Community Health Needs Assessment:

Health and Behavioral Health Needs
Mason 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.

Mason County Courthouse - Mason, 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 Mason County.

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PREFACE

Community Development Initiatives at Angelo State University prepared this Community Health Needs Assessment for the people of Mason 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.

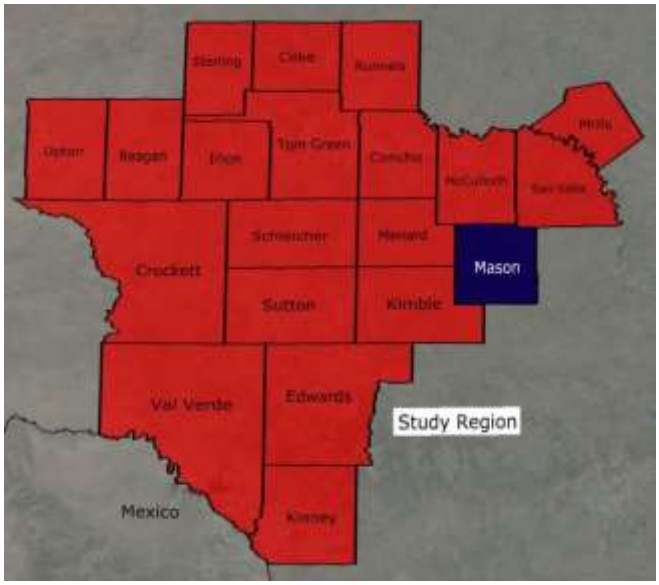
The purpose of the comprehensive study is to identify and prioritize health and behavioral health needs of the approximately 14,743 extremely poor individuals living in a twenty-county region covered by the project. The Mason County Community Health Needs Assessment is a vital part of the regional project.

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 Mason 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 Mason 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 eastern part of the study region.
4. Identification and prioritization of health and behavioral health issues in Mason 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 MASON COUNTY COMMUNITY

Mason County is a 932 square mile land area in the Hill Country of West Central Texas. The county and the county seat, located at the crossroads of U.S. Highway 87 and Texas State Highway 29, gained their name from Fort Mason, established in 1851. Fort Mason offered protection to residents from the Indians living in the area. The city of Mason is the only incorporated community in Mason County.

Historically, Mason County was a ranching community. Agriculture is still important part of the economy. Tourism contributes to the county's economy, especially hunting and outdoor recreation.

Table 1 reports private industry and employment for Mason County in 2013. About 70 private industry establishments employed nearly 443 county residents at an average pay rate of $26,169. Private industry employees comprised approximately 23 percent of the county's 1,959 person labor force in 2013.[1]

Table 1
Mason County Private Industry & Employment, 2013

North American Industry Classification System (NAICS) Sectors	Annual Average Establishment Count	Annual Average Employment	Percent Total Employment	Average Annual Pay
All private industries	70	443	100	$26,169
NAICS 23 Construction	12	19	4	$27,416
NAICS 31-33 Manufacturing	6	35	8	$41,661
NAICS 42 Wholesale trade	11	68	15	$40,330
NAICS 44-45 Retail trade	22	100	23	$15,843
NAICS 52 Finance and insurance	8	61	14	$47,303
NAICS 53 Real estate and rental and leasing	4	6	1	$19,317
NAICS 62 Health care and social assistance	7	154	35	$14,844

