Community Health Needs Assessment:

Health and Behavioral Health Needs
Sterling County, Texas

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This report is part of a comprehensive project to assess the Health and Behavioral Health Needs of vulnerable populations in a twenty-county region of West Texas. The region covers 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 and a comprehensive regional-level assessment.

Sterling County Courthouse - Sterling City, 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 Sterling County.

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PREFACE

Community Development Initiatives at Angelo State University prepared this Community Health Needs Assessment for the people of Sterling 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 Sterling 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 Sterling 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 Sterling County are an important segment of the vulnerable populations in health care. The assessment includes the following:
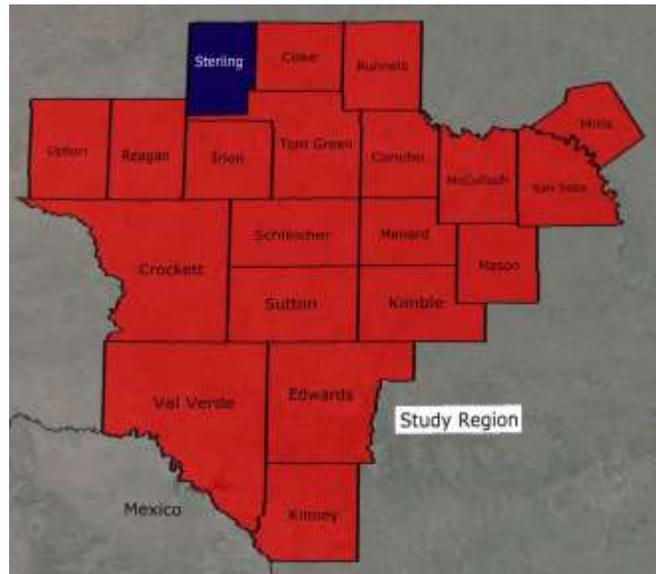
1. A demographic profile featuring the vulnerable groups in the population. The profile integrates publicly available secondary demographic data.
2. A health status profile of community health and mental health care resources, utilization patterns, and morbidity and mortality rates.
3. Results of a survey of poor and extremely poor residents of selected counties in the northern part of the study region.
4. Identification and prioritization of health and behavioral health issues in Sterling 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 STERLING COUNTY COMMUNITY

Sterling County is a 914 square mile land area in the Edwards Plateau region of West Texas. The county was established and organized in 1891. There are two communities located in Sterling County: Sterling City and Broome. Sterling City, Texas is the county seat, and is located along U.S. Highway 87.

Sterling County

Historically, farming endeavors have not been immensely successful in Sterling County. Instead, ranching dominated the local economy until the 1930s. The Great Depression, resulting in a decline in agricultural holdings and county population, affected the county's economy. Oil was discovered in Sterling County in 1947, bailing out the local economy. Oil and gas production and ranching are still important to the local economy.

Hunting is also a part of the local culture and economy in Sterling County. Every year Sterling County hosts the Sterling County Annual Hunters' Appreciation Dinner. Findings from a survey of dinner attendees conducted by the Texas A&M AgriLife Extension Service suggest hunters bring about $833,100 annually in gross sales generated to the economy.[1]

Sterling County and Coke County are home to the Capricorn Ridge Wind Farm. The wind farm is one of the state's Competitive Renewable Energy Zones and is one of the largest on-shore wind farms in the world. The wind farm supports the local economy through employment opportunities, adding to the tax base, land owner lease payments, and purchasing regional goods and services.

Table 1 reports private industry and employment for Sterling County in 2013. About 51 private industry establishments employed nearly 319 county residents at an average pay rate of $49,698. Private industry employees comprised approximately 49 percent of the county's 653 person labor force in 2013.[2]

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[1] "The Economic Impact of Hunters in Sterling County," Community Economic Development Publications, Texas A&M AgriLife Extension Service (June, 2011), p. 2.

[2] The estimate of 653 labor force participants is from the US Census Bureau's 2009-2013 5-Year American Community Survey, retrieved September 1, 2015: http://factfinder.census.gov.

