

Carnegie Tri-County Municipal Hospital Community Health Needs Assessment Summary and Implementation Strategy



Oklahoma Office of Rural Health

OSU Center for Rural Health

November 2019

This project is/was supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) under grant number U2WRH33319 and title: Medicare Rural Hospital Flexibility Grant Program for \$673,496, 0% financed with nongovernmental sources. This information or content and conclusions are those of the author and should not be construed as the official position or policy of, nor should any endorsements be inferred by HRSA, HHS or the U.S. Government.



CENTER FOR
RURAL HEALTH
OSU Center for Health Sciences

Table of Contents

Introduction.....	1
Oklahoma Office of Rural Health Partnership.....	2
Previous Community Health Needs Assessment- Priorities, Implementation, and Evaluation.....	2
Community Awareness of Hospital Programs.....	4
Carnegie Tri-County Municipal Hospital Medical Services Area Demographics.....	5
Table 1. Population of Carnegie Tri-County Municipal Hospital Medical Service Areas	6
Table 2. Existing Medical Services in the Carnegie Tri-County Municipal Hospital Medical Services Area.....	7
Table 3. Percent of Total Population by Age Group for Carnegie Tri-County Municipal Hospital Medical Service Areas, Caddo County and Oklahoma.....	8
Table 4. Percent of Total Population by Race and Ethnicity for Carnegie Tri-County Municipal Hospital Medical Service Areas, Caddo County and Oklahoma	10
Summary of Community Meetings.....	11
Economic Impact and Community Health Needs Assessment Overview, August 27, 2019.....	11
Table 5. Carnegie Tri-County Municipal Hospital Medical Service Area Health Sector Impact on Employment and Income, and Retail Sales and Sales Tax	13
Health Data, September 10, 2019	14
Table 6. Health Factors (Overall Rank 64)	15
Table 2. Health Outcomes (Overall Rank 75).....	16
Community Survey Methodology and Results, August 27 2019- October 8, 2019.....	17
Table 8. Zip Code of Residence.....	18
Table 9. Type of Specialist Visits	19
Table 10. Top Health Concerns in the Carnegie Area	21
Table 11. Additional Health and Wellness Services Survey Respondents Would Like to See Offered in the Carnegie Area	22
Primary Care Physician Demand Analysis, October 8, 2019	22
Table 12. Primary Care Physician Office Visits Given Usage by Local Residents in the Carnegie, Oklahoma Medical Service Area	23
Community Health Needs Implementation Strategy	24
Community Health Needs Assessment Marketing Plan	24
Appendix A- Hospital Services/Community Benefits	25

Appendix B Community Meeting Attendees.....	26
Appendix C- Meeting 1 Materials, August 27, 2019.....	29
Appendix D- Meeting 2 Materials, September 10, 2019	32
Appendix E- Survey Form and Meeting 3 Materials, October 8, 2019	34

Introduction

New requirements for nonprofit, 501 (c)(3), hospitals were enacted under the Patient Protection and Affordable Care Act (ACA), passed on March 23, 2010. One of the most significant of the new requirements is the Community Health Needs Assessment (CHNA) that must be conducted during taxable years after March 23, 2012 and submitted with IRS form 990. A CHNA must then be completed every three years following.

While the requirements are fairly new, the IRS has made strides in defining hospitals that must complete the CHNA as well as details of what is expected in the CHNA report to be submitted. At this time the only entities that must complete the CHNA are hospital organizations defined as:

- An organization that operates a State-licensed hospital facility
- Any other organization that the Secretary determines has the provision of hospital care as its principal function or purpose constituting the basis for its exemption under section 501 (c)(3).

The general goal behind the requirement is to gather community input that leads to recommendations on how the local hospital can better meet and serve residents' needs. The community input is typically derived from a community survey and a series of open meetings. Local health data are presented. Community members then identify and prioritize their top health needs.

After listening to community input, the hospital defines an implementation strategy for their specific facility. The implementation strategy is a written plan that addresses each of the health needs identified in the community meetings. To meet Treasury and IRS guidelines an implementation strategy must:

- Describe how the hospital facility plans to meet the health need, or
- Identify the health need as one the hospital facility does not intend to meet and explain why the hospital facility does not intend to meet the health need¹

After the needs are identified that the hospital can address, the implementation strategy must take into account specific programs, resources, and priorities for that particular facility. This can include existing programs, new programs, or intended collaboration with governmental, nonprofit, or other health care entities within the community.²

¹ Internal Revenue Service. 2011. Notice and Requests for Comments Regarding the Community Health Needs Assessment Requirements for Tax-Exempt Hospitals. Internal Revenue Bulletin: 2011-30.

² Ibid

The facility must make the recommendations and implementation strategy widely available to community members. The facility must adopt the implementation strategy in that same taxable year.

Oklahoma Office of Rural Health Partnership

The Oklahoma Office of Rural Health makes this program available to all rural facilities in Oklahoma free of charge. The Oklahoma Office of Rural Health works closely with the hospital and community members to develop an economic impact of the local health sector, develop and analyze a local health services survey, and gather and analyze local health data. Comments received from the previous CHNA are addressed if received. The community meetings are facilitated by a resource team that includes Corie Kaiser and Lara Brooks of the Oklahoma Office of Rural Health.

After the meetings conclude, the resource team assists the hospital in developing their implementation strategy. After implementation, the resource team will assist in evaluation of the strategies implemented and provide continued assistance with data and resources.

This document discusses the steps taken to conduct a CHNA for Carnegie Tri-County Municipal Hospital in 2019. It begins with a description of the hospital's medical service area, including a demographic analysis, and then summarizes each meeting that took place during the CHNA process. The report concludes by listing the recommendations that came out of the process and presenting the hospital's implementation strategy and marketing plan.

This report along with the implementation strategy was presented and approved by the governing board on November 25, 2019.

Previous Community Health Needs Assessment- Priorities, Implementation, and Evaluation

Carnegie Tri-County Municipal Hospital worked with the Oklahoma Office of Rural Health to complete a CHNA during 2016. The following identifies each priority, implementation taken, and an evaluation or impact of the implementation.

Priority: Poverty

Service Implemented/Partnerships: Case Management

Description: A case manager works with all patients (ED, outpatient, inpatient) to align resources if needed. This includes the hospital's financial assistance program, the local food pantry, applying for Medicaid and the Medicaid Advantage. This was first implemented in 2016. During 2019, 323 patients have benefited as of November 12, 2019.

Priority: Poverty

Service Implemented/Partnerships: Carnegie Hospital Employee Society

Description: This is operated on a voluntary basis through donations and fundraisers. Some of the recent beneficiaries include Carnegie Public Schools (donations for school supplies, head lice checks, a bed for the special education program), DHS angel tree. In 2018, four families in need received holiday baskets. The hospital also partnered with the school to purchase and provide food for students to take home in the evenings and weekends. This program provides a wide reach of assistance through the community. Therefore, an estimate of the individuals who benefited is not available.

Priority: Mental Health/Substance Abuse

Service Implemented/Partnerships: Strong Mind Program

Description: This program is an outpatient counseling program for adults aged 55 years and greater. Transportation and lunch are provided. Participants are initially evaluated by a psychiatrist. Their treatment plan is then created to determine their goals and objectives for the 30 days during the time services are offered. Patients are then re-evaluated every 30 days. This program started in June of 2018. It is estimated that nearly 35 individuals have benefited from this offering.

Priority: Mental Health/Substance Abuse

Service Implemented/Partnerships: Grief Support

Description: This program is open to all individuals in the community. This program has been marketed through the newspaper. Swing-bed patients are also made aware and referred if needed to this program. This program meets every Wednesday starting in August of 2019. To date 5 individuals have benefitted from this offering.

Priority: Mental Health/Substance Abuse

Service Implemented/Partnerships: Miracles Counseling

Description: This offering provides counseling for all ages. This is available for all ages for Medicaid patients. This program started in August of 2019, and to date, 5 individuals have benefited from this program.

Priority: Mental Health/Substance Abuse

Service Implemented/Partnerships: Hospital Policy for Care and Treatment of Psychiatric Patient

Description: This includes a new screening questions for the ED, outpatient, and inpatient. The goal is to improve the care and treatment of patients need psychiatric care. The hospital partners with Red Rock either out of Clinton and Chickasha who then sends a licensed professional to complete the exam with the patient if necessary. This policy was implemented in 2018 with revisions in 2019. In 2019, it is estimated that 12 individuals have benefited from this policy.

Priority: Community Outreach and Collaboration

Service Implemented/Partnerships: Community Liaison

Description: This role started in August 2018. This person is tasked with creating relationships with businesses, programs, schools, seniors, nursing homes, mainly everyone possible in the community. She shares with community members the resources of the hospital, but also listens to the needs of those community members. This is a fairly new role, and the overall impact of the number of individuals have directly benefited from this increased awareness or increased assistance is not readily available.

Community Awareness of Hospital Programs

A survey question was included for respondents to indicate which community programs they were aware of the hospital offering. The Strong Minds Program (senior counseling) was the top response with 16 respondents. Grief group (6 responses) and mental health (3 responses) were the most common responses. The full listing is included in the table below.

Community Programs Listed by Survey Respondents

Response Category	No.	%
Strong Minds/Senior Counseling	16	48.5%
Grief group	6	18.2%
Mental health	3	9.1%
Diabetes	1	3.0%
WIC	1	3.0%
Blood drives	1	3.0%
No response	5	15.2%
Total	33	100.0%

Carnegie Tri-County Municipal Hospital Medical Services Area Demographics

Figure 1 displays the Carnegie Tri-County Municipal Hospital medical services area. Carnegie Tri-County Municipal Hospital and all area hospitals are delineated in the figure. The surrounding hospitals are identified in the table below by county along with their respective bed count.

