



**Clay County 2015**  
**Community Health Assessment**  
**February 1<sup>st</sup> 2016**

# CLAY COUNTY COMMUNITY HEALTH ASSESSMENT

## ACKNOWLEDGEMENTS

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WNC**HEALTHY**IMPACT

## TABLE OF CONTENTS

Acknowledgements.....	1
TABLE OF CONTENTS.....	2
Clay County 2015 CHA Executive Summary .....	7
Purpose and Process.....	7
Data Summary.....	7
Community.....	7
Health Outcomes .....	8
Populations at risk.....	8
Health Priorities.....	9
• Chronic Disease Control and Prevention.....	9
• Access to Healthcare .....	9
• Cancer Control and Prevention .....	9
Next Steps.....	9
Chapter 1 – Community Health Assessment Process.....	10
Purpose .....	10
Definition of Community .....	10
WNC Healthy Impact.....	10
Data Collection .....	10
Core Dataset Collection.....	11
Additional Community-Level Data .....	11
Health Resources Inventory .....	11
Community Input & Engagement.....	12
At-Risk & Vulnerable Populations.....	12
CHAPTER 2 – CLAY COUNTY.....	13
Location and Geography .....	13
History.....	13
Population.....	14
Chapter 3 – A Healthy Clay County.....	15

Elements of a Healthy Community .....	15
Community Assets .....	15
Chapter 4 – Social & Economic Factors.....	17
Income .....	17
Employment .....	17
Unemployment.....	18
Education .....	18
Community Safety.....	19
Housing.....	19
Family & Social Support .....	19
Social Determinants of Health .....	20
Chapter 5 – Health Data Findings Summary.....	21
Mortality .....	21
Chronic Disease in Clay County.....	22
.....	22
Health Status & Behaviors.....	24
Clinical Care & Access.....	26
At Risk Populations .....	28
Chapter 6 – Physical Environment .....	29
Air Quality.....	29
Water.....	30
Access to Healthy Food & Places .....	31
Chapter 7- Health Resources.....	32
Health Resources .....	32
Process .....	32
Findings .....	32
Resource Gaps.....	32
Chapter 8 – Identification of Health Priorities.....	33
Health Issue Identification.....	33
Process .....	33

Identified Issues.....	33
Priority Health Issue Identification.....	34
Process.....	34
Identified Priorities .....	34
Priority issue #1 –Access to Healthcare.....	35
Data Highlights.....	35
Health Indicators.....	36
Specific Populations At-Risk .....	36
Health Resources available/needed.....	37
Priority Issue #2 –Chronic Disease Control and Prevention .....	37
Data Highlights.....	37
Health Indicators.....	40
Specific Populations At-Risk .....	41
Health Resources available/needed.....	41
Priority Issue #3- Cancer Control and Prevention .....	41
Data Highlights.....	41
Health Indicators.....	42
Specific Populations At-Risk .....	44
Health Resources available/needed.....	44
Chapter 9 - Next Steps.....	45
Sharing Findings .....	45
Collaborative Action Planning .....	45
Works Cited.....	46
Appendices.....	47
Appendix A - Data Collection Methods & Limitations .....	48
Secondary Data from Regional Core.....	48
Secondary Data Methodology.....	48
Data limitations.....	51
WNC Healthy Impact Survey (Primary Data).....	51
Survey Methodology .....	51

Benchmark Data .....	54
Survey Administration.....	54
Information Gaps .....	56
Online Key Informant Survey (Primary Data) .....	57
Online Survey Methodology.....	57
Appendix B – Secondary Data Profile.....	59
Appendix C- County Maps .....	62
Appendix D- Survey Findings.....	66
Clay County Citizen Survey .....	66
Clay County Employee Survey .....	69
Clay County Health Department Staff Survey.....	72
Clay County Board of Health, and Healthy Carolinians Survey.....	74
Appendix E-Key Informant Survey Findings .....	77
Methodology .....	78
<b>Participation</b> .....	78
Characteristics of a Healthy Community .....	81
Community’s Greatest Gem/Asset .....	82
Requirements for Quality of Life.....	82
Ranking of Health Issues .....	83
Perceptions of Health Issues.....	83
<b>Access to Health Care Services</b> .....	84
<b>Cancer</b> .....	84
<b>Diabetes</b> .....	85
<b>Heart Disease &amp; Stroke</b> .....	85
<b>Injury &amp; Violence</b> .....	87
<b>Maternal &amp; Infant Health</b> .....	87
<b>Mental Health</b> .....	87
<b>Nutrition, Physical Activity, &amp; Weight</b> .....	88
<b>Oral Health</b> .....	88
<b>Respiratory Diseases</b> .....	89

<b>Sexually Transmitted Disease &amp; Unintended Pregnancy .....</b>	<b>89</b>
<b>Substance Abuse .....</b>	<b>90</b>
Contributors to Health Issues .....	91
<b>Physical Environment .....</b>	<b>92</b>
<b>Social Determinants of Health .....</b>	<b>92</b>

# CLAY COUNTY 2015 CHA EXECUTIVE SUMMARY

## Purpose and Process

The Community Health Assessment (CHA) is a process in which data on the current health of Clay County is analyzed and published for the community, partners, and stakeholders. The process involves the collection of a wide range of data and includes demographics, socioeconomic and health statistics, personal self-reports, and public and key informant opinions. This information is analyzed and published so that it may be used to define health priorities on which to focus for the next four years until the next health assessment is done.

WNC Healthy Impact is a partnership between hospitals and local health departments in Western North Carolina for the purpose of improving the health of the region. WNC Healthy Impact was instrumental in the collection and dissemination of secondary data to its partners so the CHA process could be completed.

Key Partners instrumental in the success of the 2015 CHA include the Clay County Health Department, the Clay County Partnership for Healthy Carolinians, Murphy Medical Center, and WNC Healthy Impact.

## Data Summary

### Community

Clay County has the distinction of being the smallest county by landmass in all of North Carolina and is located in the Appalachian Mountain range. We are bordered to the south by the state of Georgia, by Cherokee County, NC to the west and Macon County, NC to the north. Clay County was formed in 1861 from portions of both Cherokee and Macon counties and is named after Henry Clay. The county seat is Hayesville, and is named in honor of George Hayes, the Representative from Cherokee County who was instrumental the formation of the county.

The 2010 Census conducted by the US Census Bureau shows 10,587 residents in Clay County and a total land mass of total area of 221 square miles, of which 215 square miles is land and 5.9 square miles (2.7%) is water. The population of Clay County is predominantly Caucasian at 96.6%; the next largest ethnic group is the Hispanic population at 2.4%.

Clay County is still considered an agricultural community whose members still value a good day's work and helping their neighbors. Clay County offers many venues for outdoor recreation from the Appalachian Trail and world class mountain bike trails on Jack Rabbit to the 7,000 acre Lake Chatuge which we share with Towns County, Georgia.



## **Health Outcomes**

The data collected for the 2015 Community Health Assessment showed many trends among county residents such as the need for mental health. The excessive rate of smoking mothers in Clay County constitutes the highest rate in NC. The data also showed high mortality rates for heart disease, cancer, and chronic lower respiratory disease. The increased need for access to healthcare is highlighted by the large population of uninsured, along with a high rate of adults and children living in poverty in our county.

Since the 2012 Community Health Assessment Clay County's accomplishments include:

- Providing free access to a state of the art recreation facility
- Building a new Health Department and increasing the number of exam rooms and primary care providers.
- Adding a Registered Dietitian to the Health Departments pay role allowing for expanded services
- Adding a Diabetes Prevention Program to the already successful Diabetes Self-Management Program
- Passed a resolution making all of Clay County's parks, playgrounds, recreational facilities, and campgrounds smoke free.

Ongoing challenges for Clay County will be to reduce the number of smoking mothers, and tobacco users as a whole, lower the rates of heart disease, obesity, cancer rates, and those living in poverty. A major challenge will be preparing to provide services for the increasingly older population.

## **Populations at risk**

The high percentage of our population living in poverty, and/or unemployed and uninsured are the groups who are at risk in our county. These "at-risk" populations have limited access to needed medical care and screenings to both prevent and treat the chronic diseases that challenge our citizens.

## Health Priorities

A variety of methods were utilized to identify and prioritize health issues for Clay County. Community input was obtained through surveys and organized meetings. Key informant surveys were analyzed along with stakeholder involvement through the Healthy Carolinians Partnership. The Health Carolinians Partnership is a diverse group made up of partners and stakeholders within the community. Review of primary and secondary data, analysis of facts and figures, and a realistic look at our county and our people provided the information necessary to agree on our top three priorities:

- **Chronic Disease Control and Prevention**
- **Access to Healthcare**
- **Cancer Control and Prevention**

## Next Steps

Clay County's Community Health Assessment will be disseminated using several methods:

- For the public:
  - Clay County Health Department website
  - Printed copies in Health Department Lobby and Moss Memorial Library
  - Printed copies will be available upon request
- For Partners and Stakeholders:
  - Clay County Board of Health and Clay County Commissioners will receive electronic copies along with a formal presentation,
  - Clay County Partnership for Healthy Carolinians shall receive electronic copies and printed copies upon request for further distribution

The community stake holders and partners instrumental in the development of the 2015 Community Health Assessment will re-convene in the Spring of 2016 to establish and set goals to “move the needle” on the priorities established in 2015 CHA.

# CHAPTER 1 – COMMUNITY HEALTH ASSESSMENT PROCESS

## Purpose

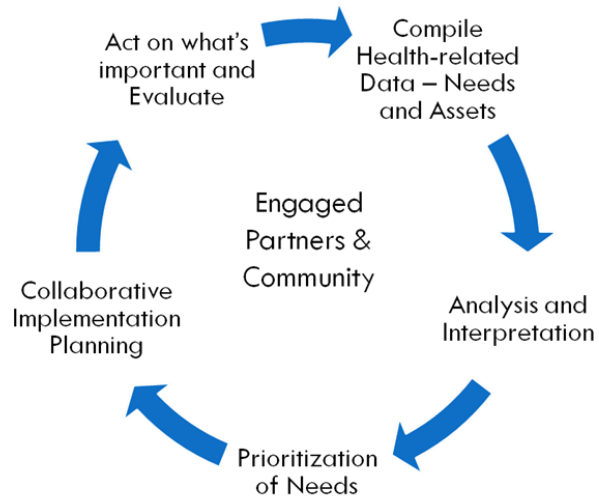
The Community Health Assessment (CHA) is an important part of improving and promoting the health of county residents.

***Community-health assessment is a key step in the ongoing community health improvement process.***

The CHA, which is both a process and a product, investigates and describes the current health indicators and status of the community, what has changed, and what still needs to change to reach a community's desired health-related results.

## Definition of Community

Community is defined as "county" for the purposes of the North Carolina Community Health Assessment Process. Clay County is included in Murphy Medical Center's community for the purposes of community health improvement, and as such they were key partner in this local level assessment.



## WNC Healthy Impact

WNC Healthy Impact is a partnership between hospitals and health departments in western North Carolina to improve community health. As part of a larger and continuous community health improvement process, these partners are collaborating to conduct community health (needs) assessments across western North Carolina [www.WNCHealthyImpact.com](http://www.WNCHealthyImpact.com). Our county and partner hospitals are involved in this regional/local vision and collaboration. Participating counties include: Buncombe, Cherokee, Clay, Graham, Haywood, Henderson, Jackson, Macon, Madison, McDowell, Mitchell, Polk, Rutherford, Swain, Transylvania and Yancey.

## Data Collection

The set of data reviewed for our community health assessment process is comprehensive, though not all of it is presented in this document. Within this community health assessment product we share a general overview of health and influencing factors then focus more on priority health issues identified through this collaborative process. Our assessment also

highlights some of our community strengths and resources available to help address our most pressing issues.

### **Core Dataset Collection**

The data reviewed as part of our community's health assessment came from the WNC Healthy Impact regional core set of data and additional local data compiled and reviewed by our local CHA team. WNC Healthy Impact's core regional dataset includes secondary (existing) and primary (newly collected) data compiled to reflect a comprehensive look at health. The following data set elements and collection are supported by WNC Healthy Impact data consulting team, a survey vendor, and partner data needs and input:

- A comprehensive set of publically available secondary data metrics with our county compared to the sixteen county WNC region as "peer"
- Set of maps accessed from Community Commons and NC Center for Health Statistics
- Telephone survey of a random sample of adults in the county
- Electronic key-informant survey

See [Appendix A](#) for details on the regional data collection methodology.

### **Additional Community-Level Data**

The Clay County Health Department collected data from several sources in order to better understand the needs of our citizens. We reviewed data on NC Detect, as well as information collected from the Robert Wood Johnson Foundation's County Health Rankings and Road Maps website.

Data collected by the state of NC that is published by the N.C. State Center for Health Statistics was reviewed. We used an open forum to collect surveys during the Health Department's Open House.

Electronic surveys were created and distributed to Clay County Citizens through the Health Department's Facebook Page; these surveys were also distributed to Employees of Clay County and included the Health Department staff and the Department of Social Services. Similar surveys were sent to Clay County Healthy Carolinians Partnership, and to Clay County's Board of Health.

### **Health Resources Inventory**

An inventory of available resources of our community was conducted through reviewing a subset of existing resources currently listed in the 2-1-1 database for our county as well as working with partners to fill in additional information. Where gaps were identified, we

partnered with 2-1-1 to fill in or update this information when applicable. See [Chapter 7](#) for more details related to this process.

## **Community Input & Engagement**

Including input from the community is an important element of the community health assessment process. Our county included community input and engagement in a number of ways:

- Partnership on conducting the health assessment process
- Through primary data collection efforts (survey and key informant interviews)
- In the identification and prioritization of health issues

In addition, community engagement is an ongoing focus for our community and partners as we move forward to the collaborative action planning phase of the community health improvement process. Partners and stakeholders with current efforts or interest related to priority health issues will continue to be engaged. We also plan to work together with our partners to help assure programs and strategies in our community are developed and implemented with community members and partners.

## **At-Risk & Vulnerable Populations**

Throughout our community health assessment process and product, our team was focused on understanding general health status and related factors for the entire population of our county as well as the groups particularly at risk for health disparities or adverse health outcomes. In particular, for the purposes of the overall community health assessment, we aimed to understand variability in health outcomes and access of medically underserved, low-income, minority, and others experiencing health disparities.

- The Elderly
- Young Children
- Non-Native English Speakers
- Residents living in poverty
- Uninsured Adults

## CHAPTER 2 – CLAY COUNTY

### Location and Geography

There are five counties adjacent to Clay County; Macon County, NC to the northeast; Rabun County, Georgia, to the southeast; Towns County, Georgia, to the south; Union County, Georgia to the southwest; Cherokee County, NC to the northwest.

Communities and Townships: Hayesville, with a 2010 population of 311, is the only incorporated town in the county. Hayesville is the county seat and the center of economic activity for Clay County. Warne, Brasstown, Elf, Tusquittee, and Shooting Creek are all unincorporated communities of Clay County.

The county is divided into six townships: Brasstown comprises the westernmost township, Hayesville is centrally located and home to the county seat, Hiwassee is the smallest and surrounds Lake Chatuge, Shooting Creek is the westernmost township, Sweetwater is a small township northwest of Hayesville Township, and Tusquittee, one of the larger townships, is most northern.

According to the U.S. Census Bureau, the county has a total area of 221 square miles (572.4 km<sup>2</sup>), the smallest county in North Carolina, of which 215 square miles (556.8 km<sup>2</sup>) is land and 6 square miles (15.5 km<sup>2</sup>) (2.67%) is water. Clay County is bordered to the south by the state of Georgia and the Chattahoochee National Forest. The Nantahala River forms part of its northeastern border. The county is drained by the Hiwassee River. In the southern part of Clay County is Lake Chatuge which runs along the North Carolina–Georgia border. Much of Clay County exists within the Nantahala National Forest. Fires Creek Bear Reserve is north of the township of Tusquittee. The eastern portion of the county is preserved as part of the Nantahala National Forest.

### History

Before settlement, Clay County was home to the Cherokee Indians, a tribe of Native Americans that made their home in Southeastern United States (principally Georgia, the Carolinas and Eastern Tennessee) They were one of the "Five Civilized Tribes" because of their assimilation of European-American cultural and technological practices. During the late 1700s, the first European-American settler, John Covington Moore, settled here in what was then part of Macon County. The first emigrants moved to this area in the early 1830s.

In 1837, General Winfield Scott was hired to gather all the Native Americans in the region and detain them in improvised stockades before transporting them into Oklahoma Territory. Captain Hembree was sent to an area about a mile southwest of Hayesville to construct a stockade to hold the Native Americans until they had all been gathered up. This marks the beginning of the Trail of Tears. The stockade was named after Captain Hembree as “Fort Hembree” and served as a center of business.

In the fall of 1860, George Hayes, who was running for Representative from Cherokee County, promised his southeastern constituents to introduce legislation to form a new county. In February 1861 the legislation was introduced and passed by the North Carolina General Assembly.

Clay County was formed primarily from Cherokee County, North Carolina; however a small area was taken from Macon County, North Carolina. In honor of Mr. Hayes, the new county's seat was appointed as Hayesville, and the newly formed county was named in honor of Henry Clay, famous American statesman, and member of the United States Senate from Kentucky.

Despite having been created in 1861, Clay County lacked an organized, formal government until 1868. Later that year, the first post office opened in Hayesville and the first county courthouse was built in 1888. The courthouse is currently listed on the National Register of Historic Places.

## Population

As of the census of 2010 there were 10,587 people, 4,431 households, and 7,167 housing units in Clay County with a homeownership rate of 80.7%. The population density was 49.3 people per square mile. The racial makeup of the county was 96.9% White, 1% Black or African American, 0.4% Native American, 0.02% Asian, 0.07% Pacific Islander, 0.15% from other races, and 1.4% from two or more races. 3.1% of the populations were Hispanic or Latino of any race.

The 4,431 households have an average of 2.37 people per household. The median value of owner occupied housing was \$154,700, and home ownership rate was 80.7%. The median household income was \$38,828, and 24.3% live below the poverty level. The per capita money income in the past 12 months was \$22,081.

The population of Clay County consists of 48.9% male, and 51.1% female. The median age is estimated to be 50.1 years old, and 27.5% of our population is over 65 years old compared to NC with 14.3%. The percentage of individuals with a High School diploma or higher is 86.9%, the percentage with a bachelor's degree or higher is 20.6%

## CHAPTER 3 – A HEALTHY CLAY COUNTY

### Elements of a Healthy Community

When key informants were asked to describe what elements they felt contributed to a health community in our county, they reported:

- Access to Health Care (both Medical and Dental)
- Variety of Opportunities for Physical Activity
- Community Resources
- Leaders Focus on Health and Wellness



*“Our geographical location contributes to a smaller community which aids in community involvement and friendliness, plus the beauty of where we live is a factor in our quality of life”.*

*(Direct quote taken from Key Informant survey)*

As part of our continuing collaborative planning efforts and next steps, we will further explore these concepts and the results that our community has in mind.

### Community Assets

We also asked key informants to share some of the assets or “gems” they thought were important in our community. They shared the following information and ideas:

#### Natural Environment

*“Our location in the mountains...”*

*“Geographical location contributes to a smaller community which aids in community involvement and friendliness plus the beauty of where we live is a factor in the quality of life...”*

*“It has been our environmental surroundings- mountains, lakes, streams...”*



*“Environment...mountains, lake, clean air and water...”*

It is certainly apparent that the beauty of our home is paramount to the well-being of our community.

### **Sense of Community**

*“There are so many. The population size and rural setting is amazing, but probably our history and culture. Clay County has such a rich historic culture that, though it seems to be fading in some instances, is still very much alive and can help direct our future generations.”*

*“The closeness of the community.”*

*“The home town aspect...”*

### **People**

*“The people (volunteers, churches, service providers, etc.) are giving, caring, individuals that will step up to help in any situation!”*

### **Personalized Care with Physicians**

*“Personal care with the physicians that are available.”*



## CHAPTER 4 – SOCIAL & ECONOMIC FACTORS

### Income

- 2009-2013 Median Household Income = \$38,828
  - ^\$3,719 since 2006-2010
  - \$59 **below** WNC average
  - \$7,506 **below** NC average
- 2009-2013 Median Family Income = \$46,528
  - ^\$7,122 since 2006-2010
  - \$23 **below** WNC average
  - \$10,400 **below** NC average

**Household:** all people in a housing unit sharing living arrangements; may or may not be related

**Family:** householder and people living in household related by birth, marriage or adoption.

*All families are also households; not all households are families.*

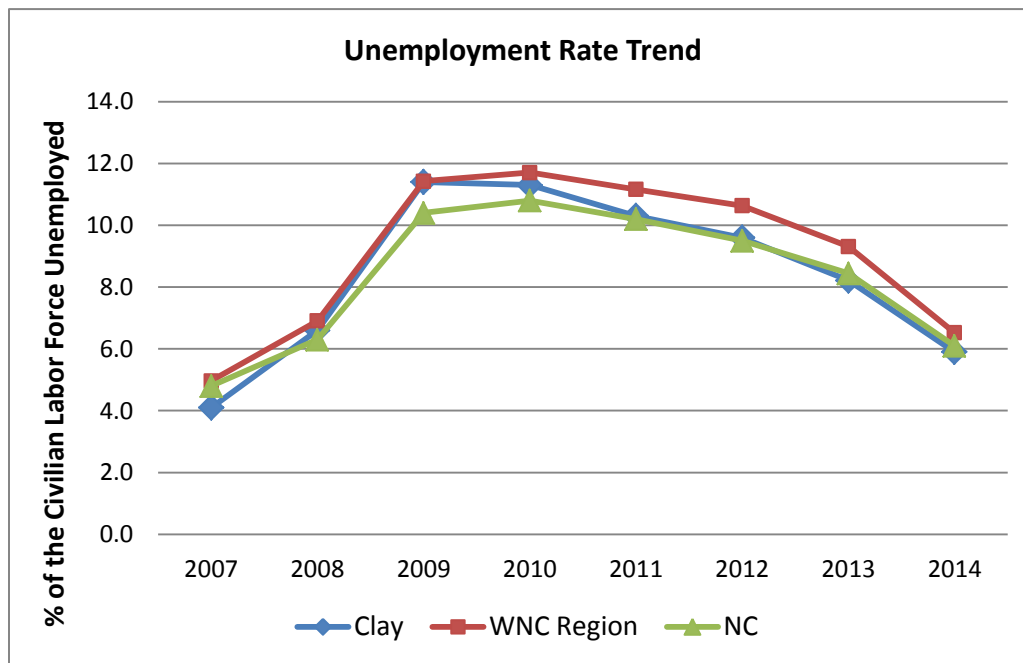
### Employment

As of 2013, the three employment sectors in Clay County with the largest proportions of workers (and average weekly wages) were:

- Retail Trade: 24.91% of workforce (\$468)
- Health Care and Social Assistance: 18.88% of workforce (\$470)
- Educational Services: 13.85% of workforce (\$740)

*Region-wide in 2013 the largest employment sector was Health Care and Social Assistance (18.37%) at an average weekly wage of \$655 per employee. Statewide the largest employment sector also was Health Care and Social Assistance (14.48%) at an average weekly wage of \$859.*

## Unemployment



Throughout most of the period cited the unemployment rate in Clay County was lower than the comparable rate for WNC but higher than the rate for NC as a whole.

