# Clay County Community Health Assessment

## 2021

# CLAY COUNTY COMMUNITY HEALTH ASSESSMENT

This document was developed by the Clay County Health Department in partnership with Clay County Healthy Carolinians Partnership, Erlanger-Murphy Medical Center, and Union General Hospital as part of a local community health assessment process.  We would like to thank and acknowledge several agencies and individuals for their contributions and support in conducting this health assessment:

| Name | Agency | Role/ Contribution | Duration of Participant | Agency Website |
|---|---|---|---|---|
| Jerry Payne | Clay County Park and Recreation | Healthy Carolinian Partner | Fall 2021 | www.clayconc.com |
| Carie Free | Chatuge Family Practice | Healthy Carolinian Partner | Fall 2021 | www.chatugefp.org |
| Clarissa Rogers | Clay County Health Department | Interim Health Director | Full Process | www.clayhdnc.us |
| Cynthia Kelly | Clay County Health Department | Healthy Carolinian Partner | Fall 2021 | www.clayhdnc.us |
| Harry Baughn | Town of Hayesville | Town Council | Fall 2021 | www.hayesville.org |
| Jacqueline Gottlieb | Hinton Center | Healthy Carolinian Partner | Fall 2021 | www.hintoncenter.org |
| Judith Alvarado | Reach of Clay County | Healthy Carolinian Partner | Fall 2021 | www.reachofclaycounty.org |
| Julie Lyvers | Clay County Extension Office | Healthy Carolinian Partner | Fall 2021 | www.clay.ces.ncsu.edu |

| Marie Gunther | Clay County Transportation | Healthy Carolinian Partner | Fall 2021 | www.clayconc.us |
|---|---|---|---|---|
| Miranda Kephart | Union General | Healthy Carolinian Partner | Fall 2021 | www.uniongeneralhospital.com |
| Regina Harper | Clay County Health Department | Health Educator | Full Process | www.clayhdnc.us |
| Ricky Hill | Hinton Center | Healthy Carolinian Partner | Fall 2021 | www.hintoncenter.org |
| Theresa Waldroup | Communities in School | Healthy Carolinian Partner | Fall 2021 | www.claycountycgs.com |

## TABLE OF CONTENTS

# Clay County 2021 Community Health Assessment Executive Summary

## Community Results Statement

Leading the way to a healthier community

## Leadership for the Community Health Assessment Process

The leadership for the CHA process included the Clay County Health Department Public Health Educator and the Interim Health Director.

| Name | Agency | Title | Agency Website |
|---|---|---|---|
| Clarissa Rogers | Clay County Health Department | Interim Health Director | www.clayhdnc.us |
| Regina Harper | Clay County Health Department | Public Health Educator | www.clayhdnc.us |

## Partnerships

Partnerships during the CHA process were particularly crucial. The main partnership came from Healthy Carolinians, which is comprised of multiple entities from around the county. Healthy Carolinians was developed to enhance the health of Clay County through networking to determine how we can support each other within our county.

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## Regional/Contracted Services

Our county received support from **WNC Healthy Impact**, a partnership and coordinated process between hospitals, public health agencies, and key regional partners in western North Carolina working towards a vision of improved community health. We work together locally and regionally to assess health needs, develop collaborative plans, take action, and evaluate progress and impact.  This innovative regional effort is coordinated and supported by **WNC Health Network**. WNC Health Network is the alliance of stakeholders working together to improve health and healthcare in western North Carolina. Learn more at www.WNCHN.org.

## Theoretical Framework/Model

WNC Health Network provides local hospitals and public health agencies with tools and support to collect, visualize, and respond to complex community health data through Results-Based Accountability™ (RBA). RBA is a disciplined, common-sense approach to thinking and acting with a focus on how people, agencies, and communities are better off for our efforts.

## Collaborative Process Summary

Clay County's collaborative process is supported on a regional level by WNC Healthy Impact.

Locally, our process is to share our Community Health Assessment Primary and Secondary data with our CHA team to identify and prioritize our priorities for the CHA.

Clay County examined the data that was distributed by WNC Healthy Impact, and distributed the information to the CHA team. To determine the key issues for Clay County, the Public Health Educator created a rating and prioritizing worksheet to help determine which issue is the highest priority that can be obtained within Clay County. The results showed that **Chronic Disease Prevention and Control, Prevention** and **Management of Acute Respiratory Infections** along with **Prevention and Screening for Cancers** are three areas of need that are still troubling our county.

Phase 1 of the collaborative process began in January 2021 with the collection of community health data. For more details on this process see Chapter 1 – Community Health Assessment Process.

### Key Findings
The data collected for the 2021 Community Health Assessment showed a need for prevention and control on chronic illnesses. According to the data, the leading cause of death included diseases of the heart, chronic lung disease, and diabetes mellitus. Unfortunately, the lifestyle behaviors and health status such as inactivity, obesity, and poor nutrition continues to be a prevalent cause of these chronic diseases. The data also showed the need to prevent and manage acute respiratory infections. In the analysis, it showed that flu, pneumonia, and COVID-19 were a contributing factor in several cases where death had occurred. Thirdly, Cancer seems to play a role in the lives of several Clay County residents, making prevention and proper screening essential for the wellbeing of the community.

### Health Priorities
The Following health issues were identified as priorities:
Chronic Disease Control and Prevention
Prevention and Management of Acute Respiratory Infections.
Prevention and Screening for Cancer

### Next Steps
The next steps for developing the community health improvement plans include:

- Working with partners and community members to understand the root cause of the problem and determine how to implement changes to improve the overall health of the county
- Using evidence-based strategies when working on health issues within the county.
- Selecting priority strategies and creating performance measures to help us evaluate how people are better off because of the strategies.
- Publish the Community Health Improvement Plan (CHIP) on an electronic Scorecard that anyone can access to monitor progress.

- To access the full data set that was used for the CHA please email Regina Harper at [reginaharper@clayhdnc.us](mailto:reginaharper@clayhdnc.us)

# Chapter 1- Community Health Assessment Process

## Purpose

Community health assessment (CHA) is an important part of improving and promoting the health of county residents.  A CHA results in a public report which describes the health indicators, status of the community, recent changes, and necessary changes to reach a community's desired health-related results.

## Phases of the Community Health Improvement Process:
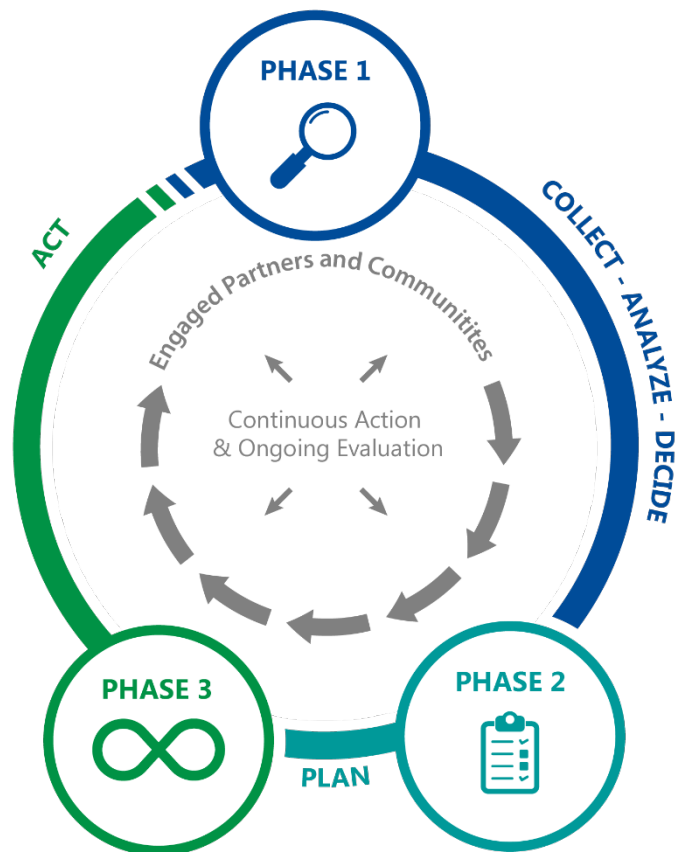


## Definition of Community

Community is defined as "county" for the purposes of the North Carolina Community Health Assessment Process. Clay county is included in Erlanger-Murphy Medical Center and Union General Hospital for the purposes of community health improvement, and as such they were key partners in this local level assessment.

## WNC Healthy Impact

WNC Healthy Impact is a partnership among local and regional hospitals, public health agencies, and key regional partners towards a vision of improved community health. The vision is achieved by developing collaborative plans, taking action, and evaluating progress. More information is at www.wnchn.org/wnchealthyimpact.



## Data Collection
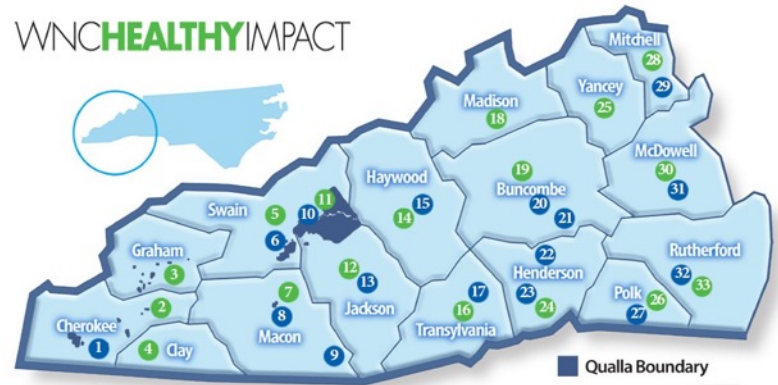The set of data reviewed for our community health assessment process is comprehensive, though not all of it is presented in this document. Within this community health assessment, we share a general overview of health and influencing factors, then focus more on priority health issues identified through a 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 came from the WNC Healthy Impact regional data and local data. To ensure a comprehensive understanding, the dataset includes both secondary (existing) and primary (newly collected) data. 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 publicly available secondary data metrics with our county compared to the sixteen county WNC region
- Set of maps using Census and American Community Survey (ACS) data
- WNC Healthy Impact Community Health Survey (cell phone, landline and internet-based survey) of a random sample of adults in the county
- Online key informant survey

See **Appendix A** for details on the regional data collection methodology.

## Additional Community-Level Data

The Clay County Health Department used additional information from the NCDHHS Dashboard, and U.S Census Bureau to help bring more information to the data presented by the Western North Carolina Health Network

## Health Resources Inventory
We conducted an inventory of available resources of our community by reviewing a subset of existing resources currently listed in the 2-1-1 database for our county as well as working with

partners to include additional information.  See **Chapter 6** for more details related to this process.

## Community Input & Engagement

Including input from the community is a critical 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, key informant interviews, listening sessions, etc.)
- Participation in coalitions and advisory boards to determine their highest priorities
- 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 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 ensure that 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, 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.  For the purposes of the overall community health assessment, we aimed to understand differences in health outcomes, correlated variables, and access, particularly among medically underserved, low-income, and/or minority populations, and others experiencing health disparities.

The at-risk and vulnerable populations of focus for our process and product include:

- Older Adults

- Young Children

- Residents Living in Poverty

- Uninsured Adults

- Immunocompromised Patients

- Ethnic Groups (African American, American Indians and Alaska Natives, Asians and Pacific Islanders, and Hispanics)

- Non-Native English Speakers

Though there are not universally accepted definitions of the three groups, here are some basic definitions from the Health Department Accreditation Self-Assessment Instrument (in some cases definitions have been slightly altered to better represent our region):

**Underserved populations** relate to those who do not access health care either because there is a lack of services or providers available or because of limitations such as income, literacy/language barriers or understanding on how to access services, cultural competency of clinicians, trust, transportation, or other barriers.

**At-risk populations** are the members of a particular group who are likely to, or have the potential to, get a specified health condition. This could be from engaging in behavior (such as pregnant women who smoke) that could cause a specified health condition, having an indicator or precursor (high blood pressure) that could lead to a specified health condition or having a high ACE score (traumatic experiences), which is correlated with increased risk of specified health conditions.

**A vulnerable population** is one that may be more susceptible than the general population to risk factors that lead to poor health outcomes. Vulnerable populations, a type of at-risk population, can be classified by such factors as discrimination/ prejudice based on race/ethnicity, socio-economic status, gender, cultural factors and age groups.

Health Department Self-Assessment Instrument (HDSAI) Interpretation Document v.7.0

# Chapter 2 – Clay County

## Location, Geography, and History of Clay

The U.S. Census Bureau describes Clay County as the 98th largest county in North Carolina. Located in the mountain region of southwestern North Carolina, Clay County has 214.9 square miles of land area and 6 square miles of water area that is bordered by the state of Georgia. There are five counties that are adjacent to Clay County which are Macon County to the northeast; Cherokee County to the north; Rabun County, Georgia to the southeast; Towns County, Georgia, to the south; and Union County, Georgia to the southwest (US Census Bureau, 2019).
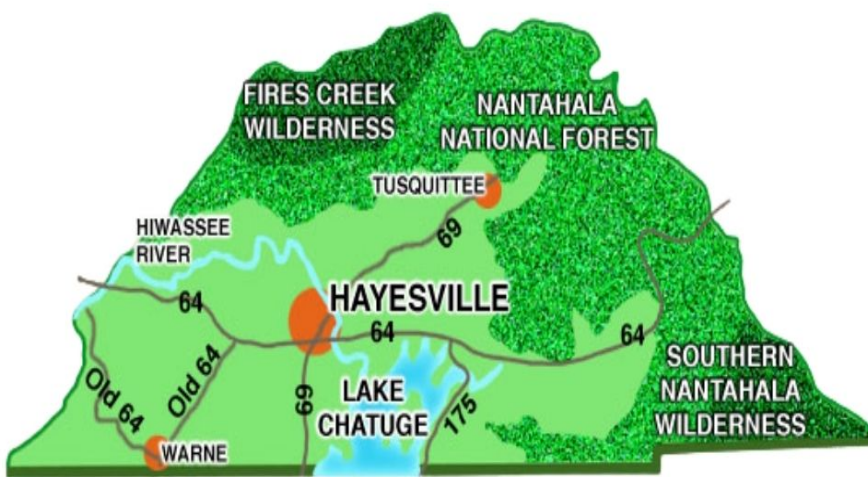
Hayesville is the incorporate town and the center of economic activity for Clay County. However, Warne, Brasstown, Elf, and Tusquittee are all unincorporated communities that make up Clay County. Within Clay County, the Nantahala National Forest covers a section of it with other prominent physical features such as Lake Chatuge, Hiawassee River, Jack Rabbit Mountain, Yellow Mountain, and Standing Indian Mountain. (NCpedia, 2006).

Clay County was developed from Cherokee County in the year of 1861. This beautiful county received its name from the legendary senator, Henry Clay, who ironically, was not from North Carolina. Thirty years after the county's establishment, Hayesville was incorporated as the county seat. Hayesville was named after George W. Hayes, a North Carolina General Assembly member who worked for Clay County's establishment (Encyclopedia of North Carolina, 2016).

Primarily a rural area; the main industries are farming, wire and cable manufacturing, health and human services, education system and tourism. For more than a century, agriculture was the backbone of the county's economy; but now, tourism seems to be more profitable for the county. (North Carolina Visitors Network, 2022). Unfortunately, due to Clay County being a rural area, resources are limited to the county residents; the primary issue being healthcare. The closest hospital for Clay County residents is within a thirty-minute radius and specialty care could be as far as two hours away. The lack of access limits the ability for many individuals, especially those dealing with poverty issues.

Being in the southern part of the state, Clay County has an Appalachian cultural aspect when it comes to diets and societal standards. For years, many residents of Clay County have grown up

and continue to maintain an Appalachian style diet. This diet consists of fried foods, rich meats, breads, cobblers and sweet tea. Even though these foods are delicious, they pose a risk for those who exclusively eat these types of foods. Those risks lead to many of the chronic diseases that Clay County faces today, such as Heart Disease, Cerebrovascular Disease and Diabetes.

Over the years, Clay County has been known for their conservative values based off Appalachian traditions. These common values are loyalty to family, independence, self-reliance, modesty, pride, love of the land, and religion. Even though these values are admirable, they can lead to individuals refraining from seeking healthcare needs due to self-reliance and independence, leaving many people thinking that, "the hospital is where a person goes to die". As these traditions continue to be passed down, our social norms are continuously evolving around us causing a lag in progress.

## Population
### General Population Characteristics

According to the U.S Census Bureau, Clay County has a total population of 10,587 people in the year of 2010 with an estimate of 3.4 % population increase in 2019. The median age range of Clay County is 52.2, which is higher than the Western North Carolina region of 46.8 and the state of North Carolina median age of 39.1, as shown on **Table 1** (US Census Bureau, 2021). Clay County has a large percentage of their population that is considered seasonal and only spend half the year within the county.

**Table 1**. Total population in Clay County compared to the State of North Carolina.

| County Total | Total Population (2019) | Total Population (2010) | % Males | % Females | Median Age | % Under 5 years old | % 5-19 Years old | % 20-64 Years old | % 65 Years and older |
|---|---|---|---|---|---|---|---|---|---|
| Clay County | 10,946 | 10,587 | 47.6 | 52.4 | 52.2 | 3.7 | 15.5 | 50.7 | 30.1 |
| WNC (Regional) | 792,708 | 759,727 | 48.4 | 51.6 | 46.8 | 4.8 | 16.4 | 56.1 | 22.8 |
| State of NC | 10,264,876 | 8,049,313 | 48.7 | 51.3 | 38.7 | 5.9 | 19.3 | 59.0 | 15.9 |

U.S Census Bureau ACS. (2021)

### Race and Ethnicity of Populations

Clay County is made up largely of a White/Caucasian population that is higher than both the region and state observed on **Table 2**. However, between 2010 and 2019 there has been an increase of 0.9% of Hispanic or Latinos and 1.5% increase in African Americans that reside in Clay County (US Census Bureau, 2021). The main language for the county is English but of 4,996 households, 212 are non-English speaking. This includes 156 homes that are Spanish-speaking and 56 homes that are other non-English speaking households.

**Table 2**. Race/Ethnicity of Population.

| County Total | Total Population (2019) | White % | Black or African American % | American Indian, Alaskan Native % | Asian % | Native Hawaiian, Other Pacific Islander % | Some other Race% | Two or More Races % | Hispanic or Latino % |
|---|---|---|---|---|---|---|---|---|---|
| Clay County | 10,946 | 96.7 | 2.1 | 0.4 | 0.2 | 0.2 | 0.1 | 0.4 | 3.3 |
| WNC (Regional) | 792,708 | 90.0 | 4.3 | 1.5 | 0.9 | 0.1 | 1.4 | 1.9 | 6.1 |
| State of NC | 10,264,876 | 68.7 | 21.4 | 1.2 | 2.9 | 0.1 | 3.1 | 2.7 | 9.4 |

U.S Census Bureau ACS. (2021)

## Population changes and birth rate

Clay County has a total population of 10,587 in 2010 with 23.8% of the population being 65 years of age and older. For the year 2020, the U.S Census Bureau has projected that Clay County will have a 7% increase in the 65 years of age and older population. In 2010, 18.7% of the total population in Clay County was under the age of 18. Considering the statistical data, Clay County has maintained a birth rate of 8.0% to 8.1% for the year 2014 through 2019.  Due to the little change in birth rates in Clay County, it is projected there will be a decrease in population at 1.9% for the under the age of 18 population (U.S Census Bureau ACS, 2021).

