

# **Community Health Needs Assessment**

Tyler Health Community 2022





Approved by: Baylor Scott & White Health - North Texas Operating, Policy and Procedure Board on May 31, 2022 Posted to **BSWHealth.com/CommunityNeeds** on June 30, 2022



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# **Baylor Scott & White Health mission**

#### Our commitment to the communities we serve

As the largest not-for-profit healthcare system in Texas and one of the largest in the United States, Baylor Scott & White Health was born from the 2013 combination of Baylor Health Care System and Scott & White Healthcare. Today, Baylor Scott & White includes 51 hospitals, 1,100 access points, more than 7,300 active physicians, and over 49,000 employees and the Baylor Scott & White Health Plan.

Baylor Scott & White Health is a leading Texas healthcare provider with a proven commitment to patient and community health. Baylor Scott & White Health demonstrates this commitment through periodic community health needs assessments, then addresses those needs with a wide range of outreach initiatives.

These Community Health Needs Assessment (CHNA) activities also satisfy federal and state community benefit requirements outlined in the Patient Protection and Affordable Care Act and the Texas Health and Safety Code.

Baylor Scott & White Health conducts a thorough periodic examination of public health indicators and a benchmark analysis comparing

Founded as a Christian ministry of healing, Baylor Scott & White Health promotes the well-being of all individuals, families and communities. We serve Health faithfully Experience Affordability We act Alignment honestly Growth We never settle We are in To be the trusted leader, educator it together and innovator in value-based care delivery, customer experience and affordability.

communities it serves to an overall state of Texas value. In this way, it can determine where deficiencies lie and the opportunities for improvement are greatest.

Through interviews, focus groups and surveys, the organization gains a clearer understanding of community needs from the perspective of the members of each community. This helps it identify the most pressing needs a community is facing and develop implementation plans to focus on those prioritized needs.

The process includes input from a wide range of knowledgeable people who represent the myriad interests of the community in compliance with 501 (r)(3) regulations. The CHNA process overview can be found in **Appendix A**.

The CHNAs serve as the foundation for community health improvement planning efforts over the next three years, while the implementation plans will be evaluated annually.

# **Community Health Needs Assessment** (CHNA) report

Baylor Scott & White Health (BSWH) owns and operates numerous individually licensed hospital facilities serving the residents of North and Central Texas.

The Tyler Health Community is home to one of these hospitals:

• Baylor Scott & White Texas Spine & Joint Hospital

The community served by the hospital listed above is Anderson, Gregg, Smith and Wood Counties and was determined based on the contiguous ZIP codes within the associated counties that made up nearly 80% of the hospital facility's inpatient admissions over the 12-month period of FY20. The facility completed a CHNA report in accordance with the Internal Revenue Code Section 501 (r) (3) and the US Treasury regulations thereunder.

#### Tyler Health Community map



BSWH engaged with IBM Watson Health, a nationally respected consulting firm, to conduct a Community Health Needs Assessment (CHNA) in accordance with the federal and state community benefit requirements for the health communities they serve.



The CHNA process included:

- Gathering and analyzing more than 59 public and 45 proprietary health data indicators to provide a comprehensive assessment of the health status of the communities. The complete list of health data indicators is included in **Appendix B**.
- Creating a benchmark analysis comparing the community to overall state of Texas and United States (US) values.
- Conducting focus groups, key informant interviews and stakeholder surveys, including input from public health experts, to gain direct input from the community for a qualitative analysis.
  - Gathering input from state, local and/or regional public health department members who have the pulse of the community's health.
  - Identifying and considering input from individuals or organizations serving and/or representing the interests of medically underserved low-income and minority populations in the community to help prioritize the community's health needs.
  - The represented organizations that participated are included in Appendix C.

IBM Watson Health provided current and forecasted demographic, socioeconomic and utilization estimates for the community.

### Demographic and socioeconomic summary

The most important demographic and socioeconomic findings for the Tyler Health Community CHNA are:

- The community is growing at a rate higher than the US but at a slower rate than the state of Texas.
- The average age of the population is slightly younger than the US but older than Texas overall.
- The median household income is significantly lower than both the state and the US.
- The community served has a higher percentage of Medicare, uninsured and underinsured than Texas and a significantly lower percentage of employer payer group.

Further demographic and socioeconomic information for the Tyler Health Community is included in **Appendix D**.

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### Health community data summary

IBM Watson Health's utilization estimates and forecasts indicate the following for the Tyler Health Community:

- Inpatient discharges in the community are expected to decline by -0.2% by 2030 where the only growing product lines are:
  - Pulmonary medical
  - Cardiovascular diseases
  - Psychiatry
  - Neuro sciences
  - Alcohol & drug abuse
- Outpatient procedures are expected to increase by almost 21% by 2030 with the largest areas of growth including:
  - General & internal medicine
  - Labs
  - Physical & occupational therapy
- Emergency department visits are expected to grow by 6% by 2025.
- Hypertension represents almost 68% of all heart disease cases.
- Cancer incidence is expected to increase by 3.5% by 2025.

Further health community information for the Tyler Health Community is included in **Appendix E**.

The community includes the following health professional shortage areas and medically underserved areas as designated by the US Department of Health and Human Services Health Resources Services Administration. **Appendix D** includes the details on each of these designations.

	Health profes	ssional shortage a	areas (HPSA)		Medically underserved area/ population (MUA/P)
County	Dental health	Mental health	Primary care	Grand total	MUA/P
Anderson	2	1	2	5	
Gregg	2	3	3	8	3
Smith	1	2	2	5	2
Wood	1	2	2	5	1

Source: US Department of Health and Human Services, Health Resources and Services Administration, 2021

Total population **494,750** 

Average income \$53,598



#### Insurance coverage



- Medicare
- Medicare dual eligible
- Private direct
- Private ESI
- Private exchange
- Uninsured

## **Priority health needs**

Using these and other data collection and interpretation methods, BSWH identified what it considers to be the community's key health needs. The resulting prioritized health needs for this community include:

Priority	Need	Category of need
1	Access to primary healthcare providers	Access to care
2	Food insecurity/access to healthy foods	Environment
3	Population under age 65 without health insurance	Access to care
4	Obesity	Conditions/diseases
5	Access to mental healthcare (providers/resources)	Mental health

## **Priority 1: Access to Primary Healthcare Providers**

The following data indicates greater need for access for the population to one primary care provider and access for the population to one non-physician primary care provider.

Category	Data shows greater need	Key informants indicate greater need
Access to care	<ul> <li>Population to one primary care physician</li> <li>Population to one non-physician primary</li> </ul>	<ul> <li>Limited access to primary healthcare providers</li> </ul>
	care provider	

The **population to one primary care physician** indicator is defined as **the number of individuals served by one physician in a county if the population was equally distributed across physicians** and is based on data from County Health Rankings & Roadmaps and Area Health Resource File/American Medical Association.

Access to care: population to one primary care physician (number of individuals served by one physician by county)



The **population to one non-physician primary care provider** indicator is defined as **the ratio of population to primary care providers other than physicians** and is based on data from County Health Rankings & Roadmaps; CMS, National Provider Identification Registry (NPPES).

Access to care: population to one non-physician primary care provider (ratio of population to primary care providers other than physicians by county)



Counties are listed in alphabetical order within NTX-Tyler Health Community. **LEFT PANEL**: Indicator Values horizontal bar and label shows the county score. Vertical dotted line shows the state benchmark. Solid line is US score. Orange colors indicate a greater need and potentially larger vulnerable population in the county relative to the state benchmark. Blue indicates a lesser need and potentially smaller vulnerable population. Darker intense colors indicate greater differences. **RIGHT PANEL**: Rank within county marks show how the indicator ranks compared to other indicators within the county. Indicators are ranked from 1 to 59, where low numbers show higher need and potentially larger vulnerable population relative to the state benchmark. Color and shape compare county performance to the state benchmark; orange diamonds show greater need and blue circles lesser need.

The focus group participants felt that the overall community area has limited access to healthcare services. High demand for primary care and a limited number of primary care providers lead to difficulty accessing primary care. The community is also lacking knowledge or information about available health services.

