Community Health Needs Assessment
2017-2019

CHRISTUS SOUTHEAST TEXAS
Health System

CHRISTUS Southeast Texas St. Elizabeth • CHRISTUS Southeast Texas St. Mary • CHRISTUS Southeast Texas Jasper Memorial

About Texas Health Institute:

Texas Health Institute (THI) is a nonpartisan, nonprofit organization whose mission is to improve the health of Texans and their communities. Based in Austin, Texas, THI has operated at the forefront of public health and health policy in the state for over 50 years, serving as a trusted, leading voice on issues of health care access, health equity, workforce development, planning, and evaluation. Core and central to THI's approach is engaging communities in participatory, collaborative approaches to improving population health, bringing together the wisdom embedded within communities with insights, innovations, and guidance from leaders across the state and nation.

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EXECUTIVE SUMMARY

The CHRISTUS Southeast Texas Health System is a non-profit, Catholic, integrated health care delivery system that includes three acute care hospitals — CHRISTUS Southeast Texas St. Elizabeth, CHRISTUS Southeast Texas St. Mary, and CHRISTUS Southeast Texas Jasper Memorial. CHRISTUS Southeast Texas Health System's dedicated staff provide specialty care that is tailored to the individual needs of every patient, aiming to deliver high-quality services with excellent clinical outcomes. CHRISTUS Southeast Texas 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 Health commissioned Texas Health Institute to conduct and produce the 2017-2019 Community Health Needs Assessment for CHRISTUS Southeast Texas Health System, required by law to be performed once every three years as a condition of 501(c)(3) tax-exempt status.

In this community health needs assessment, THI staff and CHRISTUS Southeast Texas Health System community stakeholders analyzed over 40 different indicators, spanning demographics, socioeconomic factors, health behaviors, clinical care, and health outcomes. Report findings combine data from publicly available sources, internal hospital data, and input from those with close knowledge of the local public health and health care systems to 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. Through an iterative process of community debriefing and refinement of findings, a final list of five prioritized health concerns was developed, and is summarized in the table below. This list of priority health needs and data compiled in support of their selection lay the foundation for CHRISTUS Southeast Texas Health System to remain an active, informed partner in population health in the region for years to come.

Rank	Health Concern
1	Access to primary care services
2	Unhealthy behaviors
3	Preventable hospital stays
4	Access to mental health providers and services
5	Food insecurity

INTRODUCTION

CHRISTUS Southeast Texas Health System is comprised of three non-profit hospitals primarily serving a six-county region in southeast Texas. The CHRISTUS Southeast Texas Health System service area centers on the Beaumont-Port Arthur metropolitan statistical area, located approximately 85 miles east of Houston and 25 miles west of the Texas-Louisiana state line. CHRISTUS Southeast Texas St. Elizabeth Hospital and CHRISTUS Southeast Texas St. Mary Hospital are located in downtown Beaumont and Port Arthur, respectively. CHRISTUS Southeast Texas Jasper Memorial Hospital, located 70 miles north of Beaumont-Port Arthur, serves the northern portion of CHRISTUS Southeast Texas Health System's service region.

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. Today, CHRISTUS Health operates 25 acute care hospitals and 92 clinics across Texas, Louisiana, and New Mexico, and 12 international hospitals in Mexico and Chile. In addition, the CHRISTUS Dubuis Health System owns or manages eight long term acute care hospitals across the southern and midwestern United States. As part of its mission 'to extend the healing ministry of Jesus Christ,' CHRISTUS Southeast Texas 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 commissioned Texas Health Institute (THI) to develop the CHNA report for CHRISTUS Southeast Texas 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 Southeast Texas Health System have drawn upon a wide range of primary and secondary data sources, and have engaged a group of community residents and stakeholders with special knowledge of the local public health landscape and/or vulnerable population groups to provide insight into community health needs and priorities, challenges, resources, and potential solutions.

A CHNA ensures that CHRISTUS Southeast Texas Health System has made efforts to identify the unmet health needs of residents in its service region, examine barriers residents face in achieving and

[1] CHRISTUS Health. (2016). Our mission, values, and vision. Available at: http://www.christushealth.org/OurMission.

maintaining good health status, and inventory available health opportunities and assets within the service area that can be leveraged toward improving population health. The CHNA lays the foundation for future planning, ensuring that CHRISTUS Southeast Texas 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

The THI team conducted a literature review using previously published community health needs assessments and other local reports focused on the Southeast Texas region. The findings and evaluation from previous community needs assessments were incorporated into project design, interviews and focus groups, and this report as applicable. In an effort to standardize the CHNA process across all CHRISTUS facilities, THI staff collaborated with the Louisiana Public Health Institute (LPHI) to design and conduct the needs assessments. THI and LPHI followed a mixed-methods approach of data collection, accessed from both primary and secondary data sources, including both qualitative and quantitative measures.

CHNA construction 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. The THI team subsequently obtained internal data from the three CHRISTUS Southeast Texas Health System acute care hospitals and conducted a descriptive analysis. Together, THI 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 barriers and resources, and possible opportunities for action. The interviewer inquired about 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 CHRISTUS Health contributed contact information for 15 people who represent the broad interests of Southeast Texas and who possess knowledge about the region's health-related challenges. These key stakeholders included nonprofit leaders, health department authorities, public school leaders, healthcare providers and leaders, elected officials, local and state agencies, law enforcement agencies, persons representing distinct geographic areas, and persons representing diverse racial/ethnic groups. To recruit interviewees, the THI team contacted key informants by email and telephone. THI conducted eight interviews between February and May 2016, each lasting between 45 and 60 minutes.

Transcription

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

The THI team finalized the design of the focus group guide after discussions with CHRISTUS Health staff, a review of quantitative data, and analysis of interview data collected prior to the focus group.

Recruitment and Sample

Potential participants were identified by CHRISTUS Southeast Texas Health System leadership. Most participants were recruited through organizations that provide health care or related services to community residents (e.g., clinics, community organizations, social service agencies). Elected officials and government leaders were also invited to participate. To assist with recruitment, the local CHRISTUS Health liaison recruited 21 stakeholders who represented specific groups, occupations, or perspectives important to the project. Sixteen people participated in the focus group.

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 coded all transcripts, identifying and consolidating the main themes. From successive readings of transcripts, the THI team methodically analyzed transcript content to produce a progressively refined coding scheme. From this coding scheme, several predominant themes emerged that were used to construct the final summaries.

NEEDS PRIORITIZATION

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. The second step was to facilitate a community-driven refinement of the data-based priorities, using Nominal Group Technique to generate a prioritized needs list.

THI staff facilitated a Nominal Group Technique exercise at a needs prioritization meeting that took place in June 2016. The local liaison recruited 21 participants to serve on the needs prioritization committee, all 21 of whom participated in the meeting. THI staff presented the initial analysis of both primary and secondary data, shared a list of data-based priorities, and led the group in a Nominal Group Technique exercise to distill a final list of top priorities. Participants identified and scored their top priorities, and facilitators from THI consolidated individual participants' scores to generate an overall ranking, which was relayed back to the group for further discussion. The prioritization committee reached consensus on the composite ranking before finalizing the priority health needs list.

SUMMARY OF ACTIVITIES SINCE 2014-2016 CHNA

CHRISTUS Southeast Texas Health System's most recent CHNA was completed in 2013, informing system-wide planning and strategy for the 2014-2016 triennium. The board of CHRISTUS Southeast Texas Health System approved the CHNA and accompanying Community Health Improvement Plan (CHIP) in FY 2013, providing the impetus for initiatives that address the needs of the underserved. The assessment and planning benefited from CHRISTUS Southeast Texas Health System's participation in the Texas Medicaid 1115 Demonstration Waiver Region 2 Partnership. The CHNA involved 16 counties in the assigned Region 2, with the University of Texas Medical Branch (UTMB) as the anchor. The quantitative health assessment was prepared by the University of Texas School of Public Health in Houston and the UTMB Center for Elimination of Health Disparities, drawing upon a wide range of data

sources. The qualitative community health assessment was designed and conducted by the Texas Area Health Education Center (AHEC) East Program.

The CHNA identified the unmet health needs of underserved residents in the CHRISTUS Southeast Texas Health System service area, enhancing collective understanding of the challenges those populations encounter when trying to maintain or improve their health, and opportunities to better serve those populations. The needs receiving the greatest collective emphasis included (1) increasing access to primary care, and (2) addressing chronic diseases. Following the directives of the Texas Medicaid 1115 Waiver, two Delivery System Reform Incentive Payment (DSRIP) projects were developed.

In response to the need for improved access to primary care, CHRISTUS granted Legacy Community Health Services $375,000 and additional in-kind support for the development of a federally qualified health center (FQHC) where none previously existed in the Beaumont, Texas area. The newly established FQHC now operates two busy clinics in underserved neighborhoods, featuring a strong collaboration with CHRISTUS Southeast Texas Health System in serving the clinical care needs of the local population. The clinics serve over 15,000 patients per year, most of whom are uninsured or enrolled in Medicaid. In collaboration with an existing FQHC in Port Arthur, Texas, a health navigator position was also established in the local CHRISTUS hospital emergency room, and a bilingual community health worker position was added to address health disparities observed among the local Hispanic/Latino population.

To address chronic diseases, CHRISTUS launched two Center for Health Management clinics. The Beaumont Center for Health Management was established in 2013, and the Port Arthur Center was established in 2014. The Centers are equipped to address chronic diseases such as congestive heart failure, chronic obstructive pulmonary disease, obesity, diabetes, and smoking-related illnesses. Patients are referred from a physician and receive education and behavior change support to encourage healthy habits. The Centers now treat over 400 chronically ill patients per year. The FQHC initiatives and the Center for Health Management DSRIP projects have each contributed to reductions in hospital readmissions.

