Community Health Needs Assessment Report

Central Carolina Hospital

Lee County, North Carolina

CENTRAL CAROLINA
HOSPITAL

A Duke LifePoint Hospital

Paper copies of this document may be obtained at Central Carolina Hospital, 1135 Carthage Street, Sanford, NC 27330 or by phone 919-774-2100. This document is also available electronically via the hospital websitecentralcarolinahosp.com

Table of Contents

Sourced from the Robert Wood Johnson Foundation's County Health Rankings website:
http://www.countyhealthrankings.org/roadmaps/action-center

Perspective/Overview

The Community Health Needs Assessment (CHNA) defines priorities for health improvement, creates a collaborative community environment to engage stakeholders, and an open and transparent process to listen and truly understand the health needs of Lee County, North Carolina. This assessment analyzes community health as well as defines priorities for the next three years.

Central Carolina Hospital, as the sponsor of the assessment, engaged national leaders in community health needs assessment to assist in the project. Stratasan, a healthcare analytics and facilitation company out of Nashville, Tennessee was engaged to marshal the process and provide community health data and facilitation expertise. Stratasan provided the analysis of community health data, facilitated a focus group, conducted the CCH employee and community physician surveys, and facilitated a Community Health Summit to assist the community with determining significant health needs and goals for improvement.

Central Carolina Hospital board of directors approved and adopted this CHNA on December 1, 2016.

Starting in December 31, 2016, this report is made widely available to the community via Central Carolina Hospital's website, www.centralcarolinahosp.com, and paper copies are available free of charge at Central Carolina Hospital.

Participants

Forty-eight individuals from twenty-eight community and health and social services organizations collaborated to conduct a comprehensive CHNA process focused on identifying and defining significant health needs, issues, and concerns of Lee County. The three-month process centered on gathering and analyzing data as well as receiving input from persons who represented the broad interests of the community and had special knowledge of or expertise in public health to provide direction for the community and hospital to create a plan to improve the health of the community.

Project goals

1. To implement a formal and comprehensive community health assessment process, which will allow for the identification and prioritization of significant health needs of the community to allow for resource allocation, informed decision-making and collective action that will improve health.
2. To initiate a collaborative partnership between all stakeholders in the community by seeking input from persons who represent the broad interests of the community.
3. To support the existing infrastructure and utilize resources available in the community to instigate health improvement in the community.

"We initiated the Community Health Needs Assessment with the goals of identifying community health needs and setting priorities, and creating an implementation plan," said John Maxwell, Chief Executive Officer, Central Carolina Hospital. "It is our goal to use our findings to continue community mobilization of Lee County residents to improve the community health."

"The information we gathered both from public health data and from community stakeholders provided the insight CCH and the community needed to set priorities for significant health issues and will be used by CCH to create an implementation plan. We hope to collaborate with Lee Community Action Network (LeeCAN) and implement with the existing task forces." added Crystal Hickman, Marketing, Central Carolina Hospital.

Community Input and Collaboration

Data Collection and Timeline

In February, 2016, LifePoint Health contracted with Stratasan to assist in conducting a Community Health Needs Assessment for Lee County, North Carolina. CCH sought input from persons who represent the broad interests of the community using several methods:

- Information gathering, using secondary public health sources occurred in August and September of 2016
- A community focus group was held on August 23, 2016 with 23 community members participating. The community members were invited based on their representation of low-income, medically underserved, minorities and the community in general.
- A Community Summit was conducted on November 17, 2016 with 35 community stakeholders attending. The audience consisted of healthcare providers, the Lee County Health Department, businesses, schools, government representatives, newspaper, the faith community, human services, not-for-profit organizations, (medically underserved, United Way) and other community members.

As mentioned previously, forty-eight individuals from twenty-eight community and health care organizations collaborated to conduct a comprehensive CHNA process focused on identifying and defining significant health needs, issues, and concerns of Lee County. Below is a list of the organizations that participated, the population they represented, and how they were involved in the process.

In many cases, several representatives from each organization participated.

Organization	Population Represented (kids, low income, minorities, those w/o access)	How Involved
Boys & Girls Clubs of Central Carolina	Community kids K-12	Summit
Central Carolina Community College	Those w/o access; low income health sciences, education, medical programs	Summit, Focus Group
Central Carolina Hospital	All	Summit, Focus Group
Coalition for Families	Kids / low income	Summit, Focus Group
County Extension	All	Focus Group
CUOC	Food Needs	Summit
Duke LifePoint		Summit, Focus Group
El Refugio	Low income / minorities	Summit, Focus Group
Family Promise of Lee County	Low income, homeless	Summit
First Baptist	Community outreach / job seekers	Focus Group
Haven in Lee County	Domestic violence / sexual assault victims	Focus Group
Helping Hand Clinic	Uninsured	Summit, Focus Group
Jones Printing, CCH Board	Health care	Summit
Lee County Health Department	All	Summit, Focus Group
Lee County Partnership for Children	All	Focus Group
Lee County Schools	Students and families	Summit
Lee County Senior Services & COLTS	All, older adults	Summit, Focus Group
Lee County Sherrif's Office	Community Police / all	Focus Group
Lee County Social Services	All	Summit
Mentek		Summit
NAACP Lee County	Community	Summit
Retired teachers, school, ECA Assoc.	Adults / retired	Summit
Sanford Area Growth Alliance; Chamber of Commerce	Business community	Summit, Focus Group
Sanford Herald	Community	Summit
Star of Hope Baptist Church	Minorites	Summit
The Sanford Herald	Community	Summit
United Way of Lee County	Community / low income	Summit, Focus Group
YMCA	All	Focus Group

Input of Public Health Officials

Lee County Health Department representatives attended both the focus group and the Community Health Summit. At the Summit held on November 17, 2016, Ashley Graham, Health Educator of the Lee County Health Department, presented information and priorities from the Community Health Assessment completed in 2014.

The Lee County Health Department's current CHA covers the time-period 2014 through 2018. The health department is implementing around three focus areas of obesity, teen pregnancy and substance abuse/mental health.

Obesity

- Lee County was identified by CDC as a high risk county based on Behavioral Risk Factor Surveillance Systems Data (2012)
- According to the BRFSS data 40.4% of adults in Lee County are obese.
- If an individuals BMI is 30.0 or higher, it falls within the obese range.

Teen Pregnancy

- 2014 NC Teen pregnancy rate – 32.3 per 1,000
- 2014 Lee County pregnancy rate – 45.1 per 1,000

Mental Health/Substance Abuse

- The Healthy NC 2020 Objective is to decrease the average number of poor mental health days among adults in the past 30 days to 2.8. According to the Robert Wood Johnson Foundation Lee County residents experienced an average of 4.0 poor mental health days per month.
- When asked if in the past 30 days, there have there been any days when feeling sad or worried kept you from going about your normal business, twenty-two percent of survey respondents answered yes.
- Twenty four percent of the Community Health Opinion survey respondents reported being told by a doctor, nurse, or other health professional that they have depression or anxiety.

LeeCAN

Community Action Network is implementing the strategies around the top three priorities. There are three task forces currently working.

- Mental Health Partners
- Healthy Eating Active Living Taskforce (HEALTH)
- Teen Advisory Council

Where there are common initiatives between the state, county, hospitals, and community groups, coordination of efforts would be ideal.

Input of Medically Underserved, Low-Income, and Minority Populations

Input of medically underserved, low-income and minority populations was received during the community survey and community health summit. People representing these population groups were intentionally invited to participate in the focus group and the Community Health Summit.

Community Engagement and Transparency

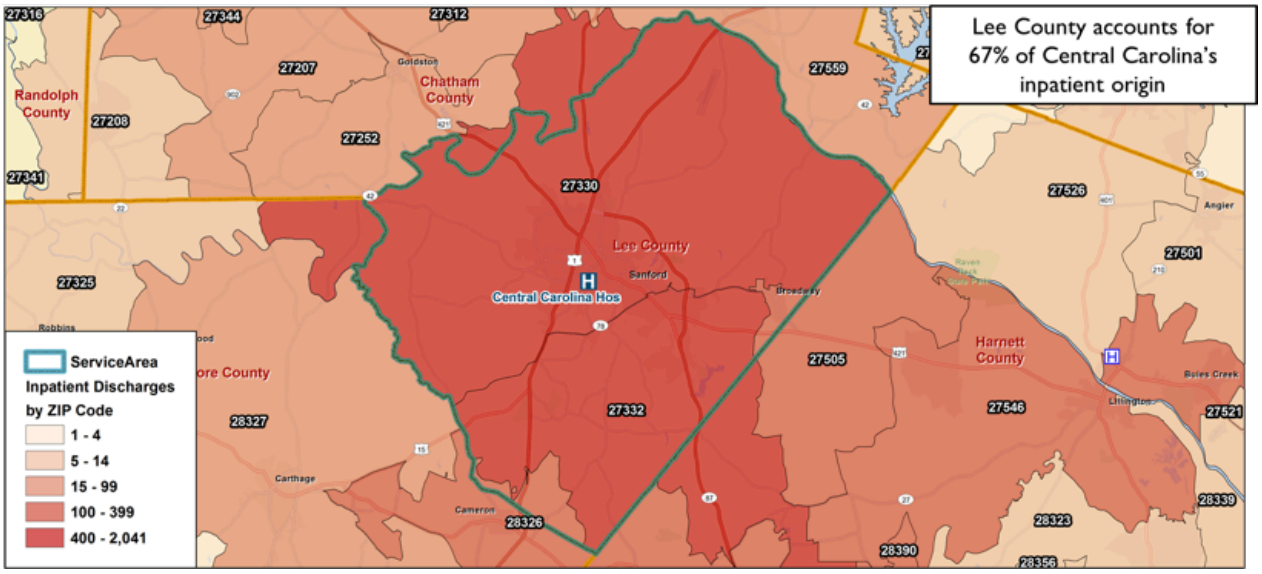
We are pleased to share the results of the Community Health Needs Assessment with our community in hopes of attracting more advocates and volunteers to improve the health of the community. The following pages highlight key findings of the assessment. We hope you will take the time to review the health needs of our community as the findings impact each and every citizen in one way or another; and join in the improvement efforts. The comprehensive data analysis may be obtained via a PowerPoint on the website or by contacting Central Carolina Hospital.

