Community Health Needs Assessment:

Health and Behavioral Health Needs
Coke County, Texas

Prepared by:

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December 31, 2015

This report is part of a comprehensive project to assess the Health and Behavioral Health Needs of vulnerable populations in a 20-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.

Coke County Courthouse – Robert Lee, 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 Coke County.

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PREFACE

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

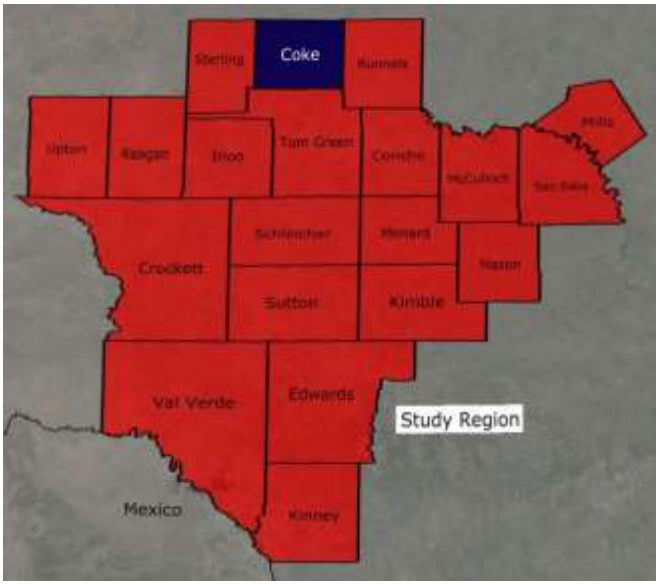
The purpose of the comprehensive study is to identify and prioritize health and behavioral health needs of the approximately 14,743 extremely poor individuals living in a twenty-county region covered by the project. The Coke County Community Health Needs Assessment is a vital part of the regional project.

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 Coke 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 Coke 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 Coke 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 COKE COUNTY COMMUNITY

Coke County is a 928 square mile land area on the Edwards Plateau in region of West Texas. The county was established in 1889. Robert Lee, Texas, located at the crossroads of Texas State Highways 208 and 158, is the current county seat. Other communities in Coke County are Bronte, Tennyson, Silver, Sanco, and Blackwell.

There are two lakes in Coke County, the E.V. Spence Reservoir and the Oak Creek Reservoir. When full, these lakes provide recreational activities such as boating, fishing, and swimming for residents and tourists. Currently, both reservoirs have extremely low water levels because of recent droughts.

The county's economic base is farming, ranching, and oil and gas service and production. The majority of the county's economic base is from oil and gas service and production. Oil was discovered in Coke County in 1942. Tax money from oil production has been used to improve public services for the citizens of Coke County.

Table 1 reports private industry and employment for Coke County in 2013. About 39 private industry establishments employed 218 county residents at an average pay rate of $31,012. Private industry employees comprised approximately 14 percent of the county's 1,535 person labor force in 2013.[1]

Table 1
Coke 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	39	218	100	$31,012
NAICS 11 Agriculture, forestry, fishing and hunting	3	10	5	$19,891
NAICS 21 Mining, quarrying, and oil and gas extraction	5	27	12	$76,824
NAICS 23 Construction	8	41	19	$28,409
NAICS 31-33 Manufacturing	3	10	5	$85,500
NAICS 44-45 Retail trade	14	98	45	$18,979
NAICS 62 Health care and social assistance	6	32	15	$18,992

