CHRISTUS Good Shepherd Health System

Community Health Needs Assessment 2020-2022

About Texas Health Institute:

Texas Health Institute (THI) is a non-profit, non-partisan public health institute. Since 1964, THI has served as a trusted, leading voice on public health and healthcare issues in Texas and the nation. THI's expertise, strategies, and nimble approach makes it an integral and essential partner in driving systems change efforts. THI works across and within sectors to lead collaborative efforts and facilitate connections to foster systems that provide the opportunity for everyone to lead a healthy life.

Developed by:

9111 Jollyville Road, Suite 280
Austin, Texas 78759

TABLE OF CONTENTS

LIST OF TABLES, FIGURES, AND DATA SOURCES

EXECUTIVE SUMMARY

CHRISTUS Good Shepherd Health System is a non-profit, Catholic integrated health care delivery system that includes acute care hospitals and inpatient facilities in six counties in northeastern Texas. CHRISTUS Good Shepherd Health System's dedicated staff provide specialty care tailored to the individual needs of every patient, aiming to deliver high-quality services with excellent clinical outcomes. CHRISTUS Good Shepherd Health System works closely with the local community to ensure that regional health needs are identified and incorporated into system-wide planning and strategy. To this end, CHRISTUS Good Shepherd Health System commissioned Texas Health Institute to conduct and produce its 2020-2022 Community Health Needs Assessment, as required by law to be performed once every three years as a condition of 501(c)(3) tax-exempt status. This report fulfills those requirements for CHRISTUS Good Shepherd's hospitals in Longview and Marshall, Texas.

In this community health needs assessment, THI staff and CHRISTUS Good Shepherd Health System community stakeholders analyzed over 40 different indicators of health needs based on demographics and socioeconomic trends; measures of physical, behavioral, social, and emotional health; and risk factors and behaviors that promote health or produce sickness. The latter provided insight into social determinants of health operating in the report area, such as transportation, and food insecurity. Report findings combine secondary analysis from publicly available data sources, hospital utilization data, and input from those with close knowledge of the local public health and health care systems. All combined, these data present a comprehensive overview of unmet health needs in the region.

The voice of the community guided the needs assessment process throughout the life of the project, ensuring the data and analyses remained grounded in local context. Focus group and needs prioritization meetings ensured input from low income and minority communities and stakeholders representing those communities. Through an iterative process of community debriefing and refinement of findings, a final list of five prioritized health concerns were developed. These are summarized in the table below. This priority list of health needs and the data compiled in support of their selection lays the foundation for CHRISTUS Good Shepherd Health System to remain an active, informed partner in population health in the region for years to come.

Rank	Health Concern
1	Mental Health
2	Primary Care Access
3	Health System Performance
4	Homelessness
5	Employment

CHRISTUS Good Shepherd Health System Prioritized Health Needs, 2020-2022

INTRODUCTION

CHRISTUS Good Shepherd Health System (CGSHS) serves the health needs of communities in East Texas. CGSHS includes two medical centers: a 425-bed hospital in Longview, Gregg County and a 149-bed hospital in Marshall, Harrison County. CGSHS has Wound, Breast, Emergency, Endoscopy, Rehabilitation, Sleep, and Surgery Centers and two Home Health agencies located across Gregg, Harrison, and Rusk Counties. Outpatient facilities such as CHRISTUS Good Shepherd NorthPark Medical Plaza in Longview, and CHRISTUS Good Shepherd Emergency center in Kilgore offer programs and services in imaging, pediatrics, emergency care, and obstetrics and gynecology. CGSHS facilities draw patients living in their respective counties as well as patients living in surrounding counties such as Marion, Panola, and Upshur. These three counties combine with the Gregg, Harrison, and Rusk to compose the "report area" for this CGSHS's needs assessment.

In addition to these medical services, CGSHS includes a Life Center, Healthy Living Institute, and Spa to support prevention and disease management. CGSHS includes two foundations and helps train physicians, nurses, and allied health professionals. It's graduate medical education program, a partnership with the University of Texas Medical Center at Tyler, offers training opportunities for internal medicine residents to provide care to the patients CGSHS serves.

CHRISTUS Health is a Catholic health system formed in 1999 to strengthen the faith-based health care ministries of the Congregations of the Sisters of the Incarnate Word of Houston and San Antonio that began in 1866. In 2016, the Sisters of the Holy Family of Nazareth became the third sponsoring congregation to CHRISTUS Health. Today, CHRISTUS Health operates 25 acute care hospitals and 92 clinics in Texas. CHRISTUS Health facilities are also located in Louisiana, Arkansas, and New Mexico. It also has 12 international hospitals in Colombia, Mexico and Chile. As part of CHRISTUS Health's mission "to extend the healing ministry of Jesus Christ," CHRISTUS Good Shepherd Health System strives to be, "a leader, a partner, and an advocate in the creation of innovative health and wellness solutions that improve the lives of individuals and communities so that all may experience God's healing presence and love."[1]

Federal law requires all non-profit hospitals to conduct a Community Health Needs Assessment (CHNA) every three years to maintain their tax-exempt status. CHRISTUS Health contracted with Texas Health Institute (THI) to develop the CHNA report for CHRISTUS Good Shepherd Health System, a document that will fulfill the requirements set forth in IRS Notice 2011-52, 990 requirements for non-profit hospitals' community health needs assessments, and will be made available to the public. To complete its CHNA, the THI team and CHRISTUS Good Shepherd Health System leadership drew upon a wide range of primary and secondary data sources and engaged a group of community residents and stakeholders with special knowledge of vulnerable population groups and the local public health landscape. All together, these data and diverse perspectives provide insight into community health needs and priorities, challenges, resources and potential solutions.

[1] CHRISTUS Health. (2019). Our mission, values, and vision. Available at: http://www.christushealth.org/OurMission.

A CHNA ensures that CHRISTUS Good Shepherd Health System has made efforts to identify the unmet health needs of residents in its service region, examine barriers residents face in achieving and maintaining good health status and inventory health opportunities and assets available within the report area that can be leveraged toward the improvement of population health. The CHNA lays the foundation for future planning, ensuring that CHRISTUS Good Shepherd Health System is prepared to undertake efforts that will help residents of the local community attain the highest possible standard of health.

METHODOLOGY

REVIEW OF LITERATURE AND QUANTITATIVE DATA

THI staff conducted a literature review using previously published community health needs assessments and other reports focused on health in report region. These included regional assessments such as the Regional Needs Assessment released in 2018 by the Prevention Resource Center 4 and the Health Assessment and The Health Status of Northeast Texas released by the University of Texas Health Science Center at Tyler.[2,3] Findings from the literature review and from previous CGSHS's prior CHNA and progress reporting on initiatives launched in response were incorporated into project design, interviews, focus groups, and this report as applicable.

THI used a mixed-methods approach to data collection and analysis. Both qualitative and quantitative measures are drawn from primary and secondary data sources to ensure a comprehensive understanding of health needs and the potential for CGSHS to address those needs in collaboration with community partners. This mixed-methods approach is standard in all THI needs assessments and was used in concurrent needs assessments in four other CHRISTUS services areas in 2019.

CHNA development began with collection and examination of quantitative data from secondary sources. Unless otherwise specified, all data were accessed from Community Commons, a repository of community-level data compiled from archival sources including, but not limited to, the American Community Survey, U.S. Census Bureau, the CDC Behavioral Risk Factor Surveillance System, and the National Vital Statistics System. The most recent data available from this source were examined for the report area in aggregate and by county across several dimensions, including sociodemographics, health risk behaviors, access to care and clinical outcomes. THI subsequently obtained internal data from the two CGSHS acute care hospitals

[2] Regional Needs Assessment. (2018). Region 4 Prevention Resource Center. Available at: https://www.etcada.com/rna.
[3] The Health of Northeast Texas 2016. UT Health Science Center at Tyler. Available at: https://utsystem.edu/sites/default/files/news/assets/northeasttx-health-status-report-2016.pdf

and conducted a descriptive analysis. Together, THI staff reviewed over 40 measures and categorized them for higher-level examination.

KEY INFORMANT INTERVIEWS

Purpose

The purpose of in-depth interviews was to gather a broad sample of perspectives on significant health needs in the community. Findings from interviews informed the design of the focus group and were incorporated into the results to lend context to quantitative patterns and trends. Semi-structured interviews followed a pre-designed questionnaire covering the identification of health needs, community resources, and possible opportunities for action. The interviewer asked about barriers and reasons for unmet health needs, existing capacity, needed resources, and potential solutions that could enhance well-being in the community, either for specific subgroups or the population at-large. The full-length Key Informant Interview Protocol can be found in Appendix B of this report.

Sample and Recruitment

Representatives from CGSHS contributed contact information for 14 people who represent the broad interests of residents living in the report area and who possess knowledge about the region's health-related challenges. For example, key stakeholders included nonprofit leaders, health department authorities, university and college leaders, healthcare providers or leaders, human services providers, local and state agencies, people representing distinct geographic areas and people representing diverse racial/ethnic groups.

To recruit interviewees the THI team contacted these 14 key informants by email and telephone, and 10 individuals responded to the request. THI conducted 10 interviews between September and December 2018, each lasting between 30 to 60 minutes.

Transcription

THI used the notes and recordings to develop transcripts of each key informant interview for later coding and analysis. The identities of key informants and transcribed content of their statements will remain confidential.

FOCUS GROUP

Purpose and Questions to Address

The purpose of the focus group was to obtain clarity around needs and concepts proposed for inclusion in the CHNA report, and to approximate a group response to the collection of ideas put forth. The group followed a semi-structured protocol intended to elicit responses aligned with the following objectives:

1. Identify significant health needs
2. Identify community resources to meet its health needs
3. Identify barriers and reasons for unmet health needs
4. Identify supports, programs, and services that would help to improve the needs or issues

THI staff finalized the design of the focus group guide after a review of quantitative data and discussions with CGSHS staff.

Recruitment and Sample

Potential participants were identified by CGSHS leadership. A total of 11 people participated in the focus group. To assist with recruitment the local CHRISTUS liaison recruited these stakeholders who represented diverse population groups, occupations, and healthcare or realted service providers (e.g., clinics, community organizations and social service agencies).

Administering Focus Group and Collecting Data

The focus group lasted two hours. The facilitator opened with a general assessment of the participants' views of the community's overall health profile, inviting general comments using open-ended questions about health needs. Next, the facilitator followed with probes regarding any health needs that arose in the quantitative and qualitative analyses but did not appear in the group members' initial responses. An assistant moderator took notes and recorded the group responses. THI used the notes and recordings to develop transcripts for later coding and analysis.

ANALYSIS

Quantitative Analysis

The first stage of the analysis involved comparing rates of mortality, morbidity, health utilization, and various measures of social determinants of health using publicly available secondary data sources. The THI team compared the rates in the report area with those of Texas and the US to determine evidence of "health needs."[4] These comparisons represented quantitative indicators of need. For example, if the lung cancer rate in the report area were greater than the rate in Texas, that would be indicative of the need for more oncological services or primary prevention (e.g., reducing cigarette smoking). In addition to these comparisons, THI compared rates across counties within the report area to uncover potential regional disparities.

