

# Community Health Needs Assessment:

## Health and Behavioral Health Needs McCulloch County, Texas

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This report is part of a comprehensive project to assess the Health and Behavioral Health Needs of the Extremely Poor in a 20-county region of West Texas. The regional assessment includes Coke, Concho, Crockett, Edwards, Irion, Kimble, Kinney, Mason, McCulloch, Menard, Mills, Reagan, Runnels, San Saba, Schleicher, Sterling, Sutton, Tom Green, Upton, and Val Verde counties. The set of project documents includes a report for each county, plus a regional-level assessment.



McCulloch County Courthouse - Brady, Texas

Methodist Healthcare Ministries of South Texas and the San Angelo Health Foundation provided support for this Community Health Needs Assessment for the people of McCulloch County.

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## PREFACE

Community Development Initiatives at Angelo State University prepared this Community Health Needs Assessment for the people of McCulloch County, Texas. The assessment is the product of collaboration among Community Development Initiatives, the Concho Valley Community Action Agency, and many community champions and stakeholders of the twenty-county region covered in the comprehensive study of the Health and Behavioral Health Needs of the Extremely Poor in West Texas.

Community Development Initiatives is based on a belief that flourishing communities thrive on trust between individuals, organizations and institutions. Its mission is to link Angelo State University to West Texas communities through innovative community-based research in support of their development.

The Concho Valley Community Action Agency is a 501(c)3 nonprofit corporation founded in 1966 in response to War on Poverty legislation. Although programs and services have changed over the years, the purpose of fighting the causes of poverty in the Concho Valley has been constant. CVCAA's vision is a community free of barriers to self-sufficiency.

The purpose of the comprehensive study is to identify and prioritize health and behavioral health needs of the approximately 14,743 extremely poor individuals living in a twenty-county region covered by the project. The McCulloch County Community Health Needs Assessment is a vital part of the regional project.

The research to assess the Health and Behavioral Health Needs of the Extremely Poor in West Texas was guided by a six-member advisory group including:

- Mark Bethune, Concho Valley Community Action Agency
- Tim Davenport-Herbst, St. Paul Presbyterian Church of San Angelo
- Dusty McCoy, West Texas Counseling & Guidance
- Susan McLane, Concho Valley Community Action Agency
- Sue Mims, West Texas Opportunities & Solutions
- Kenneth L. Stewart, Community Development Initiatives

The generous support of Methodist Healthcare Ministries of South Texas and the San Angelo Health Foundation made the comprehensive regional project and this Community Health Needs Assessment for the people of McCulloch County possible.

## INTRODUCTION

The project to assess Health and Behavioral Health Needs in West Texas employs a collaborative community-based research approach to evaluate the health status and situation of the vulnerable population groups in the study region. By definition, vulnerable populations are the most underserved by the health care system. They include individuals with the least education, low incomes, and members of racial or ethnic minority groups. People living in rural areas such as McCulloch County are an important segment of the vulnerable populations in health care. The assessment includes the following:



1. A demographic profile featuring the vulnerable groups in the population. The profile integrates publicly available secondary demographic data.
2. A health status profile of community health and mental health care resources, utilization patterns, and morbidity and mortality rates.
3. Results of a survey of poor and extremely poor residents of selected counties in the southern part of the study region.
4. Identification and prioritization of health and behavioral health issues in McCulloch County based on the prevalence, consequences, and impact of risk factors on health inequities, and the feasibility of communities acting toward solutions.

## GENERAL DESCRIPTION OF THE MCCULLOCH COUNTY COMMUNITY

McCulloch County is a 1,071 square mile land area on the Edwards Plateau in Central Texas. The county seat is Brady, Texas. The geographical center of Texas is located sixteen miles northeast of Brady. As a result, the nickname for Brady is the Heart of Texas.



Formation of the county occurred in 1856; however, extensive settlement didn't occur until the 1870s. The early 1900s was a period of rapid population growth in McCulloch County. The Great Depression led to a forty-year decline in the county's population.

The county seat of Brady was declared a National Defense Area in 1941, leading to the construction of two military facilities: Curtis Field and a prisoner-of-war internment camp. The camp was deactivated in 1945. Later the facility was leased for use as a school for delinquent black girls.

Historically, the economy in McCulloch County was based almost exclusively on agriculture. Stock-raising accounted for the primary occupation in Brady. The poultry industry, the wool and mohair industry, and cotton production also contributed to the county's economy. Oil and gas production are important to the economy in McCulloch County. Brady Lake and hunting bring tourists to McCulloch County.

Table 1 reports private industry and employment for McCulloch County in 2013. About 217 private industry establishments employed nearly 2,281 county residents at an average pay rate of \$44,425. Private industry employees comprised approximately 60 percent of the county's 3,786 person labor force in 2013.<sup>1</sup>

No single sector dominates the employment picture in McCulloch County. Employment in NAICS sector 44-45 (retail trade) was the county's largest source of employment, comprising 23 percent of private industry employment. Despite being the largest source of employment, the average annual pay for this sector was nearly half of the average annual pay for all private industries. The retail trade sector was closely followed by NACIS sector 48-49 (transportation and warehousing) at 22 percent of private industry employment.

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<sup>1</sup> The estimate of 3,786 labor force participants is from the US Census Bureau's 2009-2013 5-Year American Community Survey, retrieved October 30, 2015: <http://factfinder.census.gov>.

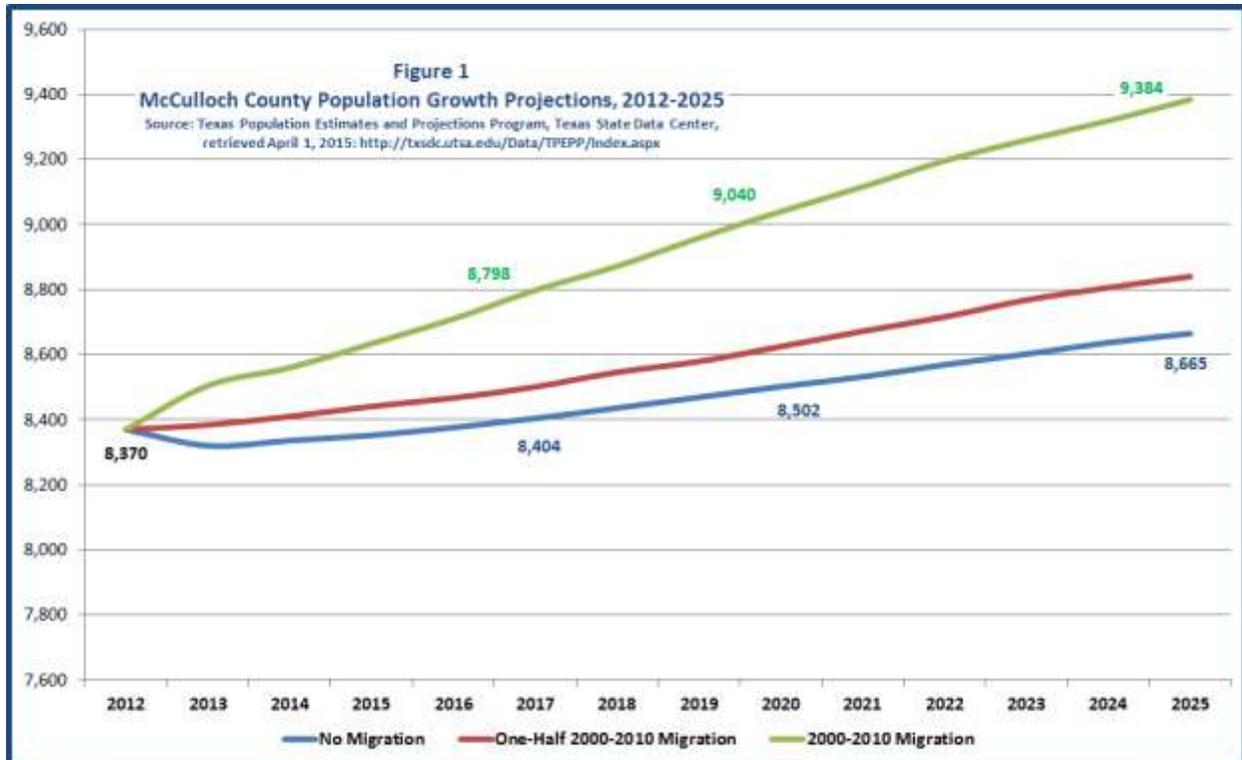
Oil and gas production play an important part in the county's economy as well. Employment in the NAICS sector 21 (mining, quarrying, and oil and gas extraction) only comprised 11 percent of the private industry employment. However, NAICS sector 21 had a location quotient for employment of 13, indicating that employment in mining, quarrying, and oil and gas extraction was about 13 times more concentrated than the nationwide level.