In the prioritization session, the hospital leadership agreed that access to primary care is a need in the community and added that if people were able to get the preventive care they need, some of the other chronic health conditions would be better managed in the downstream effect.

#### Tyler Health Community

Greater or lesser need than state

same level of need or NA

♦ areater need

lesser need

## Priority 2: Food Insecurity/Access to Healthy Food

The data below indicates a greater need for access to healthy foods in the community.

Category	Data shows greater need	Key informants indicate greater need
Environment	• Limited access to healthy food	• Need to improve access to healthy foods

The indicator **limited access to healthy foods** is defined as **the percentage of population who are lowincome and do not live close to a grocery store**. The indicator is based on data from County Health Rankings & Roadmaps; USDA Food Environment Atlas, United States Department of Agriculture (USDA).

# Environment: limited access to healthy foods (% population who are low-income and do not live close to grocery store by county)



The key informants noted that community residents have limited access to healthy food options. They noted opportunities to improve and increase access to healthy, affordable food and to coordinate with local food stores.

In the prioritization session, the hospital and community leaders agreed that food security is a top need that should be addressed. They cited that nearly 70% of students in the Tyler Independent School District qualify for free and reduced-priced lunch, which provides some access to those students to healthier food options.

## **Priority 3: Population Under Age 65 Without Health Insurance**

The following indicates a greater need in the area of the uninsured.

Category	Data shows greater need	Key informants indicate greater need
Access to	Children uninsured	<ul> <li>Many residents disadvantaged with</li> </ul>
care	<ul> <li>Population under age 65 without</li> </ul>	limited resources/lack of insurance
	health insurance	

The indicator **children uninsured** is defined as **the percentage of children under age 19 without health insurance**. The indicator is based on data from County Health Rankings & Roadmaps; Small Area Health Insurance Estimates (SAHIE), United States Census Bureau.

#### Access to care: children uninsured (% of children under age 19 without health insurance)



The indicator **population under age 65 without health insurance** is defined as **the percentage of population under age 65 without health insurance**. The indicator is based on data from County Health Rankings & Roadmaps; Small Area Health Insurance Estimates (SAHIE), United States Census Bureau.

## Access to care: population under age 65 without health insurance (% of population under age 65 without health insurance)





Counties are listed in alphabetical order within NTX-Tyler Health Community. **LEFT PANEL**: Indicator Values horizontal bar and label shows the county score. Vertical dotted line shows the state benchmark. Solid line is US score. Orange colors indicate a greater need and potentially larger vulnerable population in the county relative to the state benchmark. Blue indicates a lesser need and potentially smaller vulnerable population. Darker intense colors indicate greater differences. **RIGHT PANEL**: Rank within county marks show how the indicator ranks compared to other indicators within the county. Indicators are ranked from 1 to 59, where low numbers show higher need and potentially larger vulnerable population relative to the state benchmark. Color and shape compare county performance to the state benchmark; orange diamonds show greater need and blue circles lesser need.

The focus group participants noted that there are many disadvantaged residents with limited resources and a lack of health insurance in the community. They felt that the lack of health insurance prevents many from seeking needed medical care, and it causes their health to worsen. They also cited a lack of knowledge in the community about services that are available for the uninsured and how to access them.

In the prioritization session, the hospital and community leaders added that the United Way of Smith County has seen an increase in calls to 2-1-1 from uninsured community members asking for assistance with healthcare costs.

## **Priority 4: Obesity**

The following indicates a need in the areas of obesity, diabetes and cancer.

Category	Data shows greater need	Key informants indicate greater need
Conditions/diseases	• Adult obesity	• Obesity is a barrier in the community

The adult obesity indicator is defined as the percentage of the adult population (age 20 and older) that reports a body mass index (BMI) greater than or equal to 30 kg/m2 and is based on data from County Health Rankings & Roadmaps, CDC Diabetes Interactive Atlas and The National Diabetes Surveillance System.

#### Conditions/diseases: adult obesity (% of adults with BMI =>30 by county)



marks show how the indicator ranks compared to other indicators within the county. Indicators are ranked from 1 to 59, where low numbers show higher need and potentially larger vulnerable population relative to the state benchmark. Color and shape compare county performance to the state benchmark; orange diamonds show greater need and blue circles lesser need.

The key informants noted that obesity is a barrier in the community and that the aging population is trending toward obesity/higher obesity rates in the community.

In the prioritization session, hospital leadership felt that adult obesity is a major problem in the Tyler community. They cited that community members are not physically active enough and referenced a recent study that showed some residents of Tyler spend between five to eight hours in front of the television per day.

## Priority 5: Access to Mental Healthcare (Providers/Resources)

The following data indicates greater need for access for the population to one mental healthcare provider.

Category	Data shows greater need	Key informants indicate greater need
Mental health	• Population to one mental health	• Limited access to mental/
	provider	behavioral healthcare

The indicator **population to one mental health provider** is defined as **the ratio of population to mental health providers** and is based on data from County Health Rankings & Roadmaps; CMS, National Provider Identification Registry (NPPES).

## Mental health: population to one mental health provider (ratio of population to mental health providers by county)





Counties are listed in alphabetical order within NTX-Tyler Health Community. LEFT PANEL: Indicator Values horizontal bar and label shows the county score. Vertical dotted line shows the state benchmark. Solid line is US score. Orange colors indicate a greater need and potentially larger vulnerable population in the county relative to the state benchmark. Blue indicates a lesser need and potentially smaller vulnerable population. Darker intense colors indicate greater differences. RIGHT PANEL: Rank within county marks show how the indicator ranks compared to other indicators within the county. Indicators are ranked from 1 to 59, where low numbers show higher need and potentially larger vulnerable population relative to the state benchmark. Color and shape compare county performance to the state benchmark; orange diamonds show greater need and blue circles lesser need.

The focus group participants noted that there is a high demand in the community for mental/ behavioral health services, but the community lacks mental health providers, especially in outpatient care with the recent loss of a behavioral health center. They also noted that there is no residential center for children for behavioral health services, so they need to be placed out of their community away from family to receive treatment.

In the prioritization session, the hospital and community leaders agreed that mental health is a huge problem in the Tyler community, which was exacerbated by the pandemic. They also commented that the community lacks a sufficient network of behavioral health providers to care for mental health patients.

The Community Health Dashboards data referenced above can be found at **BSWHealth.com/About/Community-Involvement/Community-Health-Needs-Assessments**.

The prioritized list of significant health needs approved by the hospital's governing body and the full assessment are available to the public at no cost. To download a copy, visit **BSWHealth.com/CommunityNeeds**.

## **Existing resources to address health needs**

One part of the assessment process included gathering input on potentially available community resources. A statewide Community Resource Guide and suggestions from some of our assessment participants helped identify community resources that may help address this community's known health needs.

#### Tyler community resources

Need	Organization	Address	Phone
	Special Health Resources	4519 Troup Highway Tyler, TX 75703	903.289.9252
Access to	Family Circle of Care Administration	523 S. Fannin Avenue Tyler, TX 75702	903.535.9041
primary healthcare	Clínica Hispana	510 S. Southwest Loop 323 Tyler, TX 75702	903.530.0240
providers	Tyler VA Primary Care Clinic	7916 S. Broadway Avenue Tyler, TX 75703	903.266.5900
	Bullard Mission House and Mission Clinic	226 S. Phillips Street Bullard, TX 75757	903.894.0109
Food insecurity/ access to healthy food	PATH Food Pantry	402 W. Front Street Tyler, TX 75702	903.597.7284
	Sylvania Baptist Church (food pantry)	2806 Santa Elena Drive Tyler, TX 75701	903.592.1591
	Sacred Heart Catholic Church - St. Vincent de Paul (food pantry)	503 N. Queen Street Palestine, TX 75801	903.729.2463
	West Erwin Benevolence Center (food pantry)	420 W. Erwin Street Tyler, TX 75702	903.592.0809
	First Resource Center (food pantry)	801 N. Sycamore Street Palestine, TX 75801	903.731.9270
Population under age 65 without health insurance	Texas HHSC	4105 Victory Drive Marshall, TX 75672	877.635.6736
	ASP Cares Texas (patient assistance program for medications)	1109 E. 5th Street Tyler, TX 75701	903.354.0231
	Crossroads Family Care - Palestine (serving uninsured patients)	205 E. Brazos Street Palestine, TX 75801	903.729.3015
	Bethesda Health Clinic (serving uninsured patients)	409 W. Ferguson Street Tyler, TX 75702	903.596.8353
	PATH Prescription Assistance Program	402 W. Front Street Tyler, TX 75702	903.597.7284

