

Community Health Needs Assessment:

Health and Behavioral Health Needs Crockett County, Texas

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December 31, 2015

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.



Crockett County Courthouse - Ozona, 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 Crockett County.

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PREFACE

Community Development Initiatives at Angelo State University prepared this Community Health Needs Assessment for the people of Crockett 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 Crockett County Community Health Needs Assessment is a vital part of the regional project.

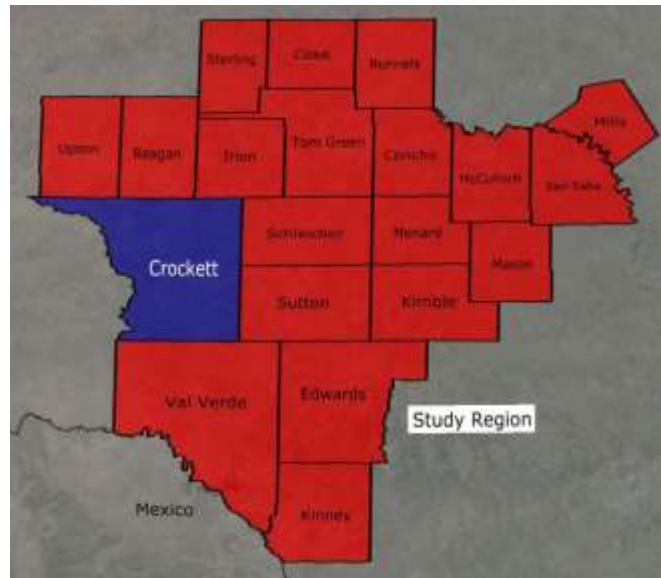
The research to assess the Health and Behavioral Health Needs of the Extremely Poor in West Texas was guided by a six-member advisory group including:

- 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 Crockett 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 Crockett 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 western part of the study region.
4. Identification and prioritization of health and behavioral health issues in Crockett County based on the prevalence of risk factors, the consequences, the impact on health inequities, and the feasibility of acting toward solutions.

GENERAL DESCRIPTION OF THE CROCKETT COUNTY COMMUNITY

Crockett County is a 2,806 square mile land area on the western edge of the Edwards Plateau in the region of West Texas. The county was formed in 1875 and named in honor of David Crockett. Ozona, Texas became the county seat nearly 16 years after the county was formed.

Historically, the county's economy depended on sheep and cattle ranching. Oil was discovered in Crockett County in 1925, supporting the ranching community. Hunting leases and tourism also support the economy.



Table 1 reports private industry and employment for Crockett County in 2013. About 90 private industry establishments employed nearly 1,175 county residents at an average pay rate of \$38,516. Private industry employees comprised approximately 60 percent of the county's 1,959 person labor force in 2013.¹

Table 1				
Crockett 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	150	1,175	100	\$38,517
NAICS 11 Agriculture, forestry, fishing and hunting	28	86	7	\$19,128
NAICS 21 Mining, quarrying, and oil and gas extraction	23	300	26	\$78,810
NAICS 22 Utilities	3	11	1	\$48,986
NAICS 42 Wholesale trade	10	32	3	\$63,712
NAICS 44-45 Retail trade	16	215	18	\$19,110
NAICS 48-49 Transportation and warehousing	5	78	7	\$45,902
NAICS 52 Finance and insurance	6	41	3	\$33,856
NAICS 53 Real estate and rental and leasing	3	15	1	\$74,832
NAICS 54 Professional and technical services	5	21	2	\$29,870
NAICS 62 Health care and social assistance	5	34	3	\$16,738
NAICS 71 Arts, entertainment, and recreation	3	10	1	\$14,009
NAICS 72 Accommodation and food services	18	226	19	\$14,350
NAICS 81 Other services, except public administration	25	106	9	\$24,646

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

While no one sector dominated employment in Crockett County, the impact of activities in the oil and gas industries is readily evident from the industry and employment picture in Table 1. In 2013, NAICS code 21 establishments employed about 26 percent of the county's private

¹ The estimate of 1,959 labor force participants is from the US Census Bureau's 2009-2013 5-Year American Community Survey, retrieved November 9, 2015: <http://factfinder.census.gov>.