<b>Table 1</b>				
<b>McCulloch County Private Industry &amp; Employment, 2013</b>				
<b>North American Industry Classification System (NAICS) Sectors</b>	<b>Annual Average Establishment Count</b>	<b>Annual Average Employment</b>	<b>Percent Total Employment</b>	<b>Average Annual Pay</b>
All private industries	217	2,281	100	\$44,425
NAICS 11 Agriculture, forestry, fishing and hunting	29	61	3	\$26,036
NAICS 21 Mining, quarrying, and oil and gas extraction	8	262	11	\$71,976
NAICS 23 Construction	21	88	4	\$25,882
NAICS 31-33 Manufacturing	11	234	10	\$46,954
NAICS 44-45 Retail trade	44	516	23	\$25,359
NAICS 48-49 Transportation and warehousing	16	495	22	\$74,600
NAICS 51 Information	3	32	1	\$21,324
NAICS 52 Finance and insurance	16	96	4	\$40,664
NAICS 53 Real estate and rental and leasing	7	27	1	\$22,360
NAICS 54 Professional and technical services	17	51	2	\$23,254
NAICS 62 Health care and social assistance	22	342	15	\$28,010
NAICS 81 Other services, except public administration	23	77	3	\$21,499

Source: US Department of Labor, Bureau of Labor Statistics, Quarterly Census of Employment and Wages, April 1, 2015: <http://www.bls.gov/cew/>

## DEMOGRAPHICS

The Census Bureau's 2013 estimate of the McCulloch County resident population is 3,601.<sup>2</sup> The most recent official Texas estimate from the State Demographer is 8,330 for 2012. In addition, the State Demographer developed three population projections based on varying assumptions about migration to and from the county in years ahead. Figure 1 depicts the State's official projections for population growth in McCulloch County through 2025.



The highest growth projection (green line) is based on the assumption that migration in and out of the county is following the trend set between the decennial census counts in 2000 and 2010. This projection approximates the county will reach 8,798 residents in 2017, 9,040 by 2020, and 9,383 for 2025 (an overall 13% gain from 2012-2015).

### Vulnerable Populations

Table 2 below shows the majority (66%) of the residents in McCulloch County identify as White, Non-Hispanic. The county's 2,567 Hispanic residents comprised the majority of the minority population in 2012 according to estimates of the State Demographer. Black citizens and other minorities added another 246 residents, bringing the total minority population to 34 percent.

<sup>2</sup> From US Census Bureau, Population Division, Annual Estimates of the Resident Population: April 1, 2010 to July 1, 2013, retrieved April 1, 2015: <http://factfinder.census.gov>.

<b>Table 2</b>								
<b>Race &amp; Ethnicity: 2012 Estimate with Projections to 2025</b>								
<b>Groups</b>	<b>2012</b>		<b>2017</b>		<b>2020</b>		<b>2025</b>	
White, Non-Hispanic	5,557	66%	5,660	64%	5,696	63%	5,729	61%
Total Minority	2,813	34%	3,138	36%	3,344	37%	3,655	39%
Hispanic	2,567	31%	2,888	33%	3,087	34%	3,386	36%
Black	135	2%	137	2%	142	2%	150	2%
Other	111	1%	113	1%	115	1%	119	1%
Total Population	8,370	100%	8,798	100%	9,040	100%	9,384	100%

Source: Texas Population Estimates and Projections Program, Texas State Data Center, retrieved April 1, 2015: <http://txsdc.utsa.edu/Data/TPEPP/Index.aspx>. The forward projections for 2017, 2020, and 2025 reflect the State Demographer's high-growth assumption that migration will equal the rates of the 2000-2010 time period.

In addition, the State Demographer's projections indicate that Hispanic residents are likely to account for all of the county's population increase in the near future. The expectation is for the Hispanic segment of the community to steadily grow from 31 to 36 percent between 2012 and 2025 while the Non-Hispanic White population is expected to shrink proportionally.

Children under age 18 (numbering 1,041) made up 24 percent of the county's population in 2012 according to State estimates. Youngsters of school attendance age (5-17 years) comprised 75 percent of the children, while preschoolers accounted for 25 percent.

<b>Table 3</b>								
<b>Children: 2012 Estimate with Projections to 2025</b>								
<b>Groups</b>	<b>2012</b>		<b>2017</b>		<b>2020</b>		<b>2025</b>	
All Children (under age 18)	2,001	100%	1,946	100%	1,984	100%	2,025	100%
School-age children (ages 5-17)	1,494	75%	1,427	73%	1,415	71%	1,425	70%
Pre-school-age children (under 5)	507	25%	519	27%	569	29%	600	30%

Source: Texas Population Estimates and Projections Program, Texas State Data Center, retrieved April 1, 2015: <http://txsdc.utsa.edu/Data/TPEPP/Index.aspx>. The forward projections for 2017, 2020, and 2025 reflect the State Demographer's high-growth assumption that migration will equal the rates of the 2000-2010 time period.

Projections estimate a decline in the child population by 2025. Despite the decline in the overall child population, pre-school toddlers are projected to steadily grow from 25 percent of children in 2012 to 30 percent in 2025.

The county was home to 1,769 senior citizens in 2012 according to State estimates. They accounted for 21 percent of the total population. Hispanics (numbering 327) made up 18 percent of the senior residents in the county.

<b>Table 4</b>								
<b>Seniors: 2012 Estimate with Projections to 2025</b>								
<b>Groups</b>	<b>2012</b>		<b>2017</b>		<b>2020</b>		<b>2025</b>	
Total Population	8,370	100%	8,798	100%	9,040	100%	9,384	100%
Seniors (65 & over)	1,769	21%	2,088	24%	2,316	26%	2,650	28%
Hispanic Seniors (65 & over)	327	18%	442	21%	521	22%	651	25%

Source: Texas Population Estimates and Projections Program, Texas State Data Center, retrieved April 1, 2015: <http://txsdc.utsa.edu/Data/TPEPP/Index.aspx>.  
The forward projections for 2017, 2020, and 2025 reflect the State Demographer's high-growth assumption that migration will equal the rates of the 2000-2010 time period.

Official State projections suggest brisk growth of the senior population to 28 percent by 2025. Hispanics, once again, will account for much of the increase. The number of Hispanic seniors is expected to more than double between 2012 and 2025, increasing their representation within the elder population from 18 to 25 percent.