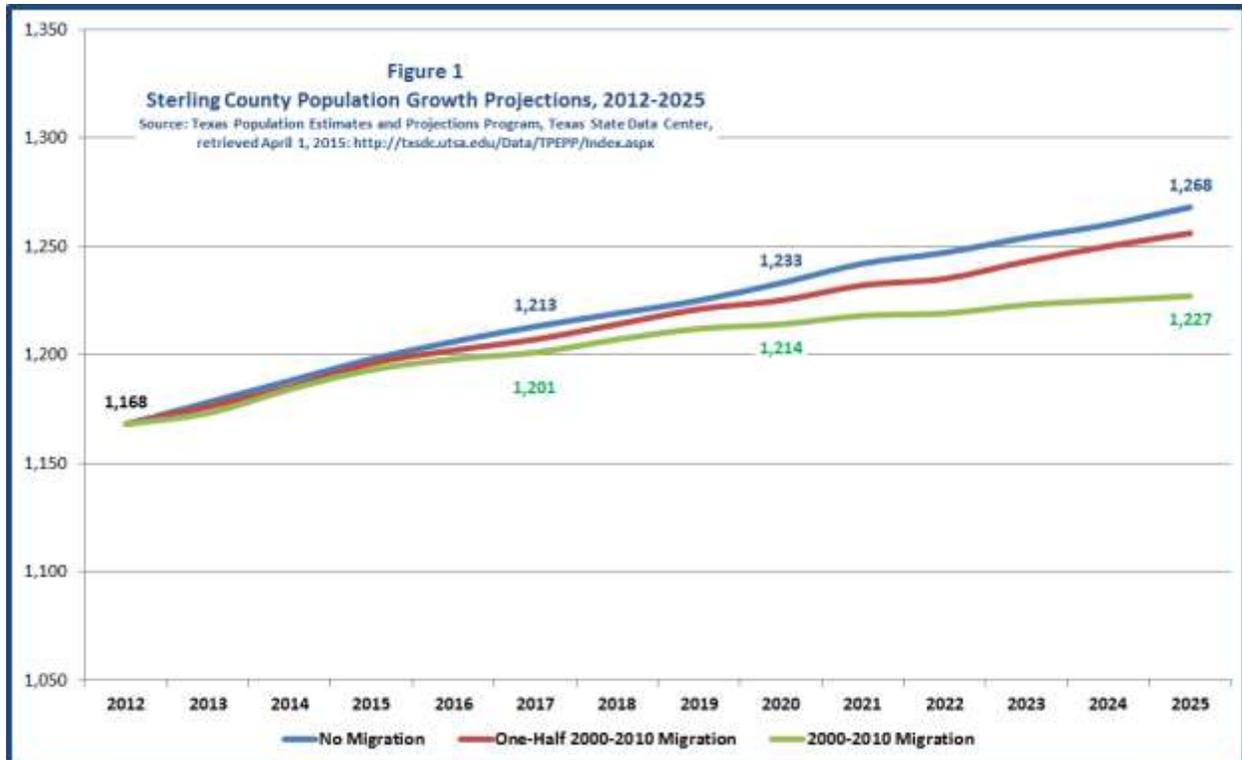| Table 1				
Sterling County Private Industry & Employment, 2013				
North American Industry Classification System (NAICS) Sectors	Annual Average Establishment Count	Annual Average Employment	Percent Total Employment	Average Annual Pay
All private industries	51	319	100	$49,698
NAICS 11 Agriculture, forestry, fishing and hunting	17	60	19	$29,308
NAICS 21 Mining, quarrying, and oil and gas extraction	7	147	46	$78,383
NAICS 42 Wholesale trade	4	30	9	$29,614
NAICS 44-45 Retail trade	3	43	13	$18,015
NAICS 54 Professional and technical services	4	10	3	$40,178
NAICS 81 Other services, except public administration	16	29	9	$17,519
Source: US Department of Labor, Bureau of Labor Statistics, Quarterly Census of Employment and Wages, April 1, 2015: http://www.bls.gov/cew/				

The impact of activities in the oil and gas industries is readily evident from the industry and employment picture in Table 1. In 2013, the North American Industry Classification System (NAICS) sector concentrated in oil and gas extraction (NAICS code 21) employed about 46 percent of the county's private industry employees. The average annual wage rate of employees in this sector was $78,383. This wage rate is $28,685 above the average annual wage rate for all private industries in Sterling County.

