CHI ST. LUKE'S HEALTH-MEMORIAL

COMMUNITY HEALTH NEEDS ASSESSMENT

2019

TEXAS A&M UNIVERSITY
Center for Community
Health Development

2019 CHI ST. LUKE'S HEALTH-MEMORIAL COMMUNITY HEALTH NEEDS ASSESSMENT

Conducted and Prepared by

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INTRODUCTION

The Center for Community Health Development (CCHD) at the Texas A&M University Health Science Center School of Public Health conducted the 2019 CHI St. Luke's Health-Memorial Community Health Needs Assessment (St. Luke's Assessment). The 2019 St. Luke's Assessment included seven counties - Angelina, Houston, Jasper, Polk, Sabine, San Augustine, and Trinity.
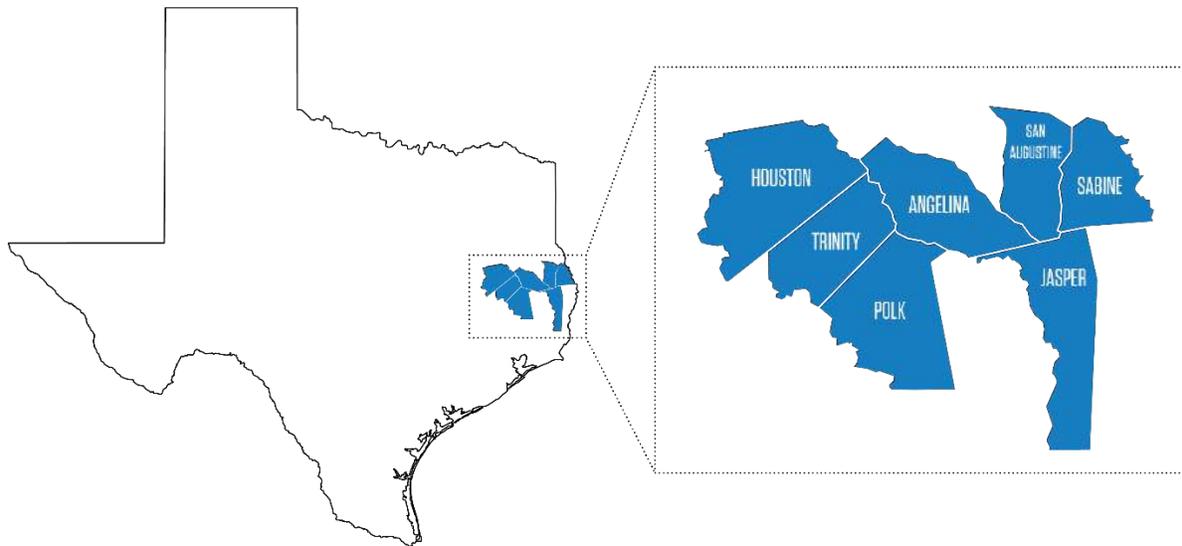
Figure 1. Map of CHI St. Luke's Health Assessment Region

St. Luke's maintains hospitals in Angelina, Polk, and San Augustine counties, and clinics in Angelina, Houston, Jasper, Polk, Sabine, and San Augustine Counties.

St. Luke's Health-Memorial Lufkin provides quality and innovative health care, charity, and community support services to patients in East Texas. It is a 271-bed facility with the largest emergency room in the region, 32 private rooms, a 24-bed intensive care unit, a 26-bed progressive care wing, and imaging and laboratory departments, with an array of highly trained professional staff of surgeons, physician specialists, nurses, and technicians.

Regionally, the Lufkin hospital leads cardiovascular health care and hosts the latest medical technology at the Heart & Stroke Cancer Center with a variety of board-certified neurologists, neurosurgeons, cardiothoracic, and vascular surgeons on staff. The inpatient and outpatient Cardiac Rehabilitation Center assists patients in recovery through trained physical, occupational, and speech therapists. They also have the Henderson Women's and Children's Center which offers quality and compassionate pediatric care to newborn babies. Other centers of excellence

include the Polk Education Center for Stroke, Diabetes, and Heart Care, the Express Lab, the Temple Cancer Center, and the Wound Care Center.[1]

St. Luke's Health-Memorial Livingston is a 66-bed modern facility that provides more than 60,000 patients with 24/7 critical care and cost-effective diagnostic services each year in East Texas. The facility is equipped with highly trained and dedicated physicians who specialize in a wide array of specialties, an imaging department, a Sleep Center, and a Sexual Assault Nurse Examiner (SANE) program for sexual assault victims.[2]

St. Luke's Health-Memorial San Augustine is a fully accredited 18-bed medical facility that offers affordable acute healthcare to its residents as the only certified critical care access hospital in the area. They offer a broad array of services including emergency care and diagnostic services such as MRI, CT, and digital mammography. The hospital is also equipped with a fully accredited dialysis center, via Sankar Nephrology. Physician specialties at San Augustine range from Family Practice to Internal Medicine, Cardiology, Neurology, Podiatry, Chiropracty, and Nephrology.[3]

The 2019 St. Luke's Assessment was conducted as part of the required community health needs assessment of the Patient Protection and Affordable Care Act for nonprofit hospitals, which occurs on a three-year cycle. In addition to the governmental requirement, St. Luke's invested in the current assessment as part of their organizational commitment to creating healthier communities in East Texas. Assessment planning initiated in November 2018, data collection began in January 2019, and the final report was completed in March 2019.

Overview of 2019 CHI St. Luke's Health-Memorial Community Health Needs Assessment

Assessment Methodology

The 2019 CHI St. Luke's Health-Memorial Regional Health Assessment combined data which comes from existing sources, known as secondary data, with qualitative data collected through community discussion groups with a broad cross-section of community members, and interviews with key community stakeholders. Collectively, this data is used to describe key characteristics of the population, the

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[1] https://www.chistlukeshealthmemorial.org/centers/lufkin
[2] https://www.chistlukeshealthmemorial.org/centers/livingston
[3] https://www.chistlukeshealthmemorial.org/centers/san-augustine

most prevalent local health conditions and issues, and the availability of health care resources.

The information from community discussion groups (CDGs) and secondary data analysis can be used by St. Luke's Health and other community organizations as a road map to determine: 1) local priority issues; 2) available or needed local resources to help address identified priority issues; and 3) how and with whom to work to address community issues and/or to take advantage of community opportunities to improve population health.

Community Partners

In late fall of 2018, St. Luke's Health organized a group of local and regional health and health-related organizations to solicit support for the conduct of the regional assessment. Requested partner support included working with the hospital to identify and contact colleagues and/or partnering agencies in the seven counties to host community discussion groups and recruitment of participants. The same partners will be asked to provide input towards the development and implementation of a Community Health Improvement Plan.

Assessment partners included:
- Alcohol & Drug Abuse Council of Deep East Texas
- Angelina County & Cities Health District
- Burke
- Rural East Texas Health Network
- Texas Forest Country Partnership
- The Coalition

Assessment Consultant

St. Luke's contracted with the Center for Community Health Development (CCHD), a component of the Health Science Center at Texas A&M University, based in College Station, Texas, to facilitate the regional assessment's planning, implementation, data analysis, and composition of the final report. Faculty and staff at CCHD have conducted similar regional health status assessments in more than 40 states over the past 25 years. More detailed information on the assessment process can be obtained from the center's website at www.cchd.us.

METHODOLOGY

Secondary Data

Existing data previously collected for other purposes, known as secondary data, were compiled from a variety of credible local, state, and national sources to provide context for analyzing and interpreting the community discussion group data collected during the 2019 St. Luke's Health-Memorial Regional Health Assessment. Secondary data sources used included the Texas Department of State Health Services (DSHS), the U.S. Census Bureau, the Behavioral Risk Factor Surveillance System from the Centers for Disease Control and Prevention (CDC), the Texas Department of Public Safety, the County Health Rankings project at the University of Wisconsin (sponsored by the Robert Wood Johnson Foundation), Episcopal Health Foundation County Health Data, as well as *Healthy People 2020* objectives and priorities, among others.

A widely used resource for understanding the factors impacting the health status of a population is the County Health Rankings project, sponsored by the Robert Wood Johnson Foundation[4]. The County Health Rankings project compiles data and produces reports on a variety of health-related factors in a standardized format for essentially all United States counties. Within each state, all of the counties are ranked using a set of measures looking at health outcomes and health factors. Only 242 of the 254 Texas counties are included in the rankings. Detailed information on the ranking methodology is available on their website.[5] In addition to the county level rankings, each county's report references counties which have the best possible outcomes related to the outcomes and factors. These co-called "Best Performer" counties provide a good frame of reference or goal for population health best practices and are included, when available, in this report.

Similar to County Health Rankings, but with a slightly different focus and a more regional orientation, the Episcopal Health Foundation makes county-level data available for the 57 counties of the Episcopal Diocese of Texas.[6] This resource, which is a compilation of a variety of secondary data sources into one location for the ease of communities to find health-related data, was also used as part of the secondary data examined for this report.

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[4] http://www.countyhealthrankings.org/

[5] County Health Rankings (http://www.countyhealthrankings.org/our-approach)

[6] Episcopal Health Foundation County Health Data (http://www.episcopalhealth.org/en/research/county-health-data/)

Healthy People 2020 provides comprehensive national goals and objectives used to guide improving the nation's health. The *Healthy People* initiative has been published every decade since the 1980s serving as a foundation to concentrate population health improvement efforts on specific areas, which are referred to as Leading Health Indicators.[7] If a *Healthy People 2020* goal is available related to topics discussed in this assessment, we have provided it as an additional reference.

Available secondary data were compiled to provide regional information (all seven counties combined), as well as each of the seven counties individually. Texas and the U.S. overall data were also included for most measures for comparison purposes.

Community Discussion Groups

Community discussion groups (CDGs) are a group interview methodology similar to a town hall meeting but with a structured agenda of discussion questions. More appropriate than focus groups for soliciting a broad array of responses from participants, CDGs are facilitated by a team including a group moderator and two individuals documenting input – one capturing "big ideas" on a flipchart and a second capturing more detailed notes on a laptop computer.

CDGs and/or interviews were conducted in each county. Meetings were scheduled with community residents in three separate groups: members of the general public, representatives from healthcare and human service organizations, and key community leaders. They were organized by St. Luke's Health staff via community partners. Twenty discussion groups/interviews were held across the region.

Overall, 197 individuals participated in CDGs or interviews across the region; some individuals participated in more than one CDG as their organizations serve multiple counties in the region. Extensive notes were taken during each discussion group. CDG data were analyzed for common themes, which provided context to related secondary data. All CDGs or interviews used the following questions to guide the discussion:

- *Describe your community.*
- *What are the most important issues or problems your community is facing?*
- *What are the key resources in your community?*
- *How has your community come together in the past to address important issues?*

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[7] https://www.healthypeople.gov/

- *What advice would you give to a group wanting to address any issues we have discussed today in order for them to be successful?*

SECONDARY DATA FINDINGS

This document presents the 2019 regional assessment findings for the seven counties served by CHI St. Luke's Health-Memorial. When referencing the seven counties as a whole we will use the term "region" due to the lack of a specific local term used to refer to these specific seven counties as a whole.