The 2014-2016 CHNA did highlight gaps in mental health, behavioral health, and substance abuse services that the most recent CHIP has not addressed sufficiently. Mental and behavioral health needs persist due to limited resources in the community — the ratio of patients to mental health providers numbers approximately 1,786 to 1, with no local inpatient beds available for the uninsured or Medicaid-enrolled population with mental health needs. When specialized mental health services are required, CHRISTUS works collaboratively with other public or non-profit mental health organizations in the community such as Baptist Hospitals of Southeast Texas and Texas MHMR. In the event of urgent needs, CHRISTUS makes mental health consultation available to stabilize patients in crisis, facilitating

timely transfer to more suitable facilities. CHRISTUS Southeast Texas Health System continually evaluates mental and behavioral health gaps and works with the community either to provide services directly or arrange for outside services in the best interest of the patients and the community.

FINDINGS

POPULATION DEMOGRAPHICS

CHRISTUS Southeast Texas Health System serves a six-county region (henceforth referred to as "report area" or "service area"), consisting of a total population of nearly half a million residents (Table 1). Over 50% of the region's population resides in Jefferson County, which contains Beaumont and Port Arthur, the report area's largest cities. Seven in 10 residents of the report area live in an urban environment, while the remaining 3 in 10 are rural. The population of the report area represents approximately 2% of Texas' total population.

County	Population
Jefferson	252,466
Orange	82,737
Hardin	55,215
Jasper	35,826
Tyler	21,552
Newton	14,323
Total	**462,119**

Table 1. Report Area Population, by County

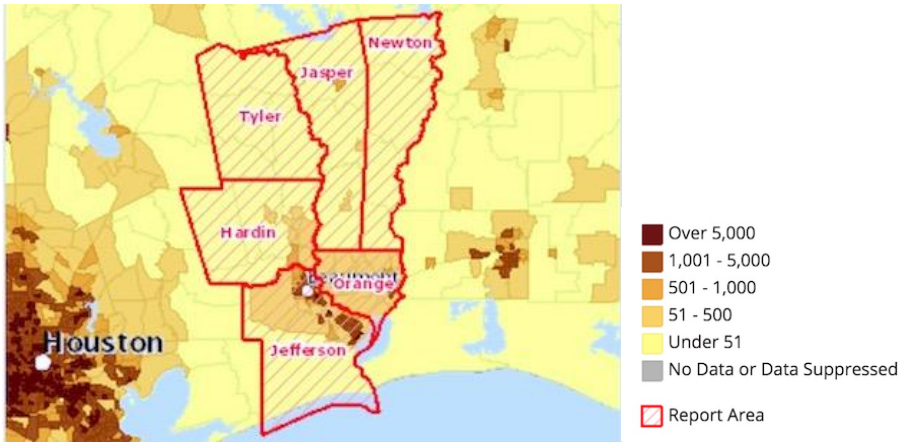

Figure 1. Report Area Population Density (Persons per Square Mile)

Sixty percent of persons living in the report area are working-age adults. Of the remaining population, 7% are in infancy or early childhood, 17% are school-age children, and 14% are over the age of 65 (Figure 2). Overall, the population residing in the report area is slightly older than the population of Texas. Just 11% of Texas' population is comprised of adults over age 65. Focus group participants acknowledged the

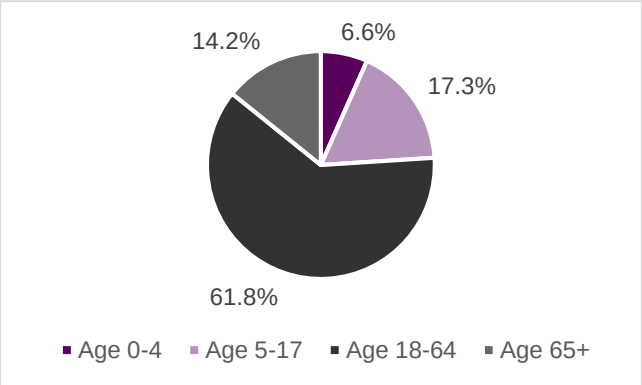

Figure 2. Report Area Population, by Age

unique challenges associated with the aging population, characterizing older adults as the region's fastest growing demographic segment. The availability of programs designed to support people who are growing older and leaving the workforce was described as limited, and participants stressed the need for CHRISTUS to plan proactively and with urgency for the needs of the over-65 age group.

The report area is home to a racially and ethnically diverse population that differs slightly in composition from the racial/ethnic demographics of Texas (Table 2). Nearly 4 in 10 Texans are Hispanic/Latino, compared to just over 1 in 10 residents of the report area. Among the non-Hispanic/Latino population, 70.4% are White, 23.0% are Black, and 2.3% are Asian. Nearly a quarter of report area residents are black, substantially exceeding the proportion of Black residents in the state of Texas. Persons belonging to Native Hawaiian/Pacific Islander and Native American/Alaska Native race categories each comprise fewer than 0.5% of the report area population.

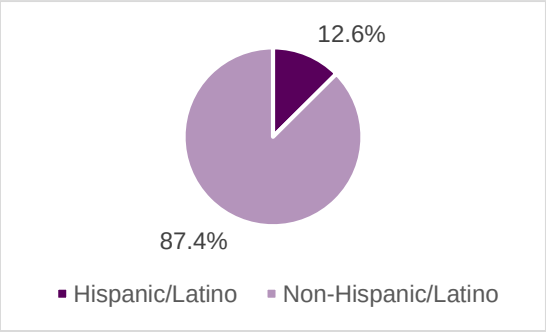

Figure 3. Report Area Population, by Ethnicity

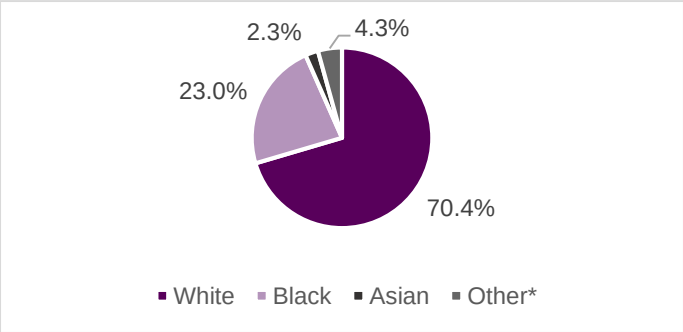

Figure 4. Report Area Population, by Race

**Other includes the following race classifications: Native Hawaiian/Pacific Islander, Native American/Alaska Native, Multiple races, and Other race.*

	Report Area	Texas
Ethnicity		
• Hispanic/Latino	12.6%	38.2%
• Non-Hispanic/Latino	87.4%	61.8%
Race		
• White	70.4%	74.7%
• Black	23.0%	11.9%
• Asian	2.3%	4.1%
• Native Hawaiian/Pacific Islander	<0.1%	<0.1%
• American Indian/Alaska Native	0.4%	0.5%
• Other race	2.3%	6.4%
• Multiple races	1.6%	2.4%

Table 2. Race/ethnic Distribution of Report Area and Texas

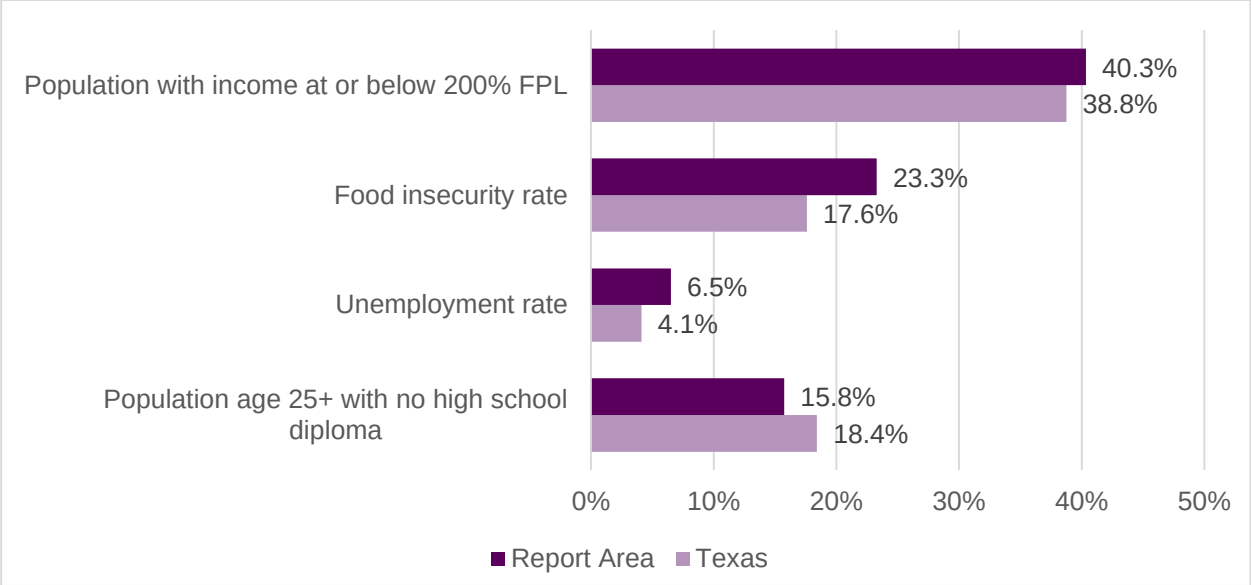

Figure 5. Socioeconomic Characteristics of Report Area and Texas

SOCIAL AND ECONOMIC ENVIRONMENT

Educational attainment in the CHRISTUS Southeast Texas Health System service area is slightly higher than in Texas as a whole — just 15.8% of report area residents over age 25 lack a high school diploma, compared to 18.4% of Texans. The 2013-14 high school graduation rates in Texas and the report area are identical (89.6%). Consolidated median income data for the report area is not available, but county-level data show that Hardin County has the highest median family income of all counties in the service area ($64,751), while Newton County's median family income is lowest ($47,660). Poverty is fairly widespread in the service area, with 40% of report area residents earning annual incomes at or below 200% of Federal Poverty Level (FPL). According to 2016 federal guidelines, 200% FPL corresponds to an income of $48,600 per year for a family of four.[2]

Compared to Texas, the report area's food insecurity and unemployment rates are substantially higher. Twenty-three percent of report area residents experience food insecurity, or uncertainty whether they will be able to eat enough nutritious food at some point during the year, compared to about 18% of Texas residents. Unemployment is over 50% greater in the report area (6.5%) than Texas' overall unemployment rate (4.1%). Figure 5 provides a comparative summary of socioeconomic indicators for the report area and the state of Texas.