There are 1.03 females in McCulloch County for every male. Women and girls comprised 51 percent of the population according to the State Demographer's 2012 population estimates. Projections indicate the female population will slowly increase in number through 2025, but slightly decrease as a segment (from 51% to 50%) because the overall population is set for faster growth.

<b>Table 5</b>								
<b>Females: 2012 Estimate with Projections to 2025</b>								
<b>Groups</b>	<b>2012</b>		<b>2017</b>		<b>2020</b>		<b>2025</b>	
Total Population	8,370	100%	8,798	100%	9,040	100%	9,384	100%
Female (all ages)	4,240	51%	4,420	50%	4,518	50%	4,651	50%
Female (ages 13-17)	317	7%	255	6%	268	6%	242	5%
Hispanic Female (ages 13-17)	122	38%	121	47%	135	50%	109	45%

Source: Texas Population Estimates and Projections Program, Texas State Data Center, retrieved April 1, 2015: <http://txsdc.utsa.edu/Data/TPEPP/Index.aspx>.  
The forward projections for 2017, 2020, and 2025 reflect the State Demographer's high-growth assumption that migration will equal the rates of the 2000-2010 time period.

Teen pregnancy and a range of associated factors particularly affect girls age 13-17. According to estimates, the segment of girls age 13-17 will decrease by 2025. Estimates suggest the representation of Hispanic females in this age group to grow from 38 percent to 45 percent by 2025.

## COMMUNITY HEALTH RESOURCES

The Heart of Texas Memorial Hospital District anchors the county's health resources. According to the records of the Texas Comptroller, the Hospital District's 2013 tax rate was 12.8 cents per \$100 of the county's taxable property base valued at \$513,587,410. This produced a total tax levy of \$659,513 in 2013. The median tax rate for 137 hospital districts that reported tax revenues in 2013 was 17.5 cents. The median levy was \$1.3 million.<sup>3</sup>

Hospital district facilities include Heart of Texas Memorial Hospital located in Brady, Texas. The hospital is operated in collaboration between the McCulloch County Hospital District and the Heart of Texas Healthcare System, a local non-profit entity. The hospital provides critical access short-term acute care and adult Level IV emergency room services, swing bed services, dialysis, physical and occupational therapy, radiology, and a preventative care and family practice clinic. The hospital district opened a new facility in 2012 and an outpatient dialysis center in 2014.

### Hospital Utilization, Revenue, and Charges

The Heart of Texas Memorial Hospital reported availability of 25 staff beds in the 2012 Annual Survey of Hospitals.<sup>4</sup> The number translates to availability of 3.2 staff beds per 1,000 residents of the county. This compares to 2.7 staff beds available per 1,000 residents in 13 acute care hospitals located in 10 counties across the 20-county study area.<sup>5</sup> Three physicians and two physician assistants are affiliated with the hospital, as well as twelve specialists.

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<sup>3</sup> "Special District Rates and Levies," 2013, Texas Comptroller of Public Accounts, retrieved May 2, 2015: <http://www.window.state.tx.us/taxinfo/proptax/taxrates/>. The McCulloch County Profile at the Texas Association of Counties reports a tax rate of 12.2 cents per \$100 valuation and a levy of \$658,629 in 2014. See County Profiles, Texas Association of Counties, retrieved November 5, 2015: <http://www.txcip.org/tac/census/sd.php?FIPS=48307>.

<sup>4</sup> The Annual Survey of Hospitals is a cooperative project of the American Hospital Association, the Texas Hospital Association and the Texas Department of State Health Services. The Annual Survey of Hospitals reports for Texas are available at: <http://www.dshs.state.tx.us/chs/hosp/>.

<sup>5</sup> The 13 hospitals within the study region include Concho County Hospital, Kimble Hospital, Heart of Texas Healthcare System, Reagan County Memorial, Ballinger Memorial Hospital District, North Runnels Hospital, Schleicher County Medical Center, Lillian M. Hudspeth Memorial Hospital, San Angelo Community Medical Center, Shannon West Texas Memorial Hospital, McCamey Hospital, Rankin County Hospital District, and Val Verde Regional Medical Center.

According to data on patient safety indicators from the Centers for Medicare and Medicare Services (CMS) covering 2011-2013, Heart of Texas Memorial Hospital performed “As Expected” compared to similar hospitals. Similarly, Heart of Texas Memorial Hospital performed “As Expected” on clinical quality data covering 2012-2014 on three procedures and conditions (heart failure, chronic obstructive pulmonary disease, and pneumonia).<sup>6</sup> No additional quality ratings or indicators for Heart of Texas Memorial Hospital are publicly available.

Table 6 depicts 383 annual admissions to Heart of Texas Memorial for 1,288 inpatient days reported for 2012. This computes to just 53.5 admissions per 1,000 county residents and compares to 91.8 per 1,000 in the combined 13 hospitals within the study region. The Staffed Occupancy Rate for Heart of Texas Memorial indicates that only 14.1 percent of its staff bed capacity was used in 2012. This is nearly one-third of the 40.6 percent Staffed Occupancy Rate for the 13 hospitals across the study region.

Underutilization is also reflected in the 2012 published data on revenues and charges at Heart of Texas Memorial Hospital. Gross patient revenue, on a per capita basis for 2012, amounted to \$2,121 per resident of the county. This was about one-third of \$6,197 per capita revenue in the combined 13 hospitals of the region. In addition, Heart of Texas Memorial reported uncompensated care charges (most accounted as “bad debt”) totaling 12.4 percent of the gross patient revenue. That rate of uncompensated care compares to 8.8 percent of gross patient revenue in the 13 regional hospitals combined.

Discharge records from the Texas Department of State Health Services indicate that McCulloch County residents made 915 inpatient visits to facilities outside of McCulloch County in 2013. Tom Green County hospitals handled 59 percent of these inpatient stays. Similarly, records show residents made 3,040 outpatient visits outside of McCulloch County during 2013, 48 percent to Tom Green County facilities.<sup>7</sup>

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<sup>6</sup> Healthgrades uses Medicare inpatient data from the Medicare Provider Analysis and Review (MedPAR) database and Patient Safety Indicator software from the Agency for Healthcare Research and Quality (AHRQ) to calculate event rates for 13 patient safety indicators plus one patient safety event count. Patient safety indicators are serious, potentially preventable complications that occur during a patient’s hospital stay. It uses Centers for Medicare and Medicaid Services data for years 2012-2014 to assess clinical procedures. Only ratings for three clinical procedures and conditions are available for the Heart of Texas Memorial Hospital: heart failure, chronic obstructive pulmonary disease, and pneumonia. Data retrieved November 2, 2015: <http://www.healthgrades.com/hospital-directory/texas-tx-central/heart-of-texas-memorial-hospital-hgst5f672a5b451348#Ratings>.

<sup>7</sup> Texas Department of State Health Services, Inpatient and Outpatient Public Use Data Files, 2013.