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

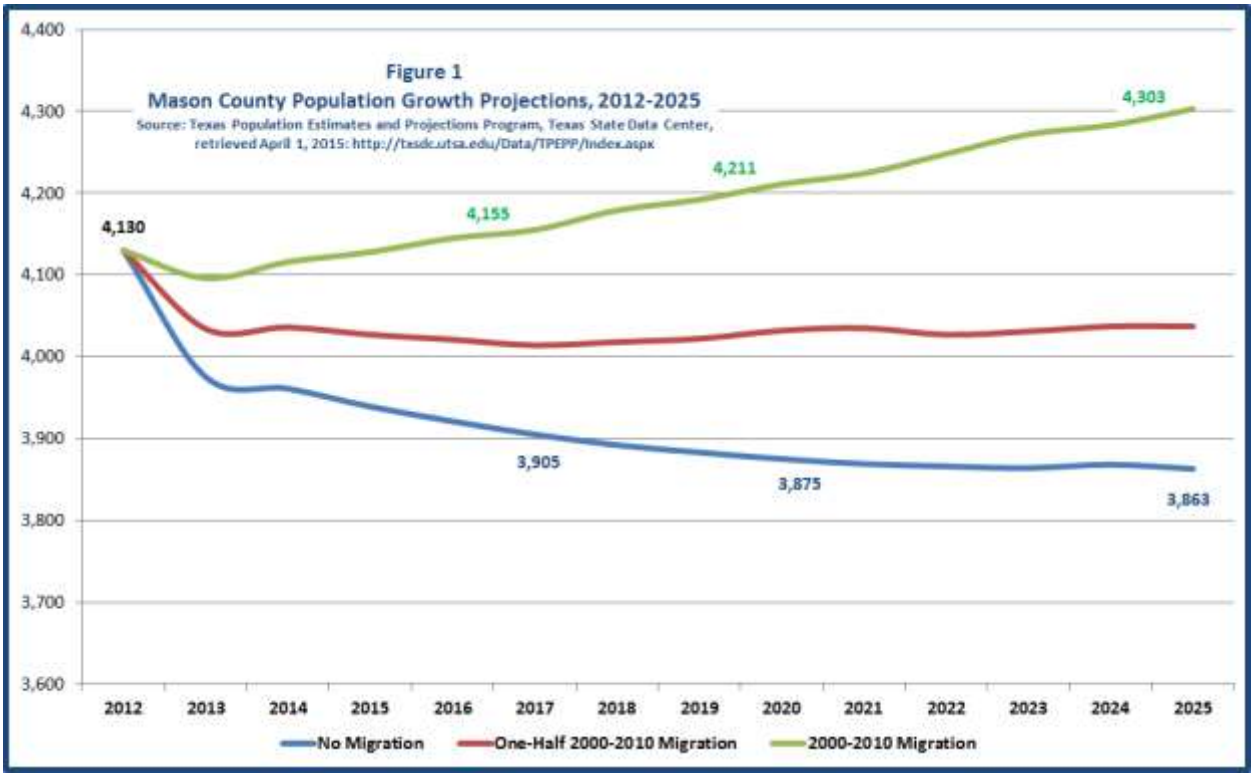
Table 1 illustrates the importance of health care sector in Mason County. No single sector dominated the employment picture in Mason County, but health care and social assistance (NAICS code 62) provided the largest source of private employment at 35 percent.[2] However, workers in the sector earned the lowest average pay of all private industry sectors.

[1] The estimate of 1,959 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.

[2] The largest location quotient for employment in Mason County was 1.42 for NAICS sector 42, indicating that employment in wholesale trade was about 1 and a half times more concentrated than the nationwide level.

DEMOGRAPHICS

The Census Bureau's 2013 estimate of the Mason County resident population is 4,128.[3] The most recent official Texas estimate from the State Demographer is 4,130 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 Mason 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 4,155 residents in 2017, 4,211 by 2020, and 4,303 for 2025 (an overall 4.2% gain from 2012-2015).

Vulnerable Populations

Table 2 below shows the majority (77%) of the residents in Mason County identify as White, Non-Hispanic. The county's 906 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 52 residents, bringing the total minority population to 23 percent.

[3] From US Census Bureau, Population Division, Annual Estimates of the Resident Population: April 1, 2010 to July 1, 2013, retrieved October 30, 2015: http://factfinder.census.gov.

Table 2 Race & Ethnicity: 2012 Estimate with Projections to 2025								
Groups	2012		2017		2020		2025	
White, Non-Hispanic	3,172	77%	3,111	75%	3,110	74%	3,124	73%
Total Minority	958	23%	1,044	25%	1,101	26%	1,179	27%
Hispanic	906	22%	989	24%	1,047	25%	1,128	26%
Black	12	0%	14	0%	14	0%	13	0%
Other	40	1%	41	1%	40	1%	38	1%
Total Population	4,130	100%	4,155	100%	4,211	100%	4,303	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 22 to 26 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 27 percent of the county's population in 2012 according to State estimates. Youngsters of school attendance age (5-17 years) comprised 77 percent of the children, while preschoolers accounted for 23 percent.

