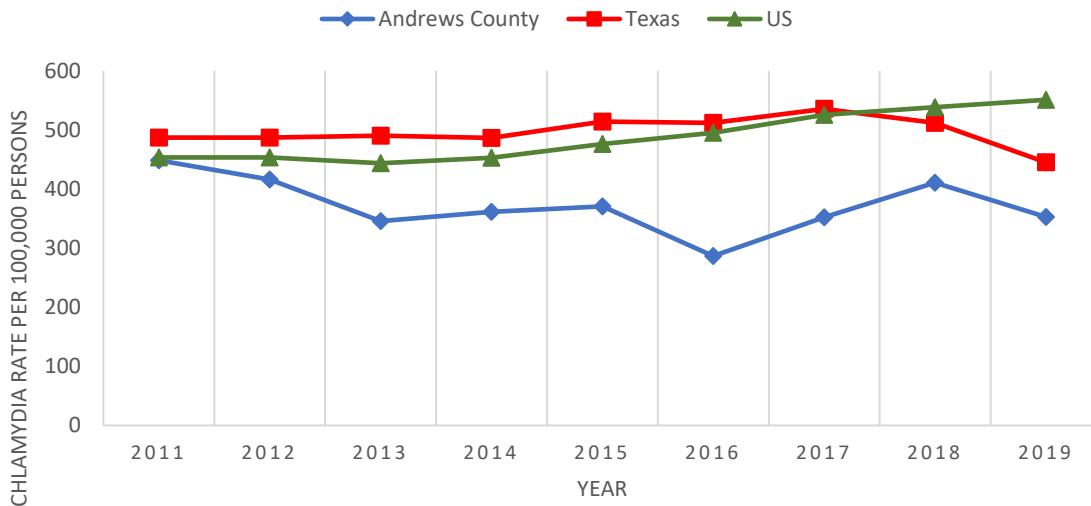
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Figure 13.
Gonorrhea by Age and Sex 2018-2021



Note. Data from the ABS EPHIMS surveillance system

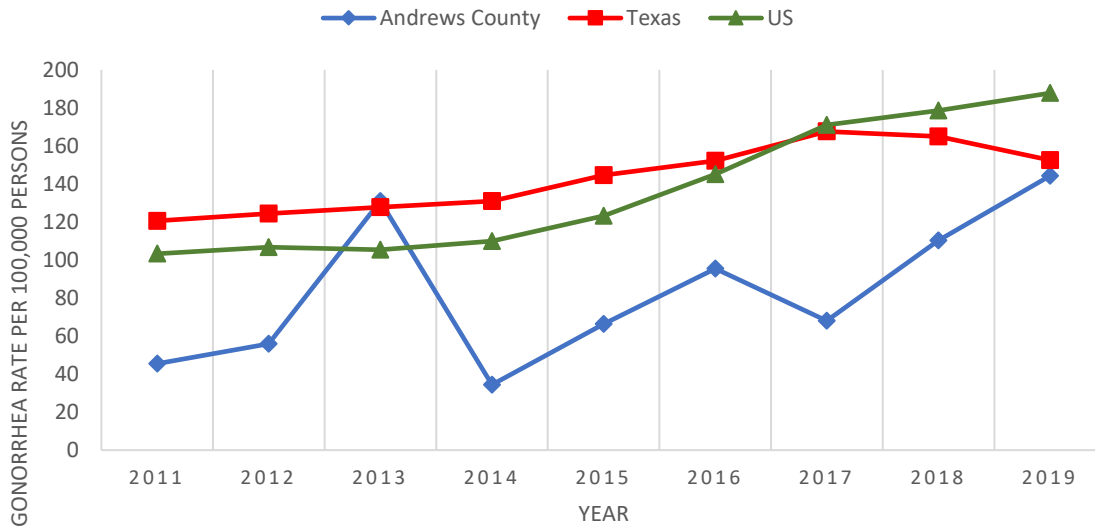
Figure 14.
Chlamydia rate by Location 2011-2019