Need	Organization	Address	Phone
Obesity	East Texas Food Bank (nutrition education)	3201 Robertson Road Tyler, TX 75701	903.597.3663
	Family Care Center - WIC	225 E. Amherst Drive Tyler, TX 75701	903.533.1319
	Tyler WIC Clinic	815 N. Broadway Avenue Tyler, TX 75702	903.592.7635
	Northeast Texas Public Health District (NET Health) - WIC	1020 E. Goode Street, Quitman, TX 75783	903.763.4123
	Oak Street Health (nutrition/exercise courses for older adults on Medicare)	2115 S. Broadway Avenue Tyler, TX 75701	903.201.8991
Access to mental healthcare (providers/ resources)	Goodwill Industries of East Texas Inc. (counseling services)	1530 John Carney Drive Tyler, TX 75701	903.593.8438
	UT Health East Texas (clinic-based counseling/therapy, Medicaid/Medicare)	11937 US 271 Tyler, TX 75708	903.877.7000
	Special Health Resources (behavioral health)	4519 Troup Highway Tyler, TX 75703	903.289.9252
	Samaritan Counseling Center of East Texas	218 N. College Avenue Tyler, TX 75702	903.593.9141
	Anderson Cherokee Community MHMR Center (ACCESS)	3320 Texas 256 Loop Palestine, TX 75801	903.723.6136

There are many other community resources and facilities serving the Tyler area that are available to address identified needs and can be accessed through a comprehensive online resource catalog called Find Help (formerly known as Aunt Bertha). It can be accessed 24/7 at **BSWHealth.FindHelp.com**.

### **Next steps**

BSWH started the Community Health Needs Assessment process in April 2021. Using both qualitative community feedback as well as publicly available and proprietary health indicators, BSWH was able to identify and prioritize community health needs for its healthcare system. With the goal of improving the health of the community, implementation plans with specific tactics and time frames will be developed for the health needs BSWH chooses to address for the community served.

# **Appendix A: CHNA requirement details**

The Patient Protection and Affordable Care Act (PPACA) requires all tax-exempt organizations operating hospital facilities to assess the health needs of their community every three (3) years. The resulting Community Health Needs Assessment (CHNA) report must include descriptions of the following:

- The community served and how the community was determined;
- The process and methods used to conduct the assessment, including sources and dates of the data and other information as well as the analytical methods applied to identify significant community health needs;
- How the organization used input from persons representing the broad interests of the community served by the hospital, including a description of when and how the hospital consulted with these persons or the organizations they represent;
- The prioritized significant health needs identified through the CHNA as well as a description of the process and criteria used in prioritizing the identified significant needs;
- The existing healthcare facilities, organizations and other resources within the community available to meet the significant community health needs; and
- An evaluation of the impact of any actions that were taken since the hospital's most recent CHNA to address the significant health needs identified in that report.
  - Hospitals also must adopt an implementation strategy to address prioritized community health needs identified through the assessment.

### **CHNA process**

BSWH began the 2022 CHNA process in April of 2021. The following is an overview of the timeline and major milestones:



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## **Consultant qualifications**

IBM Watson Health delivers analytic tools, benchmarks and strategic consulting services to the healthcare industry, combining rich data analytics in demographics, including the Community Needs Index, planning and disease prevalence estimates, with experienced strategic consultants to deliver comprehensive and actionable Community Health Needs Assessments.

# Health needs assessment process overview

To identify the health needs of the community, the hospitals established a comprehensive method using all available relevant data including community input. They used the qualitative and quantitative data obtained when assessing the community to identify its community health needs. Surveyors conducted interviews and focus groups with individuals representing public health, community leaders/groups, public organizations and other providers. In addition, data collected from public sources compared to the state benchmark indicated the level of severity. The outcomes of the quantitative data analysis were compared to the qualitative data findings.

These data are available to the community via an interactive dashboard at **BSWHealth.com/CommunityNeeds**.

# Data gathering: quantitative assessment of health needs - methodology and data sources

The IBM team used quantitative data collection and analysis garnered from public health indicators to assess community health needs. This included over 100 data elements grouped into over 11 categories evaluated for the counties where data was available. Recently, indicators expanded to include new categories addressing mental health, healthcare costs, opioids and social determinants of health. A table depicting the categories and indicators and a list of sources are in **Appendix B**.

A benchmark analysis of each indicator determined which public health indicators demonstrated a community health need. Benchmark health indicators included overall US values, state of Texas values and other goal-setting benchmarks, such as Healthy People 2020.

According to America's Health Rankings 2021 Annual Report, Texas ranks 22nd out of the 50 states in the area of Health Outcomes (which includes behavioral health, mortality and physical health) and 50th in the area of Clinical Care (which includes avoiding care due to cost, providers per 100,000 population and preventive services). When the health status of Texas was compared to other states, the team identified many opportunities to impact community health. The quantitative analysis of the health community used the following methodology:

- The team set benchmarks for each health community using state value for comparison.
- They identified community indicators not meeting state benchmarks.
- From this, they determined a need differential analysis of the indicators, which helped them understand the community's relative severity of need.
- Using the need differentials, they established a standardized way to evaluate the degree that each indicator differed from its benchmark.
- This quantitative analysis showed which health community indicators were above the 25th percentile in order of severity—and which health indicators needed their focus.

The outcomes of the quantitative data analysis were compared to the qualitative data findings.

#### Information gaps

In some areas of Texas, the small population size has an impact on reporting and statistical significance. The team has attempted to understand the most significant health needs of the entire community. It is understood that there is variation of need within the community, and BSWH may not be able to impact all of the population who truly need the service.

#### Community input: qualitative health needs assessment - approach

To obtain a qualitative assessment of the health community, the team:

- Assembled a focus group representing the broad interests of the community served;
- Conducted interviews and surveys with key informants—leaders and representatives who serve the community and have insight into its needs; and
- Held prioritization sessions with hospital clinical leadership and community leaders to review collection results and identify the most significant healthcare needs based on information gleaned from the focus groups and key informants.

Focus groups helped identify barriers and social factors influencing the community's health needs. Key informant interviews gave the team even more understanding and insight about the general health status of the community and the various drivers that contributed to health issues.

Multiple governmental public health department individuals were asked to contribute their knowledge, information and expertise relevant to the health needs of the community. Individuals or organizations who served and/or represented the interests of medically underserved, low-income and minority populations in the community also took part in the process. NOTE: In some cases, public health officials were unavailable due to obligations concerning the COVID-19 pandemic.

The hospitals also considered written input received on their most recently conducted CHNA and subsequent implementation strategies if provided. The assessment is available for public comment or feedback on the report findings by going to the BSWH website (BSWHealth.com/CommunityNeeds) or by emailing CommunityHealth@BSWHealth.org.

# Approach to prioritizing significant health needs

On January 25, 2022, a session was conducted with key leadership members from Baylor Scott & White along with community leaders to review the qualitative and quantitative data findings of the CHNA to date, discuss at length the significant needs identified, and complete prioritization exercises to rank the community needs. Prioritizing health needs was a twostep process. The two-step process allowed participants to consider the quantitative needs and qualitative needs as defined by the



High data = Indicators worse than state benchmark by greater magnitude High qualitative = Frequency of topic in interviews and focus groups

indicator dataset and focus group/interview/survey participant input.

In the first step, participants reviewed the top health needs for their community using associated data-driven criteria. The criteria included health indicator value(s) for the community and how the indicator compared to the state benchmark.



**High data and high qualitative:** The community indicators that showed a greater need in the health community overall when compared to the state of Texas comparative benchmark and were identified as a greater need by the key informants.