Community Selected for Assessment

CCH's health information provided the basis for the geographic focus of the CHNA. The map below shows where CCH received its patients; 67% CCH's inpatients came from Lee County. Therefore, it was reasonable to select Lee County as the primary focus of the CHNA. However, surrounding counties could benefit from efforts to improve health in Lee County.

The community included medically underserved, low-income or minority populations who live in the geographic areas from which CCH draws its patients. All patients were used to determine the service area without regard to insurance coverage or eligibility for financial assistance under CCH's Financial Assistance Policy.

Central Carolina Hospital Patients — 2015



Key Findings of the Community Health Assessment

Information Gaps

While this assessment was quite comprehensive, it cannot measure all possible aspects of health in the community, nor can it adequately represent all possible populations of interest. It must be recognized that these information gaps might in some ways limit the ability to assess all of the community's health needs.

For example, certain population groups (such as the homeless, institutionalized persons, or those who only speak a language other than English) were not represented in the primary data.

Other population groups (for example, pregnant women, lesbian/gay/bisexual/transgender residents, undocumented residents, and members of certain racial/ethnic or immigrant groups) might not be identifiable or might not be represented in numbers sufficient for independent analyses.

Process and Methods

Both primary and secondary data sources were used in the CHNA. Primary methods included:

- Community focus group
- Community Health Summit

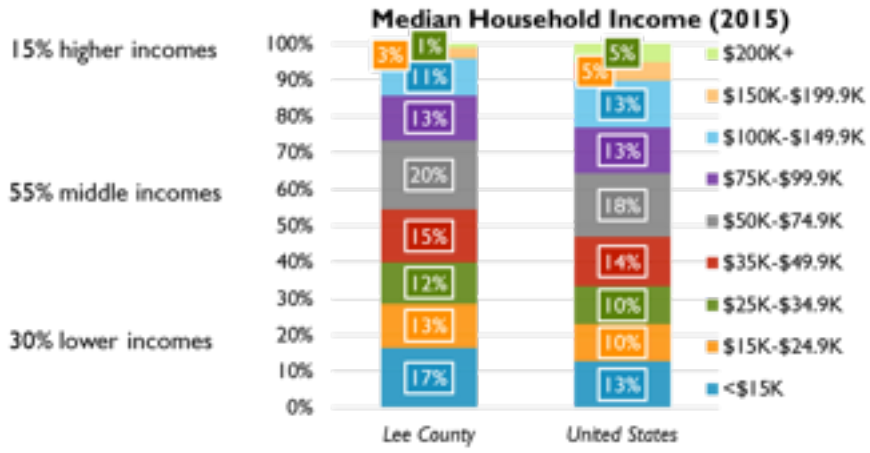
Secondary methods included:

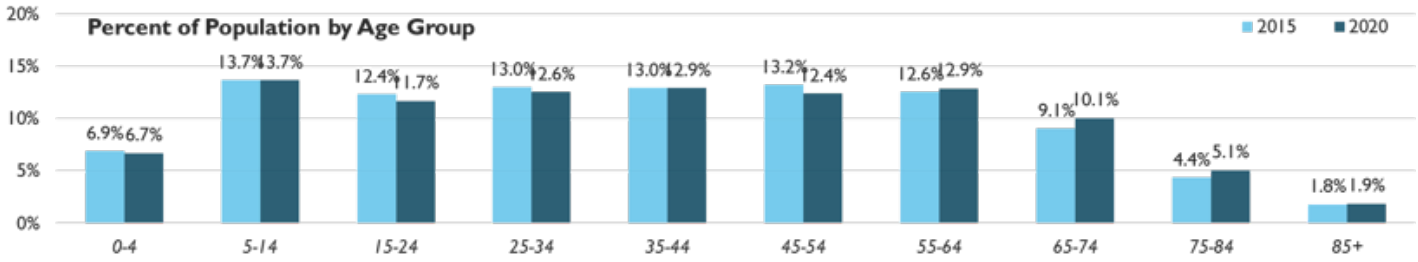
- Public health data – death statistics, county health rankings
- Demographics – population, poverty, uninsured
- Psychographics – Tapestry Segmentation

Demographics of the Community

The table below shows the demographic summary of Lee County compared to North Carolina and the U.S.

	Lee County		North Carolina	USA
Population (2015)		59,597	10,01449	318,536,439
Median Age (2015)		38.1	38.3	37.9
Median Household Income (2015)	*Lower HH Inc.*	$43,610	$46,306	$53,217
Annual Pop. Growth (2015-20)	*Positive Growth*	0.62%	1.16%	0.75%
Household Population (2015)		22,733	3,945,351	120,746,349
Dominant Tapestry (2015)		Southern Satellites (10A)	Southern Satelites (10A)	Green Acres (6A)
Businesses (2015)		2,372	407,540	13,340,415
Employees (2015)		33,888	4,723,334	158,567,719
Medical Care Index (2015)		78	90	100
Average Medical Expenditures (2015)		$1,498	$1,886	$2,098
Total Medical Expenditures (2015)		$34 M	$7.4 B	$253.3 B
Racial / Ethnic Make-up				
White		67%	67%	71%
Black		20%	22%	13%
American Indian		1%	1%	1%
Asian / Pacific Islander		2%	3%	5%
Other		11%	5%	7%
Mised Race		3%	3%	3%
Hispanic Origin		22%	9%	18%





Source: Esri

Lee County

- The population of Lee County was projected to grow .62% per year from 2015 to 2020, lower than the rate of NC at 1.16%, the U.S. at .75%.
- Lee County was younger (38.1 median age) than NC and slightly older than the U.S., with 15.3% 65 or over, and had lower median household income ($43,610) than both NC and the U.S.
- The medical care index measures how much the county spent out of pocket on medical care services. The U.S. index was 100. Lee County (78 index) spent 22% less than the average U.S. household out of pocket on medical care (doctor's office visits, prescriptions, hospital services).
- The racial make-up of Lee County was 67% white, 20% black, 1% American Indian, 2% Asian/Pacific Islander, 3% mixed race, 11% some other race, and 22% Hispanic origin. (These percentages total to over 100% due to Hispanic Origin being an ethnicity not a race.)
- The median household income distribution of Lee County was 15% higher income (over $100,000), 55% middle income and 30% lower income (under $24,999).

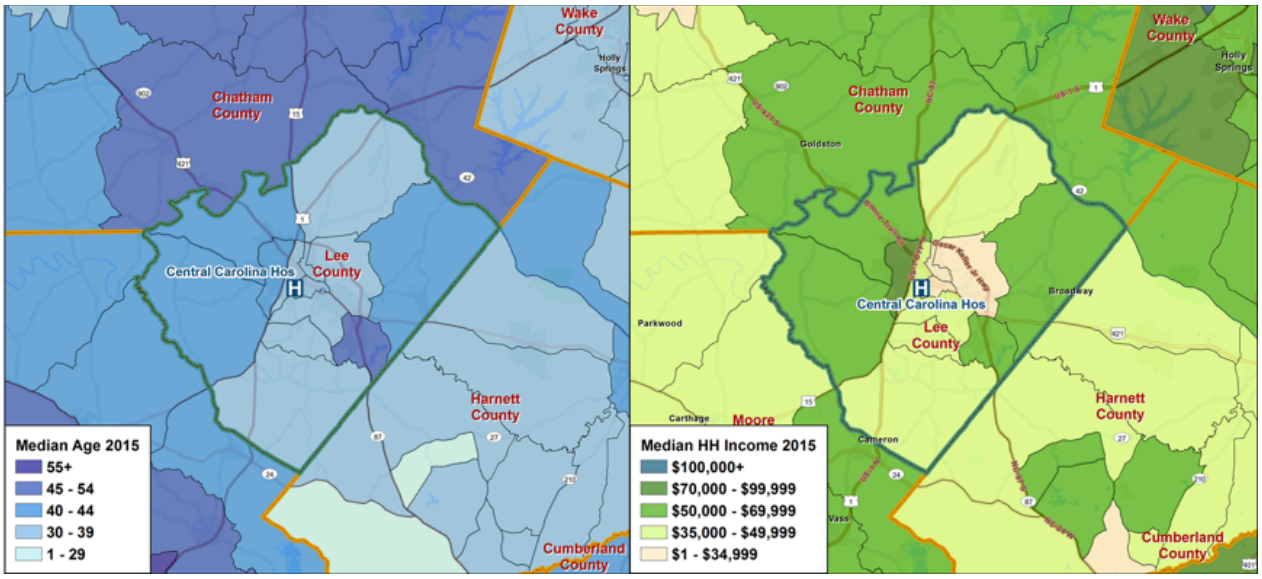
2015 Population by Census Tract and Population Change 2015-2020

Census tracts generally have a population size between 1,200 and 8,000 people, with an optimum size of 4,000 people. There were higher population census tracts, 5,000-7,999 in two census tracts around Sanford and the southern corner of the county. The remainder of the county contains tracts with 2,000 to 4,999 population.

The population was projected to grow in throughout the county with higher growth in two tracts around Sanford and one tract in the northeast corner of the county.

2015 Median Age

Median Income



These maps depict median age and median income by census tract. Lee County had a median age of 30-39 in most tracts.[ ] The tract to the southeast of Sanford had an older median age of 45-54. To the west and east of Sanford there were tracts with median ages of 40-44. Not all households were at the median in a census tract, but these are indicators of segments of the population that may need focused attention.

There were four $50,000 - $69,999 median income tracts to the west and east of Sanford on the county borders. One census tract west of the hospital had the highest median income at $70,000-$99,999. In the tracts east and north of the hospital, had the lowest household income at $1 - $34,999. The tracts north and south of Sanford had median income of $35,000 - $49,999.

The census tracts at the hospital and south of the hospital had the highest concentration of households with median incomes less than $15,000.

The rate of poverty in Lee County was 18.5% (2014 data), which was above NC (17.2%) and the US (15.5%).

Lee County's unemployment was 6.0% compared to 5.1% for North Carolina and 4.9% for the U.S. (June 2016, preliminary; Bureau of Labor Statistics) Unemployment decreased significantly in the last few years.