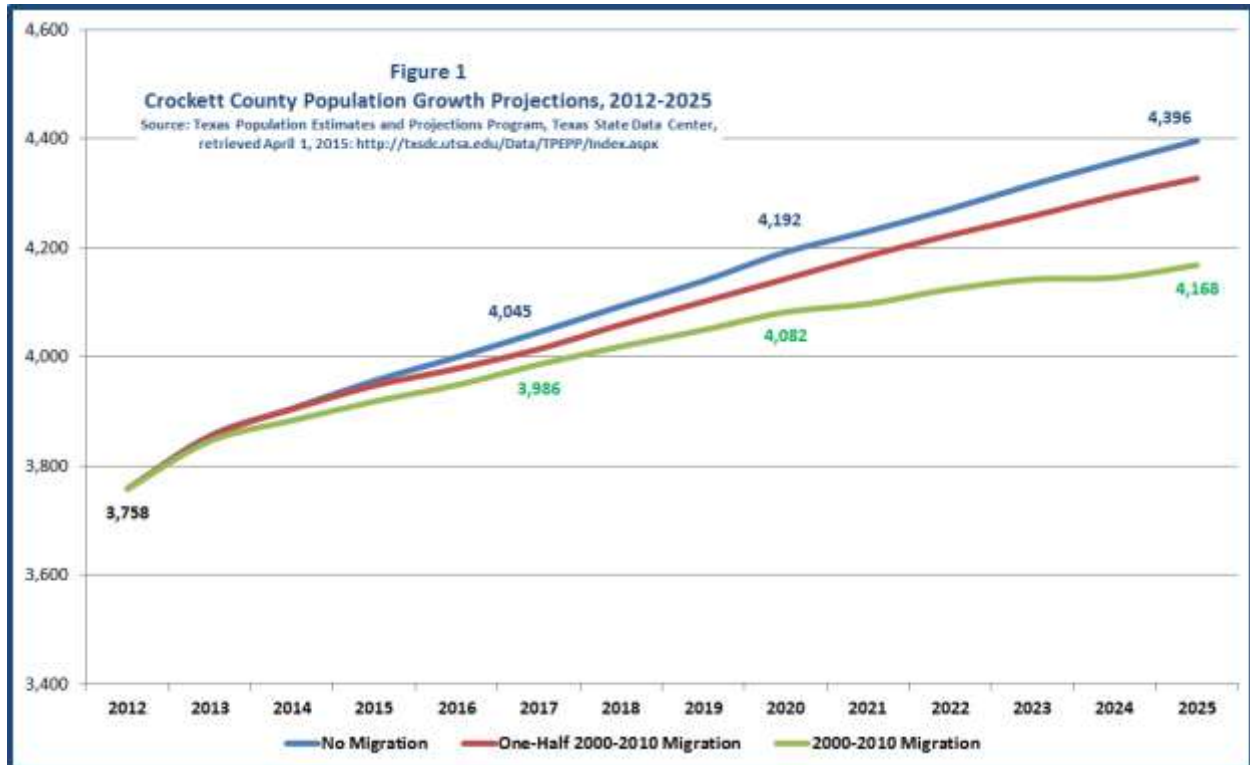
industry employees.² The average annual wage rate of employees in these sectors was \$78,810, more than twice as much as the average annual wage rate for all private industries in Crockett County.

In contrast, the accommodation and food service sector (NAICS code 72) employed 19 percent of workers. However, and the average annual rate of pay in that sector was nearly one-sixth of the wage of workers in the oil and gas and transportation industries. Health care and social assistance workers (NAICS code 62) are only a small part of private industry employees in Crockett County.

² Crockett County's 2013 location quotient for NAICS 21 employment was 29.6. This means that employment in the mining, quarrying, and oil and gas extraction sector was about 30 times more concentrated in Crockett County compared to average concentration of workers in the sector across the nation.

DEMOGRAPHICS

The Census Bureau’s 2013 estimate of the Crockett County resident population is 3,807.³ The most recent official Texas estimate from the State Demographer is 3,758 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 Crockett County through 2025.



The highest growth projection (blue line) is based on the assumption that migration in and out will lead to no net gain or loss of the population. This projection approximates the county will reach 4,192 by 2020, and 4,396 for 2025.

Vulnerable Populations

Crockett County has a “majority-minority” population as described in Table 2 below. The county’s 2,387 Hispanic residents comprised the majority (64%) of the population in 2012 according to estimates of the State Demographer. Black citizens and other minorities added another 51 residents, bringing the total minority population to 64 percent.

³ 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>.