Note. Data from CDC's Atlas Plus STD Surveillance data

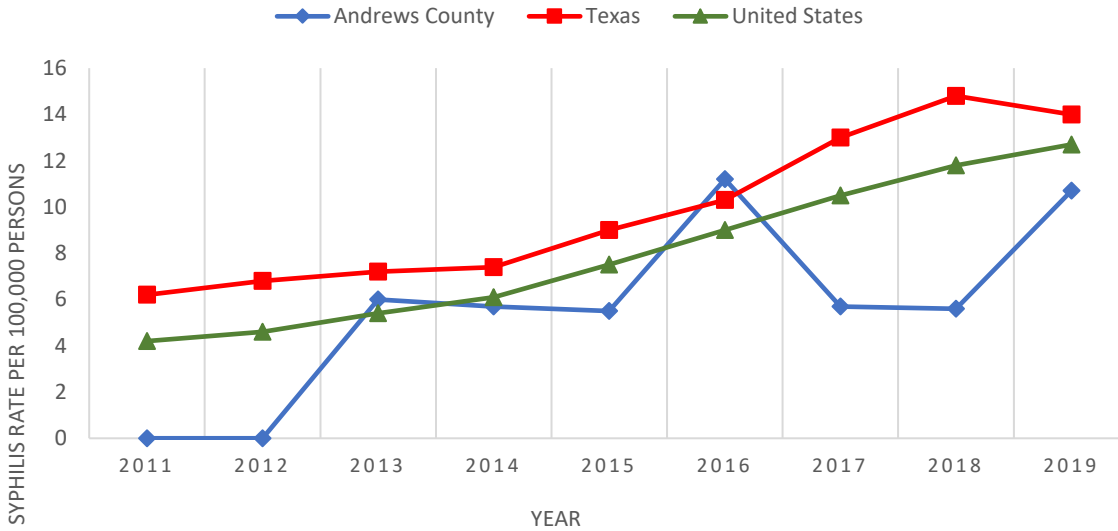
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Figure 15.
Gonorrhea rate by Location 2011-2019



Note. Data from CDC's Atlas Plus STD Surveillance data

Figure 16.
Early Non-Primary, Non-Secondary Syphilis Rate 2011-2019

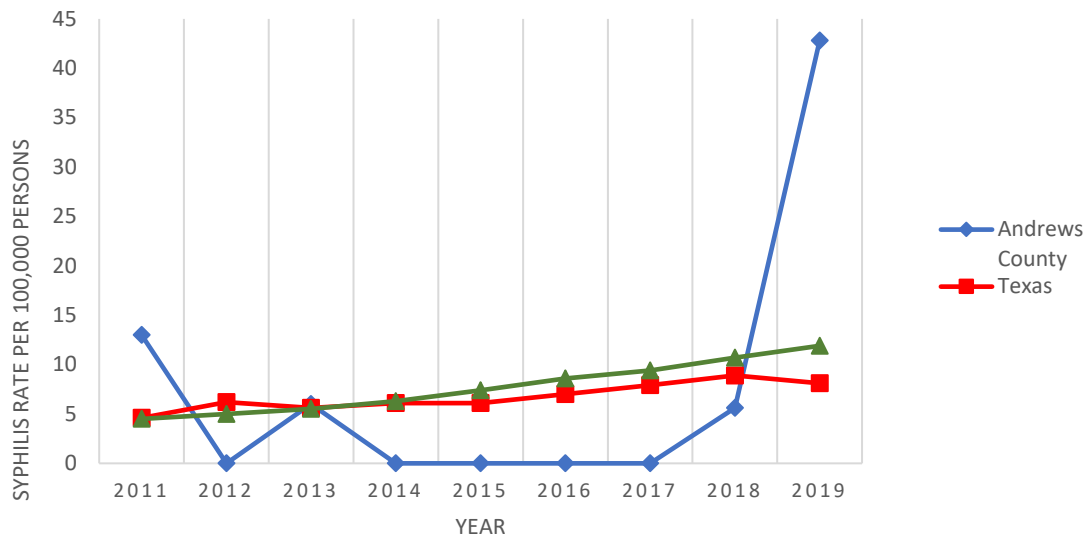


Note. Data from CDC's Atlas Plus STD Surveillance data

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Figure 17.