Health Status Data

The leading cause of death in Lee County was heart disease (185.8 per 100,000 population) followed by cancer (181.1 per 100,000 population). The leading cause of death in NC was cancer followed by heart disease. The leading cause of death in the U.S. was heart disease (169.8) followed by cancer (163.2). The other causes of death in Lee County were chronic lower respiratory disease, stroke, accidents, diabetes, Alzheimer's Disease, kidney disease and influenza and pneumonia. Source: NC Department of Health and Human Services (2009-2013)

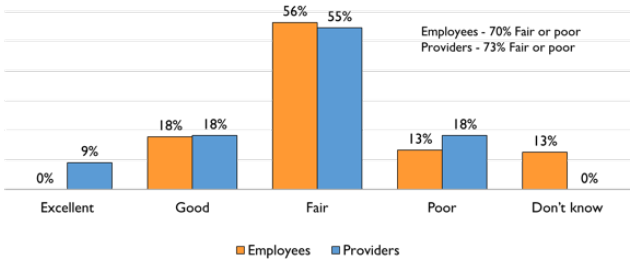
Based on the latest County Health Rankings study performed by the Robert Wood Johnson Foundation and the University of Wisconsin [ ], Lee County ranked 67th healthiest county in North Carolina out of the 100 counties ranked (1= the healthiest; 100 = unhealthiest). County Health Rankings suggest the areas to explore for improvement in Lee County were: adult smoking, adult obesity, sexually transmitted infections, teen births, uninsured, preventable hospital stays, and unemployment. The areas of strength were identified as higher mammography screening, high school graduation, and no drinking water violations.

When analyzing the health status data, local results were compared to North Carolina, the U.S. (where available) and the top 10% of counties in the U.S. (the 90th percentile). Where Lee County's results were worse than the State and U.S., there is an opportunity for group and individual actions that will result in improved community ratings. There are several lifestyle gaps that need to be closed to move Lee County up the ranking to be the healthiest community in North Carolina and eventually the Nation. For additional perspective, North Carolina was ranked the 31st healthiest state out of the 50 states.

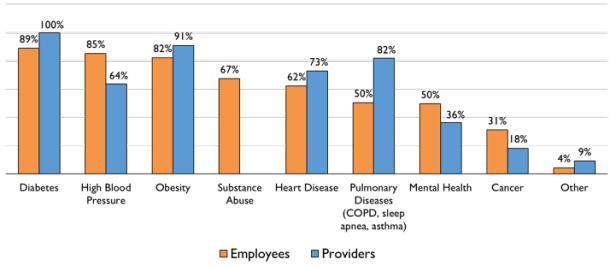
Survey Results, Focus Group, Health Status Comparisons

Survey Results

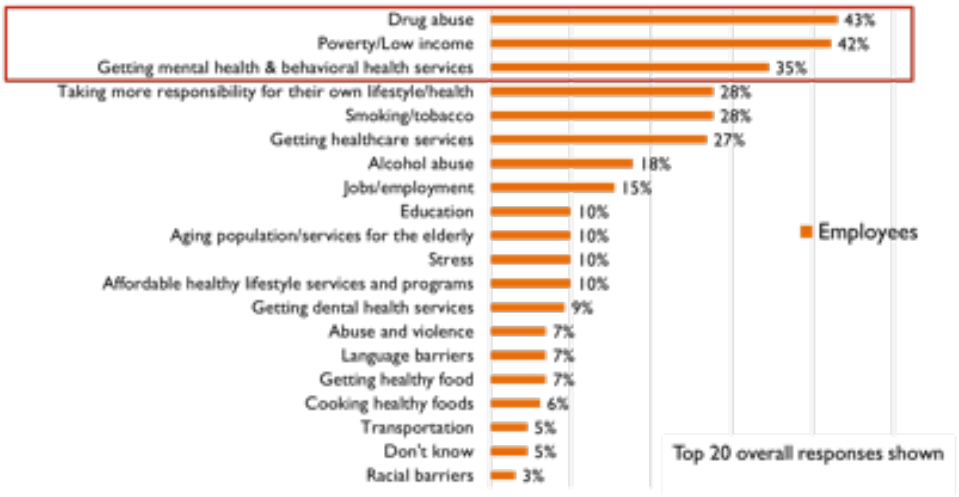
135 of Central Carolina Hospital's employees and 11 community physicians and providers responded to an on-line survey regarding their perspectives on community health status and needs in Lee County from October 14 through November 9, 2016. Most of the Central Carolina Hospital's employees and physicians are members of the local community and have unique insight into the health status of the community.

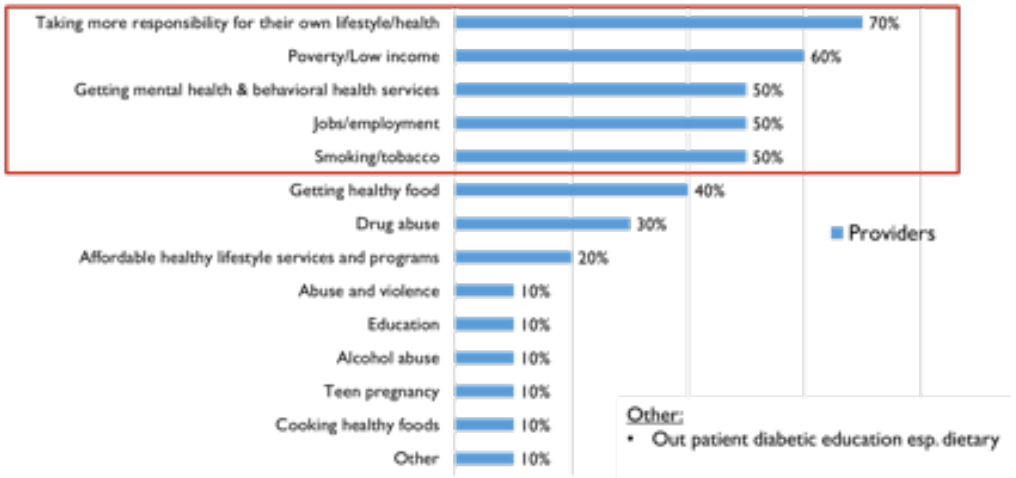


56% of hospital employees responded the community's health was fair, 18% responded good, and 13% responded poor. 13% didn't know. These results were compared to the physician's responses to the same question in their survey. 55% of physicians responded fair, 18% good, 18% poor and 9% excellent.

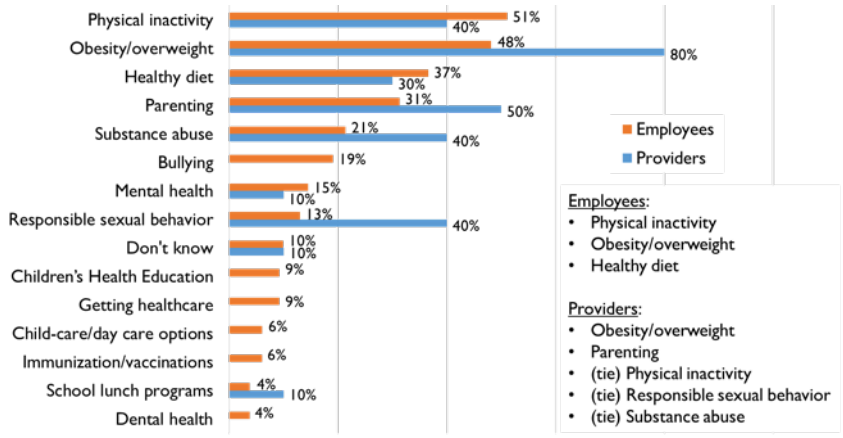


89% of employees believed diabetes was the most prevalent chronic disease followed by high blood pressure (85%), obesity (82%), substance abuse (67%), heart disease (62%), pulmonary disease and mental health both with 50% and cancer (31%). 100% of physicians believed diabetes was the most prevalent chronic disease in the community followed by obesity (91%), pulmonary diseases (82%), heart disease (73%), high blood pressure (64%), mental health (36%), and cancer (18%).

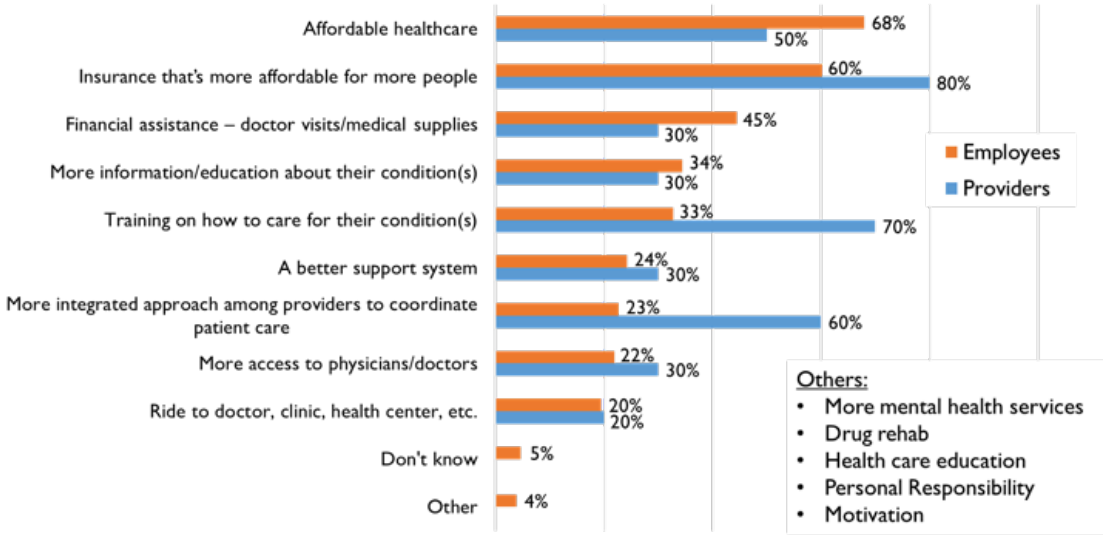




When asked about the top three issues impacting people's health, employees ranked drug abuse (43%), poverty/low income (42%), and getting mental health & behavioral health services (35%) as the top three. When physicians were asked, they responded with taking more responsibility for their own lifestyle/health first at 70%, followed by poverty/low income with 60% and then mental & behavioral health services, jobs/employment and smoking/tobacco use all tied at 50%.