Primary data from CGSHS provided additional information to supplement the analysis of health needs. THI calculated rates of hospital and emergency room admissions. Indicators from these data were based on comparisons across facility, service line, payment type, and zip code. For example, if ER visits for an ambulatory care sensitive condition were concentrated in one zip code, along with increasing trends across adjacent years, this might be indicative of the need to improve access to primary care in that region.

Qualitative Analysis

Whereas quantitative data analysis provides evidence of the magnitude of various health needs in the report area population (relative to a standard), qualitative data analysis facilitates exploration of why those health needs were arising in the report area and how the community could potentially respond.

[4] Rates were age-adjusted for comparisons.

THI utilized a hybrid approach to qualitative analysis based on both thematic and content analysis as well as grounded theory-based methods.[5,6,7] Whereas thematic analysis identifies and qualifies narratives, content analysis identifies and quantifies recurring narratives.[8] These two approaches are used to develop a comprehensive understanding of the report area while identifying priority health needs based on the weight of the evidence.

Grounded theory is an inductive approach to forming an understanding of a phenomenon that best fits all the data. The approach is an iterative process that involves collecting the data, coding similar concepts, forming concepts into categories, generating theory, and then going back to the data to verify the theory. THI used this iterative process to identify recurring themes that evidenced community health needs and health system needs—instead of generating theory per se. The iterative nature of collecting, analyzing, and reviewing data with stakeholders was built into THI's CHNA process from start to finish.

From successive readings of key informant and focus group transcripts, the THI team methodologically analyzed transcripts to understand interviewee narratives. The analysis focused on understanding stakeholders and focus group participant views with respect to (1) health needs (including physical, behavioral, and social/emotional) (2) the social determinants of health (3) barriers to care and (4) assets and solutions to address population health and health system needs. Next, the THI team tagged transcript passages, open-coded key concepts within passages, compared patterns of codes within and across transcripts, and collapsed these codes into thematic categories.

The key informant interviews and focus group interviews varied in the themes that arose. In addition, some of the themes were supported by quantitative findings. The THI team therefore triangulated the results across all the data—key informant interviews, the focus group interview, and quantitative measures—to identify themes that emerged most frequently. These themes essentially offer a "theory" about the health needs in the community and the ways in which (health and non-health sector) systems could improve to support greater health outcomes in the report area. The last stage of the analysis involved verifying whether these themes were an accurate reflection of health and systems needs in the service area. This last step was incorporated as part of the needs prioritization.

---

[5] Smith, J., & Firth, J. (2011). Qualitative data analysis: the framework approach. Nurse researcher, 18(2), 52-62.
[6] Joffe, H., & Yardley, L. (2004). Content and thematic analysis. Research methods for clinical and health psychology, 56, 68.
[7] Corbin, J. & Strauss, A. (1990). Grounded theory method: Procedures, canons, and evaluative criteria. Qualitative Sociology, 13, 3-21.
[8] Vaismoradi, M., Turunen, H., & Bondas, T. (2013). Content analysis and thematic analysis: Implications for conducting a qualitative descriptive study. Nursing & health sciences, 15(3), 398-405.

NEEDS PRIORITIZATION

Phase 1: Initial Prioritization

The needs prioritization occurred in two phases. The first phase included a data-based prioritization from the THI team in advance of convening a needs prioritization committee comprised of local stakeholders. In this phase, THI identified the top indicators of need based on both the qualitative and quantitative analysis. The top indicators based on the qualitative analysis included the most recurring themes for which there was the greatest evidence base on all available data. These emerged in the process of triangulation described above.

For quantitative analysis, THI determined whether:

- Rates for the report area exceeded those for Texas or the US.
- Health measures were deemed to impact a large percentage of residents in the report area.
- Evidence of significant variation in rates across counties in the report area, indicating potential regional disparities.

This process enabled THI to sort quantitative indicators across three tiers—those with (I) clear, (II) middling, or (III) no evidence of health needs. All of Tier I and some of Tier II indicators were assembled for presentation at a needs prioritization workshop.

Phase 2: Workshop for Validation and Prioritization

The second phase involved facilitating a community-driven process to validate phase 1 findings and further refine and prioritize health needs. More specifically, the key objectives of this process were to determine the validity of THI's findings about community health needs (i.e., phase 1 results), identify a core set of community health issue areas for more focused discussion, and implement a fair process that enabled the group to prioritize needs through generative dialogue and group consensus.

To do this, THI designed a needs prioritization workshop that combined focused discussion with liberating structures.[9] The workshop design (1) facilitated a fair and inclusive process so that all the stakeholders could review and comment on preliminary results on an equal footing, (2) enabled all stakeholders to feel free to present their views about the core health needs in the community, and (3) utilized a cumulative voting method to prioritize needs after uncovering the diverse perspectives of the group.

The needs prioritization workshop took place in January 2019. THI staff informed the CGSHS liaison about the purpose of this meeting and appropriate logistics were arranged. The local liaison recruited individuals from the community to serve on the needs prioritization committee, and 26 people ultimately attended the meeting. A key component of recruitment was to ensure

[9] Lipmanowicz, H., & McCandless, K. (2010). Liberating structures: innovating by including and unleashing everyone. E&Y Performance, 2(4), 6-19.

that the focused discussion included residents from or stakeholders representing the interests of low income, minority, vulnerable, or medically underserved communities.

THI staff facilitated the needs prioritization workshop and successfully identified a prioritized list of health needs. THI staff presented the initial analysis of all data, facilitated discussion about the validity of the results, and identified approximately 10 issue areas for focused discussion based on the indicators presented. The facilitation ensured open discussion among all participants and used group consensus before moving to the next stage of the workshop. After discussion of the issue areas, participants voted on their top priorities based on a three-vote cumulative voting method. Facilitators from THI consolidated individual participants' scores to generate an overall ranking and a ranking based on community votes only to identify any differences in prioritization between community stakeholders and those from CHRISTUS. No differences were found, and the prioritization committee reached consensus on the composite ranking before finalizing the priority health needs list.

SUMMARY OF ACTIVITY SINCE 2017-2019 CHNA

CGSHS's prior Community Health Needs Assessment identifies 10 health needs.[10] Of these, the following 8 were targeted for action in the accompanying Community Health Implementation Plan (CHIP) for the 2017-2019 triennium[11]:

1. Lack of Mental Health Providers/Services
2. Obesity, Diabetes, Heart Disease and Other Chronic Health Disorders
3. Affordable Primary and Preventative Care Options
4. Healthy Behavioral Lifestyle Choices
5. Lack of Health Knowledge/Education
6. Lack of Community Resources to Promote Health (e.g., outdoor spaces)
7. Uninsured/Limited Insurance
8. Adult Smoking/Tobacco Use[12]

In collaboration with a wide variety of stakeholders CGSHS pursued actions that sometimes span multiple health needs. The information below summarizes the expanded actions CGSHS pursued during the last 3 years for each of the targeted health needs.

---

[10] CHRISTUS Health. 2016 Community Health Needs Assessment. Available at: https://www.christushealth.org/-/media/files/chip/christus-good-shepherd-longview-chna-2016.ashx?la=en
[11] CHRISTUS Health. Community Health Implementation Plan: Longview. Available at: https://www.christushealth.org/-/media/files/chip/christus-good-shepherd-longview-chip-2017.ashx?la=en
[12] Note: The prior CHNA included Unemployment and Crime/Violence as health needs, two significant social determinants of health, but were not targeted for action during the three-year implementation period.

SIGNIFICANT NEEDS WITH HOSPITAL IMPLEMENTATION RESPONSIBILITY

Lack of Mental Health Providers/Services

To address this need, Good Shepherd partnered with a tele-psychiatry provider to conduct behavioral health screenings and evaluations utilizing a platform launched in 2016. The use of telemedicine for psychiatric patients benefited from a collaborative effort with Community Health Core, Texas' regional mental health authority, to improve psychiatric screening and disposition processes.

Furthermore, in recognition of the increased use of the emergency department (ED) by patients with psychiatric and behavioral health issues, CGSHS remodeled the ED and an observation unit on a patient floor to include patient care specifically for psychiatric patients. In addition, CGSHS provided ED and other staff with Satori Alternative to Managing De-escalation training to help prevent harm from psychiatric patient aggression

Obesity, Diabetes, Heart Disease, and Other Chronic Health Disorders

Multiple activities during prior period address this health need, including the following:

- Healthy Living Scholarship Program. The CHRISTUS Good Shepherd Institute for Health Living offers a scholarship program of 12-month free membership for its 75,000 square foot fitness facility. Awards are based on financial need, eligible medical condition (e.g., obesity), and potential for patient health improvement. In FY2019 awarded $4,111 in scholarships.[13]
- Community Education.[14] Free and open to the public at the Institute for Healthy Living, CHRISTUS Good Shepherd's community education classes focus on health disparities identified in the community, including heart disease, diabetes, obesity, physical inactivity, healthy eating, and smoking cessation. Clinical experts and other health professional are instructors to these free classes open to the public.[15]
- Cardiac Support Group. CGSHS provides information and support to cardiac patients by hosting "Helping Hearts," a support group established by cardiac catheterization lab nurses to provide patients an outlet to share concerns and learn how to prevent additional cardiac episodes.

[13] By opening the Institute for Healthy Living and developing programs and opportunities for residents in the community to utilize the fitness facilities, CGSHS is also addressing the Lack of Community Resources to Promote Health need.

[14] Community Education also addresses the Lack of Health Knowledge/Education need.

[15] While CGSHS provides diabetes education to inpatients prior to discharge and refers inpatients to outpatient diabetes education for follow-up, diabetes prevention is a topic of ongoing, free community seminars offered at the Medical Center. By offering smoking cessation programs, CGSHS community education activities also address the Adult Smoking/Tobacco Use need.

- Continuity of Care. The Institute for Healthy Living provides comprehensive cardiovascular risk reduction services to patients with cardiovascular disease while offering a continuum of care between the inpatient and outpatient settings.

Affordable Primary and Preventative Care Options

CGSHS operates multiple programs for preventative care in the community. For example, a mobile mammography unit provides services regionally at worksites and other convenient locations. The mobile clinic makes this care option more accessible to women who lack adequate transportation. Additionally, CGSHS utilizes skilled patient care navigators connect patients with a medical home, navigate the continuum of healthcare services, and support culturally competent care to vulnerable and high-risk patients.

During the 2016-2019 triennium, CGSHS has referred uninsured or underinsured patients lacking a medical home to area federally qualified health centers (FQHCs) that provide primary and preventative care in the service region. FQHCs offer care to patients on a sliding scale based on need.[16] Patients in need of affordable care also receive primary care from residents in CHSHS's Internal Medicine Residency Program. In addition, CGSHS makes healthcare more affordable through its Prompt Pay Program. Implemented in 2009, the program offers uninsured and underinsured patients a discounted price like those with health insurance coverage.

Healthy Behaviors/Lifestyle Choices

In addition to the fitness and educational offerings at CHRISTUS Good Shepherd's Institute for Healthy Living and free Community Education (see above), CGSHS offers ExtraClassic, a complementary lifestyle membership program targeted to anyone age 50 or older. ExtraClassic (formerly ClassiCare) members may attend quarterly health seminars, a free month of membership at CHRISTUS Good Shepherd Institute for Healthy Living or Marshall Life Center, and receive local merchant discounts and group travel opportunities. ExtraClassic now has over 1600 members.