Population Characteristics
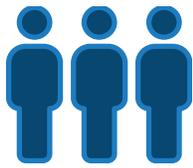
Population dynamics are an important factor to understanding population health status. As the local population changes through growth or aging, for example, the particular health issues impacting the population may change as well. Here we describe the population characteristics of the seven county region covered by this assessment.

Based on the U.S. Census Bureau's 2017 estimate, the population of the St. Luke's seven county assessment region was estimated at 228,930 people, which represented an increase of 3,020 people or 1.3% since the 2010 Census. In that same time, individual county growth varied from –6.9% for San Augustine County to +8.3% for Polk County. With the exception of Polk County, the region saw very small or even negative growth, the opposite of both the state of Texas and the United States, both of which grew by 12.6% and 5.5%, respectively.

The Texas State Demographer's Office provides 2025 population projections for counties. The regional projections indicate a continuation of the current trends of both population growth and loss (see Table 1). By 2025, the regional population is estimated to reach 231,288, an increase of 1.1% from 2017. Within the region however, growth/loss rates vary substantially. Angelina County is projected to grow by nearly 4,000 or 4.5%. At the other extreme, Sabine County is expected to continue to see population decline to less than 9,500 or a -9.5% population loss using the current estimate. Texas is expected to continue its growth and by 2025 increase by 13.8% over 2017's population. The U.S. growth rate is expected to be 5.9% for the same period.

**Table 1. Population Estimates and Growth of Counties
in the St. Luke's Assessment Region[8, 9, 10]**

	2010	2017 Estimate	% Change (2010-17)	2025 Estimate	% Change (2017-25)
Angelina County	86,771	87,805	1.2%	91,749	4.5%
Houston County	23,732	23,021	-3.0%	22,081	-4.1%
Jasper County	35,710	35,561	-0.4%	35,076	-1.4%
Polk County	45,413	49,162	8.3%	50,926	3.6%
Sabine County	10,834	10,461	-3.4%	9,468	-9.5%
San Augustine County	8,865	8,253	-6.9%	8,164	-1.1%
Trinity County	14,585	14,667	0.6%	13,924	-5.1%
Region	225,910	228,930	1.30%	231,388	1.1%
Texas	25,145,561	28,304,596	12.6%	32,204,904	13.8%
United States	308,745,538	325,719,178	5.5%	345,084,551	5.9%

Age and Gender

Age and gender are among some the factors most closely linked to health status and are displayed in Table 2. The 2018 median age for Texas was 34.3 years, with regional variation by county ranging from 52.1 years for Sabine County to 36.8 years in Angelina County. The region was 49.6% female. Within the region, we again see variation by county. Angelina and Trinity Counties have higher proportions of females (51.3% and 51.5%, respectively) when compared to Houston and Polk Counties (46.6% and 46.1%, respectively).

It is also useful to examine the proportion of the population in the specific age groups (see Table 3). Within the region, Angelina County stands out from the other counties with respect to its age distribution. A lower median age than the rest of the region, Angelina County's 2017 estimated age distribution was similar to Texas and the U.S. than the other counties in the region. Persons in Angelina County in the groups "under age five," "five to nine," "10 to 14," and "15-19," have a larger proportion of persons in these age groups than the rest of the region.

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[8] https://www.census.gov/quickfacts/fact/table/US/INC110217
[9] https://demographics.texas.gov/Data/TPEPP/Projections/
[10] https://www.pewsocialtrends.org/2008/02/11/us-population-projections-2005-2050/

Table 2. Median Age and Percent Female Population of Counties in St. Luke's Assessment Region[8]

	Median Age	% Female
Angelina County	36.8	51.3%
Houston County	44.6	46.6%
Jasper County	40.4	50.5%
Polk County	43.4	46.1%
Sabine County	52.1	50.8%
San Augustine County	48.9	50.7%
Trinity County	48.5	51.5%
Region	49.6	50.4%
Texas	34.3	50.3%
United States	37.8	50.8%

The region exceeded the proportion of Texans in the 45 and older age groups, and all counties but Angelina County had higher proportions than the national rates for the same groups. Proportions of persons ages 65 and older in the region were older than those in Texas and the U.S. and again. In fact, Sabine, San Augustine, and Trinity Counties were all more than double the state rate (29.9%, 24.5% and 26.0% compared to 11.7%). As expected with a low median age and a high proportion of those under age 25, Angelina County had the fewest residents in this age group with only 13.9% of residents aged 65 and older. Table 3 provides detailed information on age group breakdowns by county.

Table 3. Age Distribution by County for the St. Luke's Assessment Region[8]*

	Angelina County	Houston County	Jasper County	Polk County	Sabine County	San Augustine County	Trinity County	Region	Texas	United States
Persons under 5 (age 4 or less)	7.0%	5.4%	6.2%	5.5%	4.8%	5.1%	5.3%	6.1%	7.2%	6.1%
Age 5-9	7.5%	5.5%	6.4%	5.5%	5.1%	4.7%	6.7%	6.4%	7.4%	6.4%
Age 10-14	7.2%	5.4%	8.0%	6.1%	4.9%	6.4%	5.8%	6.7%	7.4%	6.5%
Age 15-19	7.0%	5.1%	5.9%	6.0%	5.0%	7.0%	6.1%	6.3%	7.1%	6.6%
Age 20-24	6.5%	6.1%	6.3%	5.6%	3.2%	3.3%	3.7%	5.8%	7.2%	7.0%
Age 25-34	12.6%	10.6%	11.4%	11.4%	10.9%	9.5%	9.2%	11.5%	14.6%	13.7%
Age 35-44	12.2%	12.8%	10.8%	11.6%	8.3%	9.1%	9.9%	11.5%	13.5%	12.7%
Age 45-54	12.8%	14.5%	13.1%	13.7%	11.6%	14.2%	12.6%	13.2%	12.8%	13.4%
Age 55-64	12.1%	14.2%	13.7%	15.9%	16.4%	15.7%	15.4%	13.9%	11.1%	13.7%
Age 65-74	7.7%	11.3%	11.0%	12.4%	17.5%	14.3%	14.8%	10.7%	7.0%	8.6%
Age 75-84	4.4%	6.9%	5.1%	5.0%	8.7%	7.2%	9.3%	5.5%	3.4%	4.4%
Age 85 and older	1.8%	2.7%	2.4%	1.5%	3.7%	3.0%	1.9%	2.1%	1.3%	1.9%

*columns may not add up to 100% due to rounding.

Race and Ethnicity
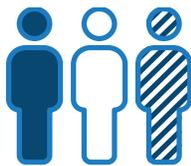
The topic of race and ethnicity is challenging to discuss in the context of health status largely because the typical measures, e.g., U.S. Census Bureau statistics, are viewed by many as inadequate. However, because of the common use of these measures across most national data sources, we have selected the following Census-based race/ethnicity clusters to report population data: "White, Not-Hispanic," "Black/African-American, Not Hispanic" "Hispanic, Any Race" and "All Other Races, Not Hispanic."[11]

When we look at the region as a whole (see Table 4), 67.8% of the population were reported as White, Not-Hispanic, 15.0% reported as Black/African-American, Not Hispanic, 15.0% as Hispanic, Any Race, and 1.5% as All Other Races, Not Hispanic. The region more closely reflects the racial/ethnic composition of the United States

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[11] A significant example of the limitations of working with Census Estimates using this race/ethnicity scheme is that Native American/American Indian groups, such as the Alabama - Coushatta Tribe, many of whom live in the St. Luke's Assessment region, are not included as a separate population.

than it does the State of Texas (with 60.7% White, Not Hispanic for the U.S. and 42.0% for the State of Texas).

Among the counties in the region, some variation in racial/ethnic categories can be found. However, the region is predominantly White, Not Hispanic, comprising as high as 86.1% in Sabine County to low of 60.7% in Angelina County. The Black/African-American, Not Hispanic population is found in higher proportions in Houston and San Augustine counties (25.7% and 22.0%, respectively), and are lowest in Sabine (7.1%) and Trinity (9.5%) counties. Sabine and Jasper counties have the lowest Hispanic, Any Race population rates at 4.5% and 6.7%, respectively; Angelina (22%) and Polk (15.3%) counties have the highest. All counties in the region have a similar proportion of All Other Races, Not Hispanic racial/ethnic group which are all in lower proportions than that of Texas (2.0%) and the U.S. (2.7%).

Table 4. Racial and Ethnic Distributions of the Counties in St. Luke's Assessment Region[8]*

	White, Not-Hispanic	Black/African-American, Not Hispanic	Hispanic, Any Race	All Other Races, Not Hispanic
Angelina County	60.7%	15.4%	22.2%	1.3%
Houston County	61.8%	25.7%	11.0%	1.3%
Jasper County	74.8%	16.3%	6.7%	1.6%
Polk County	70.9%	10.4%	15.3%	1.6%
Sabine County	86.1%	7.1%	4.5%	1.7%
San Augustine County	69.1%	22.0%	7.1%	1.8%
Trinity County	78.5%	9.5%	9.7%	1.8%
Region	67.8%	15.0%	15.0%	1.5%
Texas	42.0%	12.7%	39.4%	2.0%
United States	60.7%	13.4%	18.1%	2.7%

*columns may not add up to 100% due to rounding.

Household Composition

In 2017 there was an estimated 81,812 households in the St. Luke's seven county region. Table 5 illustrates that among these households, there were 2.2% (n=1,820) male single head of household with children under the age of 18, while 5,999 (7.3%) were female single head of household with children under 18. The highest rate for female single head of household with children under 18 was in Angelina County at 9.3% and the lowest rate was in Sabine County at 3.6%.

**Table 5. Household Composition of Counties
in the St. Luke's Assessment Region[8]**

	Percent Female Single Head of Household with Children <18	Percent Male Single Head of Household with Children <18	Total Households
Angelina County	9.3%	2.8%	30,931
Houston County	7.0%	1.5%	8,328
Jasper County	5.3%	2.0%	11,974
Polk County	7.4%	2.6%	17,632
Sabine County	3.6%	1.5%	3,811
San Augustine County	5.2%	1.2%	3,202
Trinity County	5.0%	0.6%	5,934
Region	7.3%	2.2%	81,812
Texas	7.8%	2.4%	9,430,419
United States	6.8%	2.3%	118,825,921

Education

Education is widely recognized as one of the primary social determinants of health. The St. Luke's region has a lower proportion of residents with a college degree (14.2%) than either Texas (28.7%) or the U.S. (30.9%). Within the region, the rate varies from a low of 11.6% in Jasper County to a high of 16.7% in Angelina County, yet both are significantly lower than Texas or U.S. The high proportion of college degrees in Angelina County is likely driven by the presence of Angelina College. They also have a population with the lowest proportion of residents with less than a High School education at 15.3%, whereas Sabine County has the highest rate at 41.7%.

Educational attainment is low in this region with more than 20% of the residents having less than a high school education in four counties within the region – Sabine (41.7%), Houston (26.8%), Polk (22.5%), and San Augustine (21.7%) Counties. See educational breakdown by county in Table 6 for further details.