For employees, the top health concerns for children were: physical inactivity (51%), obesity/overweight (48%) and lack of a healthy diet (37%). For providers, the order was obesity/overweight (80%), parenting (50%), and substance abuse and responsible sexual behavior tied at 40%.



Affordable healthcare (68%), insurance that's more affordable for more people (60%) and financial assistance – doctor visits/medical supplies (45%) were seen as most needed by people in the community in order to manage their health more effectively by employees. For providers, affordable healthcare (80%), training on how to care for their condition(s) (70%) and more integrated approach among providers to coordinate patient care (60%) were seen as most needed by people in their community to manage their health more effectively.

Focus Group Results

Twenty-three community stakeholders participated in a focus group on August 23, 2016 for their input into the community's health. There was broad community participation in the focus group representing a range of interests and backgrounds. Below is a summary of the 90-minute discussion.

1. Generally, how would you describe the community's health?

- Good
- The older population may not be in such good health
- Fair
- There are a set of problems in the county that affects people's health.

2. What are the biggest health or concerns and issues for Lee County today?

- Teen pregnancy top 25 in the state
- Well-water issues
- Growing homeless population
- Mental health issues – Nowhere to send referrals, long waiting list, hard to get people in. For immediate mental health issues have to send to Moore county.
- Children's psychiatrists – 2, 1 only 1 day per week and the other 5 days per week, difficult to get people in.
- Same issue for older population – almost impossible to get help
- Access to care - High deductibles, lack of specialty care
- Obesity – high rate; 40% of adults are obese; adolescents and childhood obesity also
- Diabetes
- Sexually Transmitted Infections
- Physical & mental issues for sexual assault victims
- Oral health

3. What are the most important health issues facing various populations including medically-underserved, low-income and minority populations?

- Higher poverty rate than NC and surrounding counties
- Transportation getting to appointments; cost effective transportation
- Language barriers to seeking care; high Hispanic population

4. What are the most important health issues facing children?

- Behavioral health access – psychiatrists
- Obesity
- Oral health
- Diabetes
- Hunger
- Homeless children

5. Were there any barriers to improving health in the last 3 years?

- Energize program at the Y for adolescents at risk for diabetes, but people don't come. Don't know why.
- Language – Hispanic community feels more comfortable when people speak Spanish
- Transportation – not all services available locally; some women leave town to have a baby because the hospital doesn't have a NICU.
- Some feel they must leave town to get care
- Education – people only value what they have knowledge about – diabetes education, follow-up, quick doctor visits
- Education is key to changing behavior
- High illiteracy rate
- Struggle with coordinated, collaborative effort for health improvement. There needs to be a guiding coalition that can focus and guide all the efforts.
- Active, busy lifestyles – eating more unhealthy foods, more stress
- Low-income/poverty

6. What behaviors have the most negative impact on health?

- Smoking
- Drug abuse – pill addiction, overprescribing, drug addicted babies, drug overdose deaths,
- Increase in heroin use which increases HIV and Hepatitis C
- Untreated mental health and substance abuse – no local treatment for substance abuse
- Noncompliance with medications
- Lack of wellness and preventative care
- Education
- Nutrition
- Physical Fitness

7. What environmental factors have the biggest impact on community health?

- Coal ash potential
- Contaminated wells
- Close to a nuclear plant – potential
- Safety, crime – perception it's not safe to be outside

8. What community assets support health and wellbeing?

- The Sheriff's department has a two-week summer camp
- Healthy food costs more; people buy cheap food
- People don't know how to eat healthy
- Backpack Pals – 400 per week
- Schools – feeding kids in the summer
- Medical facilities – not designated as medically needy by the State for aging population

- Organizations: Coalition for families, Helping Hand Clinic,
- United Way
- Community College – oral health resources, training professionals
- Facilities for geriatrics – 3 skilled nursing facilities and 3 assisted living facilities
- 211counts.org – resources to meet health needs
- Strong Christian and Faith communities- Christian Outreach Ministries, Family Promise Program, Salvation Army
- Central Carolina Hospital's focus on wellness with dedicated resources
- Greenways
- Job Seekers
- Youth sports - Soccer complex and leagues, pee wee football, Upward basketball
- City improving paths, safety, rejuvenation of downtown
- Strong Economic Development program
- Involved City Council
- Parks and Recreation
- YMCA – Live Strong and Energize programs, summer camp
- Boys and Girls Clubs
- County of Lee Transit System (COLTS)
- Senior Center – focusing on Boomers, Seniors and caregivers

9. Where do members of the community turn for basic healthcare needs?

- School nurse – free healthcare instead of taking kids to the doctor
- Industries utilize plant nurse – hypertension
- Urgent Cares
- Helping Hand Clinic
- Out of town – don't have all specialties or limited choice
- Central Carolina Hospital and emergency department

10. What does the community need in order to manage health conditions or stay healthy?

- Behavioral health needs
- Dieticians – nutrition education
- Insurance
- Education – what is available to them
- Hispanic population – create programs in Spanish
- More specialty care

11. If you had the power you so richly deserve and a magic wand, what priority health improvement action should Lee County focus on?

- Mental health
- Substance Abuse
- Specialty care
- Obesity – kids, adults, older adults, impacts other health issues
- Low income/uninsured – not getting preventive care they need
- Translators
- More prevention for high risk population – teach label reading, how to buy and cook healthy food
- Knowledge of services available
- More staff trained to deal with domestic violence and sexual assault victims

Comparisons of Health Status

Information from County Health Rankings and America's Health Rankings was analyzed in the Community Health Needs Assessment, in addition to the previously reviewed information and other public health data. Other data analyzed was referenced in the bullets below, such as: causes of death, demographics, socioeconomics, and consumer health spending. When data was available for North Carolina, the U.S. or the top 10% of counties (90th percentile), they were used as comparisons. Where the data indicated a strength or an opportunity for improvement, it is called out below. Strengths are important because the community can build on those strengths, and it's important to continue focus on strengths so they don't become opportunities for improvement. There were strengths and opportunities identified for measures and for the county. Opportunities were denoted with red stars, and strengths were denoted using green stars. The years displayed on the County Health Rankings graphs show the year the data was released. The actual years of the data are contained in the source notes below the graphs. The full data analysis can be seen in the CHNA PowerPoint.

Leading Causes of Death: Age Adjusted deaths per 100,000

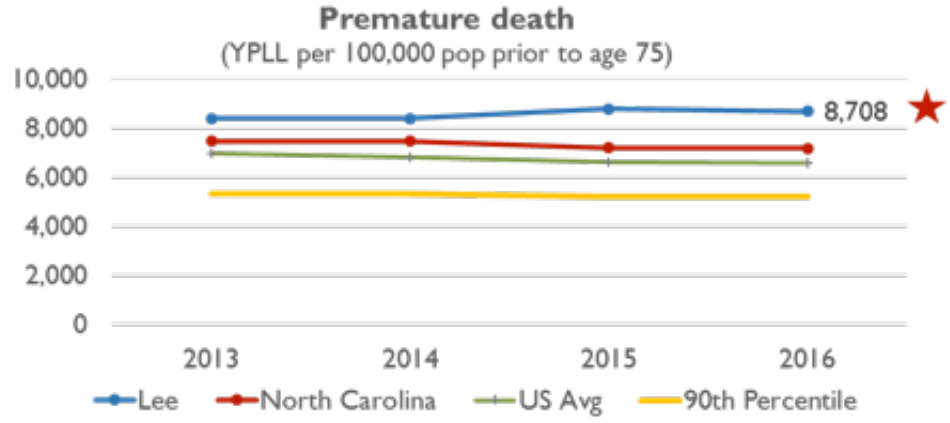
Cause of Death	Lee County (2009-2013)	**North Carolina** (2009-2013)	**USA** (2013)
Heart Disease	185.8	170.0	169.8
Cancer	181.1	173.3	163.2
Chronic Lower Respiratory Disease	46.6	46.1	42.1
Accidents	28.8	21.7	39.4
Stroke	45.6	43.7	36.2
Alzheimer's Disease	20.9	28.8	23.5
Diabetes	27.4	21.7	21.2
Influenza and Pneumonia	13.9	17.9	15.9
Kidney Disease	16.0	17.6	13.2

Source(s): CDC/NCHS, National Vital Statistics System, Mortality 2013 (2014); North Carolina County Health Data Book - N.C. Department of Health and Human Services (2016)

Red areas had death rates higher than the state. The leading causes of death in Lee County were heart disease followed by cancer, like the U.S. The leading cause of death in NC was cancer followed by heart disease. Lee County had higher death rates than NC in all but Alzheimer's Disease, influenza and pneumonia and kidney disease.

Health Outcomes (Length of Life and Quality of Life)

Health Outcomes are a combination of length of life and quality of life measures. Lee County ranked 70th of 100 North Carolina counties for health outcomes. Length of life was measured by years of potential life lost per 100,000 population prior to age 75. Lee County ranked 71st out of 100 counties.

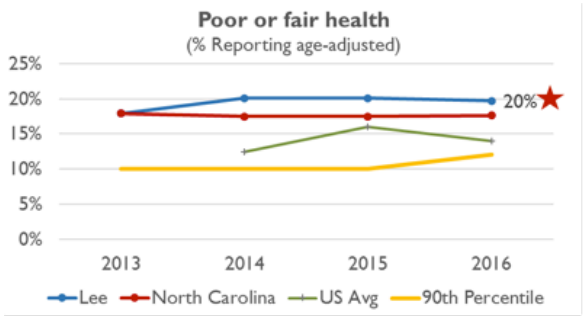


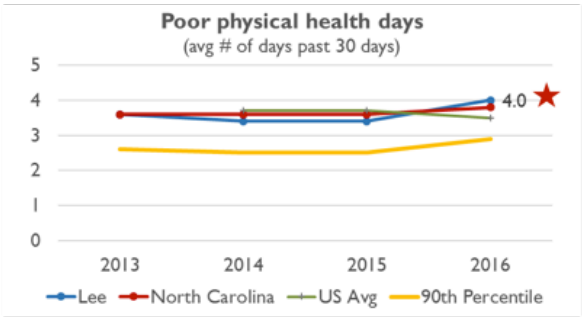
Source: County Health Rankings; National Center for Health Statistics – Mortality File 2011-2013

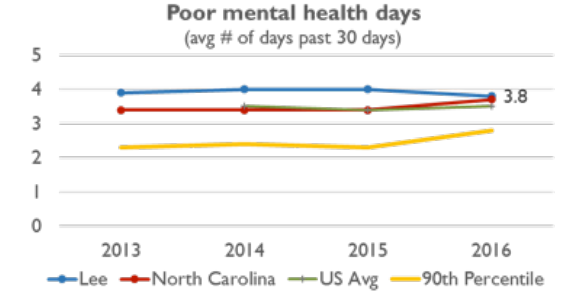
In most of the following graphs where data is available, Lee County will be blue, North Carolina red, U.S. green and the 90th percentile gold.