Uninsured/Limited Insurance

While efforts to support care affordability and to refer patients to local FQHCs address this need, CGSHS offers Certified Application Counselors available to patients free of charge. The service helps determine eligibility and enroll in Medicaid, CHIP, and Marketplace insurance, including tax credits and cost sharing.

KEY FINDINGS

[16] In 2017 CGSHS transferred its Family Medicine Clinic building in Marshall to Genesis PrimeCare. This transfer of clinic space will likely enhance the FQHC's ability to offer services.

POPULATION DEMOGRAPHICS

CHRISTUS Good Shepherd Health System serves Gregg, Harrison, Marion, Panola, Rusk, and Upshur Counties in Texas, henceforth referred to as the "report area", consisting of a total population of 317,449 residents (Table 1). Nearly two-thirds of the region's population resides in Gregg County and Harrison County. Just over 75% percent of residents in the report area live in the urban counties of Gregg, Harrison, Rusk and Upshur while the remaining 15% live in the rural counties of Marion and Panola.[17] The population increased for the report area by 1% from years 2010 to 2017. Although, the rural counties saw a significant decrease in population with 4.6% and 2.3% in Marion and Panola, respectively.

Geography	Population (%)
Gregg County, TX	123,367 (38.9%)
Harrison County, TX	66,661 (21.0%)
Marion County, TX	10,064 (3.2%)
Panola County, TX	23,243 (7.3%)
Rusk County, TX	52,833 (16.6%)
Upshur County, TX	41,281 (13.0%)
Report Area	317,449

Table 1. Report Area Population, by County

[17] Health Services and Resources Administration. (2016). List of Rural Counties and Designated Eligible Census Tracks in Metropolitan Counties. Available at https://www.hrsa.gov/sites/default/files/ruralhealth/resources/forhpeligibleareas.pdf

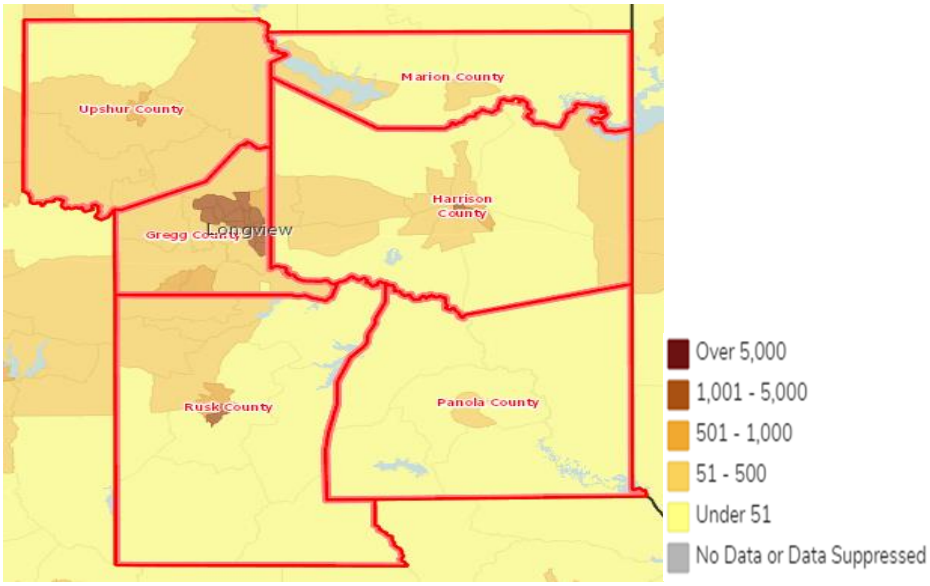

Figure 1. Population Density (Persons per Square Mile)

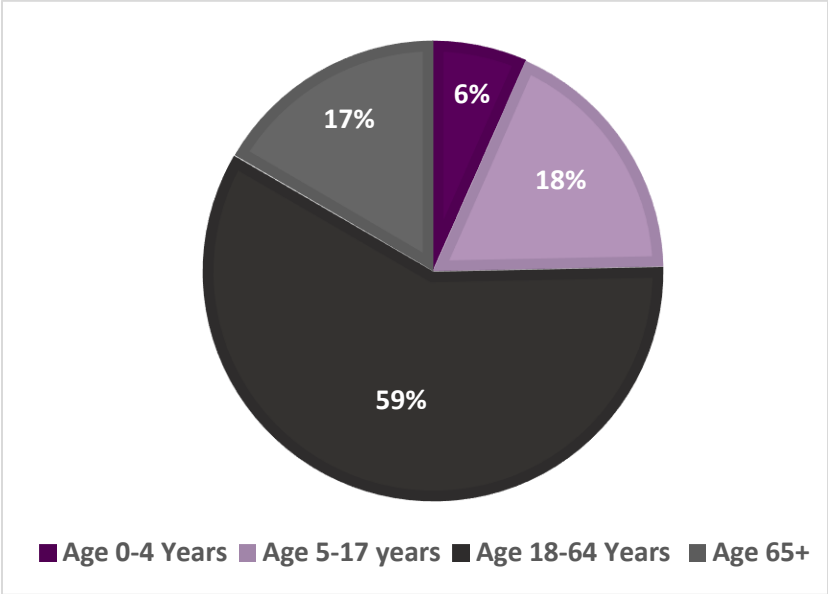

Figure 2. Report Area Population by Age Groups

Individuals between ages 18 and 64 (working-aged adults) constitute 59% of total population. Of the remaining population, 17% are ages 65 and older, 18% are school age children, and 6% are in infancy or early childhood (Figure 2). Overall, the population ages 65 and older are slightly higher than that of the population of Texas (12%). When broken down by county, Marion County is significantly higher than the at 25% compared to the report area at 17%.

Compared to Texas, the population in the report area have a lower proportion of Hispanic residents (Table 2). The Hispanic/Latino population in the report area more closely resembles that of the US than that of Texas — just over 14% of the report area is Hispanic/Latino, compared to 39% of Texans and 17% of US residents. The NH-African American population in the report area have a higher proportion of residents at 18% compared to Texas at 12%. The NH-Asian, NH-Native Hawaiian/Pacific Islander and NH-Native American/Alaska Native categories each comprise of less than 3% of the report area population. The report area population is virtually evenly distributed by gender (49.5% male, 50.5% female), mirroring the gender distribution of Texas and the US.

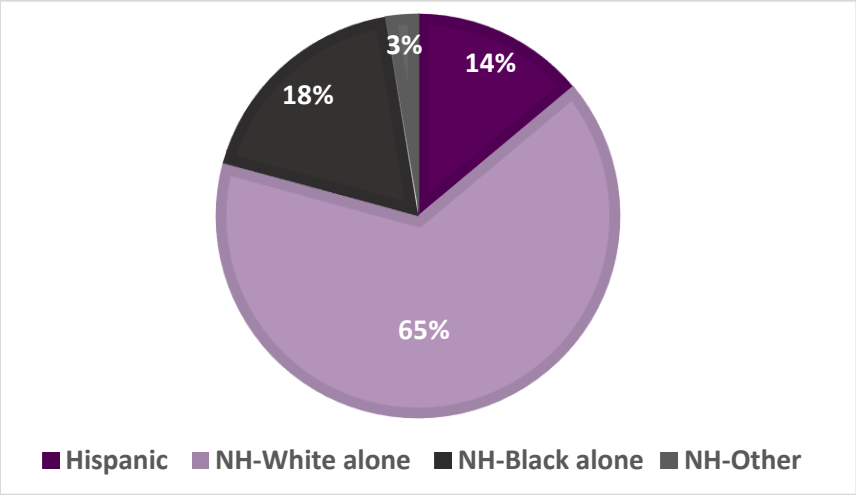

Figure 3- Report Area Population by Race and Ethnicity

Race and Ethnicity	Report Area	Texas	United States
Hispanic %	13.9	38.6	17.3
NH - White alone%	65.3	43.4	62.0
NH - Black or African American alone %	18.2	11.6	12.3
NH - American Indian and Alaska Native alone %	0.3	0.2	0.7
NH - Asian alone %	0.9	4.3	5.2
NH - Native Hawaiian & Other Pacific Islander alone %	0.1	0.1	0.2
NH - Some other race alone %	0.0	0.1	0.2
NH - Two or more races %	1.3	1.6	2.3

Table 2. Report Area Population by Race and Ethnic Breakdown

SOCIAL AND ECONOMIC ENVIRONMENT

Consolidated median income data for the report area is not available, but county-level data show that Panola County has a median annual family income is $11,000 higher than Marion County ($60,449 compared to $49,423). For all counties in the report area, the income level is lower than Texas' median family income ($64,585).

Poverty is widespread in the report area, with 40% of report area residents earning annual incomes at or below 200% FPL. This is slightly higher than the poverty for the state of Texas at 37%. When broken down by county, Marion County has the highest poverty at 46%. According to 2019 federal guidelines, 200% FPL corresponds to an income of $51,500 per year for a family of four.[18]

Figure 4. Poverty Distribution by Language

[18] Office of the Assistant Secretary for Planning and Evaluation. (2019). US Poverty Guidelines Used to Determine Financial Eligibility for Certain Government Programs. Available at https://aspe.hhs.gov/poverty-guidelines

English-speaking populations have lower poverty rates than Spanish-speaking populations for the report area (Figure 4; Appendix A). However, the difference is not as stark in the report area compared to Texas. Whereas the Spanish-speaking poverty rate is twice as high compared to the English-speaking poverty rate in Texas, the difference is only 7 percentage points higher in the report area.

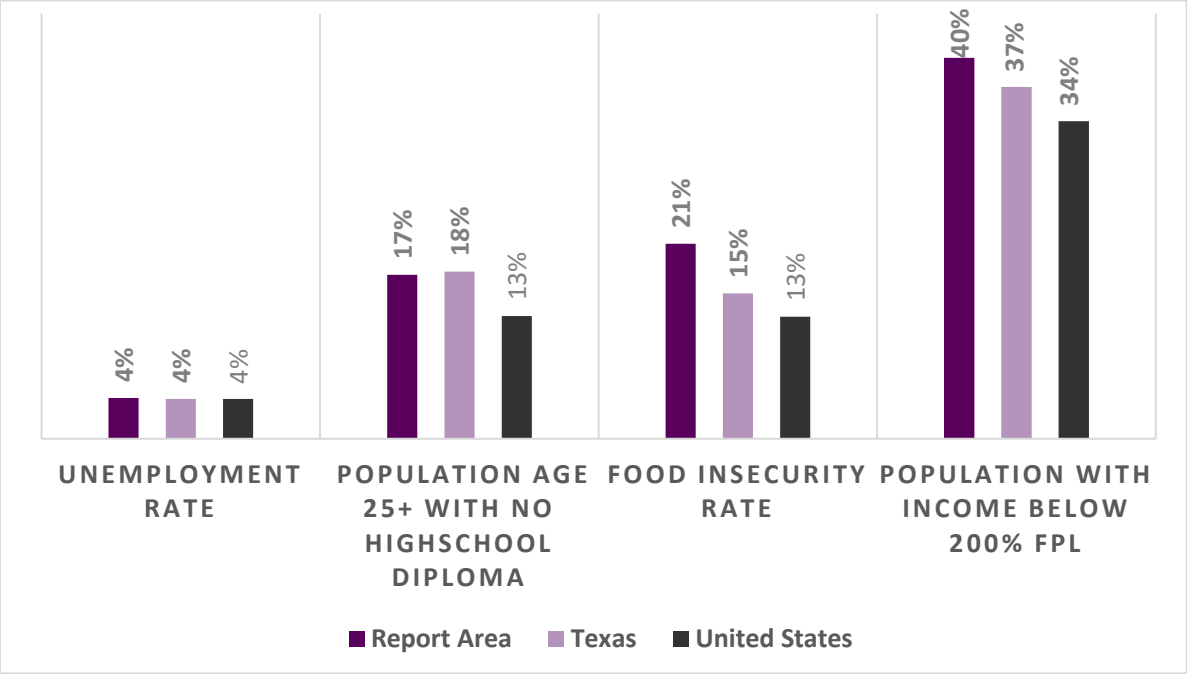

Figure 5. Socioeconomic Characteristics of Report Area

Figure 5 provides a comparative summary chart of socioeconomic indicators for the report area, Texas and the US. High school graduation rates are on par with Texas graduation rates. Although, college graduation is significantly lower than Texas, 25% versus 35%, and varies widely by county with the lowest graduation rates in Marion County at 19%.