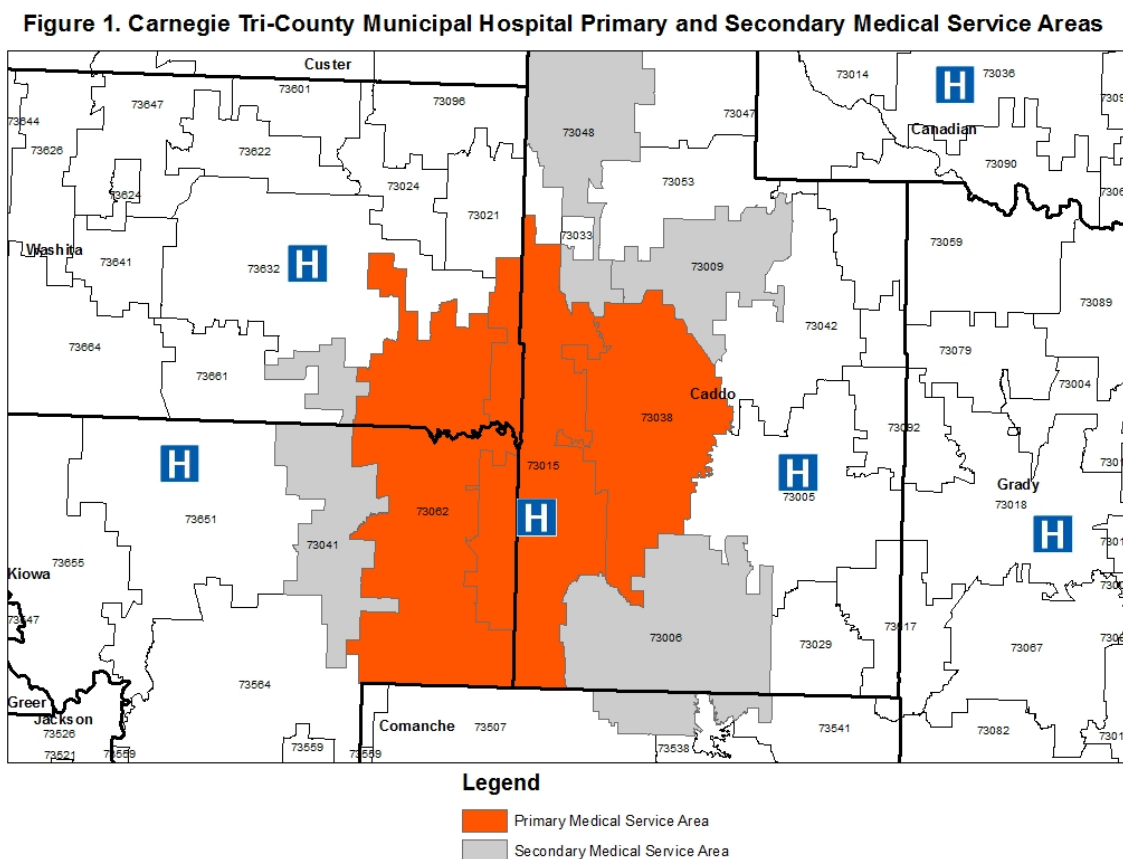


Figure 1. Carnegie Tri-County Municipal Hospital Medical Service Areas

City	County	Hospital	No. of Beds
Anadarko	Caddo	The Physicians' Hospital in Anadarko	25
Carnegie	Caddo	Carnegie Tri-County Municipal Hospital	17
El Reno	Canadian	Mercy Hospital El Reno, Inc.	48
Chickasha	Grady	Grady Memorial Hospital	99
Hobart	Kiowa	Elkview General Hospital	38
Cordell	Washita	Cordell Memorial Hospital	25

As delineated in Figure 1, the primary medical service area of Carnegie Tri-County Municipal Hospital includes the zip code areas of Carnegie, Mountain View, and Fort Cobb. The primary medical service area experienced a population decrease of 9.3 percent from the 2000 Census to the 2010 Census (Table 1). This same service area experienced an increase in population of 1.0 percent from the 2010 Census to the latest available, 2013-2017, American Community Survey.

The secondary medical services area is comprised of the zip code areas Hydro, Binger, Apache, and Gotebo. The secondary medical service area experienced a decrease in population of 5.2 percent from 2000 to 2010 followed by a population decrease of 2.9 percent from 2010 to the 2013-2017 American Community Survey.

Table 1. Population of Carnegie Tri-County Municipal Hospital Medical Service Areas

Population by Zip Code	2000 Populati on	2010 Population	2013-2017 Population	% Change 2000- 2010	% Change 2010-13- 17
<i>Primary Medical Service Area</i>					
73015 Carnegie	3,157	2,877	3,151	-8.9%	9.5%
73062 Mountain View	1,642	1,396	1,364	-15.0%	-2.3%
73038 Fort Cobb	2,153	2,032	1,856	-5.6%	-8.7%
Total	6,952	6,305	6,371	-9.3%	1.0%
<i>Secondary Medical Service Area</i>					
73048 Hydro	2,101	2,020	2,289	-3.9%	13.3%
73009 Binger	1,353	1,264	1,363	-6.6%	7.8%
73006 Apache	3,862	3,718	3,261	-3.7%	-12.3%
73041 Gotebo	454	366	244	-19.4%	-33.3%
Total	7,770	7,368	7,157	-5.2%	-2.9%

SOURCE: Population data from the U.S. Bureau of Census, Decennial Census 2000, 2010 and American Community Survey 2013-2017 (June 2019)

Table 2 displays the current existing medical services in the primary service area of the Carnegie Tri-County Municipal Hospital medical services area. Most of these services would be expected in a service area of Carnegie's size: five physician offices and clinics, one dental office, one nursing home, two home health providers, one EMS provider, and one pharmacy. The hospital provides swing bed, physical therapy, laboratory, radiology (CT, Ultrasound, and

XRay), and 24 hour emergency services. A complete list of hospital services and community involvement activities can be found in Appendix A.

Table 2. Existing Medical Services in the Carnegie Tri-County Municipal Hospital Medical Services Area

Count	Service
1	Hospital: Carnegie Tri-County Municipal Hospital
5	Physician offices and clinics
1	Dental office
1	Nursing home
2	Home health provider
1	EMS provider
1	Pharmacy

In addition to examining the total population trends of the medical service areas, it is important to understand the demographics of those populations. Table 3 displays trends in age groups for the primary and secondary medical service areas as well as Caddo County in comparison to the state of Oklahoma. Overall, the over 65 age group accounts for a larger share of the population for both medical service areas and Caddo County according to the latest, 2013-2017 American Community Survey. This cohort accounted for 14.7 percent of the total population at the state level. In terms of the medical service areas, this age group accounted for 19.3 percent of the primary medical service area, 18.9 percent of the secondary medical service area, and 16 percent of the population of Caddo County. The 45-64 age group accounts for the largest share of the population in the primary (25.5%) and secondary (27.1%) service area and Caddo County (25.1%). This is compared to the state share of 24.7 percent of the total population.

Table 3. Percent of Total Population by Age Group for Carnegie Tri-County Municipal Hospital Medical Service Areas, Caddo County and Oklahoma

Age Groups	Primary Medical Service Area	Secondary Medical Service Area	Caddo County	Oklahoma
2010 Census				
0-14	19.8%	20.2%	20.9%	20.7%
15-19	6.3%	6.7%	7.0%	7.1%
20-24	4.7%	5.1%	5.9%	7.2%
25-44	20.5%	23.0%	25.2%	25.8%
45-64	29.1%	28.4%	26.3%	25.7%
65+	<u>19.7%</u>	<u>16.5%</u>	<u>14.7%</u>	<u>13.5%</u>
Totals	100.0%	100.0%	100.0%	100.0%
Total Population	6,305	7,368	29,600	3,751,351
13-17 ACS				
0-14	21.3%	16.7%	21.1%	20.5%
15-19	6.0%	6.2%	6.6%	6.7%
20-24	5.4%	6.1%	6.4%	7.2%
25-44	22.4%	24.9%	24.8%	26.1%
45-64	25.5%	27.1%	25.1%	24.7%
65+	<u>19.3%</u>	<u>18.9%</u>	<u>16.0%</u>	<u>14.7%</u>
Totals	100.0%	100.0%	100.0%	100.0%
Total Population	6,371	7,157	29,437	3,896,251

SOURCE: U.S. Census Bureau, Decennial Census data for 2010 and American Community Survey data for 2013-2017 (www.census.gov [July 2019]).

Changes in racial and ethnic groups can impact the delivery of healthcare services, largely due to language barriers and dramatically different prevalence rates for specific diseases, such as diabetes. A noticeable trend in Oklahoma is the growth in the Hispanic origin population. In 2010, those of Hispanic origin accounted for 8.9 percent of the total state population. The latest American Community Survey data of 2013-2017 suggest that this

population group has experienced an increase to 10.1 percent of the total population. This trend is evident in Caddo County and both medical service areas. The share of the population identified as of Hispanic Origin accounted for 11.4 percent of the primary medical service area's population in 2013-2017 and 5.8 percent of the secondary medical service area during the same time period. The Hispanic Origin population accounted for 12.1 percent of the total population from 2013-2017 in Caddo County. An even more striking data point in both service areas and Caddo County is the large share of Native American population. In particular, this cohort accounts for 22 percent of the primary medical service area, 14.9 percent of the secondary and 24.6 percent of the total population of Caddo County. This is compared to the state rate of 7.3 percent.