[2] U.S. Department of Health and Human Services. (2016). 2016 Poverty Guidelines. Office of the Assistant Secretary for Planning and Evaluation. Available at: http://aspe.hhs.gov/poverty-guidelines

Violent crime (defined as homicide, rape, robbery, and aggravated assault) occurred in the report at a rate of 486 violent crimes per 100,000 population, compared to 422 per 100,000 population in Texas (Figure 6). Within the report area, substantial disparities in violent crime appear by county. Jefferson County, the report area's most populous county, has the highest violent crime rate at 652 per 100,000 population, while Newton County, the least populous county, had a violent crime rate of just 43 per 100,000 population. Jefferson County accounted for over half of violent crimes committed in the service area during the reporting period.

Overweight, obesity, and chronic disease have remained consistent areas of need for the CHRISTUS Southeast Texas Health System service area, and a scarcity of healthy food outlets can create barriers for individuals who need to manage their weight and nutrition. The Centers for Disease Control and Prevention (CDC) Modified Retail Food Environment Index measures the availability of healthy food retail outlets at the census tract level. According to this measure, nearly two-thirds of the report area population lives in a census tract with either low access to healthy food outlets, no healthy food outlets, or no food outlets at all. Most of the remaining one-third have moderate access to healthy food outlets, while just 1% have high access to healthy food retail (Figure 7). Among the population with low/no healthy food access, significant racial and ethnic disparities exist: 57% of the White population has low/no healthy food access, compared to 68% of the area's Hispanic/Latino residents and 78% of Black residents.

Focus group participants and key informants helped lend context to the socioeconomic trends observed in the data. One key informant estimated that seventy percent of the people in the community they serve receive vouchers for housing, and while unemployment in the area is usually below national rates, low-wage employment is common and limits residents' ability to securely provide for themselves and their families. Stakeholders stressed how a person's overall well-being and sense of dignity are closely linked to having productive employment and the stability it provides.

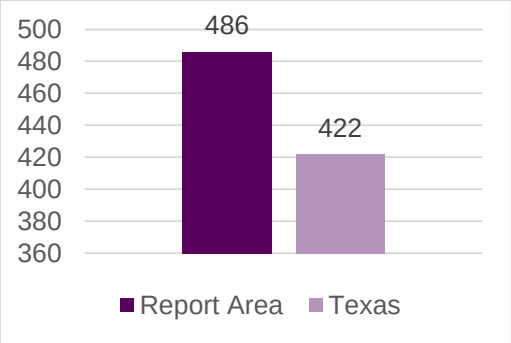

Figure 6. Violent Crime Rate per 100,000 Residents

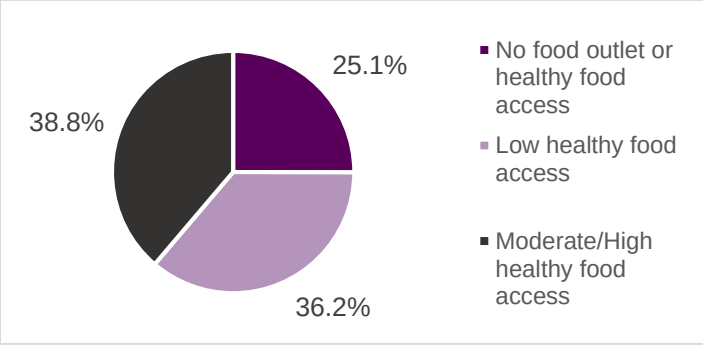

Figure 7. Population living in Census Tracts with Access to Healthy Food Outlets

Food security and access also received a strong emphasis from stakeholders, who noted that even when healthy choices are available, they can be cost prohibitive. In one stakeholder's opinion, addressing food insecurity is critical because "not much matters when someone is hungry except finding their next meal," leading to negative impacts that cut across all aspects of well-being. Moving forward, stakeholders encouraged a pursuit of cross-sector collaborations to address social determinants of health from multiple angles.

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.[3] 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.

Uninsured rates in Texas have declined in recent years, but remain relatively high compared to the rest of the nation. In the CHRISTUS Southeast Texas Health System service area, the uninsured rate is nearly identical to Texas' uninsured rate overall (21.2% versus 21.9%). Figure 8 shows the uninsured rate among adults over age 65 in the report area is just 1%, likely due to the availability of Medicare coverage for this age group. In contrast, nearly 3 in 10 working-age adults in the report area are uninsured and approximately 1 in 10 children living in the report area are uninsured.

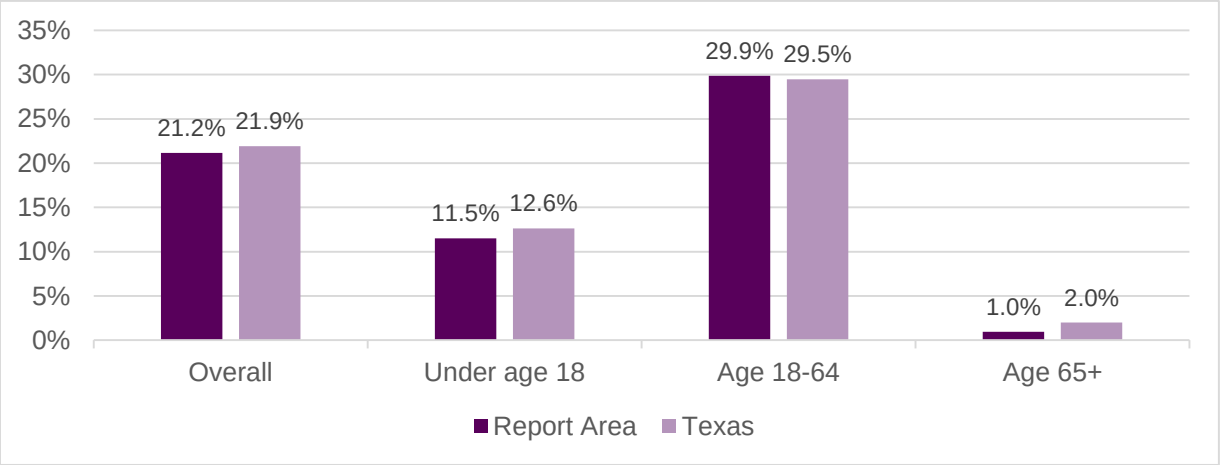

Figure 8. Uninsured Rate, Overall and by Age Group

[3] Institute of Medicine. (1993). Access to health care in America. *Committee on Monitoring Access to Personal Health Care Services.* Washington, DC: National Academy Press.

Stakeholders identified access to care and provider shortages as some of the community's most urgent needs. Key informants illustrated deficits in the access to care landscape by detailing some of the difficulties people face in connecting to routine care. For example, stakeholders commented that many lower-income individuals continue to use the emergency department for primary care even when insured because they cannot afford to take off work and receive no paid leave for this purpose. Others suggested that the uninsured are traveling to cities outside the service region, visiting public hospitals and teaching hospitals where the availability of free or lower-cost options may be greater.

Health insurance represents just one component of access to care, and does not guarantee access even to those enrolled in coverage. Without an adequate supply of local health care providers, the health system will lack the capacity to accommodate all patients who need care, regardless of insurance status. Insufficient availability of health care providers stands out as an area of concern in the service region. The number of primary care physicians, dentists, and mental health providers per 100,000 population practicing in the report area is uniformly lower than the number of providers in Texas and nationally (Figure 9). The sharpest differences can be observed in relative numbers of mental health providers: while the national average number of mental health providers is 202.8 per 100,000 population, Texas averages only half this amount of providers (102.3 per 100,000), and the number of mental health providers in the report area amounts to barely a quarter of the national average (64.8 per 100,000). Stakeholders expressed a common sentiment that it can be difficult to attract and retain health professionals in Beaumont/Port Arthur and the surrounding region, a potential contributing factor to the observed health workforce deficiencies.