**Table 6. Educational Attainment of Counties
in the St. Luke's Assessment Region[8]**

	Less than H.S.	H.S. Graduate	Some College	B.S. or higher
Angelina County	15.3%	81.1%	25.3%	16.7%
Houston County	26.8%	81.6%	23.3%	14.5%
Jasper County	15.4%	85.9%	22.5%	11.6%
Polk County	22.5%	78.1%	22.4%	12.3%
Sabine County	41.7%	86.0%	25.0%	14.4%
San Augustine County	21.7%	80.0%	22.0%	12.1%
Trinity County	19.1%	83.5%	25.7%	11.7%
Region	19.7%	81.6%	23.9%	14.2%
Texas	15.7%	82.8%	22.1%	28.7%
United States	13.4%	87.3%	20.8%	30.9%

Employment and Home Ownership

A frequent issue raised in CDGs was unemployment. This area of East Texas has seen losses of large employment opportunities such as hospital and factory closings, despite declines in the state and national unemployment rates. Unemployment rates for Texas counties in December 2018 were reported as shown in Table 7. The St. Luke's regional unemployment rate of 4.9% was higher than the rate for the entire state at 3.7% and nation at 3.9%. All counties with the exception of Houston County (3.2%) were above the state and national rates, with the highest in Sabine County at 8.1%, more than double that of the state (3.7%) and nation (3.9%).

Nearly all of the regional CDGs also reported safe, affordable housing as significant concerns for county residents. The Owner Occupied Housing rate reported by the Census Bureau is commonly used as a proxy for affordability of housing. Interestingly, the 2017 estimated Owner Occupied Housing rate for this region was 72.2%, higher than the State rate of 62.0% and the national rate of 63.8%. All of the St. Luke's Health region counties fall in the Texas Department of Housing and

Community Affairs Region 5 which is reported to have the second highest regional home ownership rate in the state[12]. However, the value of owned homes falls far below Texas ($151,500) and U.S. ($193,500) values with a regional average home value of $87,014. This suggests that while a higher proportion of residents own their homes, the quality of those homes (based on value) is lower.

To examine this more closely, data from the County Health Rankings project were used to determine the percentage of residents living in homes with Severe Housing Problems. Severe housing problems is defined as the "percentage of households with at least 1 of 4 housing problems: *overcrowding, high housing costs, lack of kitchen facilities,* or *lack of plumbing facilities*[4]." As can be seen in Table 7, all of the counties in the region report lower percentages of households with severe housing problems than the state or nation.

So, we are left with a contradiction between community perceptions reported in the CDGs and the data reported by the Census Bureau. Both data sources have limitations: CDGs are reflective of the perceptions of those in attendance, and while accurately reported, may be biased or represent only limited points of view. The Census measure for "housing problems" is also limited in that "high housing costs" may be underreported, as previously discussed. As a result, users of this report are encouraged to look into affordable housing more thoroughly as a community issue.

Household Income

Also shown in Table 7, and closely related to employment and home ownership, is household income. The per capita income reported by the Census Bureau's 2017 estimate was $21,513 for the assessment region, varying among the counties from $17,884 in Houston County to $23,023 in Polk County. None of the counties exceeded the state or national per capita income rates of $28,985 and $31,177, respectively.

Median household income, which is the income representing the middle of the income distribution (not the numerical average) was reported to be $42,104 for the region. That amount was approximately $15,000 less than the state rate and slightly more than $15,000 less than the national rate. Variation among the counties in the region may again be attributed to Angelina County having both the largest hospital in the region (a large employer), as well as the mining, quarrying, and oil and gas industry. It had the highest median household income in the region at $46,472. The lowest rate reported was for San Augustine County at $32,394.

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[12] Texas Department of Housing and Community Affairs (2019). *The State of Texas low income housing plan and annual report.* Austin, TX: Texas Department of Housing and Community Affairs.

The Census Bureau estimates the percent of the population living at or below the Federal Poverty Level. The federal poverty level (FPL) for 2017 was set at $24,600 for a family of four[13]. That rate for the assessment region was 19.9% of the population. Percentages of the population living at/below 100% of the FPL by county varied from a low of 18.0% in Polk County to a high of 22.3% in Houston County.

Table 7. Unemployment, Home Ownership, and Income Characteristics in St. Luke's Assessment Region[4,8]

	Unemployment Rate	Owner Occupied Housing Rate	Percent Severe Housing Problems	Per Capita Income	Median Household Income	Persons at/below 100% of FPL
Angelina County	4.3%	66.0%	17%	$21,974	$46,472	20.0%
Houston County	3.2%	68.7%	16%	$17,884	$33,552	22.3%
Jasper County	6.5%	75.1%	12%	$21,402	$41,960	20.0%
Polk County	4.8%	76.7%	15%	$23,023	$43,427	18.0%
Sabine County	8.1%	88.0%	13%	$20,876	$33,561	20.2%
San Augustine County	6.3%	79.2%	16%	$21,066	$32,394	21.6%
Trinity County	5.2%	77.8%	12%	$20,369	$37,398	21.0%
Region	4.9%	72.2%	15%	$21,513	$42,105	19.9%
Texas	3.7%	62.0%	18%	$28,985	$57,051	13.0%
United States	3.9%	63.8%	18%	$31,177	$57,652	11.0%

Population Conclusions

In summary, the St. Luke's Health assessment region had a population growth that is stable, but with both negative and positive growth in individual counties.

Differences in county demographics are important to note. For instance, Angelina County had a younger population with more females, while Polk County's population was primarily male. Houston, Sabine, San Augustine, and Trinity Counties had older populations.

The distribution of age groups also varied among the counties with similarities in distribution creating three groupings of the region; Angelina looks different from Houston, Jasper, and Polk Counties which differ from Sabine, San Augustine, and

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[13] https://aspe.hhs.gov/2019-poverty-guidelines

Trinity Counties. Racial/ethnic diversity was not prevalent in the region when compared to the state and nation. As such, the region appears mostly White, Not Hispanic which could result in overlooking existing health disparities with respect to race/ethnicity. Residents of the region tend to be less educated than the state or nation, and per capita and median household incomes are lower than the averages for the state and nation.

Mortality

Although the leading causes of death are generally the same in most American communities, subtle differences can be found that may influence prioritization of issues for population health improvement efforts. Data from a variety of sources were examined to identify any such variations in the St. Luke's Assessment region.

Table 8 summarizes key findings related to mortality across all counties. Data for the entire State of Texas were used as a frame for comparisons. Because some populations are so small and/or some diseases so infrequent, some agencies do not report specific numbers. This avoids the risks of unreliable statistical analysis and/or the use of that data for discrimination in a variety of ways (e.g., "victim blaming"). As a result, however, some "cells" in the table include the statement "Not reported."

Table 8. Selected Mortality-related Community Health Status Indicators For St. Luke's Assessment Region (mortality rates per 100,000 population)*

Indicators	Angelina	Houston	Jasper	Polk	Sabine	San Augustine	Trinity	Texas
Premature Death: All races	446.7	417.5	480.5	528.0	560.5	628.7	535.9	341.3
Premature Death: Black	698.5	498.9	634.8	522.8	1019.6	933.7	736.2	
Premature Death: White	455.8	400.5	475.9	569.7	539.3	577.8	551.8	
Premature Death: Hispanic	187.4	NR	NR	273.3	NR	NR	NR	
Length of Life Ranking (out of 242 counties)	147	152	200	229	241	240	228	NR

*Data presented in RED boxes indicate significantly higher (worse) rates than the State overall. Data in GREEN boxes are significantly lower (better) than the State. NR=not reported

In comparison to the overall Texas premature death rate across all racial/ethnic groups, persons identified as Hispanic of any race in Polk and Angelina Counties had lower premature death rates. Premature death rates usually refer to years of potential life lost. County Health Rankings revealed Sabine and San Augustine Counties as two of the counties with the most years of potential life lost ranking

each counties' length of life as #241 and #240 (respectively) out of the 242 counties ranked. Table 8 illustrates premature death rates and length of life rankings. Cancer deaths are a concern for the region as well (see Table 9). Polk County had the third highest number of cancer related deaths per 100,000 in Texas (230.0/100,000), according to the Texas Cancer Registry. Sabine County had 210.1 deaths from all types of cancer per 100,000 positioning it at the sixth highest rate in Texas, followed by Trinity County in eighth with 207.7 deaths per 100,000. Polk, Sabine, and Trinity Counties are of considerable concern. Texas Cancer Registry revealed each of these counties have some of the highest cancer rates in Texas related several types of cancers; some county rates by cancer type were more than twice that of the state. For example, in Texas (37.3/100,000), with respect to lung cancer, Trinity and Polk Counties had the second (77.4/100,000) and third (74.2/100,000) highest mortality rates, followed by Sabine and San Augustine Counties at #13 (63.7/100,000) and #14 (63.6/100,000).

Table 9. Selected Mortality-related Community Health Status Indicators For St. Luke's Assessment Region (mortality rates per 100,000 population)*

Indicators	Angelina	Houston	Jasper	Polk	Sabine	San Augustine	Trinity	Texas	United States
Heart Disease Deaths[14]	189.4	196.7	239.9	283.1	238.5	179.8	253.7	169.7	186.4
Cancer Deaths[15]	172.8	158.2	179.3	230.0	210.1	177.7	207.7	153.7	143.8
Stroke Deaths[14]	101.7	33.7	53.7	63.7	54.5	59.2	49.8	42.1	42.8
Respiratory Disease Deaths[14]	44.8	54.8	73.7	74.5	59.3	75.5	69.4	40.4	47.8
Accidents[14]	43.5	47.8	63.1	72.4	75.8	NR	60.2	37.8	49.9
Alzheimer's Disease Deaths[14]	40.4	51.8	61.7	57.2	34.6	NR	NR	35.2	34.4
Diabetes Deaths[14]	25.0	NR	23.6	27.0	NR	79.6	NR	20.9	24.3
Child Mortality[16]	54.56	56.39	43.33	54.81	NR	144.20	NR	51.52	26.0

*Data presented in RED boxes indicate significantly higher (worse) rates than the State overall. Data in GREEN boxes are significantly lower (better) than the State. NR=not reported

With a few exceptions (deaths from stroke in Houston County, deaths from Alzheimer's Disease in Sabine County, and deaths of children in Jasper County –

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[14] http://healthdata.dshs.texas.gov/HealthFactsProfiles_14_15
[15] https://www.cancer-rates.info/tx/
[16] http://www.countyhealthrankings.org/app/texas/2012/overview

which are all lower than the State's rates for these diseases), premature death rates in the assessment region are higher than the State in every category. Unfortunately, this is reflective of the impact of lower incomes, less access to care, lower educational attainment, and other social determinants of health.

Morbidity

Examining data on leading causes of morbidity identified both counties and diseases which warrant further exploration. As can be seen in Table 10, two counties have HIV prevalence rates higher than that of the state. Houston County reported 729 per 100,000 population, and Polk County reported 422; the Texas rate was 369 per 100,000. Across the region, diabetes prevalence rates exceed the state's overall rate, with Angelina, San Augustine and Trinity Counties having the highest rates.