## Geographic Mobility

As presented by the 2020 U.S Census Bureau, Clay County has had very little geographic mobility compared to the Western North Carolina region and throughout the state of North Carolina. The **Table 3** represents for the year 2015 through 2019 (U.S Census Bureau, 2021).

**Table 3.** Geographic Mobility

| Location | Total Population 1 year and over | Moved within the same county | Moved from different county within the state | Moved from different state | Moved from abroad |
|---|---|---|---|---|---|
| Clay | 10,868 | 1.8 | 1.0 | 3.8 | 0.0 |
| WNC (Regional) | 785,695 | 5.2 | 3.1 | 3.1 | 0.2 |
| NC state | 10,148,819 | 7.8 | 3.7 | 3.2 | 0.5 |

U.S Census Bureau ACS. (2021)

## Education Attainment

During the years of 2015 through 2019, Clay County had a total population of 8,376 who was 25 years and older. Out of that 8,376, only 33.4% received a high school diploma and 20.2% received some college but no degree. However, 23.7% did continue their education and received a bachelor's degree or higher as discussed on **Table 4** (U.S Census Bureau ACS, 2021).

**Table 4.** Education Attainment

| County | 2015-2019 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Total Population Age 25 Years and Older | % High School Graduation Rate (Includes equivalency) | | | % Some College, no degree | | | % Bachelor's Degree or Higher |
| | | Total | Male | Female | Total | Male | Female | |
| | | | | | | | | |
| Clay | 8,376 | 33.4 | 33.4 | 33.4 | 20.2 | 17.9 | 22.2 | 23.7 |
| WNC (Regional) Arithmetic Mean | 36,331 | 30.1 | 32.0 | 28.1 | 21.8 | 20.9 | 22.7 | 24.5 |
| State Total | 6,983,859 | 25.7 | 27.1 | 24.3 | 21.2 | 20.8 | 21.6 | 31.3 |

U.S Census Bureau ACS. (2021)

## COVID-19 Pandemic

Early March 2020, Clay County began dealing with the widespread pandemic known as COVID-19. Upon the realization that COVID-19 had made its way to our small community, panic set in throughout the community. Many local businesses shut their doors to keep everyone safe. Unfortunately, some were not able to reopen due to the lack of financial funds. As the numbers

began to rise, testing for COVID-19 was immediately put into place at Clay County Health Department. Testing was administered twice a day for all the patients that contacted the health department with symptoms of COVID-19. All specimens were sent to an outside lab that would result out in seven days. Overwhelmed lab and staff were at their breaking point with running a full clinic and keeping up to date on current guidelines for COVID-19.

Early November 2020, Clay County Health Department decided to limit the number of patients seen in the clinic, with one working provider per day. All patient visits within the clinic were to be for programs, and all sick visits were handled on the phone.  As of May 2021, clinic has been reopened up to see sick patients along with the patients being seen in programs.

Regrettably, the pandemic did have an impact on our CHA/CHIP priorities for 2018. In 2018, the health priorities that were to be addressed involved chronic disease prevention, mental health access, and substance abuse. To address chronic disease prevention, a fitness program was designed called Strive to Thrive. This program helped identify key risk factors in patients signed up for the program, with education on how to reduce those risks. Once the pandemic hit, clients were unable to continue to come in for their follow-ups, and eventually; the program was discontinued.

In November 2018, Clay County Health Department, along with other local health departments, became part of the Western North Carolina Opioid Response Consortium. The Consortium worked systematically to access gaps and opportunities related to substance use disorder/opioid use disorder prevention, treatment, and recovery. To implement evidence-based harm reduction interventions and prevention-focused activities within the community, two peer support specialists were assigned to serve the tri-county region. One of the peer support specialists has been stationed to work out of the health department, which provides Clay County residents with an opportunity to be seen locally.  As of today, the Consortium is still thriving but has developed alternate ways to meet with clients when unable to do so in the office, such as zoom meetings or phone conferences.

 As the pandemic continued, Clay County Health Department focused on keeping the community informed and provided as much guidance as could be given to help stop the spread. Eventually, resources became scarce, causing the health department to change testing from twice a day to once a day limit the number of gowns, masks, and face shields being used. Not only were resources for COVID testing limited, but regular supplies were often allocated. This led to the use of multiple suppliers to fulfill our medical supply needs. Even though resources were limited, Clay County Health Department was able to remain open and provide for our community. By remaining open, residents from Clay County and surrounding areas were able to have their health needs managed while other places were limited on availability.

Today, COVID-19 remains a major concern for the health of our community and others. From March 2, 2020, to January 11, 2022, Clay County has had a total of 1 ,900 cases of COVID-19. Out of those 1,900 cases, there has been 44 individuals who have had COVID-19 related fatalities. Since the beginning of 2021, vaccines have been administered to all who request it. However, there has been some vaccine hesitancy in our area. With a population of 10,946 people, 5,071 individuals have been fully vaccinated with Moderna, Pfizer, or Johnson & Johnson (North Carolina Department of Health and Human Services, 2022).

With the recent events of the pandemic, Clay County Health Department recognized the despair the community was feeling, and wanted to give them the hope they needed and deserved. In their efforts to combat these challenges, Clay County Health Department incorporated a program that allowed them to offer a community paramedic service. The community paramedic program started in August 2021, and has offered a great deal of assistance to our residents who are home bound. Many clients have been able to received their COVID-19 vaccine in their home from this service. Even though this program helped prevent many individuals from being exposed to COVID-19, Clay County Health Department felt like it wasn't enough. In the beginning of September 2021, Clay County Health Department decided to reach out to the local Emergency Medical Services to establish a Monoclonal Antibody infusion center. These Monoclonal Antibodies were designed to help fight COVID-19 and reduce admission rates in the surrounding hospitals. Since the health department started the Monoclonal Antibody therapy, patients have had complete turnaround in their recovery; and with the assistance of the community paramedic, many have received the infusion at home.

# Chapter 3 – Social & Economic Factors

As described by [Healthy People 2030](#), economic stability, education access and quality, healthcare access and quality, neighborhood and built environment, and social community and context are five important domains of social determinants of health. Social determinants of health (SDOH) are the conditions in the environments where people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks. (Office of Disease Prevention and Health Promotion, 2020). For an instance, people in poverty are more likely to engage in risky health behaviors, and they are also less likely to have affordable housing.

## Income & Poverty

 "Income provides economic resources that shape choices about housing, education, child care, food, medical care, and more. Wealth, the accumulation of savings and assets, helps cushion and protect us in times of economic distress. As income and wealth increase or decrease, so does health" (County Health Rankings, 2021). Clay County has an average income level of $42,222, which is less than the region by $3,689, and the state by $12,380. As shown on **Table 5**, Clay County has 56.3% of the county that is considered 300% below the federal poverty level and 53% of all students are eligible for free or reduce lunches (U.S Census Bureau, 2022). Food and Nutrition Services is a program that helps individuals with food purchases at their local grocery stores. In North Carolina, a plastic card called an EBT is used for recipients to access their benefits to make those purchases. In Clay County, participates that receive food and nutrition services have had an increase from 2020 to 2021. In 2020, the number of individuals that were participants were 1,561 and increased to 1,770 in 2021 (UNC-CH Jordan Institute for families 2021).

**Table 5**. Income and Poverty

| County | Population | Below 100% Poverty Level | Below 50% Poverty Level | Below 125% Poverty Level | Below 150% Poverty Level | Below 185% Poverty Level | Below 200% Poverty Level | Below 300% Poverty Level |
|---|---|---|---|---|---|---|---|---|
| | | % | % | % | % | % | % | % |
| Clay | 10,921 | 13.9 | 4.6 | 17.0 | 24.8 | 32.2 | 37.2 | 56.3 |
| WNC (Regional) Total | 773,516 | 13.9 | 5.3 | 19.3 | 25.2 | 32.0 | 35.2 | 54.7 |
| State Total | 9,984,891 | 14.7 | 6.5 | 19.7 | 24.5 | 31.4 | 34.3 | 51.6 |

U.S Census Bureau ACS (2021).

## Employment

"Employment provides income and, often, benefits that can support healthy lifestyle choices. Unemployment and under employment limit these choices, and negatively affect both quality of life and health overall. The economic condition of a community and an individual's level of educational attainment both play important roles in shaping employment opportunities" (County Health Rankings, 2021). Clay County has 229 work establishments that offer 1,648 individuals' work. The majority of work in Clay County involves retail trade with the employment of 372 workers. The 2nd highest employment involves healthcare and social assistance with 285 employees (NC Department of Commerce, 2021). Unemployment in Clay County has steadily increased over the last few years. (See table 1).
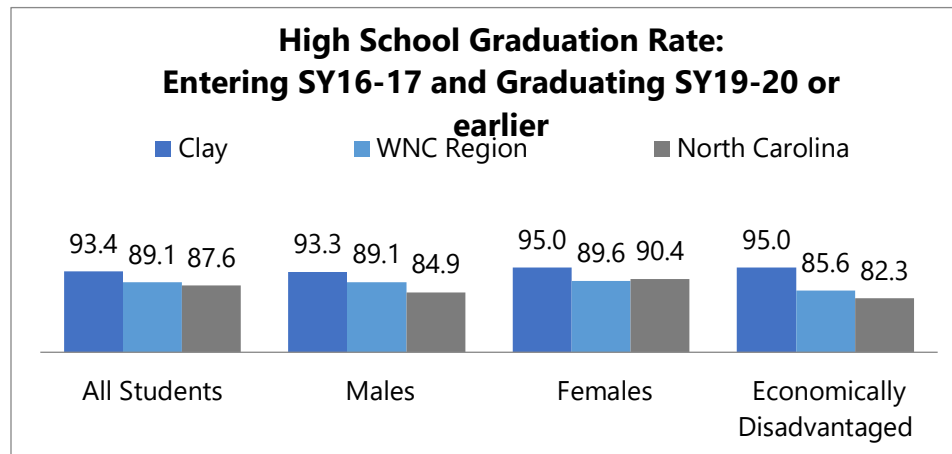
**Table 1.** Unemployment Rate for Clay County

| County | 2019 | 2020 |
|---|---|---|
| Clay | 4.5 | 7.4 |
| WNC Regional (Arithmetic Mean) | 4.0 | 7.5 |
| State Total (Unadjusted) | 3.9 | 7.3 |
| | | |
| | | |

NC Department of Commerce. (2021)

## Education

"Better educated individuals live longer, healthier lives than those with less education, and their children are more likely to thrive. This is true even when factors like income are considered" (County Health Rankings, 2021). The school year of 2019 to 2020 had an enrollment of 1,323 students within the Clay County School District. During that time frame, 12 students dropped out of Clay County High School leaving a 93.4% graduation rate for the area. Compared to the WNC regional average and state total, Clay County has a higher graduation rate than several counties within the state as demonstrated in **Graph 1** (Public Schools of North Carolina, 2021).

**Graph 1.** Education

**High School Graduation Rate:**
**Entering SY16-17 and Graduating SY19-20 or earlier**

■ Clay   ■ WNC Region   ■ North Carolina

| | All Students | Males | Females | Economically Disadvantaged |
|---|---|---|---|---|
| Clay | 93.4 | 93.3 | 95.0 | 95.0 |
| WNC Region | 89.1 | 89.1 | 89.6 | 85.6 |
| North Carolina | 87.6 | 84.9 | 90.4 | 82.3 |

NC Department of Public Instruction. (2021)

## Racism and Discrimination

"Racism is an underlying or root cause of health inequities and leads to unfair outcomes between racial and ethnic groups. Different geographic areas and various racial and ethnic groups experience challenges or advantages that lead to stark differences in life expectancy, infant mortality, poverty, and more" (County Health Rankings, 2021). Most of Clay County's population is Caucasian (96.7%) with a small percentage of the population being African American (2.1%) and Hispanic/Latino (3.3%). In 2021, the community was asked "if they felt like Clay County was a welcoming place for people of all races and ethnicities?" Nearly, 18% of the population disagreed that the community was welcoming for all races and ethnicities, and 7.4% were sometimes threatened or harassed due to their race/ethnicity (WNC Health Network, 2021). The community was then asked "over your entire lifetime, how often have people criticized your accent or the way you speak?" Unfortunately, 40.1% of the population were often criticized for their accent or the way they speak.

## Community Safety

"Injuries through accidents or violence are the third leading cause of death in the United States, and the leading cause for those between the ages of one and 44. Accidents and violence affect health and quality of life in the short and long-term, for those both directly and indirectly

affected, and living in unsafe neighborhoods can impact health in a multitude of ways" (County Health Rankings, 2021). In 2017, there was a total of 329 crimes committed in Clay County shown on **Table 6.** However, these crimes are much lower than the Western North Carolina regional total and the North Carolina state total.  During the year of 2019 to 2020, Clay County has received 484 domestic abuse calls and 205 ended up being clients (North Carolina Department of Administration, 2021). As of now, there is no record of having any domestic abuse homicides in Clay County (NC state Bureau of Investigation, 2021).

**Table 6**. Community Safety

| County | Totals | Murder | Rape | Robbery | Aggravated Assault | Burglary | Larceny | Motor Vehicle Theft |
|---|---|---|---|---|---|---|---|---|
| Clay | 329 | 0 | 1 | 1 | 18 | 141 | 142 | 26 |
| WNC Regional Total | 18,808 | 25 | 153 | 323 | 1,257 | 5,153 | 10,632 | 1,265 |
| State Total | 302,141 | 637 | 2,035 | 9,453 | 25,742 | 66,467 | 181,951 | 15,856 |

North Carolina Department of Justice (2019).

### Housing and Transportation
"The housing options and transit systems that shape our communities'-built environments affect where we live and how we get from place to place. The choices we make about housing and transportation, and the opportunities underlying these choices, also affect our health" (County Health Rankings, 2021).

### Family & Social Support
"People with greater social support, less isolation, and greater interpersonal trust live longer and healthier lives than those who are socially isolated. Neighborhoods richer in social capital provide residents with greater access to support and resources than those with less social capital" (County Health Rankings, 2021).

# Chapter 4 – Health Data Findings Summary

## Mortality

**Table 7.** Mortality

| Cause of Death | Clay | | Comparison to WNC Regional Average Rate | | Comparison to NC Rate | |
|---|---|---|---|---|---|---|
| | # Deaths | Death Rate | Regional Rate | % Difference | NC Rate | % Difference |
| Acquired Immune Deficiency Syndrome | 0 | 0.0 | 0.9 | -100.0% | 1.8 | -100.0% |
| All Other Unintentional Injuries | 36 | 53.3 | 50.7 | 5.2% | 39.3 | 35.6% |
| Alzheimer's disease | 40 | 37.1 | 33.0 | 12.4% | 36.9 | 0.5% |
| **Cancer** | **158** | 145.8 | 157.3 | -7.3% | 158.0 | -7.7% |
| **Cerebrovascular Disease** | **54** | 48.9 | 39.6 | 23.6% | 42.7 | 14.5% |
| Chronic Liver Disease and Cirrhosis | 10 | 16.0 | 15.2 | 5.4% | 10.6 | 50.9% |
| **Chronic Lower Respiratory Diseases** | **51** | 46.2 | 53.5 | -13.6% | 44.0 | 5.0% |
| **Diabetes Mellitus** | **23** | 21.4 | 22.2 | -3.7% | 23.8 | -10.1% |
| **Diseases of Heart** | **163** | 157.7 | 164.0 | -3.8% | 157.3 | 0.3% |
| Homicide | 1 | 2.7 | 4.2 | -36.3% | 6.8 | -60.3% |
| **Nephritis, Nephrotic Syndrome, and Nephrosis** | **17** | 16.2 | 15.1 | 7.0% | 16.5 | -1.8% |
| **Pneumonia and Influenza** | **17** | 14.7 | 17.8 | -17.2% | 16.7 | -12.0% |
| Septicemia | 7 | 8.7 | 10.8 | -19.3% | 12.7 | -31.5% |
| Suicide | 7 | 13.4 | 19.8 | -32.2% | 13.4 | 0.0% |
| Unintentional Motor Vehicle Injuries | 13 | 20.6 | 16.1 | 28.3% | 14.7 | 40.1% |
| All Causes (some not listed) | 783 | 803.0 | 805.5 | -0.3% | 780.0 | 2.9% |

North Carolina State Center for Health Statistics. (2021)

The leading cause of death in Clay County continues to be diseases of the heart, cancer, and lung diseases during 2015-2019. With the high rates of death from chronic disease and acute respiratory infections, Clay County has an overall life expectancy of 76.5 years of age as shown above on **Table 7**. This is much younger than the Western Carolina Region and state levels. Unfortunately, as the cost of living continues to rise so does medical costs. In 2021, 22% of Clay County Residents from the age 18-64 years old lacked health insurance. According to WNC Health Network data, Clay County is the 2nd highest county in the state of North Carolina with residents that lack insurance (WNC health Network, 2021). Lacking health insurance can
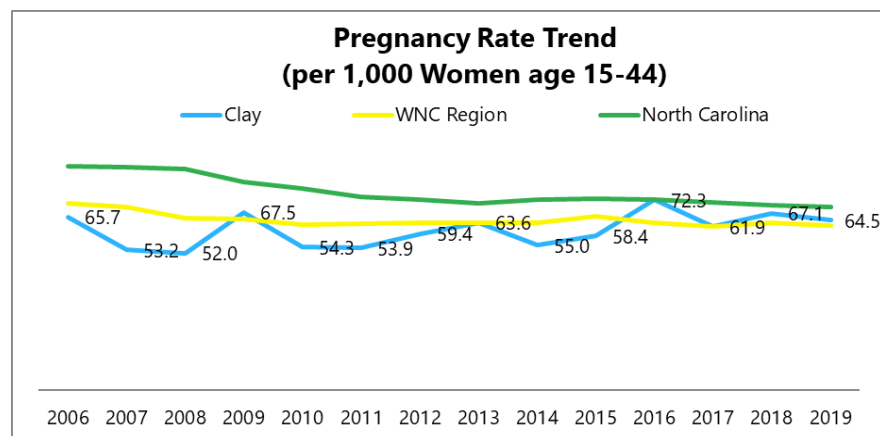
decrease the chances of an individual to seek out care or maintain an illness, which in return can cause a person to die prematurely.