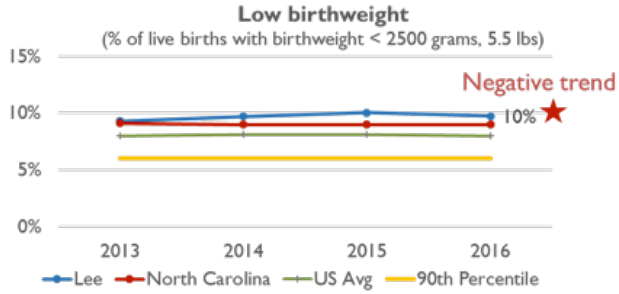
Quality of Life

Quality of life is measured by: % reporting fair or poor health, the average number of poor physical health days and poor mental health days in the past 30 days, and % of live births with birthweight less than 2500 grams (5lbs 8ozs). Lee County ranked 66th in quality of life.









Source: County Health Rankings; Behavioral Risk Factor Surveillance System (BRFSS) 2014
Source: County Health Rankings: National Center for Health Statistics – Natality files (2007-2013)
*indicates a change in the Behavioral Risk Factor Surveillance System Survey calculations of results. 2016 cannot be compared to prior year results.

Length and Quality of Life Opportunities

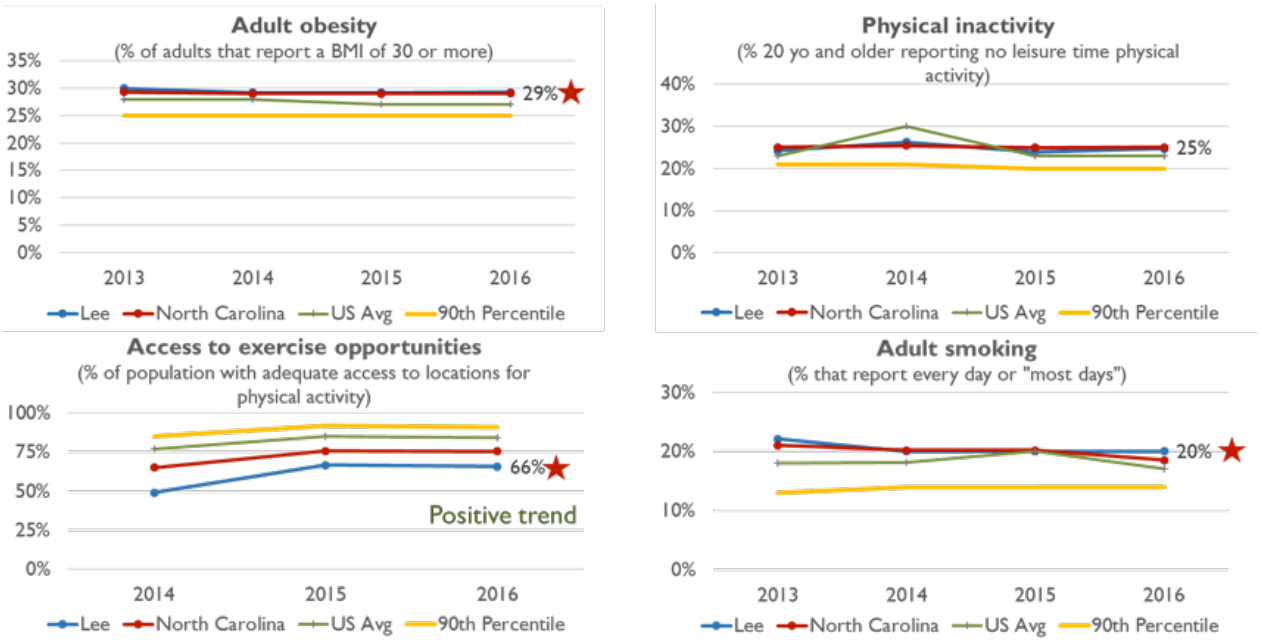
- Years of potential life lost (YPLL) per 100,000 population prior to age 75, was higher in Lee County at 8,708 years, than North Carolina and the U.S.
- The number of poor physical health days in the last 30 days was higher in Lee County at 4.0 days than NC and the U.S.
- The percentage of low birthweight babies was higher in Lee County at 10% than NC and the U.S.

In the other quality of life measures, Lee County outcomes were near the NC measures.

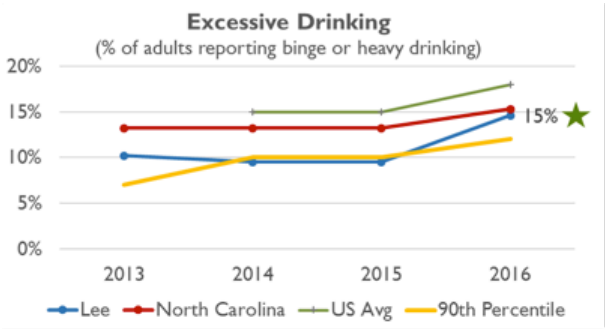
Health Factors or Determinants

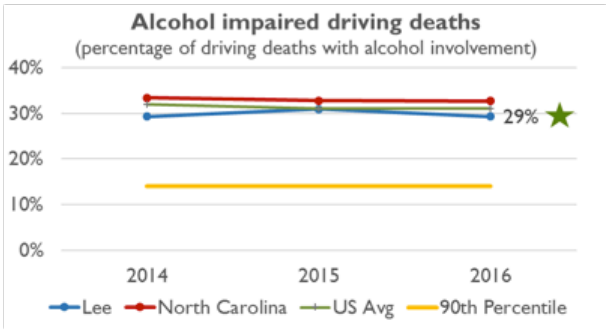
Health factors or determinants are comprised of measures of related to health behaviors, clinical care, social & economic factors, and physical environment. Lee County ranked 64th out of 100 NC counties in health factors. Health behaviors are made up of nine measures. Health behaviors account for 30% of the county rankings. Lee County ranked 61st out of 100 counties in North Carolina for health behaviors.

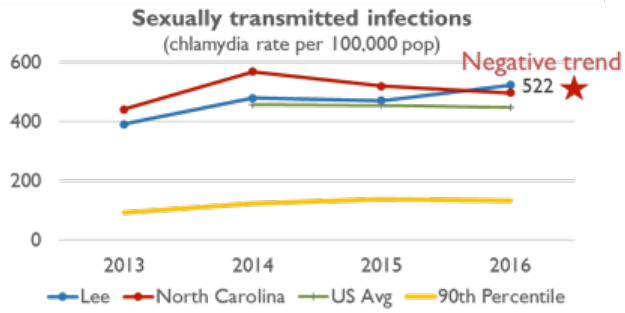
Health Behaviors

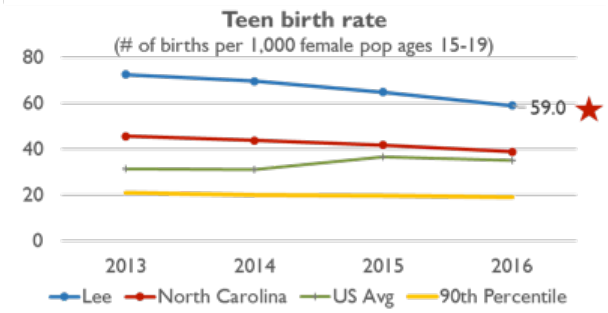


Source: Obesity, physical inactivity - County Health Rankings; CDC Diabetes Interactive Atlas, 2012
Source: Access to exercise opportunities - County Health Rankings; ArcGIS Business Analyst, Delorme map data, ESRI and US Census Tigerline Files, 2013
Source: Smoking - County Health Rankings; Behavioral Risk Factor Surveillance System (BRFSS)

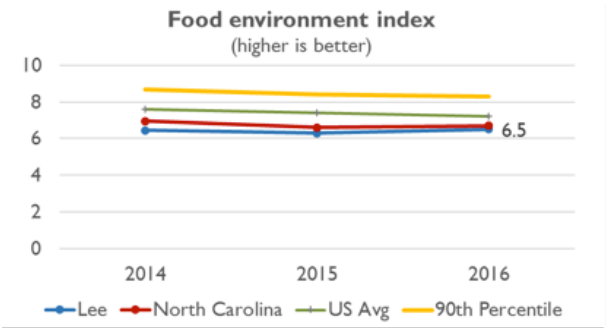


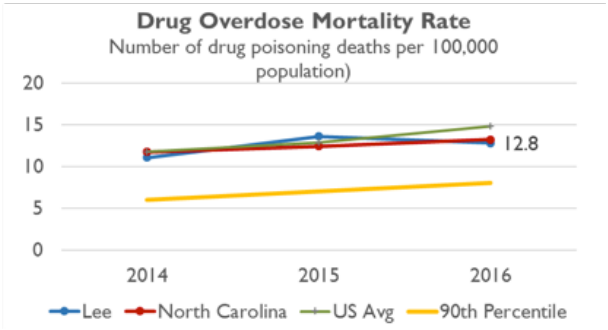






Source: Excessive drinking - County Health Rankings; Behavioral Risk Factor Surveillance System (BRFSS), 2014
Source: Alcohol-impaired driving deaths - County Health Rankings; Fatality Analysis Reporting System, 2010-2014
Source: STDs - County Health Rankings; National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention, 2013
Source: Teen birth rate – County Health Rankings; National Center for Health Statistics – Natality files, 2007-2013