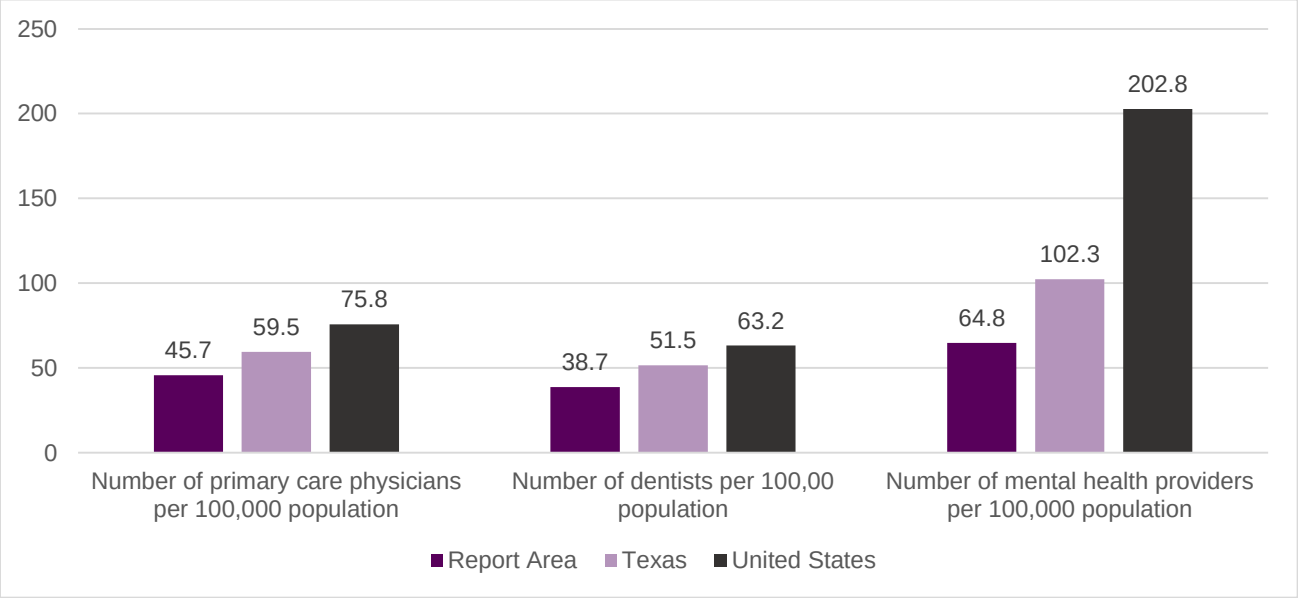

Figure 9. Number of Health Care Providers per 100,000 population, by Type

When access to care is limited, people may forego routine preventive care or diagnostic services typically provided by a primary care physician. Among residents of the report area, over one in five (22.6%) reported not having a consistent source of primary care, or someone they consider their personal doctor. This figure is substantially lower than the 32.4% of people in Texas who lack a source of primary care. Of the six counties in the report area, Newton County had the highest percentage of residents who lacked a source of primary care (40.2%), while just 14.9% of Orange County residents said they did not have a primary care doctor. Community stakeholders reacted to these data by pointing out that many providers in the area are choosing not to accept new patients into their practice, and those accepting patients may have weeks-long waiting lists for an appointment.

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 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. Preventable visits numbered 70.7 per 1,000 Medicare enrollees in the report area, exceeding the 62.9 preventable hospital events per 1,000 Medicare enrollees in Texas overall (Figure 10). A consensus emerged among community stakeholders that improper use of hospital and emergency department services is likely linked either to (1) lack of knowledge or awareness about an alternative service, such as a federally qualified health center; or (2) lack of capacity to address certain health issues in the community, which eventually spills over into emergency room demand. An example of the latter is a shortage of community-based mental health services, which leads to an excess of people visiting the emergency room in psychiatric distress.

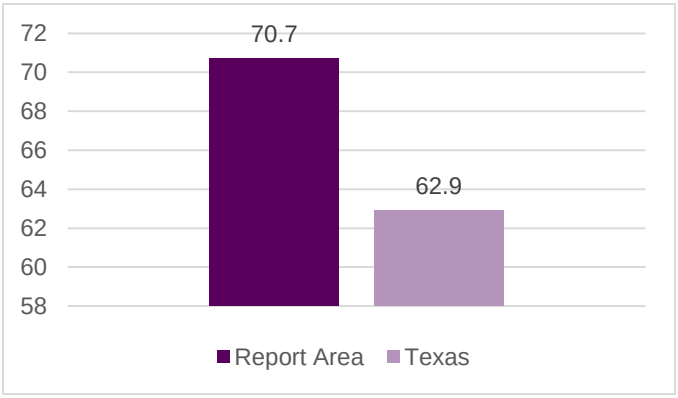

Figure 10. Number of Preventable Hospital Stays per 1,000 Medicare Enrollees

HEALTH OUTCOMES

Physical Health

Preventable chronic diseases, such as diabetes, heart disease, hypertension, and asthma, occur at high rates in the report area, frequently in excess of the corresponding prevalence in Texas overall (Figure 11). Hypertension is one of the most common preventable conditions observed in the report area, with

37% of residents reporting they have been told they have high blood pressure by a doctor. The prevalence of hypertension is exceptionally high in Jasper County (45.5%) and Tyler County (46.1%).

Diabetes prevalence among adults in the report area is 10.4%, an increase of approximately 3% over the past decade. Heart disease prevalence remains near 4%, in line with state and national prevalence, but differences by county in the report area are evident. Fewer than 2% of residents have been diagnosed with heart disease in Newton and Hardin Counties, but the prevalence of heart disease in Jasper County is 16.5%, four times the rate observed in the report area overall. Twelve percent of residents in the report area have asthma, including 31% of Newton County and 26% of Jasper County. Asthma prevalence is particularly important to monitor by geography because asthma can worsen in areas with poor air quality or other environmental triggers. One key informant stated their belief that asthma and other respiratory ailments are tied to irritants from industrial activity in the region, noting a tension between environmental exposures and the critical role industry plays in the local economy — "You can smell it. It's the smell of money."

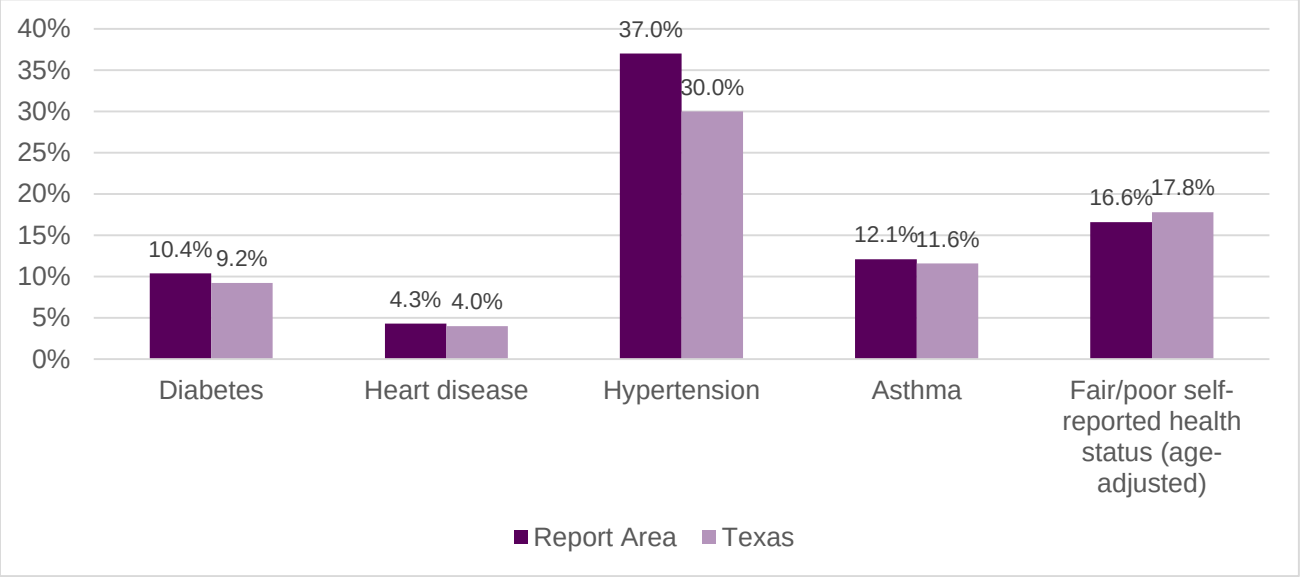

Figure 11. Lifetime Prevalence of Select Health Conditions Among Adults

Cancer is a leading cause of morbidity and mortality among the service area population. Measures of age-adjusted annual cancer incidence per 100,000 population show that cancer diagnoses are more frequent among all types of cancer in the report area than in Texas as a whole, with the exception of breast cancer (Figure 12). The largest difference is observed in lung cancer incidence, with the report area exceeding Texas in incidence by 11.5 new cases of cancer per 100,000 population annually. Cancer mortality is also substantially elevated among residents of the service area as compared to Texas, with

approximately 30 more deaths per 100,000 population occurring from cancer in the report area than in the state as a whole.

Age-adjusted mortality from numerous other causes is elevated in the CHRISTUS Southeast Texas Health System service area (Figure 13). Though the prevalence of heart disease in the report area is comparable to Texas, mortality from heart disease is much higher in the report area (212.1 deaths versus 175.7 deaths per 100,000 population). Along with cancer and heart disease, stroke, respiratory diseases, and unintentional injuries also contribute to high overall mortality in the report area.