In contrast, the next largest concentration of private industry employers in 2013 were in agriculture, forestry, fishing, and hunting (NAICS 11), employing about 19 percent of the county's private industry employees. The average annual wage rate of employees in this sector was $29,308; less than half the wage of workers in the oil and gas industries.

DEMOGRAPHICS

The Census Bureau's 2013 estimate of the Sterling County resident population is 1,219.[3] The most recent official Texas estimate from the State Demographer is 1,168 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 Sterling County through 2025.

Figure 1
Sterling County Population Growth Projections, 2012-2025
Source: Texas Population Estimates and Projections Program, Texas State Data Center, retrieved April 1, 2015: http://txsdc.utsa.edu/Data/TPEPP/Index.aspx

The highest growth projection (blue line) is based on the assumption that there will be no migration in or out of the county from 2012-2025. This projection approximates the county will reach 1,213 residents in 2017, 1,233 by 2020, and 1,268 for 2025 (an overall 5.6% gain from 2012-2015).

Vulnerable Populations

The county's 746 Non-Hispanic White residents comprised the majority (64%) of the population in 2012 as shown in Table 2 below. The total minority population was 36 percent in 2012 according to estimates of the State Demographer. Hispanic residents make up 89% of the minority population in Sterling County.

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[3] From US Census Bureau, Population Division, Annual Estimates of the Resident Population: April 1, 2010 to July 1, 2013, retrieved September 24, 2015: http://factfinder.census.gov.

Table 2								
Race & Ethnicity: 2012 Estimate with Projections to 2025								
Groups	**2012**		**2017**		**2020**		**2025**	
White, Non-Hispanic	746	64%	762	63%	764	62%	768	61%
Total Minority	422	36%	451	37%	469	38%	500	39%
Hispanic	376	32%	406	33%	425	34%	456	36%
Black	16	1%	13	1%	13	1%	13	1%
Other	30	3%	32	3%	31	3%	31	2%
Total Population	1,168	100%	1,213	100%	1,233	100%	1,268	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 36 to 39 percent between 2012 and 2025. All other race and ethnic groups are projected to decrease proportionately.

Children under age 18 (numbering 275) made up 23 percent of the county's population in 2012 according to State estimates. Youngsters of school attendance age (5-17 years) comprised 73 percent of the children, while preschoolers accounted for 27 percent.

Table 3								
Children: 2012 Estimate with Projections to 2025								
Groups	**2012**		**2017**		**2020**		**2025**	
All Children (under age 18)	275	100%	279	100%	272	100%	265	100%
School-age children (ages 5-17)	201	73%	208	75%	204	75%	194	73%
Pre-school-age children (under 5)	74	27%	71	25%	68	25%	71	27%
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 not expected to change significantly from 2012-2025. However, there will be a slight decrease in both pre-school and school-age children groups by 2025.

The county was home to 202 senior citizens in 2012 according to State estimates. They comprised 17 percent of the total population. Hispanics (numbering 47) made up 23 percent of the senior residents in the county.

Table 4								
Seniors: 2012 Estimate with Projections to 2025								
Groups	**2012**		**2017**		**2020**		**2025**	
Total Population	1,168	100%	1,213	100%	1,233	100%	1,268	100%
Seniors (65 & over)	202	17%	263	22%	287	23%	350	28%
Hispanic Seniors (65 & over)	47	23%	56	21%	68	24%	83	24%
Source: Texas Population Estimates and Projections Program, Texas State Data Center, retrieved April 1, 2015: http://txsdc.utsa.edu/Data/TPEPP/Index.aspx. The forward projections for 2017, 2020, and 2025 reflect the State Demographer's high-growth assumption that migration will equal the rates of the 2000-2010 time period.								