Cancer incidence is of particular concern in this region. For age-adjusted invasive cancer of any kind, the most current data from the Texas Cancer Registry lists Polk County as having the highest cancer rate in Texas (576.4/100,000). Trinity County has the fourth highest in the State at 500.0/100,000 cases, followed by Houston County ranked as 5th, and Jasper is 11th.

**Table 10. Selected Morbidity Rates
for St. Luke's Assessment Region (rates per 100,000 population)*[15,17,18,19]**

Indicators	Angelina	Houston	Jasper	Polk	Sabine	San Augustine	Trinity	Region	Texas	United States
HIV Prevalence Rate	196	729	157	422	100	140	226	362	369	340
Diabetes Rate	14%	11%	13%	12%	13%	15%	14%	13%	10%	9.4%
Cancer Prevalence (All types)	466.5	490.5	481.8	576.4	461.2	414.9	500.0	484.5	407.8	439.2
Skin Cancer Rate	14.1	11.5	17.2	24.1	NR	NR	29.1	19.2	13.9	12.7
Lung Cancer	72.8	71.1	69.4	99.7	78.2	77.7	95.6	80.64	51.9	69.5
Breast Cancer	96.8	120.7	106.7	141.1	91.4	108.8	104.7	110.0	112.2	125
Colorectal Cancer	39.2	41.7	55.8	48.9	46.5	31.0	46.5	44.2	37.7	38

*Data presented in RED boxes indicate significantly higher (worse) rates than the State overall. Data in GREEN boxes are significantly lower (better) than the State. NR=not reported

[17] https://gis.cdc.gov/grasp/nchhstpatlas/main.html?value=atlas
[18] https://www.cdc.gov/hiv/basics/statistics.html
[19] https://www.cdc.gov/diabetes/data/index.html

Although not all counties have data reported for all cancer types, skin cancer is clearly a concern in Trinity County where the incidence rate is more than twice that of the State; Trinity County also has the highest rates of skin cancer in Texas. Lung cancer is also much more common in the St. Luke's region counties than the State overall. The two highest rates of lung cancer in the state can be found in Polk and Trinity Counties (99.7 and 95.6, respectively). Breast cancer rates are higher in Houston and Polk counties than the rest of the region. And finally, only San Augustine County has a lower incidence rate for colorectal cancer than the State among the region's counties; Jasper County has the 10th highest rate of colorectal cancer in Texas.

Health Status
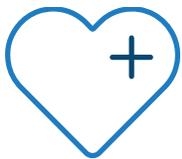
While understanding the leading causes of death and morbidities provides important perspectives on population health, understanding health status independent of disease states is actually more useful for purposes of planning interventions to improve the health of our communities. As a result, health status data were examined from several perspectives.

A common measure to gauge the health status of a population is to ask the question "In general, how would you describe your overall health?" with responses of "excellent," "very good," "good," "fair," or "poor." This question, when, combined with the additional questions about the number of days in which someone felt physical or mentally well, is a commonly used measurement scale to understand a population's Health Related Quality of Life[20]. Table 11 provides these data in detail.

When asked to describe their health, nearly one in five (18.1%) Texas residents reported "poor" or "fair" health. Within the St. Luke's assessment region those reporting poor or fair health ranged from the lowest percentage of 17% (Jasper) to a high of 23% (Angelina and San Augustine). With the exception of Jasper County, all other counties reported the same or worse condition than Texas. Since Angelina has a lower median age, and age is associated with health status, this suggests factors other than age are negatively impacting population health status.

The next perspective examined is based on responses from the public to the Center for Disease Control and Prevention's national survey – the Behavioral Risk Factor Surveillance System (BRFSS) which asked "How many days during the past 30 days was your (physical or mental) health not good?" Counties in the St. Luke's

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[20] https://www.cdc.gov/hrqol/methods.htm

assessment region all reported more days in the past 30 that their physical health was *poor*, than the 3.50 days for Texas and 3.01 for the United States. *Poor physical health days* ranged from a high of 4.50 days for San Augustine County to a low of 3.70 for Jasper County. For *poor mental health days* a similar distribution is found with the region again reporting more days of poor mental health than the 3.40 days for Texas and 3.1 days for the U.S. Within the region, the county with the highest number of *poor mental health days* is San Augustine County (4.20 days) and again Jasper County has the fewest reported *poor mental health days* at 3.70.

Table 11. Selected Health Status Indicators for Counties in the St. Luke's Assessment Region[4]

	Indicators		
	Overall Health Status as "Poor" or "Fair"	Number of "Poor" Physical Health Days per Month	Number of "Poor" Mental Health Days Per Month
Angelina County	23%	4.2	4.1
Houston County	20%	4.1	3.8
Jasper County	17%	3.7	3.7
Polk County	19%	3.8	3.8
Sabine County	18%	4.1	4.0
San Augustine County	23%	4.5	4.2
Trinity County	19%	4.1	4.0
Region	20%	4.0	3.9
Texas	18%	3.5	3.4
United States	12%	3.0	3.1

*Data presented in RED boxes indicate significantly higher (worse) rates than the State overall. Data in GREEN boxes are significantly lower (better) than the State.

Risk Factors

Overall health status is driven by both individual and social factors. Among the individual factors are health-related behaviors, called "risk factors," that contribute to the development of major chronic diseases. Risk factors can include smoking, obesity, and exercise, among others. Findings for selected risk factors are shown in Table 12.

Smoking

While national smoking rates have declined dramatically over the past forty years, there is still a significant proportion of adults who continue to smoke tobacco products[21]. The Texas and U.S. smoking rates were both currently 14%. In the assessment region, the smoking rate was higher. The regional rates approached the highest smoking rates in Texas with county rates that vary from 17-20%. San Augustine County had the highest smoking rate in the region of 20%. The remaining counties rates were 17% (Jasper, Polk, Sabine, and Trinity) or 18% (Angelina and Houston). All regional county rates were higher than the *Healthy People 2020* goal of 12%.

Smoking (tobacco use) continues to be single most preventable cause of death in the world today, and is a primary factor in most of the leading causes of death in the U.S. It also costs the U.S. billions of dollars each year in health care costs. Research shows those most likely to smoke have similar characteristics to the assessment region: males, middle aged adults, lower education, low socioeconomic status, and the uninsured[22].

Obesity and Food Environment
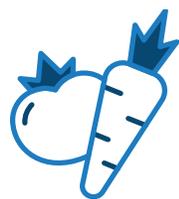
Obesity in the U.S. continues to impact approximately 85 million adults (26%). It is a contributing factor to many of the leading causes of death – heart disease, stroke, diabetes, and some cancers. Obesity-related medical costs in the U.S. topped $147 billion in 2008[23]. Obesity is a complex issue requiring complex interventions that address both physical activity and nutrition. The St. Luke's assessment region's rates were at or above both state and national obesity rates, ranging from 28% in Houston County to as high as 40% in Angelina County. With the exception of Houston and Jasper Counties, the region was well above the *Healthy People 2020* obesity goal of 30.5%.

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[21] https://www.cdc.gov/tobacco/data_statistics/fact_sheets/index.htm?s_cid=osh-stu-home-spotlight-001
[22] https://www.cdc.gov/tobacco/data_statistics/fact_sheets/adult_data/cig_smoking/index.htm
[23] https://www.cdc.gov/obesity/data/adult.html

The Food Environment is a measure that takes into consideration two factors: limited access to healthy foods and food insecurity. Limited access to healthy foods estimates the percentage of the population who are low income and do not live close to a grocery store. Living close to a grocery store is defined differently in rural and non-rural areas; in rural areas, it means living less than ten miles from a grocery store whereas in non-rural areas, it means less than one mile. Low income is defined as having an annual family income of less than or equal to 200 percent of the federal poverty threshold for the family size. Food insecurity estimates the percentage of the population who did not have access to a reliable source of food during the past year.

The Food Environment Index rates the food environment on a scale of one to ten, with ten as the best possible score. Overall, Texas had a Food Environment Index of 6.0, compared to the U.S. at 8.6. Within the counties of the St. Luke's assessment region, the Food Environment Index scores ranged from a low of 4.3 for Houston County to a high of 7.0 in Trinity County.

Breaking down Food Environment Index into the two contributing factors, only 10% of the U.S. population is food insecure and only 2% have limited access to healthy foods, compared to 16% and 9%, respectively, in Texas. Regionally, the average percentage of the population with food insecurity is 21%. The lowest rates were in Angelina, Polk, and Trinity Counties, where one in five (20%) experience food insecurity; the highest rate was in San Augustine County where 26% of the population is food insecure. Limited access to food in the St. Luke's assessment region ranges broadly. San Augustine and Trinity Counties have the lowest percentage of the population with limited access to food (1% and 2%, respectively), compared to nearly 1 in 4 (23%) in Houston County who have limited access to food.

Physical Inactivity and Access to Exercise Opportunities

Physical activity has repeatedly been shown to have positive health benefits; inactivity is a risk factor to overall health. Few Americans actually meet the recommended physical activity guidelines[24]. We examine the extent of participation in physical activities, as well as community characteristics that influence the rate of participation, such as adequate access to opportunities or locations for physical activity.

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[24] https://www.cdc.gov/physicalactivity/about-physical-activity/why-it-matters.html

Adequate access to opportunities/locations for physical activity looks at distance to recreational activities (parks, schools, commercial recreational facilities, etc.), depending on urban or rural designation. Physical inactivity is a measure that considers the percentage of those age 20 and over who report no leisure-time physical activity. However, the validity of this measure in rural areas is not without controversy. It is reported here because of its increasing use in planning and policy processes, but it warrants further discussion by the community.

As can be seen in Table 12, over 90% of those living in the best performing counties in the U.S. reported adequate access to locations for physical activity; fewer reported so in Texas (81%). However, rural communities often face challenges with locations to participate in physical activity when compared to their urban counterparts. In the St. Luke's assessment region, the percentage of the population reporting adequate access to locations or opportunities for physical activity ranged from a low of 42% in Polk County to a high of 85% in Sabine County.

Table 12. Selected Risk Factors for Major Chronic Diseases for Counties in the St. Luke's Assessment Region[4]

	Smoking	Adult Obesity	Food Environment Index	Access to Exercise Opportunities	Physical Inactivity
Angelina County	18%	40%	6.1	73%	33%
Houston County	18%	28%	4.3	55%	29%
Jasper County	17%	30%	6.0	56%	26%
Polk County	17%	32%	6.1	42%	27%
Sabine County	17%	31%	5.8	85%	28%
San Augustine County	20%	33%	5.9	79%	31%
Trinity County	17%	32%	7.0	82 %	29%
Texas	14%	28%	6.0	81%	24%
Top performing U.S. counties	14%	26%	8.6	91%	20%
Healthy People 2020 Target	12.0%[25]	30.5%[26]	-	-	20.1%[27]

[25] https://www.healthypeople.gov/2020/topics-objectives/topic/tobacco-use/objectives
[26] https://www.healthypeople.gov/2020/topics-objectives/topic/nutrition-and-weight-status/objectives
[27] https://www.healthypeople.gov/2020/topics-objectives/topic/physical-activity/objectives

One in five people in the U.S. were considered physically inactive, compared to 1 in 4 in Texas. All counties of the assessment area had rates of physical inactivity above the *Healthy People 2020* goal. Between one-quarter and one-third of the population in the assessment area were physically inactive. Angelina County had the greatest proportion of inactive populations (33%) and the lowest proportion (26%) was found in Jasper County.