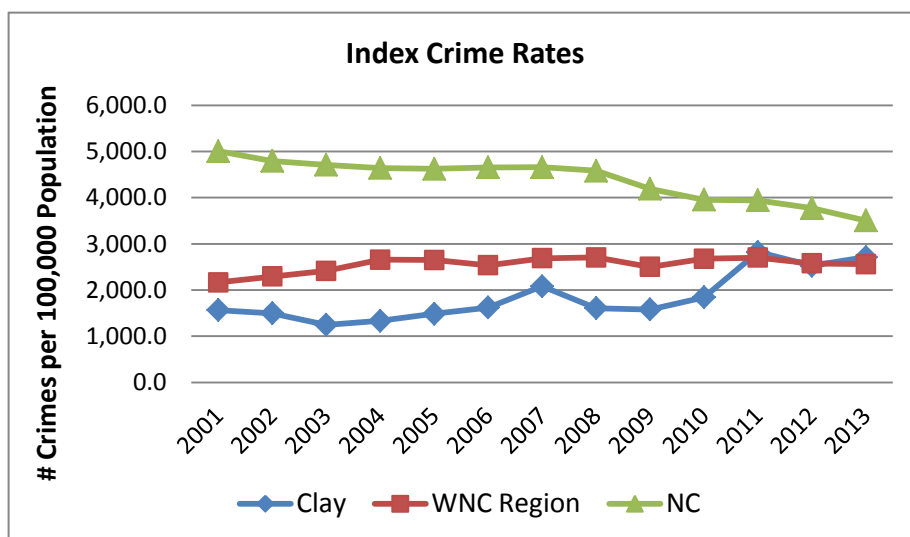
**\*\*Definition of “unemployed”:** An estimate of persons having no employment during the week that includes the 12th of the month but were available for work, had made specific efforts to find employment during the four weeks prior, were waiting to be recalled to a job from which they had been laid off, or were waiting to report to a new job within 30 days.

## Education

- Compared to the **WNC Region average**, Clay County has:
  - **7% lower** percentage of persons in the population over age 25 having only a high school diploma or equivalent (2009-2013 Estimate)
  - **3% lower** percentage of persons in the population over age 25 having a Bachelor’s degree or higher (2009-2013 Estimate)
  - **8% higher** overall HS graduation rate (for 4-year cohort of 9<sup>th</sup> graders entering school in SY 2010-2011 and graduating in SY 2013-2014 or earlier)

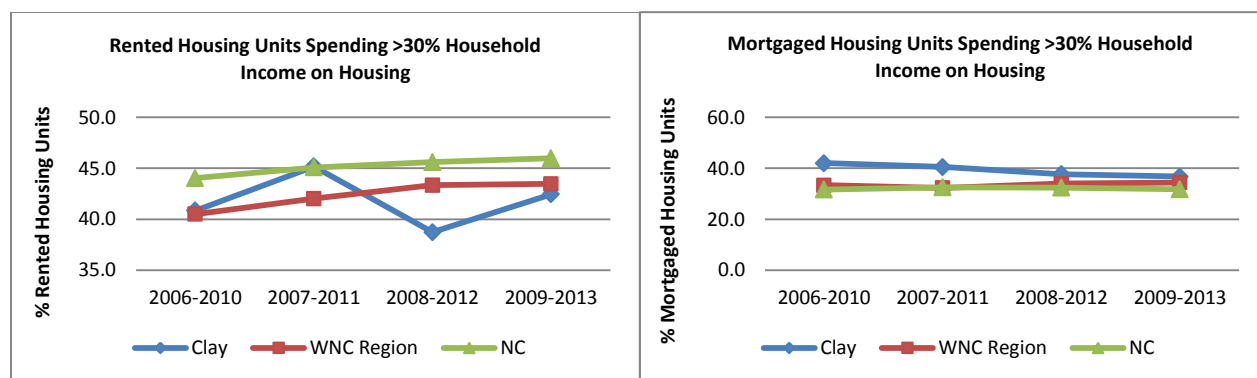
## Community Safety

Index crime is the sum of all violent and property crime. The index crime rate in Clay County was lower than the comparable NC and WNC averages in most years cited. It would appear that the index crime rate in Clay County has risen lately, while the state rate has fallen.



## Housing

One measure of economic burden in a community is the percent of housing units spending more than 30% of household income on housing. In Clay County and WNC, smaller proportions of renters but larger proportions of mortgage holders spend >30% of household income on housing than the NC average.



## Family & Social Support

In the 5-year period from 2009-2013, an estimated 125 Clay County grandparents living with their minor-aged grandchildren also were financially responsible for them. Over the same period there were an estimated 4,431 households in Clay County, 879 of them with children under 18 years of age. Among the households with minor-age children, 79% were headed by a

married couple. An additional 15% were headed by a female single parent, and 6% were headed by a male single parent.

#### Minor-Age Children Living with Grandparents and in Single-Parent Households, 2009-2013

County	# Grandparents Living with Own Grandchildren (<18 Years)	Grandparent Responsible for Grandchildren (under 18 years)*		# Total Households	Family Household Headed by Married Couple (with children under 18 years)		Family Household Headed by Male (with children under 18 years)		Family Household Headed by Female (with children under 18 years)	
		Est. #	%		Est. #	%**	Est. #	%**	Est. #	%**
Clay	260	125	48.1	4,431	696	15.7	47	1.1	136	3.1
WNC (Regional) Total	15,007	8,142	54.3	316,799	49,395	15.6	6,133	1.9	17,711	5.6
State Total	206,632	100,422	48.6	3,715,565	706,106	19.0	84,199	2.3	293,665	7.9

#### Social Determinants of Health

Over two-thirds of key informants characterized Social Determinants of Health as a “major contributor” to local health issues. Those who rated this as a “major contributor” feel that the following contribute the most to health problems in Clay County:

Alcohol/Drugs	Lack of Motivation to Change
Economy	Learned Behaviors
Education	Parental Involvement
Employment	Poverty
Employment that pays a living wage	Social Impact

Contributors to Health Issues				
Health Issue	Major Contributor	Moderate Contributor	Minor Contributor	Not a Contributor At All
Physical Environment	0.0%	33.3%	44.4%	22.2%
Social Determinants of Health	66.7%	22.2%	11.1%	0.0%

## CHAPTER 5 – HEALTH DATA FINDINGS SUMMARY

### Mortality

#### Leading Causes of Death, Age-Adjusted Death Rates per 100,000 Population (5-Year Aggregate, 2009-2013)

Rank	Cause of Death	Clay		
		# Deaths	Mortality Rate	Rate Difference From NC
1	Diseases of Heart	161	179.2	+3%
2	Cancer	153	162.3	-5%
3	Chronic Lower Respiratory Diseases	49	51	+11%
4	All Other Unintentional Injuries	26	38.7	+32%
5	Alzheimer's disease	28	30.2	+4%
6	Cerebrovascular Disease	27	27.2	-38%
7	Unintentional Motor Vehicle Injuries	14	25.8	+88%
8	Diabetes Mellitus	17	18	-17%
9	Pneumonia and Influenza	14	16.6	-7%
10	Suicide	9	16.6	+36%
11	Chronic Liver Disease and Cirrhosis	10	15.4	+62%
12	Nephritis, Nephrotic Syndrome, and Nephrosis	13	12.9	-27%
13	Septicemia	9	10.2	-23%
14	Homicide	3	6.6	+14%
15	Acquired Immune Deficiency Syndrome	0	0	N/A
	All Causes (some not listed)	703	810.5	

Color Code: Red= Above State Average Green=Below State Average Blue=No Statistical Value

- The leading causes of death in Clay County continue to be Heart Disease, Cancer (all types), and Chronic Lower Respiratory Disease (COPD, Emphysema, etc.). As seen on the chart above our rates of heart disease are 3% greater than the NC rate, and our rates of Chronic Lower Respiratory Disease are 11% higher. Lung cancer is the leading cause of all cancer deaths.

For persons born in 2011-2013, life expectancies among comparison jurisdictions are shortest for males but longest for females in Clay County. Overall life expectancy is longest in NC as a whole.

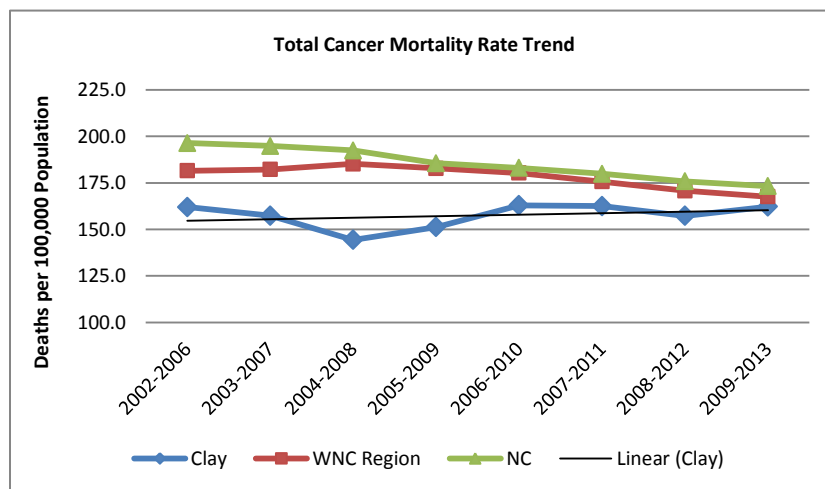
### Life Expectancy at Birth for Person Born in 2011-2013 in Clay County

County	Overall	Sex		Race	
		Male	Female	White	African-American
Clay	78.0	74.7	81.5	77.9	n/a
WNC (Regional) Arithmetic Mean	78.0	74.7	81.5	77.9	75.2
State Total	78.2	75.7	80.6	78.8	75.9
US Total	78.8				

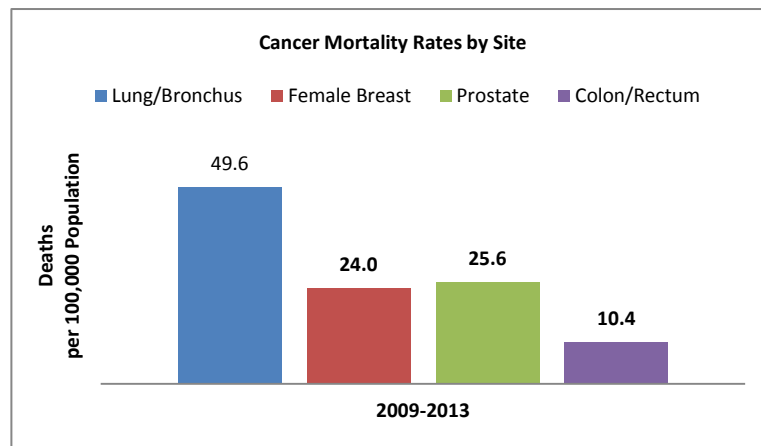
1 - 2011-2013 State-Level Life Expectancies by Age, Sex, Race and Race by Sex. North Carolina Center for Health Statistics, Life Expectancy - State & County Estimates: <http://www.schs.state.nc.us/data/lifexpectancy/>

### Chronic Disease in Clay County

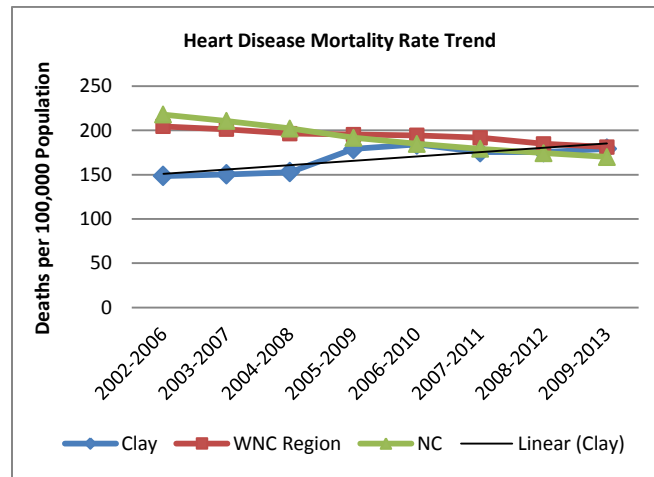
- Cancer
  - Although Clay County's total cancer mortality is lower than WNC as a region and the state of NC, we are trending upwards whereas WNC, and NC as a whole is trending downwards.



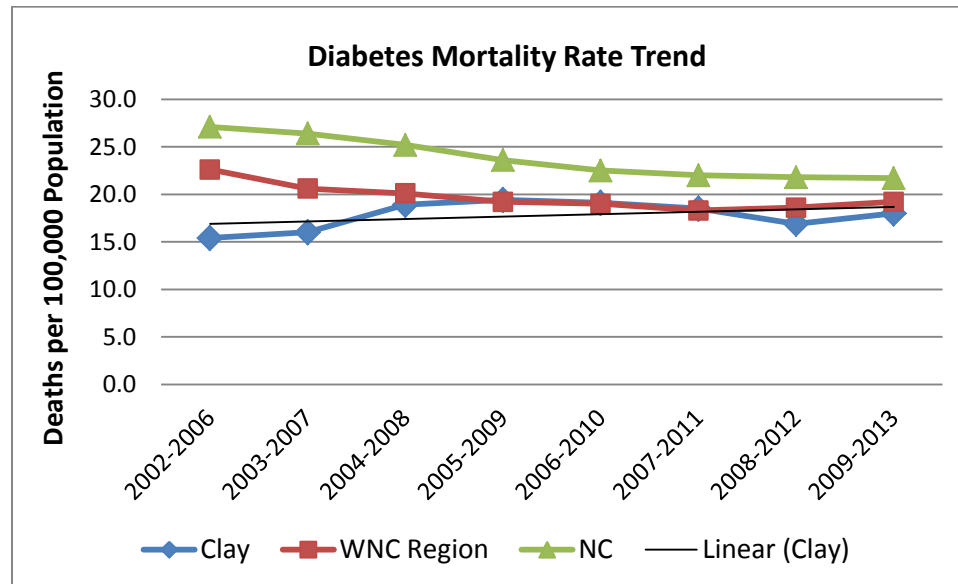
- As of 2013 Lung Cancer is still the leading cause of cancer death in Clay County at almost double the rate of the second leading cause--prostate cancer. Breast cancer rates are slightly lower than prostate cancer.



- Heart Disease
  - Heart Disease is the number cause of death of Clay County Citizens, and is trending up in number of deaths compared to WNC and NC which are trending down.



- Diabetes
  - Diabetes is not a leading cause of death in Clay County, however, it greatly affects other causes such as heart disease. Although the rates of death due to diabetes for Clay County is lower than WNC and NC as a whole, we are shown as trending upwards after falling between years 2005-2009, and 2008-2012.



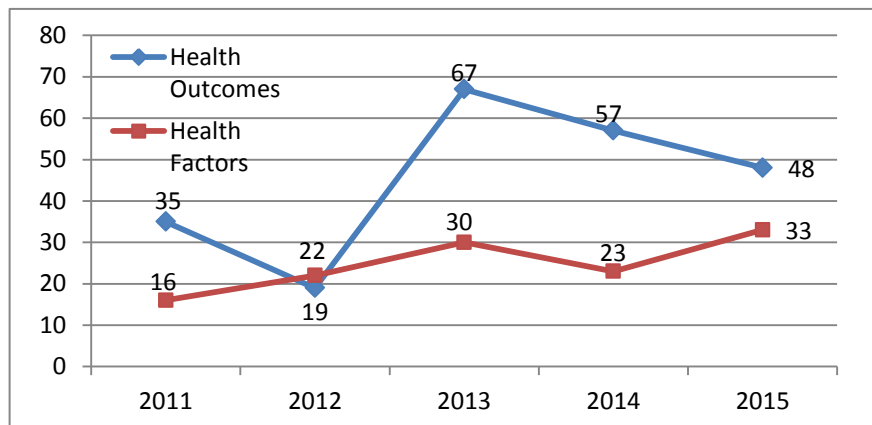


## Health Status & Behaviors

### Overall Health Status

- According to *County Health Rankings* (2015) for NC, Clay County was ranked 48<sup>th</sup> overall (where “1” is the best). This is an improvement from 2013 and 2014.
- The County Health Rankings are based on two measurements Health Outcomes (length and quality of life), and Health Factors (determinants of health).
  - Clay County Health Outcomes rankings (2015) out of 100 (where 1 is the best):
    - 65<sup>th</sup> in length of life
    - 32<sup>nd</sup> for quality of life
  - Clay County health factors rankings (2015) out of 100 (where 1 is the best)
    - 12<sup>th</sup> for health behaviors
    - 57<sup>th</sup> for clinical care
    - 44<sup>th</sup> for social and economic factors
    - 98<sup>th</sup> for physical environment

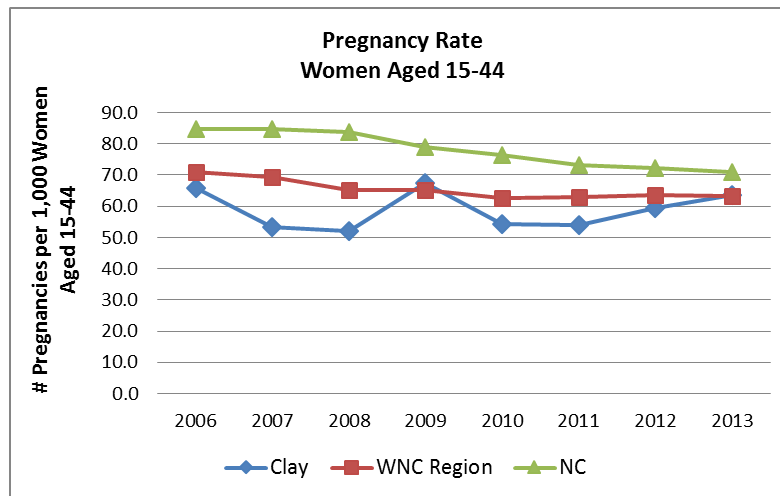
Clay County Health Rankings-RWJ Foundation



## **Maternal & Infant Health**

### **Pregnancies per 1,000 Women Age 15-44**

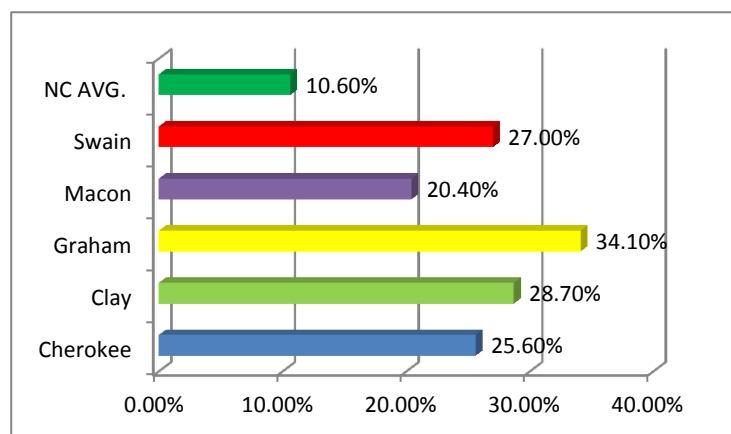
- The total pregnancy rate in Clay County was the lowest among the comparators in every year cited except 2009 and 2013.
- Since 2006 the total pregnancy rate has fallen overall in WNC and NC, but has risen recently in Clay County.



### **Smoking during Pregnancy**

- Clay County has the second highest percentage of mothers who smoked while pregnant in WNC, and the second highest in all of North Carolina for the year 2013 (the last year data is available).

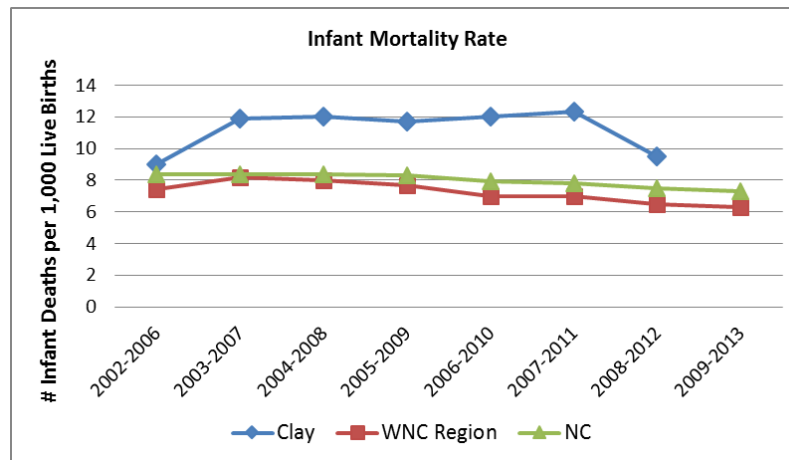
### **Percentage of Mothers Who Reported Smoking While Pregnant in Far Western NC, 2013**



(NC SCHS Pocket Guide, 2015)

## Infant Mortality

- The infant mortality rate in Clay County was the highest among the comparators in every period cited. Note, however, that all Clay County rates were unstable, and the 2009-2013 rate was suppressed.



## Clinical Care & Access

### Health Insurance

The percentages of uninsured adults age 18-64 in Clay County, WNC and NC all increased between 2009 and 2010 but have decreased since.

Clay County had higher proportions of uninsured adults than WNC or NC in 2011 through 2013. From 2009 through 2013 Clay County had higher percentages of uninsured children than either the region or the state.