Compared to Texas, the report area's unemployment is the same while food insecurity is significantly higher (Figure 5). Twenty-one percent of report area residents experience food insecurity (i.e., uncertainty about whether they will be able to get enough nutritious food at some point during the year) compared to about 15% of Texas residents. Obesity and chronic disease have remained consistent areas of need within the report area, and food insecurity can create barriers for individuals who need to manage their weight and nutrition. Feeding America measures food insecurity and defines it as a lack of consistent access to enough food for an active, healthy life.

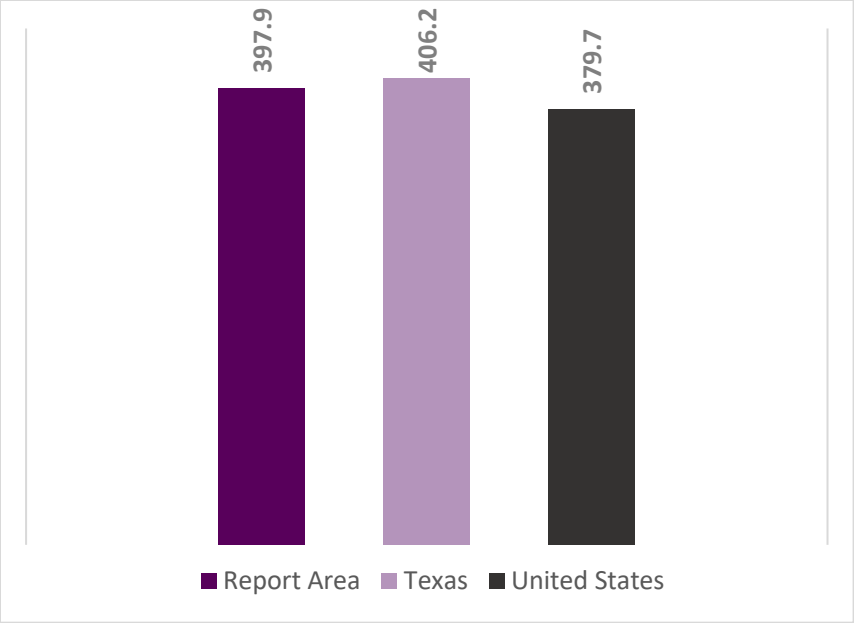

Figure 6. Violent Crime Rate per 100,000 Population

Community safety represents an environmental indicator with implications for population health, including mental health. Violent crime (defined as homicide, rape, robbery, and aggravated assault) occurred in the report area at a rate of 397.9 violent crimes per 100,000 population, which is on par with the overall violent crime rates in Texas (406.2 per 100,000 population) (Figure 6). Within the report area, substantial disparities in violent crime appear by county. Specifically, Marion County which has 647.3 violent crimes per 100,000 and Gregg County at 470.3 violent crimes per 100,000.

A common theme among the focus groups and key informant interviews was that many regions within the report area suffered from chronic poverty, homelessness, drug abuse and violence. Prevalent types of drug abuse were synthetic marijuana, meth, and opioids. It was also noted that there is a section of dilapidated buildings and hotels along highway 80 that are common places for drug and sex trafficking.

> The cost of prescription medication for those that do need it is too high and they can't get it. They're self- medicating.
> --Focus Group Participant

ACCESS TO HEALTH CARE

Access to health care is a key component of maintaining and improving overall health. The Institute of Medicine identifies three essential steps in attaining access to care: gaining entry into the health care system, finding access to appropriate sites and types of care, and developing relationships with providers who meet patients' needs and whom patients can trust.[19] For many, health insurance represents not only a ticket into the health care system, but an assurance that the cost of most health services will remain affordable to them.

Figure 7. Uninsured Rate in Report Area, Overall and by Age Group

In the report area the overall uninsured percentage of 18% is the same as Texas. Only 1% of elderly adults in the area are uninsured due to the availability of Medicare coverage for this age group. In contrast, around 1 in 4 working-age adults in the report area are uninsured and around 1 in 10 children living in the report area are uninsured. At the time of this writing, Texas remains among the 14 states that have declined to expand Medicaid.[20]

[19] Institute of Medicine. (1993). Access to health care in America. Committee on Monitoring Access to Personal Health Care Services. Washington, DC: National Academy Press.
[20] Kaiser Family Foundation. (2019). Stat of state action on the Medicaid expansion decision. Available at: https://www.kff.org/health-reform/state-indicator/state-activity-around-expanding-medicaid-under-the-affordable-care-act/?currentTimeframe=0&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D

Health insurance is just one component of access to care and does not guarantee access even to those who have it. Without an adequate supply of local health care providers, the health system will not have the capacity to accommodate all patients who need care, regardless of insurance status. Higher numbers of residents per provider in an area, the population to provider ratio, is an indicator of fewer providers available for the population in a region.

Differences in access to providers can be seen when comparing population to provider ratios across the report area. The most significant disparity amongst the data is the limited access to psychiatrists within each county. The report area ratio for psychiatrists at 28,852:1 is significantly higher than the Texas ratio of 13,145:1. These ratios say nothing about the level of need for services, including the demand for services by adjacent rural county populations. A high population to provider ratio, then, tells half the story. Excess needs for the services of a provider (e.g., high rates of dental canaries) alongside the lack of access to the provider (e.g., dentists) provides greater certainty of health needs.

Geography	Primary Care Practioners	Registered Nurse	General Dentists	Psychiatrist
Gregg County, TX	884:1	68:1	1991:1	12127:1
Harrison County, TX	3373:1	234:1	5903:1	-
Marion County, TX	11285:1	209:1	11285:1	-
Panola County, TX	3193:1	228:1	6385:1	-
Rusk County, TX	3061:1	249:1	7652:1	-
Upshur County, TX	6278:1	458:1	8790:1	43948:1
Report Area	1665:1	125:1	3569:1	28852:1
Texas	1350:1	121:1	2753:1	13145:1

Table 3. Population to Healthcare Provider Ratio

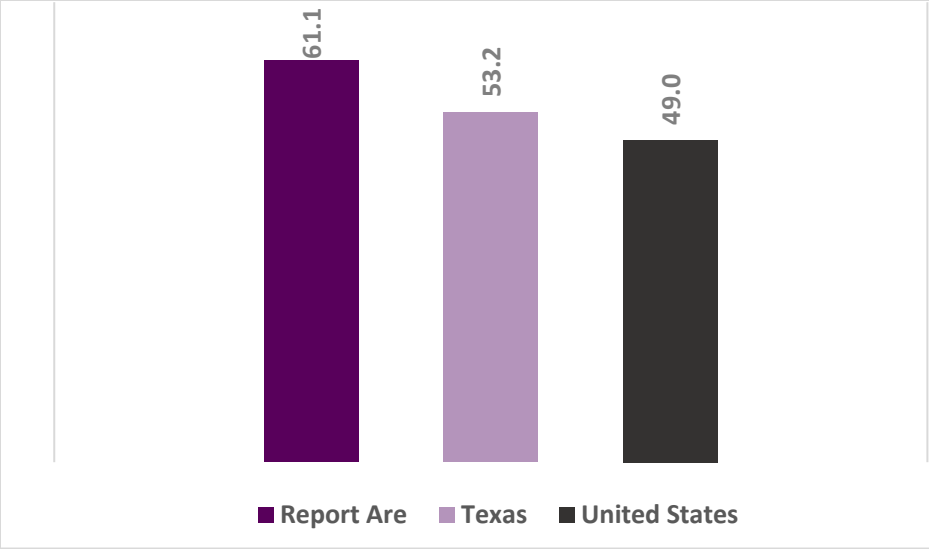

Figure 8. Preventable Hospital Admissions (per 1,000 Medicare Enrollees)

Primary care access barriers are a concern due to the potential for minor, treatable health conditions to worsen in severity, leading to avoidable hospital visits and potential overuse of costly emergency department services. Preventable hospital stays are defined as hospital visits for conditions that could have been prevented if adequate primary care resources were available and accessed by those patients. These preventable visits numbered 61.1 per 1,000 Medicare enrollees in the report area, similar to the 53.2 preventable hospital events per 1,000 Medicare enrollees in Texas (Figure 8).

Stakeholders identified access to care issues with primary and specialty care. Specifically, long wait for appointments and limited physicians within the area. This was noted as spurring the high emergency department use.

Many others stated as well that consumers may not have the awareness, knowledge, or skills to navigate the system and use the available resources to their maximum benefit. There was a stated need of physicians increasing education around patient education and navigation for chronic illnesses and maternal and child care. Both focus group and key informant interviews suggested a need for increased patient awareness about private free-standing emergency rooms. Informants considered these private facilities problematic as they do not accept Medicaid, Medicare, or Tricare (military insurance)—and residents often are unaware until after receiving services and the bill.