Table 2								
Race & Ethnicity: 2012 Estimate with Projections to 2025								
Groups	2012		2017		2020		2025	
White, Non-Hispanic	1,316	35%	1,377	34%	1,402	33%	1,400	32%
Total Minority	2,442	65%	2,668	66%	2,790	67%	2,996	68%
Hispanic	2,387	64%	2,613	65%	2,735	65%	2,941	67%
Black	14	0%	13	0%	13	0%	13	0%
Other	41	1%	42	1%	42	1%	42	1%
Total Population	3,758	100%	4,045	100%	4,192	100%	4,396	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 64 to 67 percent between 2012 and 2025. All other race and ethnic groups are projected to decrease proportionately.

Children under age 18 (numbering 973) made up 26 percent of the county's population in 2012 according to State estimates. Youngsters of school attendance age (5-17 years) comprised 72 percent of the children, while preschoolers accounted for 28 percent.

Table 3								
Children: 2012 Estimate with Projections to 2025								
Groups	2012		2017		2020		2025	
All Children (under age 18)	973	100%	1,035	100%	1,086	100%	1,112	100%
School-age children (ages 5-17)	696	72%	726	70%	767	71%	787	71%
Pre-school-age children (under 5)	277	28%	309	30%	319	29%	325	29%

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.

The child population is expected to increase in number slightly, but the child population will decrease within the total population by one percent by 2025. Pre-school toddlers are projected to increase from 28 percent of children in 2012 to 29 percent in 2025.

According to 2012 State estimates, 588 senior citizens resided in the county. They comprised 16 percent of the total population. Hispanics (numbering 311) made up 53 percent of the senior residents in the county.

Official State projections suggest brisk growth of the senior population to 25 percent by 2025. The number of elder residents is expected to nearly double (from 588 to 1,098) between 2012 and 2025.

Hispanics, once again, will account for much of the increase. The number of Hispanic seniors is expected to nearly double between 2012 and 2025; however, their representation within the elder population will decrease from 53 to 52 percent.

Table 4								
Seniors: 2012 Estimate with Projections to 2025								
Groups	2012		2017		2020		2025	
Total Population	3,758	100%	4,045	100%	4,192	100%	4,396	100%
Seniors (65 & over)	588	16%	770	19%	905	22%	1,098	25%
Hispanic Seniors (65 & over)	311	53%	400	52%	477	53%	569	52%

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.

There are 1.03 females in Crockett 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 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	3,758	100%	4,045	100%	4,192	100%	4,396	100%
Female (all ages)	1,907	51%	2,036	50%	2,107	50%	2,211	50%
Female (ages 13-17)	138	7%	117	6%	150	7%	138	6%
Hispanic Female (ages 13-17)	114	83%	104	89%	127	85%	94	68%

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. Hispanic females make up the majority (83%) of this age group, but their representation will decrease to 68 percent by 2025.

COMMUNITY HEALTH RESOURCES

There is no hospital district located in Crockett County. County residents can receive ambulatory care and preventive care from a rural health clinic located in Ozona. The clinic is operated by Shannon Medical Center based in Tom Green County.

Health Resources and Utilization

The Family Health Center of Ozona is an outpatient Rural Health Clinic. There is no direct quality of care data for the Family Health Center of Ozona; however, the hospital that operates the clinic is one of the hospitals the Centers for Medicare & Medicaid Services (CMS) evaluates through the Hospital Quality Initiative.

The Initiative uses a variety of tools to encourage and support improvements in the quality of care delivered by hospitals by distributing objective, easy to understand data from consumer perspectives. The data are risk-adjusted to reflect characteristics of hospitals and patients. Thus, hospitals are compared to like-hospitals of similar size and patient mix. The Hospital Compare website includes data on more than 4,000 Medicare-certified hospitals across the country.⁴

Shannon Medical Center received an average rating from discharged patients in the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey. Conducted in partnership with CMS between October 2013 and September 2014, the survey collected responses on patient experiences of the hospital environment as well as communication and responsiveness of doctors, nurses, and staff members. The Healthcare System's 3-star rating indicates that the level of positive patient responses to the hospital is average compared to similar hospitals.⁵

The Hospital Quality measures of effective care report the percentage of hospital patients receiving the recommended treatments for certain medical conditions or surgical procedures. These include conditions like heart attack, heart failure, pneumonia, children's asthma, stroke, influenza, and blood clots, as well as best practices to prevent surgical complications. Additional measures focus on timely treatment of patients who come to a hospital with medical emergencies.