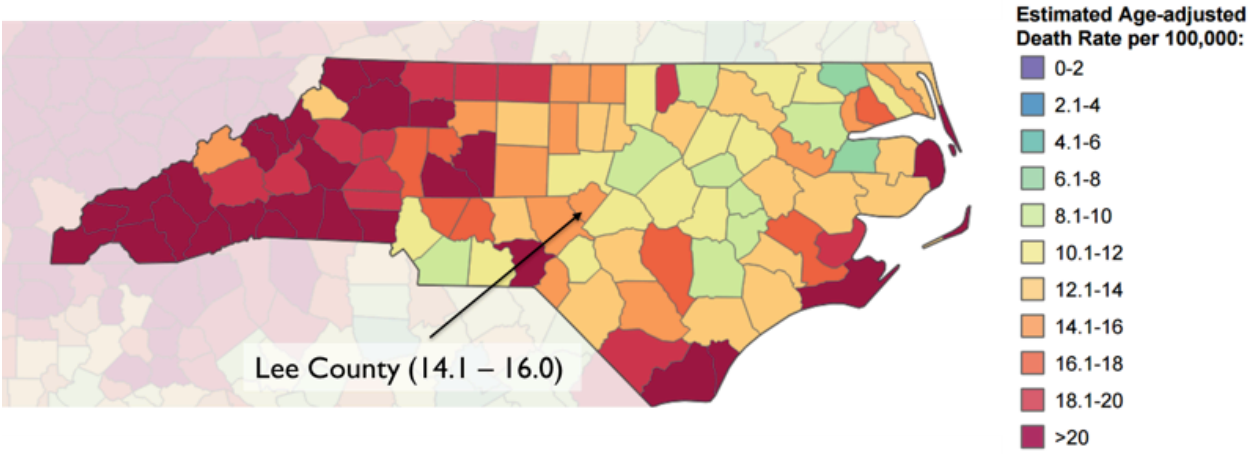




The food environment index is a comprised of % of the population with limited access to healthy foods and % of the population with food insecurity. Limited access to foods estimates the % of the population who are low income and do not live close to a grocery store. Food insecurity is the % of the population who did not have access to a reliable source of food during the past year.

Source: County Health Rankings; USDA Food Environment Atlas, 2012-2013
Source: County Health Rankings; CDC WONDER mortality data, 2012-2014

Estimated Age-adjusted Death Rates for Drug Poisoning by County 2014



Source(s): CDC/NCHS, National Vital Statistics System, mortality data (viewed 2016)

The death rates for drug poisoning based on 2014 data in Lee County was between 14.1 and 16 per 100,000 population. This places Lee County in the bottom half of NC counties.

Health Behaviors Strengths

- Excessive drinking was lower in Lee County at 15% than NC and the U.S. However, the trend was rising.
- The percent of driving deaths with alcohol involved were lower in Lee County at 29% than NC and the U.S.

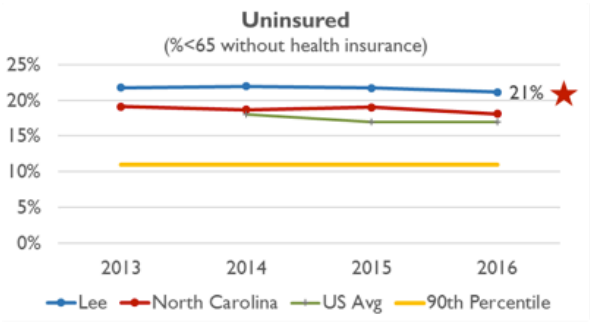
Health Behaviors Opportunities

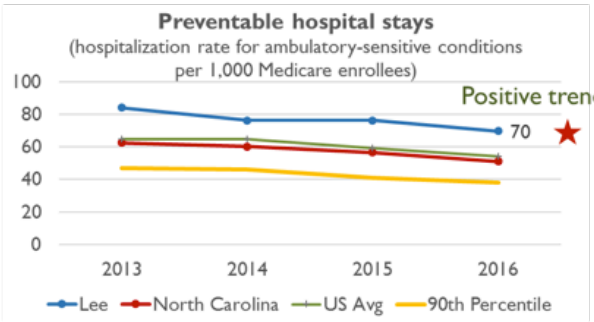
- Adult obesity was high in Lee County at 29%, at NC and higher than the U.S. Obesity puts people at increased risk of chronic diseases: diabetes, kidney disease, joint problems, hypertension and heart disease. Obesity can cause complications in surgery and with anesthesia. It has been implicated in Alzheimer's. It often leads to metabolic syndrome and type 2 diabetes. It is a factor in cancers, such as ovarian, endometrial, postmenopausal breast cancer, colorectal, prostate, and others.
- Access to exercise opportunities was lower in Lee County with 66% of the population with adequate access to locations for physical activity, lower than NC and the U.S.
- Adult smoking was higher at 20% in Lee County than NC and the U.S., and the Healthy people 2020 goal is 12%. Each year approximately 443,000 premature deaths can be attributed to smoking. Cigarette smoking is identified as a cause of various cancers, cardiovascular disease, and respiratory conditions, as well as low birthweight and other adverse health outcomes.
- Sexually transmitted diseases as measured by Chlamydia rate per 100,000 population was higher in Lee County than North Carolina and increasing.
- The teen birth rate in Lee County at 59.0 births per 1,000 females age 15-19 was much higher than NC the U.S. However, the trend is decreasing.
- Lee County's death rates for drug poisoning were in the bottom half of NC counties.

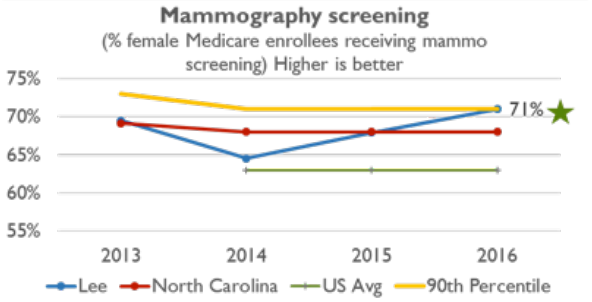
On the other health behavior indicators, Lee County was even with North Carolina.

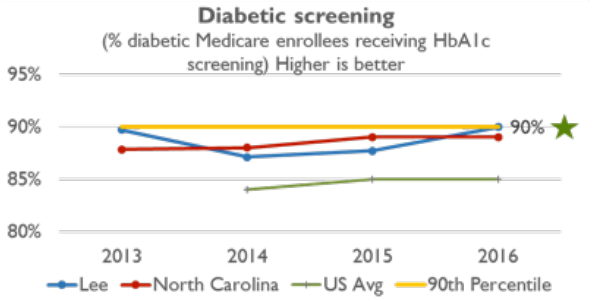
Clinical Care

Clinical care ranking is made up of seven indicators, and they account for 20% of the county rankings. Lee County ranked 72nd out of 100 North Carolina counties in clinical care.

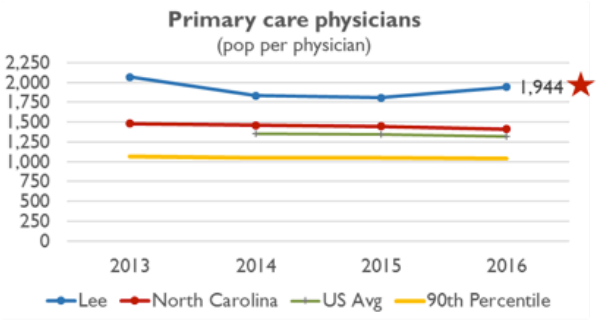


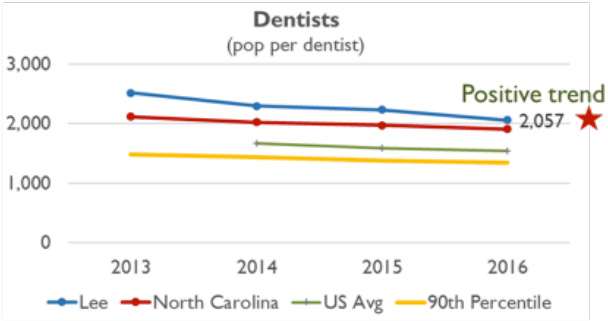


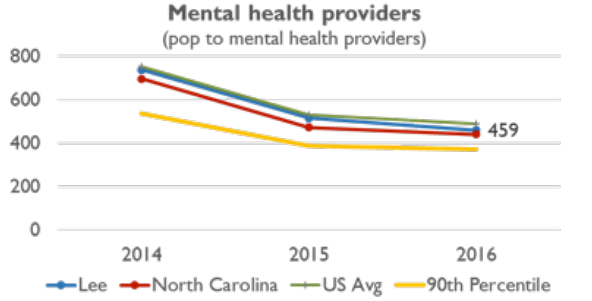


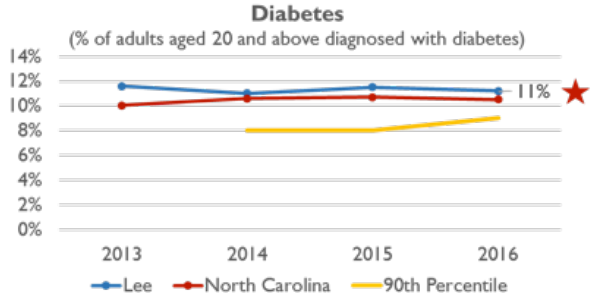


Source: Uninsured - County Health Rankings; Small Area Health Insurance Estimates, 2013
Source: Preventable hospital stays, mammography screening, diabetic screening - County Health Rankings; Dartmouth Atlas of Health Care, 2013









Source: Pop to PCP - County Health Rankings; Area Health Resource File/American Medical Association, 2013
Source: Pop to Dentists - County Health Rankings; Area Health Resource File/National Provider Identification file, 2014
Source: Pop to mental health provider (psychiatrists, psychologists, licensed clinical social workers, counselors, marriage and family therapists and advanced practice nurses specializing in mental health) County Health Rankings; CMS, National Provider Identification, 2014
Source: County Health Rankings; CDC Diabetes Interactive Atlas, 2013