Table 3 Children: 2012 Estimate with Projections to 2025								
Groups	2012		2017		2020		2025	
All Children (under age 18)	848	100%	763	100%	749	100%	784	100%
School-age children (ages 5-17)	655	77%	572	75%	536	72%	538	69%
Pre-school-age children (under 5)	193	23%	191	25%	213	28%	246	31%

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 decrease in the child population by 2025. Despite the decline in the overall children population, pre-school toddlers are projected to steadily grow from 23 percent of children in 2012 to 31 percent in 2025.

The county was home to 1,101 senior citizens in 2012 according to State estimates. They comprised 27 percent of the total population. Hispanics (numbering 103) made up only 9 percent of the senior residents in the county.

Table 4 Seniors: 2012 Estimate with Projections to 2025								
Groups	2012		2017		2020		2025	
Total Population	4,130	100%	4,155	100%	4,211	100%	4,303	100%
Seniors (65 & over)	1,101	27%	1,236	30%	1,310	31%	1,443	34%
Hispanic Seniors (65 & over)	103	9%	131	11%	153	12%	203	14%

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 34 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 9 to 14 percent.

There are 1.03 females in Mason 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.

Table 5 Females: 2012 Estimate with Projections to 2025								
Groups	2012		2017		2020		2025	
Total Population	4,130	100%	4,155	100%	4,211	100%	4,303	100%
Female (all ages)	2,097	51%	2,100	51%	2,127	51%	2,169	50%
Female (ages 13-17)	147	7%	121	6%	102	5%	95	4%
Hispanic Female (ages 13-17)	44	30%	32	26%	29	28%	30	32%

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 almost half by 2025. Estimates suggest the representation of Hispanic females in this age group to initially decline, but to grow from 30 percent to 32 percent by 2025.

COMMUNITY HEALTH RESOURCES

There is no hospital or hospital district serving Mason County. Residents receive primary healthcare from the Federally Qualified Health Center (FQHC) located in the City of Mason.

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 FQHC medical clinics and behavioral health services in Eden, Menard, Mason, Junction, Brady, and Fredericksburg, Texas.

A physician and a physician assistant are affiliated with the clinic. The Mason 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.[4]

Utilization of Health Resources

There are also two home health services with offices based in Mason. These agencies offer nursing care, physical therapy, occupational therapy, speech pathology, medical social services, and home health aide services. The average 5-point star quality rating for the two service agencies is 2.75 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.[5] Both the local and state quality ratings are near the national average range (3.0-3.5 on the 5-point scale) of quality performance.

In addition, Texas hospital usage data documents a total of 2,470 visits by Mason County residents to outpatient facilities during 2013.[6] This computes to 1 visit for every 1.7 residents of the county. Residents checked into outpatient facilities located in a number of different Texas cities. According to the Texas Department of State Health Services, nearly 42 percent of the residents checked into facilities in Fredericksburg, Texas.

[4] See information on Frontera Healthcare Network at http://fronterahn.org/home.html.
[5] Home Health Compare Data, Centers for Medicare and Medicaid Services, retrieved August 13, 2015: https://data.medicare.gov/.
[6] Texas Department of State Health Services, Outpatient Public Use Data Files, 2013.

Mason County residents also checked into hospitals for 358 inpatient visits during 2013. This equals one hospitalization for every 11.5 county residents. According to the Texas Department of State Health Services, the most frequent inpatient destination (42% of visits) is Hill Country Memorial Hospital in Fredericksburg, Texas. Hill Country Memorial was also the destination for 64 percent of 2,469 outpatient visits by Mason County residents in 2013 according to State Health Services records.[7]

Mason County EMS provides emergency medical services (EMS) to Mason County. The Texas EMS & Trauma Registries report that Texas hospitals received 177 trauma patients from Mason County over five years from 2010-2014. This computes to an average of 35 EMS trauma incidents per year. The most common trauma incidents were unintentional fall incidents at 50 percent.[8]

Other Health Care Resources

Department of State Health Services for 2014 counts 20 EMS professionals in Mason County. This yields a population ratio of 202 residents per EMS specialist; a favorable population ratio compared to 295 residents per specialist in the 20-county study area and 438 for Texas overall.

Mason is one of 19 counties served by Hill Country Mental Health and Developmental Disabilities (MHDD) Centers based in Kerrville. Hill Country MHDD maintains two satellite offices in Llano that serve Mason County, one providing access to mental health services and another for intellectual and developmental disability (IDD) service access.[9]

Table 6 depicts the supply of key health professionals in Mason County according to the 2014 Department of State Health Services data. Based on population ratios, it appears the county is relatively well supplied with personnel such as licensed vocational nurses and EMS personnel. However, it is undersupplied with other core health professionals such as registered nurses and physicians.