### **Percent of Population without Health Insurance, by Age Group**

County	2009		2010		2011		2012		2013	
	0-18	18-64	0-18	18-64	0-18	18-64	0-18	18-64	0-18	18-64
Clay County	10.9	23.5	10.7	25.8	9.8	25.7	10.4	26.3	10.2	25.9
WNC Region	9.9	24.2	9.7	26	9.1	25.2	9.3	25.4	8.6	25
State of NC	8.7	21.9	8.3	23.5	7.9	23	7.9	23.4	6.9	22.5

- Health Professionals in Clay County

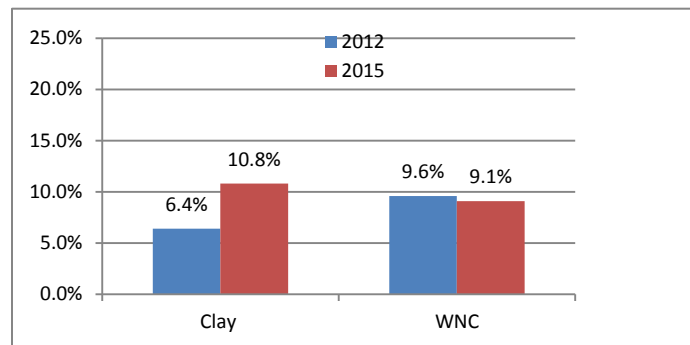
In 2012, among the jurisdictions cited, Clay County had the lowest ratio of active health professionals in all categories except dentists. The ratio of dentists to population in Clay County actually exceeded the average for NC as a whole.

**Number of Active Health Professionals per 10,000 Population**

County	2012				
	Physicians	Primary Care Physicians*	Dentists	Registered Nurses	Pharmacists
Clay	4.75	3.80	4.75	46.58	7.60
WNC (Regional) Arithmetic Mean	0.30	0.24	0.30	2.91	0.48
State Total	22.31	7.58	4.51	99.56	10.06
National Percent (date)**	23 (2011)	8.1 (2011)	5.3 (2012)	91.6 (2012)	9.1 (2012)

- Clay County citizens were surveyed by phone in 2012 and 2015 and asked if they were unable to get needed medical care at some point in the past year. The graph below represents the number who responded yes. In 2012 the rates reported by Clay citizens were much lower than the rest of WNC, however in 2015 we had a slightly higher percentage.

Unable to Get Needed Medical Care at Some Point in the Past Year  
(Clay County)

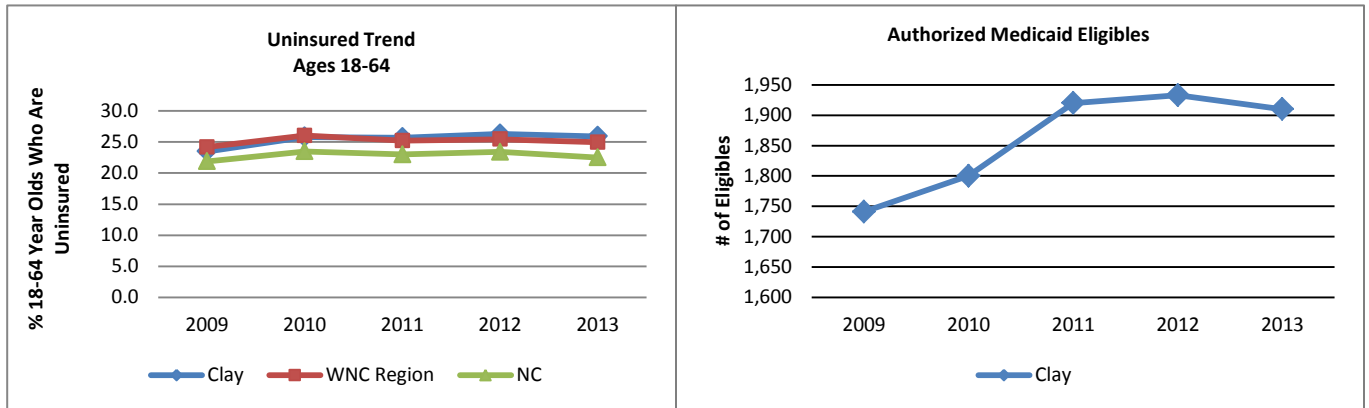


- A 2015 Key Informant Survey conducted for the Health Department of Nurses, Physicians, and Community Advocates showed that the number one characteristic of a Healthy Community was Access to Health Care.

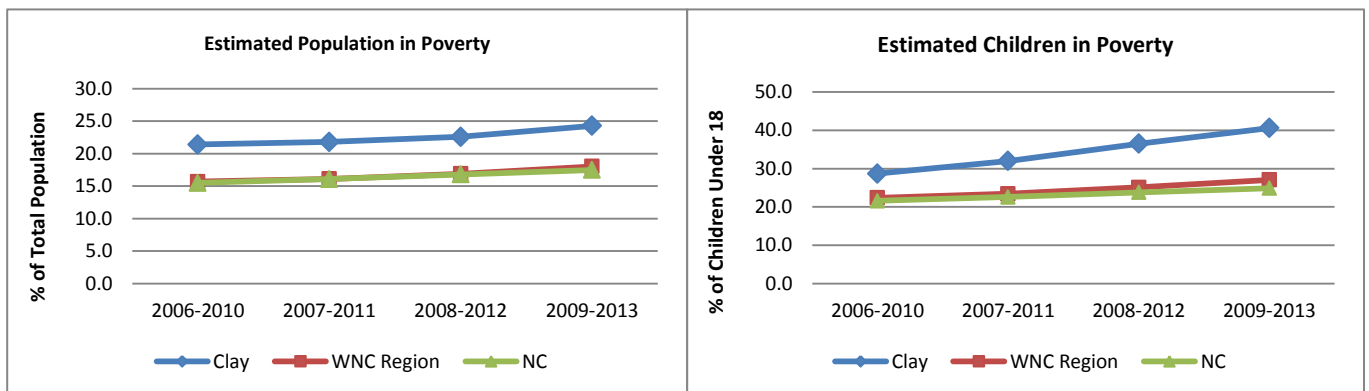
Health Issue	Major Problem	Moderate Problem	Minor Problem	No Problem At All
Access to Health Care Services	22.20%	44.40%	33.30%	0%

## At Risk Populations

- As of 2013 the percentage of uninsured adults in Clay County is slightly higher than WNC and NC as a whole. The number of Authorized Medicaid Eligible citizens increased from 2009-2012 then declined slightly in 2013.



- Clay County's estimated population in poverty and children in poverty is higher than both the WNC and NC rate.



## CHAPTER 6 – PHYSICAL ENVIRONMENT

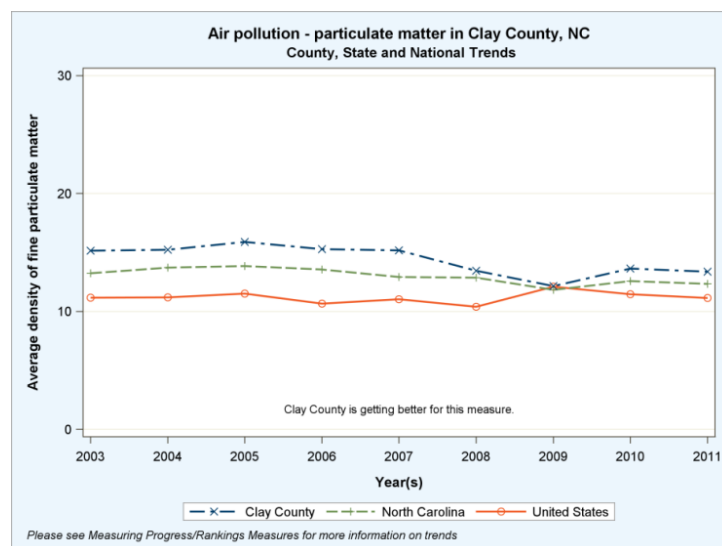
The World Health Organization considers physical environment as an important determinant of health. The Robert Wood Johnson Foundation's County Health Rankings and Roadmaps program ranks Clay County as 98<sup>th</sup> out of 100 for Physical Environment.

<http://www.countyhealthrankings.org/app/north-carolina/2015/rankings/clay/county/outcomes/overall/snapshot>

### Air Quality

Although Clay County's Air Quality is higher than most metropolitan areas the average density of fine particulate matter is high in our area. Fine Particulate matter is matter that is 2.5 micrometers in diameter (PM2.5) in size or less. This size is considered the most dangerous because it can become lodged deep into the lungs.

Clay County's Average Density of Fine Particulate Matter (as seen in the graph below) was measured at 13.4 in 2011 (the newest data available) whereas the top U.S. Performers were at 9.5, and NC as a whole was at 12.3.



This fine particulate matter may come from many sources including:

- Wood Smoke
- Motor Vehicles
- Manufacturing Plants
- Any Combustion Process

## Radon

Clay County and WNC as a whole has a significant rate in Radon Gas in homes. Radon is an odorless, colorless, tasteless gas that occurs naturally with the breakdown of Uranium in granite rock. Radon gas is a known carcinogen and has been linked to lung cancer when breathed in, and stomach and intestinal cancers when found in the water supply.

County	Average Indoor Radon Level (pCi/L)	% Variance from Average National Indoor Radon Level (1.3 pCi/L)	% Variance from Average Regional Indoor Radon Level (4.3 pCi/L)
Clay	4.2	223.1	-2.3
WNC (Regional) Arithmetic Mean	0.3	-79.8	0.0
State Total	n/a	n/a	n/a
Source	1	1,2	2

1 - North Carolina Counties with Detailed Radon Information. North Carolina Radon Information: [http://nc-radon.info/NC\\_counties.html](http://nc-radon.info/NC_counties.html)

2 - Calculated from table data

3 - Facts about radon: Radon in Water; Radon and Geology. North Carolina Department of Environment and Natural Resources: <http://www.epa.gov/radon/states/northcarolina.html>

## Water

Community water systems in Clay County serve an estimated 1,895 people, or 18% of the 2010 county population, which is the lowest in all of Western North Carolina. The fraction of the Clay County population served by a community water system is 67% lower than the average for the WNC region and NC as a whole. Clay County does not provide fluoride in its community water system.

### Population Served by Community Water Systems in Clay County as of 2014

County	2010 Population	Population Served by CWSs (February 10, 2014)		
		Total Population Served by CWSs	% Population Served by CWSs	% Variance from Regional % Population Served
Clay	10,587	1,895	17.9	-67.4
WNC (Regional) Total	759,727	417,651	54.9	-
WNC (Regional) Arithmetic Mean	47,483	26,103	55.0	-
State Total	n/a	n/a	n/a	n/a
Source	1	2	3	3

1 - Profile of General Population and Housing Characteristics: 2010 (DP-1). U.S. Census Bureau, American Fact Finder: <http://factfinder2.census.gov>

2 - Safe. Drinking Water Search for the State of North Carolina, results based on data extracted on February 10, 2014. United States Environmental Protection Agency Enviro facts Safe Drinking Water Information System (SDWIS): <http://www.epa.gov/enviro/facts/sdwis/search.html>

3 - Calculated from table data

## Access to Healthy Food & Places

Clay County is fortunate to have multiple options for healthy food options and recreation. This is an area of improvement on which the Health Department has worked and was a priority in the previous Community Health Assessment.

Citizens of Clay County have access to:

- Free Gym Access at the Rec. Department
- Jack Rabbit Walking and Mountain Bike Trails
- Walking paths between Chatuge Dam, and the Clay County Rec. Park
- Multi-use walking paths and ball fields at the Rec. Department and Rec. Park
- Multiple hiking trails such as the Appalachian Trail, and Rim Trail at Fires Creek
- The Quanassee Path in downtown Hayesville



### Sources of Healthy Foods, Access to Healthier Food Options

- Evening Harvest
- Brasstown Farmers Market
- Mountain Valley Farmers Market
- Warne Kwik Stop-Healthy Corner Store
- Ingles Super Market
- Misty's Produce
- SMM Farms Produce Stand
- Community Garden
- Other Roadside Produce Stands





## CHAPTER 7- HEALTH RESOURCES

### Health Resources

#### Process

WNC Healthy Impact provided a 2-1-1 dataset for mental health and substance abuse resources available to the citizens of Clay County. This data set was reviewed by the Clay County Health Department, along with our CHA partners, to ensure that it was complete and up to date. The Clay County Health Department maintains an updated list of resources available on the Health Department website which is available in print format by request.

#### Findings

Clay County has basic services available, some of which may be underutilized. The Health Department offers several programs such as dental care, and diabetes education as well as a walk-in primary care clinic. Clay County citizens also have several Primary Care Providers that can be utilized. Clay County offers a free gym membership to the Citizens of Clay County and Clay County employees which provides an excellent value and service to our county. Jackrabbit Mountain bike and walking trails, along with walking trails between the Clay County Recreation Park and Chatuge Dam, offer options for families and individuals to stay active and healthy. Additional walking paths may be found at the Recreation Center as well as the Quanassee Path.

#### Resource Gaps

A major resource gap for the citizens of Clay County is the lack of an Urgent Care Clinic or Hospital in our County. Citizens must travel to surrounding Counties to access Hospital services sometimes up to a two hour drive. Although Clay County offers transportation services those services are being underutilized, or may be cost prohibitive to some of our citizens. Affordable dental care for adults without insurance continues to be a need for our county.

Clay County offers little in the form of entertainment for youth such as bowling allies, skating rinks or movie theaters, although those services are offered in some neighboring counties.

Other gaps include:

- Public heated pool for year around use
- Water aerobics activities for seniors
- Pediatric care
- Sidewalks connecting downtown Hayesville to the County Buildings on Courthouse drive i.e. Health Department, Social Services, etc.

## CHAPTER 8 – IDENTIFICATION OF HEALTH PRIORITIES

### Health Issue Identification

#### Process

To identify the significant health issues in our community, our key partners, Board of Health, and the Clay County Healthy Carolinians Partnership reviewed data and discussed the facts and circumstances of our community. We used the following criteria to identify significant health issues:

- County data deviates notably from the region, state or benchmark
- Number of people affected
- The degree in which the issue affects health, and/or leads to death
- The effectiveness and feasibility of the intervention
- Surfaced as a priority community concern
- The importance of the issue to Clay County citizens.

Meetings were conducted with other key partners such as Murphy Medical Center, and the Primary Care Providers at Chatuge Family Practice, along with the Health Departments in Graham and Cherokee Counties to discuss and identify significant health issues in our county and the region.

#### Identified Issues

The following health issues were identified through the above process:

- ***Access to Health Care:*** Clay County Citizens do not have access to after-hours care in our county, and must travel to other counties to utilize hospitals or urgent care clinics. We also have a significant uninsured/underinsured adult population.
- ***Chronic Disease Control and Prevention:*** Heart disease, chronic lung diseases, and diabetes continue to have high mortality rates in Clay County as well as North Carolina.
- ***Radon:*** Clay County Homes have some of the highest tested rates of Radon in NC.
- ***Smoking While Pregnant:*** Clay County has the highest rate of mothers that smoked while pregnant in the State of NC, and the second highest percentage.
- ***Cancer (all forms):*** Lung Cancer continues to be the second leading cause of death of men and women in our county, with prostate and breast cancer a close second.

- ***Mental Health/Substance Abuse:*** Mental health service is suffering state wide and was described as an issue in multiple surveys along with substance abuse.
- ***Oral Care:*** Affordable oral care for uninsured adults is needed in our area.
- ***Physical Activity/Nutrition:*** Despite access to healthy food options, and multiple outlets for physical activity, these resources continue to under-utilized possibly due to having to travel outside the county for employment.

## Priority Health Issue Identification

### Process

In order to identify the significant health issues of our county; the Clay County Partnership for Healthy Carolinians, the Clay County Health Department, and other key partners from Murphy Medical Center and the community met to review all the data compiled during the CHA process. Data utilized included data from PRC, the Key Informant Survey, and data from the North Carolina State Center for Health Statistics.

Once data priorities were identified, surveys were conducted for Clay County Citizens, Clay County Employees including the Health Department staff and Social Services, and the Clay County Board of Health to help narrow down our health priorities to the top three. Some of the other priorities were consolidated when possible.

During our group process, the following criteria were used to select priority health issues of focus for our community over the next three years:

- Criteria 1 – The degree in which the issue affects health and/or leads to death.
- Criteria 2 – The effectiveness or feasibility of the intervention
- Criteria 3 – The degree in which the county data deviates notably from the region, state, or benchmark.
- The importance of the issue to Clay County citizens as identified through surveys.

### Identified Priorities

The following priority health issues are the final community-wide priorities for our county that were selected through the process described above:

- Chronic Disease Control and Prevention – The major mortality and morbidity causes in Clay County can be consolidated under chronic diseases. By selecting the broad priority of Chronic Disease, we are able to take full advantage of programs and evidence based strategies available to address these issues.

- **Access to Healthcare** – Access to healthcare was listed as the number one characteristic of a healthy community on the Key Informant survey conducted by PRC and is an ongoing issue in our region. Without adequate access to affordable healthcare, illnesses such as pneumonia that are easily treated may become deadly. Many of the chronic diseases plaguing our county could be addressed before they worsen with improved access to primary care to manage those diseases.
- **Cancer Control and Prevention**– Cancer is the second leading cause of death of Clay County citizens. Some of these cancers are more easily treated when patients have access and education for early screening and detection.

## PRIORITY ISSUE #1 –ACCESS TO HEALTHCARE

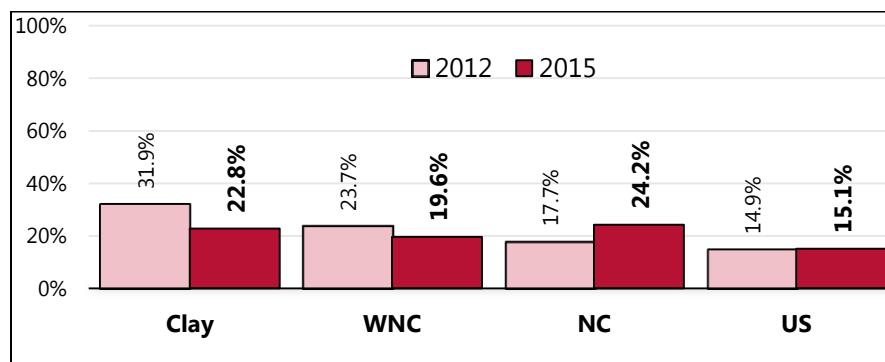


Clay County is a medically underserved county that lacks an Urgent care, Free Clinic, or Hospital within its borders. Clay County also does not have specialists such as Pediatricians, Obstetricians/Gynecologists, and others. Our citizens must travel to surrounding counties—sometimes up to two hours to reach a major medical facility for hospitalization or treatment. The Clay County Health Department has dedicated itself to increasing access to healthcare by adding more exam rooms to its new facility, along with an additional Nurse Practitioner to help strengthen the number of Primary Care Providers in our County.

## Data Highlights

A driving factor in lack of access to healthcare is lack of health insurance. Health care is expensive, and anyone can find themselves delaying an important health services because of cost. This is true even among those who have health insurance and higher incomes, due mainly to the high deductibles and copayments that are part of today's health insurance plans.

**Lack of Healthcare Insurance Coverage**  
(Among Adults Age 18-64; Clay County)



A telephone survey conducted by PRC in 2015 of 3000 Clay County Citizens shows that 22.8% of those surveyed still do not have health insurance.

### **Health Indicators**

- Clay County falls well below the state for the ratio for all medical providers except for dentists, as shown in the chart below, with data compiled from the State Center for Health Statistics. The 2015 PRC survey of our citizens shows that 9.6% of those surveyed reported not being able to get the medical care they needed in the past year which has increased from 6.4% reported in the 2012 survey and is slightly higher than the WNC total for 2015.
- Data shown earlier in this document shows that the number of un-insured is increasing, and is predicted to continue to increase despite the ACA. This creates a recipe for disaster when addressing the increasing prevalence of Chronic Disease

Number of Active Health Professionals per 10,000 Population

County	2012				
	Physicians	Primary Care Physicians*	Dentists	Registered Nurses	Pharmacists
Clay	4.75	3.80	4.75	46.58	7.60
WNC (Regional) Arithmetic Mean	0.30	0.24	0.30	2.91	0.48
State Total	22.31	7.58	4.51	99.56	10.06
National Percent (date)**	23 (2011)	8.1 (2011)	5.3 (2012)	91.6 (2012)	9.1 (2012)

North Carolina Health Professions, 2009 -2012 Data Books. Cecil G. Sheps Center for Health Services Research, North Carolina Health Professions Data System: <http://www.shepscenter.unc.edu/hp/publications.htm>

### **Understanding the Issue**

- The reduced number of primary care providers coupled with the lack of insurance and the increase in the over 65yo population creates hardships for families and individuals who must take time from work to get medical treatment, or must find transportation out of the county for those treatments.
- The number of families living in poverty, and the high un-employment rate creates the issue of families having to decide between paying bills or eating, or seeking medical care and/or filing a prescription compounding the issue.

### **Specific Populations At-Risk**

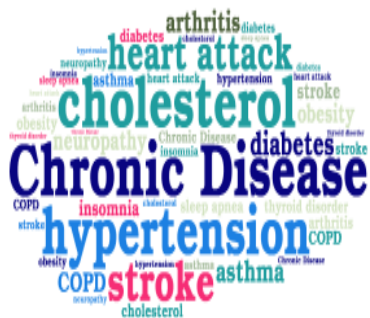
- Populations at the greatest risk are the elderly who lack transportation and those living in poverty in our county who cannot afford to take off work to get the help they need. Our mountain community requires reliable transportation to function for even the most basic of needs such as buying groceries.

### **Health Resources available/needed**

The Clay County Health Department prides itself in the quality of care we provide our citizens; however, many remain unaware of the services we provide, some of which are available on a sliding scale fee system. The Health Department has added a second Nurse Practitioner in an effort to increase healthcare accessibility. Chatuge Family Practice has added a Mid-level provider to its practice for a total of four primary care providers, and just recently Murphy Group Practice has added a full time Physician to their practice for a total of two providers. Clay County also has Hayesville Family Practice that staffs two Nurse Practitioners.

Clay County is still in need of an after-hours Urgent Care Clinic, and would certainly benefit from a free clinic to serve those in financial need.