## Health Status & Behaviors (Include morbidity and health behavior data)

According to the county health rankings, Clay County is ranked 54th out of 100, where 1 is the best. This is an improvement to the 2020 ranking of 67th. The county health ranking is based off two health outcomes that include length of life and quality of life (County Health Rankings, 2022).
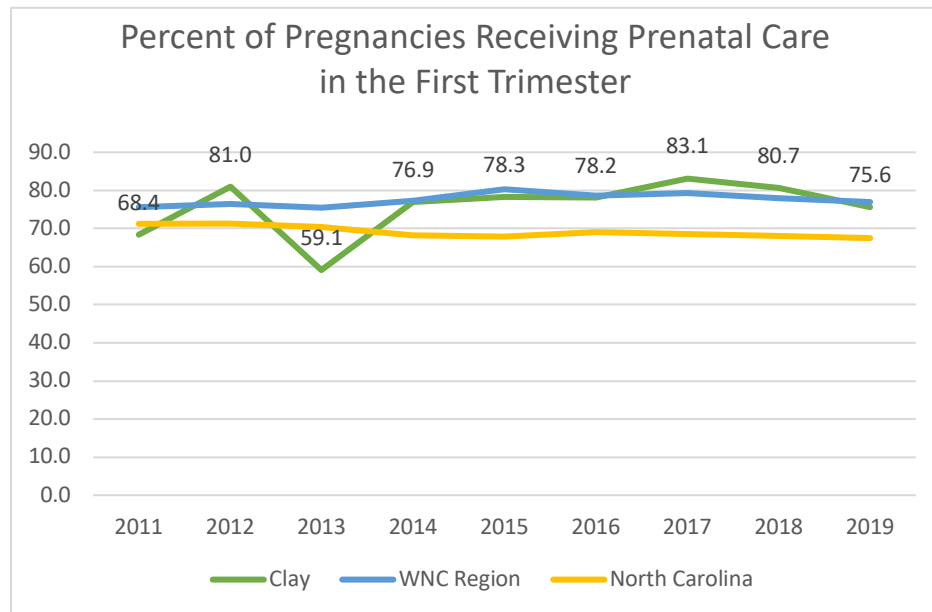
The **pregnancy rate trend** in Clay County in women ages 15-44 has been slowly decreasing since 2016, but remains higher than the Western Carolina Region. See **Graph 2** for pregnancy rate and **Graph 3** for prenatal care. Sadly, mothers that receive **prenatal care** within the first trimester has also decreased since 2016 (NC SCHS, 2021). The lack of prenatal care can often cause poor outcomes to the mother and infant. In 2015-2019, there were a total of 5 infant mortalities and 48 infants were born less than 37 weeks which is considered preterm (NC SCHS, 2021).

---

**Graph 2.** Pregnancy Rate Trend



**Pregnancy Rate Trend**
**(per 1,000 Women age 15-44)**

Clay — WNC Region — North Carolina

65.7    67.5    72.3    67.1    64.5
53.2  52.0    54.3  53.9  59.4  63.6  55.0  58.4    61.9

2006  2007  2008  2009  2010  2011  2012  2013  2014  2015  2016  2017  2018  2019

NC SCHS. (2021)

**Graph 3.** Prenatal care in the first trimester

**Percent of Pregnancies Receiving Prenatal Care in the First Trimester**



NC SCHS. (2021)

Prevalence of **heart disease** has decreased from 12.2% in 2018 to 10.5% in 2021. However, many individuals are still suffering from high blood pressure. In 2021, 49.6% of Clay County residents were dealing with high blood pressure (WNC Health Network (2021). People with high blood pressure, or hypertension, are more likely to have coronary heart disease, stroke, heart failure, and kidney disease. The desired goal on reducing adults with high blood pressure is 27.7% (Healthy People 2030, 2022). Due to Clay County's increase, we must work harder on reducing the amount of people suffering from hypertension by 21.9%.

Though **diabetes** is not in the top three leading causes of death, this illness is still something that we see quite often in Clay County. Since 2015, there has been a 5% incline in individuals with diabetes. Clay County has surpassed the region and state with 20.6% of individuals dealing with diabetes. The lack of physical activity and healthy nutritional habits is not only leading to diabetes, but to an increase in obesity trends. The obesity trends for Clay County have been a steady upward incline from 32.3% in 2018 to 33.1% in 2021 (WNC Health Network, 2021).

**Cancer** is the second leading cause of death for Clay County and affects more people who are 40 years of age and older. Clay County has a higher mortality rate of lung/bronchus cancer (36.8) followed by prostate (21.8) (NC SCHS, 2021). Breast and colorectal cancer rates have decreased steadily. Prostate cancer rates have slowly been decreasing but continue to surpass the regional and state rates as shown on **Table 8**.
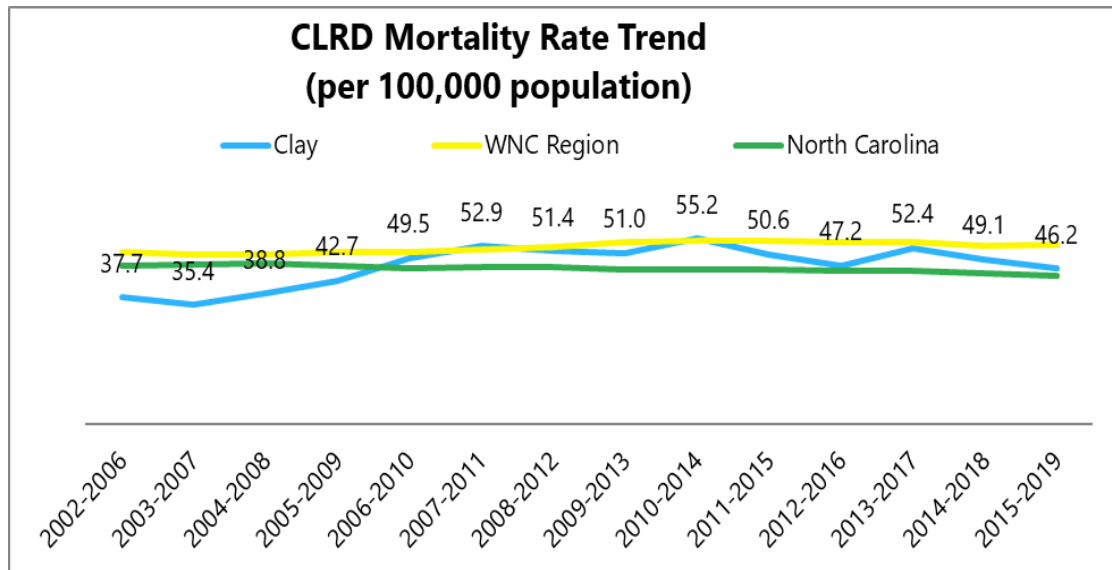
**Table 8.** Cancer Rates

| County | Colon/Rectum | Lung/Bronchus | Female Breast | Prostate | All Cancers |
|---|---|---|---|---|---|
| | **Rate** | **Rate** | **Rate** | **Rate** | **Rate** |
| Clay | 13.7 | 36.8 | 17.9 | 21.8 | 145.8 |
| WNC Regional Arithmetic Mean | 15.1 | 42.8 | 20.8 | 17.5 | 157.3 |
| State Total | 13.3 | 42.0 | 20.6 | 19.5 | 158.0 |

*Age-adjusted rates per 100,000 population, single 5-year aggregate, 2015-2019 (NC SCHS, 2021).*

**Chronic Lower Respiratory Disease** is Clay County's third leading cause of death. Chronic Lower Respiratory Diseases includes emphysema, chronic obstructive pulmonary disease, and chronic bronchitis. In 2015-2019, Clay County had 46.2% mortality rate for Chronic Lower Respiratory Disease. Even though the mortality rate has come down from previous years, Clay County's mortality rate still passes that of the state but remains below the Western North Carolina Region as shown on **Graph 4** (NC SCHS, 2020). In 2021, 20% of Clay County's population currently smoke cigarettes and 4.8% use electronic vaping products (WNC Health Network, 2021). The long-term use of cigarettes and electronic vaping cigarettes can often lead to Chronic Lower Respiratory Diseases making prevention key in resolving this current health issue.

**Graph 4.** Chronic Lower Respiratory Disease Mortality Rate

## CLRD Mortality Rate Trend
### (per 100,000 population)

——Clay ——WNC Region ——North Carolina

37.7   35.4   38.8   42.7   49.5   52.9   51.4   51.0   55.2   50.6   47.2   52.4   49.1   46.2

2002-2006   2003-2007   2004-2008   2005-2009   2006-2010   2007-2011   2008-2012   2009-2013   2010-2014   2011-2015   2012-2016   2013-2017   2014-2018   2015-2019

*Age-adjusted rates per 100,000 population, single 5-year aggregate, 2015-2019 (NC SCHS, 2021).*

In terms of **dental care**, Clay County has one dental office that sees Medicaid patients. The Clay County Health Department Dental Clinic has been a big benefit to the community of Clay County. In 2020, the Dental Clinic performed 7,628 procedures for Medicaid patients and several more for other clients. Dental care is an important factor when it comes to an individual's overall health. Knowing the impact that early intervention has on healthcare, the Dental Clinic decided to provide the youth of Clay County with dental cleanings by having a mobile unit go into the Clay County Schools and day care centers in 2019. The hope for the future is to continue to provide this service once again when funds are available.

### Clinical Care & Access

Clay County in 2019, per a 10,000-population ratio, had less physicians, dentists, primary care physicians, registered nurses, and physicians' assistants then both the region and the state (Cecil G. Sheps Center for Health Services Research, 2021). Clay County has seen an influx of nurse practitioners within the county to surpass both the region and the state. It was found, depending on the health care profession, that 10% of the professionals are over the age of 65 and still actively practicing. In 2018, Clay County's population was surveyed to determine if they had a place to go when they are sick or have questions about their health. 82.5% agreed that they have a specific source for ongoing care. Unfortunately, 14.3% of Clay County's population answered that in the past 12 months that they were unable to get needed medical care. Since 2018, Clay County has had the availability of an urgent care facility within its region and has seen that 14.3% decrease to 6.5% in the year of 2021.

**Health Inequities**

According to World Health Organization (WHO), health inequalities are systematic differences in the health status of different population groups. These inequalities can create certain groups to experience worse health and increased difficulty accessing healthcare (World Health Organization, 2018). Unfortunately, Clay County falls within those categories of health inequities. Clay County has high rates of adults and children who are considered low-income and who are uninsured or underinsured within the county. Nearly a quarter (23.7%) of the population in Clay County is eligible for Medicaid and 21.7% had no insurance (NC Department of Health and Human Services, 2021). Considering these variables, these individuals are limited to which providers they can see and afford. This means that specialty doctors are rarely used for reoccurring medical conditions due to high cost. Not only is being insured an issue, but Clay County has seen an influx of non-English speakers which can leave citizens frustrated when trying to receive services due to language and other cultural barriers.

# Chapter 5 – Physical Environment

The physical environment is an important part of our everyday lives. People interact with their physical environment through the air we breathe, water we drink, houses we live in, and the transportation we use. Having a poor physical environment can affect our ability to live a long and healthy life (County Health Rankings, 2021).

## Air Quality

"Clean air and safe water are prerequisites for health. Poor air or water quality can be particularly detrimental to vulnerable populations such as the very young, the elderly, and those with chronic health conditions." (County Health Rankings, 2021). To determine air pollutants, many counties have an air quality monitoring station to help provide this information. Due to Clay County's small population size, an air quality monitoring station is not set up.  Even though, there is no way to determine unhealthy days, Clay County's neighboring counties, Graham and Macon, have reported no unhealthy days for the general population (US Environmental Protection Agency, 2020).

According to County Health Ranking, particle pollution is the term used to describe liquid and solid particles that are found in the air. Any fine particulate matter that is 2.5 micrometers in diameter (PM2) or less is considered more dangerous due to its ability to be lodged deep within the lungs. Fine particulate matter can be emitted from wood smoke, motor vehicle emission, manufacturing plant emissions, and any other combustion process. Clay County is considered as having more fine particulate matter (9.2) than that of top U.S performers (5.2) and the state of North Carolina (8.5) (County Health Rankings, 2021).

Toxic Release Inventory (TRI) tracks the management of certain toxic chemicals that may pose a risk to human health and the environment. U.S facilities in different industries are required to report how much of each chemical is released into the environment. In terms of release, it means that the chemical was emitted in the air or water or placed in some type of land disposal. Clay County has only one facility that is a primary releasing facility. In 2019, a total on and off-site disposal of chemicals were 2 pounds. With low quantities of waste, the county is ranked 80th out of the 85 reporting counties (US EPA TRI Explorer, 2021).

Radon is an underrated health issue that Clay County and the rest of the Western North Carolina region need to be concerned about. Radon is an odorless, colorless, tasteless gas that occurs naturally with the breakdown of Uranium in granite rock. It is a known cancer-causing agent and is the second-leading cause of lung cancer after active smoking.  Radon is responsible for 21,000

lung cancer death per year in the United States. Clay County has been zoned in Zone 2 by the Environmental Protection Agency for a county that is predicted to average indoor radon screening levels from 2 to 4 pCi/L compared to Zone 1 that has levels greater than 4 pCi/L and need radon mitigation as shown in **Chart 1** (US Environmental Protection Agency, 2022).

**Chart 1.** North Carolina Map Radon Zones
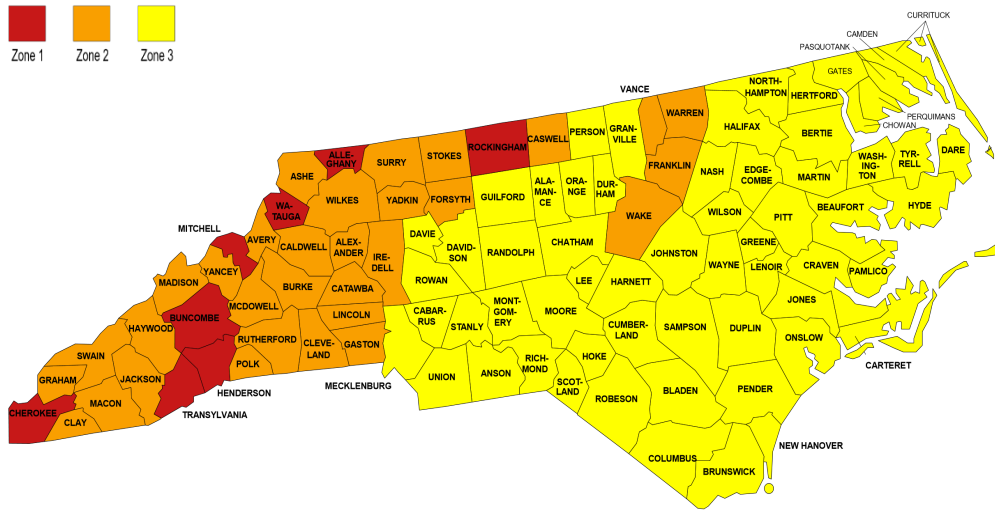


US Environmental Protection Agency (2019)

## Water Quality

Water quality is an essential component that affects the health of people, animals and plants that utilize the water. Poor water quality has been linked to disease outbreaks and poor overall health. The water quality management of private wells and community water systems are examined through Clay County Health Department. The community water systems (CWS) in Clay County serve an estimated 17.7% of the population. The fraction of the Clay County population served by a community water system is 68.3% lower than the average for the Western North Carolina region and North Carolina (US EPA, 2021).

The Clean Water Act was established to help regulate discharges of pollutants into the water and regulating quality standards for surface waters. This means that Environmental Protection Agency implemented pollution control

programs by setting wastewater standards for industries (US Environmental Protection Agency, 2021).  By having a safety water plan like the National Pollutant Discharge Elimination System (NPDES), it can benefit the community by making sure they remain healthy. Clay County has two facilities that are monitored and permitted by the NPDES as of July 2021.  (North Carolina Division of Water Resources, 2021).

## Access to Healthy Food & Places

Food security, as defined by the United Nations' Committee on World Food Security, exists when all people always have physical, social, and economic access to sufficient, safe, and nutritious food to meet their dietary needs and food preferences for an active and healthy life. Clay County is a very food-conscious county that is concerned about the community going hungry. Matt's Ministry and the Clay County Food Pantry serve the community to ensure there is ample food for those in need. Matt's Ministry provides food to in-need citizens of Clay County with special emphasis on at risk children and seniors through food boxes distributed within the schools and the Saturday food pantry. Even though Clay County has access to different food pantries, we still struggle with the community attaining 5+ servings of fruits and vegetables per day. In 2021, 3.7% of Clay County residents achieved the daily recommended servings of fruit and vegetables which was an increase from 2.2% in 2018 (WNC Health Network, 2021). Clay County has worked hard to improve this, including making this a priority for previous Community Health Assessments.

**Sources of Physical Activity:**
- Affordable Gym access at the Recreation Department
- Jack Rabbit Walking and Mountain Bike Trails
- Multiple Hiking trails: Appalachian, Chunky Gal Trail Head, and Rim Trail at Fires Creek
- Multi-use walking paths and ball fields at Park and Recreation
- The Quanassee Path in downtown Hayesville
- Walking paths between Chatuge Dam and the Recreation Park
- 9 Hole Disk Golf at Hinton Center

**Sources of Healthy Foods, Access to Healthier Food Options:**
- Brasstown Farmers Market
- Community Garden
- Evening Harvest
- Ingles Super Market
- Misty's Produce
- Mountain Valley Farmers Market
- SMM Farms Produce Stand
- Warne KWIK Stop-Healthy Corner Store

**Sources of Food for those in Need:**
- Clay County Food Pantry, Inc
- Hayesville First Freewill Baptist Church
- Matt's Ministry/ Ledford's Chapel UMC
- Hayesville First UMC- Free Wednesday night meal

## Chapter 6- Health Resources

*"Overall health and desire to achieve better health"- Other Health Provider (Clay County)*

## Health Resources

### Process

The review of available health resources as conducted through a review of Clay County Resource Guide published through the Clay County Health Department. This resource has been shared with community leaders to ensure that we can maintain the needed updates within the county. This tool is assessable via web 24/7.



### Findings

Clay County has basic services available to the public, some of which are underutilized. Through the health department, several programs are available on a sliding fee if needed. Clay County has several primary care providers through the Clay County Health Department, Union General/Chatuge, and Erlanger hospital. Parks and Recreation within Clay County offers a state-of-the-art workout facility at a very cost-effective price that all residents may enjoy. Through this department there are also plenty of walking paths, mountain biking, and campgrounds that are accessible to the public. Clay County Food Pantry and Matt's Ministry offer needed food resources to those within the county that are considered food scarce due to income restraints.

### Resource Gaps

Based on local review of available resources and collaborative discussions around general availability of services (or those specifically related to prioritized needs), it was determined that Clay County is lacking specialty provider facilities, for example: mental health, cardiology, pulmonary, pediatric care, etc. The lack of specialty clinics in our area affects two of our top priorities within the CHA cycle: Chronic Disease Prevention/Control, and Prevention/Screening for Cancer. The lack of these specialty facilities in our area causes community members to seek care that is 30 minutes to up to 2 hours away. This means that clients will spend money and time in which they might not have to give to manage their chronic diseases. Findings also show that there is a lack of available places for students to go when they are not in school or participating in sports.

# Chapter 7 – Identification of Health Priorities

## Health Priority Identification

### Process
Every three years we pause our work to improve community health so that we may step back and take a fresh look at all the current data from our county that reflects the health of our community. We then use this information to help us assess how well we're doing, and what actions we need to take moving forward.

Beginning in November 2021, our team spent time understanding the data and uncovering what issues were affecting the most people in our community. We also interviewed community leaders to find out what they're most concerned about. To identify the significant health issues in our community, our key partners (see a full list in the Executive Summary) reviewed data and discussed the facts and circumstances of our community.