**Table 4. Percent of Total Population by Race and Ethnicity for Carnegie Tri-County
Municipal Hospital Medical Service Areas, Caddo County and Oklahoma**

Race/Ethnic Groups	Primary Medical Service Area	Secondary Medical Service Area	Caddo County	Oklahoma
2010 Census				
White	69.3%	76.3%	63.1%	72.2%
Black	0.8%	0.7%	2.8%	7.4%
Native American ¹	21.9%	16.4%	24.5%	8.6%
Other ²	2.6%	1.9%	3.6%	5.9%
Two or more Races ³	5.3%	4.7%	6.0%	5.9%
Hispanic Origin ⁴	7.5%	6.0%	10.1%	8.9%
Total Population	6,305	7,368	29,600	3,751,351
13-17 ACS				
White	65.6%	77.6%	63.2%	72.6%
Black	1.2%	1.3%	2.2%	7.3%
Native American ¹	22.0%	14.9%	24.6%	7.4%
Other ²	5.1%	1.1%	3.7%	4.9%
Two or more Races ³	6.1%	5.1%	6.2%	7.8%
Hispanic Origin ⁴	<u>11.4%</u>	<u>5.8%</u>	<u>12.1%</u>	<u>10.1%</u>
Total Population	6,371	7,157	29,437	3,896,251

SOURCE: U.S. Census Bureau, Decennial Census data for 2010 and American Community Survey data for 2013-2017 (www.census.gov [July 2019]).

Summary of Community Meetings

Carnegie Tri-County Municipal Hospital hosted three communities between August 27, 2019 and October 8, 2019. The Oklahoma Office of Rural Health facilitated these meetings. Summaries of the information presented at each meeting are included below in chronological order.

Community members in attendance at these meetings included:

- Carnegie Tri-County Municipal Hospital representatives
- Retired individuals
- Dental Office
- Local EMS
- Local school leadership
- Representative from local tech center
- Local pharmacist
- Caddo County Health Department

Average attendance at the community meetings was 20-30 community members. Hospital representatives created a list of prominent leaders in the community. This list included chief of police, school leaders, business owners, the local dental office, local pharmacist, Indian Health Services, DHS, the local health department, churches, and Kiowa tribal members. Most of the invitations were in the format of a letter that were hand delivered to these individuals. This includes community members with knowledge and insight of the needs of low-income and racially diverse populations. Significant efforts were made to reach these populations and those who work closely with these populations.

Economic Impact and Community Health Needs Assessment Overview, August 27, 2019

A meeting was held to discuss the economic impact of the health sector and explain the process and need for the Community Health Needs Assessment. The economic impact of the health sector was reviewed at this meeting (and is summarized below).

Table 5 below summarizes the overall economic impact of the health sector on the Caddo County, Oklahoma economy. Local providers were asked to share their employment levels and of those employees how many were physicians/optometrists/dentists/pharmacists/etc. When available, payroll information was also collected from the establishments. When payroll information was not available, payroll was estimated using state level averages from the Bureau of Labor Statistics.

The health sector in the Carnegie Tri-County Municipal Hospital medical service area employs 168 FTE individuals. After applying a county-specific employment multiplier to each respective sector, there is a total employment impact of 215 FTE employees. The same methodology is applied to income. The local health sector has a direct income impact of over

\$10.5 million. When the appropriate income multiplier is applied, the total income impact is over \$13.4 million. The last two columns examine the impact this has on the retail sector of the local community. Recent data suggest that just 29.5% of personal income in Oklahoma will be spent on taxable goods and services locally. Therefore, if we just examine the impact made on retail from those employed in the health sector, this would account for over \$3.9 million spent locally, generating \$39,572 on a 1% tax. A copy of the meeting materials that were distributed can be found in Appendix C.

At the conclusion of the meeting, community members were asked to identify their top health concerns based on the demographic information presented and their local expertise. The following concerns were identified:

- More primary care services offered locally/More primary care
- Wellness/Preventative care
- Adult day center/Respite care/Caregiver relief
- Flu clinic/Drive through flu shots
- Dialysis
- Poverty levels/uninsured rates/Education level
- More services amenities to draw youth and young families back to Carnegie

Community members also identified areas of strength in their community. The following lists those areas:

- Proud of local facilities and ER/Revamp of facilities and services
- Increase in those utilizing local health services
- Food feedback on HCAHPS
- Nursing staff
- Quality of care received at Carnegie compared to metro facilities
- Team effort/Good relationship with local EMS
- Fort Cobb Clinic is part of the Farm Worker Health Program
- Local pride of the healthcare community
- Carnegie is a fully functioning community, clean town, friendly people, movie theater, businesses, etc.
- Kiowa tribal headquarters
- Love the hometown feel/Great place to raise a family
- Improvements at schools and hospital

Table 5. Carnegie Tri-County Municipal Hospital Medical Service Area Health Sector Impact on Employment and Income, and Retail Sales and Sales Tax

Health Sectors	Employment			Income			Retail	1 Cent
	Direct	Multiplier	Impact	Direct	Multiplier	Impact	Sales	Sales Tax
Hospitals	65	1.42	93	\$5,025,216	1.31	\$6,563,319	\$1,936,179	\$19,362
Physicians, Dentists & Other Medical Professionals	22	1.24	27	\$1,886,358	1.29	\$2,434,514	\$718,182	\$7,182
Other Medical & Health Services, Nursing Homes, and Pharmacies	81	1.17	95	\$3,646,337	1.21	\$4,416,279	\$1,302,802	\$13,028
Total	168		215	\$10,557,911		\$13,414,112	\$3,957,163	\$39,572

SOURCE: 2017 IMPLAN database, Minnesota IMPLAN Group, Inc.; Local data for employment, employee compensation and proprietor's income; income estimated based on state average incomes if local data not available; employment data from local survey.

* Based on the ratio between Oklahoma taxable sales and income (29.5%) – from 2017 Sales Tax Data and 2016 Personal Income Estimates from the Bureau of Economic Analysis.

Health Data, September 10, 2019

A community meeting was held September 10, 2019, to examine various sources of local health data. Various sources of health data were examined including data from the County Health Rankings and Roadmaps Program through the University of Wisconsin Population Health Institute, and the Robert Wood Johnson Foundation. The County Health Rankings program evaluates and ranks counties based on two distinct areas: Health Factors and Health Outcomes. Along with these two areas counties receive an overall rank within their state; therefore 1=best and 77=worst.

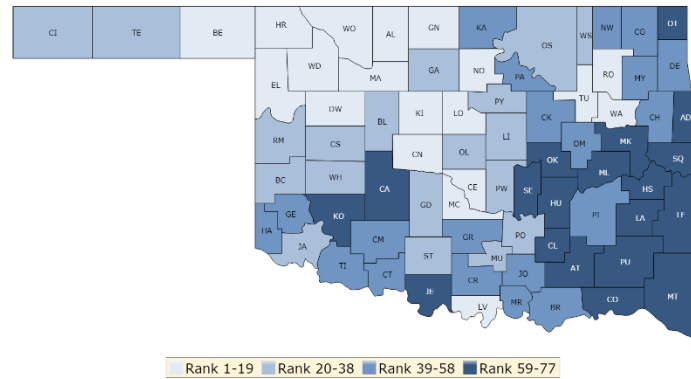
Health factors, considered tomorrow's health, are comprised of health behaviors (rank: 71), clinical care (rank: 65), social and economic factors (rank: 57), and physical environment (rank: 30). Caddo County's overall health factors rank is 64. Areas of concern include Caddo County's smoking rate, adult obesity rate, rate of physical inactivity, teen birth rate, the rate of uninsured, the population to primary care physician ratio, and the rate of mammography screenings among Medicare enrollees. In terms of social and economic factors, the rate of residents who have education or training beyond a high school diploma, the share of children in poverty, and the rate of injury deaths are all areas to take a deeper look. All health factors variables are presented in Table 6 along with Caddo County specific data, the top U.S. performers, and the state average. The yellow-highlighted categories are the areas identified by the County Health Rankings and Roadmaps as areas to explore (generally where Caddo County ranks very poorly compared to the national benchmark). The green-highlighted areas are where Caddo County performs well when compared to the national benchmark.

Table 6. Health Factors (Overall Rank 64)

Category (Rank)	Caddo County	Error Margin	Top U.S. Performers	Oklahoma
Health Behaviors (71)				
Adult Smoking	22%	21-23%	14%	20%
Adult Obesity	37%	32-43%	26%	33%
Food Environment Index	6.5		8.7	5.7
Physical Inactivity	32%	27-37%	19%	28%
Access to Exercise Opportunities	52%		91%	72%
Excessive Drinking	13%	13-14%	13%	13%
Alcohol-Impaired Driving Deaths	21%	14-28%	13%	27%
Sexually Transmitted Infections	518		153	548
Teen Births	55	49-60	14	39
Clinical Care (65)				
Uninsured	21%	19-23%	6%	16%
Primary Care Physicians	5,910:1		1,050:1	1,590:1
Dentists	5,830:1		1,260:1	1,660:1
Mental Health Providers	2,240:1		310:1	260:1
Preventable Hospital Stays	5,430		2,765	4,862
Mammography Screening	30%		49%	36%
Flu Vaccinations	44%		52%	46%
Social & Economic Factors (57)				
High School Graduation	85%		95%	83%
Some College	47%	42-51%	73%	60%
Unemployment	4.5%		2.9%	4.3%
Children in Poverty	29%	22-35%	11%	21%
Income Inequality	4.6	4.3-4.9	3.7	4.6
Children in Single-Parent Household	39%	33-45%	20%	34%
Social Associations	14.9		21.9	11.5
Violent Crime Rate	259		63	428
Injury Deaths	128	110-146	57	93
Physical Environment (30)				
Air-Pollution- Particulate Matter	8.9		6.1	9.4
Drinking Water Violations	Yes			
Severe Housing Problems	11%	9-13%	9%	14%
Driving Alone to Work	82%	81-84%	72%	83%
Long Commute- Driving Alone	31%	28-34%	15%	26%

Source: County Health Rankings & Roadmaps; University of Wisconsin Population Health Institute; Robert Wood Johnson Foundation

The following figure depicts each county's rank by shade. Caddo County's health is less favorable than most of the neighboring counties. Caddo County's health is comparable to Kiowa County.