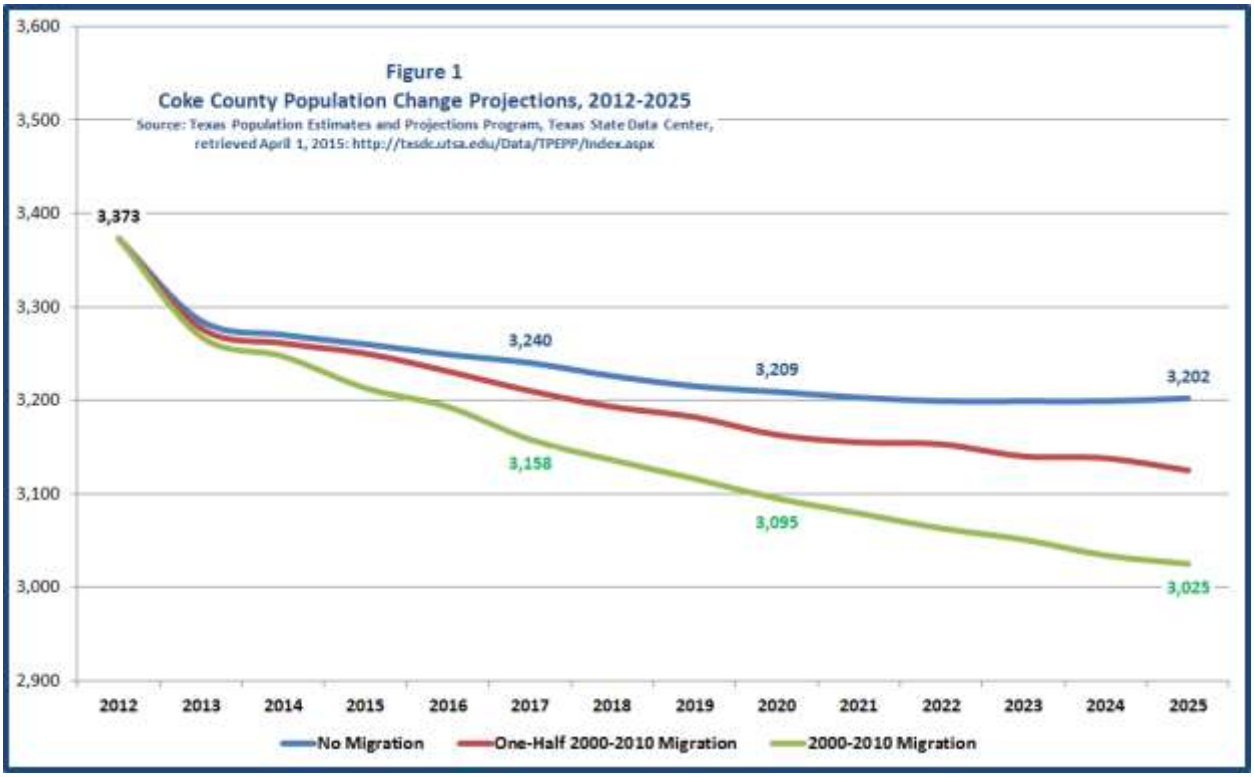
Source: US Department of Labor, Bureau of Labor Statistics, Quarterly Census of Employment and Wages, April 1, 2015: http://www.bls.gov/cew/

[1] The estimate of 1,535 labor force participants is from the US Census Bureau's 2009-2013 5-Year American Community Survey, retrieved October 5, 2015: http://factfinder.census.gov.

NAICS code 44-45 (retail trade) comprised 45 percent of private industry employment, making it the largest source of private employment in Coke County. However, the average annual rate of pay in the retail trade sector is one of the lowest rates compared to all the other private industries in Coke County.

DEMOGRAPHICS

The Census Bureau's 2013 estimate of the Coke County resident population is 3,210.[2] The most recent official Texas estimate from the State Demographer is 3,373 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 Coke 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 3,240 residents in 2017, 3,209 by 2020, and 3,202 for 2025 (an overall 5% decrease from 2012-2015).

[2] 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.

Vulnerable Populations

Coke County has a majority Non-Hispanic White population as described in Table 2 below. The county's minority residents comprised 21% of the population in 2012 according to estimates of the State Demographer. The majority of the minority population in Coke County is comprised of Hispanic residents.

Table 2
Race & Ethnicity: 2012 Estimate with Projections to 2025

Groups	2012		2017		2020		2025	
White, Non-Hispanic	2,669	79%	2,505	77%	2,441	76%	2,370	74%
Total Minority	704	21%	735	23%	768	24%	832	26%
Hispanic	636	19%	662	20%	692	22%	752	23%
Black	7	0%	7	0%	7	0%	7	0%
Other	61	2%	66	2%	69	2%	73	2%
Total Population	3,373	100%	3,240	100%	3,209	100%	3,202	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 19 to 23 percent between 2012 and 2025. The Non-Hispanic White population is expected to decrease from 79 to 74 percent.

Children under age 18 (numbering 678) made up 20 percent of the county's population in 2012 according to State estimates. Youngsters of school attendance age (5-17 years) comprised 77 percent of the children, while preschoolers accounted for 23 percent.