We used the following criteria to identify significant health issues:
- Data reflects a concerning trend related to size or severity
- Significant disparities exist
- Issue surfaced as high community concern
- County data deviates notably from the region, state or benchmark

Once our team made sense of the data, we presented key health issues to a wide range of partners and community members. The participants used the information we presented to score each issue, and then vote for their top areas of concern. They considered the severity of the issue, the relevancy of the issue, and the feasibility in improving the issue.

This process, often called health issue prioritization, is an opportunity for various community stakeholders, such as the hospital, health department, and partners to agree on which health issues and results we can all contribute to, which increases the likelihood that we'll make a difference in the lives of people in our community.

### Identified Issues
During the above process, the CHA Team identified the following health issues or indicators:

- **Chronic Disease Prevention and Control:** Illnesses that can be controlled or prevented through lifestyle changes.

- **Cancer (All Forms):** Clay County has high rates of cancer and is the second leading cause of death.

- **Access to Health Care:** Lack of specialty care within the county.

- **Physical Activity and Nutrition:** There are high rates of obesity within the county due to the lack of physical activity and healthy nutritional diet.

- **Prevention and Management Acute Respiratory infections:** Mortality continues to climb with acute respiratory infections including the recent pandemic at hand.

- **Access to Mental Healthcare:** Resources for adults and children to prevent and provide mental health and wellbeing.

- **Substance use/abuse/misuse:** The misuse of substance either prescribed or obtained illegally.

## Priority Health Issue Identification

### Process
During our group process, the following criteria were applied to the issues listed above to select priority health issues of focus for our community over the next three years:

- Criteria 1 – Relevant – How important is this issue? *(Size of the problem; Severity of problem; Focus on equity; Aligned with HNC 2030; Urgency to solve problem; Linked to other important issues)*
- Criteria 2 – Impactful – What will we get out of addressing this issue? *(Availability of solutions/proven strategies; Builds on or enhances current work; Significant consequences of not addressing issue now)*
- Criteria 3 – Feasible – Can we adequately address this issue? *(Availability of resources (staff, community partners, time, money, equipment) to address the issue; Political capacity/will; Community/social acceptability; Appropriate socio-culturally; Can identify easy, short-term wins)*

Participants used a modified Hanlon method to rate the priorities using the criteria listed above. Then Clay County Health Department and CHA team made a group decision on the top three priority health issues that needed to be addressed.

### 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 Prevention and Control- The leading causes of death in Clay County are considered chronic illnesses.
- Prevention and Management of Acute Respiratory Infections- The mortality rate from respiratory infections continues to rise over the years and now that we are faced with a pandemic, it will contribute to that growing number.
-  Prevention and Screening of Cancer- The needed resources are not available to adequately serve our community and Cancer continues to be the second leading cause of death in Clay County.

# Chronic Disease Prevention and Control

Chronic Diseases were discovered to be an issue of high concern in Clay County's secondary data and key informant interviews. Chronic illness is defined as an illness or disease that develops slowly and persists over a period of time. According to Center for Disease Control, over half of the deaths caused by chronic diseases may be due to preventable causes (CDC, 2021). We decided to choose this priority because we know how important it is to limit the burden that chronic illness has on not only the individual, but the community as a whole.

## WHAT THE NUMBERS SAY:

### No Leisure-Time Physical Activity in the Past Month

■ 2018   ■ 2021

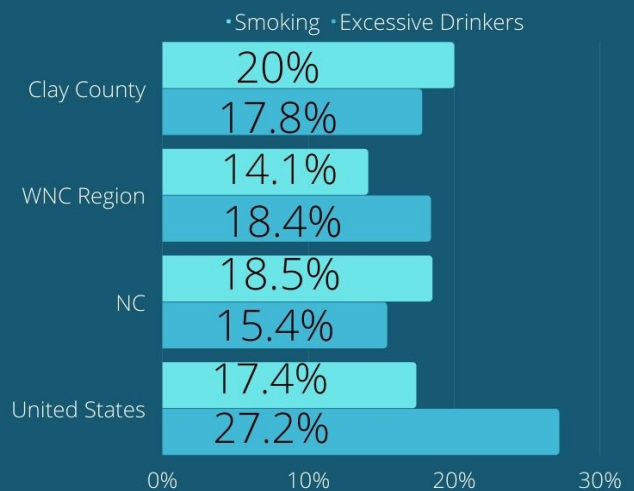| Location | 2018 | 2021 |
|---|---|---|
| Clay County | 28.3% | 25.3% |
| WNC Region | 25% | 22% |
| NC | 23.3% | 26.3% |
| United States | 26.2% | 31.3% |

WNC (2021)

Many Chronic Diseases are caused by high–risk behaviors: Tobacco use, poor nutrition, lack of physical activity, and excessive alcohol use. As seen in the graphs above, you can see that Clay County has had a decrease in individuals who were unable to participate in physical activity. Because physical activity is important in maintaining overall health, it is best that this trend continue with more individuals participating in physical activity.

Clay County still has a high population rate of individuals who are considered overweight or obese. Most often the contributing factor to obesity is poor nutrition. Having a healthy diet is crucial for the growth and development of children which follows them to adulthood. Individual choices play an important role in the overall well–being of a person, but the accessibility and affordability can be a component in those decisions (CDC, 2022).

### Clay County Residents that are overweight or obese
WNC (2021)

75%

### Percentage of individuals participating in High Risk Lifestyle

• Smoking   • Excessive Drinkers

| Location | Smoking | Excessive Drinkers |
|---|---|---|
| Clay County | 20% | 17.8% |
| WNC Region | 14.1% | 18.4% |
| NC | 18.5% | 15.4% |
| United States | 17.4% | 27.2% |

WNC (2021)

As shown above, Clay County continues to have individuals participate in high–risk behaviors which can lead to chronic illnesses. Unfortunately, smoking continues to surpass that of the WNC Region and the state. While excessive drinking is lower than the WNC region but is much higher than the state.
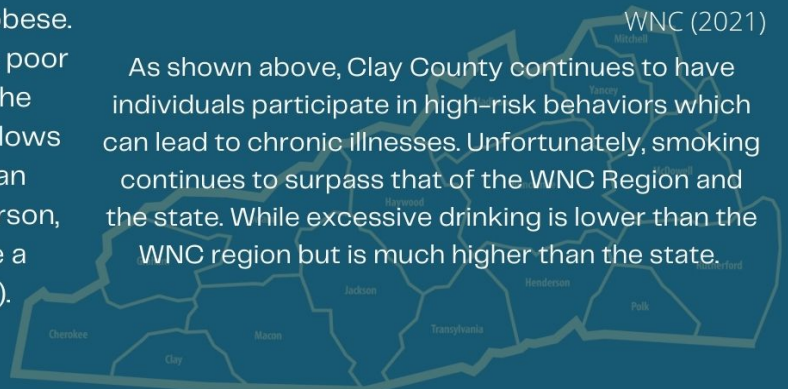
# Chronic Disease Prevention and Control

### WHO'S IMPACTED?

Chronic Diseases impacts the lives of the older population more than the younger. Not only is age a factor but those individuals who live in low–income households may have a hard time managing their chronic disease.

### WHAT'S HURTING?

- Clay County is a rural area that does not have any providers that specialize in the treatment of chronic diseases. Having the lack of specialists in the area limits the community to life changing resources.

### CURRENT ACTION

- Clay County was recently able to establish another urgent care/ primary care provider within the area. By having more providers in the area, people are able to be seen sooner than later.
- Clay County Health Department offers a program that will help assist clients with their medications that otherwise would have been too expensive.
- Diabetes self-management education and lifestyle education to prevent/control chronic diseases is offered at Clay County Health Department.
- Healthy Communities program is aimed to help reduce the burden of chronic disease in North Carolina by working with the Health Department to put these plans into action.

### WHAT'S HELPING?

We have noticed that linking public health services to individuals such as NC Quitline and Medication Assistance program can be very beneficial to the overall health of the person. Education about health along with the right resources can be very impactful in improving the lives of others.

### Consequences

More people die each year from chronic diseases than anything else in the United States. The economic toll that heart disease and stroke have on our healthcare system is $216 billion per year and diabetes is $327 billion a year. Chronic diseases have significant health and economic costs in the United States. Preventing chronic disease or managing symptoms when prevention is not possible, can reduce these negative outcomes from occurring (Center for Disease Control, 2022).

# Prevention and Management of Acute Respiratory Infections

Acute Respiratory Infections involves a contagious infection that starts in the upper respiratory tract and can move to the lower respiratory system. Acute respiratory infections can be caused by a virus or bacteria. Some individuals may experience fever, fatigue, headache, wheezing, congestion, cough, and a runny nose (Healthline, 2021). Respiratory infections can often turn fatal, especially in individuals who are immune compromised. Influenza and Pneumonia are the two types of respiratory infections that can be detrimental to your health if care is not sought out in time. Over the last two years, we have faced a new respiratory infection, COVID-19, that has caused more deaths than pneumonia and influenza combined in the last four years.
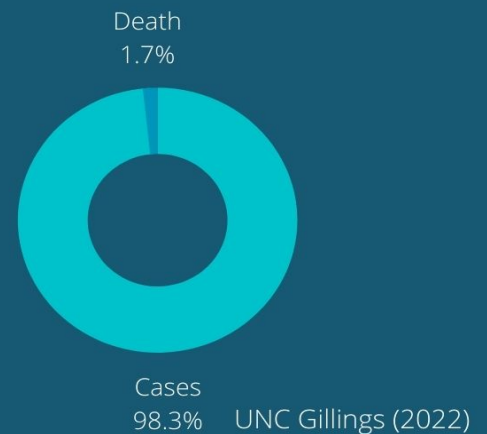
## WHAT THE NUMBERS SAY:
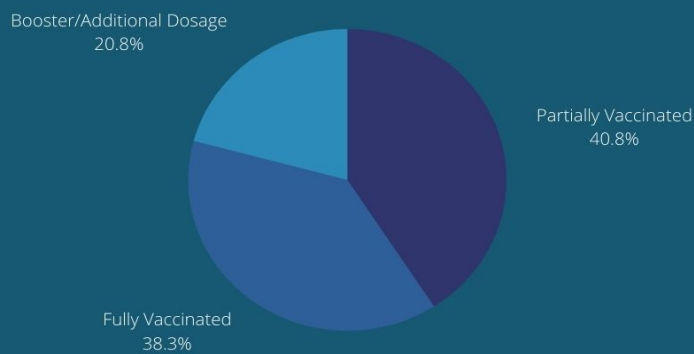
### Pneumonia and Influenza Mortality (2015-2019)

NC State
33.9%

Clay County
29.9%

WNC Regional (Arithmetic Mean)
36.2%
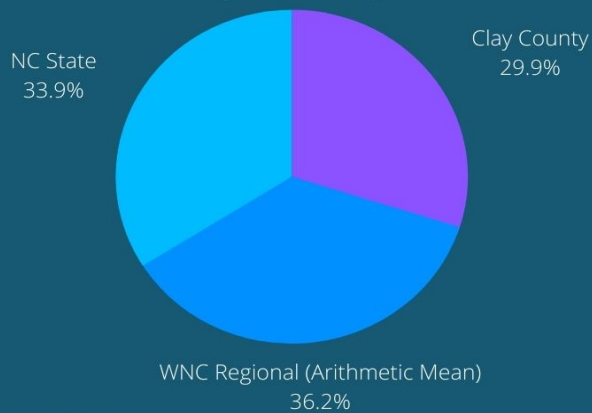
NC SCHS (2021)

### COVID-19 in Clay County (2020-2022)

Death
1.7%

Cases
98.3%     UNC Gillings (2022)

### Covid-19 Vaccination Status for Clay County

Booster/Additional Dosage
20.8%

Partially Vaccinated
40.8%

Fully Vaccinated
38.3%

NCDHHS (2022)

Clay County has seen an overwhelming number of individuals who have developed COVID-19 in the last few years. As the numbers continue to remain high, the urgency to get individuals vaccinated becomes a priority. As shown in the graph to the left, 38.3% are fully vaccinated whereas only 20.8% are boosted. Recent data shows that COVID-19 vaccines become less effective at preventing infection over time. Therefore, it is recommended for a person to receive a booster. The vaccine has shown it's effectiveness in reducing the risk of hospitalizations and even death (CDC,2022). Clay County has recently introduced Monoclonal Antibodies to help fight off the COVID-19 infection once it has entered the body. We have given over 300 Monoclonal Antibody treatments which has been very successful in battling the COVID-19 virus. Ongoing treatment plans are still taking place at Clay County Health Department to help the citizens in our community.
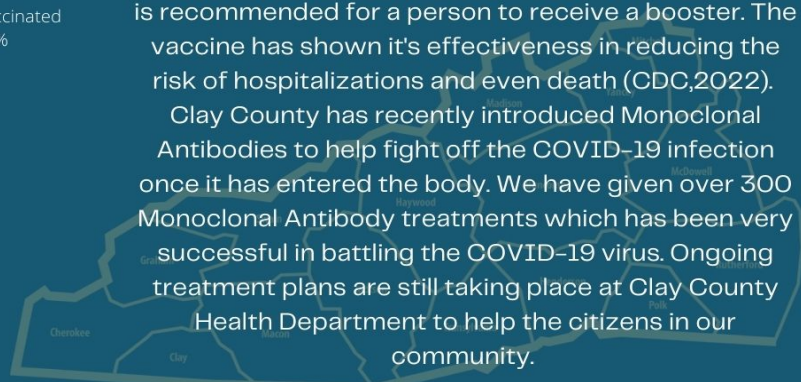
# Prevention and Management of Acute Respiratory Infections

## WHO'S IMPACTED?

Acute respiratory infections can impact the elderly and the very young along with individuals who are immune compromised.
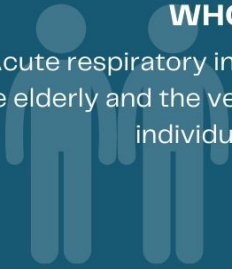
## WHAT'S HELPING?

The promotion of good hygiene, vaccinations and early interventions are key when it comes to respiratory infections.

## WHAT'S HURTING?

Vaccination hesitancy and the delay in treatment poses risk for a much serious illness like pneumonia.

## Consequences

Some individuals are able to fight off a respiratory infection on their own. However, if the infection seems to get worse and the client begins to have a shortness of breath, it is a possibility that pneumonia has developed. Pneumonia requires the patient to receive treatment. The lack of treatment can cause acute respiratory distress and possible death.
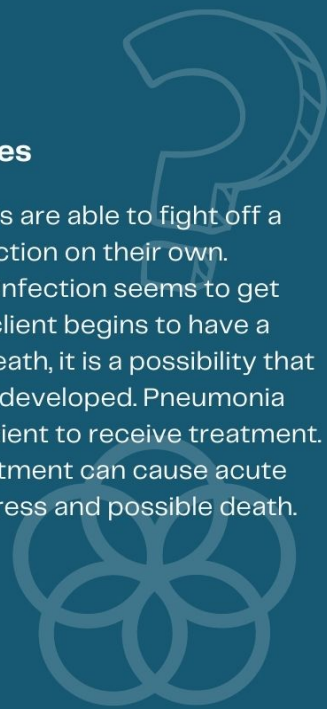
## CURRENT ACTION

- Vaccinations are offered at all the surrounding pharmacies, health department, and primary care physicians.
- Monoclonal Antibody treatment for COVID-19 are being offered at Clay County Health Department.
- Providing testing for influenze and COVID-19 at primary care offices and Clay County Health Department.

# Prevention and Screening of Cancer

Cancer is the second leading cause of death in Clay County and accounts for nearly 10 million death in the United States in 2020. Cancer is the transformation of normal cells into tumor cells. The most common cancers are breast, lung, colon and rectum, and prostate. Around one third of deaths from cancer are due to tobacco use, obesity, alcohol consumption, low fruit and vegetable intake, and lack of physical activity. However, cancer can be caused from infections like human papillomavirus and hepatitis. If cancer is detected early and treated effectively, it can be cured (WHO, 2022).
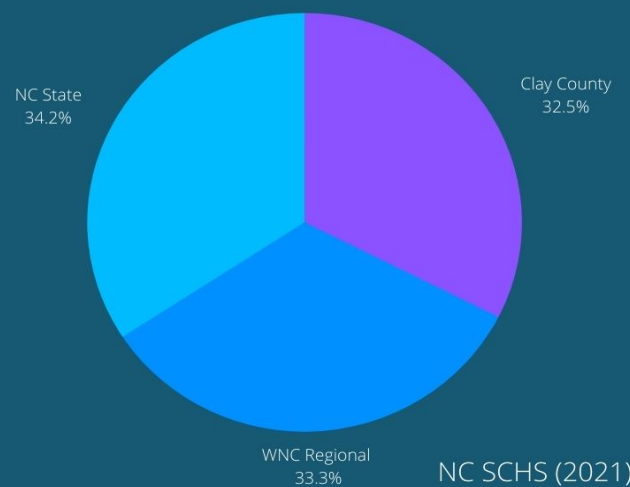
## WHAT THE NUMBERS SAY:

### Cancer Rate in Clay County (2015-2019)



- Lung 18.9%
- Female Breast 4.6%
- Prostate 3.8%
- Colon/Rectum 6.3%
- All Cancers 66.4%
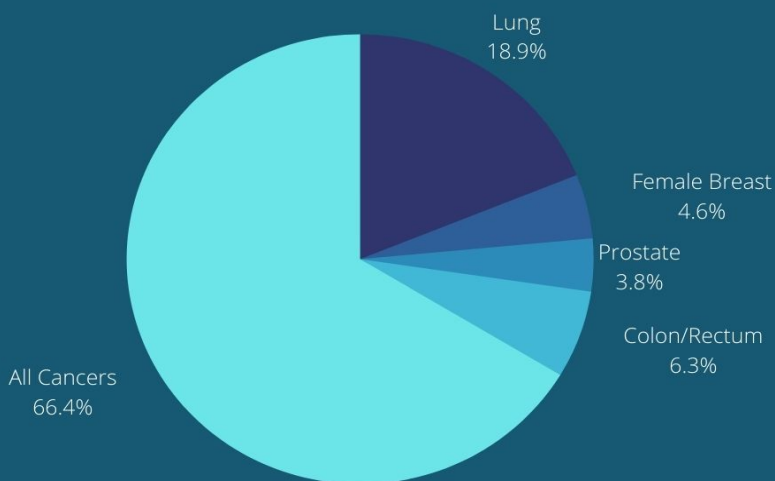
NC SCHS (2021)

### Total Cancer Rate (2015-2019)



- NC State 34.2%
- Clay County 32.5%
- WNC Regional 33.3%

NC SCHS (2021)

As you can see above, Clay County has a high rate of lung cancer. We believe that the majority of this stems from the number of individuals who smoke. In 2021, 20% of the population currently smoke cigarettes and 4.8% smoked electronic cigarettes. The use of tobacco remains the root cause of cancer, however, high Radon levels may also contribute to the cause. The next highest rate is colon and rectum cancer, followed by breast cancer and prostate. Routine physical exams are beneficial in getting screened for these types of cancer. Cancer mortality is reduced when cases are detected and treated early (WHO, 2022). Over the past few years, Cancer continues to climb not only in Clay County but in the whole state of North Carolina.
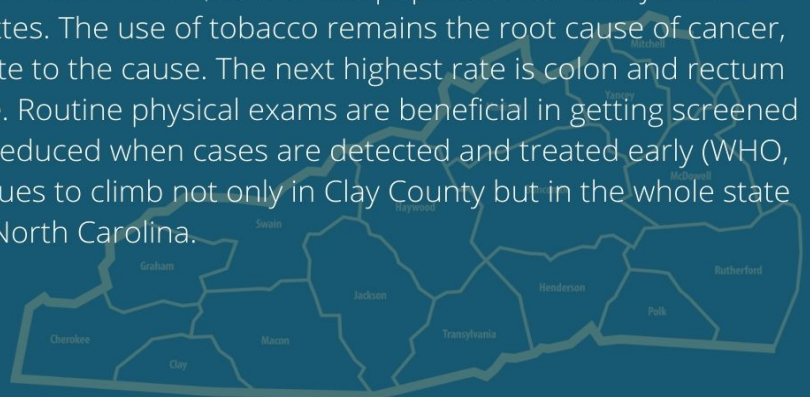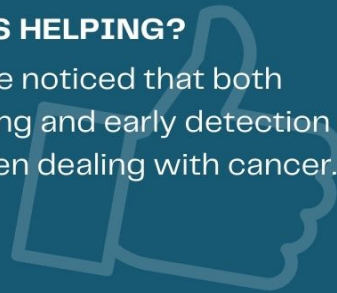
# Prevention and Screening of Cancer

### WHO'S IMPACTED?

Cancer can impact anybody any time of their life. However, the most heavily impacted is the elderly.