Official State projections suggest brisk growth of the senior population to 28 percent by 2025. Although the number of Hispanic seniors is expected to nearly double (from 47 to 83) between 2012 and 2025, their representation within the elder population will only increase one percent.

There are 1.03 males in Sterling County for every female. Women and girls comprised 49 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 stay steady as a segment.

Table 5 Females: 2012 Estimate with Projections to 2025								
Groups	**2012**		**2017**		**2020**		**2025**	
Total Population	1,168	100%	1,213	100%	1,233	100%	1,268	100%
Female (all ages)	575	49%	593	49%	605	49%	618	49%
Female (ages 13-17)	30	5%	36	6%	38	6%	41	7%
Hispanic Female (ages 13-17)	12	40%	16	44%	14	37%	16	39%
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.								

Girls age 13-17 are particularly vulnerable to risks of teen pregnancy and a range of associated factors. This segment of the population is projected to grow slightly from five percent in 2012 to seven percent in 2025. Hispanic females comprised 40 percent of this age range (13-17) according to the 2012 population estimates.

COMMUNITY HEALTH RESOURCES

There is no hospital located in Sterling County. The main health resource in Sterling County is the Sterling City Family Clinic. The clinic operates Mondays, Tuesdays, and Thursdays from 9:00 am to 4:30 pm and on Fridays from 9:00 am to 12:30 pm. Sterling County residents receive basic family care and minor emergency service care at the clinic.

Utilization of Health Resources

Sterling City owns two local ambulances staffed by volunteer Emergency Medical Technicians. The nearest hospitals are in San Angelo, Texas and Big Spring, Texas. The Texas EMS & Trauma Registries report that Texas hospitals received 44 trauma patients from Sterling County over the five year period from 2010-2014. This computes to an average of 8.8 EMS trauma incidents per year.[4]

The Sterling County Nursing Home is a non-profit county owned nursing home. The facility provides skilled nursing care as well as inpatient physical therapy, occupational therapy, and speech therapy.

Publicly available 2015 data provided by the Centers for Medicare and Medicaid Services (CMS) indicate that the Sterling County facility has a bed capacity of 44 with approximately 35 inpatients in residence.[5] This computes to a countywide occupancy rate of 79 percent, which compares to as statewide rate of 71 percent for 1,220 Texas nursing homes represented in the CMS 2015 data.

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 Sterling County Nursing Home achieved an above average rating based on the 2015 CMS data for staffing, and the overall facility ratings. On quality of care ratings and for health inspections the facility achieved average ratings.[6]

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[4] Data provided by the Injury Epidemiology & Surveillance Branch from the Texas EMS & Trauma Registries, Texas Department of State Health Services, June, 2015.
[5] Nursing Home Compare Data, Centers for Medicare and Medicaid Services, retrieved August 16, 2015: https://data.medicare.gov/.
[6] See Nursing Home Compare, https://www.medicare.gov/nursinghomecompare/search.html.

According to Texas hospital usage data, Sterling County residents visited outpatient facilities a total of 824 times during 2013.[7] This computes to 1 visit for every 1.4 residents of the county. Outpatient facilities located in Tom Green County (San Angelo) received the vast majority of outpatient visits (89.8%) from Sterling County residents.

Sterling County residents also checked into hospitals for 132 inpatient visits during 2013. This equals 1 hospitalization for every 8.8 county residents. Similar to outpatient visits, residents checked into facilities located in San Angelo the majority of the time (84.8%) during 2013.[8]

Other Health Care Resources

Table 6 depicts the supply of EMS and other of key health professionals in Sterling County during 2014 based on data from the Department of State Health Services. At first glance, the data indicates a relative oversupply of health workers because of the low ratio of population per professionals. The total of 61 professionals residing in Sterling County translates to one health worker per 19 residents. This ratio compares to one worker per 33 residents in the study region and one per 38 Texans statewide.

Despite the initial indication of an oversupply of health professionals, there is a severe shortage of core health care professionals. According to the data from the Department of State Health Services, there are no practicing primary care physicians, psychiatrists or psychologists, dentists, or pharmacists in Sterling County. Emergency medical service professionals and certified nurse aides comprise 76 percent of the health professionals in Sterling County.