Clinical Care Strengths

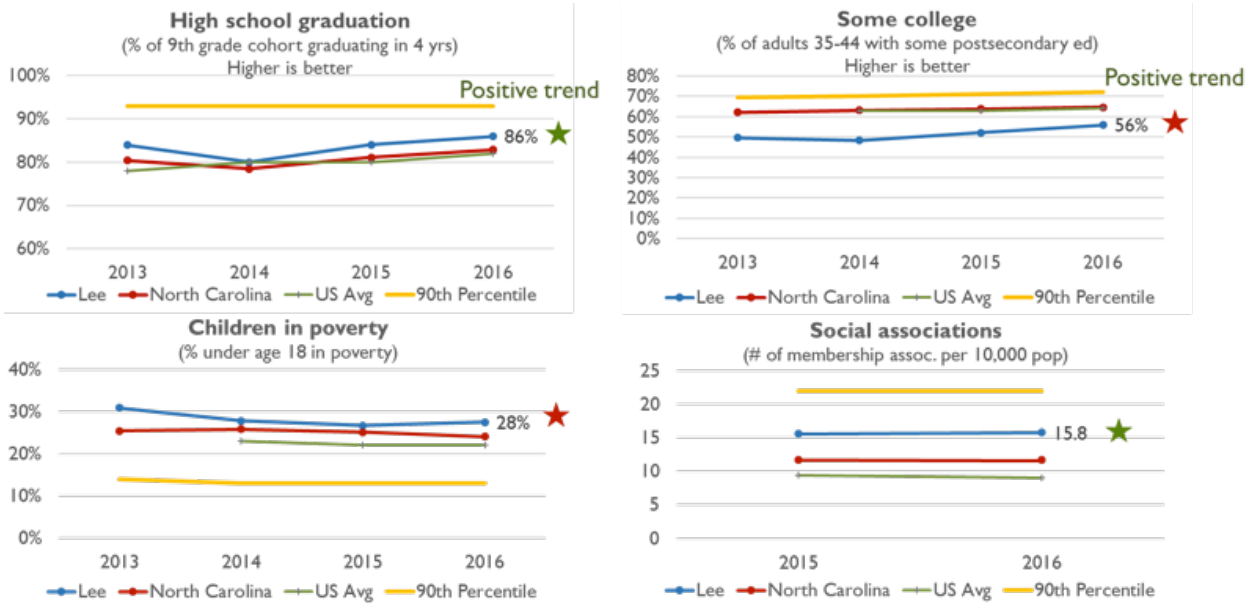
- Mammography screening was higher in Lee County than NC and the U.S.
- Diabetic screening was higher than NC and the U.S.

Clinical Care Opportunities

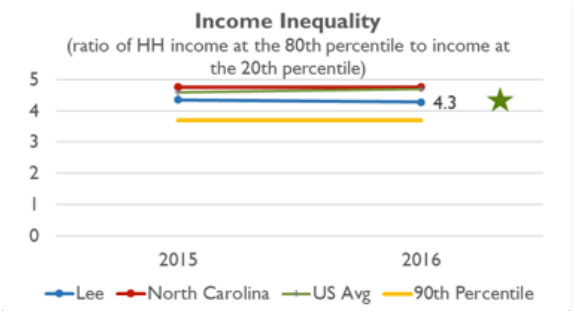
- The percent of population under 65 without health insurance was higher than NC and the U.S.
- Preventable hospital stays measured by hospitalization rate for ambulatory-sensitive conditions per 1,000 Medicare enrollees was higher in Lee County than NC and the U.S.
- The population per primary care physician was 1,944 in Lee County, higher than NC and the U.S.
- The population per dentist was higher in Lee County at 2,057 than NC and the U.S. The trend was declining.
- Eleven percent of Lee County had diabetes, which was higher than NC.

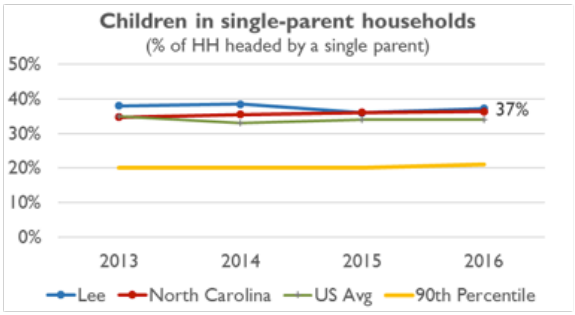
Social & Economic Factors

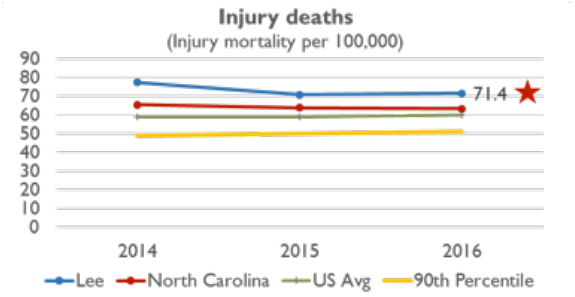
Social and economic factors account for 40% of the county rankings. There are eight measures in the social and economic factors category. Lee County ranked 54th out of 100 North Carolina counties in social and economic factors.

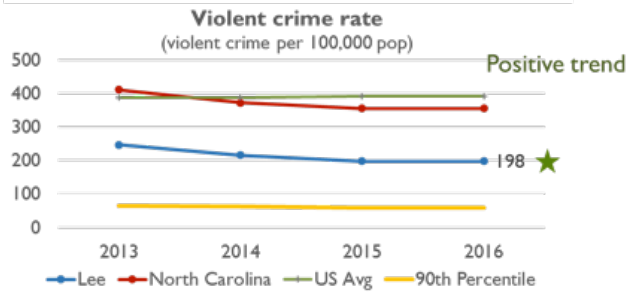


Source: High School graduation – County Health Rankings; States to the Federal Government via EDFacts, 2012-2013
Source: Some college - County Health Rankings; American Community Survey, 5-year estimates, 2010-2014
Source: Children in poverty - County Health Rankings; US Census, Small Area Income and Poverty Estimates, 2014
Source: Social associations - County Health Rankings; County Business Patterns, 2013









Source: Income inequality - County Health Rankings; American Community Survey, 5-year estimates 2010-2014
Source: Children in single parent households - County Health Rankings; American Community Survey, 5-year estimates, 2010-2014
Source: Injury deaths – County Health Rankings; CDC WONDER mortality data, 2009-2013
Source: Violent crime - County Health Rankings; Uniform Crime Reporting – FBI, 2011 - 2013

Social and Economic Strengths

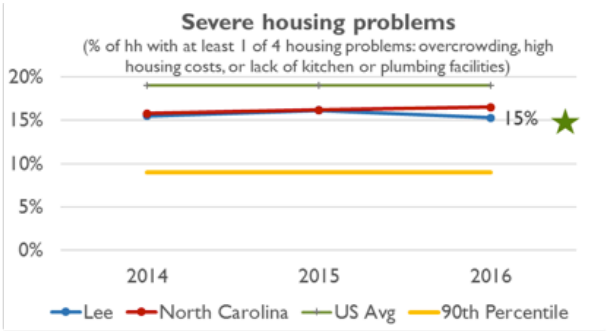
- High school graduation was higher in Lee County at 86% than NC and the U.S. and the trend was positive.
- Social associations were higher in Lee County than NC and the U.S. Associations include membership organizations such as civic organizations, bowling centers, golf clubs, fitness centers, sports organizations, religious organizations, political organizations, labor organizations, business organizations, and professional organizations. Poor family support, minimal contact with others, and limited involvement in community life are associated with increased morbidity and early mortality.
- Income inequality, the ratio of household income at the 80th percentile to income at the 20th percentile, was lower in Lee County than NC and the U.S.
- Violent crime rate per 100,000 population was lower in Lee County than in NC and the U.S.

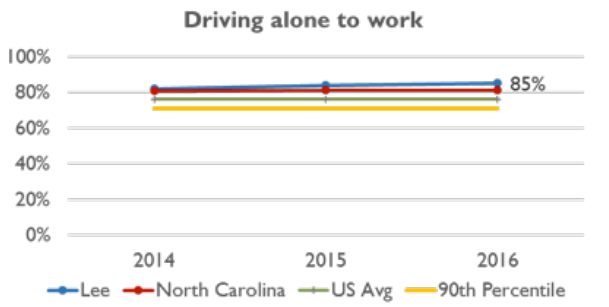
Social and Economic Opportunities

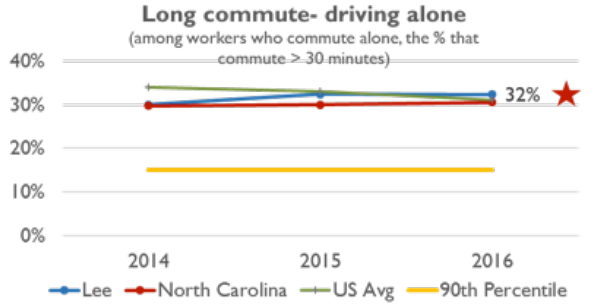
- The percent of adults with some college was lower in Lee County at 56% than NC and the U.S.
- The percentage of children in poverty was higher Lee County, 28%, than NC and the U.S.
- Children in single-parent households increased in the past years and is at 37% in Lee County which was higher than NC and the U.S.
- Injury deaths at 71 injury deaths per 100,000 population were higher than NC and the U.S.
- Lower median household income in Lee County than NC and the U.S.
- Higher poverty percentage in Lee County than NC and the U.S.
- Higher unemployment in Lee County than NC and the U.S.