### WHAT'S HELPING?

We have noticed that both screening and early detection is key when dealing with cancer.

### WHAT'S HURTING?

The lack of funding to help patients receive screening methods makes discovering cancer much harder.

### Consequences

Unfortunately, the prognosis of any cancer that is untreated can become fatal.

### CURRENT ACTION

- Clay County Health Department offers a program to help identify breast and cervical cancer. This program provides funds to undergo testing.
- Smoking cessation program is offered to help clients stop smoking.
- Prevention methods including education and vaccination against HPV and Hepatitis
- Physical Exams with the client's primary provider or Clay County Health Department to help keep routine pap smears, prostate exams, breast exams and colorectal examinations if needed.

# Chapter 8 - Next Steps

**"Build a healthier community one step at a time."- Community Leader.**

## Collaborative Planning

Collaborative 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.

## Sharing Findings

Clay County Health Department will disseminate the results of this CHA cycle to all stakeholders, community partners, and the general population. Sharing the results will occur through paper copies and online access.

## Where to Access this Report

Clay County's Community Health Assessment will be disseminated using in-person and online methods.

- WNC Health Network website
- Clay County Health Department Lobby
- Clay County Health Department Website www.clayhdnc.us
- Moss Memorial Library
- Email Dissemination to partners and stakeholders.

## For More Information and to Get Involved

The community stakeholders and partners were instrumental in the process of collecting and analyzing the community survey data. If you would like to become more involved in the process of bettering the health of our community, please contact the health department or visit our website at www.clayhdnc.us.

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# PHOTOGRAPHY CREDITS

All WNC landscape photos used in the cover page and headers courtesy of [Ecocline Photography](#) and [Flying Horse Creative](#).

All photos used throughout chapters are courtesy of Canva Designs.

Clay County Map used in geographic section, available from Clay County Economic Development Strategy.

North Carolina Map Radon Zones, available at United States Environmental Protection Agency.

WNC CHA Cycle Graphic: Co-designed by WNC Healthy Impact, graphic design by Jessicca Griffin, 2021

# APPENDICES

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

**Appendix B – Data**
- Data Presentation Slides (PDF of slides)

**Appendix C – County Maps**

**Appendix D – Key-Informant Survey Findings**

# APPENDIX A - DATA COLLECTION METHODS & LIMITATIONS

## Secondary Data Methodology

To learn about the specific factors affecting the health and quality of life of residents of WNC, the WNC Healthy Impact data workgroup and data 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; NC Department of Health and Human Services; NC Office of State Budget and Management; NC Department of Commerce; UNC-CH Jordan Institute for Families; NC Department of Public Instruction; NC Department of Justice; NC Division of Health Benefits; NC Department of Transportation; and the Cecil B. Sheps Center for Health Services Research.  The WNC Healthy Impact data consultant team made every effort to obtain the most current data available at the time the WNC Healthy Impact Data Workbook was prepared.  It is not possible to continually update the data past a certain date; in most cases that end-point is September 2021. Secondary data is updated every summer in between Community Health Assessment (CHA) years.

The principal source of secondary health data for the WNC Healthy Impact Data Workbook is 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; the Centers for Disease Control and Prevention; National Center for Health Statistics; NC DPH Nutrition Services Branch; and NC DETECT.

Environmental data were gathered from sources including: US Environmental Protection Agency; US Department of Agriculture; and NC Department of Environment and Natural Resources.

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.

The WNC Healthy Impact data workbook contains only secondary data that are: (1) retrieved directly from sources in the public domain or by special request; and (2) are available for all 16 counties in the WNC Healthy Impact region.  All secondary data included in the workbook are the most current available, but in some cases may be several years old.  Names of organizations, facilities, and geographic places presented in the tables and graphs 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.

## Gaps in Available Information

Some of the data that is used in this report may have inherent limitations, due to the sample size, geographic focus, or the information is older than we would like to use but it is the most up-to-date information available.

## WNC Healthy Impact Community Health Survey (Primary Data)

### Survey Methodology

The 2021 WNC Healthy Impact Community Health Survey was conducted from March to June 2021. The purpose of the survey was to collect primary data to supplement the secondary core dataset, and allow individual counties in the region to collect data on specific issues of concern. The survey was conducted throughout the entire WNC Healthy Impact region, which includes the following 16 counties: Buncombe, Cherokee, Clay, Graham, Haywood, Henderson, Jackson, Macon, Madison, McDowell, Mitchell, Polk, Rutherford, Swain, Transylvania and Yancey.

Professional Research Consultants, Inc. (PRC) designed and implemented the mixed-mode survey methodology, which included a combination of telephone (both landline and cell phone) interviews, online survey, as well as a community outreach component promoted by WNC Health Network and its local partners through social media posting and other communications. The survey methodology was designed to achieve a representative sample of the regional population that would allow for stratification by certain demographic characteristics, while also maximizing data collection timeliness and efficiency. Survey sampling and implementation methodology is described in greater detail below.

#### *Survey Instrument*

The survey instrument was developed by WNC Healthy Impact's data workgroup, consulting team, and local partners, with assistance from PRC.  Many of the questions were derived from the CDC Behavioral Risk Factor Surveillance System (BRFSS) and other validated public health surveys. Other questions were developed specifically by WNC Healthy Impact, with input from regional and local partners, 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 only of their county's residents.

The three additional county questions included in the 2021 survey were:

1) Which one of the following support services do you MOST need, but are not currently getting?

2) Was there a time during the past 12 months when you needed dental care but did not get it?

3) Do you currently have access to the internet for PERSONAL use, either at home, work or school?

*Sampling Approach & Design*
PRC designed the survey methodology to minimize sample bias and maximize representativeness by using best practice random-selection sampling techniques. They also used specific data analysis techniques, including poststratification, to further decrease sample bias and account for underrepresented groups or nonresponses in the population. Poststratification involves selecting demographic variables of interest within the population (gender, age, race, ethnicity, and poverty status) and then applying "weights" to the data to produce a sample which more closely matches the actual regional population for these characteristics.  This technique preserves the integrity of each individual's responses while improving overall representativeness.

In order to determine WNC regional estimates, county responses were weighted in proportion to the actual population distribution to appropriately represent Western North Carolina as a whole.  Since the sample design and quality control procedures used in the data collection ensure that the sample is representative, the findings may be generalized to the region with a high degree of confidence.

**Survey Administration**
PRC piloted the survey through 30 interviews across the region and consulted with WNC Health Network staff to resolve substantive issues before full implementation.  PRC used trained, live interviewers and an automated computer-aided telephone interviewing system to administer the survey region-wide. Survey interviews were conducted primarily during evening and weekend hours, with some daytime weekday attempts.  Interviewers made up to five call attempts per telephone number. Interviews were conducted in either English or Spanish, as preferred by respondents. The final sample included 56 (56.4) percent cell phone-based survey respondents and 44 (43.6) percent landline-based survey respondents.  Including cell phone numbers in the sampling algorithm allowed better representation of demographic segments that might otherwise be under sampled in a landline-only model.

PRC worked with a third-party provider to identify and invite potential respondents for an online survey for a small proportion (3.5%) of the sample population. The online survey was identical to the telephone survey instrument and allowed better sampling of younger and more urban demographic segments.

PRC also created a link to an online version of the survey, and WNC Health Network and its local partners promoted this online survey link throughout the various communities in order to drive additional participation and bolster overall samples. This yielded an additional 1,717 surveys, and locally an additional 151.

**About the Clay County Sample**

**Size**: The total regional sample size was 4,861 individuals age 18 and older, with 151 from our county.  PRC conducted all analysis of the final, raw dataset.

**Sampling Error**: For county-level findings, the maximum error rate at the 95% confidence level is approximately ±4.0% (Buncombe and Henderson counties), ±4.6% (Polk County), ±5.1% (Jackson and Madison counties), or ±6.9% (all other counties).

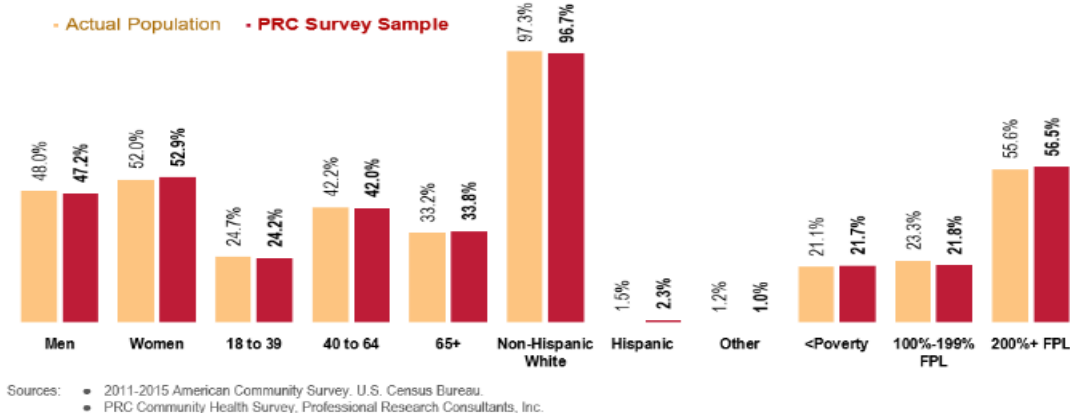Expected error ranges for a sample of 151 respondents at the 95% confidence level.

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 a sample of 200 respondents answered a certain question with a "yes," it can be asserted that between 6.0% and 14.0% (10% ± 4.0%) 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% ± 6.9%) of the total population would respond "yes" if asked this question.

**Characteristics:** The following chart outlines the characteristics of the survey sample for Clay County by key demographic variables, compared to actual population characteristics from census data.  Note that the sample consists solely of area residents age 18 and older.

## Population & Survey Sample Characteristics
### (Age 18 and Older; Clay County, 2021)

Actual Population   • PRC Survey Sample

| | Actual Population | PRC Survey Sample |
|---|---|---|
| Men | 48.0% | 47.2% |
| Women | 52.0% | 52.9% |
| 18 to 39 | 24.7% | 24.2% |
| 40 to 64 | 42.2% | 42.0% |
| 65+ | 33.2% | 33.8% |
| Non-Hispanic White | 97.3% | 96.7% |
| Hispanic | 1.5% | 2.3% |
| Other | 1.2% | 1.0% |
| <Poverty | 21.1% | 21.7% |
| 100%-199% FPL | 23.3% | 21.8% |
| 200%+ FPL | 55.6% | 56.5% |

Sources:
- 2011-2015 American Community Survey. U.S. Census Bureau.
- PRC Community Health Survey, Professional Research Consultants, Inc.

## 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; this data is 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 2020 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 2030

Since 1980, the Healthy People initiative has set goals and measurable objectives to improve health and well-being in the United States. The initiative's fifth edition, Healthy People 2030, builds on knowledge gained over the past 4 decades to address current and emerging public health priorities and challenges.

An interdisciplinary team of subject matter experts developed national health objectives and targets for the next 10 years. These objectives focus on the most high-impact public health issues, and reflect an increased focus on the social determinants of health — how the conditions where people live, work, and play affect their health and well-being.

**Survey Limitations and Information Gaps**

*Limitations*

The survey methodology included a combination of telephone (both landline and cell phone) interviews, as well as an online survey. Limitations exist for these methods. For example, potential respondents must have access to a landline or a cell phone to respond to the telephone survey.  In addition, the telephone survey sample included landlines (versus cell phones), which may further skew responses to individuals or households with landlines.

The PRC online survey component also has inherent limitations in recruitment and administration. Respondents were recruited from a pre-identified panel of potential respondents. The panel may not be representative of the overall population.

Additionally, PRC created an online survey link, which was promoted by WNC Health Network and its local partners through social media posting and other communications. The online survey link respondents might not be representative of the overall population.

A general limitation of using online survey technology is that respondents must interpret survey questions themselves, rather than have them explained by a trained, live interviewer. This may change how they interpret and answer questions.

Lastly, the technique used to apply post stratification weights helps preserve the integrity of each individual's responses while improving overall representativeness. However, this technique can also exaggerate an individual's responses when demographic variables are under-sampled.

**Information Gaps**

This assessment was designed to provide a comprehensive and broad picture of the health of the community overall. It does not measure all possible aspects of health in the community, nor does it represent all possible populations of interest. For example, due to low population numbers, members of certain racial/ethnic groups (e.g. Black, AI/AN, Hispanic/ Latinx, etc.) may not be identifiable or represented in numbers sufficient for independent analyses. In these cases, information gaps may limit the ability to assess the full array of the community's health needs.

**Online Key Informant Survey (Primary Data)**
**Online Survey Methodology**

*Survey Purpose and Administration*
The 2021 Online Key Informant Survey was conducted in June and July 2021. WNC Healthy Impact, with support from PRC, implemented an Online Key Informant Survey to solicit input from local leaders and stakeholders who have a broad interest in the health of the community. WNC Healthy Impact shared with PRC a list of recommended participants, including those from our county. 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 the community overall.

Key informants were contacted through an email that introduced the purpose of the survey and provided a link to take the survey online. Reminder emails were sent as needed to increase participation.

### *Survey instrument*
The survey provided respondents the opportunity to identify important health issues in their community, what is supporting or getting in the way of health and wellbeing in their community, and who in their community is most impacted by these health issues.

### *Participation*
In all, 16 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 Leader | 19 | 10 |
| Other Health Provider | 12 | 5 |
| Physician | 1 | 0 |
| Public Health Representative | 1 | 0 |
| Social Services Provider | 2 | 1 |

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

### *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 (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.

**Data Definitions**

Reports of this type customarily employs 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

56

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 is 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 does 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 sixteen 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.
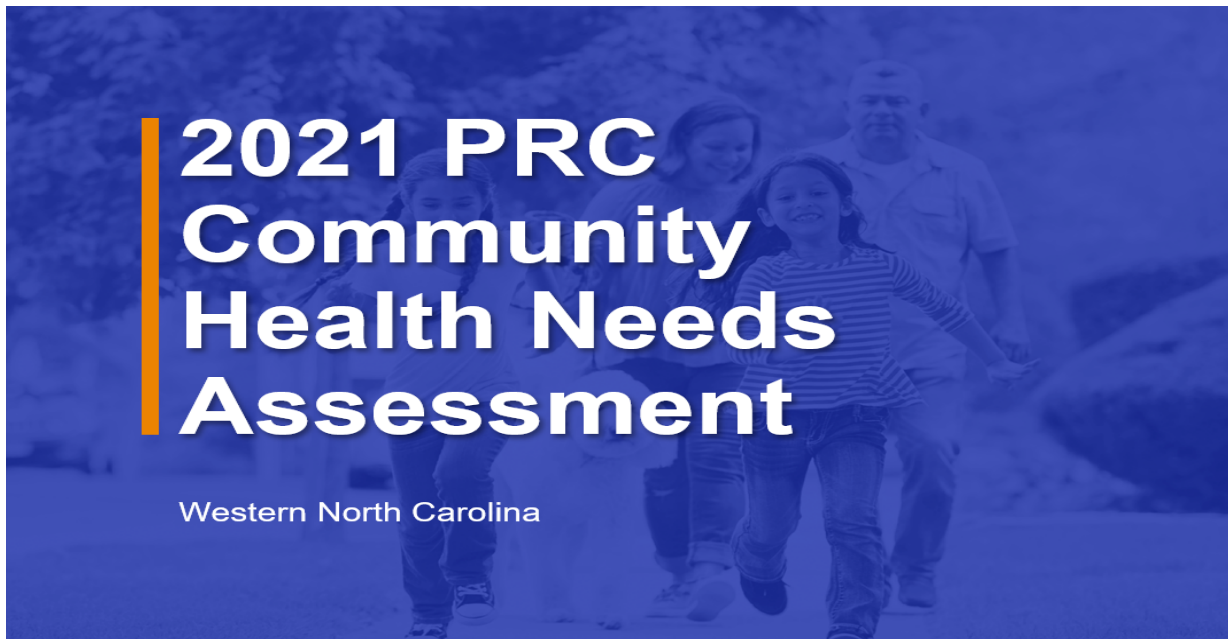
For example, there may be a rate for a type of event (e.g., death) that is one number one year and another number five years later. Suppose the earlier figure is 12.0 and the latter figure is 18.0. The simple mathematical difference between these rates is 6.0. Suppose also there is another set of rates 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.

2021 PRC Community Health Needs Assessment

Western North Carolina

WNC**HEALTHY**IMPACT



Approximate Error Ranges
at the 95 Percent Level of Confidence
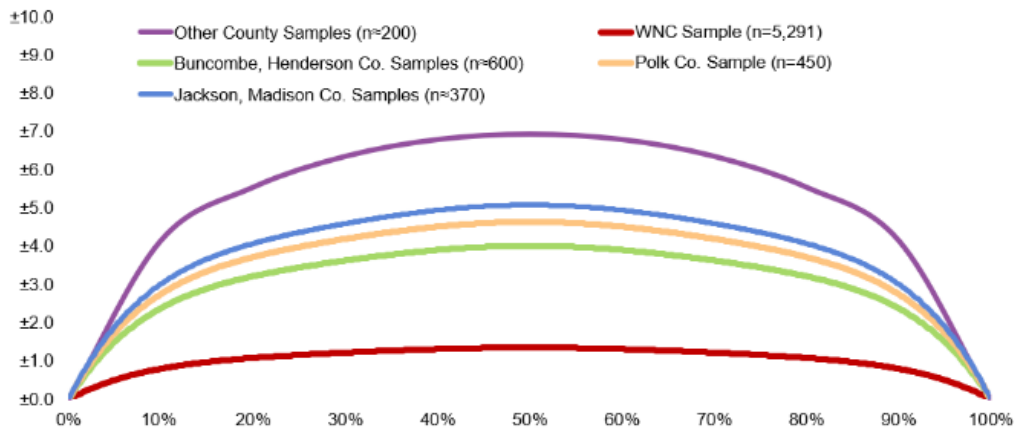
- Other County Samples (n≈200)
- Buncombe, Henderson Co. Samples (n≈600)
- Jackson, Madison Co. Samples (n≈370)
- WNC Sample (n=5,291)
- Polk Co. Sample (n=450)

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 5,289 respondents answered a certain question with a "yes," it can be asserted that between 9.2% and 10.8% (10% ± 0.8%) 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 48.6% and 51.4% (50% ± 1.4%) of the total population would respond "yes" if asked this question.