Primary and Secondary Syphilis Rate 2011-2019



Note. Data from CDC's Atlas Plus STD Surveillance data

COVID-19 in Andrews County

In December 2019, the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) was identified in Wuhan China (Mohan & Vinod, 2020). This novel coronavirus labeled COVID-19 soon spread throughout the country and then all around the world. As a result, the World Health Organization (WHO) announced this outbreak as a Public Health Emergency of International Concern in January of 2020, and later officially characterized it as pandemic, which was the first since 2009 (WHO, 2020). Symptoms of COVID-19 vary from mild to severe illness with common symptoms being fever, headache, cough, loss of smell and taste, muscle pain, and difficulty to breathe. In the most severe cases dyspnea, hypoxia, respiratory failure, shock, and multiorgan dysfunction has been exhibited (National Center for Immunization and Respiratory Diseases [NCIRD], 2021). This disease can be transmitted through the respiratory route by inhaling droplets and airborne particles and was found that asymptomatic infected persons can transmit COVID-19 to others (NCIRD, 2021). As a result, at least 244 million cases of COVID-19 have been identified and approximately 6.1 million total deaths have been reported since March 25th, 2022, in the world (WHO, 2022). Unfortunately, since its appearance in 2019, multiple variants of the COVID-19 virus

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have emerged making it a constant threat to public health for communities everywhere including Andrews County.

Andrews County didn't have their first confirmed case of COVID-19 until March of 2020. Cases continually increased as testing improved, and Andrews reached its first peak in December of 2020 with 398 confirmed cases, a second larger peak in September of 2021 with 596 reported cases, and then an even larger third peak in January of 2022 with 860 cases (see Figure 18). The larger second peak in September of 2021 was a result of the emergence of the Delta variant, which showed to be 100% of COVID-19 infections by the end of September, and the largest peak in January 2022 was a result of the Omicron B.1.1.529 variant (see Table 17). Testing during these peak months was also at its highest, and the trend in peak months paralleled the trend in the COVID-19 positivity rate (see Figure 19). Although the month with the highest positivity rate was in September 2021 at 52.19%, meaning over half the tests given came back positive. The positivity rate for January 2022, with the highest peak to date came in second at 37.87%. This could be due to a larger number of testing sites available to the public during the Omicron spike or the improvement on the system that was used to report COVID-19 tests given. The tests per 1,000 people shown in Figure 20 displays the availability of COVID-19 testing in the population, which shows that Andrews County has access to testing if needed. Andrews County's monthly COVID-19 infection rate paralleled the trend shown at the state and national level (see Figure 21). However, Andrews County had a noticeably higher monthly reported case rate in September of 2021 than the state and national rate. The small population size of Andrews County when calculating the rate per 100,000 people for state and national comparison should be taken into consideration when interpreting this trend.

The number of deaths from COVID-19 hit Andrews County the hardest during the first peak in December of 2020 with 15 deaths (see Figure 22). The COVID-19 fatality rate mirrored the state and national trend but had a significantly higher fatality rate in December of 2020 to January 2021 compared to the state and national rate shown in Figure 23 and again in October 2021. The smaller population size needs to be considered when interpreting this comparison, because one fatality has a much larger impact on deaths per 100,000 than compared to state and national population sizes.