## PRIORITY ISSUE #2 –CHRONIC DISEASE CONTROL AND PREVENTION

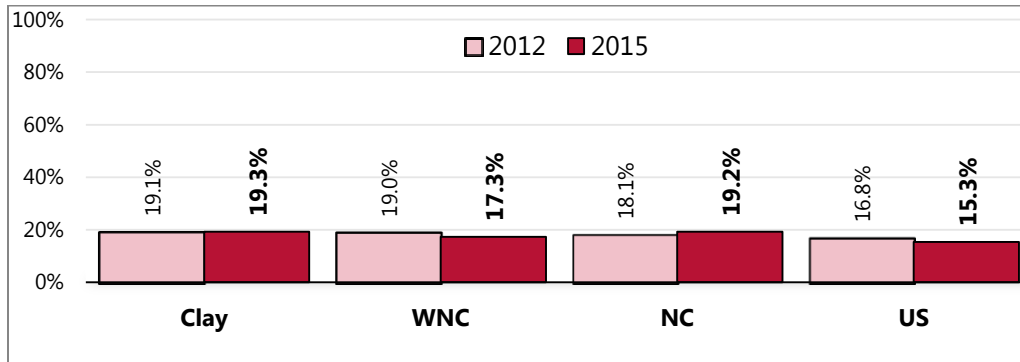


The World Health Organization (WHO) defines chronic diseases as diseases that are not communicable, develop slowly, and persist for long periods of time. Chronic Disease is a major issue for Clay County, North Carolina, and the United States as a whole. All of the top three causes of death for Clay County citizens--Heart Disease, Cancer, and Chronic Lower Respiratory Disease--are considered to be chronic diseases by WHO. This is a continual priority for Clay County and has been addressed in the 2008 and 2012 Community Health Assessments.

## Data Highlights

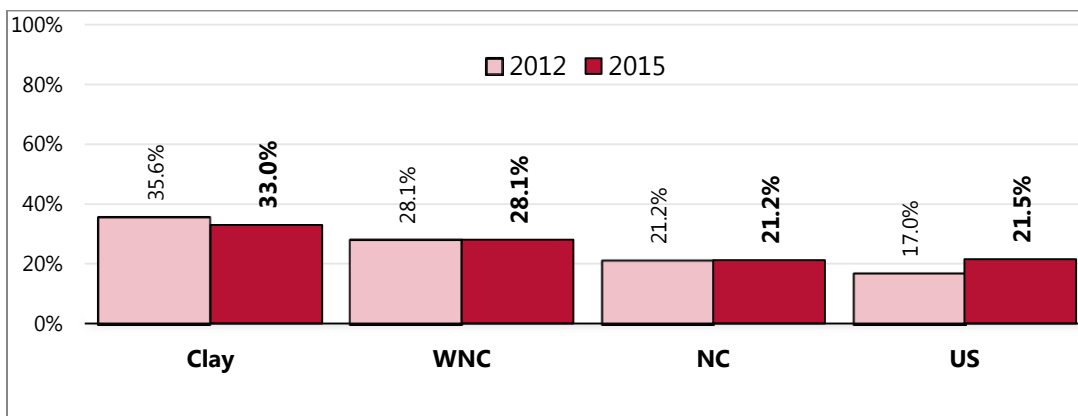
As noted above, two out of the three leading causes of death for the citizens of Clay County are Chronic Diseases. Chronic diseases have a huge impact on quality and length of life. 19.3% of Clay County citizens reported fair or poor overall health when asked by PRC for their 2015 Community Survey. That is slightly higher than the WNC, and NC rate and moderately higher than the US as a whole.

### Experience “Fair” or “Poor” Overall Health (Clay County)



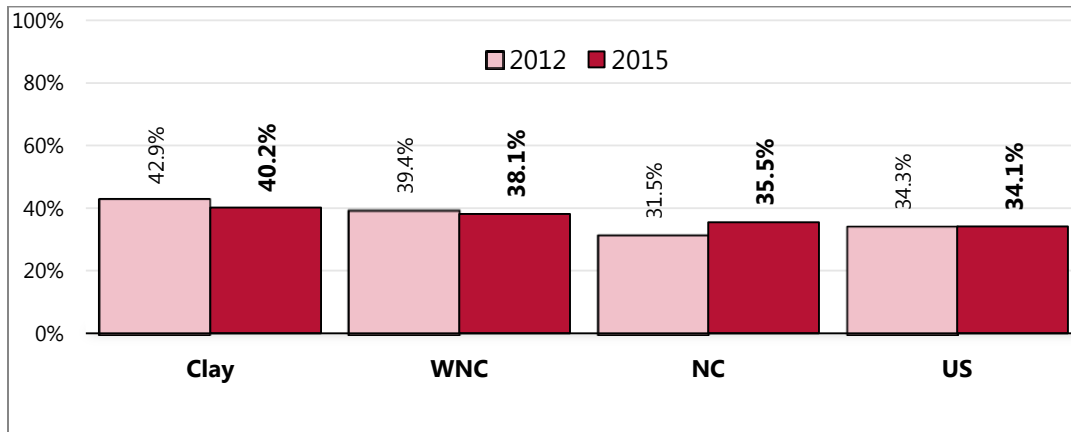
When asked on the PRC Survey “Are you limited in any way in any activities because of physical, mental or emotional problems?” 33% of our citizens responded with a “yes”, which is higher than WNC, NC, and the US as a whole. The majority cited back and neck problems (21.8%), arthritis (23.2%), and other (27.8%) as the reason why they are limited in their activities.

### Limited in Activities in Some Way Due to a Physical, Mental, or Emotional Problem (Clay County)



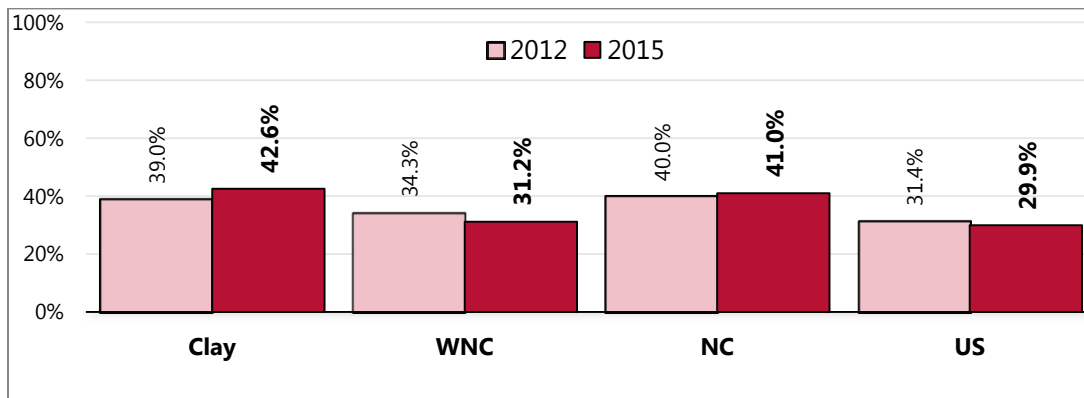
High blood pressure is a major factor in heart disease, and when asked on the PRC Citizen survey about high blood pressure, 40.2% stated that they have been diagnosed with high blood pressure (which is around 5% higher than the NC and US total).

**Prevalence of High Blood Pressure**  
(Clay County)  
**Healthy People 2020 Target = 26.9% or Lower**



Having high cholesterol increases your chances of having a heart attack due to clogged arteries which leads to reduced blood flow to the heart. When asked about a diagnosis of high cholesterol, 42.6 % stated that they have received a diagnosis-- which is around 1% higher than the NC and just over 12 higher than the US total.

**Prevalence of High Blood Cholesterol**  
(Clay County)  
**Healthy People 2020 Target = 13.5% or Lower**

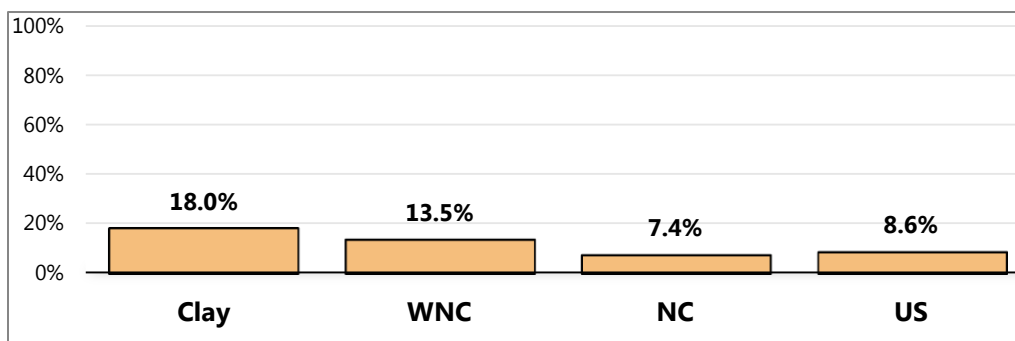


Chronic Lower Respiratory Diseases (CLRD) such as Chronic Obstructive Pulmonary Disease (COPD) and Emphysema are the third leading causes of death for Clay County citizens and Clay County has an 11% higher rate than NC as a whole. CLRD essentially causes death through slow suffocation and causes other acute diseases such as pneumonia. COPD and Emphysema have no cure, although with lifestyle modification those diagnosed can prolong their lives. When



asked about having a diagnosis of COPD 18% stated that they have received that diagnosis, this is double the NC and US rate.

**Prevalence of Chronic Obstructive Pulmonary Disease (COPD)**  
(Clay County, 2015)



### **Health Indicators**

- The US Census Bureau reports that 23.6% of the Clay County Population is over 65yo which is almost double the NC rate of 12.9%. This gives Clay County a significant population who are prone to having or developing a chronic disease. North Carolina spent almost \$54 billion in 2010 on medical bills and lost worker productivity associated with eight risk factors or precursory conditions known to cause chronic disease in adults (Be Active North Carolina, 2016).

### **Understanding the Issue**

- In 2015, we asked PRC to perform a Key Informant Survey of our stakeholders and health professionals in our county. When asked about specific chronic diseases in Clay County 44.4% of those surveyed considered diabetes a moderate problem, and 55.6% considered heart disease & stroke a moderate problem.

Health Issue	Major Problem	Moderate Problem	Minor Problem	No Problem At All
Diabetes	44.4%	44.4%	11.1%	0.0%
Heart Disease & Stroke	44.4%	55.6%	0.0%	0.0%

- One of the top concerns voiced about heart disease on the key informant survey was "Limited access to stroke and or heart centers. Patients need to quickly reach these facilities that are over two hours away in most cases, and weather or geography often hampers air medical transport."

### **Specific Populations At-Risk**

Populations at the highest risk for chronic disease are those over the age of 65, the uninsured population in our county, the unemployed, and those living in poverty. Those lacking health coverage are less likely to seek medical attention until the symptoms are exacerbated, and those living in poverty or unemployed may not have the ability to have yearly physicals performed to catch some of the symptoms that lead to chronic disease such as high blood pressure, or the beginning stages of emphysema.

### **Health Resources available/needed**

Clay County has access to a state of the art Health Department with two providers who will see patients 5 days a week. The Health Department also offers diabetes and pre-diabetes education programs along with Medical Nutritional Therapy for those suffering from chronic diseases that could use dietary help. Clay County Transportation provides public transportation both inside and outside of the county at minimum cost. Clay County also offers free access to a modern recreation facility that includes a gym for the citizens of Clay County.

## **PRIORITY ISSUE #3- CANCER CONTROL AND PREVENTION**



Cancer is the second leading cause of death for the citizens of Clay County, and the US as a whole, claiming over 584,000 lives per year nationwide. Clay County has continued to have significant cancer diagnosis and death rates for several years now. With the trend continuing unabated and despite the fact that cancer is considered a chronic disease by the WHO, it was identified as needing its own priority.

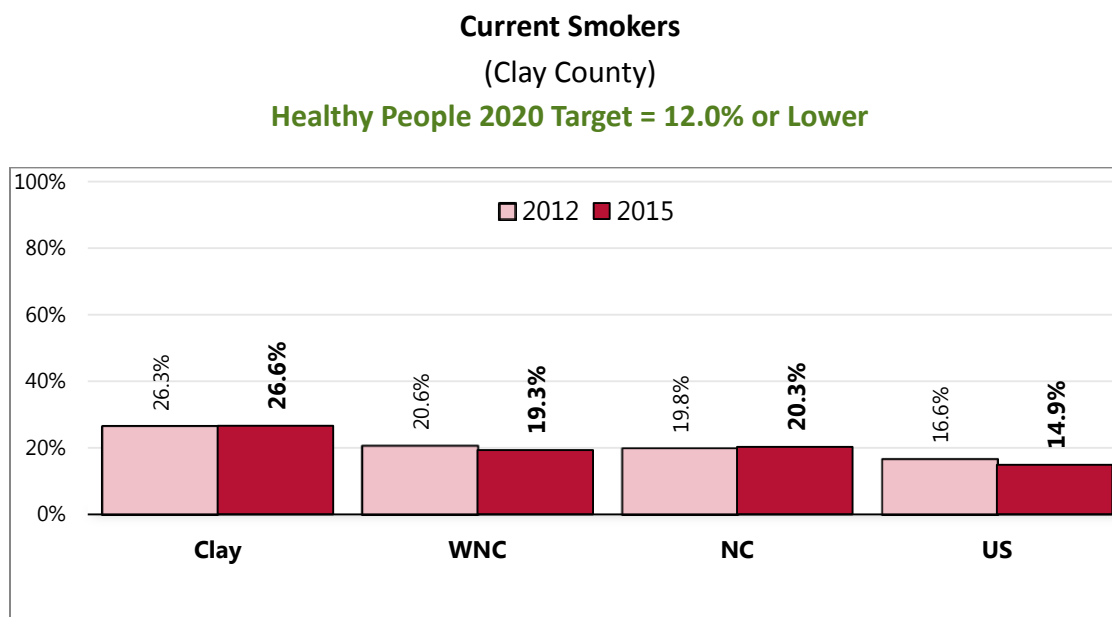
### **Data Highlights**

The second leading cause of death in Clay County, North Carolina, and the United States is cancer. The data collected by the Health Department and PRC showed that cancer was a major concern for the citizens of Clay County which shows in the mortality and morbidity rates for total cancer. There could be several reasons why cancer is so prevalent in our region. On the Key Informant survey one participant is quoted as saying that our high cancer rates could be caused by “a significant history of tobacco use, but also because Clay County was traditionally a farming community, it is thought that the use of pesticides and other environmental factors

could play a role in the cancer statistics”. Clay County also has a high prevalence of Radon Gas which is a known carcinogen and causes lung cancer.

### **Health Indicators**

Significant indicators to the causes of cancer that showed up in the data include the high rates of tobacco use in Clay County of the county citizens surveyed by PRC. According to the survey, 26.6% considered themselves a current smoker, which is higher than the WNC, NC, and US rates. The rate for smokeless tobacco use was reported as 3.2%, and the E-Cig rate was slightly higher at 4.9%.



Also, Western North Carolina has the highest radon levels in the state. The arithmetic mean indoor radon level for the 16 counties of the WNC region is 4.1pCi/L, 3.2 times the average national indoor radon level of 1.3pCi/L. In Clay County, the current average indoor radon level is 4.2pCi/L, 2% higher than the regional mean, and 3.2 times the average national level the EPA recommends home mitigation for any level over 4.0pCi/L.

### **Understanding the Issue**

Cancer is caused by our abnormal cells growing at a rapid rate that destroys body tissue. Cancer can occur anywhere in the body, and can be caused by exposures to different substances in different people. In Clay County Lung Cancer, Prostate Cancer, Breast Cancer, and Colon Cancer have the highest mortality and morbidity rates.

PRC reported that most key informants characterized *Cancer* as a “moderate problem” in Clay County on the key informant survey conducted in 2015.

Health Issue	Major Problem	Moderate Problem	Minor Problem	No Problem At All
Cancer	22.2%	77.8%	0.0%	0.0%

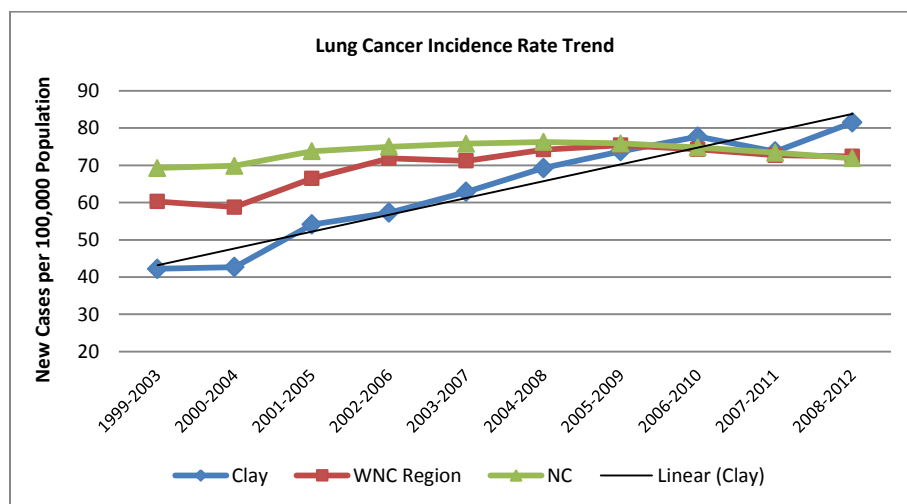
- The total cancer mortality rate difference between Clay County males and females is 85%.

#### Overall Age-Adjusted Rate (2009-2013) for Clay County

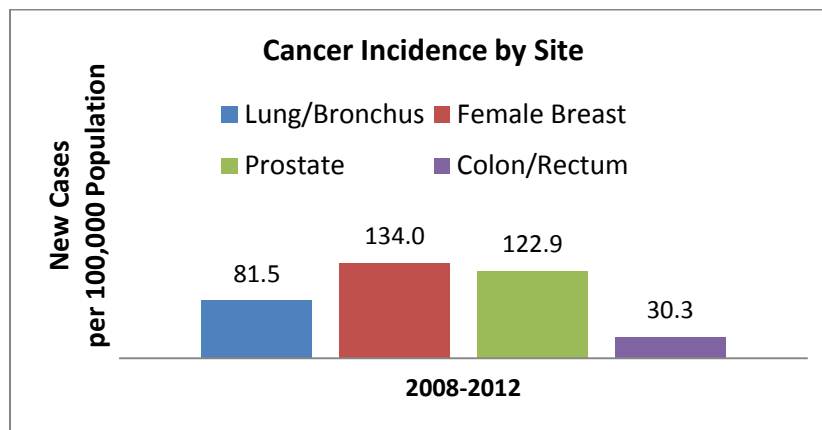
	Rate Among Males	Rate Among Females	% Male Rate Difference from Females
<u>Total Cancer</u>	217.9	117.6	85%

When considering the different types of cancers, Clay County citizens are more likely to die of lung cancer than any other type. Lung cancer has a high mortality rate, possibly attributed to a high rate of late diagnosis when the disease process is in the later stages (i.e. stage 4).

As shown in the graph below, Clay County’s lung cancer rates have been steadily trending up since 1999.



Although lung cancer has a higher mortality rate, breast cancer and prostate cancer have a higher incidence rate as shown on the graph below.



### **Specific Populations At-Risk**

Populations at most risk for developing cancer include smokers, factory workers who have been exposed to carcinogenic chemicals, those who have homes that have a high rate of radon gas present, exposure to radiation, sun exposure, and asbestos exposure. The uninsured and those living in poverty may not have the means to get diagnosed until the disease is in its later stages, increasing the mortality rates among these individuals.

### **Health Resources available/needed**

The Clay County Health Department offers services and screenings to help with the diagnosis and treatment of some types of cancer. The NC Breast and Cervical Cancer Control Program (BCCCP) helps the women who qualify get the screenings they need, and may help with treatment cost. The Health Department also offers newer types of testing for colon cancer, and has laboratory diagnostic testing available for some types of cancers. Clay County does not have a Cancer Treatment facility inside its borders, which forces its residents to travel for treatment--sometimes several hours away.

## CHAPTER 9 - NEXT STEPS

### Sharing Findings

Clay County's Community Health Assessment will be disseminated using several methods:

- For the public:
  - Clay County Health Department website
  - Printed copies in Health Department Lobby and Moss Memorial Library
  - Printed copies will be available upon request
- For Partners and Stakeholders:
  - Clay County Board of Health and Clay County Commissioners will receive electronic copies along with a formal presentation,
  - Clay County Partnership for Healthy Carolinians shall receive electronic copies and printed copies upon request for further distribution

The community stake holders and partners instrumental in the development of the 2015 Community Health Assessment will re-convene in the Spring of 2016 to establish and set goals in an effort to “move the needle” on the priorities established in 2015 CHA.

### Collaborative Action Planning

Collaborative action planning with hospitals and other community partners will result in the creation of a community-wide plan that outlines what will be aligned, supported and/or implemented to address the priority health issues identified through this assessment process.

The collaborative action planning process will start in the spring of 2016 when the CHA team will host a meeting with partners to develop strategies to improve the priority areas selected. The Community Health Assessment process is an ongoing process and must be adaptable. The Clay County Health Department is dedicated to the citizens of Clay County and will use this information obtained from the CHA process to continue to improve the health and well-being of this fine county.

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# APPENDICES

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## **Appendix A – Data Collection Methods & Limitations**

## **Appendix B – Secondary Data Profile**

- Secondary Data Summary

## **Appendix C – County Maps**

## **Appendix D – Survey Findings**

- WNC Healthy Impact Survey Instrument
- Community Health Survey Results

## **Appendix E – Key-Informant Survey Findings**



## APPENDIX A - DATA COLLECTION METHODS & LIMITATIONS

### Secondary Data from Regional Core

#### **Secondary Data Methodology**

In order to learn about the specific factors affecting the health and quality of life of residents of WNC, the WNC Healthy Impact data workgroup and consulting team identified and tapped numerous secondary data sources accessible in the public domain. For data on the demographic, economic and social characteristics of the region sources included: the US Census Bureau; Log Into North Carolina (LINC); NC Office of State Budget and Management; NC Department of Commerce; Employment Security Commission of NC; NC Department of Public Instruction; NC Department of Justice; NC Division of Medical Assistance; and the Cecil B. Sheps Center for Health Services Research. The WNC Healthy Impact consultant team made every effort to obtain the most current data available *at the time the report was prepared*. It was not possible to continually update the data past a certain date; in most cases that end-point was August 2015.