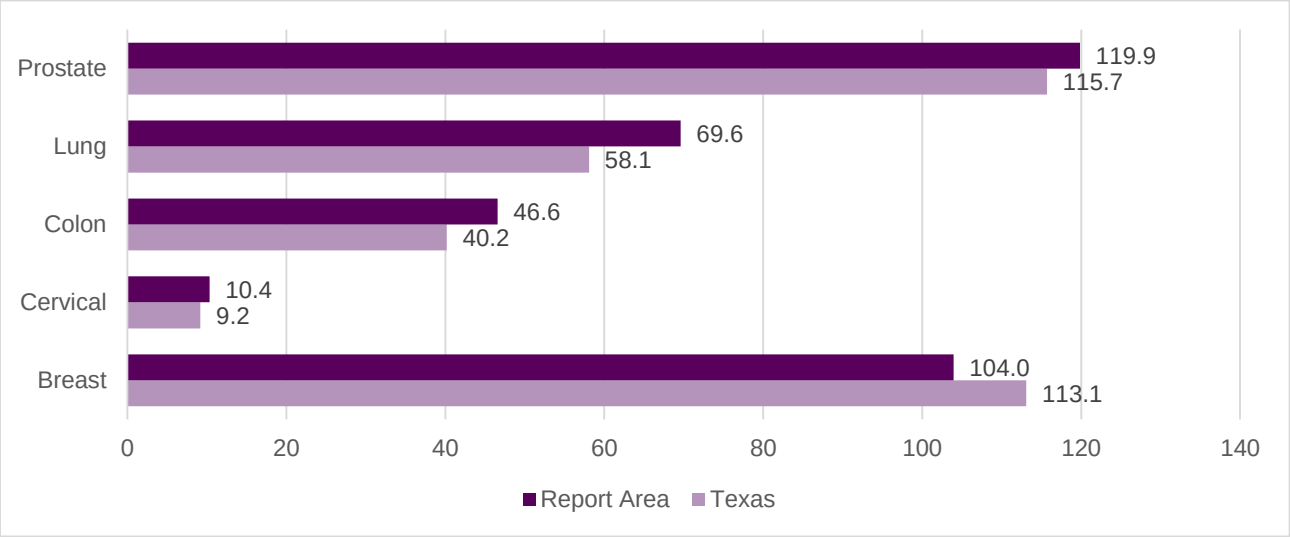

Figure 12. Age-adjusted Cancer Incidence per 100,000 Population Annually, by Type

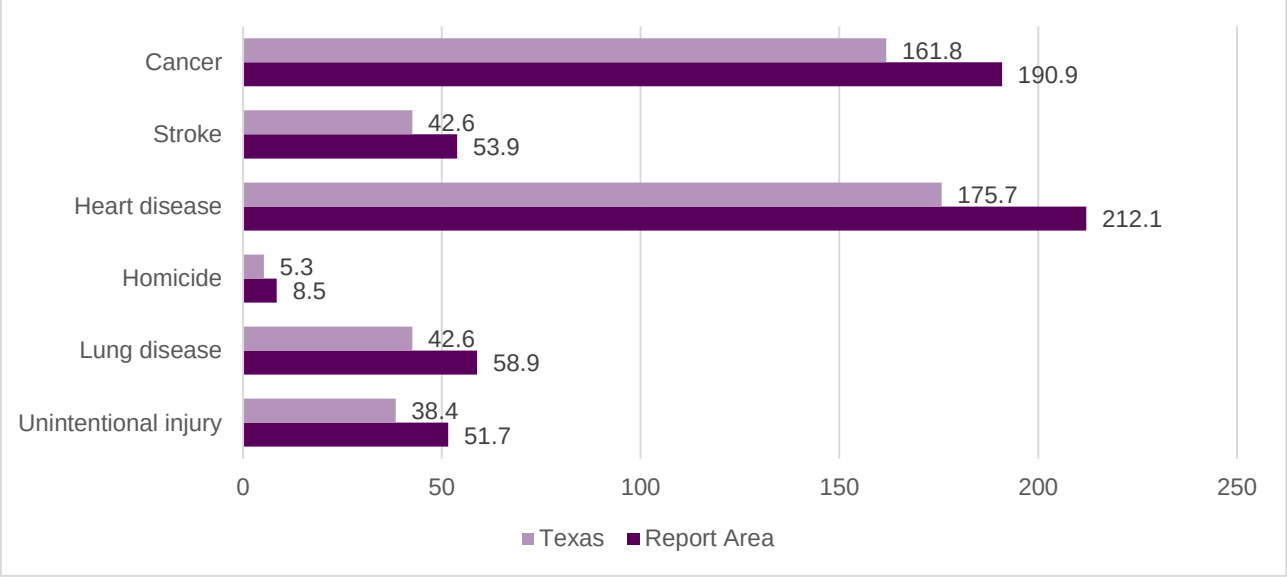

Figure 13. Age-adjusted Mortality Rate per 100,000 Population, by Cause

Community stakeholders spoke to the negative health effects they observed due to excess heart disease, cancer, and obesity in the community. They stressed the importance of prevention in curtailing incidence, severity, and mortality associated with these conditions. As opposed to clinical care, stakeholders emphasized the need to support people in the community as they pursue and attempt to sustain behavior changes. Most were adamant that chronic disease prevention should go beyond simply educating and raising awareness; in their experience, people are generally aware of the types of habits and behaviors that can improve their health. Rather, the main challenge has been to motivate change and help people follow through with long-term adjustments to their lifestyle.

Mental and Behavioral Health

The burden of morbidity and mortality resulting from mental illness represents a significant and rising concern among the report area. Approximately 14 people per 100,000 population in the report area die by suicide, compared to 12 deaths by suicide per 100,000 population in Texas (Figure 14). Evidence shows that 90% of people who die by suicide have a mental illness.[4] Suicide mortality varies strongly by gender in the report area — the suicide rate in males (23 per 100,000) is nearly six times higher than the suicide rate in females (4 per 100,000). Suicide risk is particularly elevated among older adults, which comprise a growing proportion of the report area population.

Depression, a major risk factor for suicide, affects 16.3% of Medicare beneficiaries in the report area, nearly identical to rates of depression among Medicare beneficiaries across the state (Figure 15). Over a quarter of report area residents feel they do not receive the social or emotional support they need all or most of the time, a slightly higher rate than Texans overall (Figure 16). Social and emotional support equips people to manage life stressors, navigate daily challenges, and demonstrate resilience

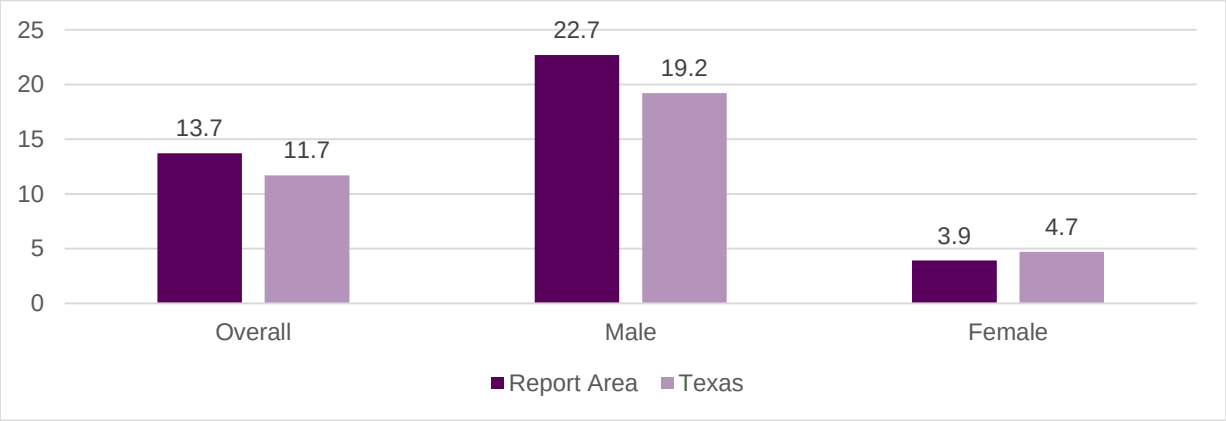

Figure 14. Age-adjusted Suicide Mortality Rate per 100,000 Population, Overall and by Gender

[4] National Alliance on Mental Illness. (2016). Risk of suicide. Available at: http://www.nami.org/learn-more/mental-health-conditions/related-conditions/suicide

if they experience crisis or trauma. Psychological distress can be precipitated or exacerbated by a perceived lack of social or emotional support.

Mental and behavioral health concerns appeared to be at the forefront of many stakeholders' minds, with one stating that mental health needs have increased to "epidemic levels." Beyond access to care concerns discussed previously, they note the importance of addressing cultural components that contribute to depression and other mental illness, especially among the area's racially and ethnically diverse communities. Stakeholders also discussed the growing toll that substance use disorders and addiction appear to have taken on the community, noting that veterans and other vulnerable subpopulations are particularly in need of quality treatment services for substance use. The focus group also noted the potential for mental and behavioral health outcome improvements to have cross-cutting impacts in other dimensions of well-being, such as unemployment, housing, and economic stability.

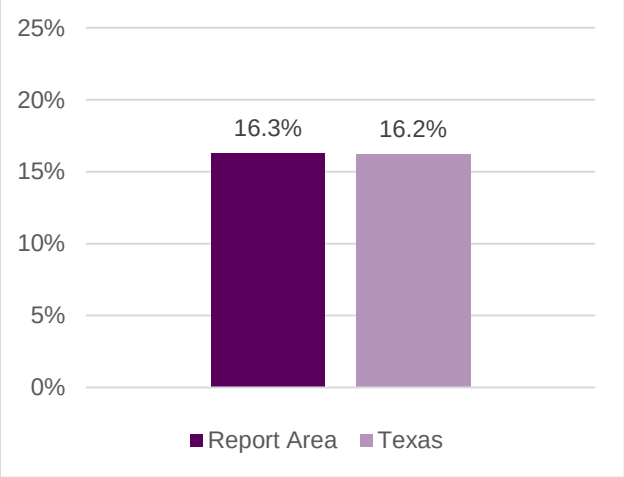

Figure 15. Prevalence of Depression Among Medicare Beneficiaries

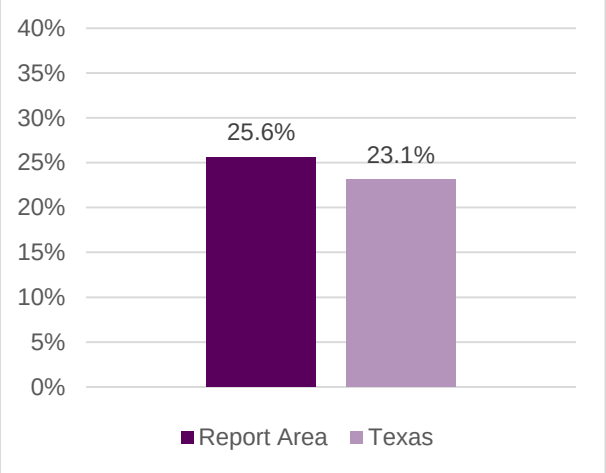

Figure 16. Percent of Residents Reporting a Lack of Social or Emotional Support

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. Accessing prenatal care early in pregnancy helps ensure that risks are identified and managed appropriately, decreasing the likelihood of perinatal and postnatal complications, disability, and death.[5]

[5] Healthy People 2020. (2014). Maternal, infant, and child health. Available at: http://www.healthypeople.gov/2020/topics-objectives/topic/maternal-infant-and-child-health

In Jefferson County, the only report area county for which prenatal care utilization rates are available, around 3 in 10 pregnant women do not receive prenatal care during their first trimester of pregnancy (Figure 17). While this proportion is lower than the 4 in 10 women who do not receive timely prenatal care in Texas, it falls well short of the national rate of fewer than 2 in 10.