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

	Table 6					
Selected Health Professionals by Geography, 2014						
Licensed or Certified Professionals	Number in Sterling County (1,185 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	32	37	1,879	127	124,616	213
Dentists	0	No Supply	70	3,422	12,767	2,082
Dieticians	0	No Supply	33	7,258	4,668	5,694
Emergency Medical Services	15	79	812	295	60,690	438
Licensed Chemical Dependency Counselors	0	No Supply	87	2,753	9,285	2,863
Licensed Professional Counselors	0	No Supply	158	1,516	20,655	1,287
Licensed Vocational Nurses	5	237	1,197	200	77,624	342
Marriage and Family Therapists	0	No Supply	12	19,961	3,149	8,441
Medication Aides	3	395	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	0	No Supply	146	1,641	23,561	1,128
Physical Therapists	0	No Supply	109	2,198	13,136	2,024
Physician Assistants	1	1,185	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)	0	No Supply	43	5,570	7,382	3,601
Registered Nurses	4	296	1,696	141	206,027	129
Advanced Practice (APRN)	1	1,185	119	2,013	15,194	1,749
Social Workers	0	No Supply	117	2,047	19,536	1,361
Total Selected Health Professionals	61	19	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 estimates 370 families residing in Sterling County over that time. Our calculations indicate that about 5.7 percent (about 21) of these 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, as is the estimated percent of women (10.7%) in the county who are currently divorced. Overall, the indicators of family and maternal health in Table 7 are very positive.

Table 7 Sterling County Family and Maternal Health Indicators*				
Indicator	Sterling County	Study Region	Region 9	Texas
Divorce Rate (Annual Divorces as a Percent of Annual Marriages)	58.8	43.2	No Data	45.0
Percent Women Age 15 & Over who are Currently Divorced	10.7	12.4	No Data	12.2
Single-Parent Families (Percent of All Families)	5.7	13.1	No Data	15.6
Teen Pregnancy Rate (Pregnancies per 1,000 Females Age 13-17)	13.4	25.3	30.5	21.4
Teen Birth Rate (Births to Mothers Age 13-17 per 1,000 Same Age Females)	13.4	23.1	28.1	18.4
Abortion Rate (Abortions as a Percent of Pregnancies among Females Age 15-44)	1.6	9.8	9.0	15.6
Percent Births to Unmarried Mothers (Female Population Age 15-44)	37.7	44.6	45.9	42.3
Child Abuse Rate* (Confirmed Incidents of Abuse per 1,000 Children)	7.9	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.

Leading Causes of Death

The Department of State Health Services recorded 76 deaths from all causes among Sterling County residents between 2008 and 2012. This computes to a five-year crude death rate of 65.1 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 is also higher than the rate of 45.6 per 1,000 for the 20-county study region.

Medical conditions classified as Diseases of the Heart top the list of the leading causes of death in Sterling County. Accidental deaths are the second leading cause, followed by cancer (malignant neoplasms) and deaths from Alzheimer's disease. The county generally has higher death rates than the study region on the leading causes. However, Sterling County has a lower cancer death rate than the overall state or the study region.

Table 8 Leading Causes of Death in Sterling 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)	16	13.7	9.5	7.4
Accidents (ICD-10 Codes V01-X59, Y85-Y86)	9	7.7	2.0	1.8
Malignant Neoplasms (ICD-10 Codes C00-C97)	7	6.0	9.6	7.0
Alzheimer's Disease (ICD-10 Code G30)	6	5.1	1.6	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 20,548 residents of Coke, Concho, Irion, Runnels, Sterling, Tom Green counties, the northern-most counties in the 20-county study region, are living below the federal poverty level. This computes to a poverty rate of 16.4 percent for these six northern counties combined. Moreover, the Census Bureau data indicates that some 8,216 or 40 percent of these residents are extremely poor, living with incomes less than half the poverty level.[9]

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.[10] A total of 597 interviews were completed, including 331 with residents of the six northern counties in the study region: Coke, Concho, Irion, Runnels, Sterling, Tom Green counties.[11] Respondents from these counties had self-reported household incomes below the applicable federal poverty level. Approximately 54.1 percent were extremely poor with incomes equal to or below half of the applicable poverty level. They ranged in age from 20 to 92 with an average age of 46.9 years. About 71 percent were females. See Table 9 for a summary of 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 (CDC), served as the model for questions. Indeed, the three-page questionnaire yielded 31 indicators which closely parallel similar items in the 2013 BRFSS results for Texas.[12]

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[9] 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/.