Table 3
Children: 2012 Estimate with Projections to 2025

Groups	2012		2017		2020		2025	
All Children (under age 18)	678	100%	612	100%	563	100%	595	100%
School-age children (ages 5-17)	524	77%	464	76%	404	72%	401	67%
Pre-school-age children (under 5)	154	23%	148	24%	159	28%	194	33%

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 decrease by 2025. The concentration of the child population is expected to shift: while the percentage of school-age children will decrease to 67 percent, the percentage of pre-school-age children will increase to 33 percent.

The county was home to 886 senior citizens in 2012 according to State estimates. They comprised 26 percent of the total population. Hispanics (numbering 71) made up 8 percent of the senior residents in the county.

Table 4 Seniors: 2012 Estimate with Projections to 2025								
Groups	2012		2017		2020		2025	
Total Population	3,373	100%	3,240	100%	3,209	100%	3,202	100%
Seniors (65 & over)	886	26%	917	28%	946	29%	977	31%
Hispanic Seniors (65 & over)	71	8%	91	10%	107	11%	138	14%

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

Official State projections suggest steady growth of the senior population to 31 percent by 2025. Hispanics will account for much of the increase. The number of Hispanic seniors is expected to nearly double between 2012 and 2025, increasing their representation within the elder population from 8 to 14 percent.

There are 1.02 females in Coke County for every male. Women and girls account for 51 percent of the population according to the State Demographer's 2012 population estimates. Projections indicate the female population will slowly decrease in number at the same rate as the male population through 2025.

Table 5 Females: 2012 Estimate with Projections to 2025								
Groups	2012		2017		2020		2025	
Total Population	3,373	100%	3,240	100%	3,209	100%	3,202	100%
Female (all ages)	1,705	51%	1,654	51%	1,635	51%	1,627	51%
Female (ages 13-17)	103	6%	125	8%	83	5%	76	5%
Hispanic Female (ages 13-17)	19	18%	37	30%	31	37%	19	25%

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

Girls age 13-17 are particularly vulnerable to risks of teen pregnancy and a range of associated factors. In Coke County, girls age 13-17 only comprise six percent of the female population. The State Demographer estimates a decline in the population of girls age 13-17 from 2012 to 2025.

COMMUNITY HEALTH RESOURCES

The main health resources in Coke County are divided between two separate hospital districts. The City of Bronte is home to the East Coke County Hospital District; West Coke County Hospital District is located in the county seat, Robert Lee. Each district owns and operates separate nursing home facilities and emergency medical ambulance services. Records from the Texas Comptroller's Office for 2013 indicate a contrast in revenue to support the facilities and activities of the two districts.

Table 6
2013 Tax Rates and Levies for
Coke County Hospital Districts

District	East Coke County	West Coke County
Taxable Value	$130,254,720	$416,373,800
Tax Rate (cents)	0.409447	0.249923
Levy (Rate/$100 Value)	$533,324	$1,040,614
Levy Rank (137 Districts)	31	55

Source: "Special District Rates and Levies," 2013, Texas Comptroller of Public Accounts, retrieved May2, 2015: http://www.window.state.tx.us/taxinfo/proptax/taxrates/.

The tax levies for both hospital districts in Coke County are actually quite limited compared to districts across Texas. The East Coke District levy rank of 31 indicates that only 30 of the 137 Texas hospital districts levying a tax in 2013 generated a smaller revenue amount than the East District. Likewise, 54 of 137 taxing districts generated a smaller amount than the West Coke District.[3]

Still, East Coke County Hospital District's tax rate (nearly 41 cents per $100 of property value) is about 64 percent higher than the West Coke County District rate (nearly 25 cents per $100 of value). However, the taxable value of properties in the West District is more than three times higher than in the East District. Consequently, the revenue (or levy) generated by the West District ($1,040,614) was nearly double that of the East ($533,324).