⁴ Hospital Compare is available online at <https://www.medicare.gov/hospitalcompare>.

⁵ HCAHPS items cover topics such as doctor and nurse communication, hospital cleanliness and noise levels, medication and post-discharge care instructions, and overall patient ratings. Data retrieved November 9, 2015: <https://data.medicare.gov/>.

Generally, Shannon Medical Center achieved a high level of adherence to the effective care recommendations compared to similar hospitals in Texas and the nation during the period of October 2013 and September 2014. Also, the average wait times for the emergency department and for receiving recommended care were similar to the state or the nation averages.

The Crockett County Care center is a county owned nursing home that provides skilled nursing care. Publicly available 2015 data provided by CMS indicate that the Crockett County facility has a bed capacity of 54 with approximately 40 inpatients in residence. This computes to a countywide occupancy rate of 74 percent, which compares favorably to a statewide rate of 71 percent for 1,220 Texas nursing homes represented in the CMS 2015 data.⁶

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.

The Crockett County nursing home achieved average or above average rating based on the 2015 CMS data for staffing, for health inspections, and the overall facility ratings. However, on quality of care ratings the Crockett County facility achieved a below average rating.⁷

According to Texas hospital discharge data from the Department of State Health Services, Crockett County residents visited outpatient facilities a total of 1,443 times during 2013. This computes to 1 visit for every 2.6 residents of the county. Outpatient facilities located in Tom Green County (San Angelo) received the vast majority of outpatient visits (87.5%) from Crockett County residents.

Crockett County residents also checked into hospitals for 436 inpatient visits during 2013. This equals 1 hospitalization for every 8.6 county residents. Similar to outpatient visits, residents checked into facilities located in San Angelo the majority of the time (82%) during 2013.⁸

Other Health Care Resources

West Texas Rehabilitation Center is another regional health resource in Crockett County. This private, non-profit corporation was founded in 1953 as a treatment center for children with cerebral palsy. The Center has locations in Abilene, Ozona, and San Angelo providing outpatient

⁶ Nursing Home Compare Data, Centers for Medicare and Medicaid Services, retrieved August 16, 2015: <https://data.medicare.gov/>.

⁷ See Nursing Home Compare, <https://www.medicare.gov/nursinghomecompare/search.html>.

⁸ Texas Department of State Health Services, Inpatient and Outpatient Public Use Data Files, 2013.

rehabilitation services to children and adults who are challenged by disabilities and disorders. The San Angelo Center location provides hearing, family support, occupational therapy, orthotic, pediatric, physical therapy, prosthetic, speech and language pathology services.

The Texas EMS & Trauma Registries report that Texas hospitals received 97 trauma patients from Crockett County over five years from 2010-2014. This computes to an average of 19 EMS trauma incidents per year. The most common trauma incidents were unintentional fall incidents at 54 percent.⁹

Crockett County EMS provides Emergency Medical Services (EMS) to for Crockett County. However, 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 Crockett County.

Licensed or Certified Professionals	Number in Crockett County (3,904 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	59	66	1,879	127	124,616	213
Dentists	1	3,904	70	3,422	12,767	2,082
Dieticians	0	No Supply	33	7,258	4,668	5,694
Emergency Medical Services	20	195	812	295	60,690	438
Licensed Chemical Dependency Counselors	0	No Supply	87	2,753	9,285	2,863
Licensed Professional Counselors	1	3,904	158	1,516	20,655	1,287
Licensed Vocational Nurses	14	279	1,197	200	77,624	342
Marriage and Family Therapists	0	No Supply	12	19,961	3,149	8,441
Medication Aides	7	558	139	1,723	10,012	2,655
Occupational Therapists	1	3,904	45	5,323	7,914	3,359
Optometrists	0	No Supply	18	13,307	3,272	8,124
Pharmacists	1	3,904	146	1,641	23,561	1,128
Physical Therapists	1	3,904	109	2,198	13,136	2,024
Physician Assistants	1	3,904	51	4,697	6,543	4,063
Physicians (Direct Patient Care)	1	3,904	357	671	47,289	562
Primary Care Physicians	1	3,904	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)	0	No Supply	43	5,570	7,382	3,601
Registered Nurses	14	279	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	122	32	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>.