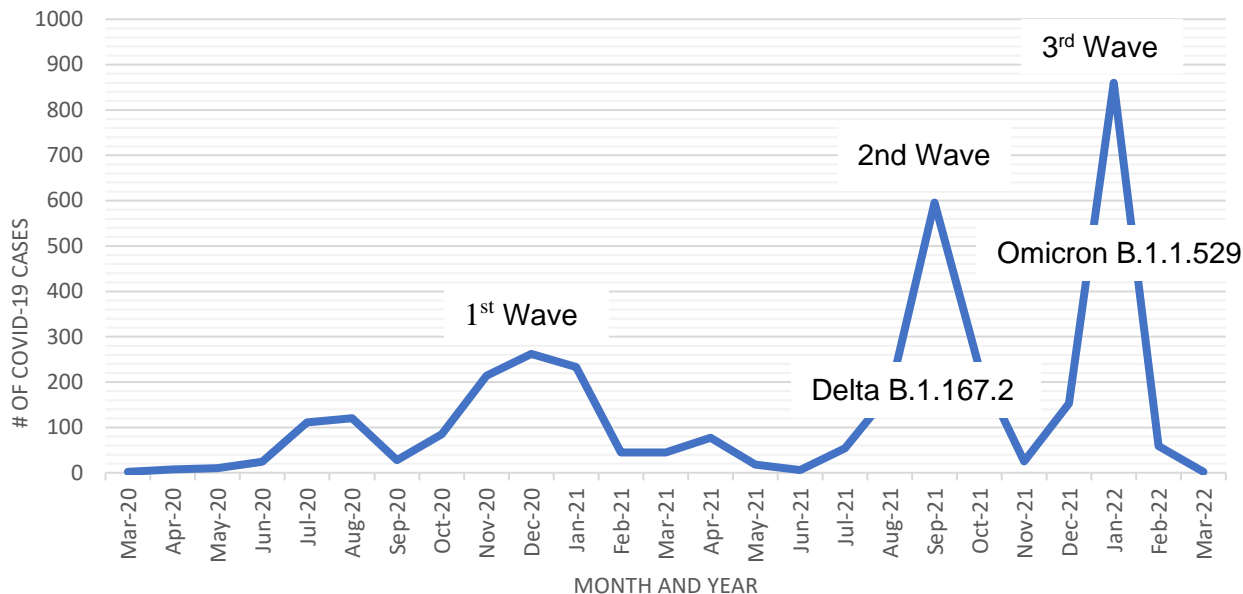
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Though September of 2021 and January 2022 had a largest number of confirmed cases, the fatalities during this period were much lower than that in December of 2020 (see Figure 22). Factors that contribute to having a high number of cases and low number of deaths are the presence of COVID-19 vaccines and improved treatment of COVID-19. In response to the pandemic, Project Warp Speed was able to develop 3 different types of COVID-19 vaccinations (Pfizer, Moderna, and Johnson & Johnson) with the first doses being administered to frontline workers in December of 2020 (Texas Department of State Health Services, 2021). By March 29, 2021, vaccines were available to everyone over the age of 16 (Texas Department of State Health Services, 2021). Andrews County was an early adopter and started administering vaccinations on the week of December 27, 2020, totaling 235 administrations for that week (see Figure 24). Vaccine administrations in Andrews County increased dramatically from December of 2020 to February of 2021 where it reached its highest number of vaccinations in a month at 3576 vaccines administered (see Figure 24). Since then, the number of vaccine administrations has fluctuated. Although the vaccines have been available to the mass public for months, vaccine hesitancy remains a concern. From a state level, approximately 64.58% of the Texas population over 5 years old has been fully vaccinated as of March 28, 2022 (Texas Department of State Health Services, 2021). Andrews County's vaccination percentage is lower with 47.20% of the Andrews population 5 years and older being fully vaccinated, and 5.88% with only one dose (see Figure 25). When analyzing by age group, about 84.62% of Andrews citizens 65 and older are fully vaccinated and 6.49% have only one dose as of March 28, 2022 (see Figure 26). Higher vaccination rates among the elderly population are important, since this age group has been identified as high-risk for more severe complications and mortality. In addition to vaccination, treatment for COVID-19 has improved since its original inception. Monoclonal antibody infusion treatment was introduced in November 2020 in the United States and has since developed over time to become more popular and effective. Clinical trials showed this type of treatment to be most effective for newly positive symptomatic COVID-19 patients who are considered high risk by significantly reducing hospitalization and mortality (Bariola et al., 2021). The Andrews County Health Department implemented a monoclonal antibody infusion center for the citizens of

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Andrews and surrounding communities in September 2021. This therapeutic resource along with vaccination are factors that help contribute to the decreasing fatality rates.