A lot of people use our ER as primary care because there is no other option for people. If you don't have transportation to go out of town to a physician, they're just going to go to the ER for their care.
--Key Informant

The hospitals are getting inundated with people that really are there because they don't have another alternative or they're just not sure where else to go to get the help they need.
--Key Informant

HEALTH OUTCOMES

Physical Health

County	Diabetes Prevalence (%)	Poor Physical Health Days
Gregg County, TX	10.7%	3.8
Harrison County, TX	12.6%	3.7
Marion County, TX	13.0%	3.9
Panola County, TX	11.4%	3.6
Rusk County, TX	13.1%	3.6
Upshur County, TX	12.1%	3.6
Texas	10%	3.5

Table 4. Diabetes Prevalence and Poor Physical Health in Report Area

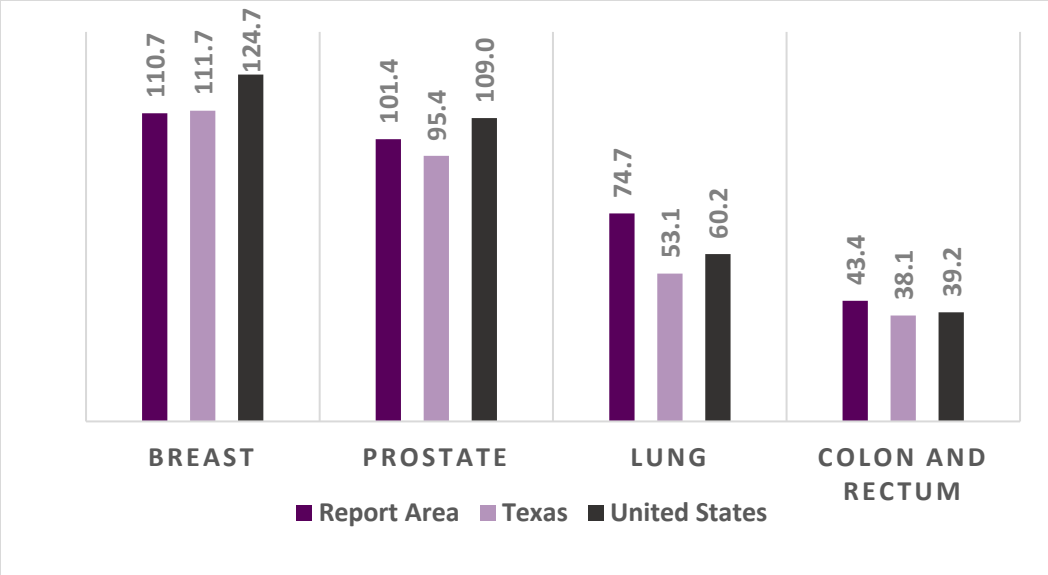

Figure 9. Age-adjusted Cancer Incidence per 100,000 Population, by Type

All counties in the report area appear less healthy than Texas (Table 4). The number of days reported in poor health over the past 30 days ranges from 3.6 to 3.9 across counties in the report area compared to only 3.5 for Texas as a whole. Similarly, the prevalence of diabetes is higher for all counties in the services area compared to Texas. Whereas only 10% of individuals in Texas have (type 2) diabetes, the rate is 3.1 percentage points higher in Rusk County, though less than a percentage point higher in Gregg County.

Among all types of cancer, breast cancer has the highest incidence in the report area at 110.7 per 100,000. The incidence of breast and prostate cancers in the report area are lower than Texas and US rates (Figure 9). The largest differences observed is in the incidence of lung cancer. The lung cancer incidence rate at 74.7 per 100,000 is higher than both the Texas and US rate at 53.1 per 100,000 and 60.2 per 100,000, respectively. Of note, compared to Texas and the US, cancer mortality is higher among residents in the report area. There are 20 more cancer deaths per 100,000 population in the report area than in Texas (Figure 10).

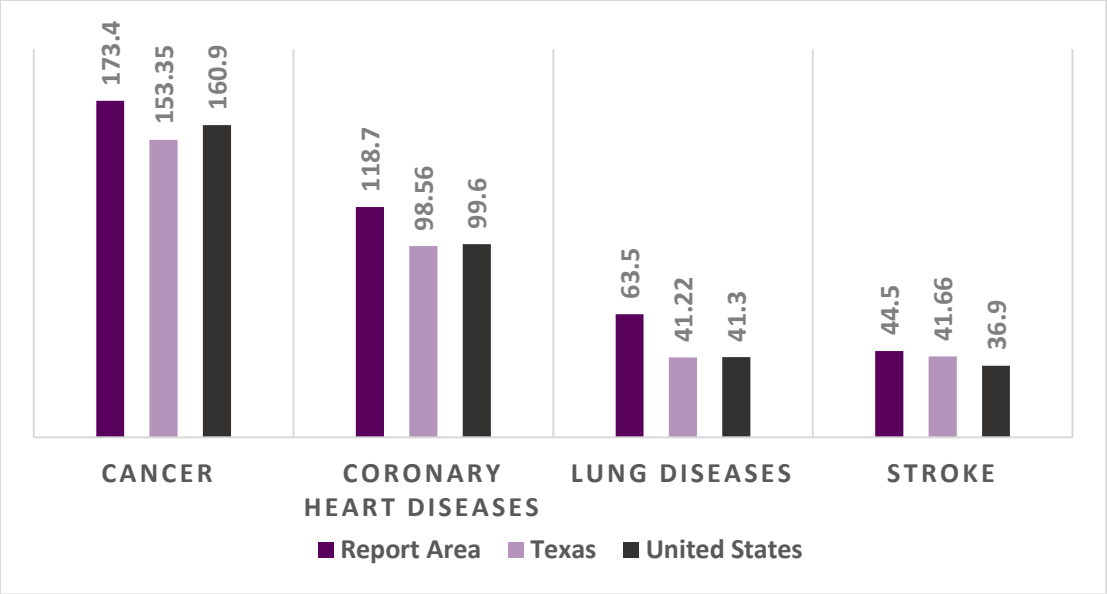

Figure 10. Age-adjusted Mortality Rate for Selective Diseases per 100,000 Population

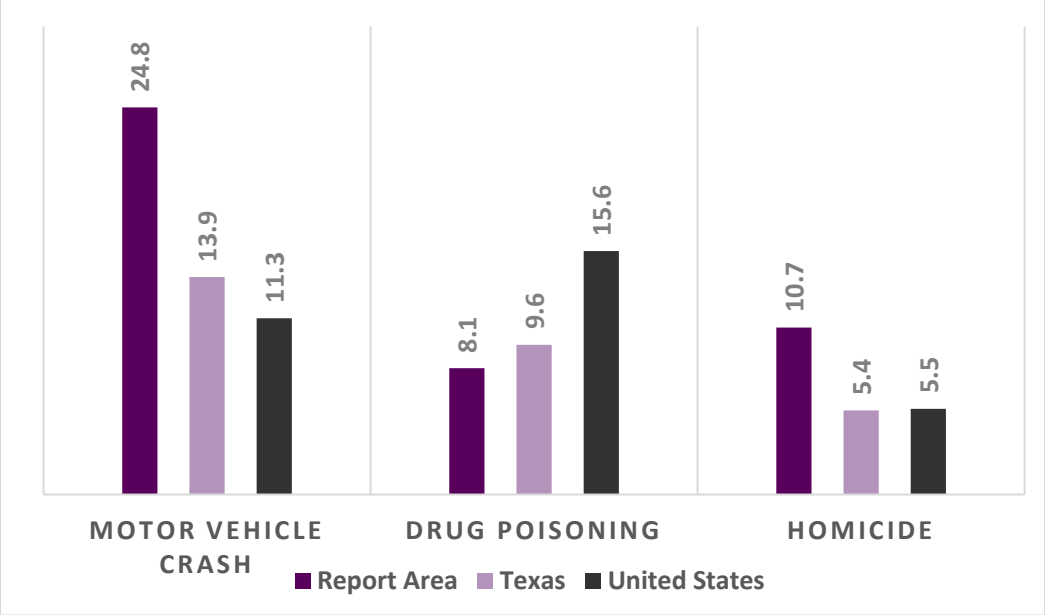

Figure 11. Age-adjusted Mortality Rate per 100,000 Population, by External Cause

Age-adjusted mortality from heart disease, lung disease and stroke causes are all higher in the report area compared to Texas (Figure 10). For example. There are 20 more deaths per 100,000 from heart disease and 22 more deaths per 100,000 from lung disease in the report area compared to Texas. Regarding external mortality causes, motor vehicle crashes are significantly higher in the report area compared to Texas and the US. (Figure 11). The report

area has a motor vehicle mortality rate of 24.8 per 100,000 compared to 13.9 for Texas and 11.3 for the US. This is even higher when broken down by county for Panola County at 42.9 per 100,000 and Rusk County at 28.7 per 100,000. Homicide in the report area is twice as high when compared to the Texas homicide rate (10.3 per 100,000 vs 5.4 per 100,000).

Diabetes, heart disease, hypertension, stroke, and cancer were raised numerous times throughout the key informant interviews and focus groups. Community members stressed the importance of educating patients about managing chronic illnesses and how to navigate the health care system. As well as increasing community collaboration and outreach in order to provide members of the community with this education.

Mental and Behavioral Health

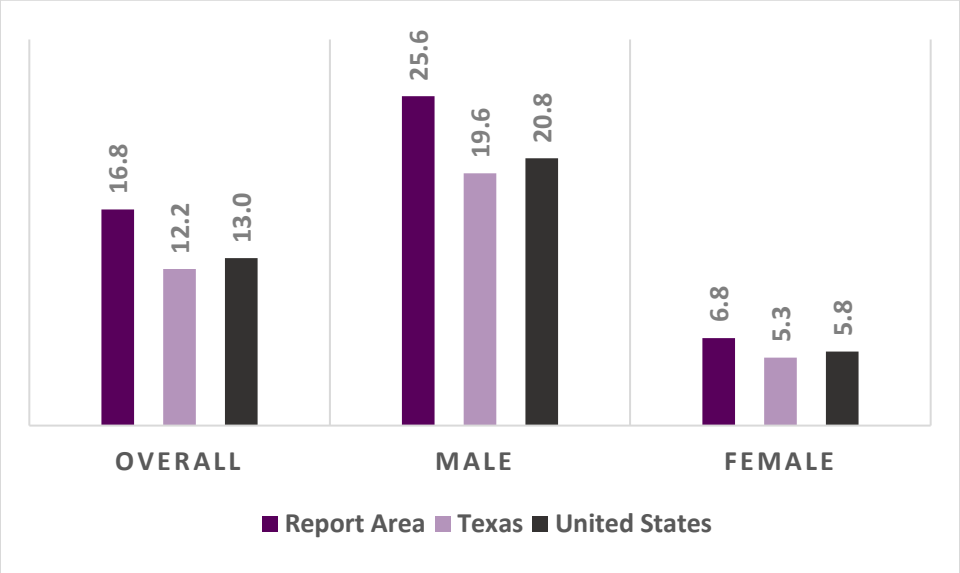

Figure 12. Age-adjusted Suicide Mortality Rate per 100,000 Population, Overall and by Gender

> People have to wait about six months to get an appointment with a psychiatrist because of lack of providers in the area.
> --Key Informant

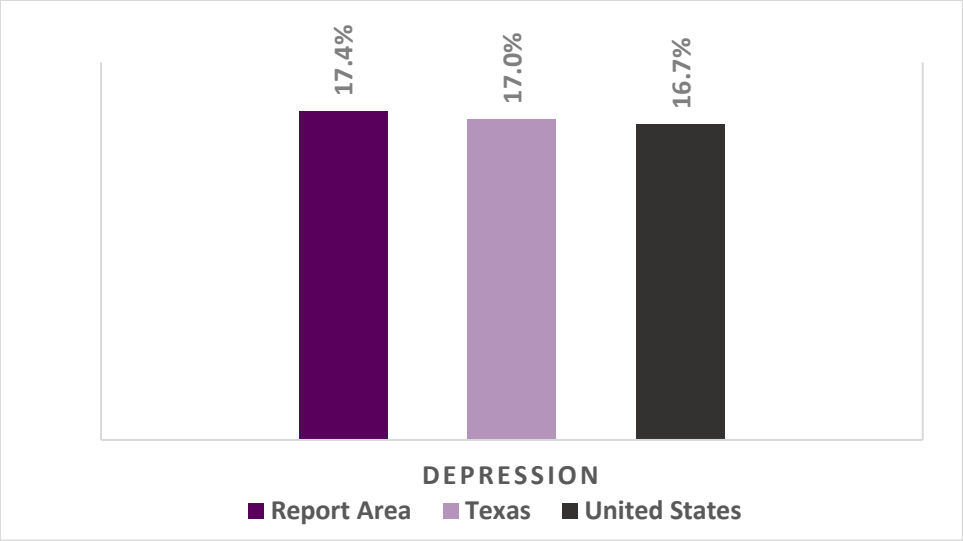

Figure 13. Prevalence of Depression among Medicare Beneficiaries

The burden of morbidity and mortality resulting from mental illness represents a significant and growing concern among the report area. After age adjustment, approximately 16.8 people per 100,000 population in the report area die of suicide, compared to 12.2 deaths by suicide per 100,000 population in Texas and 13.0 in the US (Figure 12). The suicide rate among report-area males (25.6 per 100,000) is significantly higher than the suicide rate overall, suggesting strong variation by gender. In the report area, males die by suicide at a rate nearly four times higher than that of females. Suicide risk is particularly elevated among older adults, which comprise a large and growing proportion of the report area population. Depression, a major risk factor for suicide, affects 17.6% of Medicare beneficiaries in the report area, which is slightly higher than the rates of depression among Medicare beneficiaries in Texas and the US (Figure 13).