[10] 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.

[11] 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 55.7% of extremely poor individuals in the study region resided in the northern counties of Coke, Concho, Irion, Runnels, Sterling, and Tom Green. Reflecting this, we conducted 331 or 55.4% of the interviews in these counties.

[12] BRFSS interviews are conducted by telephone. Interviews for this project were conducted by trained community interviewers in a face-to-face informal format. Information on the Texas BRFSS is available at http://www.dshs.state.tx.us/chs/brfss/default.shtm.

Table 9		
Sample Characteristics*		
County of Residence		
Coke	5	1.5%
Concho	8	2.4%
Irion	3	0.9%
Runnels	37	11.2%
Sterling	3	0.9%
Tom Green	275	83.1%
Poverty Status		
Severly poor	179	54.1%
Poor	122	36.9%
Gender		
Male	95	28.7%
Female	236	71.3%
Ethnicity		
Not Hispanic	182	55.0%
Hispanic	149	45.0%
Age		
18-29	46	13.9%
30-39	65	19.6%
40-49	66	19.9%
50-64	124	37.5%
65 & Over	29	8.8%
Average Years of Age		46.9
Years of Schooling		
Less than 12	145	43.8%
12 or More	180	54.4%
Average Years of Schooling		10.9
Household Composition		
Single Person	42	12.7%
Single Parent	75	22.7%
Couples with Children**	72	21.8%
Couples without Children**	55	16.6%
Other***	87	26.3%
Average Household Size		2.7

*The sample size in the north counties was 331. Some frequencies and percentages reported do not sum to 331 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 10 apply only to the northern counties (Coke, Concho, Irion, Runnels, Sterling, and Tom Green) 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 north counties and the state overall. The first row of the table, for instance, reports that 179 individuals or 54.1 percent of the 331 survey participants from Coke, Concho, Irion, Runnels, Sterling, and Tom Green counties said they were limited by poor mental, physical, or emotional health conditions. Texas BRFSS results from a similar question asked in 2013 estimate that only 13.5 percent of all adult residents in the six counties share this risk of impairment.[13]

The risk indicators in Table 10 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 northern counties. Indeed, based on the comparisons to the BRFSS estimates, the vulnerable poor and extremely poor population experiences elevated risks that range from 11 percent higher (for being diagnosed with stroke) to 299 percent higher (for being limited by poor mental, physical, or emotional health conditions).

Other significant findings from the Survey of the Poor and Extremely Poor add context to some of the elevated risks indicated in Table 10. For instance, the 61 percent of northern county poor and extremely poor residents who reported not seeing a doctor because of cost indicates an elevated cost barrier to health care. Results from the survey expand on this by indicating that 53.5 percent of survey respondents lack health insurance. This compares to the Census Bureau's 2013 estimate that 27.3 percent of adults age 18-64 in Coke, Concho, Irion, Runnels, Sterling, and Tom Green counties are uninsured.[14]

The survey findings also indicate that 91 percent of the poor and extremely poor do not have dental insurance; 81 percent do not have a regular dentist; 46.5 percent have not had a routine dental checkup within the past five years; and 48 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

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[13] The similar item in the BRFSS showing a 13.5% risk of impairment was based on 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. Another comparative data point is available from the Census Bureau's American Community Survey. That data point indicates a 16% disability rate among adults residing in the six northern counties of the study region. The data is based on a set of direct questions to census survey respondents about having a range of physical and cognitive disabilities. See the American Community Survey, 2009-2013 5-Year, retrieved October 2, 2015: http://factfinder.census.gov/.