**High data and low qualitative:** The community indicators showed a greater need in the health community overall when compared to the state of Texas comparative benchmark but were not identified as a greater need or not specifically identified by the key informants.

#### Low/no data and high qualitative:

The community indicators showed less need or had no data available in the health community overall when compared to the state of Texas comparative benchmark but were identified as a greater need by the key informants.

Participants held a group discussion about which needs were most significant, using the professional experience and community knowledge of the group. A virtual voting method was invoked for individuals to provide independent opinions.

This process helped the group define and identify the community's significant health needs. Participants voted individually for the needs they considered the most significant for this community. When the votes were tallied, the top identified needs emerged and were ranked based on the number of votes.

#### **Prioritization of significant needs**

In the second step, participants ranked the significant health needs based on prioritization criteria recommended by the focus group conducted for this community:

- Severity (outcome if ignored): The problem results in disability or premature death or creates burdens on the community, economically or socially.
- **Community capacity or strengths:** The community may or may not have the capacity to act on the issue with regard to economic, social, cultural or political consideration. It should be considered whether current initiatives exist to help address the health issue that can be built upon to bolster existing resources.

The group rated each of the five significant health needs on each of the two identified criteria, using a scale of 1 (low) to 10 (high). The criteria score sums for each need created an overall score.

They prioritized the list of significant health needs based on the overall scores. The outcome of this process was the list of prioritized health needs for this community.

Priority	Need	Category of need
1	Access to primary healthcare providers	Access to care
2	Food insecurity/access to healthy foods	Environment
3	Population under age 65 without health insurance	Access to care
4	Obesity	Conditions/diseases
5	Access to mental healthcare (providers/resources)	Mental health

# **Appendix B: key public health indicators**

IBM Watson Health collected and analyzed fifty-nine (59) public health indicators to assess and evaluate community health needs. For each health indicator, a comparison between the most recently available community data and benchmarks for the same/similar indicator was made. The basis of benchmarks was available data for the US and the state of Texas.

Indicator name	Indicator source	Indicator definition
Adult obesity	2021 County Health Rankings & Roadmaps; CDC Diabetes Interactive Atlas, The National Diabetes Surveillance System	2017 Percentage of the adult population (age 20 and older) that reports a body mass index (BMI) greater than or equal to 30 kg/m2
Adults reporting fair or poor health	2021 County Health Rankings & Roadmaps; The Behavioral Risk Factor Surveillance System (BRFSS)	2018 Percentage of adults reporting fair or poor health (age-adjusted)
Binge drinking	2021 County Health Rankings & Roadmaps; The Behavioral Risk Factor Surveillance System (BRFSS)	2018 Percentage of a county's adult population that reports binge or heavy drinking in the past 30 days
Cancer incidence: all causes	State Cancer Profiles National Cancer Institute (CDC)	2013 - 2017 Age-adjusted cancer (all) incidence rate cases per 100,000 (all races, includes Hispanic; both sexes; all ages. Age-adjusted to the 2000 US standard population)
Cancer incidence: colon	State Cancer Profiles National Cancer Institute (CDC)	2013 - 2017 Age-adjusted colon and rectum cancer incidence rate cases per 100,000 (all races, includes Hispanic; both sexes; all ages. Age-adjusted to the 2000 US standard population). Data has been suppressed to ensure confidentiality and stability of rate estimates. Counts are suppressed if fewer than 16 records were reported in a specific area-sex- race category. If an average count of three is shown, the total number of cases for the time period is 16 or more, which exceeds suppression threshold (but is rounded to three).
Cancer incidence: female breast	State Cancer Profiles National Cancer Institute (CDC)	2013 - 2017 Age-adjusted female breast cancer incidence rate cases per 100,000 (all races, includes Hispanic; female; all ages. Age-adjusted to the 2000 US standard population). Data has been suppressed to ensure confidentiality and stability of rate estimates. Counts are suppressed if fewer than 16 records were reported in a specific area-sex-race category. If an average count of three is shown, the total number of cases for the time period is 16 or more, which exceeds suppression threshold (but is rounded to three).

The indicators used and the sources are listed below:

Indicator name	Indicator source	Indicator definition
Cancer incidence: lung	State Cancer Profiles, National Cancer Institute (CDC)	2013 - 2017 Age-adjusted lung and bronchus cancer incidence rate cases per 100,000 (all races, includes Hispanic; both sexes; all ages. Age-adjusted to the 2000 US standard population)
Cancer incidence: prostate	State Cancer Profiles, National Cancer Institute (CDC)	2013 - 2017 Age-adjusted prostate cancer incidence rate cases per 100,000 (all races, includes Hispanic; males; all ages. Age-adjusted to the 2000 US standard population)
Children in poverty	2021 County Health Rankings & Roadmaps; Small Area Health Insurance Estimates (SAHIE), United States Census Bureau	2019 Percentage of children under age 18 in poverty.
Children in single- parent households	2021 County Health Rankings & Roadmaps; American Community Survey (ACS), Five- Year Estimates (United States Census Bureau)	2015 - 2019 Percentage of children that live in a household headed by single parent
Children uninsured	2021 County Health Rankings & Roadmaps; Small Area Health Insurance Estimates (SAHIE), United States Census Bureau	2018 Percentage of children under age 19 without health insurance
Diabetes admission	2018 Texas Health and Human Services Center for Health Statistics Preventable Hospitalizations	Number observed/adult population age 18 and older. Risk-adjusted rates not calculated for counties with fewer than five admissions.
Diabetes diagnoses in adults	CMS.gov Chronic Conditions 2007 - 2018	Prevalence of chronic condition across all Medicare beneficiaries
Diabetes prevalence	County Health Rankings (CDC Diabetes Interactive Atlas)	2017 Prevalence of diagnosed diabetes in a given county. Respondents were considered to have diagnosed diabetes if they responded "yes" to the question, "Has a doctor ever told you that you have diabetes?" Women who indicated that they only had diabetes during pregnancy were not considered to have diabetes.
Drug poisoning deaths	2021 County Health Rankings & Roadmaps, CDC WONDER Mortality Data	2017 - 2019 Number of drug poisoning deaths (drug overdose deaths) per 100,000 population. Death rates are null when the rate is calculated with a numerator of 20 or less.
Elderly isolation	2018 American Community Survey Five-Year Estimates, US Census Bureau - American FactFinder	Percent of non-family households - householder living alone - 65 years and over
English spoken "less than very well" in household	2015 - 2019 American Community Survey Five-Year Estimates, US Census Bureau - American FactFinder	2019 Percentage of households that 'speak English less than "very well"' within all households that 'speak a language other than English'
Food environment index	2021 County Health Rankings & Roadmaps; USDA Food Environment Atlas, Map the Meal Gap from Feeding America, United States Department of Agriculture (USDA)	2015 and 2018 Index of factors that contribute to a healthy food environment, 0 (worst) to 10 (best)
Food insecure	2021 County Health Rankings & Roadmaps; Map the Meal Gap, Feeding America	2018 Percentage of population who lack adequate access to food during the past year