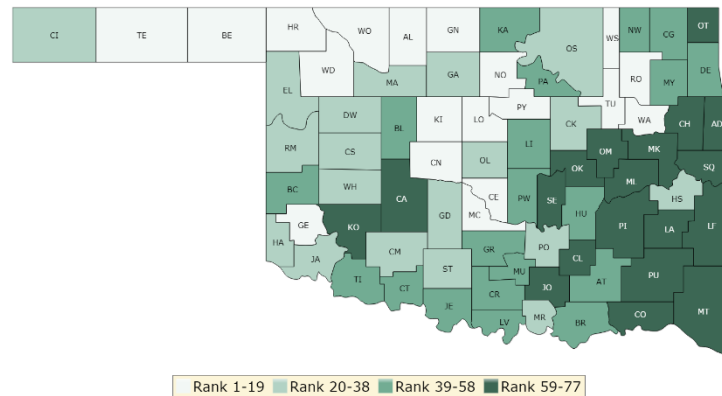
In terms of health outcomes, considered, today's health, Caddo County's ranking is 75th in the state. Health outcomes are comprised of two areas: length of life and quality of life. The variables for each of these sections are presented in Table 7.

Table 7. Health Outcomes (Overall Rank 75)

Category (Rank)	Caddo County	Error Margin	Top U.S. Performers	Oklahoma
Length of Life (76)				
Premature Death	13,900	12,300-15,500	5,400	9,300
Quality of Life (63)				
Poor or Fair Health	24%	23-24%	12%	20%
Poor Physical Health Days	5.0	4.9-5.2	3.0	4.5
Poor Mental Health Days	5.0	4.9-5.2	3.1	4.5
Low Birth Weight	8%	7-9%	6%	8%

Source: County Health Rankings & Roadmaps; University of Wisconsin Population Health Institute; Robert Wood Johnson Foundation

The following figure shows county health outcomes rankings by shades. In terms of health outcomes, Caddo County is comparable to Kiowa County, and is less favorable than the other surrounding counties. All meeting materials distributed at this meeting can be found in Appendix D.



At the conclusion of the meeting, community members were asked to identify their top health concerns based on the demographic information presented and their local expertise. The following concerns were identified:

- Mental health resources for schools including counselors for counseling (Anadarko safe room program)
- Access to exercise opportunities, trails
- Overall more support to children and families- including children living with grandparents
- Healthy dining options
- Tobacco/Vaping in schools

Community members also identified areas of strength in their community. The following lists those areas:

- School lunch program and backpack program
- Methodist Church Food Pantry collaboration with Regional Food Bank

Community Survey Methodology and Results, August 27 2019- October 8, 2019

A survey was designed to gauge hospital usage, satisfaction, and community health needs. The survey was available in both paper and web format. Surveys were also distributed at the first community meeting on August 27, 2019. Community members in attendance also received a follow-up email with a PDF copy of the survey and the electronic survey link. Hard copy surveys were made available at the hospital, distributed to patients. The electronic version

of the survey was posted on social media, emailed to the local school staff and hospital employees. A copy of the survey form can be found in Appendix E. Community members were asked to return their completed surveys to Carnegie Tri-County Municipal Hospital.

The survey ran from August 27 to September 20, 2019. A total of 73 surveys from the medical service area were completed. Of the surveys returned, 20 were electronic responses, and 53 were hard copy surveys. The survey results were presented at the October 8, 2019, community meeting.

Table 8 below shows the survey respondent representation by zip code. The largest share of respondents was from the Carnegie (73015) zip code with 47 responses or 64.4 percent of the total. Mountain View and Fort Cobb followed with 5 responses each.

Table 8. Zip Code of Residence

Response Category	No.	%
73015- Carnegie	47	64.4%
73062- Mountain View	5	6.8%
73038- Fort Cobb	5	6.8%
73005- Anadarko	2	2.7%
73006- Apache	1	1.4%
73009- Binger	1	1.4%
73013- Edmond	1	1.4%
73018- Chickasha	1	1.4%
73029- Cyril	1	1.4%
73041- Gotebo	1	1.4%
73053- Lookeba	1	1.4%
73099- Yukon	1	1.4%
73057- Maysville	1	1.4%
73521- Altus	1	1.4%
75402- Greenville, TX	1	1.4%
78593- Santa Rosa, TX	1	1.4%
79095- Wellington, TX	1	1.4%
No response	1	1.4%
Total	73	100.0%

The survey focused on several health topics of interest to the community. Highlights of the results include:

Primary Care Physician Visits

- 63.0% of respondents had used a primary care physician in the Carnegie service area during the past 24 months
- 87.0% of those responded being satisfied
- Only 22 respondents or 30.1% believe there are enough primary care physicians practicing in the Carnegie area
- 80.8% responded they were able to get an appointment, within 48 hours, with their primary care physician when they needed one
- When asked what type of medical provider survey respondents use for routine care, 59 individuals selected a primary care physician. Tribal health center followed with 13 responses, and nurse practitioner or PA had 11 responses.

Specialist Visits

Summary highlights include:

- 74% of all respondents report some specialist visit in past 24 months
- Most common specialty visited are displayed in Table 9
- No specialist visits occurred in Carnegie

Table 9. Type of Specialist Visits

Type of Specialist	No.	Percent
<i>Top 5 Responses</i>		
Cardiologist (0 visits in Carnegie)	16	18.4%
Orthopedist/Orthopedic Surg. (0 visits in Carnegie)	12	13.8%
Dermatologist (0 visits in Carnegie)	6	6.9%
Pulmonologist (0 visits in Carnegie)	6	6.9%
Neurologist/Neurosurgeon (0 visits in Carnegie)	6	6.9%
All others (2 visits in Carnegie)	<u>41</u>	<u>47.1%</u>
Total	<u>87</u>	<u>100.0%</u>

Hospital Usage and Satisfaction

Survey highlights include:

- 47.8% of survey respondents that have used hospital services in the past 24 months used services at Carnegie Tri-County Municipal Hospital
 - o Comanche County Memorial Hospital in Lawton (7.6%) and Southwestern Medical Center also in Lawton (6.5%) followed
 - o The most common response for using a hospital other than Carnegie Tri-County Municipal Hospital was availability of specialty care (including surgery) (41.5%) followed by physician referral (30.2%)
 - o The hospital usage rate is lower than the average of other surveys completed in Oklahoma (55.3%)
- 93.7% of survey respondents were satisfied with the services received at Carnegie Tri-County Municipal Hospital
 - o This was substantially higher than the average of other surveys completed in Oklahoma (86.4%)
- Most common services used at Carnegie Tri-County Municipal Hospital:
 - o Laboratory (24.1%)
 - o Emergency room (ER) (21.5%)
 - o Diagnostic Imaging (X-ray, CT, Ultrasound) (18.4%)

Top Health Concerns and Additional Health and Wellness Services

Survey respondents were asked to select (and write in) their top health concern in the Carnegie area. The top response was diabetes (14.1%) followed by substance abuse (13.8%) and mental health (11.2%). Table 10 displays all responses and the frequencies.

Table 10. Top Health Concerns in the Carnegie Area

	No.	%
Diabetes	38	14.1%
Substance abuse	37	13.8%
Mental health	30	11.2%
Heart disease	27	10.0%
Obesity	24	8.9%
Accessing specialty services	24	8.9%
Suicide	20	7.4%
Accessing primary care	17	6.3%
Cancers	16	5.9%
Dental	9	3.3%
Teen pregnancy	9	3.3%
Motor vehicle crashes	7	2.6%
Urgent care	1	0.4%
Cotton dust	1	0.4%
No response	9	3.3%
Total	269	100.0%

Survey respondents were also asked to list any additional health and wellness services they would like to see offered in the Carnegie area. This survey was an open-ended question. The top collective response was specialists including cardiologist, OB/GYN, Urologist, Oncologist with 13 responses. The next most common response was dialysis with 8 responses and urgent care or after hours care with 6 responses. Table 11 details the complete responses.

Table 11. Additional Health and Wellness Services Survey Respondents Would Like to See Offered in the Carnegie Area

Response Category	No.	%
Specialists: Cardiologist (6); OB/GYN (4); Urologist (2); Oncologist (1)	13	16.5%
Dialysis	8	10.1%
Urgent care/After hours care	6	7.6%
Don't know	5	6.3%
Mental health/Counseling/Substance abuse treatment	3	3.8%
Substance abuse treatment/Help	3	3.8%
More primary care physicians	3	3.8%
Diabetic education/Exercise/Awareness	3	3.8%
Optometrist	3	3.8%
Diagnostic Imaging: MRI and Bone Density	2	2.5%
Physical fitness classes/Walking/Yoga/Senior Yoga/Stretching	2	2.5%
Dental for uninsured	1	1.3%
Surgery	1	1.3%
Cancer care	1	1.3%
Prenatal care/Pregnancy crisis center	1	1.3%
Fellowship	1	1.3%
Suicide awareness	1	1.3%
Outpatient clinic	1	1.3%
Transportation to appointments	1	1.3%
Massages	1	1.3%
Healthy eating places	1	1.3%
More training and education	1	1.3%
Better equipped PT and OT with gym access for private pay	1	1.3%
24 hour sliding scale clinic that accepts uninsured	1	1.3%
Anything that will be helpful to others	1	1.3%
No response	14	17.7%
Total	79	100.0%

Primary Care Physician Demand Analysis, October 8, 2019

A demand analysis of primary care physicians was completed for the zip codes that comprise the Carnegie primary and secondary medical services areas. This analysis examined average primary care physician visit rates by gender and by age groups. Once age- and gender-specific coefficients were applied, total primary care physician visit numbers were calculated by service area. Table 12 displays potential primary care physician rates by shares of service area. For example, if 90% of residents in the primary medical services area and 10% of residents in the secondary medical services area utilize services of primary care physicians in the Carnegie medical services area, a total of 11,249 annual visits would occur. This would suggest that the

Carnegie medical services area would need 2.7 FTE primary care physicians to meet the needs of their existing population. Table 12 displays the estimated number of visits by share of medical services area.