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

north counties. For instance, 19.4 percent of poor and extremely poor females reported never having a mammogram or Pap smear. Among men and women, 74.6 percent said they never had a colon/rectal exam; 13.6 percent never had a blood pressure check; 16.3 never had "blood work" done by a lab; 47.4 percent never had an HIV test; 31 percent never had vision screening; and 53 percent had never been screened for hearing.

Table 10					
Health Risks of the Poor and Extremely Poor in North Counties with BRFSS Comparisons					
Risk Indicators	**Survey Results: North Counties***			**BRFSS Risk Comparisons****	
	Sample	**Population at Risk**	**Percent at Risk**	**North Counties**	**Texas**
Limited by poor physical, mental, or emotional health conditions	331	179	54.1	13.5	11.6
Does not think of anyone as a personal doctor	331	162	48.9	29.8	33.1
Could not see a doctor because of cost during past 12 months	331	202	61.0	19.9	19.3
Five or more years since routine checkup by a doctor	331	42	12.7	9.8	10.5
Diagnosed high blood pressure: not taking meds	128	32	25.0	21.2	23.2
Diagnosed heart attack (myocardial infarction)	331	26	7.9	5.7	3.9
Diagnosed heart disease	331	30	9.1	7.4	5.7
Diagnosed stroke	331	15	4.5	4.1	2.5
Diagnosed asthma	331	79	23.9	15.8	12.6
Diagnosed COPD (incl. emphysema, chronic bronchitis)	331	50	15.1	5.2	5.4
Diagnosed arthritis, rheumatoid arthritis, gout, lupus, fibromyalgia	331	114	34.4	24.7	20.7
Diagnosed depression (major, chronic, minor)	331	158	47.7	15.1	16.0
Diagnosed kidney disease	331	21	6.3	2.2	3.1
Diagnosed diabetes	331	80	24.2	14.1	10.9
Morbidly Obese BMI => 35	331	69	20.8	11.3	12.7
Current smoker	331	142	42.9	18.8	15.9
Current smokeless tobacco user				8.2	4.3
Binge drinking	331	78	23.6	15.1	16.7
Difficult to access fresh fruits & vegetables	331	92	27.8	10.2	7.7
Second-hand smoke exposure in home	331	77	23.3	10.9	13.7
*These columns report the Survey of the Poor & Extremely Poor in West Texas combined results for Coke, Concho, Irion, Runnels, Sterling, and Tom Green 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 Coke, Concho, Irion, Runnels, Sterling, and Tom Green counties.					

Still other survey findings shine additional light on the indication in Table 10 of a 216 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 (58.3%); avoiding situations out of nervousness, fear, or anxiety (67.7%); and feeling alone and not having much in common with people (59.2%). Nearly 20 percent indicated they do not feel tied to a support group (family, church, etc.) that would help them if needed.

Table 10 indicates that 27.8 percent of the poor and extremely poor in the north counties have difficulty accessing grocery stores with fresh fruits and vegetables. This suggests a 173 percent higher level of food insecurity compared to the BRFSS estimate of 10.2 percent lacking such access in the overall adult population. Additional indications of food insecurity from the survey include respondents who reported receiving assistance from SNAP or WIC (58.3%) as well as using food charities (69.8%). The potentials of food insecurity leading to obesity[15] are also buttressed by the prevalence of feeling unsafe in the neighborhood (13.9%) and not knowing of a safe place to walk, run, or exercise (27.8%) in the neighborhood. One additional sign of insecure living conditions among the poor and extremely poor is that 37.2 percent reported having been homeless for at least one week during the past five years.

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[15] Table 10 depicts only the elevated risk of "morbid obesity" (defined as having a BMI equal to or than 35) at 20.8% compared to the 11.3% level indicated for the adult population in the 2013 BRFSS. Using the standard definition of obesity as having a BMI equal to or greater than 30 raises the obesity rate to 43.5% among the poor and extremely poor of the north counties.