Indicator name	Indicator source	Indicator definition
Food: limited access to healthy foods	2021 County Health Rankings & Roadmaps; USDA Food Environment Atlas, United States Department of Agriculture (USDA)	2015 Percentage of population who are low- income and do not live close to a grocery store
High school graduation	Texas Education Agency	2019 A four-year longitudinal graduation rate is the percentage of students from a class of beginning ninth graders who graduate by their anticipated graduation date or within four years of beginning ninth grade.
Household income	2021 County Health Rankings (Small Area Income and Poverty Estimates)	2019 Median household income is the income where half of households in a county earn more and half of households earn less.
Income inequality	2021 County Health Rankings & Roadmaps; American Community Survey (ACS), Five-Year Estimates (United States Census Bureau)	2015 - 2019 Ratio of household income at the 80th percentile to income at the 20th percentile. Absolute equality = 1.0. Higher ratio is greater inequality.
Individuals below poverty level	2018 American Community Survey Five-Year Estimates, US Census Bureau - American FactFinder	Individuals below poverty level
Low birth weight rate	2019 Texas Certificate of Live Birth	Number low birth weight newborns /number of newborns. Newborn's birth weight – low or very low birth weight includes birth weights under 2,500 grams. Blanks indicate low counts or unknown values. A null value indicates unknown or low counts. The location variables (region, county, ZIP) refer to the mother's residence.
Medicare population: Alzheimer's disease/ dementia	CMS.gov Chronic Conditions 2007 - 2018	Prevalence of chronic condition across all Medicare beneficiaries. A null value indicates that the data have been suppressed because there are fewer than 11 Medicare beneficiaries in the cell or for necessary complementary cell suppression.
Medicare population: atrial fibrillation	CMS.gov Chronic Conditions 2007 - 2018	Prevalence of chronic condition across all Medicare beneficiaries. A null value indicates that the data have been suppressed because there are fewer than 11 Medicare beneficiaries in the cell or for necessary complementary cell suppression.
Medicare population: COPD	CMS.gov Chronic Conditions 2007 - 2018	Prevalence of chronic condition across all Medicare beneficiaries. A null value indicates that the data have been suppressed because there are fewer than 11 Medicare beneficiaries in the cell or for necessary complementary cell suppression.
Medicare population: depression	CMS.gov Chronic Conditions 2007 - 2018	Prevalence of chronic condition across all Medicare beneficiaries
Medicare population: emergency department use rate	CMS 2019 Outpatient 100% Standard Analytical File (SAF) and 2019 Standard Analytical Files (SAF) Denominator File	Unique patients having an emergency department visit/total beneficiaries, CY 2019

Indicator name	Indicator source	Indicator definition
Medicare population: heart failure	CMS.gov Chronic Conditions 2007 - 2018	Prevalence of chronic condition across all Medicare beneficiaries. A null value indicates that the data have been suppressed because there are fewer than 11 Medicare beneficiaries in the cell or for necessary complementary cell suppression.
Medicare population: hyperlipidemia	CMS.gov Chronic Conditions 2007 - 2018	Prevalence of chronic condition across all Medicare beneficiaries
Medicare population: hypertension	CMS.gov Chronic Conditions 2007 - 2018	Prevalence of chronic condition across all Medicare beneficiaries
Medicare population: inpatient use rate	CMS 2019 Inpatient 100% Standard Analytical File (SAF) and 2019 Standard Analytical Files (SAF) Denominator File	Unique patients being hospitalized/total beneficiaries, CY 2019
Medicare population: stroke	CMS.gov Chronic Conditions 2007 - 2018	Prevalence of chronic condition across all Medicare beneficiaries. A null value indicates that the data have been suppressed because there are fewer than 11 Medicare beneficiaries in the cell or for necessary complementary cell suppression.
Medicare spending per beneficiary (MSPB) index	CMS 2019 Medicare Spending Per Beneficiary (MSPB), Hospital Value-Based Purchasing (VBP) Program	Medicare spending per beneficiary (MSPB): for each hospital, CMS calculates the ratio of the average standardized episode spending over the average expected episode spending. This ratio is multiplied by the average episode spending level across all hospitals. Blank values indicate missing hospitals or missing score. Associated to the hospitals
Mentally unhealthy days	2021 County Health Rankings & Roadmaps; The Behavioral Risk Factor Surveillance System (BRFSS)	2018 Average number of mentally unhealthy days reported in past 30 days (age-adjusted)
Mortality rate: cancer	Texas Health Data, Center for Health Statistics, Texas Department of State Health Services	2017 Cancer (all) age-adjusted death rate (per 100,000 - all ages. Age-adjusted using the 2000 US Standard population). Death rates are null when the rate is calculated with a numerator of 20 or less.
Mortality rate: heart disease	Texas Health Data, Center for Health Statistics, Texas Department of State Health Services	2017 Heart disease age-adjusted death rate (per 100,000 - all ages. Age-adjusted using the 2000 US Standard population). Death rates are null when the rate is calculated with a numerator of 20 or less.
Mortality rate: infant	2021 County Health Rankings & Roadmaps, CDC WONDER Mortality Data	2013 - 2019 Number of all infant deaths (within one year), per 1,000 live births. Blank values reflect unreliable or missing data.
Mortality rate: stroke	Texas Health Data, Center for Health Statistics, Texas Department of State Health Services	2017 Cerebrovascular disease (stroke) age- adjusted death rate (per 100,000 - all ages. Age-adjusted using the 2000 US Standard population). Death rates are null when the rate is calculated with a numerator of 20 or less.

Indicator name	Indicator source	Indicator definition
No vehicle available	US Census Bureau, 2019 American Community Survey One-Year Estimates	2019 Households with no vehicle available (percent of households). A null value entry indicates that either no sample observations or too few sample observations were available to compute an estimate, or a ratio of medians cannot be calculated because one or both of the median estimates fall in the lowest interval or upper interval of an open-ended distribution, or the margin of error associated with a median was larger than the median itself.
Opioid involved accidental poisoning death	US Census Bureau, Population Division and 2019 Texas Health and Human Services Center for Health Statistics Opioid related deaths in Texas	Annual estimates of the resident population: April 1, 2010, to July 1, 2017. 2019 Accidental poisoning deaths where opioids were involved are those deaths that include at least one of the following ICD-10 codes among the underlying causes of death: X40 - X44, and at least one of the following ICD-10 codes identifying opioids: T40.0, T40.1, T40.2, T40.3, T40.4, T40.6. Blank values reflect unreliable or missing data.
Physical inactivity	2021 County Health Rankings & Roadmaps; CDC Diabetes Interactive Atlas, The National Diabetes Surveillance System	2017 Percentage of adults ages 20 and over reporting no leisure-time physical activity in the past month
Physically unhealthy days	2021 County Health Rankings & Roadmaps; The Behavioral Risk Factor Surveillance System (BRFSS)	2018 Average number of physically unhealthy days reported in past 30 days (age-adjusted)
Population to one dentist	2021 County Health Rankings & Roadmaps; Area Health Resource File/National Provider Identification file (CMS)	2019 Ratio of population to dentists
Population to one mental health provider	2021 County Health Rankings & Roadmaps; CMS, National Provider Identification Registry (NPPES)	2020 Ratio of population to mental health providers
Population to one non-physician primary care provider	2020 County Health Rankings & Roadmaps; CMS, National Provider Identification Registry (NPPES)	2020 Ratio of population to primary care providers other than physicians
Population to one primary care physician	2021 County Health Rankings & Roadmaps; Area Health Resource File/American Medical Association	2018 Number of individuals served by one physician in a county, if the population was equally distributed across physicians
Population under age 65 without health insurance	2021 County Health Rankings & Roadmaps; Small Area Health Insurance Estimates (SAHIE), United States Census Bureau	2018 Percentage of population under age 65 without health insurance
Prenatal care: first trimester entry into prenatal care	2020 Texas Health and Human Services - Vital statistics annual report	2016 Percent of births with prenatal care onset in first trimester

Indicator name	Indicator source	Indicator definition
Renter-occupied housing	US Census Bureau, 2019 American Community Survey One-Year Estimates	2019 Renter-occupied housing (percent of households). A null value entry indicates that either no sample observations or too few sample observations were available to compute an estimate, or a ratio of medians cannot be calculated because one or both of the median estimates fall in the lowest interval or upper interval of an open-ended distribution, or the margin of error associated with a median was larger than the median itself.
Severe housing problems	2021 County Health Rankings & Roadmaps; Comprehensive Housing Affordability Strategy (CHAS) data, US Department of Housing and Urban Development (HUD)	2013 - 2017 Percentage of households with at least one of four housing problems: overcrowding, high housing costs, or lack of kitchen or plumbing facilities
Sexually transmitted infection incidence	2021 County Health Rankings & Roadmaps; National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention (NCHHSTP)	2018 Number of newly diagnosed chlamydia cases per 100,000 population
Smoking	2021 County Health Rankings & Roadmaps; The Behavioral Risk Factor Surveillance System (BRFSS)	2018 Percentage of the adult population in a county who both report that they currently smoke every day or most days and have smoked at least 100 cigarettes in their lifetime
Suicide: intentional self-harm	Texas Health Data Center for Health Statistics	2019 Intentional self-harm (suicide) (X60 - X84, Y87.0). Death rates are null when the rate is calculated with a numerator of 20 or less.
Teen birth rate	2021 County Health Rankings & Roadmaps; National Center for Health Statistics - Natality files, National Vital Statistics System (NVSS)	2013 - 2019 Number of births to females ages 15 - 19 per 1,000 females in a county (The numerator is the number of births to mothers ages 15 - 19 in a seven-year time frame, and the denominator is the sum of the annual female populations, ages 15 - 19.)
Teens (16 - 19) not in school or work - disconnected youth	2021 County Health Rankings (Measure of America)	2015 - 2019 Disconnected youth are teenagers and young adults between the ages of 16 and 19 who are neither working nor in school. Blank values reflect unreliable or missing data.
Unemployment	2021 County Health Rankings & Roadmaps; Local Area Unemployment Statistics (LAUS), Bureau of Labor Statistics	2019 Percentage of population ages 16 and older unemployed but seeking work