Data for both measures indicate a region with fairly good access to opportunities for physical activity, yet a large portion of the community was physically inactive, an interesting paradox. Demographic characteristics do play a role in physical inactivity, therefore it is also important to consider each county's demographics when examining this risk factor further. For instance, Angelina County had 1 in 3 people physically inactive, yet it was the "youngest" of the counties in the seven county assessment region.

Alcohol Consumption, Alcohol-related Motor Vehicle Deaths, and All Motor Vehicle Crash Deaths

Alcohol consumption is an additional risk factor that is critical to review when defining health status for a community. Alcohol consumption is an important risk factor when we look at the proportion of the population who consume excessive amounts of alcohol (i.e., binge drinking or heavy drinking), due to its contribution to adverse health outcomes including hypertension, heart attacks, sexually transmitted infections, unintended pregnancy, fetal alcohol syndrome, sudden infant death syndrome, suicide, interpersonal violence, and motor vehicle crashes. Consuming more than four (women) or five (men) alcoholic beverages on a single occasion in the past 30 days is defined as binge drinking. Heavy drinking is defined as drinking more than one (women) or two (men) drinks per day on average[28].

As Table 13 depicts, the assessment region's average county rate was 17.3% of adults reporting excessive drinking. That is lower than the Texas rate (19%) overall. The rate within the region varies only slightly ranging from 14% in San Augustine County to 19% in Jasper County. Average alcohol impaired driving death rates for the region (21.2%) were higher than the top performing counties (13.0%), yet four counties had a rate lower than the state of Texas (28%), with the exception of Sabine, San Augustine, and Trinity Counties (38.0%, 35.0%, and 31.0%, respectively). The national rate for alcohol impaired driving death was rates less than 14%, over

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[28] https://www.cdc.gov/alcohol/index.htm

two times less than Sabine, San Augustine, and Trinity Counties. The overall motor vehicle crash death rate (number of fatalities per 100,000 population) for Texas was 13.0. The region's average rate was 28 per 100,000, more than double the state rate and three times that of the U.S. (9/100,000). The rate varies across the counties from a low of 20/100,000 in Angelina County to a high of 53/100,000 in San Augustine County.

Table 13. Alcohol Consumption and Motor Vehicle Deaths for Counties in the St. Luke's Assessment Region[4, 14]

	Excessive Drinking	Alcohol-related Motor Vehicle Deaths	All Motor Vehicle Crash Deaths (per 100,000)
Angelina County	18%	20%	20
Houston County	16%	17%	30
Jasper County	19%	18%	27
Polk County	17%	19%	32
Sabine County	15%	38%	41
San Augustine County	14%	35%	53
Trinity County	16%	31%	37
Region	17%	21%	28
Texas	19%	28%	13
United States	18%	29%	12
Top Performer U.S. Counties	13%	13%	9
***Healthy People 2020* Target**	-	-	12.4[29]

Health Care Resources

Health Insurance

The *Healthy People 2020* goal for health insurance stated that by 2020, **every** resident would have some type of health insurance. The 2010 Patient Protection and Affordable Care Act[30] was intended to advance this goal, but currently, many residents are still uninsured. Counties considered to be in the best shape with respect to health insurance across the U.S. were counties with only 6% of the population uninsured[4]; 19% of Texans were

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[29] https://www.healthypeople.gov/2020/topics-objectives/topic/injury-and-violence-prevention/objectives

[30] *Patient Protection and Affordable Care Act* (HR 3590) signed into law on March 22, 2010

uninsured, while the St. Luke's Assessment Region average was 18% in terms of those who lack health insurance. Across the seven counties in the assessment, percentages were consistent with the Texas average, varying from 18.0% in Jasper County to 24.0% in Polk and Trinity Counties. Additional county health rankings of uninsured residents are listed in Table 14 which follows.

Table 14. Percent of Population with No Health Insurance (under 65) for the St. Luke's Assessment Region

Angelina County	22%
Houston County	20%
Jasper County	17%
Polk County	23%
Sabine County	19%
San Augustine County	19%
Trinity County	22%
Region	21%
Texas	19%
United States	8.8%
Top Performing U.S. Counties	6%
Healthy People 2020 **Goal**[31]	0%

Health Resources and Medical Home

Issues with access to health care go beyond whether one is covered by health insurance or not. Provider availability, services, and the ability to obtain those services influence access and as a result, health status. Given the predominantly rural area of the St. Luke's assessment region, and Texas in general, the number of available health professionals is low resulting in many rural communities to be designated as health professional, mental health professional, or dental health professional *shortage areas*. Healthcare professional shortage areas are discussed as a ratio of the number of patients to one health care provider. Large ratios in some counties are an indication that given the size of the county's population, there may be essentially no health care providers in an entire county. The following section addresses these healthcare provider shortages.

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[31] https://www.healthypeople.gov/2020/topics-objectives/topic/Access-to-Health-Services/objectives

Among the counties in the St. Luke's Assessment region, most have been designated by the Health Resources and Services Administration (HRSA) as Health Professional Shortage Areas (HPSA). Using similar population to provider ratios and other considerations, counties or parts of counties can be designated on the basis of primary care providers, dental health providers, and mental health providers as HPSAs[32]. This designation provides for potential special considerations or access to additional funding and/or access to health care providers. The region's health professional shortage areas are illustrated in Table 15.

**Table 15. Health Professional Shortage Area Designations
In the St. Luke's Assessment Region[4]**

	Primary Care Physicians	Dental Health Professionals	Mental Health Specialists
Angelina County	Whole	Whole	Whole
Houston County	Whole	Some	Whole
Jasper County	Whole	Whole	Whole
Polk County	Whole	Some	Whole
Sabine County	Whole	None	Whole
San Augustine County	Whole	None	Whole
Trinity County	Whole	Whole	Whole

Primary Medical Care

According to County Health Rankings, the top performing county in the nation had a patient to provider ratio of 1,050 patients to every one provider (1050:1)[4]. Nearly 70% of Texas counties are designated as rural[33]. The current number of available primary care physicians in Texas is not sufficient to meet health care access needs. Currently, Texas had one physician per 1,670 patients, while the seven counties in this assessment had a ratio of 2,200 patients per one primary care physician. Angelina County had the best ratio of all seven counties (1600:1), which is expected given its role as a medical center for the region. Trinity County's ratio is alarming with a ratio of 7200:1, the most disproportionate ratio in the region at nearly 7 times that of the U.S. best performing counties. Table 16 details regional patient to provider ratio information.

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[32] https://www.ruralhealthinfo.org/charts/7?state=TX

[33] *State of Healthcare in Rural Texas .* (n.d.). Retrieved from Texas Department of Agriculture: https://texasagriculture.gov/ReportsPublications.aspx

**Table 16. Population to Primary Care Physician Ratio
in the St. Luke's Assessment Region[4]**

Angelina County	1600:1
Houston County	5700:1
Jasper County	2730:1
Polk County	1880:1
Sabine County	3460:1
San Augustine County	4240:1
Trinity County	7200:1
Region	2200:1
Texas	1670:1
Top Performing U.S. Counties	1030:1

Dental Care

Given that dental insurance coverage is not required by the 2010 Patient Protection and Affordable Care Act[34], and is often a costly expense, many individuals forego seeing a dentist on a regular basis. The situation is further compounded by the lack of dental specialists in rural areas, thus making accessibility even more of an issue. However, oral health issues are a significant contributor to health problems. A ratio of 1,280 patients per dentist was the ratio found in the nation's top performing counties. However, the ratio in Texas was 1,790 patients per dentist. Ratios for the St. Luke's assessment region are located in Table 17.

Access to dental care for residents of the St. Luke's assessment region was dramatically worse than the state - a ratio 4,473 patients per dentist. Of the seven counties making up the region, San Augustine County again had the lowest ratio with as many as 2,080 patients per dentist, while Trinity County's ratio was considerably disproportionate to other counties in the region at 14,440 patients per dentist which equates to one dentist to serve the entire county. Some communities have addressed the dental professional shortage area issue with programs such as fluoridation of the water supply, oral hygiene education in school districts, dental sealants[35], to name a few options.

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[34] *Patient Protection and Affordable Care Act* (HR 3590) signed into law on March3790:1 22, 2010
[35] Angelina Radiation Oncology Associates. (2019). *Columns for the Lufkin News*. Retrieved from
https://www.angelinaradiation.com/blog

Table 17. Dentist to Population Ratio for the St. Luke's Assessment Region[4]

Angelina County	2190:1
Houston County	3790:1
Jasper County	3240:1
Polk County	2990:1
Sabine County	2580:1
San Augustine County	2080:1
Trinity County	14440:1
Region	4473:1
Texas	1790:1
Top Performing U.S. Counties	1280:1

Mental Health

The demand for qualified mental health specialists has increased significantly in recent years, thus increasing the lack of qualified mental health specialists, particularly in rural populations, such as the St. Luke's assessment region. The desired ratio is that of the counties with the best ratio in the country (330:1), yet this is not found in the rural communities of the St. Luke's assessment region. Texas' ratio is three times that with a ratio of 1,010 patients per mental health specialist.

Looking at the region (see Table 18), the overall patient to mental health provider ratio was an average of 6,744 patients per provider. The best ratio among the counties was Angelina County with one mental health specialist for every 810 patients, which is still more than double the top performing counties in the U.S. Trinity County had the lowest performing ratio of 14,400 patients per mental health specialist which was practically equal to one for the entire county and 45 times the best performing counties.

**Table 18. Population to Mental Health Care Provider Ratios
for the St. Luke's Assessment Region[4]**

Angelina County	810:1
Houston County	5690:1
Jasper County	4460:1
Polk County	3190:1
Sabine County	10300:1
San Augustine County	8320:1
Trinity County	14440:1
Region	6744:1
Texas	1010:1
Top performing U.S. Counties	330:1

Preventive Hospitalizations and Preventive Screenings

This assessment examined information regarding preventive screening in addition to information reported about risk factors and disease. Preventive screenings include medical tests or other services that are used to detect and possibly prevent the onset of certain diseases. Screening has the capability to catch conditions early and limit long-term impacts of certain conditions. The U.S. Preventive Services Task Force publishes recommendations for preventive screenings. The U.S. County Health Rankings was used for the assessment of preventative health screenings with emphasis placed on the following: preventable hospital stays, diabetic monitoring, and mammography screening.

Preventable Hospital Stays

Preventable hospital stays occur when care does not adequately anticipate the possibility of admission or re-admission for selected conditions. Preventable hospital stays have become a focal point of health care in recent years as costs and quality of care have become more central to the national health care conversation. Preventable hospital stays divert hospital resources away from other cases, resulting in a more expensive and potentially less effective care for other patients, hospital providers, and insurers. The measure itself is the number of hospital stays for so-called ambulatory care sensitive conditions per 1,000 Medicare enrollees. Ambulatory care sensitive conditions include convulsions, chronic obstructive pulmonary disease, bacterial pneumonia, asthma, congestive heart failure, hypertension, angina, cellulitis,

diabetes, gastroenteritis, kidney/urinary infection, and dehydration. This measure is usually age-adjusted.