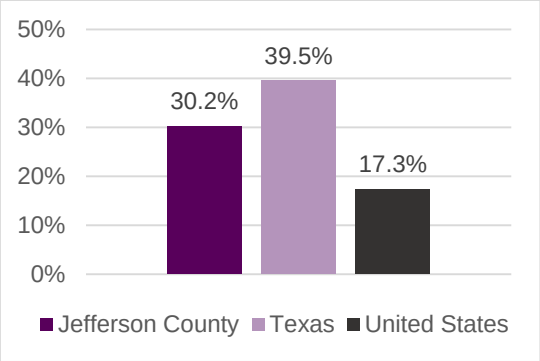

Figure 17. Percent of Women in Jefferson County who do not Receive Prenatal Care During the First Trimester of Pregnancy

Both infant mortality rate and the percent of infants born with low birth weight in the report area slightly exceed rates observed across the state. In the report area, infant mortality (defined as death before the infant's first birthday) occurs at a rate of 7.1 infant deaths per 1,000 births, compared to 6.2 infant deaths per 1,000 births in Texas (Figure 18). About 10% of infants in the report area are born with low birth weight (weighing under 2500 grams at birth), compared to 8% of infants in Texas (Figure 19).

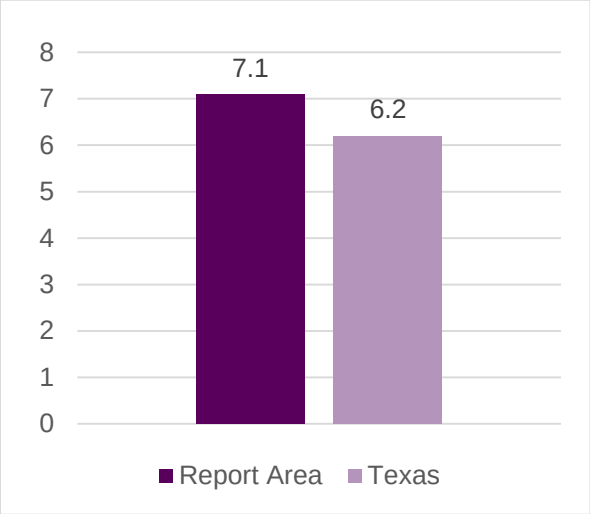

Figure 18. Infant Mortality Rate per 1,000 Births

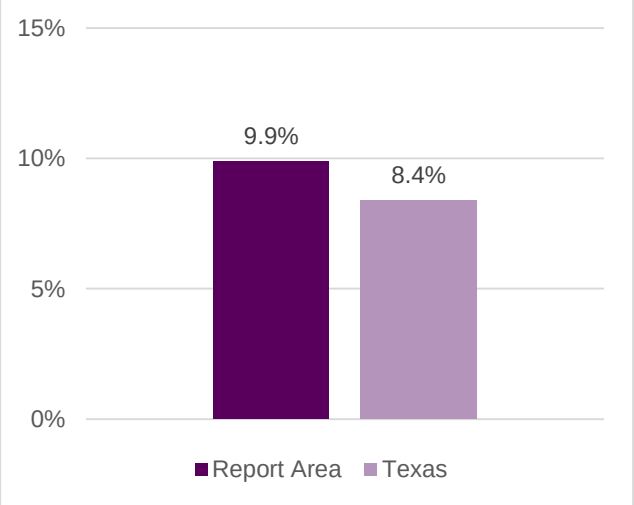

Figure 19. Percent of Infants Born with Low Birth Weight

Preterm birth is a contributing factor to low-birth-weight infants, and is associated with elevated risk for health problems and developmental disabilities. Infant mortality rate reflects not only the status of maternal and child health at the population level, but is frequently indicative of broader health system issues such as access to care and high prevalence of behavioral and socioeconomic health risks in the population. While more granular data on infant mortality and low birth weight are not available for the report area, substantial disparities in infant mortality and low birth weight do exist in Texas and nationally by race/ethnicity, income, and educational attainment.

HEALTH BEHAVIORS

Residents of the service area report numerous health risk behaviors at elevated rates. Figure 19 displays comparative prevalence rates of select risk behaviors within the report area and in Texas. Obesity, physical inactivity, and tobacco use in the service area all exceed the rest of the state by approximately 5-8%. However, 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) was about three percent lower in the report area (13.1%) than in Texas overall (15.8%). In the report area, over 77,000 adults (or 23.5%) currently use tobacco some or all days, with relatively little variation by county. Tobacco use, including smoking, is associated with elevated risk for numerous cancers, cardiovascular disease, respiratory disease, and premature death. Regular tobacco use in the report area exceeds Texas by 7%.

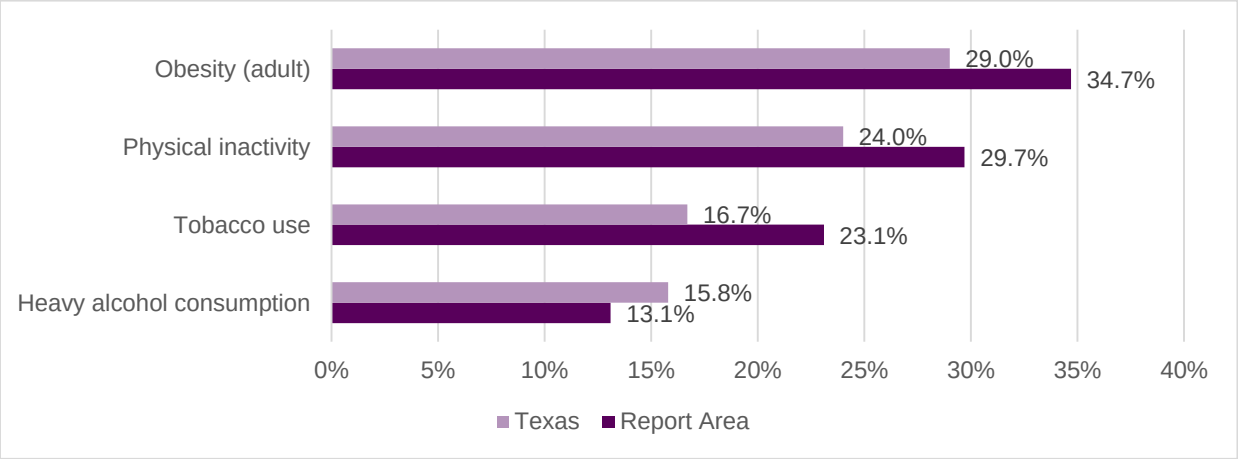

Figure 20. Prevalence of Health Risk Behaviors Among Adults

Physical inactivity contributes to poor health outcomes such as diabetes and cardiovascular disease. The CDC recommends adults participate in a minimum of 150 minutes of moderate intensity physical activity per week,[6] but nearly 30% of residents of the report area reported no physical activity of any kind during the past month. In contrast, 24% of Texans reported the same degree of physical inactivity. A physically inactive lifestyle elevates risk for overweight and obesity, which is also observed at high rates among the adult population of the service area. Thirty-five percent of report area residents are classified as obese, defined as a body mass index greater than 30.0 kg/m^2. In contrast, obesity rates in Texas and the nation fall below 30%. Obesity rates are fairly consistent across all report area counties and vary little by gender. Although the growth of obesity has slowed in recent years across Texas and

[6] Centers for Disease Control and Prevention. (2008). 2008 Physical activity guidelines for Americans. U.S. Department of Health and Human Services. Available at: http://health.gov/paguidelines/pdf/paguide.pdf

the nation, obesity in the report area has continued to climb sharply, increasing from 31% to 35% since 2009 (Figure 21).