Mental and behavioral health is considered the number one community health need. Stakeholders discussed at great length the lack of available inpatient and outpatient treatment options and long wait times. They stated that available resources helping those in crisis, though few, are far greater than the services offered to those with mild cases who might benefit from preventative education.

One of the biggest barriers noted was the waiting time in the emergency department for a patient to be admitted into inpatient treatment facilities, either through private facilities or state hospital due to lack of available spaces. Informants noted the need for integrated care for patients utilizing the emergency departments for mental health and/or addiction needs. It was also stated that there has been a rise in mental health illness among younger children and the elderly.

We have an overabundance of psychiatric patients that are seen primarily in the ER because of the lack of outpatient setting. Usually, when it comes time to transfer a patient to another facility for a higher level of care, we have a shortage of beds across the state, and that prevents us from transferring patients out and they house them in the ER for two weeks at a time in an emergency room bed.
—Key Informant

MATERNAL AND CHILD HEALTH

Healthy People 2020 stresses the role of maternal, infant, and child health as a key driver of overall population health and wellness. Delaying childbearing into adulthood decreases the likelihood of perinatal and postnatal complications, including low birth weight, disability, and infant mortality.[21] Over the long term, children born to teen parents are less likely to be prepared for kindergarten, have lower educational attainment and high school completion rates, and exhibit higher rates of social, emotional, and behavioral problems.[22]

Geography	Infant Mortality (per 1,000 Live Births)	Teen Birth (per 1,000 Female Population Ages 15-19 Years)	Low Birth Weight Percentage (< 2500 grams)
Gregg County, TX	8	59	7.9%
Harrison County, TX	6	45	8.4%
Marion County, TX	NA	50	7.6%
Panola County, TX	10	47	8.6%
Rusk County, TX	5	55	7.7%
Upshur County, TX	10	44	7.7%
Texas	6	41	8.0%

Table 5. Maternal and Child Health

[21] Healthy People 2020. (2014). Maternal, infant, and child health. Available at: http://www.healthypeople.gov/2020/topicsobjectives/topic/maternal-infant-and-child-health
[22] Youth.gov. (2016). Adverse effects of teen pregnancy. Available at: http://youth.gov/youth-topics/teen-pregnancyprevention/adverse-effects-teen-pregnancy

Teen births by each county in the report area, defined as births to mothers age 15-19, are all higher than the Texas rate of teenage pregnancy of 41 teen births per 1,000 (Table 5). This ranges from 44 teen births per 1,000 in Upshur County to 59 teen births per 1,000 in Gregg County.

The infant mortality rate is only available for the larger counties in the report area and ranges depending on the county. Panola County and Upshur County have significantly higher rates of infant mortality at 10 deaths per 1,000 live births compared to the state rate of 6 deaths per 1,000 live births. Low birth weight for all counties is on par with Texas at 8%.

HEALTH BEHAVIORS

Geography	Adult Obesity	Physical Inactivity	Insufficient Sleep	Excessive Drinking	Adult Smoking
Gregg County, TX	35%	30%	33%	19%	16%
Harrison County, TX	34%	33%	34%	19%	16%
Marion County, TX	30%	29%	32%	16%	17%
Panola County, TX	32%	27%	31%	18%	16%
Rusk County, TX	32%	31%	30%	17%	17%
Upshur County, TX	29%	31%	32%	19%	16%
Texas	28%	24%	33%	19%	14%

Table 6. Health Behavior Indicators

Residents in the report area describe a wide variety of unhealthy behaviors as highly prevalent. Table 6 displays comparative prevalence rates of select health behaviors within the report area and Texas. Rates of obesity, physical inactivity, and tobacco use in the report area all slightly exceed Texas. The proportion of residents reporting heavy alcohol consumption (more than two drinks per day on average for men and more than one drink per day on average for women) or insufficient sleep is on par with Texas.

Of note, Gregg County and Harrison County have the highest percentages of obesity (35%; 34%) and physical inactivity (30%; 33%) compared to the other report areas and Texas (28%; 24%).

HOSPITAL DATA

The CHRISTUS Southeast Texas Health System supplied internal data from its main hospital and satellite hospitals for presentation and descriptive analysis in this section. Two years of hospital admission and emergency department utilization data are provided (2017- 2018) disaggregated by facility, ZIP code, service line, and source of payment. For ZIP code, service line, and payment type, selected options reported at the greatest frequency and/or determined to be of interest are displayed in this report, as opposed to the full tabulation. Overall, the hospital data reveal a clear disproportionality in emergency department use compared to hospital admissions (Table 7; Figure 14). While some inherent differences may be expected, the frequency of emergency department visits overwhelmingly exceeded the frequency of hospital admissions over the data collection period. Emergency department visits exceeded hospital admissions by a ratio of 6.1 to 1 for the main CHRISTUS Good Shepherd hospital and 5.7 to 1 for the Marshall branch.

While further analysis is needed to determine what may be driving utilization trends in the report area, disproportionate emergency department use can indicate a high number of patients cycling in and out of the emergency department. Such patterns may highlight concerns regarding overuse and/or misuse of emergency services within the report area. Data presented in Figure 8 show a relatively high rate of avoidable hospital events in the report area, further supporting the notion that use of the emergency department for non-emergent or preventable needs may be a system-wide concern. Individuals who make frequent visits to the emergency department are likely to have lower incomes, be managing multiple chronic conditions, and report poorer health status — all important factors to consider when planning interventions for populations who may need assistance managing their health in settings other than the emergency department.[23]

[23] Peppe, E. Mays, JW, and Chng, HC (2007). Characteristics of frequent emergency department users. Kaiser Family Foundation, Available at: http://kaiserfamilyfoundation.files.wordpress.com/2013/01/7696.pdf.

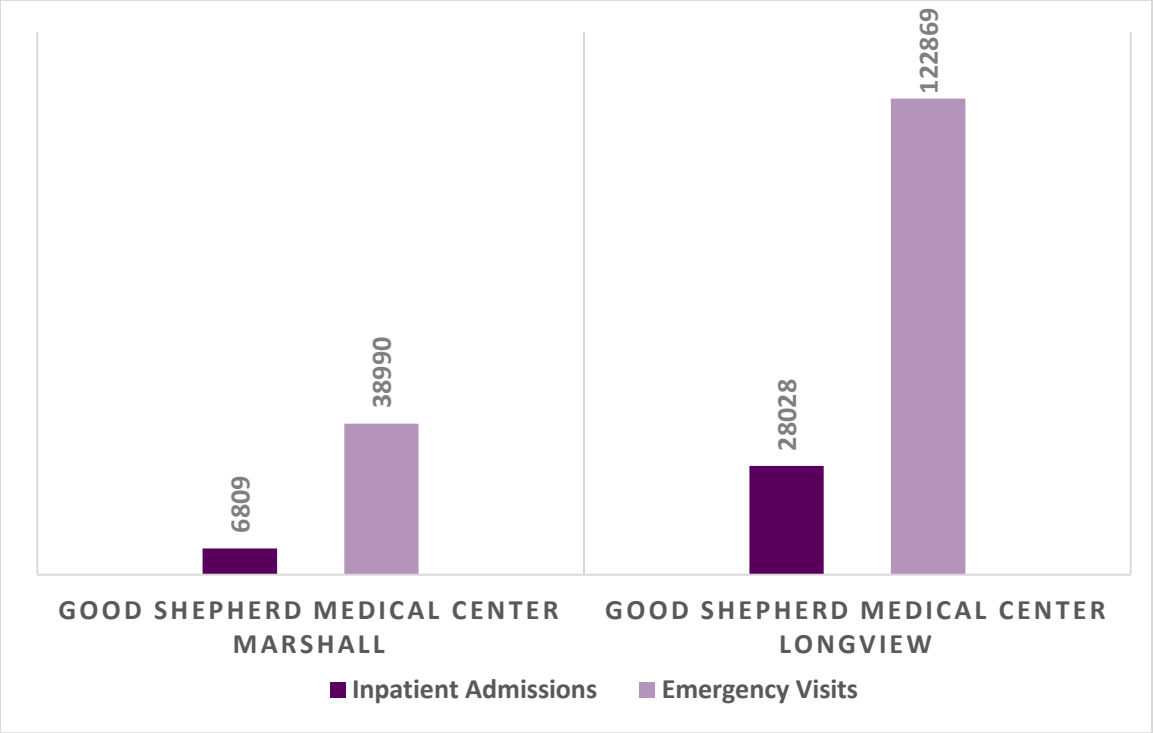

Figure 14. Total Inpatient Admissions and Emergency Department Visits by Facility (2017-2018)

Facility	Inpatient Admission	Emergency Visits
CHRISTUS GSMC – MARSHALL	6809	38990
CHRISTUS GSMC – LONGVIEW	28028	122869

Table 7. Inpatient Admissions and Emergency Department Visits by Facility (2017-2018)

CHRISTUS GSMC – MARSHALL		CHRISTUS GSMC - LONGVIEW	
ZIP Codes	Number	ZIP Codes	Number
75670	16685	75662	18938
75672	9105	75602	17538
75657	4031	75604	17134
75692	1776	75605	11379
75661	1498	75601	9401

Table 8. Top Five ZIP Codes for Emergency Department Visits

Table 8 highlights emergency department utilization by ZIP code. For the two-year period, the top 5 zip codes for the CHRISTUS Good Shepherd emergency department represent the Longview area and make up 60% of the emergency department visits. For the Marshall branch, nearly two-thirds of emergency department visits come from the Marshall regions 75670 and 75672. The latter 3 zip codes all represent surrounding rural areas.