# Appendix C: community input participating organizations

Representatives from the following organizations participated in the focus group and a number of key informant interviews/surveys:

- Alzheimer's Alliance of Smith County
- Baylor Scott & White Health
- Bethesda Health Clinic
- Children's Advocacy Center of Smith County
- Methodist Children's Home
- Regional East Texas Food Bank

# Appendix D: demographic and socioeconomic summary

According to population statistics, the community served is similar to Texas in terms of projected population growth; both outpace the country. The median age is older than Texas but younger than the United States. Median income is significantly lower than both the state and the country. The community served has a higher percentage of Medicaid and Medicare beneficiaries and uninsured individuals than the state of Texas.

#### Demographic and socioeconomic comparison: community served and state/US benchmarks

Geography		Bench	marks	Community served
		United States	Texas	Tyler health community
Total current populati	on	330,342,293	29,321,501	494,750
Five-year projected p	opulation change	3.3%	6.6%	4.7%
Median age		38.6	35.2	38.4
Population 0 - 17		22.4%	25.7%	23.7%
Population 65+		16.6%	13.2% 17.6%	
Women age 15 - 44		19.5% 20.5%		18.5%
Hispanic population		19.0%	40.7%	19.1%
	Uninsured	9.9%	18.8%	20.4%
	Medicaid	20.9%	13.0%	13.5%
Insurance coverage	Private market	8.3%	8.4%	9.6%
Ŭ	Medicare	13.8%	12.7%	18.9%
	Employer	47.2%	47.1%	37.7%
Median HH income		\$65,618	\$63,313	\$53,598
No high school diploma		12.2%	16.7%	15.3%

Source: IBM Watson Health Demographics, Claritas, 2020, Insurance Coverage Estimates, 2020.

The community served expects to grow 4.7% by 2025, an increase of over 23,400 people. The projected population growth is lower than the state's five-year projected growth rate (6.6%) and higher than the national projected growth rate (3.3%). The ZIP codes expected to experience the most growth in five years are:

- 75703 Tyler 2,803 additional people
- 75605 Longview 1,698 additional people
- 75771 Lindale 1,642 additional people

The community's population is younger with 46.5% of the population ages 18 - 54 and 23.7% under age 18. The age 65-plus cohort is expected to experience the fastest growth (14.4%) over the next five years. Growth in the senior population will likely contribute to increased utilization of services as the population continues to age.

Population statistics are analyzed by race and by Hispanic ethnicity. The community was primarily white non-Hispanic, but diversity in the community will increase due to the projected growth of minority populations over the next five years. The expected growth rate of the Hispanic population (all races) is over 13,600 people (14.5%) by 2025. The non-Hispanic white population is expected to grow by only 1.3%.

Populatio	n distributic	n				Household Income d	istribution		
		Aç	ge distributi	ion			Inco	ome distribu	ution
Age group	2020	% of total	2025	% of total	USA 2020 % of total	2020 Household income	HH count	% of total	ן % כ
0 - 14	97,255	19.7%	100,611	19.4%	18.5%	<\$15K	20,676	11.4%	10
15 - 17	19,947	4.0%	21,071	4.1%	3.9%	\$15 - 25K	19,968	11.0%	8
18 - 24	46,353	9.4%	49,805	9.6%	9.5%	\$25 - 50K	47,127	25.9%	2
25 - 34	65,577	13.3%	66,082	12.8%	13.5%	\$50 - 75K	33,051	18.2%	16
35 - 54	118,257	23.9%	122,326	23.6%	25.2%	\$75 - 100K	21,783	12.0%	12
55 - 64	60,044	12.1%	58,348	11.3%	12.9%	Over \$100K	39,363	21.6%	3
65+	87,317	17.6%	99,932	19.3%	16.6%				
Total	494,750	100.0%	518,175	100.0%	100.0%	Total	181,968	100.0%	10

Education level				
	Education level distribution			
2020 Adult education level	Pop age 25+	% of total	USA % of total	
Less than high school	19,545	5.9%	5.2%	
Some high school	31,238	9.4%	7.0%	
High school degree	90,441	27.3%	27.2%	
Some college/assoc. degree	119,598	36.1%	28.9%	
Bachelor's degree or greater	70,373	21.2%	31.6%	
Total	331,195	100.0%	100.0%	

Race/ethnicity				
	Race/ethnicity distribution			
Race/ethnicity	2020 pop	% of total	USA % of total	
White non-Hispanic	301,710	61.0%	59.3%	
Black non-Hispanic	81,087	16.4%	12.4%	
Hispanic	94,400	19.1%	19.0%	
Asian & Pacific is. non-Hispanic	6,954	1.4%	6.0%	
All others	10,599	2.1%	3.3%	
Total	494,750	100.0%	100.0%	

Source: IBM Watson Health / Claritas, 2020.

USA % of total 10.0%

> 8.6% 20.7%

16.7%

12.4%

31.5%

100.0%

Population estimates		
Population	National	Selected area
2010 total	308,745,538	461,141
2020 total	330,342,293	494,750
2025 total	341,132,738	518,175
2030 total	353,513,931	541,695
% change 2020 - 2025	3.27%	4.73%
% change 2020 - 2035	7.01%	9.49%

Population	Males all ages	Females all ages	Females childbearing
2010 total	231,580	229,561	86,795
2020 total	248,221	246,529	91,614
2025 total	260,016	258,159	95,683
2030 total	271,962	269,733	100,407
10Y %	9.56%	9.41%	9.60%
National	7.02%	7.01%	4.01%

#### 2020 race and ethnicity with total population



#### Population by sex 2010 - 2030



#### Population by age group 2010 - 2030



Source: IBM Watson Health / Claritas, 2020.

The 2020 median household income for the United States was \$65,618 and \$63,313 for the state of Texas. The median household income for the ZIP codes within this community ranged from \$85,774 for 75762 Flint to \$36,391 for 75702 Tyler. There were seventeen (17) other ZIP codes with median household incomes less than \$52,400-twice the 2020 federal poverty limit for a family of four.

- 75602 Longview \$36,451
- 75801 Palestine \$38,829
- 75708 Tyler \$42,445
- 75799 Tyler \$43,500
- 75792 Winona \$43,636
- 75601 Longview \$43,706
- 75803 Palestine \$44,114
- 75494 Winnsboro \$44,519
- 75839 Elkhart \$44,671

- 75705 Tyler \$46,833
- 75604 Longview \$48,225
- 75647 Gladewater \$48,250
- 75789 Troup \$49,167
- 75706 Tyler \$50,000
- 75704 Tyler \$50,031
- 75853 Montalba \$51,818
- 75783 Quitman \$51,937

The median household income ZIP code map below illustrates ZIP codes that are lower or higher than twice the federal poverty level for a family of four in 2020.



A majority of the population (38%) is insured through employer sponsored health coverage. The remainder of the population is fairly equally divided between Medicaid, Medicare and private market (the purchasers of coverage directly or through the health insurance marketplace).