<b>Table 6</b>		
<b>2012 Hospital Utilization, Revenue and Charges</b>		
<b>Service Geography</b>	<b>McCulloch County</b>	<b>Region</b>
<b>Utilization Measures</b>		
Staff Beds	25	643
Admissions	383	21,832
Inpatient Days	1,288	95,593
Medicare Inpatient Days	73%	59.6%
Medicaid Inpatient Days	1%	12.9%
Average Daily Census	3.5	20.1
Average Length Stay	3.4	4.5
Staffed Occupancy Rate	14.1%	40.6%
<b>Revenue &amp; Charges</b>		
Total Uncompensated Care	\$2,192,241	\$130,254,618
Bad Debt Charges	\$2,126,218	\$67,864,830
Charity Charges	\$66,023	\$62,389,788
Net Patient Revenue	\$10,431,670	\$401,687,575
Total Gross Patient Revenue	\$17,671,417	\$1,474,374,831
Gross Inpatient Revenue	\$2,650,713	\$664,983,937
Gross Outpatient Revenue	\$15,020,704	\$809,390,894
Percent of Gross Patient Revenue in Uncompensated Care	12.4%	8.8%
<b>Population Measures</b>		
Population Estimate	8,370	237,912
Staff Beds per 1,000 Population	3.2	2.7
Admissions per 1,000 Population	53.5	91.8
Inpatient Days per 1,000 Population	162.5	401.8
Per Capita Gross Patient Revenue	\$2,121	\$6,197
Per Capita Uncompensated Care	\$280	\$547
Source: Texas Department of State Health Services, Annual Survey of Hospitals, retrieved May 12, 2015: <a href="http://www.dshs.state.tx.us/chs/hosp/">http://www.dshs.state.tx.us/chs/hosp/</a> .		

### Other Health Care Resources

Brady West Rehab and Nursing is a local senior care center owned by the McCulloch County Hospital District. The center provides inpatient nursing and rehabilitation care. Brady West Rehab and Nursing has 106 certified beds and maintains a census of approximately 51 resident

patients. This computes to an occupancy rate of 48 percent, which compares to a statewide rate of 71 percent for 1,220 Texas nursing homes represented in the CMS 2015 data.<sup>8</sup>

CMS uses a five-star rating system for nursing home facilities to indicate whether they are average (3 stars), above (4 or 5 stars), or below (1 or 2 stars) compared to similar facilities nationwide. Star ratings are assigned for the facility's performance on health inspections, staffing, and quality of care, plus an overall facility rating.

Brady West Rehab and Nursing received an average rating based on the 2015 CMS data for staffing levels and performance on health inspections. However, Brady West Rehab and Nursing received a much below average (1 star) rating for performance on quality of care and a below average rating for the overall facility rating.

Frontera Healthcare Network is the result of a multiple county effort to preserve access to quality healthcare in each of the communities of Eden, Menard, and Mason, Texas. The organization was formed in 2005 with contributions from the Eden Economic Development Corporation, Spirit of Eden Fund, and the Texas Office of Rural Community Affairs.

Frontera Healthcare Network is a private non-profit organization governed by a board of directors representing the communities served. The organization operates Federally Qualified Health Center (FQHC) medical clinics and behavioral health services in Eden, Menard, Mason, Junction, Brady, and Fredericksburg, Texas.

A physician assistant is affiliated with the clinic. The Brady clinic provides care to the community on an income based sliding scale fee. The mission is to provide care to the uninsured and medically underserved.<sup>9</sup>

There are two home health services with offices based in Brady: Brady Healthcare Services Inc. and Medway Home Healthcare. These agencies offer nursing care, physical therapy, and medical social services. Brady Healthcare Services Inc. also offers occupational therapy, speech pathology, and home health aide services. The average 5-point star quality rating for the two service agencies is 4 based on data for 2015. This compares to an average of 2.9 for 1,695 Texas agencies that were rated in the 2015 Home Health Compare Data.<sup>10</sup>

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<sup>8</sup>Nursing Home Compare Data, Centers for Medicare and Medicaid Services, retrieved November 2, 2015: <https://data.medicare.gov/>.

<sup>9</sup> See information on Frontera Healthcare Network at <http://fronterahn.org/home.html>.

<sup>10</sup> Home Health Compare Data, Centers for Medicare and Medicaid Services, retrieved November 2, 2015: <https://data.medicare.gov/>.

The City of Brady Fire/EMS Department provides emergency medical services (EMS) to McCulloch County. The Brady Fire Department works three shifts of 2 firefighters, one basic EMT, and one paramedic on a 24/48 schedule.<sup>11</sup>

Department of State Health Services data counted 25 EMS professionals McCulloch County in 2014. This yields a population ratio of 336 residents per EMS specialist. This compares to 295 residents per specialist in the 20-county study area and 438 for Texas overall.

The Texas EMS & Trauma Registries reports that Texas hospitals received 398 trauma patients from McCulloch County over five years from 2010-2014. This computes to an average of 79.6 EMS trauma incidents per year. The most common were unintentional fall incidents at 56 percent.<sup>12</sup>

Licensed or Certified Professionals	Number in McCulloch County (8,410 Population)	Ratio of Population per Professional	Number in 20 County Study Region (239,529 Population)	Ratio of Population per Professional	Number in Texas (26,581,256 Population)	Ratio of Population per Professional
Certified Nurse Aides	51	165	1,879	127	124,616	213
Dentists	2	4,205	70	3,422	12,767	2,082
Dieticians	1	8,410	33	7,258	4,668	5,694
Emergency Medical Services	25	336	812	295	60,690	438
Licensed Chemical Dependency Counselors	0	No Supply	87	2,753	9,285	2,863
Licensed Professional Counselors	6	1,402	158	1,516	20,655	1,287
Licensed Vocational Nurses	58	145	1,197	200	77,624	342
Marriage and Family Therapists	0	No Supply	12	19,961	3,149	8,441
Medication Aides	3	2,803	139	1,723	10,012	2,655
Occupational Therapists	2	4,205	45	5,323	7,914	3,359
Optometrists	0	No Supply	18	13,307	3,272	8,124
Pharmacists	7	1,201	146	1,641	23,561	1,128
Physical Therapists	6	1,402	109	2,198	13,136	2,024
Physician Assistants	4	2,103	51	4,697	6,543	4,063
Physicians (Direct Patient Care)	5	1,682	357	671	47,289	562
Primary Care Physicians	4	2,103	168	1,426	19,277	1,379
Psychiatrists	0	No Supply	12	19,961	1,971	13,486
Promotors (Community Health Workers)	0	No Supply	15	15,969	2,032	13,081
Psychologists (All)	1	8,410	43	5,570	7,382	3,601
Registered Nurses	23	366	1,696	141	206,027	129
Advanced Practice (APRN)	0	No Supply	119	2,013	15,194	1,749
Social Workers	5	1,682	117	2,047	19,536	1,361
<b>Total Selected Health Professionals</b>	<b>203</b>	<b>41</b>	<b>7,283</b>	<b>33</b>	<b>696,600</b>	<b>38</b>

Source: Texas Department of State Health Services, Supply and Distribution Tables for State-Licensed Health Professions in Texas, retrieved May 26, 2015: <http://www.dshs.state.tx.us/chs/hprc/health.shtm>.

Table 7 depicts the supply of key health professionals in McCulloch County according to 2014 Department of State Health Services data. Based on population ratios, it appears the county is well-supplied with low-level personnel such as certified nurse aides or licensed vocational

<sup>11</sup> For information on the Brady Fire department, see [http://www.bradyfdems.com/?page\\_id=36](http://www.bradyfdems.com/?page_id=36).

<sup>12</sup> Data provided by the Injury Epidemiology & Surveillance Branch from the Texas EMS & Trauma Registries, Texas Department of State Health Services, June, 2015. Since the data is based on incoming trauma patients to hospitals, the reported incidents may or may not have been handled by EMS services based in McCulloch County.

nurses. The county is also well-supplied with occupational therapists, physical therapists, and physician assistants. However, it is undersupplied with advanced practitioners such as physicians, dentists, and registered nurses. McCulloch County joins many rural West Texas areas with few advanced behavioral health professionals such as psychiatrists and psychologists.