Utilization of Health Resources

Features of the tax levies of the two county hospital districts are reflected in the nursing home facilities they provide. Bronte Health and Rehab Center, supported by the East District, provides skilled nursing care with available inpatient physical therapy, occupancy therapy, and speech

[3] See "Special District Rates and Levies," 2013, Texas Comptroller of Public Accounts, retrieved May 2, 2015: http://www.window.state.tx.us/taxinfo/proptax/taxrates/.

therapy. Robert Lee Care Center is also a skilled nursing facility featuring a similar set of complementary professional services.[4]

Both facilities, however, are underutilized compared to other nursing home facilities across Texas. Publicly available 2015 data provided by the Centers for Medicare and Medicaid Services (CMS) indicate that the two Coke County facilities have a combined certified bed capacity of 132 with approximately 70 inpatients in residence. [5] This computes to a countywide occupancy rate of 53 percent, which compares to a statewide rate of 71 percent for 1,220 Texas nursing homes represented in the CMS 2015 data.[6]

Quality of care at the facilities also reflects the contrasting tax levy features of the supporting hospital districts. 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 Coke County nursing homes achieved average and above average ratings based on the 2015 CMS data for health inspections, staffing, and the overall facility ratings. On quality of care ratings, however, the Robert Lee facility fell below average (2 stars) and the Bronte facility rated much below average (1 star).[7]

The Texas EMS & Trauma Registries report that Texas hospitals received 105 trauma patients from Coke County over five years from 2010-2014. This computes to an average of 21 EMS trauma incidents per year. The majority (53 or 50.5%) were unintentional fall incidents followed by motor vehicle traffic injuries (14 or 13.3%).[8]

In addition, Texas hospital usage data documents a total of 2,244 visits by Coke County residents to outpatient facilities during 2013.[9] This computes to 1 visit for every 1.5 residents of the county. The vast majority of outpatient visits (88.6%) were to outpatient facilities located in neighboring Tom Green County (San Angelo).

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[4] For information on the Bronte facility, see http://www.brontehrc.net/. Information on the Robert Lee facility is available at http://www.robertleecarecenter.net/.

[5] Nursing Home Compare Data, Centers for Medicare and Medicaid Services, retrieved August 16, 2015: https://data.medicare.gov/.

[6] For the Bronte facility, the CMS data indicates a 62 bed capacity with a 63 percent occupancy rate. The data shows 70 beds with a 44 percent occupancy rate for the Robert Lee facility.

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

[8] Data provided by the Injury Epidemiology & Surveillance Branch from the Texas EMS & Trauma Registries, Texas Department of State Health Services, June, 2015. An undetermined number of Coke County incidents may have been served by EMS providers other than the two services operated by the county's hospital districts.

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

Coke County residents also checked into hospitals for 399 inpatient visits during 2013. This equals 1 hospitalization for every 8.5 county residents. Similar to the outpatient pattern, 343 or 86 percent of the hospitalizations were at facilities located in San Angelo.[10]

Other Health Care Resources

Table 7 depicts the supply EMS and other of key health professionals in Coke County according to the Department of State Health Services data for 2014. At first glance, the data indicate a relative oversupply of health workers. The total of 147 professionals residing in Coke County translates to one health worker per 22 residents. This ratio compares to one worker per 33 residents in the study region and one per 38 Texans statewide.

Table 7
Selected Health Professionals by Geography, 2014

Licensed or Certified Professionals	Number in Coke County (3,261 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	76	43	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	28	116	812	295	60,690	438
Licensed Chemical Dependency Counselors	0	No Supply	87	2,753	9,285	2,863
Licensed Professional Counselors	3	1,087	158	1,516	20,655	1,287
Licensed Vocational Nurses	21	155	1,197	200	77,624	342
Marriage and Family Therapists	1	3,261	12	19,961	3,149	8,441
Medication Aides	6	544	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	1	3,261	109	2,198	13,136	2,024
Physician Assistants	0	No Supply	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	9	362	1,696	141	206,027	129
Advanced Practice (APRN)	0	No Supply	119	2,013	15,194	1,749
Social Workers	2	1,631	117	2,047	19,536	1,361
Total Selected Health Professionals	147	22	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.

However, the cursory oversupply indication stems from the generous numbers of licensed vocation nurses, emergency medical services professionals, and certified nurse aides. The county actually has a severe shortage of core leading health care professionals. There is no primary care physician, no psychiatrist or psychologist, no physician assistant or advanced practice nurse, no pharmacist, and no dentist.

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

HEALTH STATUS

Family and Maternal Health

The Census Bureau's 2009-2013 5-Year American Community Survey estimates that 935 families reside in Coke County. Basic indicators of family and maternal health in the county indicate a number of noteworthy risks.