# Federally designated health professional shortage areas and medically underserved areas and populations

Health prof	essional shortage a	areas (HPSA)		
County	HPSA ID	HPSA name	HPSA discipline class	Designation type
Anderson	1485863903	LI - Anderson County	Primary care	Low-income population HPSA
Anderson	6482230355	CF - Joe F. Gurney Unit	Dental health	Correctional facility
Anderson	1487276096	CF - George Beto Unit	Primary care	Correctional facility
Anderson	6483618831	CF - George Beto Unit	Dental health	Correctional facility
Anderson	7482403933	CF - George Beto Unit	Mental health	Correctional facility
Gregg	1481704468	LI - Gregg County	Primary care	Low-income population HPSA
Gregg	7485633558	LI - Gregg County	Mental health	Low-income population HPSA
Gregg	14899948C5	Longview Wellness Center, Inc.	Primary care	Federally qualified health center
Gregg	748999484J	Longview Wellness Center, Inc.	Mental health	Federally qualified health center
Gregg	64899948H9	Longview Wellness Center, Inc.	Dental health	Federally qualified health center
Gregg	14899948H6	Special Health Resources for Texas, Incorporated	Primary care	Federally qualified health center
Gregg	748999484Y	Special Health Resources for Texas, Incorporated	Mental health	Federally qualified health center
Gregg	64899948L3	Special Health Resources for Texas, Incorporated	Dental health	Federally qualified health center
Smith	7481729946	LI - Smith County	Mental health	Low-income population HPSA
Smith	1483088876	LI - Smith County	Primary care	Low-income population HPSA
Smith	148999487K	Tyler Family Circle of Care	Primary care	Federally qualified health center
Smith	748999483G	Tyler Family Circle of Care	Mental health	Federally qualified health center
Smith	648999480T	Tyler Family Circle of Care	Dental health	Federally qualified health center
Wood	7488648104	LI - Wood County	Mental health	Low-income population HPSA
Wood	1486865021	LI - Wood County	Primary care	Low-income population HPSA
Wood	1482424775	Clyde M. Johnston Unit	Primary care	Correctional facility
Wood	6486858605	CF - Clyde M. Johnston Unit	Dental health	Correctional facility
Wood	7484980333	CF - Clyde M. Johnston Unit	Mental health	Correctional facility

Medically underserved areas and populations (MUA/P)					
County	MUA/P source identification number	Service area name	Designation type	Rural status	
Gregg	03460	Pov - Gladewater service area	Medically underserved area - governor's exception	Non-rural	
Gregg	03459	Pov - Southeast Longview service area	Medically underserved area - governor's exception	Non-rural	
Gregg	03461	Pov - West Kilgore service area	Medically underserved area - governor's exception	Rural	
Smith	07065	Northern Tyler	Medically underserved area	Non-rural	
Smith	03478	Smith service area	Medically underserved area	Non-rural	
Wood	1487467684	Wood County	Medically underserved area	Rural	

#### **Community Needs Index**

The IBM Watson Health Community Need Index (CNI) is a statistical approach that identifies areas within a community where there are likely gaps in healthcare. The CNI takes into account vital socioeconomic factors, including income, culture, education, insurance and housing, about a community to generate a CNI score for every population ZIP code in the US.

The CNI is strongly linked to variations in community healthcare needs and is a good indicator of a community's demand for a range of healthcare services. Not-for-profit and community-based hospitals, for whom community need is central to the mission of service, are often challenged to prioritize and effectively distribute hospital resources. The CNI can be used to help them identify specific initiatives best designed to address the health disparities of a given community.

The CNI score by ZIP code shows specific areas within a community where healthcare needs may be greater.

#### **Tyler Health Community**

Composite CNI: high scores indicate high need.



3.99 Texas CNI score 3.85 US composite CNI score 3.00 Barrier State US 3.0 3.0 Income Culture 4.7 3.0 Education 3.5 3.0

4.3

3.9

3.0

3.0

Insurance

Housing

Composite CNI score

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ZIP map where color shows the 2020 Community Need Index on a scale of 1 to 5. Orange color indicates high need areas (CNI = 4 or 5); blue color indicates low need (CNI = 1 or 2). Gray colors have needs at the national average (CNI = 3).

The overall CNI score for the Tyler Health Community is 3.99. The difference in the numbers indicates both a strong link to community healthcare needs and a community's demand for various healthcare services. In portions of the community, the CNI score was greater than 4.5, indicating more significant health needs among the population.

# Appendix E: proprietary community data

IBM Watson Health supplemented the publicly available data with estimates of localized inpatient demand discharges, outpatient procedures, emergency department visits, heart disease, as well as cancer incidence estimates.

Social determinants of health are the structural determinants and conditions in which people are born, grow, live, work and age. All of which can greatly impact healthcare utilization and play a major role in the shifting healthcare landscape. Social determinants, such as education, income and race, are factored into Inpatient Demand Estimates and Outpatient Procedure Estimates utilization rate creation methodologies.

#### **Inpatient demand estimates**

Inpatient demand estimates provide the total volume of annual acute care admissions by ZIP code and DRG Product Line for every market in the United States. IBM uses all-payor state discharge data for publicly available states and Medicare (MEDPAR) data for the entire US. These rates are applied to demographic projections by ZIP code to estimate inpatient utilization for 2020 through 2030.

The following summary is reflective of the inpatient utilization trends for Tyler Health Community. Total discharges in the community are expected to decline by -0.2% by 2030.

Product line	2020 discharges	2025 discharges	2030 discharges	2020 - 2025 discharges change	2020 - 2025 discharges % change	2020 - 2030 discharges change	2020 - 2030 discharges % change
Alcohol and Drug Abuse	586	578	612	(9)	-1.5%	26	4.4%
Cardio-Vasc-Thor Surgery	2,324	2,242	2,132	(82)	-3.5%	(191)	-8.2%
Cardiovascular Diseases	4,217	4,246	4,432	28	0.7%	214	5.1%
ENT	257	233	215	(24)	-9.3%	(42)	-16.3%
General Medicine	9,601	9,477	9,488	(124)	-1.3%	(112)	-1.2%
General Surgery	3,931	3,756	3,723	(175)	-4.4%	(208)	-5.3%
Gynecology	215	107	64	(108)	-50.4%	(151)	-70.3%
Nephrology/Urology	2,611	2,576	2,579	(35)	-1.3%	(32)	-1.2%
Neuro Sciences	3,344	3,296	3,403	(48)	-1.4%	59	1.8%
Obstetrics Del	4,974	4,581	4,524	(392)	-7.9%	(450)	-9.0%
Obstetrics ND	368	324	309	(43)	-11.8%	(59)	-16.1%
Oncology	882	844	823	(38)	-4.3%	(58)	-6.6%
Ophthalmology	49	44	40	(5)	-9.9%	(9)	-17.7%
Orthopedics	5,128	4,935	4,909	(192)	-3.7%	(218)	-4.3%
Psychiatry	1,139	1,180	1,237	41	3.6%	99	8.7%
Pulmonary Medical	5,426	5,999	6,491	573	10.6%	1,065	19.6%
Rehabilitation	9	8	8	(0)	-2.8%	(0)	-1.1%
TOTAL	45,059	44,425	44,991	(634)	-1.4%	(68)	-0.2%

Source: IBM Watson Health Inpatient Demand Estimates, 2020.

#### **Outpatient procedures estimates**

Outpatient procedure estimates predict the total annual volume of procedures performed by ZIP code for every market in the United States using proprietary and public health claims, as well as federal surveys. Procedures are defined and reported by procedure codes and are further grouped into clinical service lines. The Tyler Health Community outpatient procedures are expected to increase by almost 21% by 2030 with the largest growth in the categories of general & internal medicine, labs and physical & occupational therapy.