## HEALTH STATUS

### Family and Maternal Health

The Census Bureau's 2009-2013 5-Year American Community Survey estimated an average of 1,957 families residing in McCulloch County during that time. Overall the basic indicators of family and maternal health in the county are mixed.

The ratio of divorces compared to marriages may be a point of some concern for the health of families. Over the 2008-2012 time frame, the number of divorces granted totaled 62.3 percent of the number of marriage licenses issued in the county. This was a higher proportion than the 20-county study region (43.2%) or the state (45%). In addition, the 2009-2013 American Community Survey indicates a slightly higher percentage of currently divorced women in the county.

Indicator	McCulloch County	Study Region	Region 9	Texas
Divorce Rate (Annual Divorces as a Percent of Annual Marriages)	62.3	43.2	No Data	45.0
Percent Women Age 15 & Over who are Currently Divorced	15.3	12.4	No Data	12.2
Single-Parent Families (Percent of All Families)	6.5	13.1	No Data	15.6
Teen Pregnancy Rate (Pregnancies per 1,000 Females Age 13-17)	29.5	25.3	30.5	21.4
Teen Birth Rate (Births to Mothers Age 13-17 per 1,000 Same Age Females)	25.4	23.1	28.1	18.4
Abortion Rate (Abortions as a Percent of Pregnancies among Females Age 15-44)	13.8	9.8	9.0	15.6
Percent Births to Unmarried Mothers (Female Population Age 15-44)	53.0	44.6	45.9	42.3
Child Abuse Rate* (Confirmed Incidents of Abuse per 1,000 Children)	20.9	12.9	13.8	9.5
Intimate Violence Rate (Incidents of Family Violence & Sexual Assault per 1,000 Population)	3.8	9.4	No Data	8.0

\* All ratios and percents, except the Child Abuse Rate, cover 2008-2012. The Child Abuse Rate is for 2010-2014.  
Sources: All calculations of rates and percents were performed by Community Development Initiatives at Angelo State University using data on Divorce, Teen Pregnancy, Teen Birth, and Abortion from Vital Statistics, Texas Department of State Health Services, retrieved, June 9, 2015: <http://www.dshs.state.tx.us/>. The Child Abuse Rate was calculated using data from the Annual Data Books, Texas Department of Family and Protective Services, retrieved June 9, 2015: <http://www.dfps.state.tx.us/>. Estimates of Single-Parent Families and Percent Divorced Women were computed using data from the US Census Bureau, American Community Survey 2009-2013 5 Year Data, retrieved June 9, 2015: <http://factfinder.census.gov/>. Intimate Violence Rates were derived from data at Crime in Texas, Texas Department of Public Safety, retrieved June 9, 2010: <http://www.txdps.state.tx.us>.

Historically, the 30 counties in the Public Health Region 9 of West Texas have been high compared to the state on the rate of child abuse. McCulloch County, however, exceeds the

trend with a child abuse rate that is higher than the 30 counties of Region 9, the 20-county study region, and the state overall. The percent of births to unmarried mothers is also higher in the county.

### Potentially Preventable Hospitalizations

Hospitalizations that would likely not occur if the individual had accessed and cooperated with appropriate outpatient healthcare are termed potentially preventable. The initiative to reduce potentially preventable hospitalizations works to improve health while diminishing the cost of health care.

The Texas Department of State Health Services estimates that potentially preventable hospitalizations for just ten identifiable health conditions generated \$49 billion in hospital charges between 2008 and 2013. Some \$386 million of these charges were incurred by residents of the 20-county study region.

Potentially Preventable Hospitalizations	McCulloch County			Study Region			Texas		
	Number	Average Charge	Per Capita Charge	Number	Average Charge	Per Capita Charge	Number	Average Charge	Per Capita Charge
Bacterial Pneumonia	63	\$30,794	\$299	3,572	\$20,816	\$437	280,079	\$36,925	\$530
Dehydration	0	\$0	\$0	936	\$3,222	\$30	91,238	\$21,706	\$101
Urinary Tract Infection	0	\$0	\$0	1,916	\$8,880	\$114	204,853	\$25,282	\$265
Angina (without procedures)	0	\$0	\$0	66	\$1,452	\$1	13,743	\$24,987	\$17
Congestive Heart Failure	80	\$43,560	\$537	3,580	\$22,942	\$421	326,337	\$41,191	\$689
Hypertension (High Blood Pressure)	0	\$0	\$0	463	\$1,927	\$8	65,973	\$25,365	\$85
Chronic Obstructive Pulmonary Disease or Older Adult Asthma	36	\$25,053	\$139	2,857	\$15,320	\$264	253,148	\$31,674	\$411
Diabetes Short-term Complications	0	\$0	\$0	466	\$2,952	\$11	63,954	\$26,913	\$88
Diabetes Long-term Complications	36	\$47,202	\$262	1,285	\$9,768	\$86	134,630	\$46,872	\$323
All Hospitalizations	215	\$37,330	\$1,237	15,141	\$21,483	\$1,371	1,433,955	\$34,178	\$2,512
<b>Total Charges, 2008-2013</b>		<b>\$8,026,047</b>			<b>\$386,127,532</b>			<b>\$49,010,136,451</b>	

Source: Potentially Preventable Hospitalizations, Center for Health Statistics, Texas Department of State Health Services, retrieved June 12, 2015: <http://www.dshs.state.tx.us/phf/>.

McCulloch County residents experienced 215 hospitalizations for potentially preventable conditions between 2008 and 2013. These hospital stays stemmed from bacterial pneumonia, congestive heart failure, COPD, and long-term complications from diabetes. Associated hospital charges amounted to more than \$8 million, or approximately \$1,237 per adult resident of the county.

### Leading Causes of Death

The Department of State Health Services recorded 538 deaths from all causes among McCulloch County residents between 2008 and 2012. This computes to a five-year crude death rate of 130.3 deaths per 1,000 residents based on the 2012 population estimate. This is four times higher than the Texas rate of 32 per 1,000 over the same time frame. It is nearly three times higher than the rate of 45.6 per 1,000 for the 20-county study region.

<b>Table 9</b>				
<b>Leading Causes of Death in McCulloch County, 2008-2012</b>				
<b>Causes of Death</b>	<b>Deaths</b>	<b>Crude Death Rate*</b>	<b>Study Region Rate*</b>	<b>Texas Rate*</b>
Diseases of the Heart (ICD-10 Codes I00-I09, I11, I13, I20-I51)	130	31.5	9.5	7.4
Malignant Neoplasms (ICD-10 Codes C00-C97)	119	28.8	9.6	7.0
Chronic Lower Respiratory Diseases (ICD-10 Codes J40-J47)	42	10.2	2.7	1.7
Cerebrovascular Diseases (ICD-10 Codes I60-I69)	30	7.3	2.3	1.8
Accidents (ICD-10 Codes V01-X59, Y85-Y86)	20	4.8	2.0	1.8
Diabetes Mellitus (ICD-10 Codes E10-E14)	13	3.1	1.5	1.0
In Situ Neoplasms, Benign Neoplasms and Neoplasms of Uncertain or	12	2.9	0.2	0.2
Alzheimer's Disease (ICD-10 Code G30)	11	2.7	1.6	1.0
Nephritis, Nephrotic Syndrome and Nephrosis (ICD-10 Codes N00-N07, N17-N19, N25-N27)	10	2.4	1.0	0.7
Intentional Self-Harm (Suicide) (ICD-10 Codes X60-X84, Y87.0)	9	2.2	0.7	0.5
Chronic Liver Disease and Cirrhosis (ICD-10 Codes K70, K73-K74)	7	1.7	0.8	0.6
Essential (Primary) Hypertension and Hypertensive Renal Disease (ICD-10 Codes I10, I12)	6	1.5	0.5	0.3
*All rates in the table express the number of deaths per 1,000 residents based on the estimated population for 2012. They are crude rates, not adjusted for age or other demographic characteristics. Source: Texas Department of State Health Services, retrieved June 23, 2015: <a href="http://www.dshs.state.tx.us/chs/datalist.shtm">http://www.dshs.state.tx.us/chs/datalist.shtm</a> .				