Table 12. Primary Care Physician Office Visits Given Usage by Local Residents in the Carnegie, Oklahoma Medical Service Area

		Usage by Residents of Primary Service Area						
		70%	75%	80%	85%	90%	95%	100%
Usage by Residents of Secondary Service Area	5%	8,376	8,927	9,477	10,028	10,578	11,128	11,679
	10%	9,047	9,597	10,148	10,698	11,249	11,799	12,349
	15%	9,718	10,268	10,819	11,369	11,919	12,470	13,020
	20%	10,388	10,939	11,489	12,040	12,590	13,140	13,691
	25%	11,059	11,609	12,160	12,710	13,261	13,811	14,361
	30%	11,730	12,280	12,831	13,381	13,931	14,482	15,032
	35%	12,400	12,951	13,501	14,052	14,602	15,152	15,703
	40%	13,071	13,621	14,172	14,722	15,273	15,823	16,374
	45%	13,742	14,292	14,843	15,393	15,943	16,494	17,044
	50%	14,412	14,963	15,513	16,064	16,614	17,164	17,715

If 90% primary medical service area and 10 to 15% secondary medical service area, then the usage would be: 11,249 to 11,919 total primary care physician office visits in the Carnegie area for an estimated 2.7 to 2.8 total Primary Care Physicians.

(Based on 83.7 average weekly primary care physician visits with a 50 week year)

At the conclusion of the meeting, community members were asked if there is anything they would like to add to the list of concerns or strengths. The strength of the overall healthcare delivery system in the Carnegie area was discussed. In particular, the quality of care and responsive care provided by EMS and the hospital's ability to meet the needs of local residents in times of emergency.

Community members present were then asked to prioritize the previously identified health concerns. The following list outlines the identified priorities:

- Preventative care- This item was discussed along with the importance of vaccinations including childhood and annual influenza vaccinations. Community members also noted the need for drug and alcohol prevention programs. The need for a closed school campus was mentioned as a measure to keep children safe.
- Community discussions/Community support of local services- Community members discussed the importance of keeping the discussion going. The need for community education or updates of services available, collaborations, was also discussed as an effort

to help promote local services and resources. It was also mentioned the need for drug and alcohol resources and mental health resources to be discussed in a community meeting setting to allow for questions and answers.

Community Health Needs Implementation Strategy

The following lists the concerns along with steps the hospital and community plan to take to remedy the situation.

- Preventative care-
 - The hospital would like to host a semi-annual health fair to include blood pressure checks, blood sugar checks, tobacco cessation resources, depression screenings, and flu vaccines in the fall. The hospital will seek to partner with the Kiowa Tribe to co-host the events.
 - The hospital plans to continue to partner with area health fairs to provide depression screenings and materials related to the Strong Mind Program.
 - The hospital plans to continue to do lice checks and education. Also, the hospital has provided education for the school regarding bloodborne pathogens.
 - The hospital is also exploring the opportunity provide after-hours clinic services.
 - The anticipated outcome from these activities is improved flu vaccine rates, improved knowledge of factors that impact one's health to in turn make positive health decisions.
- Community discussions/Community support of local services-
 - The hospital is looking to host a listening session for spring of 2020 with the plan of inviting Red Rock Behavioral Services to have an open dialogue with community members.
 - The hospital will also explore opportunities to partner with local civic organizations and existing community activities to provide resources and updates.
 - The anticipated outcomes from these activities is to create a better dialogue with community members, gained knowledge of resources to improve local resident's overall health.

Community Health Needs Assessment Marketing Plan

The hospital will make the Community Health Needs Assessment Summary and Implementation Strategy Plan available on the Carnegie Tri-County Municipal Hospital website: www.carnegiehospital.com, and a copy will be available to be downloaded from the hospital's website (www.carnegiehospital.org). This document will also be available on the OSU Center for Rural Health blog site: (<http://osururalhealth.blogspot.com/p/chna.html>).

Appendix A- Hospital Services/Community Benefits

Service Provided by Carnegie Tri-County Municipal Hospital

OUTPATIENT

- X-Ray
- CT Scan
- Ultrasound
- DEXA Bone Density
- Laboratory
- Blood Administration
- Emergency Services
- Physical Therapy
- EKG
- Outpatient Nursing
- Sexual Assault Nurse Examiners

INPATIENT

- X-Ray
- CT Scan
- Ultrasound
- Laboratory
- Blood Administration
- Physical Therapy
- EKG
- Nutrition Services
- Cardiac Monitoring
- Drugs & Pharmaceuticals
- Swing Bed (Skilled Nursing and Skilled Therapy Beds)
- Isolation Beds
- Respiratory Therapy

PROFESSIONAL SERVICES

- Primary Care Clinics
- Emergency Room Providers

OTHER SERVICES

- Community CPR classes
- Public Forums & Community Education
- Dietary Services for Chamber of Commerce

Appendix B Community Meeting Attendees

Carnegie Community Health Needs Assessment

Meeting 1: Demographic and Economic Data and Economic Impact

27-Aug-19

Name	Title	Organization
Brenda Brantley	SW Coordinator	OSU CRH
Danielle Dewey	SW AHEC	Center Director
Caitlyn Blackburn	Hygienist	Liberty Dental
Jennifer Price	Office Manager	Liberty Dental
Delores Bartosovksy	City Trustee	Town of Carnegie
Allen Dietrich	Citizen	
Chaz Hurt	Pharmacist	Liberty Drug
Debbie Clinton	Town Clerk	Town of Carnegie
Patricia Courtney	Child Welfare	Department of Human Services
Ron Langmacher		
Tom Henton	Hospital CEO	Carnegie Tri County Municipal Hospital
Julie Heldman	RN	Carnegie Tri County Municipal Hospital
	RN-Infection	
April Summerlin	Preventionist	Carnegie Tri County Municipal Hospital
Deana Hill	Branch Manager	Farmers Bank
Suzie Nix	Realtor/Tax Prep	Carnegie Tax Service/Carnegie Realty
Louella Patterson	Retired	Medical PT Advocate
Lynn Ann Dietric	Citizen-Rancher	
Cindy Ledford	Citizen	
Amber Wolfe	APRN-CNP	Variety-Care Ft. Cobb
Emily Allen	LPN	Variety-Care Ft. Cobb
Christy Johnson	RN	Caddo County Health Department
Shannon T. Ware	RN, Quality Manager	Carnegie Tri County Municipal Hospital
	LMFT-C Program	
Rosanna Gomez	Coordinator	Carnegie Tri County Municipal Hospital

Carnegie Community Health Needs Assessment
Meeting 2: Health Indicators and Outcomes
10-Sep-19

Name	Title	Organization
Danielle Dewey	SW AHEC	Center Director
Francis Ingram	Retired	
Christy Johnson	RN Coordinating Nurse	Caddo County Health Department
Joe Ely	BIS Director	Caddo Kiowa Tech Center
Louella Patterson	Retired	Medical PT Advocate
Rep. Rhonda Baker	State Re. HD60	OK House of Representatives
Cindy Ledford	Citizen	
Allen Dietrich	Citizen	
Jennifer Price	Office Manager	Liberty Dental
Jessica Hammons	Dental Assistant	Liberty Dental
Alejandra Lowe	Front Desk	Liberty Dental
Amanda Dirickson	Dental Assistant	Liberty Dental
Evan Ketchum	Dental Assistant	Liberty Dental
Caitlyn Blackburn	Hygienist	Liberty Dental
Jamie Cameron	Dentist	Liberty Dental
Dr. Ashutosh Karnik	MD	Family Clinic
Amber Wolfe	APRN-CNP	Variety-Care Ft. Cobb
Emily Allen	LPN	Variety-Care Ft. Cobb
Chaz Hurt	Pharmacist	Liberty Drug
Julie Heldman	RN	Carnegie Tri County Municipal Hospital
Antonio Alvarado	Jr. Rotarian	Rotary Club
Sydnee Boettger	Jr. Rotarian	Rotary Club
Linda Harrison	Retired Teacher	
Tom Henton	Hospital CEO	Carnegie Tri County Municipal Hospital
Kelly Williams	Rotary Club Treasurer	Rotary Club
Kassie Manley	HR	Carnegie Tri County Municipal Hospital
Becky Roach		Carnegie Tri County Municipal Hospital
Doug White	CCO	Carnegie Tri County Municipal Hospital
Shannon T. Ware	RN, Quality Manager	Carnegie Tri County Municipal Hospital
Rosanna Gomez	LMFT-C Program Coordinator	Carnegie Tri County Municipal Hospital
April Summerlin	RN-Infection Preventionist	Carnegie Tri County Municipal Hospital

**Carnegie Community Health Needs Assessment
Meeting 3: Survey Results and Primary Care Physician Demand Analysis, Health
Concern Prioritization**

8-Oct-19

Name	Title	Organization
Danielle Dewey	SW AHEC	Center Director
Doug White	CCO	Carnegie Tri County Municipal Hospital
Tom Henton	Hospital CEO	Carnegie Tri County Municipal Hospital
Tre McPherson	Paramedic	Carnegie EMS
Ron Langmacher		
Allen Dietrich	Citizen	
Christy Johnson	RN Coordinating Nurse	Caddo County Health Department
Shannon T. Ware	RN, Quality Manager	Carnegie Tri County Municipal Hospital
April Summerlin	RN-Infection Preventionist	Carnegie Tri County Municipal Hospital
Julie Heldman	RN	Carnegie Tri County Municipal Hospital
Louella Patterson	Retired	Medical PT Advocate
Linda Harrison	Retired Teacher	
Delores Bartosovsky	Retired Postmaster	City of Carnegie Trustee
Annie Houston	RDH	Liberty Dental
Amanda Dirickson	Dental Assistant	Liberty Dental
Jessica Hammons	Dental Assistant	Liberty Dental
Caitlyn Blackburn	Hygienist	Liberty Dental
Jamie Cameron	Dentist	Liberty Dental