59

# Expected Error Ranges for a Sample of 151 Respondents at the 95 Percent Level of Confidence
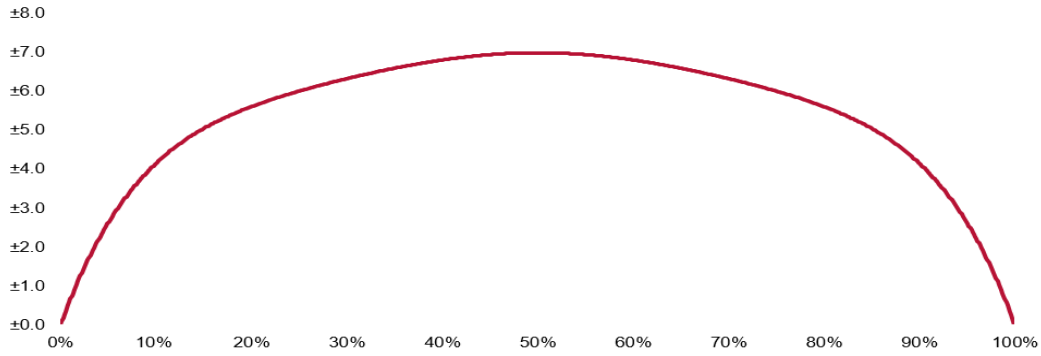


Note: ● The "response rate" (the percentage of a population giving a particular response) determines the error rate associated with that response. A "95 percent level of confidence" indicates that responses would fall within the expected error range on 95 out of 100 trials.

# Population & Survey Sample Characteristics
## (Age 18 and Older; Clay County, 2021)
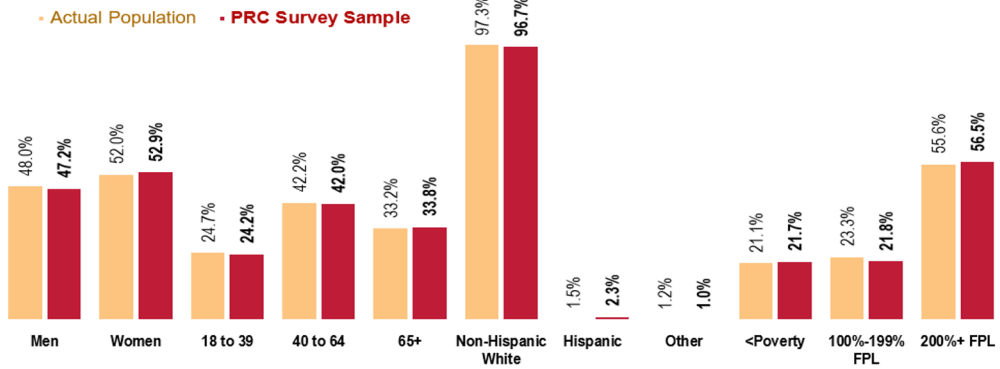


Sources: ● 2011-2015 American Community Survey. U.S. Census Bureau.
● PRC Community Health Survey, Professional Research Consultants, Inc.

60

## County Is a "Fair/Poor" Place to Live
### (By County)

■ 2015     ■ 2018     ■ 2021
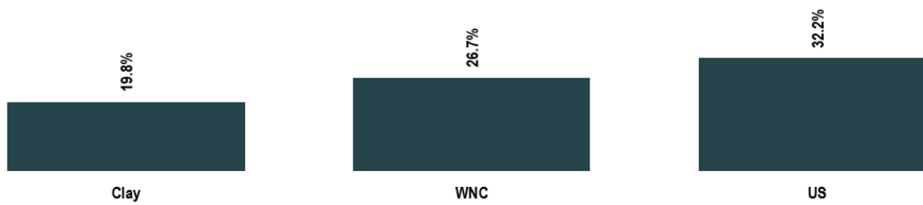
**Clay**
- 12.6%
- 8.7%
- 6.5%

**WNC**
- 13.5%
- 11.1%
- 11.9%

Sources:  ● PRC Community Health Survey, Professional Research Consultants, Inc. [Item 5]
Notes:    ● Asked of all respondents.

## Disagree That the Community Is a
## Welcoming Place for People of All Races and Ethnicities
### ("Disagree" or "Strongly Disagree" Responses; Western North Carolina, 2021; By County)

**Clay**
- 17.7%

**WNC**
- 16.8%

Sources:  ● PRC Community Health Survey, Professional Research Consultants, Inc. [Item 33]
Notes:    ● Asked of all respondents.

# "Often/Sometimes" Threatened or Harassed Due to Race/Ethnicity
## (Western North Carolina, 2021; By County)

Clay: 7.4%

WNC: 9.7%

# "Often/Sometimes" Criticized for My Accent or the Way I Speak
## (Western North Carolina, 2021; By County)

Clay: 40.1%

WNC: 28.6%

Plot Area

## Had a Time in the Past Year
### When Home Was Without Electricity, Water, or Heating
(Western North Carolina, 2021; By County)

■ 2018  ■ 2021

Clay: 31.0% (2018), 12.6% (2021)
WNC: 11.5%

## Worried or Stressed About Paying Rent or Mortgage in the Past Year
("Always/Usually/Sometimes" Responses; Western North Carolina, 2021; By County)

■ 2021

Clay: 19.8%
WNC: 26.7%
US: 32.2%

## Have Someone to Rely on for Help or Support if Needed
### (e.g. Food, Transportation, Childcare, etc.; Western North Carolina, 2021; By County)

■ 2021

79.1%
Clay

75.7%
WNC
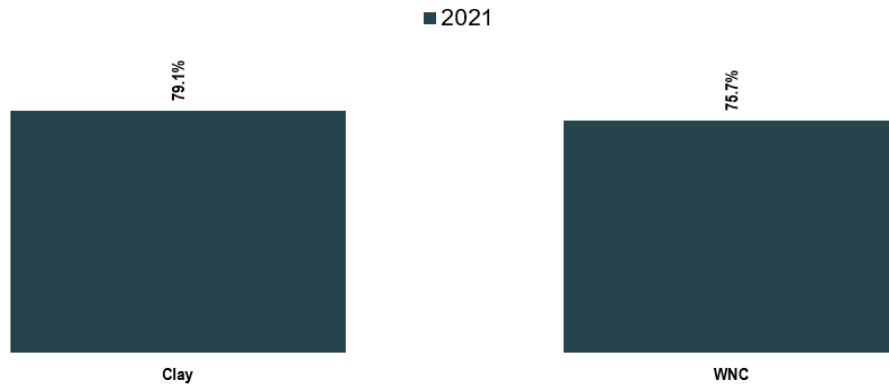
Sources:  ● PRC Community Health Survey, Professional Research Consultants, Inc. [Item 62]
Notes:      ● Includes "always" and "usually" responses.

# Overall Health

Click to add text

## Self-Report "Fair" or "Poor" Overall Health
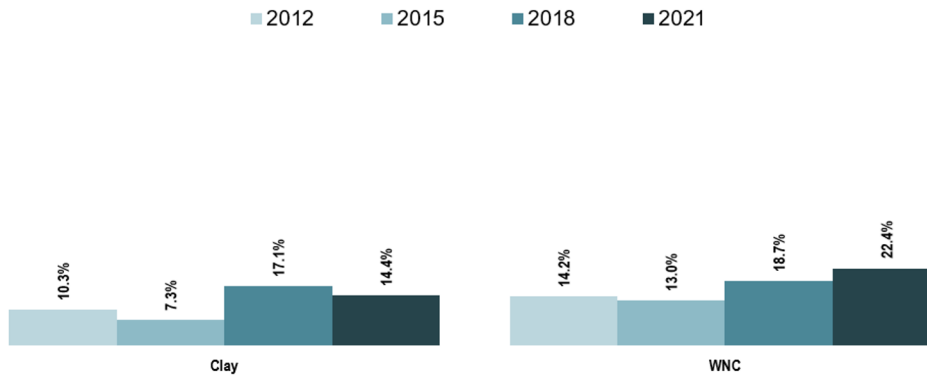### (By County)

■ 2012  ■ 2015  ■ 2018  ■ 2021

**Clay**
- 19.1%
- 19.3%
- 23.7%
- 20.0%

**WNC**
- 19.0%
- 17.3%
- 17.3%
- 17.6%

**NC**
- 18.1%
- 19.2%
- 18.3%
- 19.4%

**US**
- 16.8%
- 15.3%
- 18.1%
- 12.6%
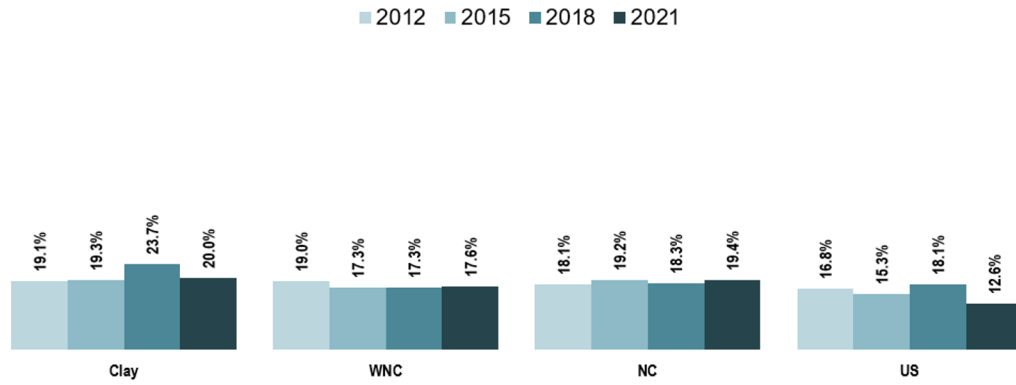
Sources:
- PRC Community Health Survey, Professional Research Consultants, Inc. [Item 6]
- Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): North Carolina data.
- PRC National Health Survey, Professional Research Consultants, Inc.

Notes:
- Asked of all respondents.

## More Than Seven Days of Poor Mental Health in the Past Month
### (By County)

■ 2012  ■ 2015  ■ 2018  ■ 2021

**Clay**
- 10.3%
- 7.3%
- 17.1%
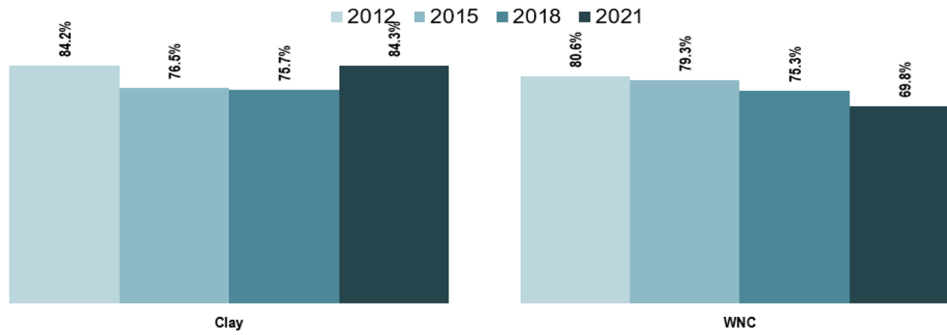- 14.4%

**WNC**
- 14.2%
- 13.0%
- 18.7%
- 22.4%

Sources:
- PRC Community Health Survey, Professional Research Consultants, Inc. [Item 63]

Notes:
- Asked of all respondents.

## "Always" or "Usually" Get Needed Social/Emotional Support
### (By County)

■ 2012  ■ 2015  ■ 2018  ■ 2021

Clay: 84.2%, 76.5%, 75.7%, 84.3%

WNC: 80.6%, 79.3%, 75.3%, 69.8%

Sources: ● PRC Community Health Survey, Professional Research Consultants, Inc. [Item 61]
Notes: ● Includes "always" and "usually" responses.

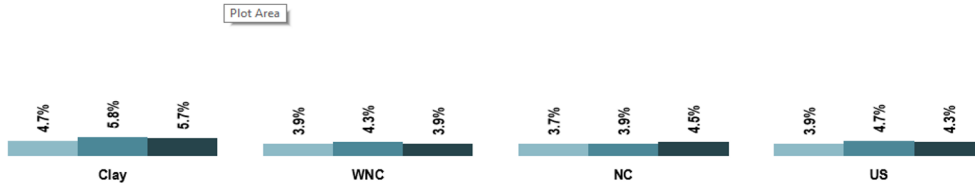## Prevalence of Heart Disease
### (By County)

■ 2015  ■ 2018  ■ 2021

Clay: 7.0%, 12.2%, 10.5%
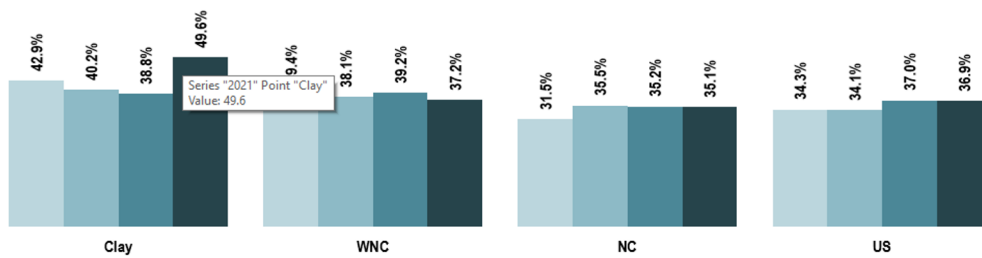
WNC: 6.5%, 8.0%, 7.6%

NC: 6.8%

US: 6.1%, 8.0%, 6.1%
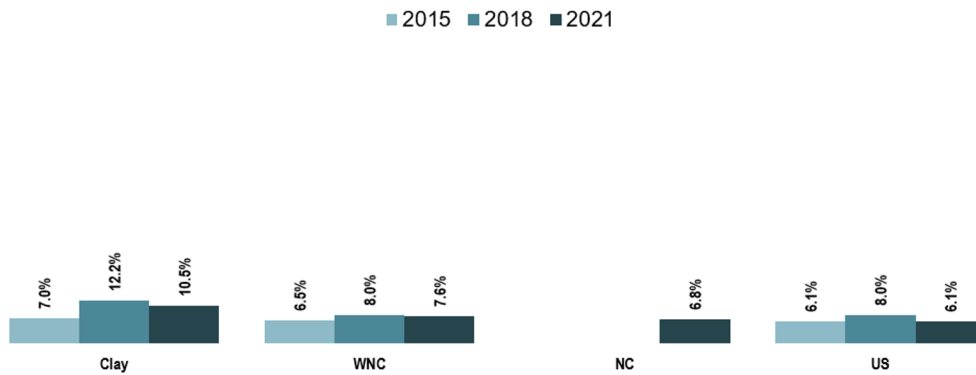
Sources: ● PRC Community Health Survey, Professional Research Consultants, Inc. [Item 10]
● Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): North Carolina data.
● PRC National Health Survey, Professional Research Consultants, Inc.
Notes: ● Asked of all respondents.

# Prevalence of Stroke
## (By County)

■ 2015  ■ 2018  ■ 2021

Plot Area

| | Clay | WNC | NC | US |
|---|---|---|---|---|
| 2015 | 4.7% | 3.9% | 3.7% | 3.9% |
| 2018 | 5.8% | 4.3% | 3.9% | 4.7% |
| 2021 | 5.7% | 3.9% | 4.5% | 4.3% |

Sources:
- PRC Community Health Survey, Professional Research Consultants, Inc. [Item 11]
- Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): North Carolina data.
- PRC National Health Survey, Professional Research Consultants, Inc.

Notes:
- Asked of all respondents.

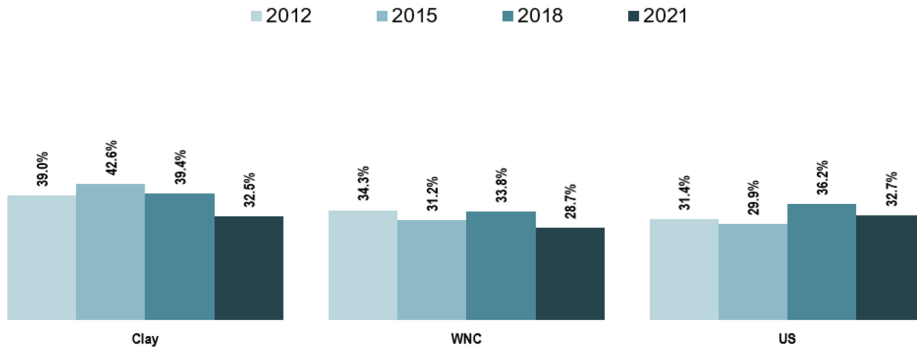# Prevalence of High Blood Pressure
## (By County)
### Healthy People 2030 Target = 27.7% or Lower

■ 2012  ■ 2015  ■ 2018  ■ 2021

| | Clay | WNC | NC | US |
|---|---|---|---|---|
| 2012 | 42.9% | 39.4% | 31.5% | 34.3% |
| 2015 | 40.2% | 38.1% | 35.5% | 34.1% |
| 2018 | 38.8% | 39.2% | 35.2% | 37.0% |
| 2021 | 49.6% | 37.2% | 35.1% | 36.9% |

Series "2021" Point "Clay"
Value: 49.6

Sources:
- PRC Community Health Survey, Professional Research Consultants, Inc. [Item 12]
- Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): North Carolina data.
- PRC National Health Survey, Professional Research Consultants, Inc.
- US Department of Health and Human Services. Healthy People 2030. http://www.healthypeople.gov.

Notes:
- Asked of all respondents.