Medical conditions classified as Diseases of the Heart top the list of the leading causes of death in McCulloch County. The county generally has much higher death rates than the study region or the state on all the leading causes depicted in Table 9.

## SURVEY OF THE POOR AND EXTREMELY POOR IN WEST TEXAS

The Census Bureau's 2009-2013 5-Year American Community Survey data approximates that 4,734 residents of Kimble, McCulloch, Mason, Menard, Mills, and San Saba counties in the eastern part of the 20-county study region are living below the federal poverty level. This computes to a poverty rate of 16.3 percent for these five eastern counties combined. Moreover, the Census Bureau data indicates that some 1,664 or 35.1 percent of these residents are extremely poor, living with incomes less than half the poverty level.<sup>13</sup>

Between April and September 2015, Angelo State University's Community Development Initiatives and 72 organizations collaborated to complete detailed interviews with poor and extremely poor residents of the 20 counties in the study region.<sup>14</sup> A total of 597 interviews were completed, including 49 with residents of the six eastern counties in the study region: Kimble, McCulloch, Mason, Menard, Mills, and San Saba counties.<sup>15</sup> Respondents from the eastern counties had self-reported household incomes below the applicable federal poverty level. Approximately 33.3 percent were extremely poor with incomes equal to or below half of the applicable poverty level. They ranged in age from 22 to 80 with an average age of 52.5 years. Females made up 75.4 percent. See Table 10 for a summary of the sample characteristics.

A schedule of questions covering health, behavioral health, and dental health topics was developed for the interviews. The Behavioral Risk Factor Surveillance System (BRFSS) surveys, conducted with adults age 18 and over by state health departments in partnership with the Centers for Disease Control and Prevention, served as the model for questions.<sup>16</sup> Indeed, the three-page questionnaire yielded 31 indicators which closely parallel similar items in the 2013 BRFSS results for Texas.

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<sup>13</sup> The combined rates of poverty and extreme poverty for the six counties were computed by Angelo State University's Community Development Initiatives based on data from the US Census Bureau, American Community Survey, 2009-2013 5-Year Estimates, retrieved October 2, 2015: <http://factfinder.census.gov/>.

<sup>14</sup> Residents were defined as extremely poor for the purposes of the interviews if their self-reported household income was near 50 percent or less of the applicable federal poverty level for 2015. They were deemed to be poor if self-reported household income was near or below the applicable 2015 poverty level. Based on the results of the 2009-2013 five-year combined samples of the Census Bureau's American Community Survey, we estimated that approximately 14,743 extremely poor individuals reside in the 20-county study region. See the US Census Bureau's 2009-2013 5-Year American Community Survey at <http://factfinder.census.gov>.

<sup>15</sup> The number of interviews conducted in the respective counties was proportional to the estimated total of extremely poor population from the American Community Survey. Based on the American Community Survey, for instance, we estimated that 11.3% of extremely poor individuals in the study region resided in the eastern counties of Kimble, McCulloch, Mason, Menard, Mills, and San Saba. Reflecting this, we conducted 69 or 11.6% of the interviews in these counties

<sup>16</sup> BRFSS interviews are conducted by telephone. In contrast, the interviews for this project were conducted by trained community-based interviewers in a face-to-face informal format. Information on Texas participation and results for the BRFSS is at <http://www.dshs.state.tx.us/chs/brfss/default.shtm>.

<b>Table 10</b>		
<b>Sample Characteristics*</b>		
<b>County of Residence</b>		
Kimble	9	13.0%
McCulloch	5	7.2%
Mason	22	31.9%
Menard	10	14.5%
Mills	10	14.5%
San Saba	13	18.8%
<b>Poverty Status</b>		
Severly poor	23	33.3%
Poor	45	65.2%
<b>Gender</b>		
Male	17	24.6%
Female	52	75.4%
<b>Ethnicity</b>		
Not Hispanic	41	59.4%
Hispanic	28	40.6%
<b>Age</b>		
18-29	3	4.3%
30-39	8	11.6%
40-49	18	26.1%
50-64	27	39.1%
65 & Over	13	18.8%
Average Years of Age		52.5
<b>Years of Schooling</b>		
Less than 12	29	42.0%
12 or More	39	56.5%
Average Years of Schooling		11.0
<b>Household Composition</b>		
Single Person	8	11.6%
Single Parent	17	24.6%
Couples with Children**	13	18.8%
Couples without Children**	13	18.8%
Other***	18	26.1%
Average Household Size		2.4
<p>*The sample size in the east counties was 69. Some frequencies and percentages reported do not sum to 69 or 100% because of missing data for selected variables.</p> <p>**Couples may be married couples or unmarried partners.</p> <p>***Other households includes small numbers of respondents living with their parents, grandparents living with grandchildren, persons living with extended relatives, and persons living with roommates.</p>		

The results in Table 11 below apply only to the eastern counties (Kimble, McCulloch, Mason, Menard, Mills, and San Saba) of the study region. The table compares results from the Survey of the Poor and Extremely Poor to BRFSS estimates of health risk among the total adult populations of the east counties and the state overall. The first row of the table, for instance, reports that 35 individuals or 50.7 percent of the 69 survey participants from Kimble, McCulloch, Mason, Menard, Mills, and San Saba counties said they were limited by poor mental, physical, or emotional health conditions. Texas BRFSS results from a similar question<sup>17</sup> asked in 2013 estimate that only 13.2 percent of all adult residents in the five counties share this risk of impairment.

The 20 risk indicators in Table 11 were selected because the Survey of the Poor and Extremely Poor suggests that this vulnerable group has a level of risk on these factors that is at least 10 percent higher than the risk in the total adult population in the eastern counties. Indeed, based on the comparisons to the BRFSS estimates, the vulnerable poor and extremely poor population experiences elevated risks that range from 18 percent higher (for being diagnosed with asthma) to 345 percent higher (for being diagnosed with kidney disease).

Other significant findings from the Survey of the Poor and Extremely Poor add context to some of the elevated risks indicated in Table 11. For instance, the 39.1 percent of poor and extremely poor residents who reported being a current smoker helps explain the elevated risk of COPD diagnosis (as well as other diagnosed diseases) in this vulnerable group.

Also, the 49.3 percent who reported not seeing a doctor because of cost indicates an elevated cost barrier to health care. Additional results from the survey suggest that a cost barrier to care may be more broadly shared among adults in the east counties. For instance, another item from the Survey indicates that 34.8 percent of respondents lack health insurance. This compares to the Census Bureau's 2013 estimate that 36.8 percent of all adults age 18-64 in Kimble, McCulloch, Mason, Menard, Mills, and San Saba counties are uninsured.<sup>18</sup>

The survey findings also indicate that 53.6 percent of the poor and extremely poor reported not seeing a dentist because of cost, 88.4 percent do not have dental insurance; 72.5 percent do not have a regular dentist; 31.9 percent have not had a routine dental checkup within the past five years; and 36.2 percent never had dental cleaning or x-rays.