The U.S. top performing counties had preventable hospital stays of 35 per 1,000 Medicare enrollees. In comparison, Texas had an average of 53 preventable hospital stays per 1,000 as shown in Table 19.

Table 19. Preventable Hospital Stays (per 1,000 Medicare enrollees) in the St. Luke's Assessment Region[4]

Angelina County	53
Houston County	58
Jasper County	58
Polk County	50
Sabine County	88
San Augustine County	72
Trinity County	91
Texas	53
Top performing U.S. Counties	35

The seven county region all had a rate of preventable hospital stays that was above the Texas (53/1,000) rate, with the exception of Polk County (50/1,000). The rate for individual counties varied from the Polk County low to a high of 91 preventable hospital stays per 1,000 Medicare enrollees in Trinity County. Some factors may explain such a high number of hospital stays given that some counties in the St. Luke's assessment region lack adequate health care access such as few providers and long commutes to find health-related services in a relatively poor region. Conditions and diseases that could have been prevented through primary interventions can easily deteriorate to the point that necessitates a hospital stay.

Until recently, the Texas Department of State Health Services has monitored potentially preventable hospitalizations at an additional level of detail that allows us to examine the payor-mix, defined as the source of funding, and average costs per preventable hospital admission. Tables 19 displays some of this information.

As can be seen in Table 20, there are significant difference in admission rates and average costs for the selected conditions among the different counties in the region. There are a number of factors producing these differences including the

volume or frequency of occurrence, the local capacity to deal with particular problems, and real differences in costs of care.

Table 20. Average Cost of Care for Potentially Preventable Hospitalizations for the St. Luke's Assessment Region*

	Uncontrolled Diabetes Admissions	Rate per 100,000	Average Charge per Admission	Perforated Appendix Admissions	Rate per 100,000	Average Charge per Admission	Lower-Extremity Amputation Among Patients with Diabetes	Rate per 100,000	Average Charge per Admission
Angelina County	40	61.56	$48,728	12	27.91	$71,763	21	32.32	$200,901
Houston County	<5	NR	NR	5	45.45	$45,052	5	27.10	$42,063
Jasper County	22	81.95	$28,550	10	58.82	$61,698	6	22.35	$86,190
Polk County	15	39.53	$38,716	<5	NR	NR	15	39.53	$169,379
Sabine County	7	83.10	$5,647	<5	NR	NR	<5	NR	NR
San Augustine County	<5	NR	NR	<5	NR	NR	<5	NR	NR
Trinity County	<5	NR	NR	<5	NR	NR	6	51.63	$119,860

*Only limited data are available for the most current year, 2016; NR=not reported.

Diabetic Monitoring

Diabetes is a chronic disease that is typically associated with other diseases such as obesity and heart disease. Type 2 diabetes is the most common type, but with proper diet, exercise, and monitoring, Type 2 diabetes can be managed without the use of insulin. Therefore, a great emphasis is placed on diabetic monitoring to prevent Type 2 diabetes from progressing to a state where regular insulin injections are required.

The top performing U.S. counties nationwide had 91.0% of reported cases of Type 2 diabetes which followed through with regular diabetic monitoring. Texas had a statewide average of 84% which didn't vary much from the top performers in the U.S. The assessment region fell below this average proportion of consistent diabetic monitoring. The proportion of those monitoring ranged from as low as 73% to a high of 83%. This can be seen in greater detail in the Table 21.

Table 21. Diabetic Monitoring Rates in the St. Luke's Assessment Region[4]

Angelina County	81%
Houston County	82%
Jasper County	82%
Polk County	83%
Sabine County	73%
San Augustine County	76%
Trinity County	81%
Texas	84%
Top performing U.S. Counties	91%
Healthy People 2020 **Target**	70%

Mammography Screening

Mammography screening is an important preventative measure to prevent the advanced stages of breast cancer. According to the CDC, the breast cancer incidence rate among U.S. females was 124.8 per 100,000[36], and the Texas incidence rate among females was 112.2 per 100,000[15]. This makes breast cancer in females the top cancer for new cancer cases in the state.

Nationally, counties with mammography screening rates above 71.1% are considered the top performers in the U.S. The Texas rating for mammography screening varied greatly from the top counties standard with only 58.0% of eligible women participating in mammography screening. The *Healthy People 2020* goal is 81.1%. Of the seven counties of the region, with the exception of Angelina (62%) and Polk (65%) Counties, all counties in the region fall well below the state rate for mammography screening and far from the *Healthy People 2020* goal. The variation between counties was great - Polk County had the highest rate of mammography screening at 65.0% and San Augustine County had the lowest rate at 49.0%. Given Polk County has the third highest incidence rate of breast cancer in Texas, this high rate of screening most likely points to increased efforts to encourage participation in mammography screenings. Table 22 illustrates the mammography screening rates for the assessment region.

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[36] https://gis.cdc.gov/Cancer/USCS/DataViz.html

**Table 22. Mammography Screening Rates Among Women
in the St. Luke's Assessment Region[4]**

Angelina County	62%
Houston County	50%
Jasper County	56%
Polk County	65%
Sabine County	54%
San Augustine County	49%
Trinity County	56%
Texas	58%
Top performing U.S. Counties	71.1%
Healthy People 2020 **Target**	81.1%

Social Associations

In previous assessment surveys the social capital or social support that individuals experience has been examined as a factor impacting health status. The County Health Rankings system uses the number of "social associations" in an environment as a proxy for social capital or social support - the number and types of social resources an individual can depend on in moments of crisis. Those living in communities with larger numbers of social associations (per 10,000 population) have better risk outcomes due to a greater availability of resources and networks that reduce the severity of impact that a crisis can have on one's life. In essence, it acts as a social safety net. Social associations are defined as civic organizations, fitness centers, sports organizations, religious organizations, political organizations, labor organizations, business organizations, and professional organizations.

The U.S. best performing counties for social associations reported an average rate of 22.1 social associations per 10,000 population. The rate for Texas deviated greatly at 7.6 social associations, meaning at the state level, support is lacking. Overall, all counties have a higher rate than the state when it comes to social associations. As for the individual counties, they varied from 15.4 social association per 10,000 population for Sabine County to 10.0 for Polk County. Further data for social association can be viewed in Table 23.

Table 23. Social Association (per 10,000) in the St. Luke's Assessment Region[4]

Angelina County	11.1
Houston County	12.7
Jasper County	13.8
Polk County	10.0
Sabine County	15.4
San Augustine County	10.6
Trinity County	13.2
Texas	7.6
Top Performing U.S. Counties	22.1

Housing Issues

Housing issues include high cost of living, unaffordability, dilapidation, and poor maintenance. A healthy, stable, living environment is a determinant of health which affects overall health and wellness. Severe housing problems are defined as having one of the following four conditions: overcrowding, high housing costs, or lack of kitchen or plumbing facilities. The top performing counties in the U.S. had only 9.0% of households reporting severe housing problems. In Texas, the average rate was twice that amount at 18.0%, and the St. Luke's assessment counties all fell below the state rate. In terms of the individual counties, Angelina County had the highest rate of reported housing issues at 17.0%, while the Jasper and Trinity Counties reported the lowest rate at 12.0%. Even the lowest rate in the region was nearly three times the *Healthy People 2020* goal of 4.2%. The data can be viewed in Table 24.

Table 24. Severe Housing Problems Reported for the St. Luke's Assessment Region[4]

Angelina County	17%
Houston County	16%
Jasper County	12%
Polk County	15%
Sabine County	13%
San Augustine County	16%
Trinity County	12%
Texas	18%
Top Performing U.S. Counties	9%

Child Abuse and Neglect

Because of data collection challenges, child-health related issues are not often included in community health status assessments. We have chosen to include data made available by the Department of Child and Family Protective Services because of the quality of those data. Across the region child abuse investigations per 1,000 children were higher in every county when compared to Texas (37/1,000). The two counties with the highest rates were Polk (61.2) and Trinity (63.8) Counties. The lowest rates of child abuse investigations were found in San Augustine and Jasper Counties (41.4 and 43.4, respectively).

The rates of **confirmed** victims of child abuse or neglect were also higher than the state rate of 8.75 per 1,000 population. Counties exceeded the state rates with as high as 14.1 victims per 1,000 children in Houston County, 12.9/1,000 in Jasper County, and 16.3/1,000 in Trinity County. The lowest rate in the region was found in Angelina County (9.3/1,000). These data can be found in Table 25.

Table 25. Confirmed Child Protective Services Victims and Investigations in the St. Luke's Assessment Region[37]

	Child Population	Child Abuse Investigations	Child Abuse Investigations per 1,000 Children	Confirmed Victims of Child Abuse/Neglect	Confirmed Victims of Child Abuse/Neglect per 1,000 Children
Angelina County	23,931	1,063	44.4	224	9.3
Houston County	4,869	242	49.7	69	14.1
Jasper County	8,809	383	43.4	114	12.9
Polk County	9,933	608	61.2	121	12.1
Sabine County	1,993	95	47.7	21	10.5
San Augustine County	1,787	74	41.4	19	10.6
Trinity County	2,945	188	63.8	48	16.3
Texas	7,583,816	280,911	37.0	66,382	8.75

37

https://public.tableau.com/views/DFPS_OIDB_CPS1_1_pop18/CPS_TexasPopulation_Risk?:embed=y&:embed_code_version=3&:loadOrderID=0&:display_count=yes&publish=yes

Human Sexuality

Three factors related to human sexuality were included in this assessment and appear in Table 26. The percent of low birthweight babies is related to overall infant mortality and is largely preventable through adequate and timely prenatal care. Texas reported a low birthweight rate of 8.3% of total live births. Across the region, rates fluctuated between 7% and 10% where Polk, Sabine, and Trinity Counties had a low rates (7.8%, 7.6%, 7.9%, respectively), and San Augustine had 10% of total live births classified as low birthweight.

Table 26. Low Birthweight, Teen Births and Sexually Transmitted Infections in the St. Luke's Assessment Region[4]

	Percent Low Birthweight	Higher %LBW in minority populations	Teen Birth Rate (per 1,000)	Higher minority population teen births	Sexually Transmitted Infections (per 100,000)
Angelina County	8.6%	NR	77	NR	549.3
Houston County	9.6%	Yes	44	Yes	294.6
Jasper County	9.0%	Yes	52	Yes	385.4
Polk County	7.8%	Yes	59	Yes	364.6
Sabine County	7.6%	No	44	Yes	251.2
San Augustine County	10.0%	Yes	55	Yes*	336.8
Trinity County	7.9%	Yes	55	Yes	246.1
Texas	8.3%	Yes	41	Yes	523.6
U.S. (2017)	8.2%	Yes	15	Yes	145.1
Healthy People 2020 Target[38]	7.8%	NR	36.2	NR	NR

*Hispanic teen birth rate is almost double that of the county (103/1,000); NR=not reported

The teen birth rate was also examined for this assessment. Texas reported a teen birth rate of 41 births per 1,000 females ages 15-19. The St. Luke's counties all had higher teen birth rates than the state. Rates range from a low of 44 births per 1,000 females in both Houston and Sabine Counties to a high of 77 per 1,000 in Angelina County. The rates far exceed the *Healthy People 2020* goal of 36.2 teen births per 1,000. On closer examination, teen birth rates in nearly every county have disproportionate rates in Black and Hispanic communities. San Augustine County

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[38] https://www.healthypeople.gov/2020/topics-objectives/topic/maternal-infant-and-child-health/objectives

had the largest teen birth rate reported in this report - 103 births per 1,000 Hispanic teens aged 15-19.