Figure 18.
Monthly New COVID-19 Cases in Andrews County



Note. Data from Texas Department of State Health Services COVID-19 Dashboard. Data is up to 03/15/2022

Table 17.
COVID-19 Variants in Texas

	Delta B.1.167.2	Omicron B.1.1.529	Omicron BA.2	Other
10/2/2021	100%	0.00%	0.00%	0.00%
10/9/2021	100%	0.00%	0.00%	0.00%
12/18/2021	25%	74.4%	0%	0.6%
12/25/2021	9.8%	89.4%	0%	0.8%
01/01/2022	3.3%	95.7%	0%	1%
01/08/2022	2.3%	97.3%	0%	0.3%
01/15/2022	0.4%	99.5%	0.1%	0%
01/22/2022	0.1%	99.4%	0.4%	0%
01/29/2022	0.2%	99.2%	0.6%	0%
02/05/2022	0%	98.9%	1.1%	0%
02/12/2022	0%	98.0%	2.0%	0%
02/19/2022	0%	94.8%	5.1%	0.1%
02/26/2022	0%	92.8%	7.2%	0%
03/05/2022	0%	84.7%	15.3%	0%
03/12/2022	0%	69.9%	30.1%	0%

Note. Data from Texas Department of State Health Services' Variants and Genomic Surveillance

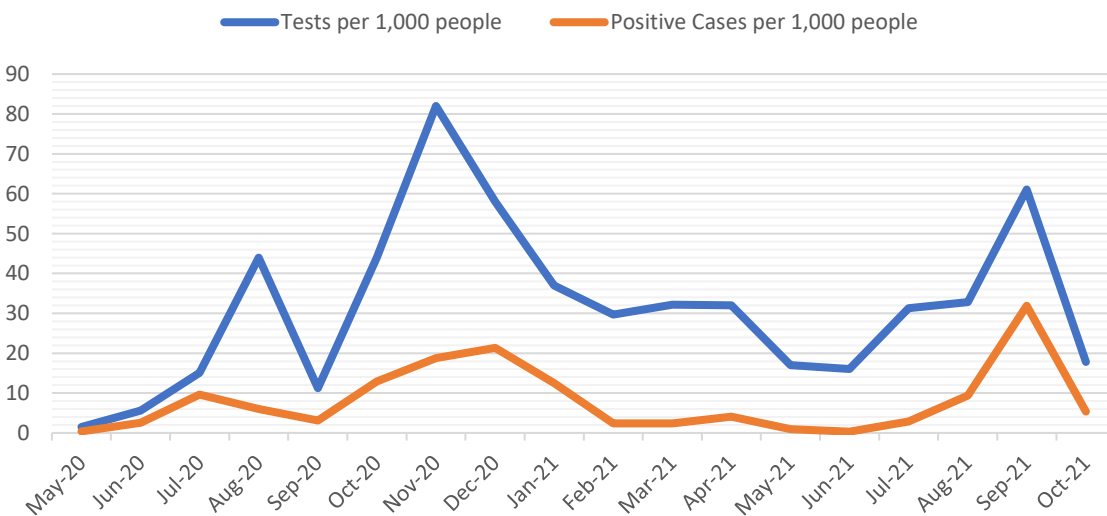
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Figure 19.
COVID-19 Test Positivity Rate in Andrews County



Note. Data from Texas Department of State Health Services COVID-19 Dashboard. Data is up to 03/15/2022