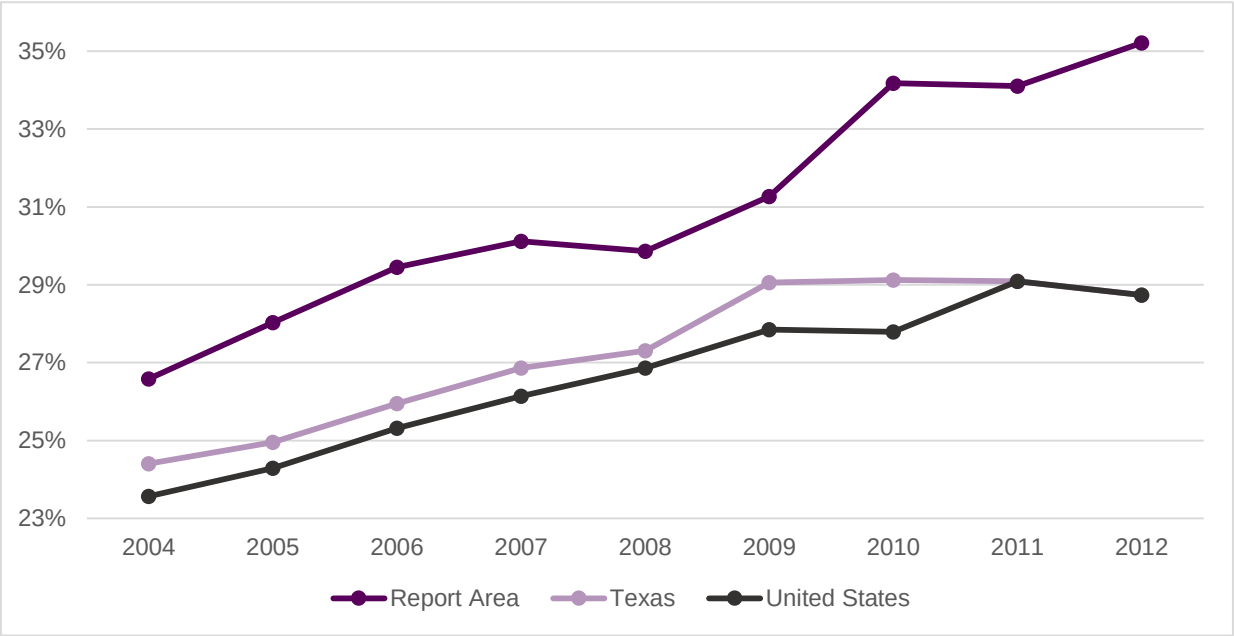

Figure 21. Prevalence of Obesity in Adults, 2004-2012

HOSPITAL DATA

The CHRISTUS Southeast Texas Health System supplied internal data from its three acute care hospitals — CHRISTUS Southeast Texas St. Elizabeth, CHRISTUS Southeast Texas St. Mary, and CHRISTUS Southeast Texas Jasper Memorial — for presentation and descriptive analysis in this section. Two years of hospital admission and emergency department utilization data are provided (2013 and 2014), disaggregated by facility, ZIP code, service line, and source of payment. For ZIP code, service line, and payment type, options reported at the greatest frequency and/or determined to be of interest to the community are shared in this report, instead of the complete tabulation.

Overall, the hospital data reveal a clear disproportionality in emergency department use compared to hospital admissions (Table 3; Figure 22). While some inherent difference may be expected, in all three hospitals, the frequency of emergency department visits overwhelmingly exceeded the frequency of hospital admissions over the data collection period. At St. Elizabeth Hospital, which received the greatest number of overall visits, emergency department visits exceeded hospital admissions by a ratio of 3.4 to 1. At St. Mary Hospital and Jasper Memorial Hospital, the ratio of emergency department visits to admissions was 8.0 to 1 and 13.2 to 1, respectively.

Facility	Hospital Admissions			Emergency Department Visits		
	2013	2014	Total	2013	2014	Total
St. Elizabeth	15,686	14,573	**30,259**	52,482	48,920	**101,402**
St. Mary	3,635	3,387	**7,022**	27,831	28,765	**56,596**
Jasper Memorial	1,980	1,642	**3,622**	24,817	23,259	**48,076**

Table 3: Hospital and Emergency Department Utilization by Facility, 2013-2014

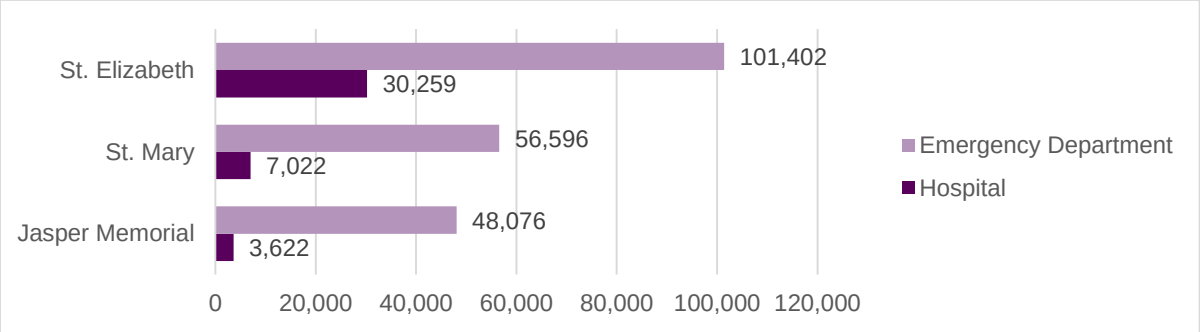

Figure 22. Hospital and Emergency Department Utilization by Facility, 2013-2014

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 10 showing a relatively high rate of avoidable hospital events further support 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.[7]

Table 4 highlights some variation in hospital admission and emergency department utilization by ZIP code. While ZIP codes 77642 (northeast Port Arthur), 77703 (north Beaumont), and 77705 (south Beaumont) have high utilization frequencies for both hospital and emergency department services, the remaining ZIP codes differ by category of hospital event. The other ZIP codes where the greatest

[7] Peppe, E. M., Mays, J. W., and Chang, H. C. (2007). Characteristics of frequent emergency department users. *Kaiser Family Foundation.* Available at: https://kaiserfamilyfoundation.files.wordpress.com/2013/01/7696.pdf

number of people admitted to the hospital reside (77662 and 77706) both center around Beaumont. Meanwhile, Jasper (75951) and southwest Port Arthur (77640) comprise the remaining ZIP codes home to the greatest number of emergency department users.

Hospital Admissions				Emergency Department Visits			
ZIP Code	2013	2014	Total	**ZIP Code**	2013	2014	Total
77642	298	428	726	**77642**	3,954	5,391	9,345
77662	321	362	683	**75951**	2,282	2,688	4,970
77705	305	348	653	**77640**	2,064	2,538	4,602
77706	288	337	625	**77703**	1,976	2,290	4,266
77703	248	295	543	**77705**	1,921	2,101	4,022

Table 4. ZIP Codes with Highest Frequencies of Hospital Admission and Emergency Department Utilization, 2013-2014

General medicine represents the most frequent type of clinical service delivered both for patients admitted to the hospital and for those seeking care in the emergency department, though the proportion — nearly 40% — is substantially higher in the emergency department (Table 5). Obstetrics and general surgery are service areas unique to hospital inpatients/outpatients in these data, while those in the emergency department are more often receiving orthopedic and ear, nose and throat care. Cardiovascular disease ranks as the third most common type of clinical service for both emergency and 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 Figure 19.

Hospital Admissions			Emergency Department Visits	
Rank	**Service Line**	**Proportion**	**Service Line**	**Proportion**
1	General medicine	22.5%	General Medicine	39.8%
2	Obstetrics	14.7%	Orthopedics	12.7%
3	Cardiovascular disease	14.6%	Cardiovascular disease	9.4%
4	General surgery	10.0%	Ear, Nose, and Throat	8.8%

Table 5. Most Frequent Clinical Services Provided During Hospital Admissions and Emergency Department Visits, 2013-2014

Table 6 presents the proportion of patients classified by payment status, and includes Medicare, Medicaid, Self-pay, and Uninsured. Not presented are data on commercially insured patient. Differences in the payer mix between the admitted patient population and users of emergency care are clearly evident. Medicare pays for over one in three hospital admissions in the report area acute care hospitals,

but pays for fewer than one in five emergency department visits. Conversely, the payer mix in the emergency department is comprised of far more uninsured and self-paying patients, who comprise 30% of the emergency department mix but just under 7% of the admitted patient mix. Medicaid accounts for about 1 in 10 patients in admitted patient population and almost a quarter of the emergency department visits.

Hospital Admissions		Emergency Department Visits	
Payment Type	**Proportion**	**Payment Type**	**Proportion**
Medicare	35.5%	Self-pay	29.2%
Medicaid	9.4%	Medicaid	25.4%
Uninsured	4.7%	Medicare	17.5%
Self-pay	2.0%	Uninsured	0.9%

Table 6. Select Admitted Patient and Emergency Department Patient Payment Sources, 2013-2014

Several key informants acknowledged the volume of uncompensated care that CHRISTUS Southeast Texas Health System is already providing, saying the system has "bent over backwards" in spite of cost to accommodate populations with limited ability to pay. They perceive that existing partnerships with federally qualified health centers, local nonprofits, and the work of the CHRISTUS Health Foundation Southeast Texas have enhanced the system's ability to reach vulnerable population groups. However, stakeholders note that affordability and accessibility remain chief concerns that discourage people from seeking care until problems become too severe to ignore. As a result, the hospitals may continue to receive more acute episodes of care and contend with high rates of emergency room use.

OTHER QUALITATIVE FINDINGS

A pervasive theme in conversations with stakeholders surrounded low health literacy among the service area population, coupled with limited awareness of available resources. Stakeholders frequently commented that they perceive many assets and resources do exist within their community, but people who need them may not know about them, or may need assistance navigating the system in order to access them. Specific populations that stakeholders felt could benefit the most from education and outreach efforts included pregnant women and families with young children, the uninsured, people with mental illness, and frequent users of the emergency department. Stakeholders also point to the need to promote health at the community level in places where people live, work, worship, and spend leisure time.

Several stakeholders also commented on the limitations of the current fee-for-service delivery models, highlighting the promise of delivery and payment reforms that include care integration, patient-

centered medical home functions, and value-based purchasing. These types of system changes, they feel, are necessary to incentivize providers to accept new patients, to introduce patients into reliable and trusted systems of care, and to sustain the system's capacity to meet the health needs of its population well into the future.

COMMUNITY RESOURCES

An inventory of community resources was compiled based on key informant and focus group interviews, and an internet-based review of health services in Southeast Texas. 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.