[7] Texas Department of State Health Services, Inpatient & Outpatient Public Use Data Files, 2013.
[8] 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 provided in Mills County.
[9] See Hill Country MHDD Centers at http://hillcountry.org/default.asp.

Table 6 Selected Health Professionals by Geography, 2014						
Licensed or Certified Professionals	Number in Mason County (4,036 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	17	237	1,879	127	124,616	213
Dentists	1	4,036	70	3,422	12,767	2,082
Dieticians	0	No Supply	33	7,258	4,668	5,694
Emergency Medical Services	20	202	812	295	60,690	438
Licensed Chemical Dependency Counselors	1	4,036	87	2,753	9,285	2,863
Licensed Professional Counselors	1	4,036	158	1,516	20,655	1,287
Licensed Vocational Nurses	21	192	1,197	200	77,624	342
Marriage and Family Therapists	0	No Supply	12	19,961	3,149	8,441
Medication Aides	0	No Supply	139	1,723	10,012	2,655
Occupational Therapists	0	No Supply	45	5,323	7,914	3,359
Optometrists	0	No Supply	18	13,307	3,272	8,124
Pharmacists	2	2,018	146	1,641	23,561	1,128
Physical Therapists	1	4,036	109	2,198	13,136	2,024
Physician Assistants	1	4,036	51	4,697	6,543	4,063
Physicians (Direct Patient Care)	0	No Supply	357	671	47,289	562
Primary Care Physicians	0	No Supply	168	1,426	19,277	1,379
Psychiatrists	0	No Supply	12	19,961	1,971	13,486
Promotores (Community Health Workers)	0	No Supply	15	15,969	2,032	13,081
Psychologists (All)	1	4,036	43	5,570	7,382	3,601
Registered Nurses	20	202	1,696	141	206,027	129
Advanced Practice (APRN)	0	No Supply	119	2,013	15,194	1,749
Social Workers	0	No Supply	117	2,047	19,536	1,361
Total Selected Health Professionals	86	47	7,283	33	696,600	38

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.

HEALTH STATUS

Family and Maternal Health

The Census Bureau's 2009-2013 5-Year American Community Survey estimated an average of 1,220 families residing in Mason County during that time. Overall the basic indicators of family and maternal health in the County are positive.

Our calculations indicated that about 123 (10.1%) of families were single-parent (mostly female-parent) families with one or more children at home. This is a lower number than the 20-county study region or the state overall. However, the estimated percent of women (14.7%) in the county who are currently divorced is slightly higher than the state and study region.

The ratio of divorces compared to marriages may be a point of some concern for the health of families in the future. Over the 2008-2012 time frame, the 88 divorces granted in the county totaled 59 percent of the number of marriages licenses issued. This was a higher proportion than the 20-county study region (43.2%) or the state (45%).

Table 7
Mason County Family and Maternal Health Indicators*

Indicator	Mason County	Study Region	Region 9	Texas
Divorce Rate (Annual Divorces as a Percent of Annual Marriages)	59.1	43.2	No Data	45.0
Percent Women Age 15 & Over who are Currently Divorced	14.7	12.4	No Data	12.2
Single-Parent Families (Percent of All Families)	10.1	13.1	No Data	15.6
Teen Pregnancy Rate (Pregnancies per 1,000 Females Age 13-17)	10.2	25.3	30.5	21.4
Teen Birth Rate (Births to Mothers Age 13-17 per 1,000 Same Age Females)	10.2	23.1	28.1	18.4
Abortion Rate (Abortions as a Percent of Pregnancies among Females Age 15-44)	7.9	9.8	9.0	15.6
Percent Births to Unmarried Mothers (Female Population Age 15-44)	34.3	44.6	45.9	42.3
Child Abuse Rate* (Confirmed Incidents of Abuse per 1,000 Children)	13.4	12.9	13.8	9.5
Intimate Violence Rate (Incidents of Family Violence & Sexual Assault per 1,000 Population)	1.6	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 in the rate of child abuse. Mason County is consistent with that trend.

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.