The reader is cautioned to consider that low frequency events, such as low birthweight or teen births in smaller counties can vary widely from year to year because even small changes in the absolute numbers of these events can appear as large percent changes or differences.

The rates of sexually transmitted infections (STI) were examined for the region using the number of newly diagnosed Chlamydia cases per 100,000 population as representative of sexually transmitted infections. Texas' rate was 523.6 (per 100,000). Among the counties in the region, the STI rate varies from 246.1/100,000 in Trinity County to 549.3/100,000 in Angelina County.

Violent Crime

The criminal acts that are designated by the Federal Bureau of Investigation as violent crimes include: rape/sexual assault, murder, aggravated assault, and robbery.[39] The Texas Department of Public Safety expands upon these designations to include criminal counts of family violence and hate crimes.[40] Table 26 displays the 2017 criminal counts of violent crime for the United States, Texas, and the counties that make up the St. Luke's assessment region for the purposes of this report.

As shown in Table 27, the leading violent crime reported was that of family violence at 438 incidents, followed by assault at 395 counts, and rape/sexual assault at 150. Fewer than 100 instances of robbery (n=62), murder (n=13), or hate crimes (n=1) were reported[40]. Top performing U.S. counties had 73 total counts of violent crime.[41] Given its significantly larger population, Angelina County had the highest average count of violent crime recorded at 304, while San Augustine had the lowest average count at 33.[41]

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[39] https://www.fbi.gov/about-us/cjis/ucr/crime-in-the-u.s/2014/crime-in-the-u.s.-2014/offenses-known-to-law-enforcement/violent-crime

[40] http://dps.texas.gov/administration/crime_records/pages/crimestatistics.htm

[41]http://www.countyhealthrankings.org/app/texas/2016/compare/snapshot?counties=48_015%2B48_041%2B48_051%2B48_185%2B48_289%2B48_313%2B48_395%2B48_477

Table 27. Counts of Violent Crimes in Texas in the St. Luke's Assessment Region (2017)[39, 40]

	Family Violence	Hate Crime	Rape/Sexual Assault	Murder	Assault	Robbery	Total Violent Crime
Angelina County	26	NR	54	6	180	38	304
Houston County	70	NR	11	0	47	5	133
Jasper County	143	NR	27	1	19	11	201
Polk County	105	1	44	5	72	5	232
Sabine County	52	NR	8	0	32	2	94
San Augustine County	4	NR	2	1	26	0	33
Trinity County	38	NR	4	0	19	1	62
Region	438	1	150	13	395	62	1,182
Texas	195,315	190	18,112	1,412	75,347	32,120	322,496
United States	1.25 million	7,175	135,755	17,284	810,825	319,356	2.54 million

*NR=not rated

COMMUNITY DISCUSSION GROUP FINDINGS

Community discussion groups (CDGs) were held in all seven counties with three different audiences as described in the Methodology section of this report. These summaries present regional findings for the seven counties served by CHI St. Luke's Memorial-Health. When referencing the seven counties as a whole we will use the term "region" due to the lack of a specific local term used to refer to these specific seven counties as a whole.

Regional Community Discussion Group Summaries

Community Characteristics

When participants were asked to describe their community, with the exception of Angelina County, the area was described as rural and spread out. Angelina County was consistently described as a small urban hub of the region for area communities for access to medical care with two local hospitals, clinics, and other social service providers; also with opportunities for retail shopping such as larger, more affordable grocery stores. Most residents in the region considered the rural nature of the community as positive due to their proximity to Lufkin and central location to other larger urban areas such as Beaumont, College Station, Dallas, and Houston.

The region, located in the Piney Woods of East Texas, has an abundant number of sources for outdoor recreation, such as National Forests, State Parks, hiking areas, and lakes. The area was reported to attract an aging population as a popular retirement destination. Nearly every group described the region as a retirement community where people were moving to the quieter area with less congestion, or were those from the community who had moved away and were now "coming home" for retirement.

Discussion group participants described the region as friendly and helping in nature. A close-knit community was often a description provided during CDGs. Additionally, participants in the more rural counties such as Houston, Polk, Sabine, and San Augustine described the communities as family oriented. As a close-knit community, some variation of "everybody knows everybody; families know families; generations know generations" was mentioned frequently.

Some difference between counties were also captured. Several discussion groups in Angelina County described themselves as a growing community, yet other counties discussed the loss of residents to larger communities in search of higher education

and jobs, particularly those who are younger. Variation on issues of race/ethnicity were also discussed in some counties. Angelina CDGs were apt to describe their community as diverse, however, demographic data illustrates a predominantly White population. Minority populations in Angelina County do represent multiple races, however those only comprise approximately 40% of the population, similar to that of the U.S., but opposite of Texas which is 54% racial minorities. In Jasper County residents discussed a strong history of racism in the community that while somewhat improved, is always at hand. The nationally infamous hate crimes from nearly 20 years ago still linger as a stigma that impacts the community both at home and outside the county.

Community Issues

When asked about issues or problems in the community, several major themes were revealed in the region. The most common concerns included access to health care, mental health and substance abuse services, economic opportunities, education, safe and affordable housing, and homelessness. Access to health care encompassed issues echoed in the heath professional shortage area data for the region – primarily mental health services. However, dental care, health specialists, pediatric diabetes healthcare, and veteran services were also commonly mentioned. Many residents discussed frustrations with needing to travel to Lufkin to access healthcare and social services. Some CDG participants, particularly Sabine and Jasper Counties, reported that residents were more likely to utilize services in Beaumont or even Louisiana because it is faster or more available to them than traveling to Lufkin.

Mental health and substance abuse issues, as well as the need for treatment services in addition to those already available, remained a top issue discussed in nearly all communities. Mental health treatment was characterized, not only as not nearly enough available, but also as frustrating to access with travel, wait lists, and payor issues being some of the top problems for those needing help. For most immediate mental health needs, in more than one county (although this is reported nationwide), the most commonly used "provider" is law enforcement. Law enforcement participants expressed they lack capacity from training to personnel, to handle such issues. Thankfully, all praised the relationships between law enforcement, judicial offices, and the primary provider of mental health services in the region, Burke. Specifically in Angelina, Jasper, and Trinity Counties, the drug of choice and the issues associated with it such as crime and need for treatment, was methamphetamines. Mentioned as a typical issue in all counties was also alcohol and marijuana use, however most heavily emphasized and concerning to the residents, was methamphetamine production and use.

The remaining themes can be categorized as social determinants influencing health which are interconnected. In recent decades, the entire region has experienced a loss of industry and business that supported many families. Residents expressed frustration that interest of large corporations or industry relocating or establishing themselves in the area has not occurred, resulting in significant job losses for residents with no new opportunities for employment. Loss of employment is usually accompanied with loss of health insurance and a host of other issues that impact health, such as increased stress levels. Additionally, CDG participants presented a scenario where available employment opportunities are scarce and most do not require higher education, therefore, as mentioned earlier, much of the younger population leaves the community when looking for employment and, as most counties reported, they do not return. Additionally, a need for educational opportunities within the county was expressed, as what jobs are available are often technical or require specific skills, but do not require a college or university education. As such, opportunities for skilled laborer education opportunities are needed.

Associated with the economic struggles of the community with respect to business is the economic struggles of families. All counties were concerned over not only lack of employment options for those recently out of work, but also the lack of opportunities for families to change their socioeconomic situation due to many jobs having low pay. Poverty was reported as having a high prevalence in all communities. Outside of employment impacts on residents, many CDGs referenced a lack of affordable staple goods such as groceries and fuel. Further increasing the burden on low income families was a need to travel outside of their community for medical care, shopping, and/or entertainment. Associated with the issue of traveling to access services or goods was the lack of public transportation throughout the region.

Lack of homeless shelters and the homeless population was also mentioned in both Angelina and Houston County CDGs. Most of the residents discussing this issue were quick to note that the homeless population was not always the stereotypical homeless person, but more often a person who did not have a home and spent a few nights here and there, often referred to as couch surfing. This issue is logically impacted by the accompanying reference to the lack of safe and affordable housing for individuals and families in the same two counties.

Community Resources

Across the region, community discussion group participants were readily able to identify resources and assets within the community. Churches were often mentioned as a prominent resource within the region, with residents noting that churches and ministerial alliances served as the backbone to the region. Health care organizations, such as local hospitals and health clinics, were said to be assets to the community. Burke was mentioned in almost every discussion group as a resource for mental health care services. Some counties mentioned local school districts, community colleges, and universities as resources for their educational services as well as a community resource for collaboration with other organizations. City and county government entities were listed as resources, specifically the Deep East Texas Council of Governments (DETCOG) and chambers of commerce across the region, both of which provide various programs to improve population health. National parks and lake amenities were seen as extremely valuable resources, bringing tourism and providing the region with recreational activities such as fishing, boating and skiing.

Community Collaboration

Building upon the description of the region as friendly and giving, discussion group participants indicated that community residents were willing to volunteer when others in their community were in need of help. In fact, all groups agreed that if someone or a group was in need, it does not take long for the community to come together to collaborate to ensure the needs are met. The religious community has a strong presence in this area of Texas and were noted for their involvement in providing for the community from disaster relief to being the home to locally run food pantries, serving not only their congregations, but anyone in the community in need. Churches were a primary entity most often cited as the facilitator of community collaboration across the region. During times of crisis, churches provided shelter to residents affected by hurricanes and serving as a hub for donations. Other collaborative efforts named were those facilitated through the school districts, Rural East Texas Health Network (RETHN) and Community Resource Coordination Groups (CRCGs). In San Augustine County, the collaboration between Stephen F. Austin and Temple Foundation to develop a health resource center was noted as a collaborative effort that is still sustainable today.

Advice on How to Work in Communities

When asked for advice on how to work in their community, participants in every discussion group across the region advised newcomers to get to know the community and its residents. Most importantly, they recommended that if you wanted to work with the community, you should be physically present and build rapport with the residents. Furthermore, participants emphasized the importance of not duplicating efforts of existing organizations, and thus, those wanting to help should do their research and homework and work with existing organizations and programs toward a mutual goal. Specifically, residents indicated that newcomers should work with local churches, school districts, chambers of commerce and county/city officials, as these groups and individuals are the ones who typically lead decision making within the community. Organizations or groups should intend to bring high quality services and customer service to the region. When questioned about how to promote or advertise new services, residents suggested Facebook or local newspapers. Lastly, participants recommended that anyone attempting to address issues in the region should be dedicated to the cause and to not come in for just a short time but to take the time to build something sustainable.

SUMMARY OF KEY FINDINGS: CHI ST. LUKE'S HEALTH MEMORIAL – LIVINGSTON

Including Polk and Trinity Counties

Transportation is a significant barrier to access to care for residents.