The ratio of divorces to marriages is high in Coke County compared to the study region and the state. State vital statistics data indicate that 78 marriages and 51 divorces were recorded in the county over the five years 2009-2013. This computes to a rate of 65 divorces per 100 marriages and compares to rates of 43.2 and 45 for the study region and the state respectively. Our calculations, however, indicated that about 3,894 (13.9% of) families were single-parent (mostly female-parent) families with one or more children. This is in line with the 20-county study region (13.1%) and somewhat lower that the statewide percentage (15.6%).

Table 8
Coke County Family and Maternal Health Indicators*

Indicator	Coke County	Study Region	Region 9	Texas
Divorce Rate (Annual Divorces as a Percent of Annual Marriages)	65.4	43.2	No Data	45.0
Percent Women Age 15 & Over who are Currently Divorced	11.4	12.4	No Data	12.2
Single-Parent Families (Percent of All Families)	11.8	13.1	No Data	15.6
Teen Pregnancy Rate (Pregnancies per 1,000 Females Age 13-17)	16.1	25.3	30.5	21.4
Teen Birth Rate (Births to Mothers Age 13-17 per 1,000 Same Age Females)	12.0	23.1	28.1	18.4
Abortion Rate (Abortions as a Percent of Pregnancies among Females Age 15-44)	11.0	9.8	9.0	15.6
Percent Births to Unmarried Mothers (Female Population Age 15-44)	42.9	44.6	45.9	42.3
Child Abuse Rate* (Confirmed Incidents of Abuse per 1,000 Children)	13.9	12.9	13.8	9.5
Intimate Violence Rate (Incidents of Family Violence & Sexual Assault per 1,000 Population)	1.5	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.

Coke County's rates of teen pregnancy and birth, abortion, births to unmarried mothers, and rates of child abuse and intimate violence are also in line or below the corresponding levels for the study region and the state.

Potentially Preventable Hospitalizations

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

Table 9
Potentially Preventable Hospitalizations for Adult Residents of Texas, 2008-2013

Potentially Preventable Hospitalizations	Coke County			Study Region			Texas		
	Number	Average Charge	Per Capita Charge	Number	Average Charge	Per Capita Charge	Number	Average Charge	Per Capita Charge
Bacterial Pneumonia	88	$24,032	$807	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	34	$21,016	$273	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	79	$28,325	$854	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	51	$34,196	$665	2,857	$15,320	$264	253,148	$31,674	$411
Diabetes Short-term Complications	0	$0	$0	466	$2,952	$11	63,954	$26,913	$88
Diabetes Long-term Complications	0	$0	$0	1,285	$9,768	$86	134,630	$46,872	$323
All Hospitalizations	252	$27,028	$2,599	15,141	$21,483	$1,371	1,433,955	$34,178	$2,512
Total Charges, 2008-2013		$6,811,045			$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/.

The Texas Department of State Health Services estimates that potentially preventable hospitalizations for ten identifiable health conditions generated $49 billion in hospital charges between 2008 and 2013. Some $386 million of these charges were incurred in the study region. Coke County's regional hospitals accounted for $6.8 million or slightly less than 2 percent of charges for the study area based on hospitalizations involving the conditions in Table 9.[11]

Leading Causes of Death

The Department of State Health Services recorded 275 deaths from all causes among Coke County residents between 2008 and 2012. This computes to a five-year crude death rate of 81.5 deaths per 1,000 residents based on the 2012 population estimate. This is considerably 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 study region.

[11] The Department of State Health Services recommends a combination of outpatient clinical and public health interventions to help reduce potentially preventable hospitalizations. See the recommended interventions at http://www.dshs.state.tx.us/ph/interventions.shtm.

Table 10 Leading Causes of Death in Coke County, 2008-2012				
Causes of Death	Deaths	Crude Death Rate*	Study Region Rate*	Texas Rate*
Malignant Neoplasms (ICD-10 Codes C00-C97)	53	1.6	9.6	7.0
Diseases of the Heart (ICD-10 Codes I00-I09, I11, I13, I20-I51)	45	1.3	9.5	7.4
Chronic Lower Respiratory Diseases (ICD-10 Codes J40-J47)	26	0.8	2.7	1.7
Alzheimer's Disease (ICD-10 Codes G30)	20	0.6	1.6	1.0
Accidents (ICD-10 Codes V01-X59, Y85-Y86)	12	0.4	2.0	1.8
Cerebrovascular Diseases (ICD-10 Codes I60-I69)	9	0.3	2.3	1.8
Diabetes Mellitus (ICD-10 Codes E10-E14)	7	0.2	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.				