	Inpatient Admissions		Emergency Department Visits	
Rank	Service Line	Proportion (%)	Service Line	Proportion (%)
1	General Medicine	17%	General Medicine	27%
2	Cardiology	12%	Ear, Nose and Throat	15%
3	Pulmonary Medicine	10%	Orthopedics	14%
4	Obstetrics	10%	Gastroenterology	11%
5	Orthopedics	7%	Pulmonary Medicine	7%

Table 9. Services Provided During Inpatient Admissions and Emergency Department Visit[24]

General medicine represents the most frequent type of clinical service for those seeking care in the emergency department and those that are admitted into the hospital (Table 9). Cardiovascular disease ranks as the second most common type of clinical service for admitted patients an observation that may be closely linked to the relatively high rates of obesity, physical inactivity, and smoking identified in the report area and presented in Table 6. Also, the high

[24]Data includes combined admission from Main and satellite branches.

percentage of orthopedic emergency department visits may be correlated with falls and injuries in the high elderly population in the report area.

Insurance Type	Inpatient Admissions	Emergency Department Visits
Private	17%	18%
Medicaid	21%	32%
Medicare	49%	18%
Other	3%	4%
Self Pay	10%	28%

Table 10. Payment Source for Inpatient Admissions and Emergency Department Visits[25]

Table 10 presents the proportion of patients paying with select payment types, includes Medicare, Medicaid, Self-pay and Private. Not presented are data on patients enrolled in certain types of public insurance (e.g., CHIP, TRICARE). Differences in the payer mix between the admitted patient population and users of emergency care are clearly evident. Medicare pays for 49% of hospital admissions, but only 18% of emergency department visits. Conversely, the payer mix in the emergency department is contains far more uninsured patients, who comprise 28% of the emergency department mix but just 10% of inpatient admissions. Also, the proportion of patients covered under Medicaid is slightly higher in ED visits compared to inpatient admissions (32% vs 21%).

OTHER QUALITATIVE FINDINGS

Informants commend CGSHS's strong community presence and many dedicated community members. Many noted how CHRISTUS is new to the community and they look forward to creating a meaningful relationship. A recurring theme among key informants was a recommendation for CGSHS to strengthen the partnership between the community and hospital. Community outreach was viewed as an asset within the community and opportunities to increase engagement with schools and congregations of faith was highly encouraged. Appendix C contains a of number potential partners and stakeholders that could be involved in such efforts

[25] Data includes combined admission from Main and satellite branches.

MOVING FORWARD

Findings from the qualitative and quantitative data and the final prioritization of needs highlight numerous gaps, issues, and threats to population health and quality of life in East Texas. This report has also emphasized key resources, assets, capacity, and potential opportunities that exist in the region to address the identified problems. In particular, the voice of stakeholders in the community has been core and central to the needs assessment process, contextualizing data in community realities while shaping the process and product.

The content of this report is intended to inform planning and strategy for the CHRISTUS Good Shepherd Health System in coming years. The findings from this CHNA report lay the groundwork for a companion Community Health Improvement Plan (CHIP) to aid the CHRISTUS Good Shepherd Health System to improve the health of the community it serves. A forthcoming report presenting the CHIP in detail will follow the release of this CHNA report and will describe opportunities, solutions, and innovations with the potential to address critical areas of unmet need in the region.

APPENDIX A: COUNTY LEVEL DATA

County	Gregg	Harrison	Marion	Panola	Rusk	Upshur
Population (%)						
Ages 0- 4	7.4	6.6	4.7	6.0	5.9	5.9
Ages 5-17	18.5	18.9	14.0	17.6	17.2	18.0
Ages 18 -64	58.9	58.0	56.1	58.0	60.4	58.0
Ages 65 +	15.2	16.5	25.3	18.4	16.5	18.1
Hispanic (%)	17.9	12.3	3.8	8.5	15.9	7.7
NH- White alone	58.9	64.2	70.8	73.6	65.0	80.9
NH - Black alone	19.9	21.4	23.8	16.5	17.2	8.6
NH – Other	3.4	2.1	1.6	1.4	2.0	2.7
NH- American Indian and Alaska Native Alone	0.4	0.3	0.3	0.1	0.2	0.6
NH - Asian alone	1.3	0.5	0.8	0.5	0.5	0.5
NH - Native Hawaiian and Other Pacific Islander alone	0.2	0.1	0.0	0.1	0.0	0.0
NH - Some other race alone	0.1	0.0	0.0	0.0	0.0	0.0
NH - Two or more races	1.4	1.2	0.4	0.7	1.2	1.6
English Speaking Population (%)	16.4	15.5	21.3	13.3	15	13.5
Spanish Speaking Population	20.6	31.8	10.1	28.6	25.3	8.7
Unemployment Rate (%)	4.5	4.9	4.6	5.0	4.6	4.6
Age 25+, no Highschool Diploma	16.3	17.2	19.7	15.7	20.7	16.6
Food Insecurity Rate	21.3	21.0	24.0	20.5	19.3	18.9
Population with Income below 200% FPL	43.4	39.3	46.4	37.3	38.8	34.5
Violent Crimes (per 100,000)	470.3	343.9	647.3	312.3	357.7	303.6
Uninsured Overall (%)	19.4	16.0	16.2	16.7	20.4	15.9
Uninsured Under Ages 18	11.6	11.1	17.5	10.6	13.5	9.4
Uninsured Ages 18-64	27.5	22.3	22.3	24.2	29.4	23.4
Uninsured Ages 65 +	0.6	1.0	0.7	0.3	0.7	0.3
Preventable Hospital Conditions (per 1,000 Medicare Enrollee)	55.9	52.5	48.7	73.2	79.7	69.0
Breast Cancer (age-adj. per 100,000)	122.1	105.4	97.9	97.5	107.2	104.3
Prostate Cancer	129.1	77.4	107.1	91.6	86.2	91.3
Lung Cancer	75.1	72.8	92.9	73.6	69.6	77.2
Colon and Rectum Cancer	49.0	37.4	45.3	42.3	40.8	41.0
Cancer Mortality (per 100,000)	175.2	171.0	215.5	185.5	151.5	182.7
Coronary Heart Disease	116.1	105.0	138.1	109.7	113.5	156.4
Lung Disease	60.8	65.0	93.3	72.4	60.6	60.3
Stroke	48.2	42.4	47.8	39.7	36.8	49.3
Motor Vehicle Crash	19.9	26.7	-	42.9	28.7	20.7
Drug Poisoning	6.8	10.5	-	-	8	-
Homicide	11.5	9.2	-	-	-	-
Suicide	14.6	17.4	-	16.9	16.2	23.1
Depression in Medicare Population (%)	17.8	17.3	17.1	14.4	18.2	16.8

APPENDIX B: KEY INFORMANT INTERVIEW PROTOCOL

[Notes to interviewer: All instructions to the interviewer are in square brackets. Do not read the statements aloud. Suggested script for interviewer appears in italics. The main questions are numbered. Interviewer should read and understand questions prior to starting the interview. Interviewer should cover all questions in protocol.

Questions phrasing is suggested. This is a discussion. Interviewer should phrase questions in a way that s/he is comfortable speaking.

Follow-up questions may be employed to more fully explore the topic area when applicable. If interviewer believes the concept has been covered s/he may skip follow-up questions. Probes are optional. If interviewer believes the participant has not fully engaged or answered the main or follow-up question s/he may use one or more of the **"probes" to further investigate and engage the participant. The**se optional questions are listed below the main question stem.]

Hello, may I please speak with [NAME]?
My name is ***[INTERVIEWER'S NAME]*** and I am calling from the [Texas Health Institute]. ***[INSERT CHRISTUS HEALTH CONTACT PERSON'S NAME]*** from CHRISTUS Health gave *me your information in order to participate in CHRISTUS Health's Community Health Needs* Assessment. Thank you so much for offering to speak with me.

As you may know, all non-profit hospitals are required to conduct a community health needs assessment every three years. The purpose of this assessment is for the hospital to gain an understanding of the current health status of their target area, learn about the top health needs and priorities, and to develop an action plan to address some of those health needs when possible. Part of the assessment is gathering quantitative data on health indicators from secondary analysis and the other part of the assessment process includes getting input from community residents and key stakeholders, which is why I am conducting this interview with you. Your input will be used to inform the health needs assessment and potential future action by CHRISTUS Health in your community.
The interview will take a maximum of one hour.

In order to capture all of the information we talk about, I will be taking notes throughout the conversation. I will not record your name on the call; I will only start taking notes with the beginning of the questions. After the interview is completed, we will transcribe and code the interviews so that we can see if any themes arise across the multiple interviews conducted. All transcripts will be destroyed at the end of the project, and your responses will not be tied back to you in any way; the results of the interviews will only be reported in aggregate. Are you comfortable with having the conversation recorded in this way?

[IF YES]: Great, thank you. I will call you at [DATE AND TIME]. I look forward to speaking with you then.
[IF NO, THANK THE PARTICIPANT FOR THEIR TIME AND END CALL]

[START HERE FOR ACTUAL INTERVIEW]

Hello, may I please speak with [NAME]?
Thank you so much for taking this time to speak with me. Do you have any questions about the assessment that we discussed during our last call? [ALLOW TIME FOR QUESTIONS]

[IF PREVIOUSLY AGREED TO RECORDING]: In order to capture all of the information we talk about, I am going to take detailed notes throughout our conversation. After the interview is completed, we will review and code the interviews so that we can see if any themes arise across the multiple interviews conducted. All of your responses will not be tied back to you in any way; the results of the interviews will only be reported in aggregate. Do you agree to participate in this way?

[IF YES, PROCEED WITH INTERVIEW]
[IF NO, THANK THE PARTICIPANT FOR THEIR TIME AND END CALL]

[BEGIN INTERVIEW]: Thank you! I appreciate your time. Again, please remember that your responses will not be tied back to you directly so feel free to be as honest as possible. We are truly interested in hearing your opinions and ideas. You may refuse to answer any question or *topic during the interview. Do you have any questions? Let's get started. I am going to begin the* recording now. [BEGIN RECORDING]

This is key informant interview [#] on [day, date, time]
As we go through these questions, please answer based on your perception for the following geographies: [Insert Site Counties Here]— counties

1. Can you please tell me a little bit about your background and how you are connected to CHRISTUS Health, if at all?

Probe: Are you a public health expert, local/county/state official; community resident; representative of CBO, faith-based organization, schools, other health setting, etc.?

Follow-up: Do you meet any of these criteria? [Note: Participant does not necessarily have to meet any of these to participate]

[CIRCLE ALL THAT APPLY]

1. Persons with special knowledge of or expertise in public health
2. Federal, tribal, regional, State, or local health or other departments or agencies, with current data or other information relevant to the health needs of the community served by the hospital facility
3. Leaders, representatives, or members of medically underserved, low-income, and minority populations, and populations with chronic disease needs, in the community served by the hospital facility.

<u>COMMUNITY HEALTH AND WELLNESS</u>

*2. What are some of your community's assets and strengths as related to the health and well-*being of community residents?

Probe: primary and preventive health care; mental/behavioral health; social environment; any other community assets

3. What do you think are the physical health needs or concerns of your community? [free list]

Probe: heart disease, diabetes, cancer, asthma, STIs, HIV, etc.
Follow up: Who do these health needs or concerns affect the most (e.g. age groups, racial/ethnic groups, socioeconomic groups, geographic subsets, etc.)?
Follow up: Are there organizations already addressing these needs? [free list] If so, which ones? How could CHRISTUS possibly partner with or enhance the efforts of these organizations?
Follow up: These are the top 3 health needs we have identified: [Refer to data sheet and read the corresponding top 3 health needs for the region from which the interviewee is representing]. Do you think these are primary concerns for your community?