The Economic and Demographic Analysis of Carnegie Tri-County Municipal Hospital Medical Service Area

As part of the Community Health Needs Assessment

Economic Data

2017 Per Capita Income ¹	\$33,886 (53rd highest in state)
Employment (June 2019, preliminary) ²	11,276 (-4.2% from 2018)
Unemployment (June 2019, preliminary) ²	447 (2.8% from 2018)
Unemployment rate (June 2019, preliminary) ²	3.8% (50th lowest in state)
2017 Poverty rate ³	21.1% (61st lowest in state)
2017 Child poverty rate ³	28.5% (59th lowest in state)
2017 Transfer Payments ¹	\$268,321,000 (27.1% of total personal income, 46th lowest in state)
2017 Medical Benefits as a share of Transfer Payments ¹	43.5% (48th lowest in state)

¹Bureau of Economic Analysis, Regional Data, 2019, ²Bureau of Labor Statistics 2017-2018, ³U.S. Census Bureau, Small Area Income and Poverty, 2019

Education Data

At Least High School Diploma ¹	86.1% (38th highest in state)
Some College ¹	45.3% (55th highest in state)
At Least Bachelor's Degree ¹	17.0% (42nd highest in state)
2015-2016 Free and Reduced Lunch Eligible ²	78.2% (71st lowest in state)

¹U.S. Census Bureau, American Community Survey, 2013-2017, ²National Center for Education Statistics, 2015-2016.

Payer Source Data

2017 Uninsured Rate (under 65) ¹	20.3% (58th lowest in state)
2017 Uninsured Rate (under 19) ¹	10.7% (52nd lowest in state)
2016 Medicare share of total population ²	18.5% (32nd lowest in state)
2018 Medicaid share of total population ³	34.0% (60th lowest in state)

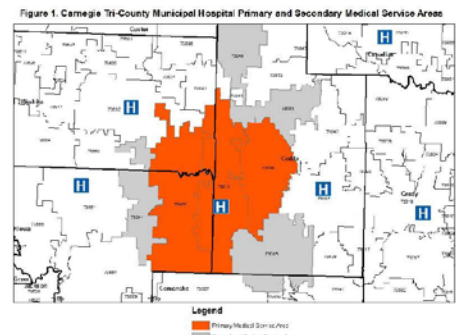
¹U.S. Census Bureau, Small Area Health Insurance Estimates, 2015, ²Centers for Medicare & Medicaid Services, Medicare Aged and Disabled by State and County, 2016

³Oklahoma Health Care Authority, Total Enrollment by County, 2018

Population (2013-2017)

Caddo County	29,437 (-0.6% from 2010)
Primary Medical Service Area	6,371 (1.0% from 2010)
Secondary Medical Service Area	7,157 (-2.9% from 2010)
Oklahoma	3,896,251 (3.9% from 2010)

U.S. Census Bureau, 2013-2017 American Community Survey 2010 Decennial Census



Percent of Total Population by Age Group for the Tri-County Municipal Hospital Medical Service Areas, Caddo County and Oklahoma

Age Groups	Primary Medical Service Area	Secondary Medical Service Area	Caddo County	Oklahoma
13-17 ACS				
0-14	21.3%	16.7%	21.1%	20.5%
15-19	6.0%	6.2%	6.6%	6.7%
20-24	5.4%	6.1%	6.4%	7.2%
25-44	22.4%	24.9%	24.8%	26.1%
45-64	25.5%	27.1%	25.1%	24.7%
65+	<u>19.3%</u>	<u>18.9%</u>	<u>16.0%</u>	<u>14.7%</u>
Totals	100.0%	100.0%	100.0%	100.0%
Total Population	6,371	7,157	29,437	3,896,251

SOURCE: U.S. Census Bureau, 2013-2017 American Community Survey

Percent of Total Population by Race and Ethnicity for the Carnegie Tri-County Municipal Hospital Medical Service Areas, Caddo County and Oklahoma

Race/Ethnic Groups	Primary Medical Service Area	Secondary Medical Service Area	Caddo County	Oklahoma
13-17 ACS				
White	65.6%	77.6%	63.2%	72.6%
Black	1.2%	1.3%	2.2%	7.3%
Native American ¹	22.0%	14.9%	24.6%	7.4%
Other ²	5.1%	1.1%	3.7%	4.9%
Two or more Races ³	6.1%	5.1%	6.2%	7.8%
Hispanic Origin ⁴	<u>11.4%</u>	<u>5.8%</u>	<u>12.1%</u>	<u>10.1%</u>
Total Population	6,371	7,157	29,437	3,896,251

SOURCE: U.S. Census Bureau, 2013-2017 American Community Survey

For additional information, please contact:

Lara Brooks, Rural Health Analyst, lara.brooks@okstate.edu

Corie Kaiser, Director, corie.kaiser@okstate.edu

This project is/was supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) under grant number H54RH00058 and title: Medicare Rural Hospital Flexibility Grant Program for \$670,326, 0% financed with nongovernmental sources. This information or content and conclusions are those of the author and should not be construed as the official position or policy of, nor should any endorsements be inferred by HRSA, HHS or the U.S. Government.



Carnegie Tri-County Municipal Hospital Economic Impact



Healthcare, especially a hospital, plays a vital role in local economies.

Carnegie Tri-County Municipal Hospital **directly** employs **65** people with an annual payroll of over **\$5 million** including benefits

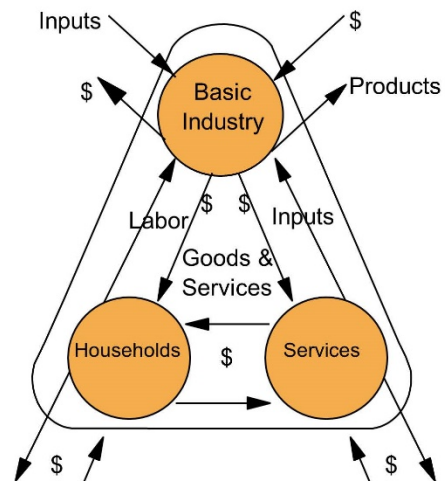
- These employees and income create an additional **28 jobs** and over **\$1.5 million** in income as they interact with other sectors of the local economy
- **Total impacts= 93 jobs and over \$6.5 million**
- Other segments of the healthcare sector (Doctors, Nurses, Pharmacies, etc.) provide another **103 jobs** and an additional **\$5.5 million** in wages
- Their interactions and transactions within the local economy create:
- **Total health sector impacts= 168 jobs and 10.5 million (Including the hospital)**
- Over **\$3.9 million** in retail sales generated from the presence of the health sector

Healthcare and Your Local Economy:

- Attracts retirees and families
- Appeals to businesses looking to establish and/or relocate
- High-quality healthcare services and infrastructure foster community development
- Positive impact on retail sales of local economy

Consider what could be lost without the hospital:

- Pharmacies
- Physicians/Specialists
- Potential Retail Sales



Source: Doeksen, G.A., T. Johnson, and C. Willoughby. 1997. Measuring the Economic Importance of the Health Sector on a Local Economy: A Brief Literature Review and Procedures to Measure Local Impacts

For additional information, please contact:
Lara Brooks, Rural Health Analyst, lara.brooks@okstate.edu
Corie Kaiser, Director, corie.kaiser@okstate.edu
Oklahoma Office of Rural Health
Phone: 405.945.8609



CENTER FOR HEALTH SCIENCES
OKLAHOMA STATE UNIVERSITY

This project is/was supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) under grant number H54RH00058 and title: Medicare Rural Hospital Flexibility Grant Program for \$670,326, 0% financed with nongovernmental sources. This information or content and conclusions are those of the author and should not be construed as the official position or policy of, nor should any endorsements be inferred by HRSA, HHS or the U.S. Government.

Appendix D- Meeting 2 Materials, September 10, 2019

Health Indicators and Outcomes for Caddo County *As part of the Community Health Needs Assessment*

Table 1. Health Factors (Overall Rank 64)

Category (Rank)	Caddo County	Error Margin	Top U.S. Performers	Oklahoma
Health Behaviors (71)				
Adult Smoking	22%	21-23%	14%	20%
Adult Obesity	37%	32-43%	26%	33%
Food Environment Index	6.5		8.7	5.7
Physical Inactivity	32%	27-37%	19%	28%
Access to Exercise Opportunities	52%		91%	72%
Excessive Drinking	13%	13-14%	13%	13%
Alcohol-Impaired Driving Deaths	21%	14-28%	13%	27%
Sexually Transmitted Infections	518		153	548
Teen Births	55	49-60	14	39
Clinical Care (65)				
Uninsured	21%	19-23%	6%	16%
Primary Care Physicians	5,910:1		1,050:1	1,590:1
Dentists	5,830:1		1,260:1	1,660:1
Mental Health Providers	2,240:1		310:1	260:1
Preventable Hospital Stays	5,430		2,765	4,862
Mammography Screening	30%		49%	36%
Flu Vaccinations	44%		52%	46%
Social & Economic Factors (57)				
High School Graduation	85%		95%	83%
Some College	47%	42-51%	73%	60%
Unemployment	4.5%		2.9%	4.3%
Children in Poverty	29%	22-35%	11%	21%
Income Inequality	4.6	4.3-4.9	3.7	4.6
Children in Single-Parent Household	39%	33-45%	20%	34%
Social Associations	14.9		21.9	11.5
Violent Crime Rate	259		63	428
Injury Deaths	128	110-146	57	93
Physical Environment (30)				
Air-Pollution- Particulate Matter	8.9		6.1	9.4
Drinking Water Violations	Yes			
Severe Housing Problems	11%	9-13%	9%	14%
Driving Alone to Work	82%	81-84%	72%	83%
Long Commute- Driving Alone	31%	28-34%	15%	26%