Physical Environment

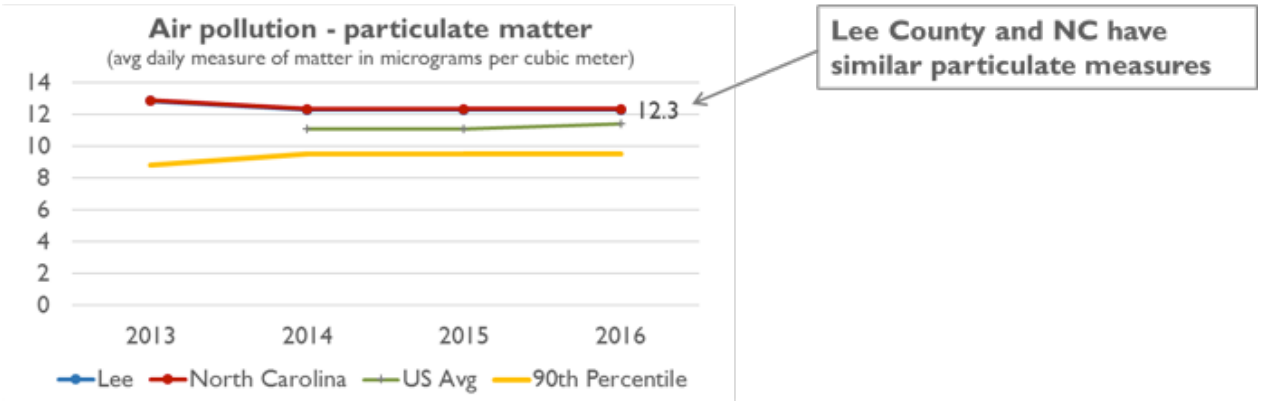
Physical environment contains five measures in the category. Physical environment accounts for 10% of the county rankings. Lee County ranked 27th out of 100 North Carolina counties in physical environment.







Source: Drinking water violations – County Health Rankings; EPA, FY 2013-2014
Source: Severe housing problems – County Health Rankings; HUD Comprehensive Housing Affordability Strategy data, 2008-2012
Source: Driving alone to work and long commute – County Health Rankings: American Community Survey, 5-year estimates, 2010-2014



Source: Air pollution – County Health Rankings: CDC WONDER environmental data, 2010

Physical Environment Strengths

- There were no drinking water violations in Lee County.
- Lee County had a lower percentage of severe housing problems than NC and the U.S.

Opportunities

- Lee County had a higher percentage, 32%, of workers who commuted alone and over 30 minutes than NC and the U.S.

There were four broad themes that emerged in this process:

- Lee County needs to create a "Culture of Health" which permeates throughout the cities, employers, churches, and community organizations to engender commitment to health improvement.
- There is a direct relationship between health outcomes and affluence (income and education). Those with the lowest income and education generally had the poorest health outcomes.
- While any given measure may show an overall good picture of community health, there are significantly challenged subgroups such as the census tracts in Sanford.
- It will take a partnership with a wide range of organizations and citizens pooling resources to meaningfully impact the health of the community. Many assets exist in the county to improve health.

Results of the CHNA: Prioritization of Health Needs

Prioritization Criteria

At the Community Health Summit, the attendees identified and prioritized the most significant health needs in the community for the next three-year period. The group used the criteria below to prioritize the health needs.

Magnitude / scale of the problem	How big is the problem? How many people does the problem affect, either actually or potentially? In terms of human impact, how does it compare to other health issues?
Seriousness of consequences	What degree of disability or premature death occurs because of this problem? What would happen if the issue were not made a priority? What is the level of burden on the community (economic, social or other)?
Feasibility	Is the problem preventable? How much change can be made? What is the community's capacity to address it? Are there available resources to address it sustainably? What's already being done, and is it working? What are the community's intrinsic barriers and how big are they to overcome?

The following needs were prioritized and goals and actions were brainstormed by the table groups at the Community Health Summit and formed the foundation of Lee County's health initiatives. Using a nominal group technique, each attendee received three sticky notes and selected their top three health needs and posted their ideas on paper at the front of the room. The results of the activity are below with higher numbers indicating the number of "votes" or priority by topic. The bullets below the health need are the actual comments received on the sticky notes.

1. Obesity – Healthy Eating/Active Living (24)
2. Mental Health (18)
3. Access and affordability (16)
4. Chronic diseases (12)
5. Teen pregnancy/Sexually Transmitted Infections (STIs) (10)
6. Socioeconomic issues – education, poverty, housing, employment (9)
7. Substance abuse (4)

1. Obesity – Healthy eating/active living (24)

- Obesity (14)
- Lack of knowledge about nutrition
- Diet
- Fast food availability
- Access to healthy food choices
- Physical inactivity and lack of recreation (6)

2. Mental Health (18)

- Mental Health (11)
- Behavioral Health (4)
- Stigma around mental health
- Lack of mental health resources for students exhibiting self-injurious behaviors
- Lack of mental health resources with Spanish speaking therapist

3. Access and Affordability (16)

- Transportation (2)
- Health insurance availability (2)
- Uninsured (2)
- Affordable healthcare even with insurance
- Access to medical/health care (2)
- Access to healthcare for low-income families
- Affordability
- Cost of medications for students behavioral issues in school
- Knowledge of availability
- Subspecialty care
- Social support
- High end healthcare local

4. Chronic diseases – diabetes, heart disease (12)

- Diabetes (6)
- Heart disease (3)
- Cancer
- Appropriate management and education for chronic diseases
- Chronic health issues and utilization in community right next to CCH

5. Teen Pregnancy/STIs (10)

- Teen pregnancy (7)
- STIs (2)
- Sex education

6. Socioeconomic issues – education, poverty, housing, employment (9)

- Education (4)
- Poverty (3)
- Low income employment
- Indigent housing

7. Substance Abuse (4)

- Substance abuse (2)
- Tobacco use (2)

Key Findings of the Community Health Assessment

The most significant health needs resulted in five categories and table groups brainstormed goals and actions around the most important health needs listed above. These suggested goals and actions have been organized below.

Significant Health Need 1: Obesity – healthy eating/active living

Goal 1- Nutrition – education and prevention

- Action 1 – Healthy cooking demonstrations at local grocery stores by CCCC students
- Action 2 – Prevention to begin early – employers and schools do BMI physical screenings annually and measure increases

Resources Needed:
Volunteers, Central Carolina Community College, Central Carolina Hospital

Goal 2 – Fitness – access and education

- Action 1 – Employers, schools provide opportunities for physical activity daily, e.g. worksite gyms
- Action 2 – Parks and Recreation bring more education, provide more programs, payment on sliding scale by seeking sponsors

Goal 3 – Address mental health aspects of obesity, increase access to counseling

- Action 1 – Faith-based community ministries
- Action 2 – Group therapy and support groups

Significant Health Need 2: Mental Health

Goal 1 – Increase awareness of available resources

- Action 1 – Providers speak to community groups about resources; add to charity tracker evaluation
- Action 2 – Partner with youth, hair salons, develop resources, provide training, media push

Resources Needed:
Educator training, curriculum, materials

Goal 2 – Increase number of accessible resources

- Action 1 – Provide positions for Masters of Social Work students
- Action 2 – Provide user-friendly hours, after work and weekend

Resources Needed:
Funding, agency cooperation

Goal 3 – Decrease stigma and increase cultural awareness

- Action 1 – Respected leaders mentor and speak out about mental health
- Action 2 – Offer classes to train people how to talk about mental health in the community
- Action 3 – Address mental health issues in the homeless population

Resources Needed:
Funding, training materials, instructors, task force to coordinate

Significant Health Need 3: Access and affordability

Goal 1 – Improve transportation

- Action 1 –
- Action 2 –

Goal 2 – Increase awareness of services for the uninsured

- Action 1 – Hold community forums

Goal 3 –

- Action 1 –

Significant Health Need 4: Chronic diseases

Goal 1 – Promote a culture of health in the community

- Action 1 – Provide translation services
- Action 2 –

Goal 2 –

- Action 1 –
- Action 2 –

Goal 3 –

- Action 1 –
- Action 2 –

Significant Health Need 5: Teen pregnancy/Sexually transmitted infections

Goal 1 – Reduce teen pregnancy rates

- Action 1 – Provide health education programs in schools targeting teens at every age
- Action 2 – Work with the faith community to address health education
- Action 3 – Provide access to teen friendly clinics

Goal 2 – Reduce sexually transmitted infections

- Action 1 – Increase access to screenings and condoms
- Action 2 – Gain trust of target group to provide education

Goal 3 – Identify resources

- Action 1 – Obtain grants
- Action 2 – Communicate community resources and coalitions

Significant Health Need 6: Socioeconomic Issues – Education, poverty, housing, employment

Goal 1 – Improve education, vocational training

- Action 1 – More access to skill training in community college and high school
- Action 2 – Stress vocational training for future jobs

Resources Needed:
Guidance counselors, library, churches, chamber of commerce, Coalition for Families

Goal 2 – Increase life skills knowledge (money management, relationships)

- Action 1 – Hold a life skills fair with emphasis on money management
- Action 2 – Include life skills education in high school

Resources Needed:
Extension service, school curriculum committee, career and technical education and schools, train people to be volunteers

Goal 3 – Increase affordable housing

- Action 1 – Provide affordable Section 8 vouchers
- Action 2 – Teach about renting – sanitation topics, bugs, ethical renting practices

Resources Needed:
Habitat for Humanity, Extension Service, Housing Authority, Board of Realtors

Significant Health Need 7: Substance Abuse

Goal 1 – Raise awareness of medication safety issues

- Action 1 – Educate the public on correcting dosing, not sharing drugs
- Action 2 – Provide education in the school system on the dangers of drugs

Resources Needed:
Media, community volunteers, funding for public awareness campaign, public presentations, curriculum in schools

Goal 2 – Decrease smoking

- Action 1 – Raise awareness of available resources
- Action 2 – Promote the Quitline

Resources Needed:
Quitline brochures, community outreach, providers, media

Goal 3 – Educate the community about the dangers of vaping and e-cigarettes

- Action 1 – Public awareness campaign

Results of the CHNA: Prioritization of Health Needs

At the summit, the attendees were asked to include comments on the 2016 CHNA on their worksheets. Comments received are below:

- Can't wait to hear solutions for our community
- Session, facilitation and location were great! Well organized!
- Very organized and informational
- Lack of education, lifestyle
- Excellent information will be helpful

Written comments on 2016 CHNA

At the summit, the attendees were asked to include comments on the 2016 CHNA on their worksheets. Comments received are below:

- Can't wait to hear solutions for our community
- Session, facilitation and location were great! Well organized!
- Very organized and informational
- Lack of education, lifestyle
- Excellent information will be helpful

2013 Central Carolina Hospital Implementation Plan/Impact Evaluation

CCH did not perform a CHNA in 2013.

Community Assets and Resources

A separate document that includes list of community assets and resources that can help improve the health of the community and assist with implementation of the plan accompanies this document.