Malignant neoplasms followed by diseases of the heart top the list of the ten leading causes of death in Coke County. The county has lower death rates than the state and the study region on each of the leading causes.

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.[12]

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.[13] 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.[14] 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 11 below 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.[15]

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[12] 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/.

[13] 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-report 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.

[14] 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.

[15] 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 11 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 12 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.[16]

The risk indicators in Table 12 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 12. 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.[17]

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

[16] 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/.

[17] 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 12
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 12 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 12 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[18] 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.

[18] Table 12 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 Coke 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 Coke County:

- Demographic Trend Data: Demographic projections of population growth in Coke 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 Coke 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 Coke 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 Coke County:

1. Needs of seniors.
   Increase capacity to address health needs of growing numbers of seniors.
2. Increase cooperation, collaboration, coordination, efficiency, and quality of hospital district services.

Develop and strengthen collaborative efforts between the East and West Coke County Hospital Districts to reduce duplication of services, increase efficiency, improve quality, and build utilization of nursing home and emergency medical services.

- Consider new strategies for the two districts working together to develop capacity for high quality ambulatory and acute care clinical services to county residents.

3. Recruit and Retain Core Health Professionals.
   Work cooperatively with the hospital districts and all community sectors to create an engaged process for recruiting and retaining core health professionals including one or more:
   - Dentist
   - Pharmacist
   - Physician Assistant
   - Nurse Practitioner
   - Psychologist
4. Preventative actions.
   Increase emphasis on preventative actions in screening, treatment, case management, and community outreach and education to reduce prevalence, preventable hospitalizations, and mortality from:
   - Cancer
   - Heart disease and cardiovascular disease
   - COPD
   - Complications arising from diabetes
   - Accidents
   - Influenza and pneumonia
   - Urinary tract infections
5. 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
6. Preventative outreach to the poor and extremely poor.
   Increase community capacity to reach the poor, extremely poor, and other vulnerable groups with preventative actions to:
   - Reduce obesity
   - Reduce cost and other barriers to medical care and treatment

- Improve case management and routine preventative screenings
- Provide education to promote healthy living and wellness

7. 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
8. Investment in community health needs.
   Develop collaborative community efforts to increase investment in community health needs. Consider solutions for expanding quality coverage of the uninsured, coordinated funding and development of proposals or campaigns, coordinated organizational and agency strategic planning, and other collaborative community capacity building approaches.

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 Coke 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 Coke County. Respondents ranked the needs based the specified criteria. A total of three responses ranking the identified needs for Coke County were returned.

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

- Prevalence: How many people are potentially affected by the issue, considering how it might change in the next 5 to 10 years?
    - 5 - More than 25% of the community (more than 1 in 4 people)
    - 4 - Between 15% and 25% of the community
    - 3 - Between 10% and 15% of the community
    - 2 - Between 5% and 10% of the community
    - 1 - Less than 5% of the community (less than 1 in 20 people)

- Significance: What are the consequences of not addressing this need?
    - 5 - Extremely High
    - 4 - High
    - 3 - Moderate
    - 2 - Low
    - 1 – Minimal Consequences

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

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

Table 13 reports the results of the prioritization of needs in Coke 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:

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

Thus, the first row of Table 13 shows the average prevalence score was 4.67 on the five-point scale. The averages for significance, impact, and feasibility were 4.67, 4.33, and 4.33 respectively. Applying the formula yields an adjusted average of 5.58, making an engaged process for recruiting and retaining core health professionals for primary care including physician assistants and nurse practitioners the highest priority need in Coke County. The related need to recruit and retain one or more pharmacists tied for 2nd priority, and the need for more dentists tied for 7th rank among the priorities.

Respondents also assigned high priority (tied for 2nd) to the need to develop collaborative efforts to invest in community health needs and emphasized needs for increased cooperation, collaboration, coordination, efficiency, and quality of services provided by the two hospital districts.