Clinical service category	2020 procedures	2025 procedures	2020-2025 procedures % change	2030 procedures	2020 - 2030 procedures % change
Allergy & Immunology	137,665	147,294	7.0%	155,854	13.2%
Anesthesia	69,566	75,575	8.6%	80,694	16.0%
Cardiology	384,373	450,788	17.3%	532,068	38.4%
Cardiothoracic	421	468	11.2%	509	20.8%
Chiropractic	246,807	235,967	-4.4%	215,730	-12.6%
Colorectal Surgery	2,720	2,779	2.2%	2,834	4.2%
CT Scan	131,740	160,470	21.8%	194,752	47.8%
Dermatology	81,482	92,242	13.2%	102,421	25.7%
Diagnostic Radiology	588,798	618,111	5.0%	644,351	9.4%
Emergency Medicine	320,219	337,241	5.3%	355,387	11.0%
Gastroenterology	37,753	40,450	7.1%	42,929	13.7%
General & Internal Medicine	4,114,772	4,631,866	12.6%	5,046,916	22.7%
General Surgery	32,380	34,865	7.7%	37,303	15.2%
Hematology & Oncology	656,927	725,828	10.5%	797,017	21.3%
Labs	4,918,856	5,314,109	8.0%	5,724,374	16.4%
Miscellaneous	173,018	184,180	6.5%	194,176	12.2%
MRI	46,141	49,888	8.1%	53,519	16.0%
Nephrology	94,327	105,053	11.4%	114,790	21.7%
Neurology	43,704	48,748	11.5%	53,446	22.3%
Neurosurgery	2,683	3,441	28.3%	3,869	44.2%
Obstetrics/Gynecology	57,377	60,323	5.1%	63,798	11.2%
Ophthalmology	302,403	341,185	12.8%	377,485	24.8%
Oral Surgery	1,605	1,874	16.7%	2,177	35.6%
Orthopedics	73,433	79,141	7.8%	84,320	14.8%
Otolaryngology	95,767	108,731	13.5%	120,772	26.1%
Pain Management	40,446	43,028	6.4%	44,646	10.4%
Pathology	145	164	13.6%	184	27.1%
PET Scan	3,179	3,481	9.5%	3,740	17.6%
Physical & Occupational Therapy	836,392	1,002,005	19.8%	1,174,292	40.4%
Plastic Surgery	3,739	4,137	10.7%	4,554	21.8%
Podiatry	28,633	30,218	5.5%	31,413	9.7%
Psychiatry	238,925	314,466	31.6%	399,345	67.1%
Pulmonary	91,221	97,500	6.9%	104,373	14.4%
Radiation Therapy	42,809	44,987	5.1%	46,830	9.4%
Single Photon Emission CT Scan (SPECT)	11,469	12,253	6.8%	13,112	14.3%
Urology	40,098	44,612	11.3%	48,942	22.1%
Vascular Surgery	12,700	13,893	9.4%	14,911	17.4%
TOTAL	13,964,694	15,461,363	10.7%	16,887,832	20.9%

Source: IBM Watson Health Outpatient Procedure Estimates, 2020.

#### **Emergency department visits**

Emergency department estimates predict the total annual volume of emergency department (ED) visits by ZIP code and level of acuity for every market in the United States. IBM uses an extensive supply of proprietary claims, public claims and federal surveys to construct population-based use rates for all payors by age and sex. These use rates are then applied to demographic and insurance coverage projections by ZIP code to estimate ED utilization for 2020 through 2030.

Visits are broken out into emergent and non-emergent ambulatory visits to identify the volume of visits that could be seen in a less-acute setting, for example, a fast-track ED or an urgent care facility. In addition, visits that result in an inpatient admission are broken out into a third, separate category. In the Tyler Health Community, ED visits are expected to grow by 6% by 2025.

Emergent status	2020 visits	2025 visits	2020 - 2025 visits change	2020 - 2025 visits % change
Emergent	163,370	176,026	12,655	7.7%
Inpatient Admission	54,173	59,321	5,147	9.5%
Non-Emergent	135,243	138,483	3,240	2.4%
TOTAL	352,787	373,830	21,043	6.0%

Source: IBM Watson Health Emergency Department Visits, 2020.



#### **Emergency department visit estimates 2025**

#### Heart disease estimates

The heart disease estimates dataset predicts the number of cases by heart disease type and ZIP code for every market in the United States. IBM uses public and private claims data as well as epidemiological data from the National Health and Nutritional Examination Survey (NHANES) to build local estimates of heart disease prevalence for the current population. County-level models by age and sex are applied to the underlying demographics of specific geographies to estimate the number of patients with specific types of heart disease.

In Tyler Health Community, the most common heart disease is hypertension at 67.8% of all heart disease cases.

Disease type	2020 prevalence	2020 % prevalence
Arrhythmia	29,865	14.3%
Heart Failure	12,947	6.2%
Hypertension	141,737	67.8%
Ischemic Heart Disease	24,413	11.7%
TOTAL	208,962	100.0%

Source: IBM Watson Heart Disease Estimates, 2020.

#### **Cancer estimates**

IBM Watson Health builds county-level cancer incidence models that are applied to the underlying demographics of specific geographies to estimate incidence (i.e., the number of new cancer cases annually) of all cancer patients. Cancer incidence is expected to increase by 3.5% in the Tyler Health Community by 2025.

Cancer type	2020 incidence	2025 incidence	2020 - 2025 change	2020 - 2025 % change
Bladder	155	171	16	10.5%
Brain	42	45	3	6.6%
Breast	589	634	44	7.5%
Colorectal	384	324	-59	-15.5%
Kidney	137	152	16	11.4%
Leukemia	100	110	10	9.9%
Lung	538	561	23	4.3%
Melanoma	150	171	21	14.2%
Non-Hodgkin's Lymphoma	150	164	14	9.4%
Oral Cavity	106	115	10	9.2%
Other	438	479	42	9.5%
Ovarian	49	51	2	3.5%
Pancreatic	97	109	12	12.2%
Prostate	428	382	-47	-10.9%
Stomach	51	52	1	2.6%
Thyroid	87	97	9	10.6%
Uterine Cervical	24	23	-1	-2.6%
Uterine Corpus	131	143	12	9.3%
TOTAL	3,654	3,782	128	3.5%

Source: IBM Watson Health Cancer Estimates, 2020.

# Appendix F: 2019 community health needs assessment evaluation

It is Baylor Scott & White Health's privilege to serve faithfully in promoting the well-being of all individuals, families and communities. Our 2019 Implementation Strategy described the various resources and initiatives we planned to direct toward addressing the adopted health needs of the 2019 CHNA.

The following is a snapshot of the impact of actions taken by Baylor Scott & White to address the below priority health issues.

**Dates:** Fiscal Years 2020 - March 2022 **Facility:** Baylor Scott & White Texas Spine & Joint Hospital - Tyler **Community served:** Gregg, Smith and Wood Counties

#### **Food insecurity**

Action/tactics	Anticipated outcome	Evaluation of impact
<b>Cash and in-kind contributions</b> Cash and in-kind contributions to other not-for-profit community organizations existing to increase access to care for the community.	Increased access to food for those who cannot afford or have access to quality, healthy food sources.	<ul> <li>Persons served: unknown</li> <li>\$15,000 community benefit</li> </ul>
<b>Dietitian on staff</b> In-house dietitian available for consultation and resources.	Better health with education on healthy food selection and preparation.	The dietitian position was unfilled during the Community Health Needs Assessment time frame due to the budgetary impact of the COVID-19 pandemic.

#### Ratio of population to one non-physician primary care provider

Action/tactics	Anticipated outcome	Evaluation of impact
<b>Health screenings</b> Screening and referral for primary health issues.	Increased access to non- physician care providers.	<ul> <li>BSW Texas Spine &amp; Joint Hospital provides Bethesda Health Clinic, a non-profit, zero government-funded clinic, with \$4,200 a month worth of imaging services, including MRI, CT, ultrasound and plain X-ray.</li> <li>Persons served: unknown</li> <li>33 months (about three years) x \$4,200 = \$138,600 community benefit</li> </ul>
<b>Charity care</b> Provide free and/or discounted care to financially or medically indigent patients as outlined in the financial assistance policy.	Increased access to primary care and/or specialty care for indigent persons regardless of their ability to pay.	• \$272,918 community benefit

#### Total investment in adopted community needs since 2019 CHNA

BSW Texas Spine & Joint Hospital - Tyler





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