Data from the Department of State Health Services for 2014 counts 20 EMS professionals in Crockett County (see Table 6). This yields a population ratio of 195 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.

⁹ Data provided by the Injury Epidemiology & Surveillance Branch from the Texas EMS & Trauma Registries, Texas Department of State Health Services, June, 2015.

Table 6 also depicts the supply of key health professionals in Crockett County. Based on population ratios, it appears the county is well supplied with low-level personnel such as certified nurse aides or medication aides, while it is undersupplied with advanced practitioners such as physicians, physician assistants, and registered nurses. Crockett County joins many rural West Texas areas with no advanced professionals for behavioral health (psychiatrists, psychologists) and few advanced professionals for oral health (dentists).

HEALTH STATUS

Family and Maternal Health

The Census Bureau's 2009-2013 5-Year American Community Survey estimated an average of 1,047 families residing in Crockett County. Our calculations indicated that about 157 (15%) of these were single-parent (mostly female-parent) families with one or more children at home. This is a higher number than the 20-county study region. It aligns with the statewide proportion of single parent families.

Table 7				
Crockett County Family and Maternal Health Indicators*				
Indicator	Crockett County	Study Region	Region 9	Texas
Divorce Rate (Annual Divorces as a Percent of Annual Marriages)	44.7	43.2	No Data	45.0
Percent Women Age 15 & Over who are Currently Divorced	12.1	12.4	No Data	12.2
Single-Parent Families (Percent of All Families)	15.0	13.1	No Data	15.6
Teen Pregnancy Rate (Pregnancies per 1,000 Females Age 13-17)	37.1	25.3	30.5	21.4
Teen Birth Rate (Births to Mothers Age 13-17 per 1,000 Same Age Females)	35.8	23.1	28.1	18.4
Abortion Rate (Abortions as a Percent of Pregnancies among Females Age 15-44)	14.1	9.8	9.0	15.6
Percent Births to Unmarried Mothers (Female Population Age 15-44)	47.5	44.6	45.9	42.3
Child Abuse Rate* (Confirmed Incidents of Abuse per 1,000 Children)	12.1	12.9	13.8	9.5
Intimate Violence Rate (Incidents of Family Violence & Sexual Assault per 1,000 Population)	2.1	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 number of teen pregnancies and births. Crockett County leads the trend. Its teen pregnancy and birth rates for 2008-2012 were higher than Region 9, and also higher than the study region or the state overall. The county's rate of child abuse is also higher than the statewide level.

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	Crockett County			Study Region			Texas		
	Number	Average Charge	Per Capita Charge	Number	Average Charge	Per Capita Charge	Number	Average Charge	Per Capita Charge
Bacterial Pneumonia	51	\$33,900	\$605	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	38	\$18,262	\$243	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	55	\$30,068	\$579	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	42	\$41,675	\$613	2,857	\$19,320	\$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	186	\$31,328	\$2,040	15,141	\$21,483	\$1,371	1,433,955	\$34,178	\$2,512
Total Charges, 2008-2013		\$5,826,977			\$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/>.

Crockett County residents experienced 186 hospitalizations for potentially preventable conditions between 2008 and 2013. These events stemmed from congestive heart failure, bacterial pneumonia, COPD, and urinary tract infections. Associated hospital charges amounted to \$5.8 million or about \$2,040 per adult resident of the county. This compares to \$1,371 in preventable charges per adult resident of the study region, and \$2,512 statewide.

Leading Causes of Death

The Department of State Health Services recorded 175 deaths from all causes among Crockett County residents between 2008 and 2012. This computes to a five-year crude death rate of 46.6 deaths per 1,000 residents based on the 2012 population estimate. This is higher than the Texas rate of 32 per 1,000 over the same time frame. It aligns with the rate of 45.6 per 1,000 for the 20-county study region.

Table 9				
Leading Causes of Death in Crockett County, 2008-2012				
Causes of Death	Deaths	Crude Death Rate*	Study Region Rate*	Texas Rate*
Diseases of the Heart (ICD-10 Codes I00-I09, I11, I13, I20-I51)	51	13.6	9.5	7.4
Malignant Neoplasms (ICD-10 Codes C00-C97)	35	9.3	9.6	7.0
Chronic Lower Respiratory Diseases (ICD-10 Codes J40-J47)	11	2.9	2.7	1.7
Influenza and Pneumonia (ICD-10 Codes J09-J18)	9	2.4	1.0	0.6
Accidents (ICD-10 Codes V01-X59, Y85-Y86)	8	2.1	2.0	1.8
Diabetes Mellitus (ICD-10 Codes E10-E14)	6	1.6	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 .				