The principal source of secondary health data for this report was the NC State Center for Health Statistics (NC SCHS), including its County Health Data Books, Behavioral Risk Factor Surveillance System, Vital Statistics unit, and Cancer Registry. Other health data sources included: NC Division of Public Health (DPH) Epidemiology Section; NC Division of Mental Health, Developmental Disabilities and Substance Abuse Services; National Center for Health Statistics; NC DPH Nutrition Services Branch; UNC Highway Safety Research Center; and NC DETECT. Because in any CHA it is instructive to relate local data to similar data in other jurisdictions, throughout this report representative county data is compared to like data describing the 16-county region and the state of NC as a whole. The WNC regional comparison is used as “peer” for the purposes of this assessment. Where appropriate and available, trend data has been used to show changes in indicators over time.

Environmental data was gathered from sources including: US Environmental Protection Agency; US Department of Agriculture, and NC Radon Program.

It is important to note that this report contains data retrieved **directly** from sources in the public domain. In some cases the data is very current; in other cases, while it may be the most current available, it may be several years old. Note also that the names of organizations, facilities, geographic places, etc. presented in the tables and graphs in this report are quoted exactly as they appear in the source data. In some cases these names may **not** be those in current or local usage; nevertheless they are used so readers may track a particular piece of information directly back to the source.

#### ***Data Definitions***

Reports of this type customarily employ a range of technical terms, some of which may be unfamiliar to many readers. Health data, which composes a large proportion of the information

included in this report, employs a series of very specific terms which are important to interpreting the significance of the data. While these technical health data terms are defined in the report at the appropriate time, there are some data caveats that should be applied from the onset.

### **Error**

First, readers should note that there is some error associated with every health data source. Surveillance systems for communicable diseases and cancer diagnoses, for instance, rely on reports submitted by health care facilities across the state and are likely to miss a small number of cases, and mortality statistics are dependent on the primary cause of death listed on death certificates without consideration of co-occurring conditions.

### **Age-adjusting**

Secondly, since much of the information included in this report relies on *mortality* data, it is important to recognize that many factors can affect the risk of death, including race, gender, occupation, education and income. The most significant factor is age, because an individual's risk of death inevitably increases with age. As a population ages, its collective risk of death increases; therefore, an older population will automatically have a higher overall death rate just because of its age distribution. At any one time some communities have higher proportions of "young" people, and other communities have a higher proportion of "old" people. In order to compare mortality data from one community with the same kind of data from another, it is necessary first to control for differences in the age composition of the communities being compared. This is accomplished by *age-adjusting* the data. Age-adjustment is a statistical manipulation usually performed by the professionals responsible for collecting and cataloging health data, such as the staff of the NC State Center for Health Statistics (NC SCHS). It is not necessary to understand the nuances of age-adjustment to use this report. Suffice it to know that age-adjusted data are preferred for comparing most health data from one population or community to another and have been used in this report whenever available.

### **Rates**

Thirdly, it is most useful to use *rates* of occurrence to compare data. A rate converts a raw count of events (deaths, births, disease or accident occurrences, etc.) in a target population to a ratio representing the number of same events in a standard population, which removes the variability associated with the size of the sample. Each rate has its own standard denominator that must be specified (e.g., 1,000 women, 100,000 persons, 10,000 people in a particular age group, etc.) for that rate.

While rates help make data comparable, it should be noted that small numbers of events tend to yield rates that are highly unstable, since a small change in the raw count may translate to a large change in rate. To overcome rate instability, another convention typically used in the presentation of health statistics is *data aggregation*, which involves combining like data gathered over a multi-year period, usually three or five years. The practice of presenting data that are aggregated avoids the instability typically associated with using highly variable year-by-

year data, especially for measures consisting of relatively few cases or events. The calculation is performed by dividing the sum number of cases or deaths in a population due to a particular cause over a period of years by the sum of the population size for each of the years in the same period. Health data for multiple years or multiple aggregate periods is included in this report wherever possible. Sometimes, however, even aggregating data is not sufficient, so the NC SCHS recommends that rates based on fewer than 20 events—whether covering an aggregate period or not—be considered *unstable*. In fact, in some of its data sets the NC SCHS no longer calculates rates based on fewer than 20 events. To be sure that unstable data do not become the basis for local decision-making, this report will highlight and discuss primarily rates based on 20 or more events in a five-year aggregate period, or 10 or more events in a single year. Where exceptions occur, the text will highlight the potential instability of the rate being discussed.

### ***Regional arithmetic mean***

Fourthly, sometimes in order to develop a representative regional composite figure from 16 separate county measures the consultants calculated a *regional arithmetic mean* by summing the available individual county measures and dividing by the number of counties providing those measures. It must be noted that when regional arithmetic means are calculated from *rates* the mean is not the same as a true average rate but rather an approximation of it. This is because most rates used in this report are age adjusted, and the regional mean cannot be properly age-adjusted.

### ***Describing difference and change***

Fifthly, in describing differences in data of the same type from two populations or locations, or changes over time in the same kind of data from one population or location—both of which appear frequently in this report—it is useful to apply the concept of *percent* difference or change. While it is always possible to describe difference or change by the simple subtraction of a smaller number from a larger number, the result often is inadequate for describing and understanding the *scope* or *significance* of the difference or change. Converting the amount of difference or change to a percent takes into account the relative size of the numbers that are changing in a way that simple subtraction does not, and makes it easier to grasp the meaning of the change. For example, there may be a rate of for a type of event (e.g., death) that is one number one year and another number five years later. Suppose the earlier figure is 12.0 and the latter figure is 18.0. The simple mathematical difference between these rates is 6.0. Suppose also there is another set of rates that are 212.0 in one year and 218.0 five years later. The simple mathematical difference between these rates also is 6.0. But are these same simple numerical differences really of the same significance in both instances? In the first example, converting the 6 point difference to a percent yields a relative change factor of 50%; that is, the smaller number increased by half, a large fraction. In the second example, converting the 6 point difference to a percent yields a relative change factor of 2.8%; that is, the smaller number increased by a relatively small fraction. In these examples the application of percent makes it very clear that the difference in the first example is of far greater degree than the difference in the second example. This document uses percentage almost exclusively to describe and

highlight degrees of difference and change, both positive (e.g., increase, larger than, etc.) and negative (e.g., decrease, smaller than, etc.)

### **Data limitations**

Some data that is used in this report may have inherent limitations, due to the sample size, its geographic focus, or its being out-of-date, for example, but it is used nevertheless because there is no better alternative. Whenever this kind of data is used, it will be accompanied by a warning about its limitations.

## **WNC Healthy Impact Survey (Primary Data)**

### **Survey Methodology**

#### ***Survey Instrument***

To supplement the secondary core dataset, meet additional stakeholder data needs, and hear from community members about their concerns and priorities, a community survey, *2015 WNC Healthy Impact Survey* (a.k.a. 2015 PRC Community Health Survey), was developed and implemented in 16 counties across western North Carolina. The survey instrument was developed by WNC Healthy Impact's data workgroup, consulting team, and local partners, with assistance from Professional Research Consultants, Inc. (PRC). Many of the questions are derived from the Centers for Disease Control and Prevention (CDC) Behavioral Risk Factor Surveillance System (BRFSS), as well as other public health surveys; other questions were developed specifically for WNC Healthy Impact to address particular issues of interest to communities in western North Carolina. Each county was given the opportunity to include three additional questions of particular interest to their county, which were asked of their county's residents.

**Professional Research Consultants, Inc.**



The geographic area for the regional survey effort included 16 counties:

Buncombe, Cherokee, Clay, Graham, Haywood, Henderson, Jackson, Macon, Madison, McDowell, Mitchell, Polk, Rutherford, Swain, Transylvania and Yancey counties.

#### ***Sample Approach & Design***

To ensure the best representation of the population surveyed, a telephone interview methodology (one that incorporates both landline and cell phone interviews) was employed. The primary advantages of telephone interviewing are timeliness, efficiency and random-selection capabilities.

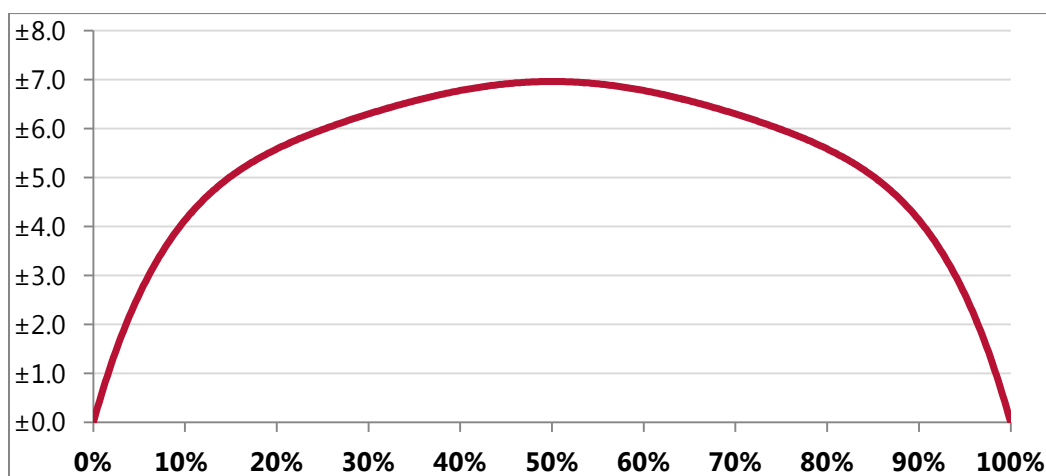
The sample design used for this regional effort consisted of a stratified random sample of 3,300 individuals age 18 and older in Western North Carolina, with 200 from our county. All administration of the surveys, data collection and data analysis was conducted by Professional

Research Consultants, Inc. (PRC). The interviews were conducted in either English or Spanish, as preferred by respondents.

### ***Sampling Error***

For our county-level findings, the maximum error rate at the 95% confidence level is  $\pm 6.9\%$ .

**Expected Error Ranges for a Sample of 200  
Respondents at the 95 Percent Level of Confidence**



Note: • The "response rate" (the percentage of a population giving a particular response) determines the error rate associated with that response. A "95 percent level of confidence" indicates that responses would fall within the expected error range on 95 out of 100 trials.

Examples:

- If 10% of the sample of 200 respondents answered a certain question with a "yes," it can be asserted that between 5.8% and 14.2% ( $10\% \pm 4.2\%$ ) of the total population would offer this response.
- If 50% of respondents said "yes," one could be certain with a 95 percent level of confidence that between 43.1% and 56.9% ( $50\% \pm 6.9\%$ ) of the total population would respond "yes" if asked this question.

### ***Sample Characteristics***

To accurately represent the population studied, PRC worked to minimize bias through application of a proven telephone methodology and random-selection techniques. And, while this random sampling of the population produces a highly representative sample, it is a common and preferred practice to apply post-stratification weights to the raw data to improve this representativeness even further. Specifically, once the raw data are gathered, respondents are examined by key demographic characteristics (namely gender, age, race, ethnicity, and poverty status) and a statistical application package applies weighting variables that produce a sample which more closely matches the population for these characteristics. Thus, while the integrity of each individual's responses is maintained, one respondent's responses may contribute to the whole the same weight as, for example, 1.1 respondents. Another respondent, whose demographic characteristics may have been slightly oversampled, may contribute the same weight as 0.9 respondents. In order to determine WNC regional estimates, county responses were weighted in proportion to the actual population distribution so as to appropriately represent Western North Carolina as a whole.

The following chart outlines the characteristics of the survey sample for our county by key demographic variables, compared to actual population characteristics revealed in census data. Note that the sample consisted solely of area residents age 18 and older.

### General Population Characteristics

#### 2010 US Census

County	Total Population (2010)	% Males	% Females	Median Age*	% Under 5 Years Old	% 5-19 Years Old	% 20 - 64 Years Old	% 65 Years and Older
Clay	10,587	49.3	50.7	49.6	4.7	15.8	55.8	23.6
WNC (Regional) Total	759,727	48.5	51.5	44.7	n/a	n/a	n/a	n/a
State Total	9,535,483	48.7	51.3	37.4	6.6	20.2	60.2	12.9

### Population Distribution by Race/Ethnicity

#### 2010 US Census

County	Total Population (2010)	White	Black or African	American Indian,	Asian	Native Hawaiian,	Some Other	Two or More	Hispanic or Latino
		%	%	%	%	%	%	%	%
Clay	10,587	96.6	0.6	0.3	0.2	0.0	0.8	1.4	2.4
WNC (Regional) Total	759,727	89.3	4.2	1.5	0.7	0.1	2.5	1.8	5.4
State Total	9,535,483	68.5	21.5	1.3	2.2	0.1	4.3	2.2	8.4

Poverty descriptions and segmentation used in this report are based on administrative poverty thresholds determined by the US Department of Health & Human Services. These guidelines define poverty status by household income level and number of persons in the household (*e.g., the 2015 guidelines place the poverty threshold for a family of four at \$23,050 annual household income or lower*). In sample segmentation: “very low income” refers to community members living in a household with defined poverty status; “low income” refers to households with incomes just above the poverty level, earning up to twice the poverty threshold; and “mid/high income” refers to those households living on incomes which are twice or more the federal poverty level.

The sample design and the quality control procedures used in the data collection ensure that the sample is representative. Thus, the findings may be generalized to the total population of community members in the defined area with a high degree of confidence.

## **Benchmark Data**

### ***North Carolina Risk Factor Data***

Statewide risk factor data are provided where available as an additional benchmark against which to compare local survey findings; these data are reported in the most recent *BRFSS (Behavioral Risk Factor Surveillance System) Prevalence and Trend Data* published by the Centers for Disease Control and Prevention and the US Department of Health & Human Services.

### ***Nationwide Risk Factor Data***

Nationwide risk factor data, which are also provided in comparison charts where available, are taken from the *2013 PRC National Health Survey*; the methodological approach for the national study is identical to that employed in this assessment, and these data may be generalized to the US population with a high degree of confidence.

### ***Healthy People 2020***

Healthy People provides science-based, 10-year national objectives for improving the health of all Americans. The Healthy People initiative is grounded in the principle that setting national objectives and monitoring progress can motivate action. For three decades, Healthy People has established benchmarks and monitored progress over time in order to:

- Encourage collaborations across sectors.
- Guide individuals toward making informed health decisions.
- Measure the impact of prevention activities.



Healthy People 2020 is the product of an extensive stakeholder feedback process that is unparalleled in government and health. It integrates input from public health and prevention experts, a wide range of federal, state and local government officials, a consortium of more than 2,000 organizations, and perhaps most importantly, the public. More than 8,000 comments were considered in drafting a comprehensive set of Healthy People 2020 objectives.

## **Survey Administration**

With more than 700 full- and part-time interviewers who work exclusively with healthcare and health assessment projects, PRC uses a state-of-the-art, automated CATI interviewing system that assures consistency in the research process. Furthermore, PRC maintains the resources to conduct all aspects of this project in-house from its headquarters in Omaha, Nebraska, assuring the highest level of quality control.

### ***Interviewing Protocols and Quality Assurance***

PRC's methods and survey administration comply with current research methods and industry standards. To maximize the reliability of research results and to minimize bias, PRC follows a number of clearly defined quality control protocols. PRC uses a telephone methodology for its

community interviews, in which the respondent completes the questionnaire with a trained interviewer, not through an automated touch-tone process.

Before going into the field in the latter half of February, PRC piloted 30 interviews across the region with the finalized survey instrument. After this phase, PRC corrected any process errors that were found, and discussed with the consulting team any substantive issues that needed to be resolved before full implementation.

PRC employs the latest CATI (computer-aided telephone interviewing) system technology in its interviewing facilities. The CATI system automatically generates the daily sample for data collection, retaining each telephone number until the Rules of Replacement are met. Replacement means that no further attempts are made to connect to a particular number, and that a replacement number is drawn from the sample. To retain the randomness of the sample, telephone numbers drawn for the sample are not discarded and replaced except under very specific conditions.

Interviewing for this study took place primarily during evening and weekend hours (Eastern Time: Monday-Friday 5pm-9pm; Saturday 10am-4pm; Sunday 2pm-9pm). Some daytime weekday attempts were also made to accommodate those for whom these times might be more convenient. Up to five call attempts were made on different days and at different times to reach telephone numbers for which there is no answer. Systematic, unobtrusive electronic monitoring is conducted regularly by supervisors throughout the data collection phase of the project.

### ***Cell Phones***

Cell phone numbers were integrated into the sampling frame developed for the interviewing system for this project. Special protocols were followed if a cell phone number was drawn for the sample to ensure that the respondent lives in the area targeted and that (s)he is in a safe place to talk (e.g., not while driving). Using this dual-mode approach yielded a sample comprised of 6% cell phone numbers and 94% landline numbers. While this proportion is lower than actual cell phone penetration, it is sufficient in supplementing demographic segments that might otherwise be under sampled in a landline-only model, without greatly increasing the cost of administration.

### ***Minimizing Potential Error***

In any survey, there exists some degree of potential error. This may be characterized as sampling error (because the survey results are not based on a complete census of all potential respondents within the population) or non-sampling error (e.g., question wording, question sequencing, or through errors in data processing). Throughout the research effort, Professional Research Consultants makes every effort to minimize both sampling and non-sampling errors in order to assure the accuracy and generalizability of the results reported.

**Non-coverage Error.** One way to minimize any effects of underrepresentation of persons without telephones is through post stratification. In post stratification, the survey findings are



weighted to key demographic characteristics, including gender, age, race/ethnicity and income (see above for more detailed description).

**Sampling Error.** Sampling error occurs because estimates are based on only a sample of the population rather than on the entire population. Generating a random sample that is representative and of adequate size can help minimize sampling error. Sampling error, in this instance, is further minimized through the strict application of administration protocols. Post stratification, as mentioned above, is another means of minimizing sampling error.

**Measurement Error.** Measurement error occurs when responses to questions are unduly influenced by one or more factors. These may include question wording or order, or the interviewer's tone of voice or objectivity. Using a tested survey instrument minimizes errors associated with the questionnaire. Thorough and specific interviews also reduce possible errors. The automated CATI system is designed to lessen the risk of human error in the coding and data entry of responses.

### **Information Gaps**

While this assessment is 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 or Spanish) are not represented in the survey 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.

In terms of content, this assessment was designed to provide a comprehensive and broad picture of the health of the overall community. However, there are certainly a great number of medical conditions that are not specifically addressed.

## Online Key Informant Survey (Primary Data)

### **Online Survey Methodology**

#### ***Purpose and Survey Administration***

To solicit input from key informants (i.e., those individuals who have a broad interest in the health of the community) an Online Key Informant Survey was implemented. A list of recommended participants from our county was provided to PRC by WNC Healthy Impact along with those of other participating counties; this list included names and contact information for physicians, public health representatives, other health professionals, social service providers, and a variety of other community leaders. Potential participants were chosen because of their ability to identify primary concerns of the populations with whom they work, as well as of the community overall.

Key informants were contacted by email, introducing the purpose of the survey and providing a link to take the survey online; reminder emails were sent as needed to increase participation.

#### ***Online Survey instrument***

In the online survey, respondents had the chance to explain what view as most needed to create a healthy community, and how they feel that environment and social determinants impact health. Key informants were also asked to specifically rate the degree to which various health issues are a problem in our county; follow-up questions asked them to describe why they identify problem areas as such, and how these might be better addressed.

#### ***Participation***

In all, 9 community stakeholders took part in the Online Key Informant Survey for our county, as outlined below:

Local Online Key Informant Survey Participation		
Key Informant Type	Number Invited	Number Participating
Community/Business Leader	6	2
Other Health Provider	7	5
Physician	0	0
Public Health Representative	2	1
Social Service Provider	1	1

Through this process, input was gathered from several individuals whose organizations work with low-income, minority populations, or other medically underserved populations.

***Online Survey Limitations***

The Online Key Informant Survey was designed to gather input from participants regarding their opinions and perceptions of the health of the residents in the area. Thus, these findings are based on perceptions, not facts.

To collect this data, purposive sampling (i.e., a type of non-probability sampling which targets a specific group of people) was used. Unlike the random sampling technique employed in the telephone survey, the purpose is not to make generalizations or statistical inferences from the sample to the entire population, but to gather in-depth insights into health issues from a group of individuals with a specific perspective.

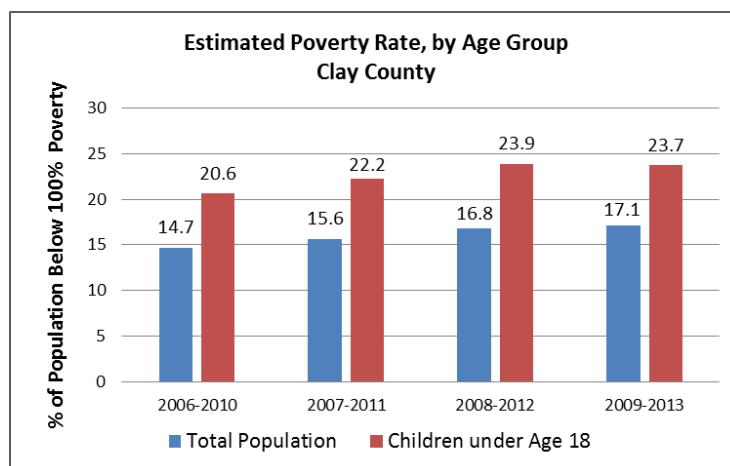
## APPENDIX B – SECONDARY DATA PROFILE

Clay County has a significant population living below the poverty level

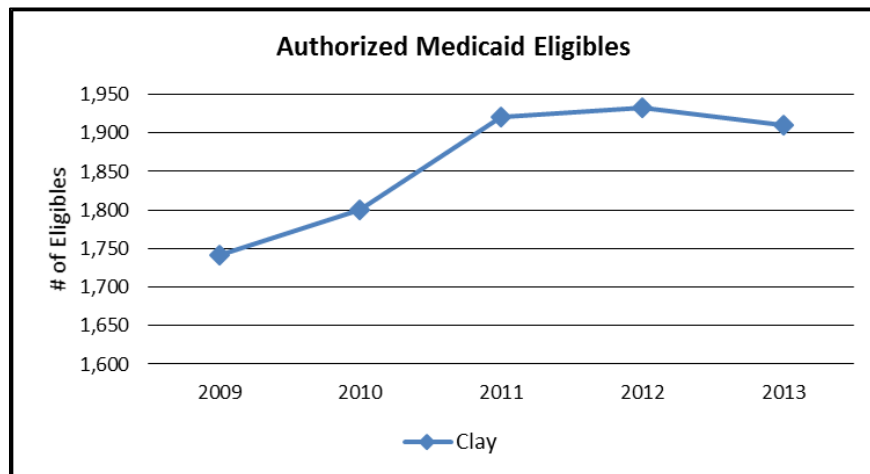
In Clay County, WNC and NC the total poverty rate increased in each period cited. The total poverty rate in Clay County was the highest among the comparators in every period cited.