Community Resources	
Name	**Description**
CHRISTUS Southeast Texas Health System	Three acute care facilities, long term care facility, several outpatient facilities, trauma center, and rural health clinics.
Baptist Hospitals of Southeast Texas	Two hospitals, cancer center, and family medicine clinic.
United Way	Two operating: Beaumont and North Jefferson County and Mid-South Jefferson County. Partner with local nonprofits, business, and government to address community needs, including health needs.
Legacy Community Health	Federally qualified health center providing primary care, pediatrics, dental, vision, behavioral health, OB/GYN, vaccinations, health promotion, community outreach, and more.
Gulf Coast Health Center, Inc.	Federally qualified health center providing comprehensive primary care, medical, dental, pharmacy, enrollment assistance, health fairs, and more.
Beaumont Bone and Joint Institute	A CHRISTUS Orthopedic Specialty Center partner. Full range of orthopedic services, including diagnostic services, imaging, surgery, and physical therapy/rehabilitation.

YMCA of Southeast Texas	Two locations in Port Arthur. Healthy living programs and community education focused on chronic disease prevention and offering opportunities for physical activity for all ages.
Gift of Life	Offers free cancer screenings to medically underserved persons, including mammograms for women and prostate exams for men. Conducts community outreach and education, and hosts events to raise cancer awareness.
Beaumont Healthy Living Foundation/Healthy Southeast Texas	Connects southeast Texas residents with resources to promote physical activity and healthy eating habits.
Texas A&M AgriLife Extension County Offices	Provide citizens with education and access to resources on health topics such as diabetes prevention, healthy eating and nutrition, food safety, and more.
Spindletop Center	Local mental health authority. Psychiatric care, crisis assessment, and community support services for people with serious mental illness, substance use disorders, people experiencing emotional crisis, and people with functional difficulties related to mental health problems.
Beaumont Public Health Department	Health promotion services including presentations to community groups on chronic and infectious disease, emergency preparedness, safety, and prevention. Hosts community health fairs. Operates immunization clinics, STD clinics, and tuberculosis clinics.
Smart Health Clinic at Baptist Hospitals of Southeast Texas	Follows up with high-risk, medically complex emergency department users to help them manage health outside hospitals and prevent readmissions.

Table 7. Select Community Health Resources Serving the Southeast Texas Service Area

PRIORITIZED COMMUNITY NEEDS

Based on the THI review of data, ten priority need areas emerged. Table 8 lists these ten priority areas in no particular order. This list was presented to the local needs prioritization committee consisting of stakeholders assembled from throughout the CHRISTUS Southeast Texas Health System service area. The committee was asked to (a) validate the data-based priorities, and (b) distill and rank the list of ten priorities into a targeted, actionable group of five (Table 9).

Data-based Priorities			
Number	**Issue**	**Number**	**Issue**
1	Aging population	6	Cancer
2	Unemployment and economic stability	7	Infant mortality
3	Access to mental health services	8	Unhealthy behaviors
4	Access to primary care	9	Food insecurity
5	Preventable hospital stays	10	Lack of social or emotional support

Table 8. Top Ten Data-based Priorities Generated from Review of Quantitative Data, Unranked

Participants in the needs prioritization process were encouraged to consider the following criteria when selecting what needs to elevate in importance over others:

- Magnitude of the problem (number of people affected)
- Severity of the problem (burden of morbidity and mortality due to the problem)
- Organizational capacity to address the problem
- Impact of the problem on vulnerable populations
- Existing resources already addressing the problem
- Risk associated with delaying targeted intervention on the problem
- Influence one problem may have on addressing other related problems

Members of the needs prioritization committee reported their preferred ranking scheme for the ten data-based priorities and discussed the rationale behind their rankings within the group. The list was organized in order of highest to lowest importance according to a composite tally of each member's ranks. Consensus was reached among the committee members on the final order of priority.

In distilling the list of ten data-based priorities into a final list of five, needs prioritization committee members favored needs that were prevention-focused (e.g., access to care, unhealthy behaviors), as opposed to priorities that were linked to specific health outcomes (e.g., infant mortality, cancer). When asked to justify the prioritization choices they made, many remarked that changes to upstream behaviors or systemic barriers could lead to downstream reductions in a number of poor health outcomes, not just those appearing on the priority list. Given the affordability concerns raised in the group discussions, emphasizing preventive measures also aligned with the goal to contain costs and reduce the need for hospital services wherever possible.

Final Prioritization and Comments		
Rank	**Issue**	**Comments**
1	Access to primary care	• Accessible hours • Affordability • Education and awareness
2	Unhealthy behaviors	• Medical literacy • More fairs and community events • Utilize public service announcements • Ensure community health workers are appropriately placed in communities
3	Preventable hospital stays	• With particular emphasis on those related to chronic disease
4	Access to mental health providers and services	• Education • Provider referrals • Non-electronic methods of outreach and communication for lower income persons • Training clinic staff on mental illness
5	Food insecurity	(none provided)

Table 9. Final Prioritized List of Community Health Needs with Stakeholder Comments

Unemployment, cancer, infant mortality, and the aging population received the fewest high-priority votes from the data-based priority list. Many stakeholders expressed their sense that these priorities remain urgent, but ultimately gave them a low priority vote because they feel resources directed toward these needs are relatively abundant compared to others, or, in the case of unemployment, they feel non-health sectors are in better position to address the need. Some stakeholders were motivated to prioritize access to care and preventable hospitalizations due to perceived value of immediate action to address these needs, while acknowledging the need to continuously monitor the lower priority issues and incorporate them into longer-term strategy.

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 Southeast Texas. This report has also emphasized key resources, assets, capacity, and potential opportunities that exist in the region to address the identified problems. The voice of stakeholders in the community has been core

and central to the entire 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 Southeast Texas 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 Southeast Texas Health System in taking action to improve the health of the community it serves. A forthcoming report presenting the CHIP in detail will closely 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

Indicator	Texas	Jefferson County	Orange County	Hardin County	Jasper County	Tyler County	Newton County
i) Social and Economic Demographics							
Uninsured population	21.91%	22.87%	18.29%	18.58%	22.54%	16.90%	21.46%
Uninsured Adults	25.81%	27.83%	19.00%	20.72%	21.00%	23.14%	21.35%
Uninsured Children	11.62%	11.83%	8.94%	9.64%	11.01%	11.93%	12.14%
Unemployment Rate	4.2	6.3	6.1	5.3	7.2	6.7	6.5
High School Graduation Rate	89.60%	86.10%	91.40%	95.70%	94.50%	93.30%	93.90%
ii) Access to Care							
Primary Care Physician Rate*	59.5	60.2	26.5	25.3	47.7	23.3	7.1
Mental Health Provider Rate*	102.3	97.5	23.9	28.7	30.9	28	7
Dentists Rate*	51.5	52.7	26.5	18	30.9	14	0
Preventable Hospitalizations**	62.9	64.3	80.8	62.68	79.44	87.71	66.09
Lack of Consistent Source of Primary Care	32.36%	23.68%	14.87%	21.46%	24.20%	27.17%	40.20%
Populations living in HPSA	16.79%	100%	100%	0%	100%	0%	100%
iii) Health Outcomes							
Diabetes (Adult)	9.24%	11.40%	8.60%	8.70%	10.40%	8.60%	10.00%
Heart disease (Adult)	4.00%	2.60%	9.50%	0.00%	16.50%	2.50%	2.00%
Asthma	11.60%	9.80%	11.50%	12.20%	25.70%	13%	31%
Hypertension	30.00%	38.20%	30.20%	32.30%	45.50%	46.10%	suppressed
Poor General Health (age-adjusted)	17.80%	15.10%	15.80%	16.20%	24.40%	25.50%	suppressed
Cancer Incidence - Breast*	113.1	109	112.3	98.3	96.5	78.4	64.6

Cancer Incidence - Cervical*	9.2	8.2	16.6	no data	no data	no data	no data
Cancer Incidence - Colon*	40.2	47.2	45.6	48.1	48.1	37.8	48.7
Cancer Incidence - Lung*	58.1	64.4	87.6	67.8	65.9	70.7	65.5
Cancer Incidence - Prostate*	115.7	128.5	97	124.3	127.4	106.2	104.2
Depression (Medicare beneficiaries)	16.20%	16.10%	14.50%	16.10%	19.40%	17.40%	18.10%
iv) Maternal and Child Health							
Low Birth Weights	8.40%	10.40%	9.60%	8.40%	10%	8.70%	8.70%
Infant Mortality (rate per 1,000 births)	6.2	7.2	8.1	5.3	7.8	6	4.2
v) Health Behaviors							
Adult Obesity	28.20%	36.70%	30.80%	34.30%	33.10%	33.10%	30.40%
Tobacco Use (current)	16.50%	22.10%	27.90%	24.40%	23.40%	20.90%	suppressed
Alcohol Consumption	15.80%	13.10%	suppressed	suppressed	suppressed	suppressed	suppressed
vi) Physical and Social Environment							
Violent Crime rate	422.1	652	388.6	151.4	306.4	359.2	43.2
Food Insecurity rate	17.59%	24.85%	21.54%	19.46%	22.77%	21.60%	24.34%
Lack of Social & Emotional Support	23.10%	28.20%	23.20%	suppressed	18.90%	14.90%	suppressed

*** rate per 100,000 population**

**** per 1,000 Medicare enrollees**

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. These 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 **[Louisiana Public Health Institute/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: ***[Beaumont-Port Arthur interviewee]—****Jefferson, Orange, Hardin, Jasper, Tyler, and Newton 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.

COMMUNITY HEALTH AND WELLNESS

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 issues 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?

BEHAVIORAL RISK FACTORS

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.)?

HEALTH CARE UTILIZATION

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]**