Medical conditions classified as Diseases of the Heart top the list of the leading causes of death in Crockett County. The County generally has higher death rates than the study region and the state on the six leading causes depicted in Table 9.

SURVEY OF THE POOR AND EXTREMELY POOR IN WEST TEXAS

The Census Bureau's 2009-2013 Five-Year American Community Survey data approximates that 2,540 residents of Crockett, Reagan, Schleicher, Sutton, and Upton counties in the western part of the 20-county study region are living below the federal poverty level. This computes to a poverty rate of 14.4 percent for these five western counties combined. Moreover, the Census Bureau data indicates that some 1,208 or 47.6 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 five western counties in the study region: Crockett, Reagan, Schleicher, Sutton, and Upton counties.¹² Respondents from the five western counties had self-reported household incomes below the applicable federal poverty level. Approximately 38.8 percent were extremely poor with incomes equal to or below half of the applicable poverty level. They ranged in age from 20 to 77 with an average age of 48.1 years. Females made up 89.8 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.

¹⁰ The combined rates of poverty and extreme poverty for the five counties were computed by Angelo State University's Community Development Initiatives based on data from the US Census Bureau, American Community Survey, 2009-2013 Five-Year, 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 8.2% of extremely poor individuals in the study region resided in the western counties of Crockett, Reagan, Schleicher, Sutton, and Upton. Reflecting this, we conducted 49 or 8.2% 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		
Crockett	16	32.7%
Reagan	0	0.0%
Schleicher	19	38.8%
Sutton	2	4.1%
Upton	12	24.5%
Poverty Status		
Severly poor	19	38.8%
Poor	29	59.2%
Gender		
Male	5	10.2%
Female	44	89.8%
Ethnicity		
Not Hispanic	15	30.6%
Hispanic	34	69.4%
Age		
18-29	7	14.3%
30-39	11	22.4%
40-49	4	8.2%
50-64	17	34.7%
65 & Over	10	20.4%
Average Years of Age	48.1	
Years of Schooling		
Less than 12	18	36.7%
12 or More	31	63.3%
Average Years of Schooling	11.2	
Household Composition		
Single Person	6	12.2%
Single Parent	9	18.4%
Couples with Children**	9	18.4%
Couples without Children**	17	34.7%
Other***	8	16.3%
Average Household Size	3.2	
*The sample size in the western counties was 49. Some frequencies and percentages reported do not sum to 49 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 western counties (Crockett, Reagan, Schleicher, Sutton, and Upton) 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 west counties and the state overall. The first row of the table, for instance, reports that 15 individuals or 30.6 percent of the 49 extremely poor survey participants from Crockett, Reagan, Schleicher, Sutton, and Upton counties said they were limited by poor mental, physical, or emotional health conditions. Texas BRFSS results from a similar question¹⁴ asked in 2013 estimate that only 13.2 percent of all adult residents in the five counties share this risk of impairment.

Table 11					
Health Risks of the Poor and Extremely Poor in West Counties with BRFSS Comparisons					
Risk Indicators	Survey Results: West Counties*			BRFSS Risk Comparisons**	
	Sample	Population at Risk	Percent at Risk	West Counties	Texas
Limited by poor physical, mental, or emotional health conditions	49	15	30.6	13.2	11.6
Could not see a doctor because of cost during past 12 months	49	21	42.9	19.8	19.3
Diagnosed heart disease	49	7	14.3	7.3	5.7
Diagnosed cardiovascular disease	49	7	14.3	10.2	7.2
Diagnosed asthma	49	9	18.4	15.4	12.6
Diagnosed COPD (incl. emphysema, chronic bronchitis)	49	9	18.4	5.0	5.4
Diagnosed arthritis, rheumatoid arthritis, gout, lupus, fibromyalgia	49	17	34.7	23.7	20.7
Diagnosed depression (major, chronic, minor)	49	14	28.6	14.8	16.0
Diagnosed kidney disease	49	3	6.1	2.1	3.1
Diagnosed diabetes	49	9	18.4	13.8	10.9
Morbidly Obese BMI => 35	49	7	14.3	11.6	12.7
Current smoker	49	12	24.5	18.6	15.9
Current smokeless tobacco user				8.3	4.3
Binge drinking	49	10	20.4	15.1	16.7
Difficult to access fresh fruits & vegetables	49	11	22.4	9.9	7.7
*These columns report the Survey of the Poor & Extremely Poor in West Texas combined results for Crockett, Reagan, Schleicher, Sutton, and Upton 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 West Counties are risk-adjusted by Community Development Initiatives at Angelo State University to account for the specific demographic characteristics of Crockett, Reagan, Schleicher, Sutton, and Upton counties.					