## Prevalence of High Blood Cholesterol
### (By County)

■ 2012  ■ 2015  ■ 2018  ■ 2021

**Clay**
- 39.0%
- 42.6%
- 39.4%
- 32.5%

**WNC**
- 34.3%
- 31.2%
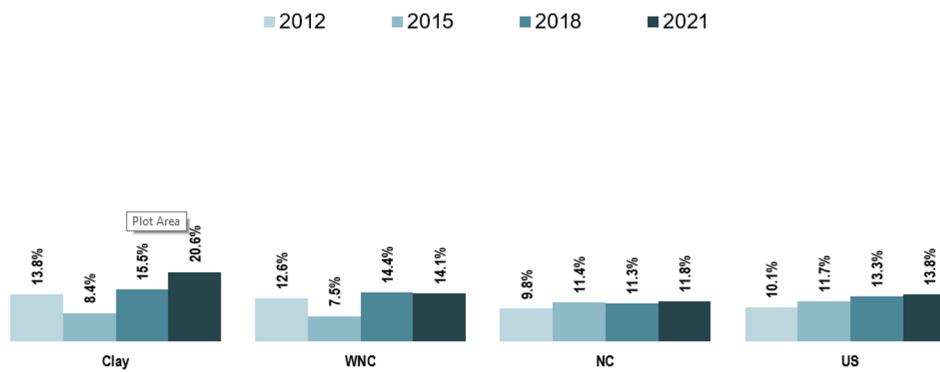- 33.8%
- 28.7%

**US**
- 31.4%
- 29.9%
- 36.2%
- 32.7%

Sources: 
- PRC Community Health Survey, Professional Research Consultants, Inc. [Item 13]
- PRC National Health Survey, Professional Research Consultants, Inc.

Notes:
- Asked of all respondents.

## Prevalence of Diabetes
### (By County)

■ 2012  ■ 2015  ■ 2018  ■ 2021

**Clay**
- 13.8%
- 8.4%
- 15.5%
- 20.6%

**WNC**
- 12.6%
- 7.5%
- 14.4%
- 14.1%

**NC**
- 9.8%
- 11.4%
- 11.3%
- 11.8%

**US**
- 10.1%
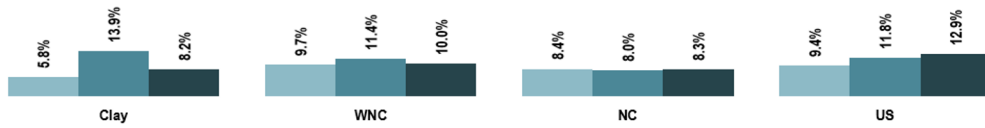- 11.7%
- 13.3%
- 13.8%

Sources:
- PRC Community Health Survey, Professional Research Consultants, Inc. [Item 85]
- Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): North Carolina data.
- PRC National Health Survey, Professional Research Consultants, Inc.

Notes:
- Asked of all respondents.
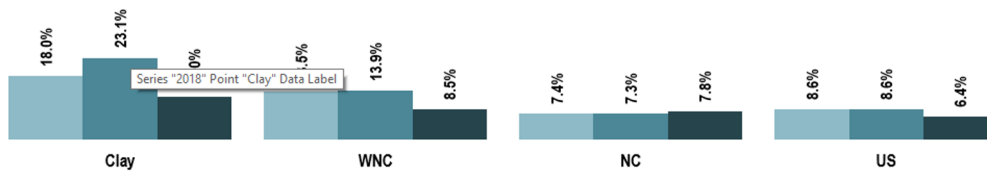
# Prevalence of Asthma
## (By County)

■ 2015  ■ 2018  ■ 2021

**Clay:** 5.8%, 13.9%, 8.2%
**WNC:** 9.7%, 11.4%, 10.0%
**NC:** 8.4%, 8.0%, 8.3%
**US:** 9.4%, 11.8%, 12.9%

Sources:
- PRC Community Health Survey, Professional Research Consultants, Inc. [Item 83]
- Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): North Carolina data.
- PRC National Health Survey, Professional Research Consultants, Inc.

Notes:
- Asked of all respondents.

# Prevalence of Chronic Obstructive Pulmonary Disease (COPD)
## (By County)

■ 2015  ■ 2018  ■ 2021

**Clay:** 18.0%, 23.1%, .0%
**WNC:** .5%, 13.9%, 8.5%
**NC:** 7.4%, 7.3%, 7.8%
**US:** 8.6%, 8.6%, 6.4%

Series "2018" Point "Clay" Data Label

Sources:
- PRC Community Health Survey, Professional Research Consultants, Inc. [Item 9]
- Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): North Carolina data.
- PRC National Health Survey, Professional Research Consultants, Inc.

Notes:
- Asked of all respondents.

# Lost a Job During the Pandemic
(Western North Carolina, 2021; By County)



**Clay** — 6.4%
**WNC** — 15.3%

# Lost Work Hours or Wages During the Pandemic
(Western North Carolina, 2021; By County)



**Clay** — 23.7%
**WNC** — 26.0%

# Lost Health Insurance Coverage During the Pandemic
### (Western North Carolina, 2021; By County)



| | |
|---|---|
| 1.2% | 7.7% |
| Clay | WNC |

# Chose to Go Without Needed Health Care During the Pandemic
### (Western North Carolina, 2021; By County)



| | |
|---|---|
| 18.9% | 30.2% |
| Clay | WNC |

## Consume Five or More Servings of Fruits/Vegetables Per Day
### (By County)

■ 2012 ■ 2015 ■ 2018 ■ 2021*
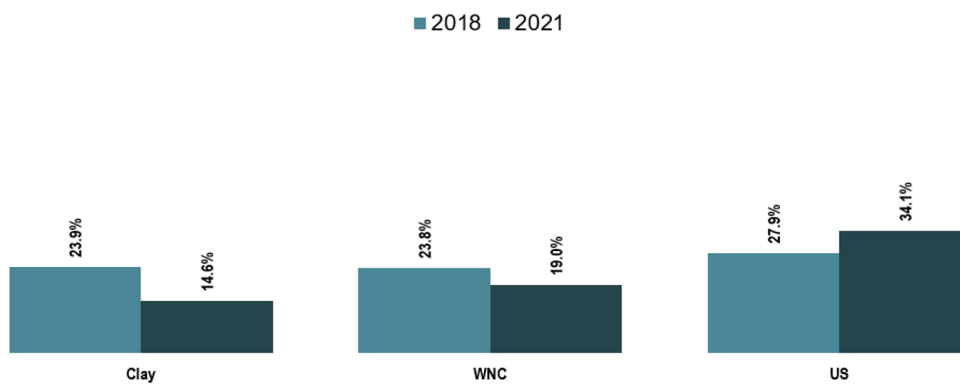
**Clay**
- 8.3%
- 5.3%
- 2.2%
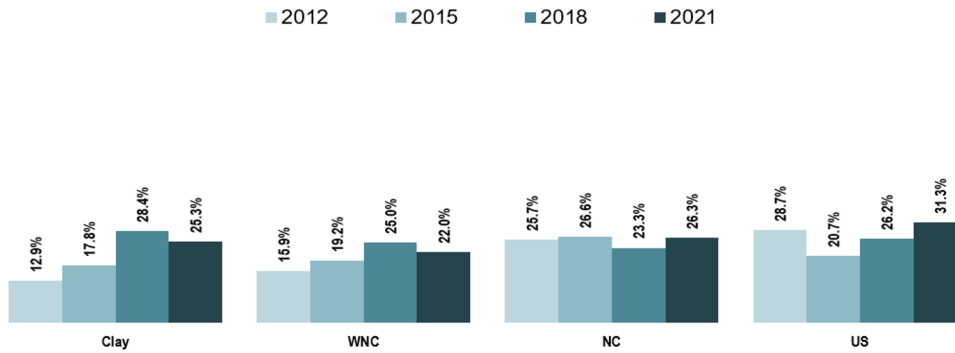- 3.7%

**WNC**
- 8.0%
- 8.1%
- 6.5%
- 5.6%
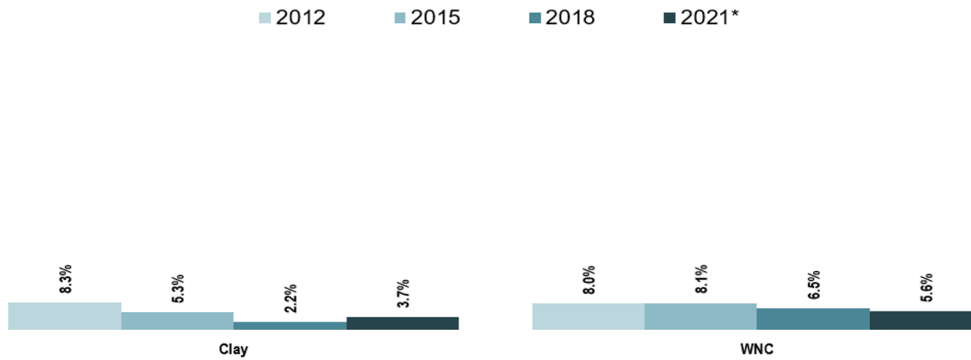
Sources: ● PRC Community Health Survey, Professional Research Consultants, Inc. [Item 89]
Notes: ● Asked of all respondents.
● For this issue, respondents were asked to recall their food intake during the previous week.
\*Reflects 1-cup servings of fruits and/or vegetables in the past week, excluding potatoes; note that the previous WNC surveys also excluded lettuce salads.

## Food Insecurity
### (By County, 2021)

■ 2018 ■ 2021

**Clay**
- 23.9%
- 14.6%

**WNC**
- 23.8%
- 19.0%

**US**
- 27.9%
- 34.1%

Sources: ● PRC Community Health Survey, Professional Research Consultants, Inc. [Item 76]
● PRC National Health Survey, Professional Research Consultants, Inc.
Notes: ● Asked of all respondents.
● Includes adults who A) ran out of food at least once in the past year and/or B) worried about running out of food in the past year.

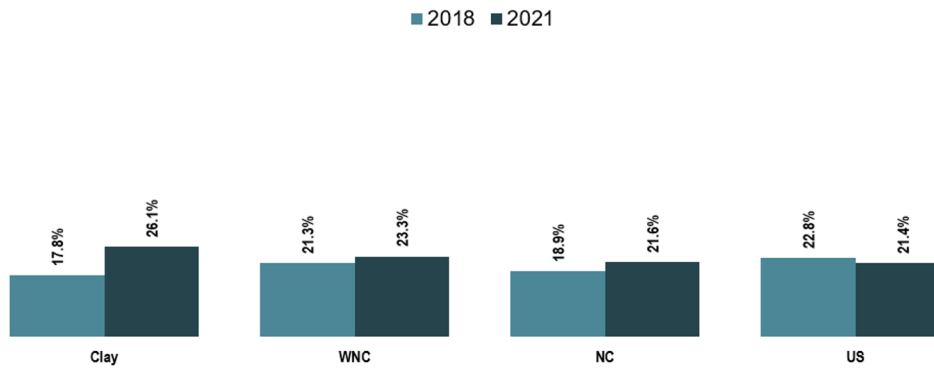## No Leisure-Time Physical Activity in the Past Month
### (By County)

■ 2012  ■ 2015  ■ 2018  ■ 2021

**Clay**
- 12.9%
- 17.8%
- 28.4%
- 25.3%

**WNC**
- 15.9%
- 19.2%
- 25.0%
- 22.0%

**NC**
- 25.7%
- 26.6%
- 23.3%
- 26.3%

**US**
- 28.7%
- 20.7%
- 26.2%
- 31.3%

## Meets Physical Activity Recommendations
### (By County, 2021)
Healthy People 2030 Target = 28.4% or Higher

■ 2018  ■ 2021

**Clay**
- 17.8%
- 26.1%

**WNC**
- 21.3%
- 23.3%

**NC**
- 18.9%
- 21.6%

**US**
- 22.8%
- 21.4%

# Strengthening Physical Activity
## (By County)

■ 2012  ■ 2015  ■ 2018  ■ 2021

**Clay**
- 33.6%
- 34.0%
- 25.1%
- 30.9%

**WNC**
- 35.1%
- 34.6%
- 31.9%
- 32.3%

**NC**
- 29.3%
- 31.9%

**US**
- 33.8%
- 33.8%

# Healthy Weight
## (Body Mass Index Between 18.5 and 24.9; By County)

■ 2012  ■ 2015  ■ 2018  ■ 2021

**Clay**
- 37.8%
- 33.2%
- 23.6%
- 24.6%

**WNC**
- 33.7%
- 33.5%
- 31.5%
- 29.8%

**NC**
- 31.4%
- 28.6%

**US**
- 31.7%
- 34.4%
- 30.3%
- 34.5%

## Obesity
### (Body Mass Index of 30.0 or Higher; By County)
Healthy People 2030 Target = 36.0% or Lower

■ 2012　　■ 2015　　■ 2018　　■ 2021

**Clay:** 27.0% | 28.9% | 32.3% | 33.1%
**WNC:** 29.2% | 28.8% | 31.9% | 35.4%
**NC:** 28.6% | 29.4% | 31.8% | 34.0%
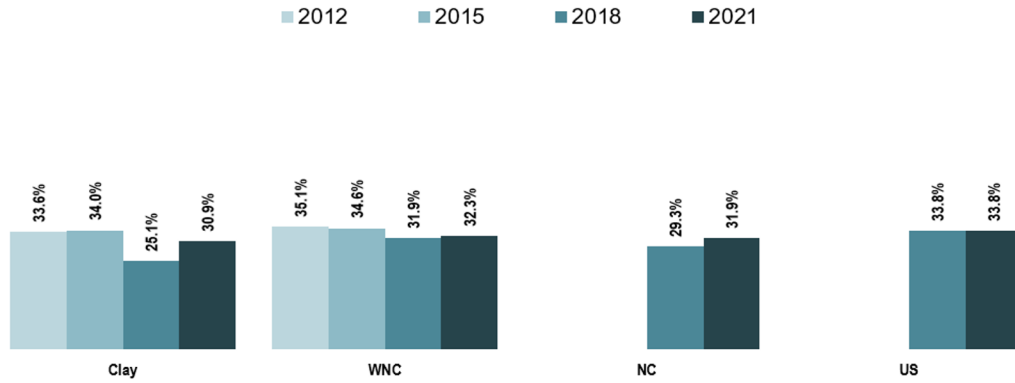**US:** 28.5% | 29.0% | 32.8% | 31.3%
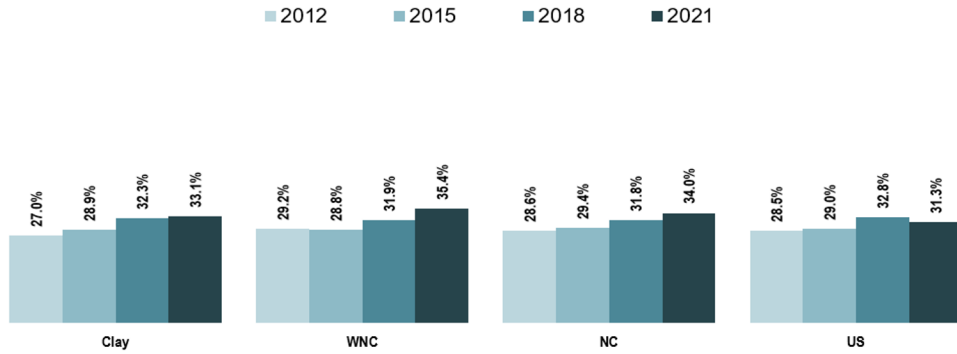
Sources:
- PRC Community Health Survey, Professional Research Consultants, Inc. [Item 92]
- Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): North Carolina data.
- PRC National Health Survey, Professional Research Consultants, Inc.
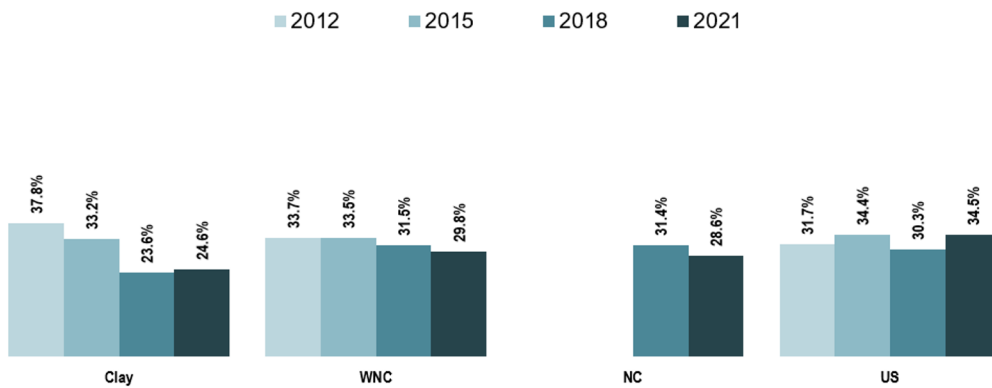- US Department of Health and Human Services. Healthy People 2030. http://www.healthypeople.gov.

Notes:
- Based on reported heights and weights; asked of all respondents.
- The definition of obesity is having a body mass index (BMI), a ratio of weight to height (kilograms divided by meters squared), greater than or equal to 30.0, regardless of gender.

## Current Drinkers
### (By County)

■ 2012　　■ 2015　　■ 2018　　■ 2021

**Clay:** 41.3% | 43.3% | 38.4% | 43.3%
**WNC:** 42.9% | 43.7% | 45.8% | 51.9%
**NC:** 44.1% | 44.3% | 49.1% | 47.9%
**US:** 58.8% | 56.5% | 55.0% | 59.8%
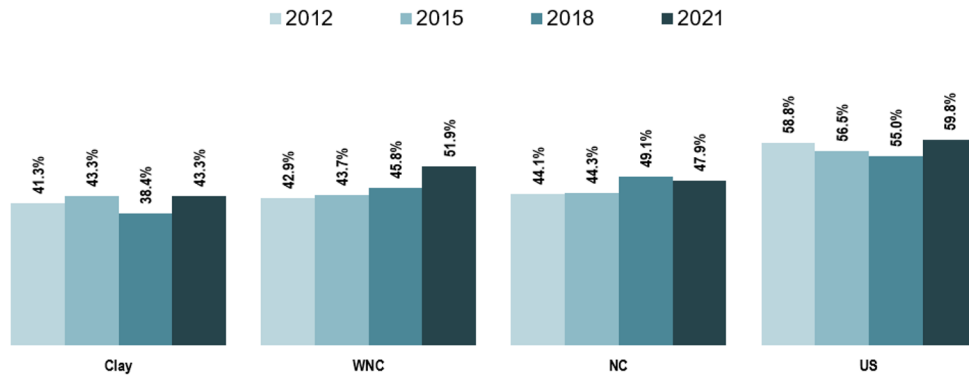
Sources:
- PRC Community Health Survey, Professional Research Consultants, Inc. [Item 23]
- Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): North Carolina data.
- PRC National Health Survey, Professional Research Consultants, Inc.

Notes:
- Asked of all respondents.
- Current drinkers had at least one alcoholic drink in the past month.