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<sup>17</sup> The similar item in the BRFSS was a more formal question asking whether respondents were kept from normal activities for five or more days in the past 30 days by poor mental or physical health.

<sup>18</sup> US Census Bureau, Small Area Health Insurance Estimates, retrieved September 29, 2015: <http://www.census.gov/did/www/sahie/>.

<b>Table 11</b>					
<b>Health Risks of the Poor and Extremely Poor in North Counties with BRFSS Comparisons</b>					
Risk Indicators	Survey Results: East Counties*			BRFSS Risk Comparisons**	
	Sample	Population at Risk	Percent at Risk	East Counties	Texas
Limited by poor physical, mental, or emotional health conditions	69	35	50.7	13.7	11.6
Could not see a doctor because of cost during past 12 months	69	34	49.3	20.1	19.3
Diagnosed high blood pressure	69	31	44.9	37.7	31.2
Diagnosed heart attack (myocardial infarction)	69	10	14.5	6.0	3.9
Diagnosed heart disease	69	11	15.9	7.7	5.7
Diagnosed stroke	69	7	10.1	4.3	2.5
Diagnosed cardiovascular disease	69	9	13.0	10.9	7.2
Diagnosed asthma	69	13	18.8	15.9	12.6
Diagnosed any cancer	69	8	11.6	9.1	9.0
Diagnosed COPD (incl. emphysema, chronic bronchitis)	69	12	17.4	5.4	5.4
Diagnosed arthritis, rheumatoid arthritis, gout, lupus, fibromyalgia	69	37	53.6	25.4	20.7
Diagnosed depression (major, chronic, minor)	69	31	44.9	15.3	16.0
Diagnosed kidney disease	69	7	10.1	2.3	3.1
Diagnosed diabetes	69	18	26.1	14.5	10.9
Morbidly Obese BMI => 35	69	17	24.6	11.3	12.7
Current smoker	69	27	39.1	18.8	15.9
Current smokeless tobacco user				8.1	4.3
Second-hand smoke exposure in home	69	19	28.8	11.0	13.7
Second-hand smoke exposure at work	69	9	19.6	13.4	18.9
Difficult to access fresh fruits & vegetables	69	18	26.1	10.3	7.7

\*These columns report the Survey of the Poor & Extremely Poor in West Texas combined results for Kimble, McCulloch, Mason, Menard, Mills, and San Saba counties.

\*\*These columns include results from the Texas BRFSS conducted by the Texas Department of State Health Services in 2013. The BRFSS estimates reported for the North Counties are risk-adjusted by Community Development Initiatives at Angelo State University to account for the specific demographic characteristics of Kimble, McCulloch, Mason, Menard, Mills, and San Saba counties.

In addition to the apparent lack of access to preventative dental care, the survey shows other serious obstacles to preventative medicine among poor and extremely poor residents of the east counties. For instance, 63.8 percent said they never had a colon/rectal exam.

Still other survey findings shine additional light on the indication in Table 11 of a 194 percent higher risk of poor and extremely poor adults being diagnosed with depression. Sizeable proportions of respondents also reported always, often, or sometimes feeling a fulfilling life is impossible (52.2%); avoiding situations out of nervousness, fear, or anxiety (66.2%); and feeling alone and not having much in common with people (52.9%).

Finally, Table 11 indicates that 26.1 percent of the poor and extremely poor have difficulty accessing grocery stores with fresh fruits and vegetables. This suggests a level of food insecurity that is more than double the BRFSS estimate of 10.3 percent lacking such access in the overall adult population of the eastern counties. It may also be associated with the higher obesity rate depicted in Table 11.

## IDENTIFICATION AND PRIORITIZATION OF HEALTH NEEDS

### Identification of Community Health Needs

The previous sections of this report summarize the findings relating to McCulloch County from primary and secondary data collected by community-based participants in a comprehensive project to assess the Health and Behavioral Health Needs of vulnerable populations in a 20-county region of West Texas. The following data provide a foundation for identifying pertinent community health needs in McCulloch County:

- **Demographic Trend Data:** Demographic projections of population growth in McCulloch County were reviewed. Growth trends for vulnerable population groups were included in the review.
- **Health Care Resources:** Data and information on hospital utilization, the supply of health care professionals, and other health care resources were reviewed.
- **Family and Maternal Health:** Indicators of family composition, domestic abuse data, and maternal health were reviewed.
- **Leading Causes of Death:** Data on leading causes of death were used to identify specific diseases associated with higher death rates in McCulloch County compared to the state.
- **Survey of the Poor and Extremely Poor in West Texas:** Original survey data was reviewed in conjunction with Texas BRFSS data to identify elevated health and behavioral health risks among the poor and extremely poor population of Kimble, McCulloch, Mason, Menard, Mills, and San Saba counties.

It is important to affirm the community-wide and regional focus of this study of the health needs of vulnerable populations in the 20-county study region of West Texas. With this perspective at the forefront, the needs assessment has made every effort to use data to identify needs of community-level importance which, in many instances, can only be addressed through cooperative, collective community action. Analysis of the data from the community level focus leads to the following summary list of identified needs for McCulloch County:

1. Needs of seniors.  
Increase capacity to address health needs of growing numbers of seniors in the population.
2. Hospital utilization.  
Create a strategy and collective community action to increase utilization of Heart of Texas Memorial Hospital facilities.
3. Shortage of core health professionals.  
Create a collaborative community effort to recruit and retain one or more health professionals in core shortage areas such as:

- Physicians
  - Advanced Nurse Practitioners or Registered Nurses
  - Psychiatrist or Psychologist
  - Dentist
4. Access to dental care.  
Increase capacity and access to quality dental care, especially by poor and extremely poor residents and households.
  5. Behavioral health capacity and access.  
Increase capacity and access to quality behavioral health resources.  
Create a collaborative community strategy for prevention of suicide.
  6. Preventative actions.  
Increase emphasis on preventative actions in treatment, case management, and community outreach and education to reduce prevalence of and mortality from:
    - Heart disease and cerebrovascular diseases
    - Cancer
    - COPD
    - Influenza and pneumonia
    - Complications from diabetes
    - Alzheimer's disease
    - Chronic liver disease and cirrhosis
    - Accidental deaths
    - Kidney disease
  7. Preventative outreach to the poor and extremely poor.  
Increase community capacity to reach the poor, extremely poor, and other vulnerable groups with preventative actions to:
    - Reduce obesity
    - Reduce tobacco use
    - Reduce depression
    - Reduce diabetes
    - Reduce heart disease and cerebrovascular diseases
    - Reduce cancer
    - Reduce cost barriers to treatment
    - Improve case management and outreach
    - Provide education to promote healthy living and wellness
  8. Food security.  
Increase access to nutritious foods by poor and extremely poor individuals and households.

## Prioritization of Community Health Needs

A prioritization instrument was used to facilitate a priority ranking of the identified health needs. Key informants and stakeholders reviewed the instrument at a series of community forums during October 2015. Invitations were sent to county judges and county officials, mayors and city officials, law enforcement officials, hospital/clinic administrators and key personnel, mental health leaders, dentists, health departments, church leaders, service organization leaders, school administrators and key personnel, chambers of commerce, and significant employers. Two events were held in San Angelo, one in Brady, and one in Del Rio.