The 14 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 western counties. Indeed, based

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.

on the comparisons to the BRFSS estimates, the vulnerable poor and extremely poor population experiences elevated risks that range from 19 percent higher (for being diagnosed with asthma) to 265 percent higher (for being diagnosed with COPD).

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 24.5 percent of poor and extremely poor residents who reported being a current smoker helps understand the elevated risk of COPD diagnosis (as well as other diagnosed diseases) in this vulnerable group.

Also, the 42.9 percent who reported not seeing a doctor because of cost indicates an elevated cost barrier to health care. Additional results from the survey expand on this by indicating that 40.8 percent of survey respondents lack health insurance. This compares to the Census Bureau's 2013 estimate that 27.1 percent of all adults age 18-64 in Crockett, Reagan, Schleicher, Sutton, and Upton counties are uninsured.¹⁵

The survey findings also indicate that 83.7 percent of the poor and extremely poor do not have dental insurance; 69.4 percent do not have a regular dentist; 47 percent have not had a routine dental checkup within the past five years; and 28.6 percent never had dental cleaning or x-rays.

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 west counties. For instance, 67.3 percent said they never had a colon/rectal exam.

Still other survey findings shine additional light on the indication in Table 11 of a 94 percent higher risk of poor and extremely poor adults being diagnosed with depression. Sizeable proportions of survey respondents also reported always, often or sometimes feeling a fulfilling life is impossible (44.9%); avoiding situations out of nervousness, fear, or anxiety (71.4%); and feeling alone and not having much in common with people (58.3%).

Finally, Table 11 indicates that 22.4 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 9.9 percent lacking such access in the overall adult population of the western counties. It may also be associated with the higher obesity rate depicted in Table 11.

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

IDENTIFICATION AND PRIORITIZATION OF HEALTH NEEDS

Identification of Community Health Needs

The previous sections of this report summarize the findings relating to Crockett 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 Crockett County:

- **Demographic Trend Data:** Demographic projections of population growth in Crockett 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, clinics, nursing homes, and emergency medical services 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 Crockett 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 Crockett, Reagan, Schleicher, Sutton, and Upton 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 Crockett County:

1. Needs of seniors.
Increase capacity to address health needs of growing numbers of seniors in the population.
2. Quality of care.
Continue improving the quality of care at Crockett County Care Center.
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:

- Dentists
 - Physicians or Physician Assistants
 - Advanced Nurse Practitioners or RNs
 - Psychiatrists or Psychologists
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.
 6. Family health.
Mobilize a collaborative community effort to reduce:
 - Teen pregnancies
 - Child abuse
 7. Preventative actions.
Increase emphasis on preventative actions in treatment, case management, and community outreach and education to reduce prevalence of, preventable hospitalizations, and mortality from:
 - Heart disease and cerebrovascular diseases
 - Cancer
 - COPD
 - Influenza and pneumonia
 - Diabetes
 - Accidents
 - Urinary tract infections
 8. 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 cost barriers to treatment
 - Improve case management and outreach
 - Provide education to promote healthy living and wellness
 9. 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 Crockett 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 Crockett County. Respondents ranked the needs based the specified criteria. A total of three responses ranking the identified needs for Crockett 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

- Impact: What is the impact of the need on vulnerable populations?
 - 5 - Extremely High
 - 4 - High
 - 3 - Moderate
 - 2 - Low
 - 1 - Minimal

- 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 Crockett 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 to 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 4.33 on the five-point scale. The averages for significance, impact, and feasibility were 4.67, 5, and 4 respectively. Applying the formula yields an adjusted average of 5.5, making a collaborative community effort to reduce child abuse the highest priority need in Crockett County. The need for a similar collaboration to reduce another social problem posing significant health risk (teen pregnancy) was also gained high priority (3rd) in Crockett County.