County	Percent Total Population Below 100% Poverty Level			
	2006-2010	2007-2011	2008-2012	2009-2013
Clay County	21.4	21.8	22.6	24.3
WNC Region	15.7	16.1	16.9	18.0
State of NC	15.5	16.1	16.8	17.5

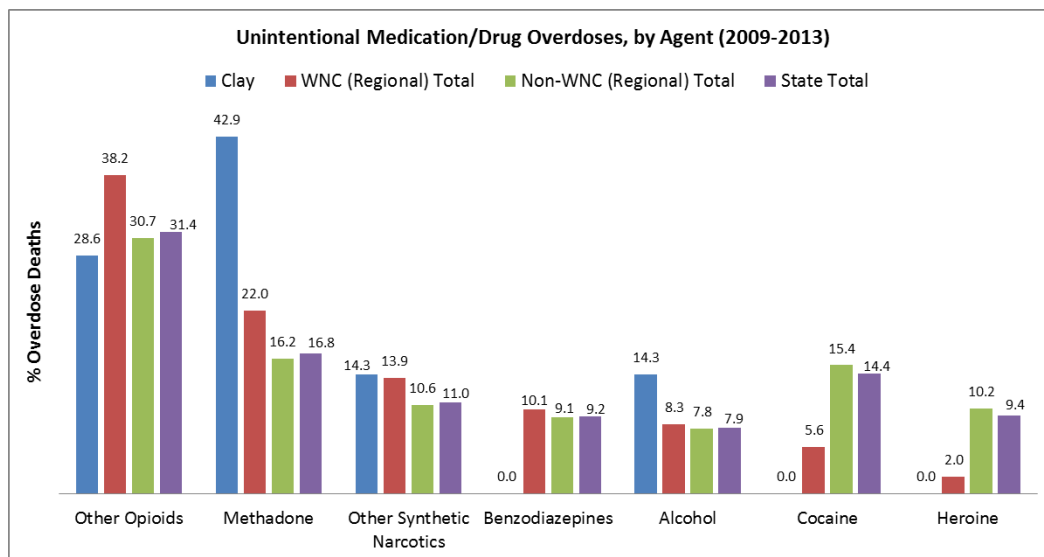
In Clay County the poverty rate increased for children and adults in every period until the most recent, but at a faster rate among children. In each period cited the estimated poverty rate among children under age 18 was from 39% to 42% higher than the overall poverty rate.



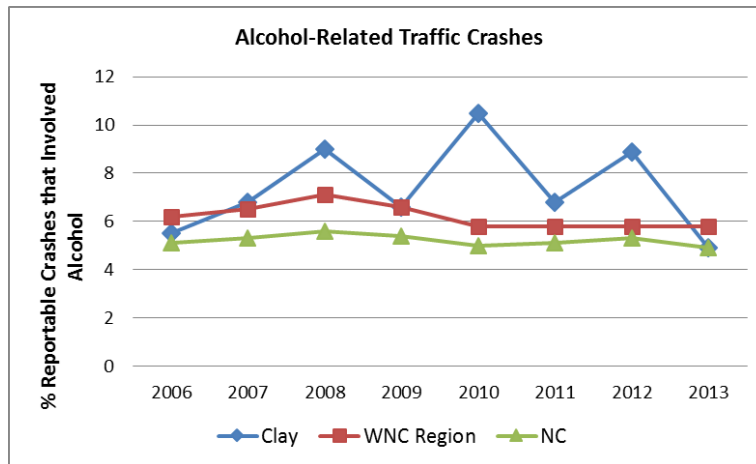
The total number of people in Clay County eligible for Medicaid increased between 2009 and 2011 then leveled off.



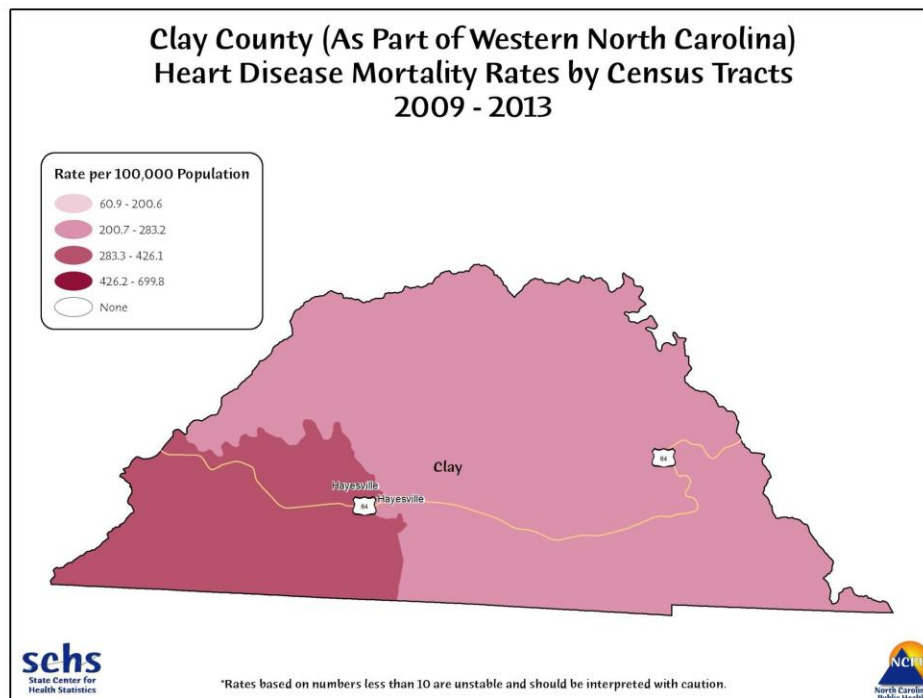
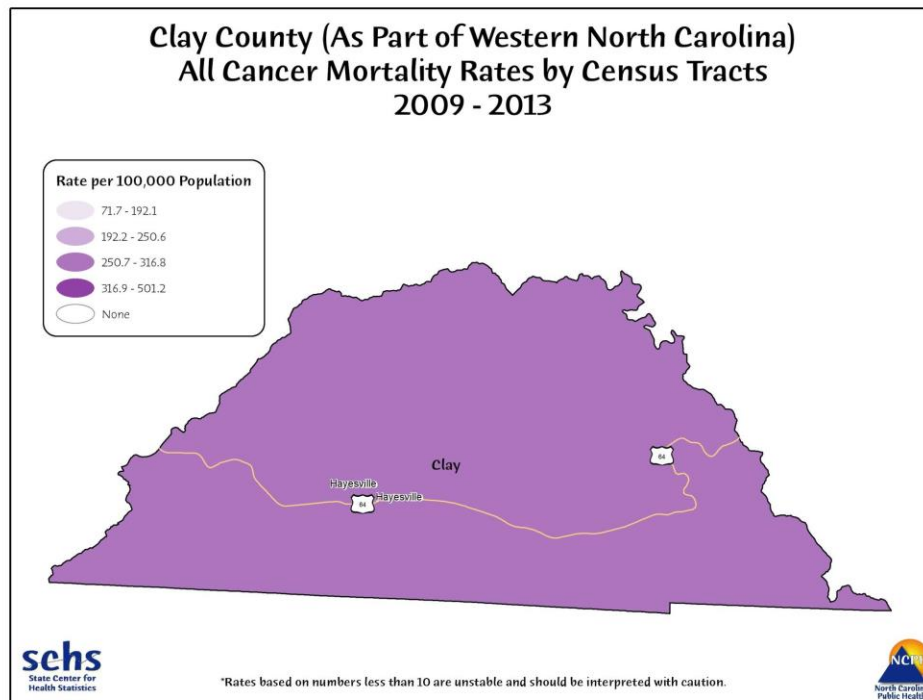
Mental Health and Substance abuse were brought up on several occasions and is something that needs to be addressed in Clay County. Methadone caused the highest proportion of drug overdose deaths (42.9%) in Clay County in the period 2009-2013.

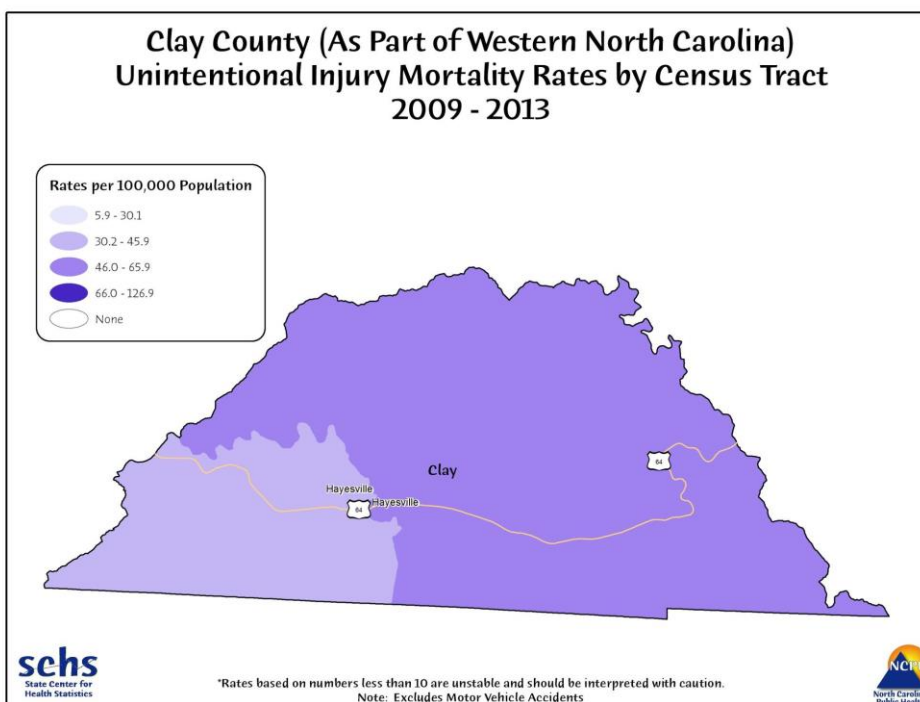
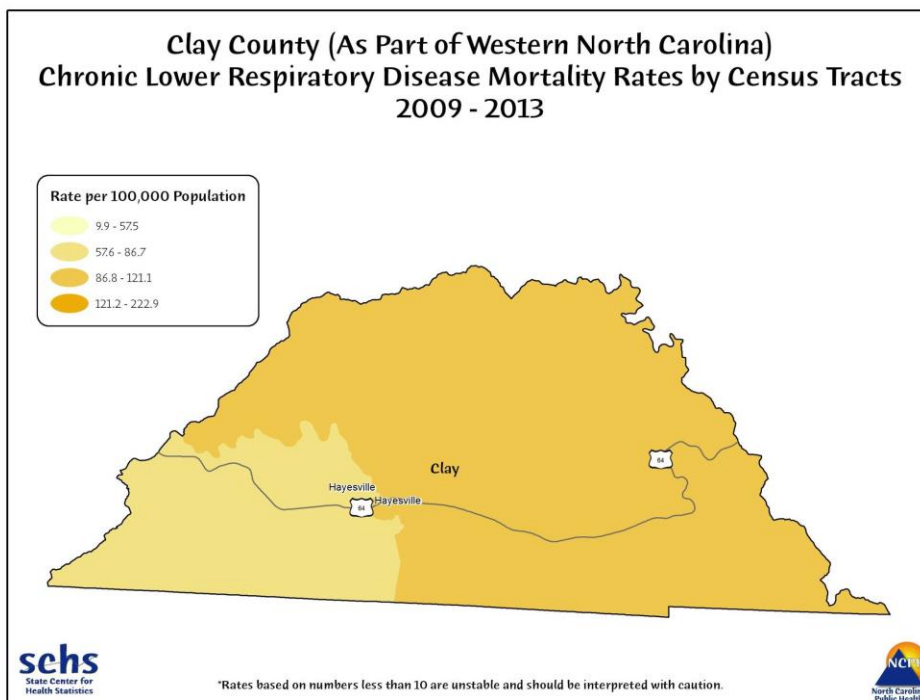


Over the period 2006 through 2013 an annual average of 7.4% of all traffic crashes in Clay County were alcohol-related. (Note this percentage is based on small numbers of events each year.) Region-wide the comparable figure was 6.2%.

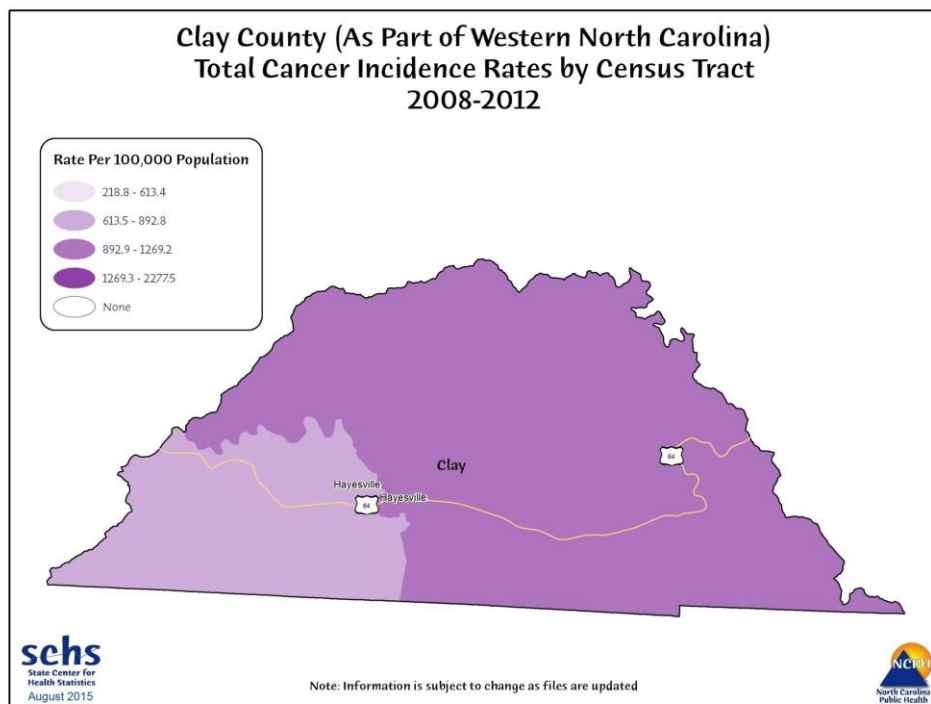
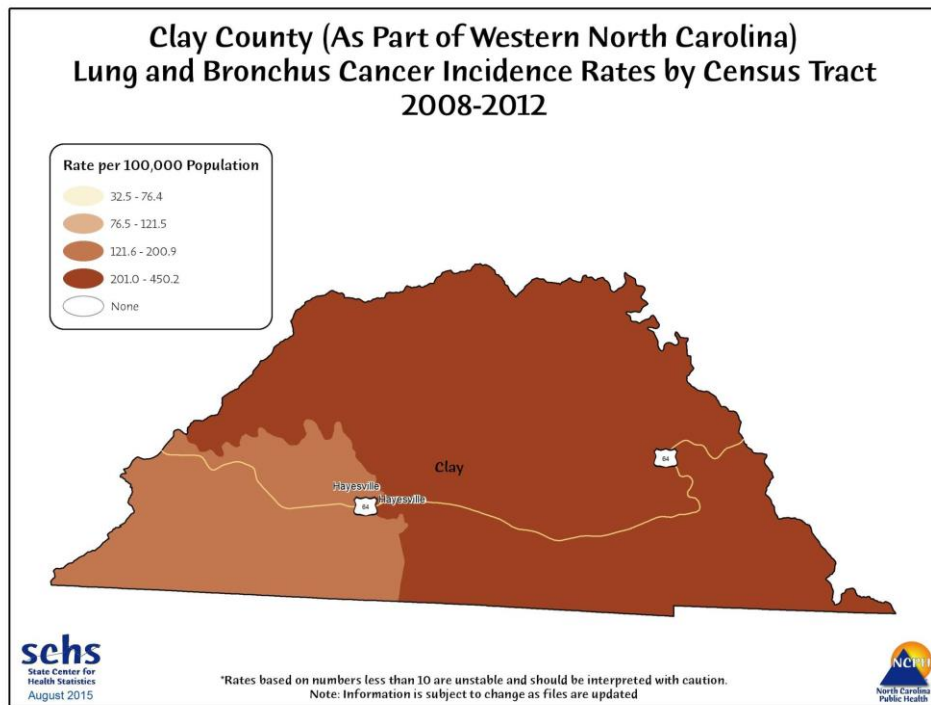


## APPENDIX C- COUNTY MAPS

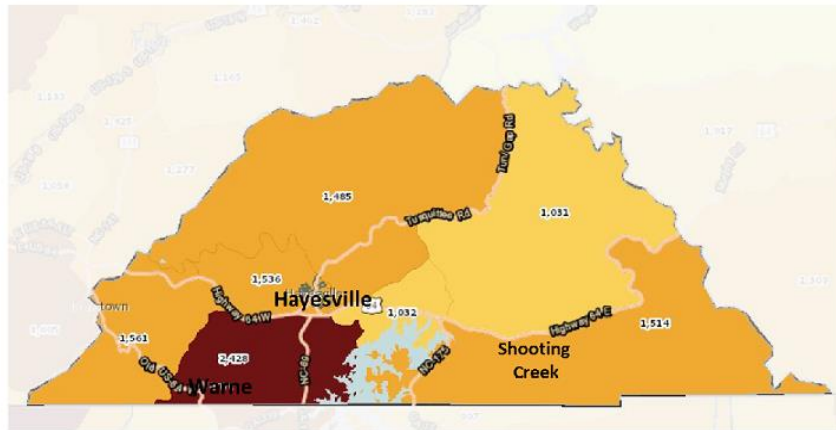








## Total Population of Clay County



Total Population, Total by Block Group, US

Census 2010

Over 2,000

1,601 - 2,000

1,201 - 1,600

801 - 1,200

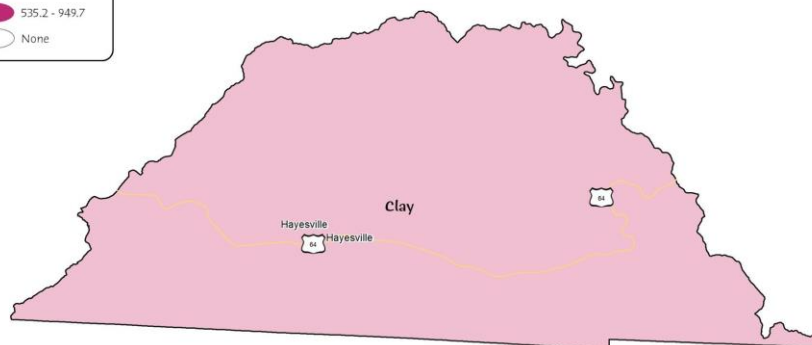
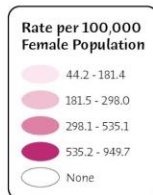
Under 801

Source: US Census 2010

Geographic Unit: Block Group

Map produced with Community Commons

## Clay County (As Part of Western North Carolina) Breast Cancer Incidence Rates by Census Tract 2008-2012



**sehs**  
State Center for  
Health Statistics  
August 2015

\*Rates based on numbers less than 10 are unstable and should be interpreted with caution.  
Note: Information is subject to change as files are updated

**NC**  
North Carolina  
Public Health

## APPENDIX D- SURVEY FINDINGS

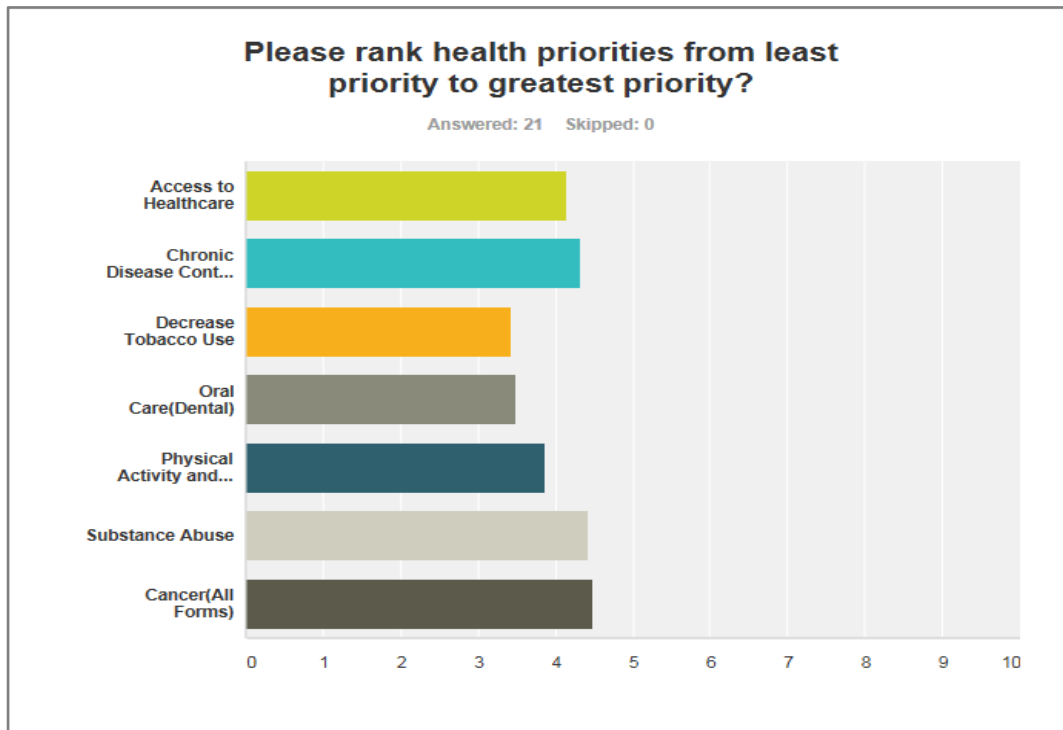
### Clay County Citizen Survey

The Clay County Health Department sought public opinion of the health issues facing our county by creating an electronic survey and then posting it on social media to collect responses. We received 21 responses but some of the participants did not answer all the questions. We asked five questions, the fifth question was not included in the appendix since it pertained only to the convenience of the working hours of the Health Department.

Question 1-In your opinion, what are the three greatest Health Risks facing Clay County? Fill in the blank.