Source: County Health Rankings & Roadmaps; University of Wisconsin Population Health Institute; Robert Wood Johnson Foundation



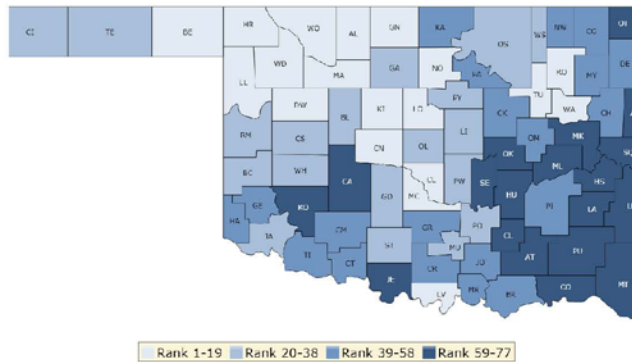
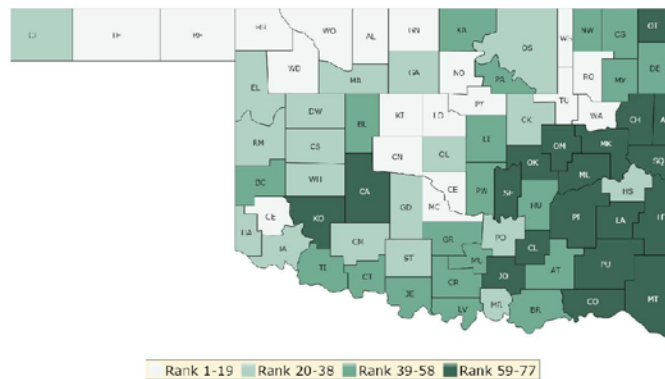


Table 2. Health Outcomes (Overall Rank 75)

Category (Rank)	Caddo County	Error Margin	Top U.S. Performers	Oklahoma
Length of Life (76)				
Premature Death	13,900	12,300-15,500	5,400	9,300
Quality of Life (63)				
Poor or Fair Health	24%	23-24%	12%	20%
Poor Physical Health Days	5.0	4.9-5.2	3.0	4.5
Poor Mental Health Days	5.0	4.9-5.2	3.1	4.5
Low Birth Weight	8%	7-9%	6%	8%

Source: County Health Rankings & Roadmaps; University of Wisconsin Population Health Institute; Robert Wood Johnson Foundation



For additional information, please contact
 Lara Brooks, Rural Health Analyst, lara.brooks@okstate.edu
 Corie Kaiser, Director, corie.kaiser@okstate.edu
 Oklahoma Office of Rural Health

This project is/was supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) under grant number U2WRH33319 and title: Medicare Rural Hospital Flexibility Grant Program for \$673,496, 0% financed with nongovernmental sources. This information or content and conclusions are those of the author and should not be construed as the official position or policy of, nor should any endorsements be inferred by HRSA, HHS or the U.S. Government.



CENTER FOR HEALTH SCIENCES
 OKLAHOMA STATE UNIVERSITY

Appendix E- Survey Form and Meeting 3 Materials, October 8, 2019

Carnegie Tri-County Municipal Hospital Local Health Services Survey

Please return completed survey by September 10, 2019



The zip code of my residence is: _____

What is your current age: _____ What is your gender: _____

1. Has your household used the services of a hospital in the past 24 months?
☐ Yes (*Go to Q2*) ☐ No (*Skip to Q6*) ☐ Don't know (*Skip to Q6*)
2. At which hospital(s) were services received? (*please check/list all that apply*)
☐ Carnegie Tri-County Municipal Hospital (*Skip to Q4*) ☐ Other (*Please specify Hospital and City, then go to Q3*)

If you responded in Q2 that your household received care at a hospital other than Carnegie Tri-County

3. Municipal Hospital, why did you or your family member choose that hospital? (*Please answer then skip to Q6*)
☐ Physician referral ☐ Quality of care/Lack of confidence
☐ Closer, more convenient location ☐ Availability of specialty care
☐ Insurance reasons ☐ Other (*Please list below*)

If you responded in Q2 that your household received care at Carnegie Tri-County Municipal Hospital, what

4. hospital service(s) were used?
☐ Diagnostic imaging (X-ray, CT, Ultrasound) ☐ Hospital Inpatient
☐ Laboratory ☐ Skilled nursing (swing bed)
☐ Outpatient infusion/Shots ☐ Emergency room (ER)
☐ Physician services ☐ Other (*Please list below*)
☐ Physical or speech therapy
5. How satisfied was your household with the services you received at Carnegie Tri-County Municipal Hospital?
☐ Satisfied ☐ Dissatisfied ☐ Don't know
6. Has your household been to a specialist in the past 24 months?
☐ Yes ☐ No (*Skip to Q10*) ☐ Don't know (*Skip to Q10*)

What type of specialist has your household been to in the past 24 months and in which city were they located?

7.	<table><tr><th>Type of Specialist</th><th>City</th></tr><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></table>	Type of Specialist	City								
Type of Specialist	City										

8. Did the specialist request further testing, laboratory work and/or x-rays?
☐ Yes ☐ No ☐ Don't know
9. If yes, in which city were the tests or laboratory work performed?

Continue on reverse side...

10. What kind of medical provider do you use for routine care *(Please select all that apply)* ?

☐ Primary Care physician	☐ Mid-Level Clinic (Nurse Practitioner or PA)
☐ Tribal Health Center	☐ Emergency Room/Hospital
☐ Income Based Health Center	☐ Specialist
☐ Urgent care/Walk in clinic	☐ Other <i>(Please list below)</i>
☐ Health Department	

11. Has your household been to a primary care (family) doctor in the Carnegie area?

☐ Yes *(Go to Q12)* ☐ No *(Skip to Q13)* ☐ Don't know *(Skip to Q13)*

12. How satisfied was your household with the quality of care received in the Carnegie area?

☐ Satisfied ☐ Dissatisfied ☐ Don't know

13. Do you think there are enough primary care (family) doctors practicing in the Carnegie area?

☐ Yes ☐ No ☐ Don't know

14. Are you able to get an appointment, within 48 hours, with your primary care (family) doctor when you need one?

☐ Yes ☐ No ☐ Don't know

15. In the past 24 months, has your household used the services of an urgent care or after hours clinic?

☐ Yes ☐ No ☐ Don't know

16. Would your household utilize the services of an urgent care or after hours clinic if offered in Carnegie?

☐ Yes ☐ No ☐ Don't know

17. What concerns you most about health in the Carnegie area *(Please select all that apply)* ?

☐ Heart disease	☐ Substance abuse
☐ Cancers	☐ Obesity
☐ Diabetes	☐ Accessing primary care
☐ Dental	☐ Accessing specialty services
☐ Teen Pregnancy	☐ Motor vehicle crashes
☐ Suicide	☐ Other
☐ Mental health	

18. What additional health and wellness services would you like to see offered in the Carnegie area?

19. Are you aware of any community programs offered by the hospital?

☐ Yes ☐ No ☐ Don't know

Please list the community program(s)

20. How would you prefer to be notified of community events?

(Please select all that apply)

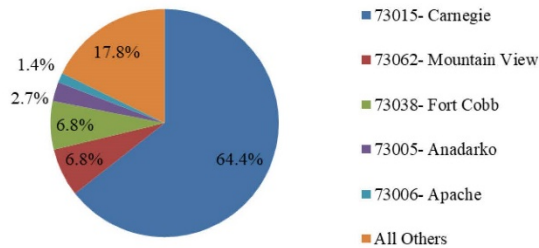
☐ Newspaper	☐ Email	☐ Social Media
☐ Radio	☐ Website	

Please mail completed survey to:
Carnegie Tri-County
Municipal Hospital
102 N Broadway
Carnegie, OK 73015
Or, return to hospital administration

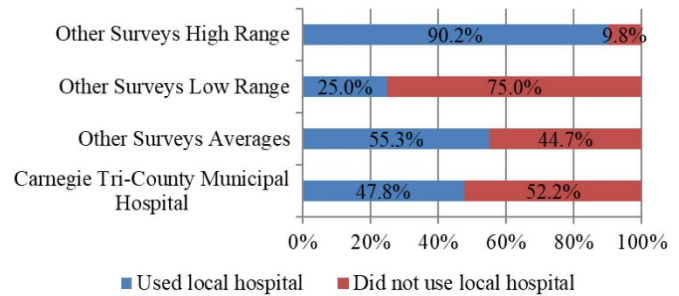
Carnegie Tri-County Municipal Hospital Community Survey Results

As part of the Community Health Needs Assessment

Zip Code of Residence, Top 5 Responses



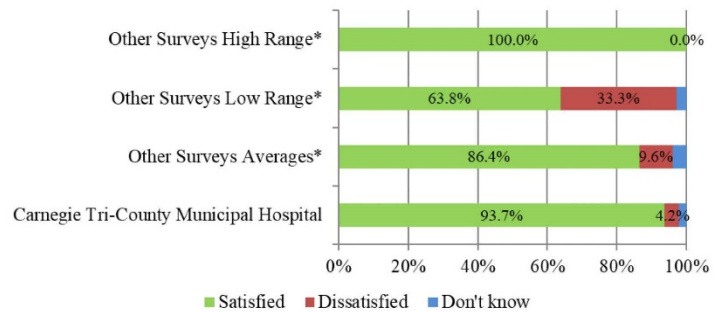
Hospital Utilization Comparison



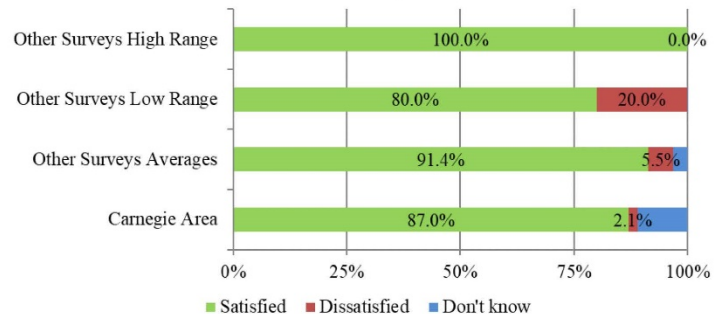
Type of Specialist Visits

Specialist	No.	Percent
Top 5 Responses		
Cardiologist (0 visits in Carnegie)	16	18.4%
Orthopedist/Ortho Surg. (0 visits in Carnegie)	12	13.8%
Dermatologist (0 visits in Carnegie)	6	6.9%
Pulmonologist (3 visits in Carnegie)	6	6.9%
Neurologist/Neurosurg. (0 visits in Carnegie)	6	6.9%
All others (2 visits in Carnegie)	41	47.1%
Total	87	100.0%