IDENTIFICATION AND PRIORITIZATION OF HEALTH NEEDS

Identification of Community Health Needs

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

- Demographic Trend Data: Demographic projections of population growth in Sterling 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, community clinics, nursing homes, home health agencies, and mental health services were reviewed.
- Family and Maternal Health: Indicators of family composition, domestic abuse data, and maternal health were reviewed.
- Potentially Preventable Hospitalizations: Data on hospitalization of Sterling County residents that might have been avoidable if individuals accessed and complied with relevant preventative and outpatient healthcare services were reviewed.
- Leading Causes of Death: Data on leading causes of death were used to identify specific diseases associated with higher death rates in Sterling 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 Coke, Concho, Irion, Runnels, Sterling, and Tom Green counties.

It is important to assert 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 Sterling County:

1. Needs of seniors.
   Increase capacity to address health needs of growing numbers of seniors, especially those with Alzheimer's or dementia.

2. Recruit and Retain Core Health Professionals.
   Work cooperatively with all community sectors to create an engaged process for recruiting and retaining core health professionals including one or more:
   - Dentist
   - Pharmacist
   - Primary Care Physician
3. Preventative actions.
   Increase emphasis on preventative actions in screening, treatment, case management, and community outreach and education to reduce prevalence of and mortality from:
   - Heart disease
   - Accidents
4. Develop capacity and access to quality behavioral health services.
   Increase access and capacity for the poor and other vulnerable groups by:
   - Reducing cost and other barriers to quality behavioral health services
   - Providing prevention and treatment for depression
   - Providing smoking and tobacco cessation
   - Providing prevention and treatment of alcohol and drug abuse
5. 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 cost and other barriers to medical care and treatment
   - Improve case management and routine preventative screenings
   - Provide education to promote healthy living and wellness
6. Food, housing, and neighborhood security.
   Increase the security of poor and extremely poor individuals and households by:
   - Increasing access to nutritious foods
   - Increasing affordable housing in safe neighborhood environments

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 Sterling 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 Sterling County. Respondents ranked the needs based the specified criteria. A total of two responses ranking the identified needs for Sterling 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

The list below reports the results of the prioritization of needs in Sterling County. The needs are listed in the rank order determined by adjusted averages that emphasize the importance of needs that were viewed as the most feasible ones for the community take action upon.[16]

- Increase emphasis on preventative actions (screening, treatment, case management, outreach & education) to reduce Heart & Vascular Diseases
- Create an engaged process for recruiting & retaining core health professionals including Pharmacists
- Increase emphasis on preventative actions (screening, treatment, case management, outreach & education) to reduce mortality from Accidents
- Increase capacity & access for vulnerable groups to quality behavioral health services by reducing Cost & Other Barriers
- Increase capacity to address health needs of Seniors
- Create an engaged process for recruiting & retaining core health professionals for Primary Care, including Physicians
- Create an engaged process for recruiting & retaining core health professionals including Dentists
- Increase capacity & access for vulnerable groups to quality behavioral health resources for prevention and treatment of Depression
- Increase capacity & access for vulnerable groups to quality behavioral health resources for prevention and treatment of Alcohol & Drug Abuse
- Increase community capacity to reach vulnerable groups with preventative actions to reduce Obesity
- Increase community capacity to reach vulnerable groups with preventative actions to promote Healthy Living & Wellness

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[16] Sterling County did not meet the minimum threshold of three responses to report priority scores; instead, the list of needs has been presented in rank order according to the adjusted average. The adjusted average for each need was calculated using the following formula: *Adjusted Average = [prevalence score + significance score + impact score + (feasibility score x 2)] ÷ 4*

- Increase capacity & access for vulnerable groups to quality behavioral health resources for Smoking & Tobacco Cessation
- Increase community capacity to reach vulnerable groups with preventative actions to reduce Cost & Other Barriers to treatment
- Increase community capacity to reach vulnerable groups with preventative actions to improve Case Management & Outreach
- Increase the Food Security of vulnerable populations by increasing access to nutritious foods
- Increase the Residential Security of vulnerable populations by increasing affordable housing in safe neighborhood environments