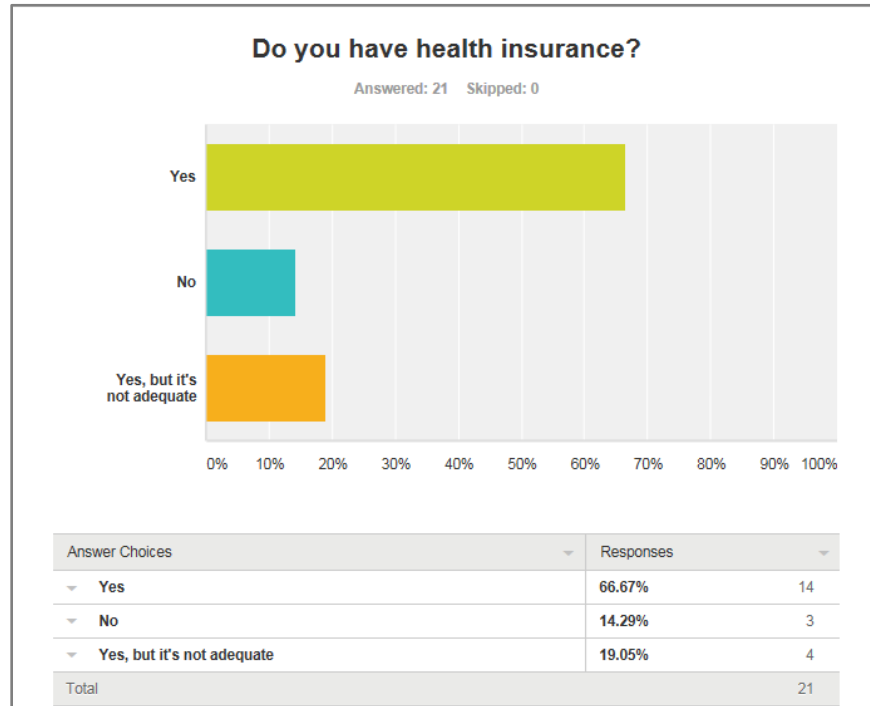
Answer Participants Gave	# of times answer was given
Drugs	11
Poor Nutrition/Lack of Healthy food options	5
Tobacco Use	5
Access to Healthcare	4
Mental Health	4
Obesity	4
Cancer	4
STD's	3
Immunizations	3
Poverty	2
Dental	1
Flu	1
Domestic Violence	1
Lack of Insurance	1
Alcohol	1
Poor Education	1
Heart Disease	1
Diabetes	1
Laziness	1

## Question 2

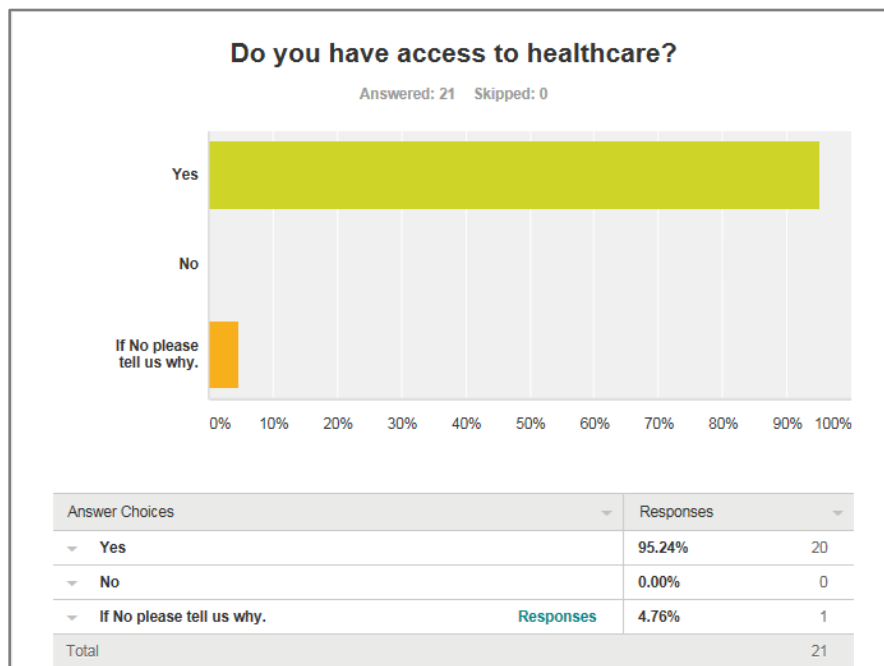


	Least	(no label)	Somewhat	(no label)	Greatest	Total	Weighted Average
Access to Healthcare	0.00% 0	10.00% 2	15.00% 3	25.00% 5	50.00% 10	20	4.15
Chronic Disease Control and Prevention (Diabetes, Heart Disease, Chronic Lung Disease)	0.00% 0	4.76% 1	4.76% 1	42.86% 9	47.62% 10	21	4.33
Decrease Tobacco Use	19.05% 4	4.76% 1	23.81% 5	19.05% 4	33.33% 7	21	3.43
Oral Care (Dental)	4.76% 1	4.76% 1	42.86% 9	33.33% 7	14.29% 3	21	3.48
Physical Activity and Nutrition	4.76% 1	9.52% 2	19.05% 4	28.57% 6	38.10% 8	21	3.86
Substance Abuse	0.00% 0	0.00% 0	14.29% 3	28.57% 6	57.14% 12	21	4.43
Cancer (All Forms)	0.00% 0	0.00% 0	9.52% 2	33.33% 7	57.14% 12	21	4.48

### Question 3



### Question 4



## Clay County Employee Survey

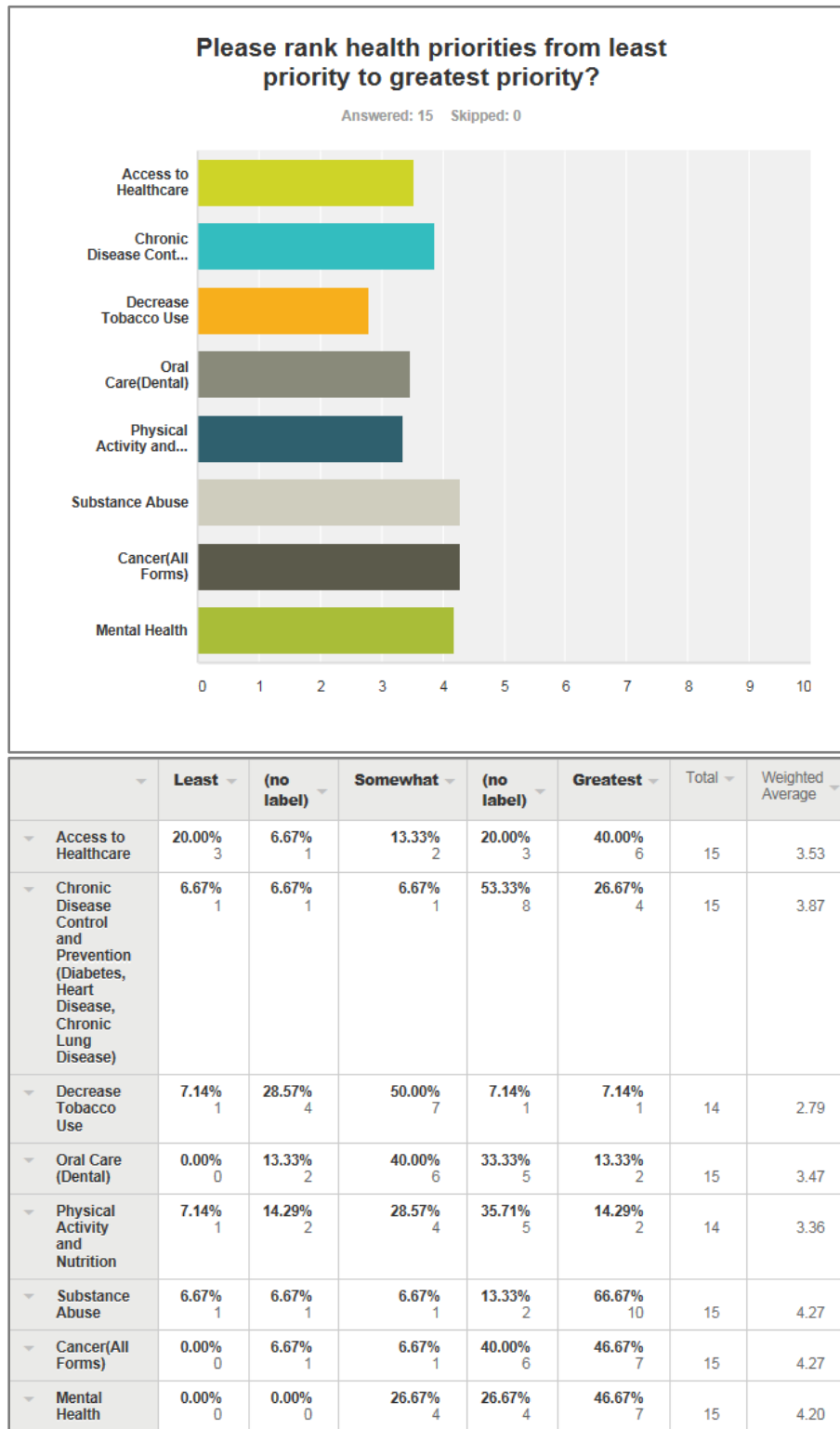
The Clay County Health Department values input from other county agencies. In order to receive valuable input about the health needs of our county an electronic survey was emailed to other departments. The Health Department received 15 responses, however all 15 participants did not answer all the questions, and some give multiple answers in the same text field on the fill in the blank questions.

### Question 1

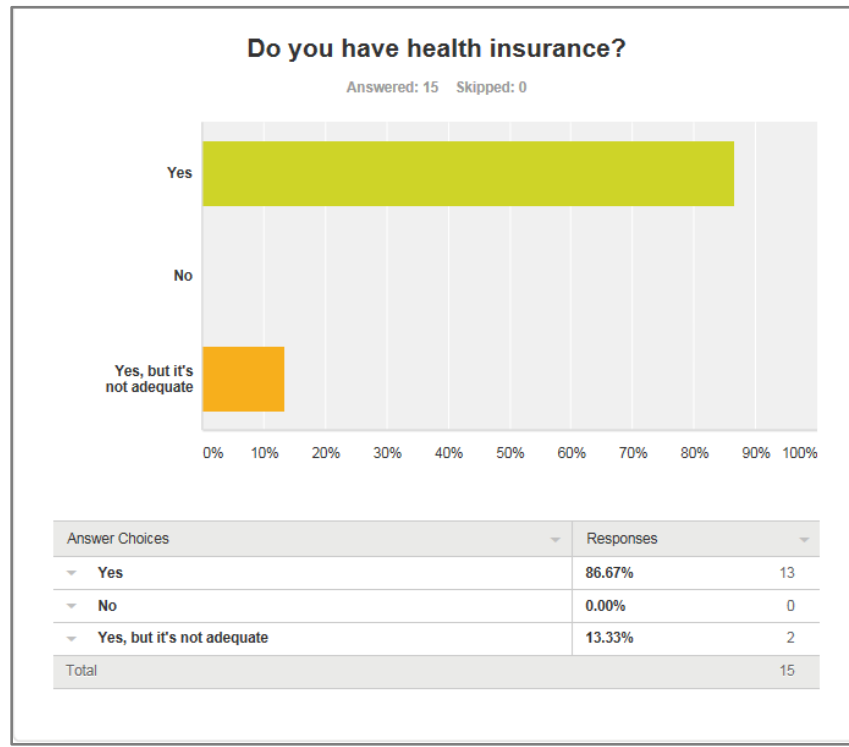
In your opinion, what are the three greatest Health Risks facing Clay County? Fill in the blank.

Answer Participants Gave	# of times answer was given
Drugs	10
Obesity	5
Diabetes	5
Access to Healthcare	3
Cancer	3
Heart Disease	3
Mental Health	2
Poor Nutrition/Lack of Healthy food options	1
Tobacco Use	1
Poverty	1
Dental	1
Stress	1
Alcohol	1
Lack of Exercise	1
Poor Health Choices	1

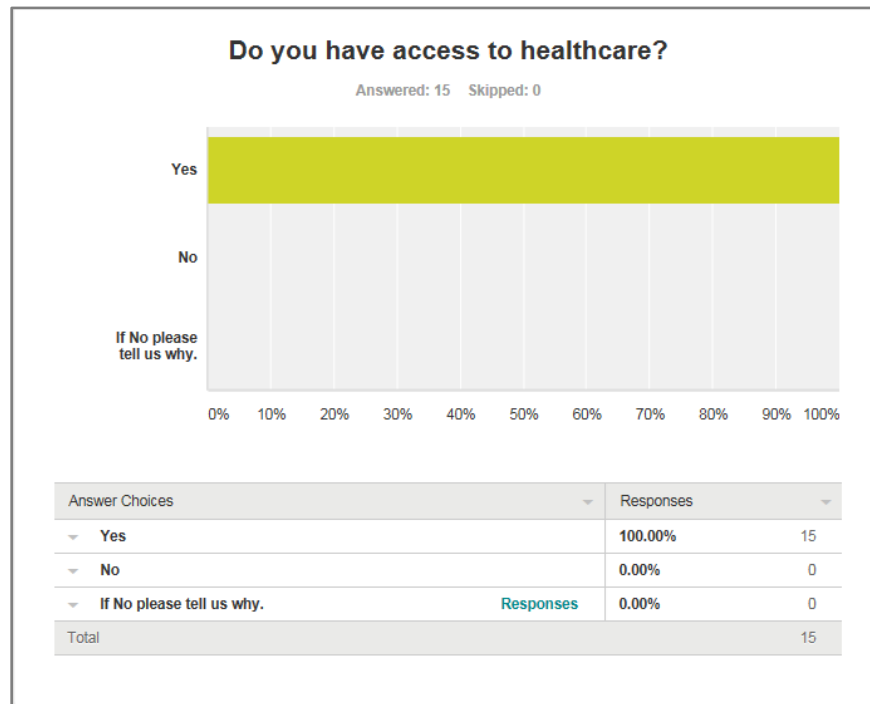
## Question 2



### Question 3



### Question 4





## Clay County Health Department Staff Survey

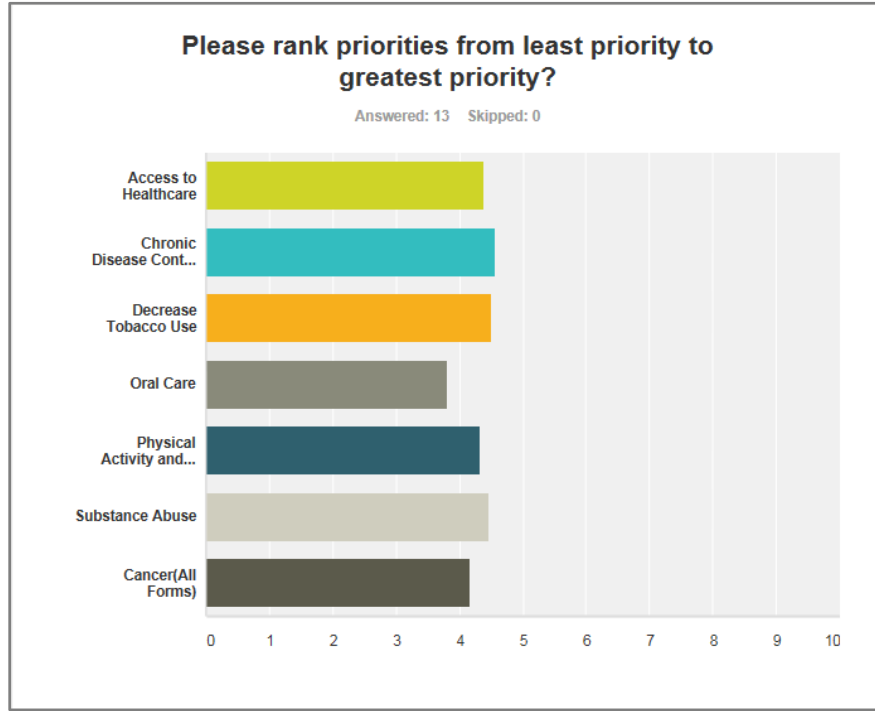
To help narrow down the priorities we would later choose, the CHA team decided to survey the Health Department staff to obtain information about their opinion of the health needs of Clay County, and the ranking of priorities. An electronic survey link was emailed to all Health Department employees from which 13 responses were received. Note that some participants gave multiple answers to each fill in the blank question. Below are the results of that survey.

### Question 1

In your opinion, what are the three greatest Health Risks facing Clay County? Fill in the blank.

Answer Participants Gave	# of times answer was given
Drugs	11
Obesity	6
Diabetes	3
Tobacco Use	3
Cancer	2
Poor Nutrition/Lack of Healthy food options	2
Access to Healthcare	1
Heart Disease	1
Bullying in School	1
Chronic Disease	1
Health Literacy	1
Alcohol	1
Lack of Exercise	1

## Question 2



	Least	(no label)	Somewhat	(no label)	Greatest	Total	Weighted Average
Access to Healthcare	0.00% 0	0.00% 0	15.38% 2	30.77% 4	53.85% 7	13	4.38
Chronic Disease Control and Prevention (Diabetes, Heart Disease, Chronic Lung Disease)	0.00% 0	0.00% 0	0.00% 0	41.67% 5	58.33% 7	12	4.58
Decrease Tobacco Use	0.00% 0	0.00% 0	8.33% 1	33.33% 4	58.33% 7	12	4.50
Oral Care	0.00% 0	8.33% 1	25.00% 3	41.67% 5	25.00% 3	12	3.83
Physical Activity and Nutrition	0.00% 0	0.00% 0	16.67% 2	33.33% 4	50.00% 6	12	4.33
Substance Abuse	0.00% 0	0.00% 0	15.38% 2	23.08% 3	61.54% 8	13	4.46
Cancer (All Forms)	0.00% 0	0.00% 0	25.00% 3	33.33% 4	41.67% 5	12	4.17

## Clay County Board of Health, and Healthy Carolinians Survey

The CHA team felt that information from our key stake holders would be beneficial to the priority setting process. With that in mind surveys were sent out the Clay County Board of Health, and Clay County Partnership for Healthy Carolinians members. We received 10 responses total, five from each group. To save space both of those surveys are combined below.

### Question 1

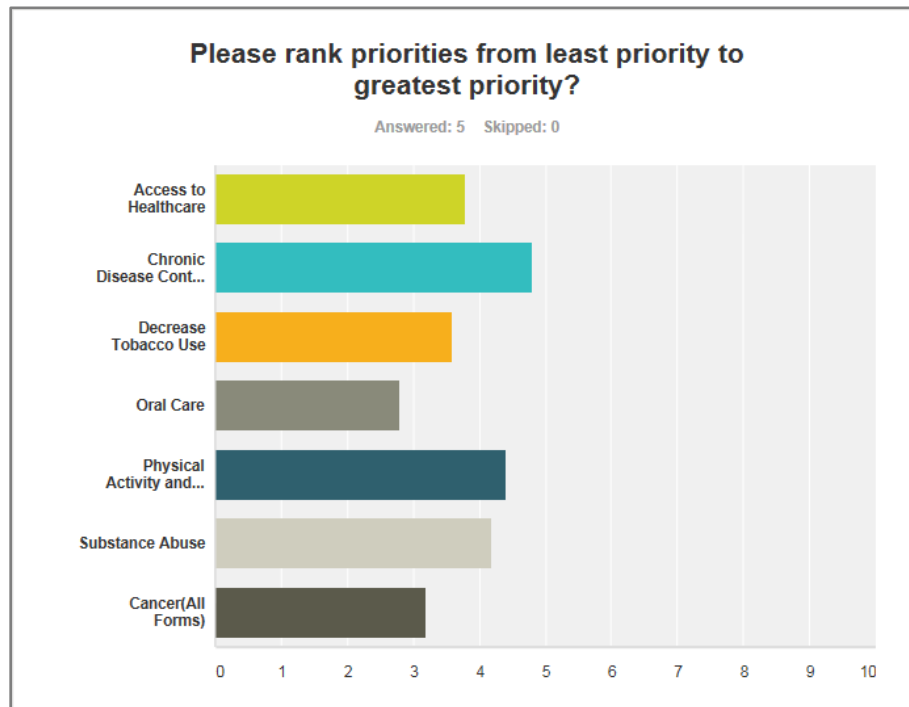
In your opinion, what are the three greatest Health Risks facing Clay County? Fill in the blank.