- In every community, public transportation was described as inadequate.
- Individuals living in the more remote areas of the region travel approximately 50-60 miles to obtain medical care, depending on services needed.

The rural communities face substantial disparities in access to resources and services, as well as in health outcomes.

- All counties were a health mental health, or dental professional shortage area. Some counties such as Trinity, have as many as 14,400 patients to one health professional.

- Throughout the region, diabetes was an issue with all counties having a current prevalence rate higher than that of Texas.
- Mortality rates and health status indicators revealed a strong disparity in deaths among Blacks in Angelina, Sabine, San Augustine, and Trinity Counties, with rates more than double that of the state of Texas.
- Several counties in the St. Luke's assessment region had the highest rates of cancer by county in Texas, which often placed them in the top five or top 10 highest rates of morbidity and/or mortality for various types of cancers.
- Polk County had the highest rate of morbidity from cancer (all types) in the state, and the highest rates of lung cancer in Texas; they also had the third highest number of deaths per 100,000 in the state.

Declining industry is contributing to lack of jobs and population decline.

- Census Bureau data showed marked decline of the population in nearly all counties. However, this was countered somewhat by the influx of retirees.
- Historic businesses who previously employed residents have shut down or were bought by large corporations and subsequently closed, forcing residents to drive to other communities for work.
- With the lack of jobs in the area, younger residents that have pursued higher education beyond high school have no job options to return to, which contributes to the declining economy.

Poverty

- Poverty is among the most well documented "determinants" of health. Unfortunately, residents of Polk and Trinity counties had significantly higher rates of poverty than Texas and the United States overall. Within the region, Trinity had the highest rate of persons that lived below the Federal Poverty Level at 35% - more than one-third of the population. Polk County's rate was 28%, third lowest in the region, but still almost 9 percentage points higher than the rate for Texas.
- Unemployment and underemployment places families in situations where they cannot afford to meet their basic needs.

- Residents mentioned that there was a large homeless population in their community, including homeless living on the streets and homeless that depend on family and friends for shelter.

Mental health needs exceed the resources and services currently available.

- Although the region had notable mental health facilities located in every county, with the exception of Trinity County, the demand for services largely exceeds the capacity available.
- With limited facility space and the lack of transportation services, law enforcement resources were reported as overburdened with caring for mental health patients. They were often called on to transfer patients to county or state facilities which may take hours in drive and wait time.

Substance abuse, particularly methamphetamine and production of methamphetamines, is a significant concern.

- Individuals who have substance abuse disorder are often also diagnosed with mental health disorders and vice versa. This comorbidity increases the need for both substance abuse treatment and mental health care in the region.
- The unique landscape of the region has created remote areas for users to participate in drug abuse and production.

The collaborative nature of residents and organizations demonstrate a strong dedication for improving quality of life.

- All discussions groups indicated that churches were the backbone of the community, serving as a hub for collaboration, volunteerism and opportunity to help others.
- Existing groups and coalitions were mentioned throughout the assessment as active champions on behalf of the residents.

The laid-back setting of this region attracts and is home to a significant retirement population.

- The influx of an older population in conjunction with declining younger adult population sets the stage for the region to expect continued increase in chronic diseases and declining health status.

- As a large retirement community, older residents reported more time and resources to contribute to their community through volunteerism and collaborative efforts for addressing community needs.

SUMMARY OF KEY FINDINGS: CHI ST. LUKE'S HEALTH MEMORIAL – LUFKIN

Including Angelina, Jasper, and Houston Counties

Transportation is a significant barrier to access to care for residents.

- In every community, public transportation was described as inadequate.
- Angelina County was the only county to list public transportation as an option and this service is only available in Lufkin and Diboll.
- Individuals living in the more remote areas of the region reported the travel approximately 50-60 miles to obtain medical care, with some residents in Jasper County finding it easier to travel to Beaumont or Louisiana for care.
- Residents living in the southern half of Jasper County often travel to Beaumont to receive health care.

The rural communities face substantial disparities in access to resources and services, as well as in health outcomes.

- With respect to health behaviors such as smoking, obesity, food environment, physical activity, substance use, and reproductive health, Angelina County was ranked last in Texas. Simultaneously, Angelina County was ranked high for clinical care, coming in 50th out of 242 counties.
- Throughout the region, diabetes was an issue with current prevalence rates higher in all counties than Texas.
- Mortality rated health status indicators reveal a strong disparity in deaths to Blacks in Angelina, Sabine, San Augustine, and Trinity Counties, with rates more than double that of the state of Texas.
- Several counties in the St. Luke's assessment region have the highest rates of cancer in Texas, often landing in the top five or top 10 highest rates of morbidity and/or mortality for various types of cancers.

Declining industry is contributing to lack of jobs and population decline.

- Census Bureau data showed marked decline of the population in nearly all counties. However, this was countered somewhat by the influx of retirees.

- Industry present in the community usually requires skilled laborers. Vocational training programs are available in the area. However, participants reported they were underutilized.
- Historic businesses who previously employed residents have shut down or been bought by large corporations and subsequently closed forcing residents to drive to other communities for work.
- With the lack of jobs in the area, younger residents that have pursued higher education beyond high school have no job options to return to, which contributes to the declining economy.

Poverty

- Poverty is among the most well documented "determinants" of health. Unfortunately, residents of Angelina, Houston and Jasper Counties have significantly higher rates of poverty than Texas and the United States, overall. Within the region, Houston County had the third highest rate of persons living below the Federal Poverty Level at 22.3% - nearly one-quarter of the population. Jasper and Angelina Counties' rates were among the lowest in the region served by this hospital, but still higher proportions than the United States poverty rates.
- Unemployment and underemployment rates placed families in situations where they cannot afford to meet their basic needs.
- Residents mentioned that there is a large homeless population in their community, including homeless living on the streets as well as homeless that depend on family and friends for shelter.

Mental health needs exceed the resources and services currently available.

- Although the region had notable mental health facilities located in every county, with the exception of Trinity County, the demand for services largely exceeds the capacity available.
- With limited facility space and the lack of transportation services, law enforcement resources were reported as often overburdened by caring for mental health patients. They are often called on to transfer patients to county or state facilities which may take hours in drive and wait time.

Substance abuse, particularly methamphetamine and production of methamphetamines are significant concerns.

- Individuals who have substance abuse disorder are often also diagnosed with mental health disorders and vice versa. This comorbidity increases the need for both substance abuse treatment and mental health care in the region.
- The unique landscape of the region provides users with remote areas in which to participate in drug abuse and production.
- Methamphetamine use was considered the most problematic of all substance abuse in Houston and Jasper Counties and was repeated in many CDGs.

The collaborative nature of residents and organizations demonstrate a strong dedication for improving quality of life.

- All discussions groups indicated that churches are the backbone of the community, serving as a hub for collaboration, volunteerism and opportunity to help others.
- Existing groups and coalitions were mentioned throughout the assessment as active champions on behalf of the residents.

The laid-back setting of this region attracts and is home to a significant retirement population.

- The influx of an older population in conjunction with declining younger adult population sets the stage for the region to expect continued increase in chronic diseases and declining health status.
- As a large retirement community, older residents have more time and resources to contribute to their community through volunteerism and collaborative efforts for addressing community needs.

Historical events continue to contribute to racial segregation and stigma.

- Despite progressive strides and efforts to reduce racial disparities and segregation, some communities expressed concerns that their communities were still quite segregated. One example is that there are still communities where two ministerial alliances exist – one for black ministers and one for white.

- The lingering history in Jasper County of the murder of James Byrd, Jr., continues to follow this community twenty years later. The community expressed concern that this history has "marked" the community as undesirable, as well as negatively affected the community's reputation.
- The historical stigma is considered by many to deter newcomers from relocating to the community and preventing industry from developing in the area. This contributes to lack of jobs and continued economic decline.

SUMMARY OF KEY FINDINGS: CHI ST. LUKE'S HEALTH MEMORIAL – SAN AUGUSTINE

Including Sabine and San Augustine Counties

Transportation is a significant barrier to access to care for residents.

- In every community, public transportation was described as inadequate.
- Individuals living in the more remote areas of the region travel approximately 50-60 miles to obtain medical care, depending on services needed.

The rural communities face substantial disparities in access to resources and services, as well as in health outcomes.

- County Health Rankings for Sabine and San Augustine Counties revealed extremely poor health outcomes. Both counties fell within the five worst counties in Texas. This overall ranking of the counties is comprised of statistics related to premature death, health status indicators, and a host of other health factors.

Declining industry is contributing to lack of jobs and population decline.

- Census Bureau data show marked decline of the population in nearly all counties. However, this is countered somewhat by the influx of retirees.
- Industry present in the community usually requires skilled laborers. Vocational training programs are available in the area. However, participants reported they are underutilized.
- Historic businesses who previously employed residents have shut down or been bought by large corporations and subsequently closed forcing residents to drive to other communities for work.
- With the lack of jobs in the area, younger residents that have pursued higher education beyond high school have no job options to return to, which contributes to the declining economy and population.

Poverty

- Poverty is among the most well document "determinants" of health. Unfortunately, residents of Sabine and San Augustine

Counties have significantly higher rates of poverty than Texas and the United States overall. Within the region, San Augustine had the second highest rate of persons living below the Federal Poverty Level at 21.6 – approximately one in five residents. Sabine County's rate was only slightly lower at 20.2%, nearly 10 percentage points higher than the rate for Texas (13%).

- Unemployment and underemployment places families in situations where they cannot afford to meet their basic needs.

Mental health needs exceed the resources and services currently available.

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- With limited facility space and the lack of transportation services, law enforcement resources were reported as often overburdened with caring for mental health patients. They are often called on to transfer patients to county or state facilities which may take hours in drive and wait time.

Substance abuse, particularly methamphetamine and production of methamphetamines are significant concerns.

- Individuals who have substance abuse disorder are often also diagnosed with mental health disorders and vice versa. This comorbidity increases the need for both substance abuse treatment and mental health care in the region.
- The unique landscape of the region was reported as one that provides users with remote areas in which to participate in drug abuse and production, particularly methamphetamines.

Residents are concerned that there are limited recreational activities for youth.

- Residents discussed a variety of opportunities for youth engagement, however, they were centered around sports, FFA, 4H, YMCA – all things that cost money and require membership.

- Many of these recreational activities were reported to have scholarship options for those unable to afford the entrance/membership fees; however, this option is not widely communicated or known.
- Residents feel that having few organized recreational activities leave youth with idle time that contribute to participation in risky behaviors and crime.

The collaborative nature of residents and organizations demonstrate a strong dedication for improving quality of life.

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- Existing groups and coalitions were mentioned throughout the assessment as active champions on behalf of the residents.

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The geographical isolation in parts of the region contribute to poor living conditions for residents.

- Residents expressed concern for individuals living "beyond the Piney Woods curtain" in the more remote and isolated areas within the region. These residents are often forgotten or neglected due to their isolation. Isolation was cited as occurring for various reasons from extreme poverty, to lack of reliable transportation, to a tendency towards reclusiveness.
- Residents living in the more remote areas often have poor living conditions, including no electricity or running water and inadequate sewage system, which can all lead to poorer health outcomes.