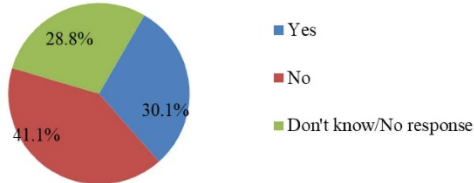
Satisfaction with Carnegie Tri-County Municipal Hospital



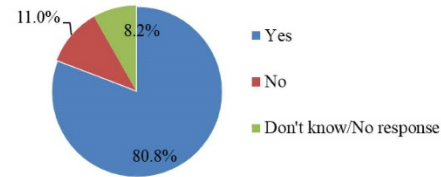
Satisfaction with Carnegie Area Primary Care Provider



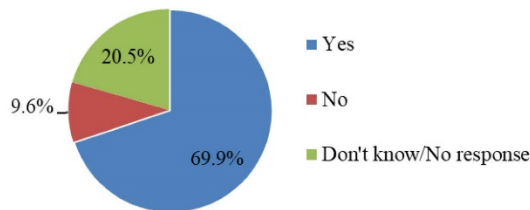
Do you think there are enough primary care doctors practicing in the Carnegie area?



Are you able to get an appointment, within 48 hours, with your primary care doctor when needed?



Would you utilize a walk in and/or after hours clinic if offered in Carnegie?



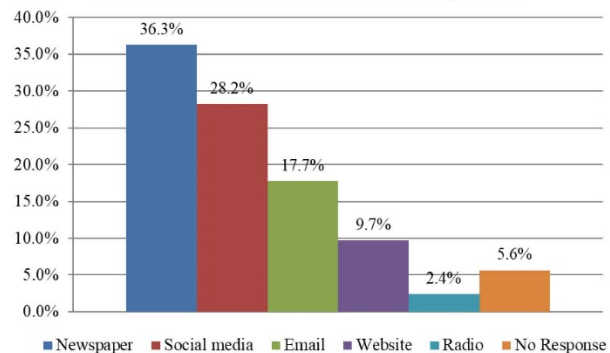
Healthcare concerns- Top 3 Responses

Concern	No.	Percent
Diabetes	38	14.1%
Substance abuse	37	13.8%
Mental health	30	11.2%
All others	164	61.0%
Total	269	100.0%

Additional Services to Offer- Top 3 Responses

Services	No.	Percent
Specialists: Cardiologist (6); OB/GYN (4); Urologist (2); Oncologist (1)	13	16.5%
Dialysis	8	10.1%
Urgent care/After hours care	6	7.6%
All others	52	65.5%
Total	79	100.0%

Preference of Notification of Community Events



For additional information, please contact
 Lara Brooks, Rural Health Analyst, lara.brooks@okstate.edu
 Corie Kaiser, Director, corie.kaiser@okstate.edu
 Oklahoma Office of Rural Health
 Phone: 405.945.8609

This project is/was supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) under grant number U2WRH33319 and title: Medicare Rural Hospital Flexibility Grant Program for \$673,496, 0% financed with nongovernmental sources. This information or content and conclusions are those of the author and should not be construed as the official position or policy of, nor should any endorsements be inferred by HRSA, HHS or the U.S. Government.



**CENTER FOR
RURAL HEALTH**
 OSU Center for Health Sciences

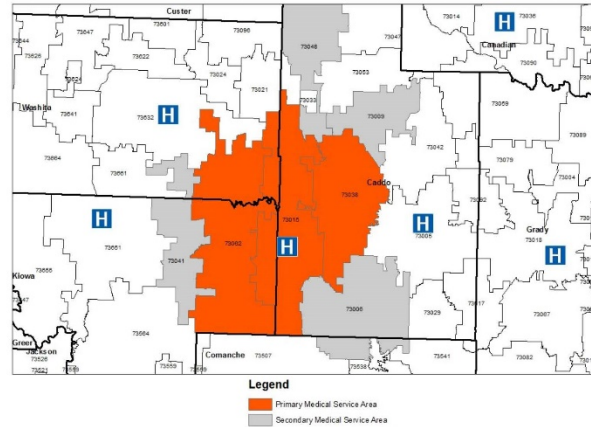
Primary Care Physician Demand Analysis for the Carnegie Medical Service Area

As part of the Community Health Needs Assessment

Table 1. Carnegie Tri-County Municipal Hospital Medical Service Areas

Zip Code	City	2013-2017 ACS Population
<i>Primary Medical Service Area</i>		
73015	Carnegie	3,151
73062	Mountain View	1,364
73038	Fort Cobb	1,856
	Totals	<u>6,371</u>
<i>Secondary Medical Service Area</i>		
73048	Hydro	2,289
73009	Binger	1,363
73006	Apache	3,261
73041	Gotebo	244
	Totals	<u>7,157</u>

Figure 1. Carnegie Tri-County Municipal Hospital Primary and Secondary Medical Service Areas



SOURCE: Population data from the U.S. Bureau of Census, 2013-2017 American Community Survey

Table 2a. Annual Primary Care Physician Office Visits Generated in the Carnegie, Oklahoma, Medical Service Areas

PRIMARY MEDICAL SERVICE AREA							
	Male			Female			
	13-17	Visit		13-17	Visit		Total
Age	Population	Rate ^[3]	Visits	Population	Rate ^[3]	Visits	Visits
Under 15	705	2.0	1,410	652	2.1	1,369	2,779
15-24	370	2.4	888	360	1.2	432	1,320
25-44	773	3.0	2,319	656	1.3	853	3,172
45-64	801	4.2	3,364	822	3.1	2,548	5,912
65-74	300	6.1	1,830	372	5.6	2,083	3,913
75+	197	7.4	1,458	363	8.0	2,904	4,362
Total	3,146		11,269	3,225		10,189	21,458

Primary Medical Service Area - Local Primary Care Physician office visits per year: 11,008



CENTER FOR
RURAL HEALTH
OSU Center for Health Sciences

Table 2b. Annual Primary Care Physician Office Visits Generated in the Carnegie, Oklahoma, Medical Service Areas

SECONDARY MEDICAL SERVICE AREA							
Age	Male			Female			Total Visits
	13-17 Population	Visit Rate ^[3]	Visits	13-17 Population	Visit Rate ^[3]	Visits	
Under 15	656	2.0	1,312	540	2.1	1,134	2,446
15-24	492	2.4	1,181	394	1.9	749	1,929
25-44	934	3.0	2,802	850	2.9	2,465	5,267
45-64	984	4.2	4,133	953	3.8	3,621	7,754
65-74	376	6.1	2,294	390	6.0	2,340	4,634
75+	253	7.4	1,872	335	6.7	2,245	4,117
Total	3,695		13,593	3,462		12,554	26,147

Secondary Medical Service Area - Local Primary Care Physician office visits per year: 13,413

Source: U. S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center of Health Statistics, "National Ambulatory Medical Care Survey: 2015 Summary.

Table 3. Primary Care Physician Office Visits Given Usage by Local Residents in the Carnegie, Oklahoma Medical Service Area

		Usage by Residents of Primary Service Area						
		70%	75%	80%	85%	90%	95%	100%
Usage by Residents of Secondary Service Area	5%	8,376	8,927	9,477	10,028	10,578	11,128	11,679
	10%	9,047	9,597	10,148	10,698	11,249	11,799	12,349
	15%	9,718	10,268	10,819	11,369	11,919	12,470	13,020
	20%	10,388	10,939	11,489	12,040	12,590	13,140	13,691
	25%	11,059	11,609	12,160	12,710	13,261	13,811	14,361
	30%	11,730	12,280	12,831	13,381	13,931	14,482	15,032
	35%	12,400	12,951	13,501	14,052	14,602	15,152	15,703
	40%	13,071	13,621	14,172	14,722	15,273	15,823	16,374
	45%	13,742	14,292	14,843	15,393	15,943	16,494	17,044
	50%	14,412	14,963	15,513	16,064	16,614	17,164	17,715

If 90% primary medical service area and 10 to 15% secondary medical service area, then the usage would be: 11,249 to 11,919 total primary care physician office visits in the Carnegie area for an estimated 2.7 to 2.8 total Primary Care Physicians.

(Based on 83.7 average weekly primary care physician visits with a 50 week year)

For additional information, please contact
 Lara Brooks, Rural Health Analyst, lara.brooks@okstate.edu
 Corie Kaiser, Director, corie.kaiser@okstate.edu
 Oklahoma Office of Rural Health
 Phone: 405.945.8609

This project is/was supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) under grant number U2WRH33319 and title: Medicare Rural Hospital Flexibility Grant Program for \$673,496, 0% financed with nongovernmental sources. This information or content and conclusions are those of the author and should not be construed as the official position or policy of, nor should any endorsements be inferred by HRSA, HHS or the U.S. Government.



CENTER FOR
RURAL HEALTH
 OSU Center for Health Sciences