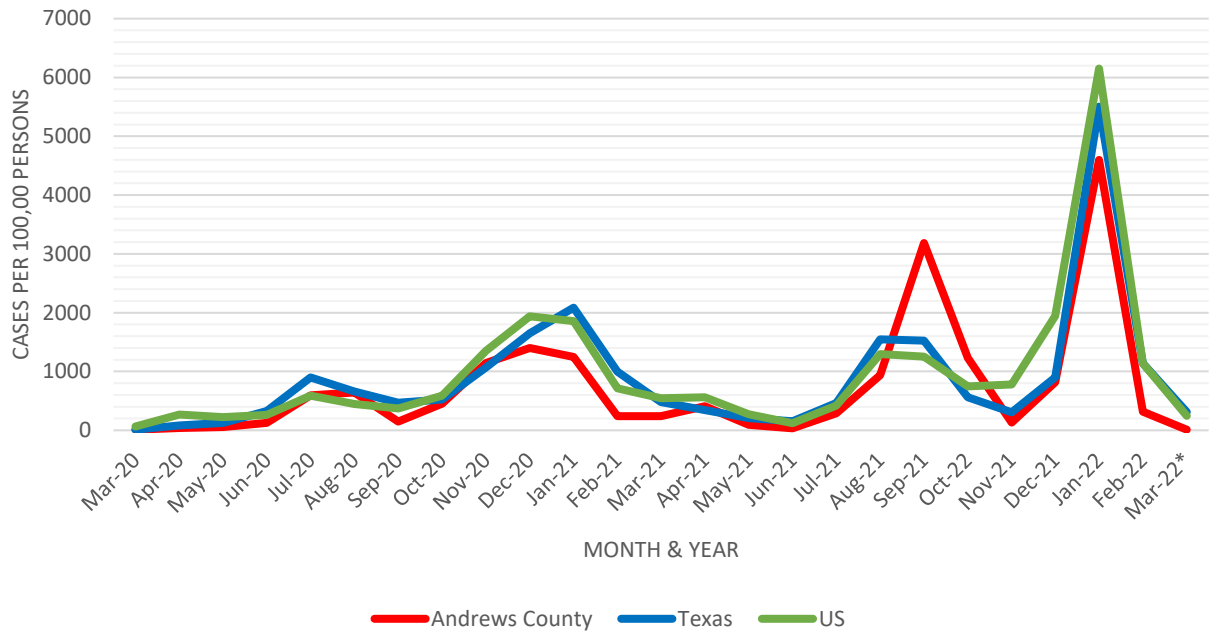
Figure 20.
COVID-19 Testing per 1,000 persons in Andrews County



Note. Data from Texas Department of State Health Services COVID-19 Dashboard. Data is up to 10/20/2021 and Andrews 2020 population of 18,705 was used for this calculation

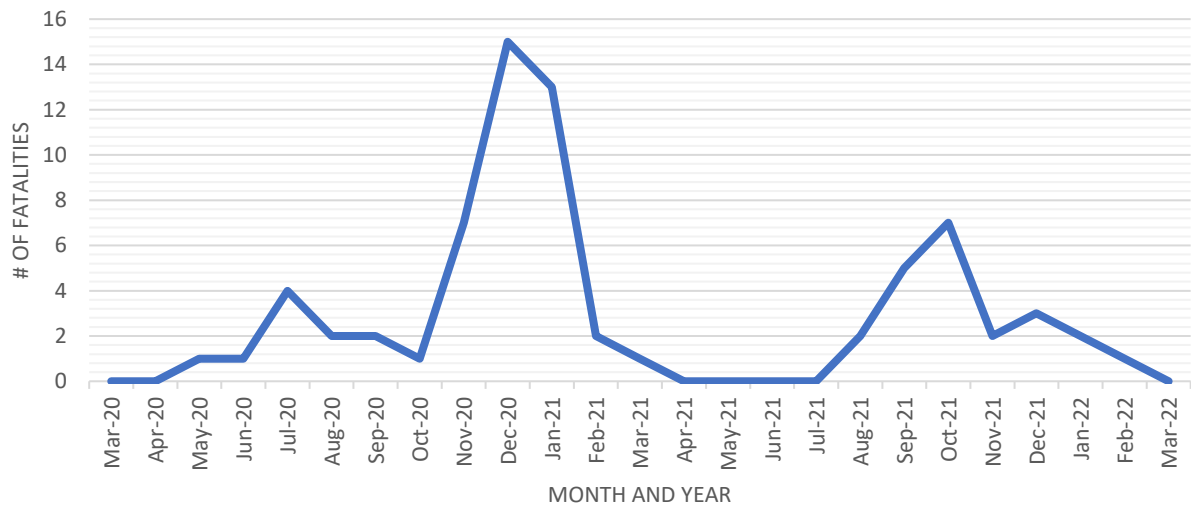
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Figure 21.
Monthly New COVID-19 Cases per 100,000 persons