Access to nutritious foods and the need for affordable housing in safe neighborhoods were high priorities in Coke County (tied for 4th and 7th respectively). Two other top rated needs were efforts to reduce potentially preventable hospitalizations for flu and pneumonia (tied for 4th) and preventative actions to reduce cancer (tied for 10th).

Coke County key informants and stakeholders in also emphasized the importance of reducing cost and other barriers to treatment, increasing capacity to address the needs of seniors (each tied for 7th), and reaching vulnerable groups with healthy living and wellness prevention (tied for 10th).

Table 13
Prioritization of Coke County Community Health Needs

Community Health Need	Respondents	Prevalence	Significance	Impact	Feasibility	Adjusted Average
Create an engaged process for recruiting & retaining core health professionals for Primary Care including Physician Assistants & Nurse Practitioners	6*	4.67	4.67	4.33	4.33	5.58
Develop collaborative efforts to invest in community health needs, including cooperation, collaboration, coordination, efficiency, and quality of Hospital District Services	6*	4.33	4.17	4.17	3.83	5.08
Create an engaged process for recruiting & retaining core health professionals including Pharmacists	3	4.67	4.33	4.00	3.67	5.08
Develop & strengthen efforts to reduce potentially preventable hospitalizations (PPH) from Influenza & Pneumonia	3	4.67	4.00	4.00	3.33	4.83
Increase the Residential Security of vulnerable populations by increasing affordable housing in safe neighborhood environments	3	4.00	4.00	4.00	3.67	4.83
Increase the Food Security of vulnerable populations by increasing access to nutritious foods	3	4.00	4.33	3.67	3.67	4.83
Increase capacity to reach vulnerable groups with preventative actions to reduce Cost & Other Barriers to treatment	3	4.00	4.00	4.33	3.33	4.75
Create an engaged process for recruiting and retaining core health professionals including Dentists	3	4.33	4.33	3.67	3.33	4.75
Increase capacity to address health needs of Seniors	3	4.33	3.67	3.67	3.67	4.75
Emphasize preventative actions (screening, treatment, case management, outreach & education) to reduce Cancer	3	4.00	4.00	4.00	3.33	4.67
Increase capacity to reach vulnerable groups with preventative actions to promote Healthy Living & Wellness	3	4.00	4.00	4.00	3.33	4.67
Create an engaged process for recruiting & retaining core health professionals including Psychologists	3	4.33	3.67	3.67	3.33	4.58
Increase access and capacity for vulnerable groups to quality behavioral health services by reducing Cost and Other Barriers	3	4.00	4.00	4.33	3.00	4.58
Increase capacity to reach vulnerable groups with preventative actions to improve Case Management	3	4.00	4.00	4.00	3.00	4.50
Develop & strengthen efforts to reduce potentially preventable hospitalizations (PPH) from Congestive Heart Failure	3	4.33	3.67	3.67	3.00	4.42
Emphasize preventative actions (screening, treatment, case management, outreach & education) to reduce Diabetes	3	4.00	3.67	4.00	3.00	4.42
Increase capacity to reach vulnerable groups with preventative actions to reduce Obesity	3	4.33	3.67	3.67	3.00	4.42
Develop & strengthen efforts to reduce potentially preventable hospitalizations (PPH) from COPD	3	4.00	3.67	3.67	3.00	4.33
Emphasize preventative actions (screening, treatment, case management, outreach & education) to reduce Heart & Vascular	3	4.00	3.67	3.67	3.00	4.33
Emphasize preventative actions (screening, treatment, case management, outreach & education) to reduce COPD	3	4.00	3.67	3.67	3.00	4.33
Emphasize preventative actions (screening, treatment, case management, outreach & education) to reduce mortality from Accidents	3	4.00	3.33	3.50	3.00	4.21
Increase capacity & access for vulnerable groups to quality behavioral health resources for prevention & treatment of Alcohol & Drug abuse	3	4.00	3.67	3.67	2.67	4.17
Develop & strengthen efforts to reduce potentially preventable hospitalizations (PPH) from UTI	3	4.33	3.00	3.00	3.00	4.08
Increase capacity & access for vulnerable groups to quality behavioral health resources for Smoking & Tobacco cessation	3	4.00	3.33	3.33	2.67	4.00
Increase capacity & access for vulnerable groups to quality behavioral health resources for prevention and treatment of Depression	3	4.00	3.33	3.33	2.33	3.83

*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.