Access to preview copies of the previous sections of this report, including the above list of identified needs, were subsequently distributed via e-mail to key informants and stakeholders interested in McCulloch County. The informants and stakeholders also received an e-mail invitation and link to respond to the online instrument. Key informants and stakeholders responded from November 13 to December 14, 2015.

The prioritization instrument provided an opportunity for key informants and stakeholders to rank the health needs identified by the study for McCulloch County. Respondents ranked the needs based the specified criteria. A total of three responses ranking the identified needs for McCulloch County were returned.

Respondents ranked the identified community health needs on four criteria. A score between 1 and 5 was assigned for each criterion. The four criteria were presented to respondents as follows:

- Prevalence: How many people are potentially affected by the issue, considering how it might change in the next 5 to 10 years?
  - 5 - More than 25% of the community (more than 1 in 4 people)
  - 4 - Between 15% and 25% of the community
  - 3 - Between 10% and 15% of the community
  - 2 - Between 5% and 10% of the community
  - 1 - Less than 5% of the community (less than 1 in 20 people)
  
- Significance: What are the consequences of not addressing this need?
  - 5 - Extremely High
  - 4 - High
  - 3 - Moderate
  - 2 - Low
  - 1 – Minimal Consequences

- Impact: What is the impact of the need on vulnerable populations?
  - 5 - Extremely High
  - 4 - High
  - 3 - Moderate
  - 2 - Low
  - 1 - Minimal Impact
  
- Feasibility: How likely is it that individuals and organizations in the community would take action to address this need?
  - 5 - Extremely High
  - 4 - High
  - 3 - Moderate
  - 2 - Low
  - 1 - Minimal

Table 12 reports the results of the prioritization of needs in McCulloch County. The needs are listed in the rank order reflected in the adjusted averages on the right side of the table. The adjusted averages emphasize the importance of needs that respondents viewed as the most feasible ones for the community take action upon.

The adjusted average for each need is based on the separate average scores assigned by respondents for prevalence, significance, impact, and feasibility. To emphasize the practicality of community action, however, the average for feasibility is given double-weight according to the following formula:

$$\text{Adjusted Average} = [\text{prevalence score} + \text{significance score} + \text{impact score} + (\text{feasibility score} \times 2)] \div 4$$

Thus, the first row of Table 12 shows the average prevalence score was 4.67 on the five-point scale. The averages for significance, impact, and feasibility were 4.33, 4.33, and 3.33 respectively. Applying the formula yields an adjusted average of 5.00, making increased capacity to reach vulnerable groups with preventative actions to reduce diabetes the highest ranking community need for McCulloch County.

Six of the top priorities recognized the need for increased capacity to reach vulnerable groups. In addition to the top need for diabetes, these include preventative actions to: promote healthy living and wellness (2<sup>nd</sup>); reduce obesity (tied for 3<sup>rd</sup>); improve case management and outreach

(tied for 5<sup>th</sup>); and reduce cost and other barriers, as well as reduce heart and vascular diseases (tied for 7<sup>th</sup>).

<b>Community Health Need</b>	<b>Respondents</b>	<b>Prevalence</b>	<b>Significance</b>	<b>Impact</b>	<b>Feasibility</b>	<b>Adjusted Average</b>
Increase community capacity to reach vulnerable groups with preventative actions to reduce Diabetes	3	4.67	4.33	4.33	3.33	5.00
Increase community capacity to reach vulnerable groups with preventative actions to promote Healthy Living & Wellness	3	5.00	4.33	4.33	3.00	4.92
Increase emphasis on preventative actions (screening, treatment, case management, outreach & education) to reduce Diabetes	3	4.67	4.33	4.33	3.00	4.83
Increase community capacity to reach vulnerable groups with preventative actions to reduce Obesity	3	4.67	4.33	4.33	3.00	4.83
Increase the Food Security of vulnerable populations by increasing access to nutritious foods	3	4.67	4.33	4.33	2.67	4.67
Increase community capacity to reach vulnerable groups with preventative actions to improve Case Management & Outreach	3	4.33	4.00	4.33	3.00	4.67
Increase capacity and access to quality Behavioral Health resources	3	4.33	4.33	4.33	2.67	4.58
Increase community capacity to reach vulnerable groups with preventative actions to reduce Cost & Other Barriers to treatment	3	4.33	4.33	4.33	2.67	4.58
Increase capacity to address health needs of Seniors	3	4.33	4.00	4.00	3.00	4.58
Create a collaborative community campaign to increase utilization of Heart of Texas Memorial Hospital facilities	3	4.33	4.00	4.00	3.00	4.58
Create an engaged process for recruiting & retaining core health professionals for Primary Care, including Physicians, Advanced Nurse Practitioners & Registered Nurses	6*	4.33	4.00	4.00	3.00	4.58
Increase emphasis on preventative actions (screening, treatment, case management, outreach & education) to reduce Heart & Vascular Diseases	3	4.33	4.00	4.00	3.00	4.58
Increase community capacity to reach vulnerable groups with preventative actions to reduce Heart & Vascular Diseases	3	4.33	4.00	4.00	3.00	4.58
Increase community capacity to reach vulnerable groups with preventative actions to reduce Depression	3	4.33	4.00	4.33	2.67	4.50
Increase emphasis on preventative actions (screening, treatment, case management, outreach & education) to reduce COPD	3	4.33	3.67	3.67	3.00	4.42
Increase emphasis on preventative actions (screening, treatment, case management, outreach & education) to reduce Influenza & Create an engaged process for recruiting & retaining core health professionals including Psychiatrists & Psychologists	3	4.00	3.67	4.00	3.00	4.42
Increase capacity and access to quality Dental Care, especially by poor and extremely poor residents and households	3	4.33	4.33	4.33	2.33	4.42
Increase emphasis on preventative actions (screening, treatment, case management, outreach & education) to reduce Cancer	3	4.33	4.00	4.00	2.67	4.42
Create an engaged process for recruiting & retaining core health professionals including Dentists	3	3.67	4.00	3.67	3.00	4.33
Increase community capacity to reach vulnerable groups with preventative actions to reduce Cancer	3	4.33	4.00	4.00	2.33	4.25
Increase emphasis on preventative actions (screening, treatment, case management, outreach & education) to reduce Alzheimer's Disease	3	4.00	3.67	3.67	2.67	4.17
Increase emphasis on preventative actions (screening, treatment, case management, outreach & education) to reduce Kidney Disease	3	4.00	3.67	3.67	2.67	4.17
Increase emphasis on preventative actions (screening, treatment, case management, outreach & education) to reduce Liver Disease	3	4.00	3.67	3.67	2.67	4.17
Increase community capacity to reach vulnerable groups with preventative actions to reduce Smoking & Tobacco Use	3	4.00	4.00	3.67	2.33	4.08
Increase emphasis on preventative actions (screening, treatment, case management, outreach & education) to reduce mortality from Accidents	3	3.67	3.33	3.33	2.67	3.92

\*This row combines three responses to two separate items in the prioritization instrument. Thus, the averages on this row represent six responses given by only three individual key informants and stakeholders.

Respondents included two additional needs for preventative actions in the community in the top priorities. Efforts to reduce diabetes (tied for 3<sup>rd</sup>) and heart and vascular diseases (tied for 7<sup>th</sup>) through preventative actions utilize screening, treatment, case management, and outreach and education. The remaining top needs include:

- Increasing access to nutritious foods
- Increasing capacity and access to quality behavioral health resources
- Increasing capacity to address health needs of seniors
- Increasing hospital utilization of Heart of Texas Memorial Hospital facilities, and
- Recruitment and retention of primary care professionals, including physicians, advanced nurse practitioners, and registered nurses.