Table 8
Potentially Preventable Hospitalizations for Adult Residents of Texas, 2008-2013

Potentially Preventable Hospitalizations	Mason County			Study Region			Texas		
	Number	Average Charge	Per Capita Charge	Number	Average Charge	Per Capita Charge	Number	Average Charge	Per Capita Charge
Bacterial Pneumonia	65	$17,260	$341	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	41	$24,615	$307	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	38	$18,589	$215	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	0	$0	$0	1,285	$9,768	$86	134,630	$46,872	$323
All Hospitalizations	144	$19,705	$862	15,141	$21,483	$1,371	1,433,955	$34,178	$2,512
Total Charges, 2008-2013		$2,837,522			$386,127,532			$49,010,136,451	

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

Mason County residents were fortunate to not have a high number of hospitalizations for potentially preventable conditions between 2008 and 2013. However, residents did experience 144 potentially preventable hospitalizations with pneumonia, congestive heart failure, and COPD. Hospital charges for these events total nearly $2.8 million, an amount equivalent to $862 per adult resident of the county.

Leading Causes of Death

The Department of State Health Services recorded 219 deaths from all causes among Mason County residents between 2008 and 2012. This computes to a five-year crude death rate of 26.2 deaths per 1,000 residents based on the 2012 population estimate. This is lower than the Texas rate of 32 per 1,000 over the same time frame. It is also lower than the rate of 45.6 per 1,000 for the 20-county study region.

Malignant neoplasms (cancer) top the list of the leading causes of death in Mason County. The County generally has lower death rates than the study region on the leading causes. However, Mason County has higher death rates than the study region or the overall state from influenza and pneumonia.

Table 9
Leading Causes of Death in Mason County, 2008-2012

Causes of Death	Deaths	Crude Death Rate*	Study Region Rate*	Texas Rate*
Malignant Neoplasms (ICD-10 Codes C00-C97)	63	7.5	9.6	7.0
Diseases of the Heart (ICD-10 Codes I00-I09, I11, I13, I20-I51)	38	4.5	9.5	7.4
Chronic Lower Respiratory Diseases (ICD-10 Codes J40-J47)	14	1.7	2.7	1.7
Accidents (ICD-10 Codes V01-X59, Y85-Y86)	11	1.3	2.0	1.8
Influenza and Pneumonia (ICD-10 Codes J09-J18)	9	1.1	1.0	0.6
Cerebrovascular Diseases (ICD-10 Codes I60-I69)	7	0.8	2.3	1.8
Diabetes Mellitus (ICD-10 Codes E10-E14)	6	0.7	1.5	1.0

*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: http://www.dshs.state.tx.us/chs/datalist.shtm.

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.[10]

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.[11] 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.[12] 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.[13] Indeed, the three-page questionnaire yielded 31 indicators which closely parallel similar items in the 2013 BRFSS results for Texas.

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[10] 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/.

[11] 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.

[12] 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

[13] 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.

Table 10 Sample Characteristics*		
County of Residence		
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%
Poverty Status		
Severly poor	23	33.3%
Poor	45	65.2%
Gender		
Male	17	24.6%
Female	52	75.4%
Ethnicity		
Not Hispanic	41	59.4%
Hispanic	28	40.6%
Age		
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
Years of Schooling		
Less than 12	29	42.0%
12 or More	39	56.5%
Average Years of Schooling		11.0
Household Composition		
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

*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.
**Couples may be married couples or unmarried partners.
***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.

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[14] 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.[15]

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.

[14] 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.
[15] US Census Bureau, Small Area Health Insurance Estimates, retrieved September 29, 2015: http://www.census.gov/did/www/sahie/.

Table 11
Health Risks of the Poor and Extremely Poor in North Counties with BRFSS Comparisons

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 Mason 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 Mason County:

- Demographic Trend Data: Demographic projections of population growth in Mason County were reviewed. Growth trends for vulnerable population groups were included in the review.
- Health Care Resources: Data and information on 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 Mason 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 Mason County:

1. Needs of seniors.
   Increase capacity to address health needs of growing numbers of seniors in the population.
2. 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 or Physician Assistants
   - Registered Nurses or Advanced Nurse Practitioners

3. Access to dental care.
   Increase capacity and access to quality dental care, especially by poor and extremely poor residents and households.
4. Behavioral health capacity and access.
   Increase capacity and access to quality behavioral health resources.
5. 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 disease
   - Cancer
   - COPD
   - Influenza and pneumonia
6. 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 kidney disease
   - 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
7. 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 Mason 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 Mason County. Respondents ranked the needs based the specified criteria. A total of five responses ranking the identified needs for Mason 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 Mason 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:

Adjusted Average = [prevalence score + significance score + impact score + (feasibility score x 2)] ÷ 4

Thus, the first row of Table 12 shows the average prevalence score was 4.64 on the five-point scale. The averages for significance, impact, and feasibility were 4.36, 4.64, and 4.09 respectively. Applying the formula yields an adjusted average of 5.45, making an increased capacity to address health needs of the growing numbers of seniors in the population the highest ranking community need for Mason County.