Note. Data from Texas Department of State Health Services COVID-19 Dashboard and CDC COVID Data Tracker. 2019 Population were used the rate calculations.
* Data is up 03/25/2022

Figure 22.
Monthly New COVID-19 Fatalities

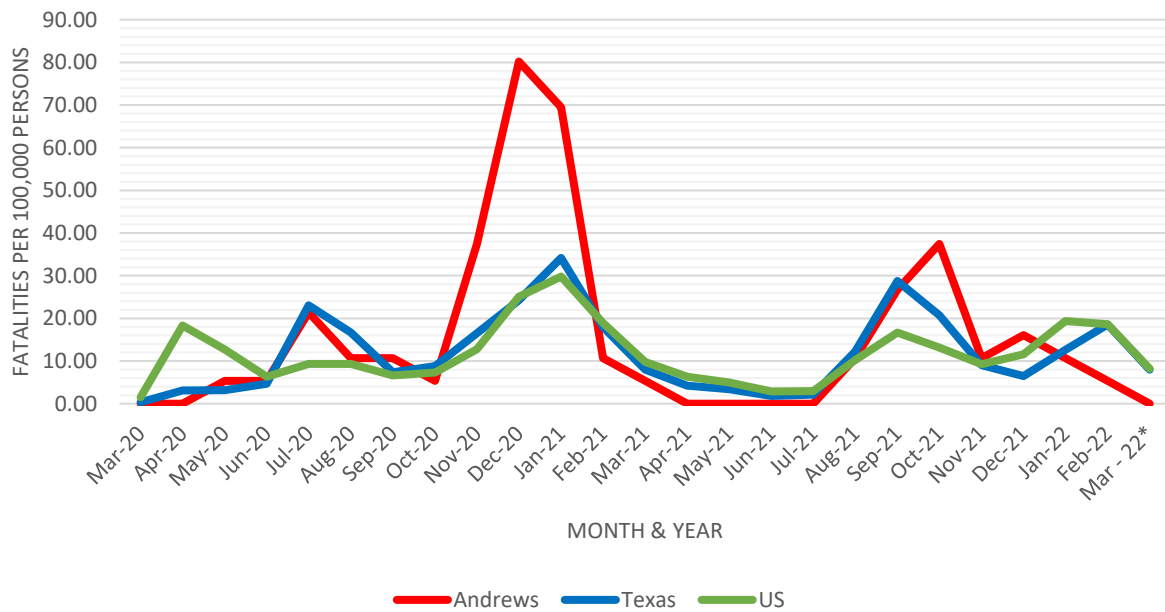


Note. Data from Texas Department of State Health Services COVID-19 Dashboard.
Data is up to 03/27/2022

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Figure 23.