Follow up: Are there any other needs that should be addressed?

Follow up: Are there organizations already addressing these needs? [free list] If so, which ones?

4. What do you think are the behavioral/mental health needs or concerns of your community? [free list]
Probe: suicide, depression, anxiety, ADHD, etc.

Follow up: Who do these health needs or concerns affect the most (e.g. age groups, racial/ethnic groups, socioeconomic groups, geographic subsets, etc.)?

Follow up: Are there organizations already addressing these needs? [free list] If so, which ones? How could CHRISTUS possibly partner with or enhance the efforts of these organizations?

5. What do you think are the environmental, including built environment, concerns facing your community? Not just limited to factors like air quality, these concerns can include things like access to green space, safe sidewalks or playgrounds, and reliable transportation. [free list]
Probe: Air quality, water quality, workplace related dangers, toxin/chemical exposures, transportation, green space, etc.

Follow up: Who do these health needs or concerns affect the most (e.g. age groups, racial/ethnic groups, socioeconomic groups, geographic subsets, etc.)?

Follow up: Are there organizations, assets or infrastructure (i.e. green space, parks, bike lanes, etc.) already addressing these needs? [free list] If so, which ones? How could CHRISTUS possibly partner with or enhance the efforts of these organizations?

6. Now I want you to think a little about a broader range of factors that could affect health. What do you think are the economic concerns facing your community? [free list]
Probe: Housing, employment, access to quality daycare, chronic poverty, etc.

Follow up: Who do these health needs or concerns affect the most (e.g. age groups, racial/ethnic groups, socioeconomic groups, geographic subsets, etc.)?

Follow up: Are there organizations already addressing these needs? [free list] If so, which ones? How could CHRISTUS possibly partner with or enhance the efforts of these organizations?

7. Again, thinking about other issue*s that could impact a person's health and well*-being, what do you think are the social concerns facing your community? These could be concerns that *impact a person's ability to interact with others and thrive or concerns that influence how the* members of that society are treated and behave toward each other.

Probe: Neighborhood safety, violence, dropout rates, teen and unplanned pregnancy etc.

Follow up: Who do these health needs or concerns affect the most (e.g. age groups, racial/ethnic groups, socioeconomic groups, geographic subsets, etc.)?

Follow up: Are there organizations, assets or initiatives in place already addressing these needs? [free list] If so, which ones? How could CHRISTUS possibly partner with or enhance the efforts of these organizations?

<u>BEHAVIORAL RISK FACTORS</u>

8. What are behaviors that promote health and wellness in your community?

Probe: Exercise, healthy nutrition, etc.

Follow up: Who engages in these positive behaviors and who is impacted (e.g. age groups, racial/ethnic groups, socioeconomic groups, geographic subsets, etc.)?
Follow up: Based on your experience/ knowledge/ expertise, what could be done to facilitate that more individuals can engage in these behaviors?

9. What are behaviors that cause sickness and death in your community?

Probe: Smoking, drinking, drug use, poor diet/nutrition, lack of physical activity, lack of screening (breast cancer, diabetes, etc.), etc.

Follow up: Who engages in these risk factors and who is impacted (e.g. age groups, racial/ethnic groups, socioeconomic groups, geographic subsets, etc.)?

<u>HEALTH CARE UTILIZATION</u>

10. Where do members of your community go to access existing primary health care?

Probe: Can you identify the facilities and what types they are (free clinic, private doctors office)?

Follow up: Who accesses these services?

Follow up: How often do they go to these facilities?

Follow up: What are the reasons they go (preventive, chronic care, etc.)?

11. Where do members of your community go to access existing specialty care?

Probe: Can you identify the facilities and what types they are (free clinic, private doctors office)?

Probe: What types of specialty care are people in your community seeking (ie gynecology, heart specialist, dialysis, etc?

Follow up: Who accesses these services?

Follow up: How often do they go to these facilities?

Follow up: What are the reasons they go (preventive, chronic care, etc.)?

12. Where do members of your community go to access emergency rooms or urgent care centers?

Probe: Please identify these facilities:

Follow up: Who accesses these services?

Follow up: How often do they go to these facilities?

Follow up: What are the reasons they go (emergencies, preventive, chronic care, etc.)?

Follow up: Why do they go to emergency care facilities rather than primary care?

13. Where do members of your community go to access existing mental and behavioral health care?

Probe: Can you identify the facilities and what types they are (free clinic, private doctors office)?

Follow up: How often do they go to these facilities?

Follow up: What are the reasons they go (preventive, chronic care, etc.)?

ACCESS TO CARE

14. Are you satisfied with the current capacity of the health care system in your community?

Probe: Access, cost, availability, quality, options in health care, etc.

Follow up: Why or why not?

15. What are some barriers to accessing primary health care in your community? [free list]

Probe: inadequate transportation, long wait times, don't know where to go, lack of insurance, etc.

16. What are some barriers to accessing mental and behavioral care in your community [free list]

Probe: inadequate transportation, long wait times, don't know where to go, lack of insurance, stigma, etc.

17. Who are impacted by these barriers?

18. Reflecting on these barriers, what are one or two things CHRISTUS, its partners, or other organizations in the community could do to try to address these?

Those are all of the questions I have for you today. Is there anything else you would like to add before I turn of the recorder? [ALLOW TIME FOR COMMENTS]
Thank you very much for your time today; we really appreciate you sharing your thoughts on the current status and health needs of your community. If you have any questions about the interviews we are conducting, you can contact [INSERT CONTACT NAME AND INFORMATION]

Note: Texas Health Institute developed this survey instrument in collaboration with the Louisiana Public Health Institute. All prompts and probes are tailored to the interview site.

APPENDIX C: COMMUNITY RESOURCES

An inventory of community resources was compiled based on key informant interviews, focus group discussions, and an internet-based review of health services in Tyler. The list below is not meant to be exhaustive but represents a broad sampling of feedback received from the stakeholder engagement process. The list of community resources is restricted to only those that are physically located within the report area. Several additional organizations located outside the report area may provide services to report area residents but fall outside the scope of inclusion in this needs assessment. Similarly, many of the organizations identified in this resource compilation serve a population broader than the report area but are included here in the context of the services they offer to report area residents.

Name	Description
CHRISTUS Good Shepherd Health System	Our not-for-profit health system includes hospitals in Longview and Marshall; Level III and Level IV Trauma Centers; two freestanding Emergency Centers; the region's first Level III NICU; comprehensive outpatient services; and medically integrated wellness facilities. In addition, from primary care to a full range of specialties, our 700 plus physicians and advanced care providers of CHRISTUS Trinity Clinic are here to serve the community with compassionate care.
Genesis Primecare	Genesis PrimeCare's purpose is to treat disease, injury, and medical needs by examination and use of various procedures; to prevent or minimize residual physical and mental disabilities; to aid the patients in achieving his/her maximum potential with-in his/her capabilities; and to accelerate convalescence and reduce the length of the functional recovery. Our goal is to help patients realize and maintain a state of wellness. Medical Services are provided to all ages including children, adolescents, adults, and geriatric, either through clinic professionals or referral to qualified specialist. Our scope of services offered are Family Medicine, Obstetrics, Pediatrics, Behavioral Health, Dentistry, Dermatology, Counseling and Education.
Gregg County Health Department	Health department that provides the following services offered: Indigent Health Care, STD Clinic, HIV Testing, Immunizations.

Name	Description
Community Healthcore	Serving as the mental health and intellectual disability governing authority for Bowie, Cass, Gregg, Harrison, Marion, Panola, Red River, Rusk and Upshur counties.
Marshall-Harrison Health District	Our mission is to provide quality public healthcare and health education to all citizens of the City of Marshall and Harrison County.
Longview Community Ministries	Longview Community Ministries is an organization that serves to enable Longview congregations and groups to work together more effectively in the community through cooperative acts of service to assist persons in need regardless of race, religion, or creed.
The Martin House Child Advocacy Center	The Martin House Children's Advocacy Center (CAC) is a child-focused non-profit organization dedicated to helping children under 18 years of age who are suspected victims of sexual or physical abuse or witnesses to violent crimes. The center is the result of a community-wide effort to combat and treat child maltreatment in Gregg, Harrison, and Marion Counties.
Women’s Center of East Texas	For over 30 years The Women’s Center of East Texas has served battered women, their witnessing children, and victims of sexual assault. We have responded to tens of thousands of calls for help, and there is so much more to be done. We spend our days exploring options, enhancing safety and creating community change with victims of domestic and stranger and/or non-stranger sexual violence.
East Texas Council on Alcoholism and Drug Abuse	Our mission at ETCADA is to reduce substance abuse and dependency within our East Texas communities.

Name	Description
Longview Regional Medical Center	Longview Regional Medical Center, a 230-bed facility, is 180 physicians and healthcare professionals strong, and quality-driven, nationally recognized for chest pain and stroke care, and dedicated to great patient service, with multi-specialty clinical expertise.
Healthcare Express	As a leader of medical care, we offer a modern, customer oriented, version of health care. We have onsite lab and X-ray at all locations. Along with urgent care, we offer primary care, occupational medicine, and weight loss services.
Wellness Pointe	Wellness Pointe is an FTCA Deemed Federally Qualified Health Center (FQHC) and 501(c)3 nonprofit organization. We provide a variety of medical and social support programs to benefit the health of the whole family. If you do not have a primary care physician or would like to change providers, Wellness Pointe is ready to serve your health care needs! We have four convenient locations in Longview, Kilgore, and Gilmer with early morning and evening appointments available to accommodate your busy schedule.
North East Texas Homeless Consortium	Working to help prevent and end homelessness and hunger.
House of Disciples	The House of Disciples (HOD) Life Recovery Center seeks to disciple men with life-controlling problems. To help them function as a Christian in society, while applying spiritually motivated Biblical principles to their families, local church, chosen vocation and the community. HOD endeavors to help individuals become mentally sound, emotionally balanced, socially adjusted, physically well, and spiritually alive.

Name	Description
Newgate Mission	Newgate is a day mission that serves the spiritual, physical, social, emotional, and financial needs of the homeless, low-income, and marginalized populations of Longview.
East Texas Open Door	East Texas Open Door, Inc. (ETOD) is a private, non-profit organization established in 1987 to serve children in the East Texas are. In its over 25 years of service to children it has expanded services to reach the entire state of Texas. Even though ETOD started with an Emergency Youth Shelter it has expanded its services through the years and now has a RTC and General Residential Operation. With these facilities ETOD is able to serve campus wide children and adolescents from ages 5 - 18 and Basic to Specialized levels of care.
Buckner International	We provide single-parent families the opportunity to live in a safe, secure environment while completing their educational or vocational goals and learning the skills they need to be self-sufficient. Families are provided support through access to affordable housing, financial assistance, counseling, spiritual growth and case management services.
Hiway 80 Rescue Mission	At Hiway 80 Rescue Mission, we preach and teach the word of God while winning souls to Jesus Christ. We accomplish this by providing - food, shelter, clothing and the opportunity to hear and receive the Gospel.

CHRISTUS GOOD SHEPHERD HEALTH SYSTEM WOULD LIKE TO THANK RESIDENTS AND STAKEHOLDERS FROM THE COMMUNITY WHO CONTRIBUTED TO THIS COMMUNITY HEALTH NEEDS ASSESSMENT.