Seven of the top 10 priorities recognized the special needs of vulnerable populations. In addition to the top need for seniors, these include: increasing food security (2nd); increasing capacity to promote healthy living and wellness, as well as to reduce cost and other barriers (tied for 3rd); increasing capacity to improve case management and outreach, as well as preventative actions to reduce diabetes for vulnerable groups (tied for 5th); and increasing capacity to reach vulnerable groups with preventative actions to reduce obesity (8th).

Respondents prioritized two additional needs for preventative actions in the community in the top 10. Efforts to reduce cancer (5th) and heart and vascular diseases (9th) through preventative actions utilize screening, treatment, case management, and outreach and education. The remaining top 10 need is the recruitment and retention of primary care professionals, including physicians, physician assistants, registered nurses, and advanced nurse practitioners.

Table 12
Prioritization of Mason County Community Health Needs

Community Health Need	Respondents	Prevalence	Significance	Impact	Feasibility	Adjusted Average
Increase capacity to address health needs of Seniors	5	4.64	4.36	4.64	4.09	5.45
Increase the Food Security of vulnerable populations by increasing access to nutritious foods	5	4.55	4.55	4.64	4.00	5.43
Increase community capacity to reach vulnerable groups with preventative actions to promote Healthy Living & Wellness	5	4.45	4.36	3.55	4.55	5.36
Increase community capacity to reach vulnerable groups with preventative actions to reduce Cost & Other Barriers to treatment	5	4.64	4.55	4.27	3.73	5.23
Increase community capacity to reach vulnerable groups with preventative actions to improve Case Management & Outreach	5	4.45	4.50	4.45	3.73	5.22
Increase community capacity to reach vulnerable groups with preventative actions to reduce Diabetes	5	4.55	4.36	4.27	3.82	5.20
Increase emphasis on preventative actions (screening, treatment, case management, outreach & education) to reduce Cancer	5	4.45	4.36	4.36	3.82	5.20
Increase community capacity to reach vulnerable groups with preventative actions to reduce Obesity	5	4.45	4.40	4.50	3.73	5.20
Increase emphasis on preventative actions (screening, treatment, case management, outreach & education) to reduce Heart & Vascular Diseases	5	4.36	4.30	4.45	3.82	5.19
Create an engaged process for recruiting & retaining core health professionals for Primary Care, including Physicians, Physician Assistants, Registered Nurses & Advanced Nurse Practitioners	10*	4.45	4.45	4.27	3.73	5.16
Increase capacity and access to quality Behavioral Health resources	5	4.36	4.36	4.18	3.82	5.14
Increase capacity and access to quality Dental Care, especially by poor and extremely poor residents and households	5	4.45	4.30	4.27	3.73	5.12
Increase emphasis on preventative actions (screening, treatment, case management, outreach & education) to reduce Influenza & Pneumonia	5	4.64	4.36	4.36	3.55	5.11
Increase community capacity to reach vulnerable groups with preventative actions to reduce Cancer	5	4.45	4.18	4.09	3.73	5.05
Increase community capacity to reach vulnerable groups with preventative actions to reduce Heart & Vascular Diseases	5	4.27	4.18	4.09	3.70	4.99
Increase community capacity to reach vulnerable groups with preventative actions to reduce Smoking & Tobacco Use	5	4.36	4.18	4.18	3.55	4.95
Increase community capacity to reach vulnerable groups with preventative actions to reduce Depression	5	4.36	4.18	4.09	3.55	4.93
Increase emphasis on preventative actions (screening, treatment, case management, outreach & education) to reduce COPD	5	4.09	4.18	4.00	3.45	4.80
Increase community capacity to reach vulnerable groups with preventative actions to reduce Kidney Disease	5	4.05	3.95	3.77	3.52	4.71

*This row combines 10 responses to two separate items in the prioritization instrument. Thus, the averages on this row represent 10 responses given by only five individual key informants and stakeholders.