Monthly New COVID-19 Fatalities per 100,000 persons

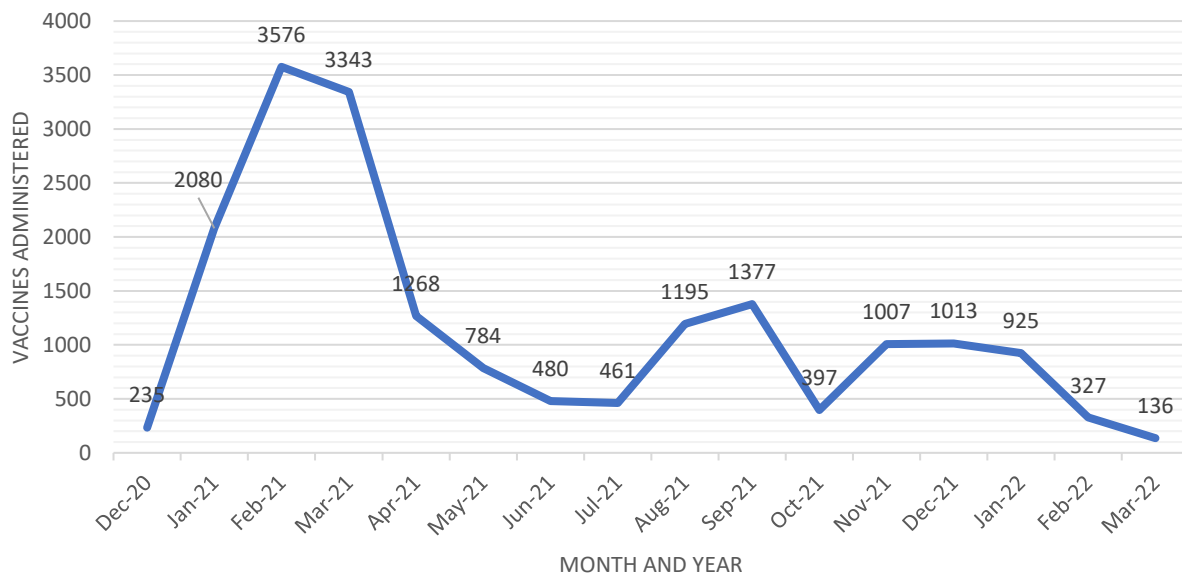


Note. Data from Texas Department of State Health Services COVID-19 Dashboard and CDC COVID Data Tracker. 2019 Population were used the rate calculations.

* Data is up 03/27/2022

Figure 24.

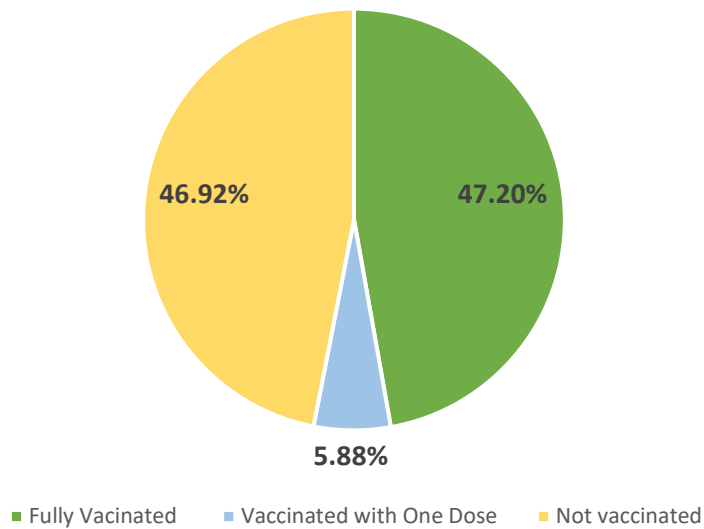
Monthly COVID-19 Vaccination Administration for Andrews County



Note. Data from the Texas Department of State Health Services COVID-19 Vaccine in Texas Dashboard. Data is up to 03/28/2022

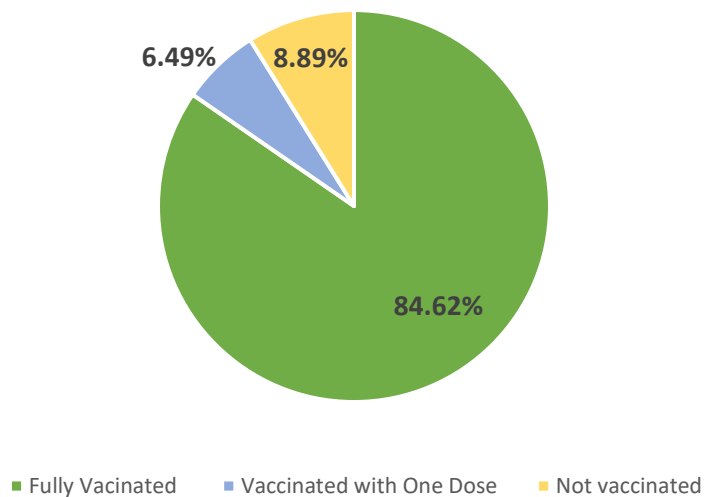
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Figure 25.
COVID-19 Vaccination for Population 5+ in Andrews County



Note. Data from the Texas Department of State Health Services COVID-19 Vaccine in Texas Dashboard. Data is up to 03/28/2022.

Figure 26.
COVID-19 Vaccination for Population 65+ in Andrews County



Note. Data from the Texas Department of State Health Services COVID-19 Vaccine in Texas Dashboard. Data is up to 03/28/2022.

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