Challenges associated with diabetes appeared in two spots within the top priorities for Crockett County. Key informants and stakeholders emphasized the need to reach vulnerable groups to reduce diabetes (2nd), and also the need to improve screening, treatment, case management, and outreach and education for the disease (one of four needs tied for 5th priority).

Crockett County informants and stakeholders recognized needs to expand community capacity and access to address the health needs of vulnerable populations to reduce depression (4th rank), cost and other barriers to medical treatment, and increasing access to nutritious foods (both tied for 5th priority). They also prioritized needs to engage preventative actions to reduce heart and vascular diseases (tied for 5th) and accidents (tied for 10th).

Table 12
Prioritization of Crockett County Community Health Needs

Community Health Need	Respondents	Prevalence	Significance	Impact	Feasibility	Adjusted Average
Mobilize a collaborative community effort to reduce Child Abuse	3	4.33	4.67	5.00	4.00	5.50
Increase community capacity to reach vulnerable groups with preventative actions to reduce Diabetes	3	4.33	5.00	5.00	3.33	5.25
Mobilize a collaborative community effort to reduce Teen Pregnancies	3	4.33	4.33	4.33	3.67	5.08
Increase community capacity to reach vulnerable groups with preventative actions to reduce Depression	3	4.33	4.67	4.67	3.00	4.92
Create an engaged process for recruiting & retaining core health professionals for Primary Care, including Physicians, Physician Assistants, Advanced Nurse Practitioners, & Registered Nurses	6*	4.67	4.67	4.67	2.50	4.75
Increase emphasis on preventative actions (screening, treatment, case management, outreach & education) to reduce Heart & Vascular Diseases	3	4.33	5.00	5.00	2.33	4.75
Increase emphasis on preventative actions (screening, treatment, case management, outreach & education) to reduce Diabetes	3	4.33	5.00	5.00	2.33	4.75
Increase community capacity to reach vulnerable groups with preventative actions to reduce Cost & Other Barriers to treatment	3	4.33	4.67	4.67	2.67	4.75
Increase the Food Security of vulnerable populations by increasing access to nutritious foods	3	4.33	4.33	4.33	3.00	4.75
Increase emphasis on preventative actions (screening, treatment, case management, outreach & education) to reduce mortality from Accidents	3	4.33	4.67	4.33	2.67	4.67
Create an engaged process for recruiting & retaining core health professionals including Dentists	3	4.33	3.00	2.00	4.67	4.67
Increase capacity and access to quality Behavioral Health resources	3	4.33	4.67	4.67	2.33	4.58
Increase community capacity to reach vulnerable groups with preventative actions to promote Healthy Living & Wellness	3	4.33	4.67	4.00	2.67	4.58
Increase community capacity to reach vulnerable groups with preventative actions to improve Case Management & Outreach	3	4.33	4.33	4.33	2.67	4.58
Increase emphasis on preventative actions (screening, treatment, case management, outreach & education) to reduce Cancer	3	4.33	5.00	4.67	2.00	4.50
Continue improving the quality of care at Crockett County Care Center	3	4.00	3.67	5.00	2.67	4.50
Increase community capacity to reach vulnerable groups with preventative actions to reduce Obesity	3	4.33	4.33	4.33	2.33	4.42
Increase emphasis on preventative actions (screening, treatment, case management, outreach & education) to reduce COPD	3	4.33	4.67	4.50	2.00	4.38
Increase capacity to address health needs of Seniors	3	4.00	3.33	4.67	2.67	4.33
Increase community capacity to reach vulnerable groups with preventative actions to reduce Tobacco Use	3	4.33	4.00	4.00	2.33	4.25
Create an engaged process for recruiting & retaining core health professionals including Psychiatrists & Psychologists	3	4.33	3.33	4.67	2.33	4.25
Increase emphasis on preventative actions (screening, treatment, case management, outreach & education) to reduce Influenza & Pneumonia	3	4.33	4.00	4.33	2.00	4.17
Increase emphasis on preventative actions (screening, treatment, case management, outreach & education) to reduce Urinary Tract Infections	3	3.67	4.00	4.00	2.00	3.92
Increase capacity and access to quality Dental Care, especially by poor and extremely poor residents and households	3	4.33	3.00	4.33	2.00	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.

Crockett County informants and stakeholders understood the need to create an engaged community process to recruit and retain core health professionals. They focused on the need for primary care professionals (tied for 5th priority) and for one or more dentists (tied for 10th).