#### Combined responses from the Board of Health and Healthy Carolinians survey

Answer Participants Gave	# of times answer was given
Obesity	7
Drugs	5
Tobacco Use	4
Cancer	3
Access to Healthcare	3
Heart Disease	3
Diabetes	2
Chronic Disease	1
Chronic Kidney Disease	1
Lack of Exercise	1

## Question 2

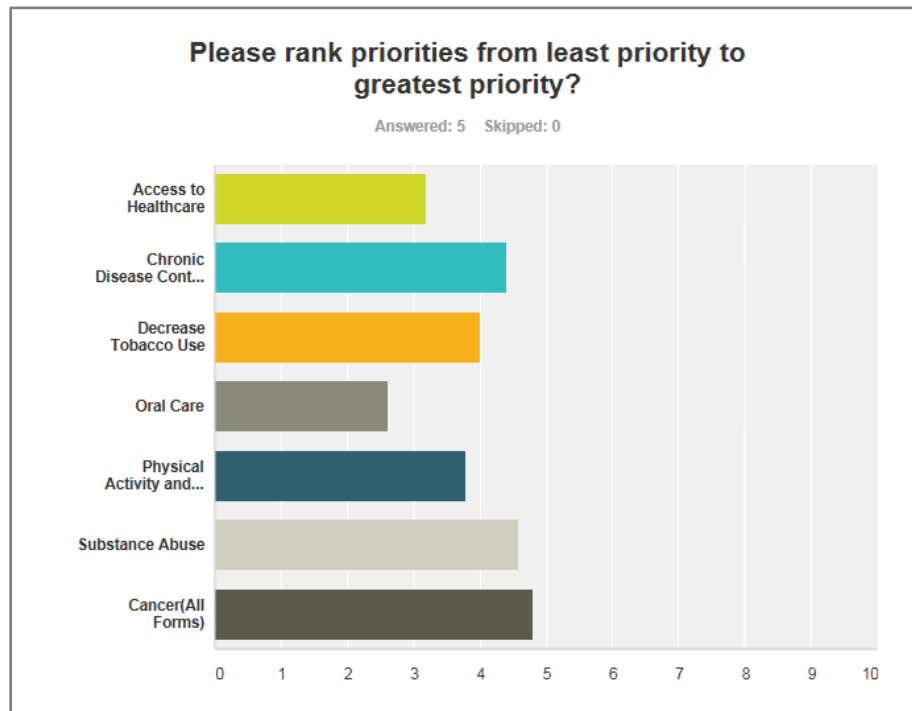
### Board of Health Response



	Least	(no label)	Somewhat	(no label)	Greatest	Total	Weighted Average
Access to Healthcare	0.00% 0	0.00% 0	40.00% 2	40.00% 2	20.00% 1	5	3.80
Chronic Disease Control and Prevention (Diabetes, Heart Disease, Chronic Lung Disease)	0.00% 0	0.00% 0	0.00% 0	20.00% 1	80.00% 4	5	4.80
Decrease Tobacco Use	0.00% 0	20.00% 1	40.00% 2	0.00% 0	40.00% 2	5	3.60
Oral Care	0.00% 0	40.00% 2	40.00% 2	20.00% 1	0.00% 0	5	2.80
Physical Activity and Nutrition	0.00% 0	0.00% 0	0.00% 0	60.00% 3	40.00% 2	5	4.40
Substance Abuse	0.00% 0	0.00% 0	20.00% 1	40.00% 2	40.00% 2	5	4.20
Cancer (All Forms)	0.00% 0	0.00% 0	80.00% 4	20.00% 1	0.00% 0	5	3.20

## Question 2

### Healthy Carolinians Response



	Least	(no label)	Somewhat	(no label)	Greatest	Total	Weighted Average
Access to Healthcare	20.00% 1	0.00% 0	40.00% 2	20.00% 1	20.00% 1	5	3.20
Chronic Disease Control and Prevention (Diabetes, Heart Disease, Chronic Lung Disease)	0.00% 0	0.00% 0	20.00% 1	20.00% 1	60.00% 3	5	4.40
Decrease Tobacco Use	0.00% 0	0.00% 0	20.00% 1	60.00% 3	20.00% 1	5	4.00
Oral Care	20.00% 1	20.00% 1	40.00% 2	20.00% 1	0.00% 0	5	2.60
Physical Activity and Nutrition	0.00% 0	0.00% 0	20.00% 1	80.00% 4	0.00% 0	5	3.80
Substance Abuse	0.00% 0	0.00% 0	0.00% 0	40.00% 2	60.00% 3	5	4.60
Cancer (All Forms)	0.00% 0	0.00% 0	0.00% 0	20.00% 1	80.00% 4	5	4.80

## **APPENDIX E-KEY INFORMANT SURVEY FINDINGS**

### **Community Stakeholder Input**

# **2015 PRC Online Key Informant Survey**

### **Clay County, NC**

*Prepared for:*  
WNC Healthy Impact

*By:*  
Professional Research Consultants, Inc.  
11326 P Street Omaha, NE 68136-2316  
[www.PRCCustomResearch.com](http://www.PRCCustomResearch.com)

2015-0631-02  
© October 2016

## Methodology

To solicit input from key informants, those individuals who have a broad interest in the health of the community, an Online Key Informant Survey was implemented. A list of recommended participants was provided to PRC by WNC Healthy Impact who compiled lists submitted by 13 of the 16 WNC counties; this list included names and contact information for physicians, public health representatives, other health professionals, social service providers, and a variety of other community leaders. Potential participants were chosen because of their ability to identify primary concerns of the populations with whom they work, as well as of the community overall.

Key informants were contacted by email, introducing the purpose of the survey and providing a link to take the survey online; reminder emails were sent as needed to increase participation.

## Participation

In all, 9 community stakeholders took part in the Online Key Informant Survey, as outlined below:

Clay County Online Key Informant Survey Participation		
Key Informant Type	Number Invited	Number Participating
Community/Business Leader	6	2
Other Health Provider	7	5
Physician	0	0
Public Health Representative	2	1
Social Service Provider	1	1

Participating Organization	Populations Served		
	Low-Income Residents	Minority Populations	Medically Underserved
Chatuge Family Practice	✓	✓	✓
Clay County Board of Health/Health Department	✓	✓	✓
Clay County Emergency Services	✓		
Clay County Health Department	✓	✓	✓
Clay County Social Services	✓		✓
King's Pharmacy	✓	✓	✓
Mountain Home Health	✓	✓	✓
NC Cooperative Extension	✓		
Town of Hayesville	✓	✓	✓

Through this process, input was gathered from several individuals whose organizations work with low-income, minority populations, or other medically underserved populations.

**Minority populations represented:**

[African American](#)  
[American Indian](#)  
[Hispanic/Latino](#)  
[Low Education Level](#)  
[Low Income](#)  
[Minorities](#)

**Medically underserved populations represented:**

[Adults](#)  
[Elderly](#)  
[Hispanic/Latino](#)  
[Lacking Transportation](#)  
[Low Education Level](#)  
[Low Income](#)  
[Mentally Ill](#)  
[Non-English Speaking](#)  
[Teen Mothers](#)  
[Uninsured/Underinsured](#)

In the online survey, respondents had the chance to explain what view was most needed to create a healthy community, and how they feel that the physical environment and social determinants impact health. Key



informants were also asked to specifically rate the degree to which various health issues are a problem in their own county; follow-up questions asked them to describe why they identify problem areas as such, and how these might be better addressed. Results of their ratings, as well as their verbatim comments, are included throughout this report as they relate to the various other data presented.

*NOTE: These findings represent qualitative rather than quantitative data. The Online Key Informant Survey was designed to gather input from participants regarding their opinions and perceptions of the health of the residents in the area. Thus, these findings are based on perceptions, not facts.*

## Characteristics of a Healthy Community

*“What are the MOST IMPORTANT characteristics of a healthy community?”*

*Key informants could list up to 3 responses.*

**Key informants characterized a healthy community as containing the following (number in parenthesis identifies number of total mentions):**

- Access to Health Care (3)
- Variety of Opportunities for Physical Activity's (2)
- Access to Medical and Dental Care (1)
- Active Arts/Theater Programs (1)
- Affordability (1)
- Community Resources (1)
- Diet/Nutrition (1)
- Educational Opportunities (1)
- Encouraging Physical Activity (1)
- Engaged Community (1)
- Families Spending Time Together (1)
- Good Education (1)
- Good Relationship With Local Health Care Community (1)
- Handle on Illegal Drug Problems (1)
- Health Education (1)
- Leaders Focus on Health and Wellness (1)
- Low Rate of Substance Abuse (1)
- Low Statistics of Residents With High Risk Behaviors (1)
- Outdoor Activities (1)
- Patient Responsibility for Their Care (1)
- Residents Knowledgeable of What Services are Available (1)
- Safety/Protection From Abuse for Children and Elderly (1)

## Community's Greatest Gem/Asset

Key informants characterized Clay County's greatest "gem" or asset as the following:

### Natural Environment

Our location in the mountains  
Geographical location contributes to a smaller community which aids in community involvement and friendliness plus the beauty of where we live is a factor in the quality of life.  
It has been our environmental surroundings- mountains, lakes, streams.  
Environment...mountains, lake, clean air and water.

### Sense of Community

There are so many. The population size and rural setting is amazing, but probably our history and culture. Clay County has such a rich historic culture that, though it seems to be fading in some instances, is still very much alive and can help direct our future generations.  
The closeness of the community  
The home town aspect

### People

The people (volunteers, churches, service providers, etc.) are giving, caring, individuals that will step up to help in any situation.

### Personalized Care With Physicians

Personal care with the physicians that are available

## Requirements for Quality of Life

Key informants characterized the following as issues that must be addressed in order to improve the quality of life in Clay County. (Number in parenthesis identifies number of total mentions.):

Employment (4)  
More Drug Enforcement (2)  
Access to Affordable Healthcare (1)  
Access to Healthcare (1)  
Affordable Housing (1)  
Alcohol/Drug Abuse (1)  
Better Paying Jobs (2)  
Culture (1)  
Nothing (1)  
Parental Involvement (1)  
Transportation (1)

*"What are the MOST IMPORTANT issues that must be addressed to improve the quality of life?"*

*Key informants could list up to 3 responses.*

## Ranking of Health Issues

Online key informants were asked to rate each of the following health issues as a “major problem,” “moderate problem,” “minor problem,” or “no problem at all” in Clay County. The table below illustrates these responses.

Evaluation of Health Issues				
Health Issue	Major Problem	Moderate Problem	Minor Problem	No Problem At All
Substance Abuse	77.8%	22.2%	0.0%	0.0%
Diabetes	44.4%	44.4%	11.1%	0.0%
Heart Disease & Stroke	44.4%	55.6%	0.0%	0.0%
Tobacco Use	44.4%	55.6%	0.0%	0.0%
Mental Health	33.3%	66.7%	0.0%	0.0%
Access to Health Care Services	22.2%	44.4%	33.3%	0.0%
Cancer	22.2%	77.8%	0.0%	0.0%
Maternal & Child Health	22.2%	33.3%	44.4%	0.0%
Nutrition, Physical Activity, & Weight	22.2%	77.8%	0.0%	0.0%
Oral Health	22.2%	22.2%	55.6%	0.0%
Sexually Transmitted Disease & Unintended Pregnancy	11.1%	44.4%	44.4%	0.0%
Respiratory Diseases	11.1%	33.3%	55.6%	0.0%
Infectious Diseases & Foodborne Illnesses	0.0%	33.3%	55.6%	11.1%
Injury & Violence	0.0%	44.4%	44.4%	11.1%

## Perceptions of Health Issues

Online Key Informant Survey participants rating any of the aforementioned health issues as “major problems” in

Clay County were further asked to give reasons for their perceptions. These are outlined, by health issue, in the following sections.

## Access to Health Care Services

The greatest share of key informants characterized *Access to Health Care Services* as a “moderate problem” in Clay County.

Health Issue	Major Problem	Moderate Problem	Minor Problem	No Problem At All
Access to Health Care Services	22.2%	44.4%	33.3%	0%

## Type of Care Most Difficult to Access

Key informants (who rated this as a “major problem”) most often identified primary care and specialty care as the most difficult to access in Clay County.

	Most Difficult to Access	Second-Most Difficult to Access	Third-Most Difficult to Access	Total Mentions
Primary Care	50.0%	0.0%	0.0%	1
Specialty Care	50.0%	0.0%	0.0%	1
Dental Care	0.0%	50.0%	0.0%	1
Urgent Care	0.0%	50.0%	0.0%	1
Elder Care	0.0%	0.0%	50.0%	1
Substance Abuse Treatment	0.0%	0.0%	50.0%	1

## Top Concerns

Among those rating this issue as a “major problem,” reasons frequently related to the following:

### Medicaid

*Medicaid was not expanded in NC. The working poor do not have access to health insurance. Political rhetoric has prevented many who could receive subsidies from seeking insurance. Preventive services are necessary to reduce serious illness. We have limited providers of medical care, dental care and mental health services.*

### Limited Number of Providers

*Lack of local doctors as well as specialists.*

### Pregnancy

*Drug addicted babies are being born to mothers residing in Clay County.*

## Cancer

Most key informants characterized *Cancer* as a “moderate problem” in Clay County.

Health Issue	Major Problem	Moderate Problem	Minor Problem	No Problem At All
Cancer	22.2%	77.8%	0.0%	0.0%

### Top Concerns

Among those rating this issue as a “major problem,” reasons frequently related to the following:

#### Prevalence/Incidence

*Almost all families have someone that has had cancer or is currently receiving treatment.*

#### Tobacco Use

*Significant history of tobacco use, but also because Clay County was traditionally a farming community it is thought that the use of pesticides and other environmental factors could play a role in the cancer statistics.*

## Diabetes

An equal share of key informants characterized *Diabetes* as a “major” or “moderate problem” in Clay County.

Health Issue	Major Problem	Moderate Problem	Minor Problem	No Problem At All
Diabetes	44.4%	44.4%	11.1%	0.0%

### Top Concerns

Among those rating this issue as a “major problem,” reasons frequently related to the following:

#### Lack of Education

*Lack of education on disease prevention.*

*I think education for the patients would be a great place to start.*

#### Nutrition, Physical Activity, and Weight

*Aging population, obesity, limited places and opportunity for exercise and poor nutrition. Expensive to eat healthy. We have cultural issues with dietary choices that encourage high fat and carbohydrate intake. Sodas, fruit juices and other sweetened drinks are too heavily consumed.*

#### Prevalence/Incidence

*Almost all families have someone with diabetes.*

## Heart Disease & Stroke

Most key informants characterized *Heart Disease & Stroke* as a “moderate” problem in Clay County.

Health Issue	Major Problem	Moderate Problem	Minor Problem	No Problem At All
--------------	---------------	------------------	---------------	-------------------

Heart Disease & Stroke	44.4%	55.6%	0.0%	0.0%
------------------------	-------	-------	------	------

## Top Concerns

Among those rating this issue as a “major problem,” reasons frequently related to the following:

### *Lack of Specialized Healthcare Facilities*

Limited access to stroke and or heart centers. Patients need to quickly reach these facilities that are over two hours away in most cases, and weather or geography often hampers air medical transport.

### *Prevalence/Incidence*

Heart disease and stroke are found in a majority of the population.

### *Aging Population*

We have an elderly population in this county.

### *Lack of Education*

Not understanding disease causes and risks.

## Infectious Diseases & Foodborne Illnesses

A majority of key informants characterized *Infectious Diseases & Foodborne Illnesses* as a “minor problem” in Clay County.

Health Issue	Major Problem	Moderate Problem	Minor Problem	No Problem At All
--------------	---------------	------------------	---------------	-------------------

Infectious Diseases & Foodborne Illnesses	0.0%	33.3%	55.6%	11.1%
---	------	-------	-------	-------

## Injury & Violence

The largest share of key informants characterized *Injury & Violence* as a “major” or “moderate problem” in Clay County.

Health Issue	Major Problem	Moderate Problem	Minor Problem	No Problem At All
Injury & Violence	0.0%	44.4%	44.4%	11.1%

## Other Comments

Although none this issue as a “major problem,” one related additional comment was given in the survey:

### *Domestic Violence and Child Abuse*

*Domestic Violence. Community accepts DV as normal. It is under reported and the victim may be re-victimized by the community. We still have old standards of how females should be treated. No insight into how DV affects children in home.*

## Maternal & Infant Health

Key informants generally characterized *Maternal & Infant Health* as a “minor problem” in Clay County.

Health Issue	Major Problem	Moderate Problem	Minor Problem	No Problem At All
Maternal & Child Health	22.2%	33.3%	44.4%	0.0%

## Top Concerns

Among those rating this issue as a “major problem,” reasons frequently related to the following:

### *Substance Use During Pregnancy*

*Due to the number of children throughout our school system that have physical or mental handicaps related to drug, alcohol or tobacco use during pregnancy and also due to the number of children visibly seen having to ride through our community in an enclosed vehicle with a smoking adult.*

### *Lack of Resources*

*Lack of providers for Obstetrics and Pediatrics.*

## Mental Health

The greatest share of key informants characterized *Mental Health* as a “moderate problem” in Clay County.



Health Issue	Major Problem	Moderate Problem	Minor Problem	No Problem At All
Mental Health	33.3%	66.7%	0.0%	0.0%

## Top Concerns

Among those rating this issue as a “major problem,” reasons frequently related to the following:

### Access Barriers

*Restricted access to mental health services for families. Many services are offered in Cherokee/Macon and this is a barrier due to transportation issues. Currently there is very little to no inpatient treatment facilities. Very little services for individuals only group sessions.*

*There is a lack of access to services locally. Transportation is a problem to other counties to seek services. No psychiatrist located in our area to see indigent and uninsured. We have a terrible issue with substance abuse both illegal and prescription use.*

### Lack of Diagnosis

*Many with mental health problems are either not diagnosed, or if diagnosed, do not seek consistent treatment.*

## Nutrition, Physical Activity, & Weight

The greatest share of key informants characterized *Nutrition, Physical Activity & Weight* as a “moderate problem” in Clay County.

Health Issue	Major Problem	Moderate Problem	Minor Problem	No Problem At All
Nutrition, Physical Activity, & Weight	22.2%	77.8%	0.0%	0.0%

## Top Concerns

Among those rating this issue as a “major problem,” reasons frequently related to the following:

### Affordable/Safe Opportunities for Physical Activity

*Need more areas for exercise like trails, greenways, and additional sidewalks installed by DOT. We eat too much fast foods, young mothers do not have time nor know how to cook. Too much sweetened soda and unhealthy snack consumption. Children and adults are addicted to electronics and don't play outside or do sports.*

### Obesity

*Obesity. Probably from poor nutritional diets of families with low income.*

## Oral Health

Over half of key informants characterized *Oral Health* as a “minor problem” in Clay County.

Health Issue	Major Problem	Moderate Problem	Minor Problem	No Problem At All
Oral Health	22.2%	22.2%	55.6%	0.0%

## Top Concerns

Among those rating this issue as a “major problem,” reasons frequently related to the following:

### *Uninsured/Underinsured*

*Lack of dental coverage.*

*Lack of insurance...self-pay cost prohibitive. Cultural negligence of teeth. Use of Methamphetamines. Spit tobacco usage by youth and young men damage their teeth. High sugar consumption by all ages. Many Clay County citizens cannot afford dental care.*

## Respiratory Diseases

The greatest share of key informants characterized *Respiratory Diseases* as a “minor problem” in Clay County.

Health Issue	Major Problem	Moderate Problem	Minor Problem	No Problem At All
Respiratory Diseases	11.1%	33.3%	55.6%	0.0%

## Top Concerns

Among those rating this issue as a “major problem,” reasons frequently related to the following:

### *Tobacco Use*

*Smokers.*

## Sexually Transmitted Disease & Unintended Pregnancy

Most key informants characterized *Sexually Transmitted Disease & Unintended Pregnancy* as a “major” or “moderate problem” in Clay County.

Health Issue	Major Problem	Moderate Problem	Minor Problem	No Problem At All
Sexually Transmitted Disease & Unintended Pregnancy	11.1%	44.4%	44.4%	0.0%

## Top Concerns

Among those rating this issue as a “major problem,” reasons frequently related to the following:

### *Teen Pregnancy Prevalence*

*Due to the number of teenage pregnancies in our community. Also due to numbers of middle school children I know personally who have admitted to sexual intercourse or behavior.*

## Substance Abuse

The greatest share of key informants characterized *Substance Abuse* as a “major problem” in Clay County.

Health Issue	Major Problem	Moderate Problem	Minor Problem	No Problem At All
Substance Abuse	77.8%	22.2%	0.0%	0.0%

## TOP CONCERNS

Among those rating this issue as a “major problem,” the greatest barriers to accessing substance abuse treatment are viewed as:

### Prevalence/Incidence

*Our department deals with families daily that have substance abuse issues. The numbers are growing rapidly in this area.*

*It is a repeated offense in the local paper and court documents. It is also a very prevalent issue in our middle and high school in Clay County.*

### Poverty

*Poverty, depression, lack of education and future make substance abuse an escape for the reality. Youth start with risk taking behavior or to fit into a crowd and then get addicted. Often parents are also addicted and then the children follow the parents' model.*

### Prevalence of Prescription Drugs

*We are bordering Georgia and there is a lot of people who cross state lines to purchase their legal or illegal substances. In today's time the prescription drugs are a big problem.*

### Addiction

*Not sure I can specify all of the societal problems but addiction is a major concern. It has caused health problems and crime problems.*

### Easy Access to Illegal Substances

*Availability, low income, social.*

## Most Problematic Substances

Key informants (who rated this as a “major problem”) most often identified methamphetamines or other amphetamines and opioid analgesics, as the most problematic substances abused in Clay County.

Most Problematic	Second-Most Problematic	Third-Most Problematic	Total Mentions
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	Most Problematic	Second-Most Problematic	Third-Most Problematic	Total Mentions
Methamphetamines or Other Amphetamines	42.9%	28.6%	0.0%	5
Opioid Analgesics (e.g. Oxycodone, Hydrocodone, Percocet, Fentanyl, Methadone)	42.9%	14.3%	14.3%	5
Alcohol	14.3%	28.6%	14.3%	4
Prescription Medications (NOT including Opioid Analgesics)	0.0%	14.3%	28.6%	3
Marijuana	0.0%	14.3%	14.3%	2
Over-The-Counter Medications	0.0%	0.0%	14.3%	1
Heroin	0.0%	0.0%	14.3%	1

## Tobacco Use

The greatest share of key informants characterized *Tobacco Use* as a “moderate problem” in Clay County.

Health Issue	Major Problem	Moderate Problem	Minor Problem	No Problem At All
Tobacco Use	44.4%	55.6%	0.0%	0.0%

## Top Concerns

Among those rating this issue as a “major problem,” reasons frequently related to the following:

### Culture

*Tobacco use is culturally accepted. Youth use it to appear grown up. Females use tobacco to control their weight. Adults sell tobacco to underage customers in our convenient stores. Tobacco companies do a great job marketing to our youth. Smoke and you will be cool and glamorous. We will even make it flavored so you will like it more.*

### Prevalence/Incidence

*High percentage of youth and adult use tobacco. This is generational and accepted in this community.*

### Lack of Resources

*Lack of resources for cessation, cost of resources, health education.*

## Contributors to Health Issues

Online key informants were asked to indicate whether they believe physical environment and social determinants of health are each a “major contributor,” “moderate contributor,” “minor contributor,” or “not a contributor at all” to health problems in Clay County.

**Physical environment** includes factors such as air and water quality, and pollution and hazards inside homes. It also includes elements of the built environment, such as bike paths and sidewalks.

Contributors to Health Issues				
Health Issue	Major Contributor	Moderate Contributor	Minor Contributor	Not a Contributor At All
Physical Environment	0.0%	33.3%	44.4%	22.2%
Social Determinants of Health	66.7%	22.2%	11.1%	0.0%

**Social determinants of health** are economic and social conditions that influence the health of people and communities. It includes social and economic policies, education, income and poverty, racial discrimination, employment status, and more.

## Physical Environment

The greatest share of key informants characterized Physical Environment as a “minor contributor” to local health issues.

## Social Determinants of Health

Over two-thirds of key informants characterized Social Determinants of Health as a “major contributor” to local health issues.

Those who rated this as a “major contributor” feel that the following contribute the most to health problems in Clay County:

- Alcohol/Drug Abuse
- Economy
- Education
- Employment
- Employment That Pays a Living Wage
- Income/Financial Ability
- Lack of Motivation to Change
- Learned Behaviors
- Parental Involvement
- Poverty
- Social Impact