# Excessive Drinkers
## (By County)

■ 2015  ■ 2018  ■ 2021



| | Clay | WNC | NC | US |
|---|---|---|---|---|
| 2015 | 17.3% | 15.4% | | 23.2% |
| 2018 | 16.5% | 15.7% | | 22.5% |
| 2021 | 17.8% | 18.3% | 15.4% | 27.2% |

# Used Prescription Opiates/Opioids in the Past Year, With or Without a Prescription
## (By County, 2021)

■ 2018  ■ 2021
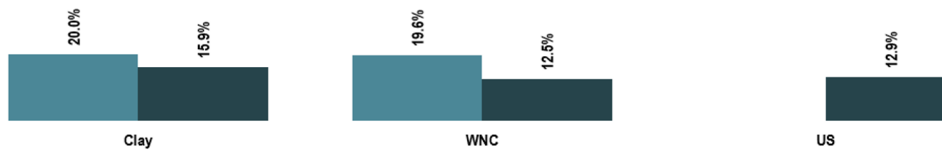


| | Clay | WNC | US |
|---|---|---|---|
| 2018 | 20.0% | 19.6% | |
| 2021 | 15.9% | 12.5% | 12.9% |

## Life Has Been Negatively Affected
## by Substance Abuse (by Self or Someone Else)
### (By County, 2021)

■ 2015　■ 2018　■ 2021

**Clay**
- 50.5%
- 41.7%

**WNC**
- 47.4%
- 45.8%

**US**
- 37.3%
- 35.8%
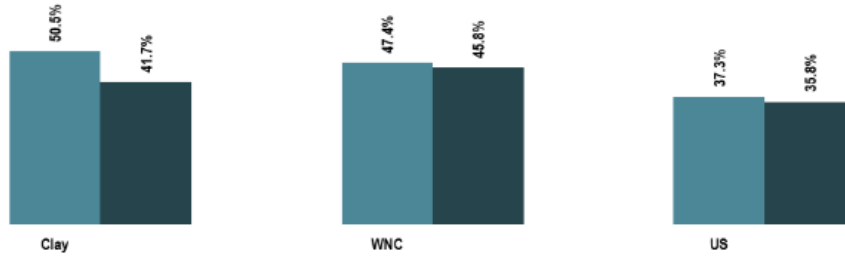
Sources:
- PRC Community Health Survey, Professional Research Consultants, Inc. [Item 27]
- PRC National Health Survey, Professional Research Consultants, Inc.

Notes:
- Asked of all respondents.

## Current Smokers
### (By County)
Healthy People 2030 Target = 5.0% or Lower

■ 2012　■ 2015　■ 2018　■ 2021

**Clay**
- 26.3%
- 26.6%
- 15.7%
- 20.0%

**WNC**
- 20.6%
- 19.3%
- 19.0%
- 14.1%

**NC**
- 19.8%
- 20.3%
- 17.9%
- 18.5%

**US**
- 16.6%
- 14.9%
- 16.3%
- 17.4%

Sources:
- PRC Community Health Survey, Professional Research Consultants, Inc. [Item 19]
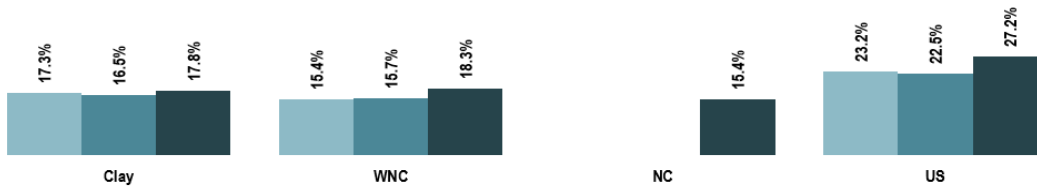- PRC National Health Survey, Professional Research Consultants, Inc.
- Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): North Carolina data.
- US Department of Health and Human Services. Healthy People 2030. http://www.healthypeople.gov.

Notes:
- Asked of all respondents.
- Includes regular and occasional smokers (everyday and some days).

# Currently Use Vaping Products (Such as E-Cigarettes)
## (By County)

■ 2015  ■ 2018  ■ 2021

| | Clay | WNC | NC | US |
|---|---|---|---|---|
| 2015 | 4.9% | 6.6% | | 3.8% |
| 2018 | 3.9% | 7.2% | | |
| 2021 | 4.8% | 4.8% | 4.6% | 8.9% |

# Currently Use Smokeless Tobacco Products
## (By County)

■ 2012  ■ 2015  ■ 2018  ■ 2021

| | Clay | WNC | NC | US |
|---|---|---|---|---|
| 2012 | 7.7% | 5.2% | | |
| 2015 | 3.2% | 4.3% | 4.3% | 2.8% |
| 2018 | 3.8% | 5.8% | 4.0% | 4.0% |
| 2021 | 5.2% | 4.3% | 5.1% | 4.4% |

# Lack of Healthcare Insurance Coverage
## (Adults Age 18-64; By County)
### Healthy People 2030 Target = 7.9% or Lower

■ 2012    ■ 2015    ■ 2018    ■ 2021

| | Clay | WNC | NC | US |
|---|---|---|---|---|
| 2012 | 31.9% | 23.7% | 17.7% | 14.9% |
| 2015 | 22.8% | 19.6% | 24.2% | 15.1% |
| 2018 | 24.4% | 19.8% | 17.1% | 13.7% |
| 2021 | 21.7% | 14.5% | 19.0% | 8.7% |
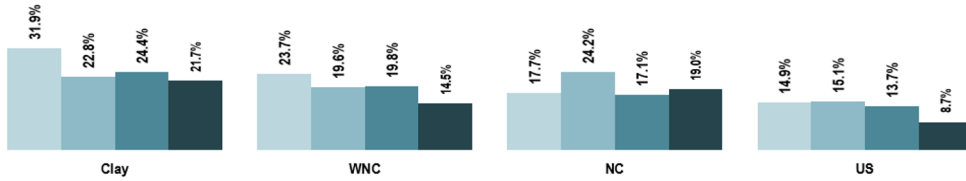
Sources:
- PRC Community Health Survey, Professional Research Consultants, Inc. [Item 101]
- PRC National Health Survey, Professional Research Consultants, Inc.
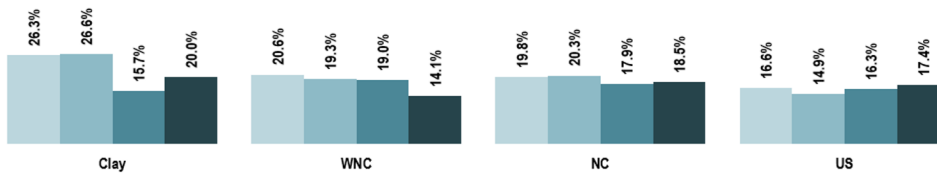- Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): North Carolina data.
- US Department of Health and Human Services. Healthy People 2030. http://www.healthypeople.gov.

Notes:
- Reflects all respondents under the age of 65.
- Includes any type of insurance, such as traditional health insurance, prepaid plans such as HMOs, or government-sponsored coverage (e.g., Medicare, Medicaid, Indian Health Services, etc.).

# Was Unable to Get Needed
# Medical Care at Some Point in the Past Year
## (Western North Carolina, 2021; By County)

■ 2012    ■ 2015    ■ 2018    ■ 2021

Plot Area

| | Clay | WNC |
|---|---|---|
| 2012 | 6.4% | 10.8% |
| 2015 | 9.6% | 9.1% |
| 2018 | 14.3% | 12.4% |
| 2021 | 6.5% | 10.6% |
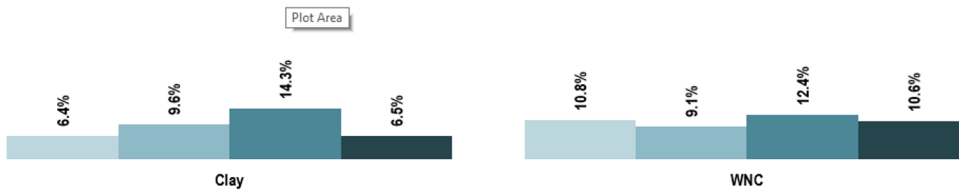
Sources:
- PRC Community Health Survey, Professional Research Consultants, Inc. [Item 7]

Notes:
- Asked of all respondents.

## Needed Dental Care in the Past Year But Did Not Get It
### (By County)

■ 2021
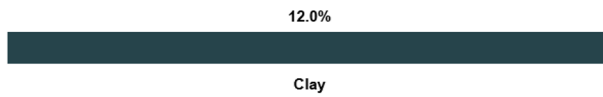
12.0%

Clay

## Do Not Have Access to the Internet for Personal Use at Home, Work, or School
### (By County, 2021)

■ 2012    ■ 2021
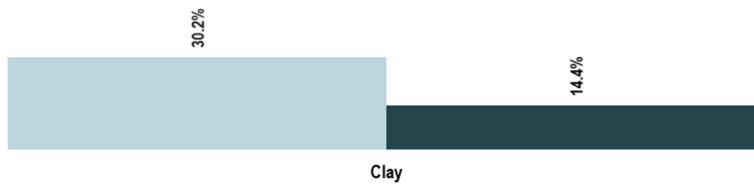
30.2%

14.4%

Clay

# Support Service Most Needed, But Not Currently Getting
## (Clay County)



Help w/Access to Svcs 3.3%

Support Groups 4.4%

Individual Counseling 3.0%

Classes On Elderly Care 0.9%

Transportation 0.9%

Do Not Need Any of These 87.5%
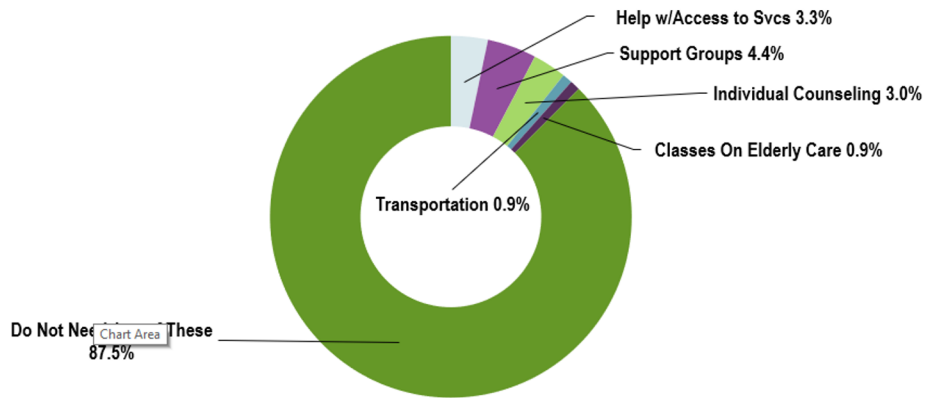
Sources: ● PRC Community Health Survey, Professional Research Consultants, Inc. [Item 320]
Notes: ● Asked of all respondents.

## APPENDIX C – County Map



Population Percentages for Selected Age Groups
Clay County

Under 18 Years
Highest (21.6%)
Total: 1,916

35 to 64 Years
Highest (49.8%)
Total: 4,098

18 to 34 Years
Highest (22.6%)
Total: 1,634

Over 65 Years
Highest (45.7%)
Total: 3,298

0 - 10%
10.1 - 20%
20.1 - 30%
30.1 - 40%
40.1 - 50%
Block-groups with no data

WNC Healthy Impact Region

0   5   10   15 mi

Leah R. Handwerger | May 2021 | WNC Health Network | Social Explorer | American Community Survey 2015-9 | Tiger/Line Shapefiles (block-group, county, and state)



Percentage of Black, Indigenous, & People of Color
Clay County

Black/African American
Highest (10.6%)

Combined, Black, Indigenous, & People of Color
Highest (19.6%)

Hispanic/Latinx
Highest (8.2%)

0%
0.1 - 2%
2.1 - 5%
5.1 - 10%
Over 10%
Block-groups with no data

WNC Healthy Impact Region

*Combined population for Black/African American, Hispanic/Latinx, American Indian or Alaskan Native, Asian, Hawaiian Native/Pacific Islander, Two or More Races, and Other

0   5   10   15 mi

Leah R. Handwerger | May 2021 | WNC Health Network | Social Explorer | American Community Survey 2015-9 | Tiger/Line Shapefiles (block-group, county, and state)

82

Percentage of Individuals Living At or Below Poverty Status
Clay County

0 - 5%
5.1 - 10%
10.1 - 15%
15.1 - 20%
Over 20%
Census-tracts with no data

10.9%

16.4%

0    4    8    12 mi

WNC Healthy Impact Region

Leah R. Handwerger | June 2021 | WNC Health Network | Social Explorer | American Community Survey 2015-9 | Tiger/Line Shapefiles (census-tracts, county, and state)



Percentage of Individuals Without Health Insurance Coverage
Clay County

0 - 5%
5.1 - 10%
10.1 - 15%
15.1 - 20%
Over 20%
Census-tracts with no data

11%

15.6%

0    4    8    12 mi

WNC Healthy Impact Region

Leah R. Handwerger | June 2021 | WNC Health Network | Social Explorer | American Community Survey 2015-9 | Tiger/Line Shapefiles (census-tracts, county, and state)

## Percentage of Households with Grandparents Serving as Primary Caregiver to Grandchildren
### Clay County

Legend:
- 0%
- 0.1 - 2%
- 2.1 - 5%
- 5.1 - 10%
- Over 10%
- Census-tracts with no data

*Percent calculated out of Households with Children Under 18 Years

3%

15%

0    4    8    12 mi

WNC Healthy Impact Region

Leah R. Handwerger | July 2021 | WNC Health Network | Social Explorer | American Community Survey 2015-9 | Tiger/Line Shapefiles (census-tract, county, and state)

## Percentage of Households Spending Over 30% of Monthly Income on Rent or Mortgage
### Clay County

Legend:
- 0 - 25%
- 25.1 - 30%
- 30.1 - 35%
- 35.1 - 40%
- Over 40%
- Census-tracts with no data

32.9%

30.4%

0    4    8    12 mi

WNC Healthy Impact Region

Leah R. Handwerger | July 2021 | WNC Health Network | Social Explorer | American Community Survey 2015-9 | Tiger/Line Shapefiles (census-tract, county, and state)

84

Percentage of Households Spending Over 50% of Monthly Income on Rent or Mortgage
Clay County

| | |
|---|---|
| | 0 - 5% |
| | 5.1 - 10% |
| | 10.1 - 15% |
| | 15.1 - 20% |
| | Over 20% |
| | Census-tracts with no data |

12.9%

12%

WNC Healthy Impact Region

0    4    8    12 mi

Leah R. Handwerger | July 2021 | WNC Health Network | Social Explorer | American Community Survey 2015-9 | Tiger/Line Shapefiles (census-tract, county, and state)

2021
# COMMUNITY HEALTH NEEDS ASSESSMENT —
## KEY INFORMANT FINDINGS
Clay County, North Carolina

Sponsored by
WNC Health Network for

WNC**HEALTHY**IMPACT

www.PRCCustomResearch.com

# TABLE OF CONTENTS

# Introduction

# METHODOLOGY

**Online Key Informant Survey**

To solicit input from key informants, those individuals who have a broad interest in the health of the community, an Online Key Informant Survey also was implemented as part of this process. A list of recommended participants was provided by WNC Healthy Impact; 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 and representatives. 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. In all, 16 community stakeholders took part in the Online Key Informant Survey, as outlined below:

| ONLINE KEY INFORMANT SURVEY PARTICIPATION ||
| KEY INFORMANT TYPE | NUMBER PARTICIPATING |
| --- | --- |
| Health Providers | 5 |
| Social Services Providers | 1 |
| Community Leaders | 10 |

Key informants who voluntarily named their organization during the survey included representatives from:

- Clay County Care Center
- Clay County Department of Social Services
- Clay County Department of Transportation
- Clay County EMS
- Clay County Food Pantry
- Clay Schools
- Communities in Schools
- Four Square
- Hinton Center
- Matt's Ministry
- Region A Partnership for Kids
- Town of Hayesville

In the online survey, key informants were asked to evaluate specific health issues, as well as provide their perceptions about quality of life and social determinants of health in their communities. For many of these, they were asked to evaluate both strengths and opportunities in these areas. Their perceptions, including verbatim comments, are included throughout this report.

## PERCEPTIONS OF LOCAL QUALITY OF LIFE

### Key Informant Perceptions of Community Resilience

In the Online Key informant Survey, community stakeholders were asked: *"Thinking over the past 12 months, what have you experienced in your community that has helped you feel inspired, confident, or hopeful related to the health and wellbeing of people in your community?"* The following represent their verbatim responses.

### Community Response to COVID-19 Pandemic

> Everyone working together. – Community Leader (Clay County)

> Communication and cooperation between the Clay County Agencies and the available resources. For example, Clay County Transportation is now delivering weekly food boxes for Matt's Ministry and Clay County Food Pantry. Department of Social Services developed a multi discipline advisory committee to discuss and coordinate needs of the community. I believe that this communication will enable all agencies to be more effective. – Community Leader (Clay County)

> Clay County has a strong support network and collaborates well between families, organization, faith community, businesses, etc.... I have witnessed kind people stepping up to help meet needs as needs have come up. During COVID, the churches, school, Communities for Students, and DSS/Health Department/County Administration partnered to offer childcare for school-aged children when the schools shut down. This project met practical needs for working families. The Health Department did an amazing job at meeting the health needs created by COVID and offering regular community education opportunities. – Social Services Provider (Clay County)

### COVID-19 Testing/Vaccination Efforts

> COVID vaccine availability at health department. – Community Leader (Clay County)

### Health Department Response to COVID-19 Pandemic

> During the pandemic our local health department and pharmacies have worked tirelessly to keep our residents informed and getting the COVID vaccine to as many as possible! – Community Leader (Clay County)

> The open, honest, and timely communication from the Clay County Health department as it relates to community health and wellness. – Other Health Provider (Clay County)

### Action Groups/Collaboratives

> We saw several community members actually do their own research regarding the COVID pandemic. They maintained up to date with changing guidance regarding mitigation strategies like masks and vaccine efforts. That was refreshing to see a community interested in educating themselves on a dire subject. – Community Leader (Clay County)

> The partnership between county leadership and departments to help keep employees and the public safe during the Covid-19 pandemic. – Community Leader (Clay County)

### Return to Normalcy

> Businesses reopening. – Other Health Provider (Clay County)

### Diligence in Safety Measures

> Diligence of the community related to COVID – wearing masks, taking precautions, etc. – Other Health Provider (Clay County)

> We have been able to keep a number of Clay County citizens from hospitalization with our community paramedic program. – Other Health Provider (Clay County)

### School District Efforts

> The performance of the school district and how they stepped up to help families in every way they could. – Community Leader (Clay County)

> The direction of our school system. – Other Health Provider (Clay County)

### Attention to Substance Abuse

> People of Clay Care Town Hall – for substance use awareness. Grants for building supplies for safe and healthy homes. – Hinton – Community Leader (Clay County)

## Key Informant Perceptions of a "Healthy Community"

The following represent characteristics that key informants identified (in an open-ended question) when asked what they feel are the most important characteristics or qualities of a "healthy community" (up to three responses allowed).

### FIRST MENTION

### Community Connections/Support

> Strong parental influences for early development of children. – Other Health Provider (Clay County)

> Volunteerism. Those that are able and providing help and services to those that need it the most. – Other Health Provider (Clay County)

> Collaboration is key to linking up all avenues of care to create successful patient partnerships. – Community Leader (Clay County)

### Health & Wellness of Residents

> Overall health and desire to achieve better health. – Other Health Provider (Clay County)

### Employment & Opportunity

> Jobs. – Community Leader (Clay County)

Ability to sustain itself, economically, socially, physically, spiritually. – Social Services Provider (Clay County)

### Affordable Housing

Having housing. – Other Health Provider (Clay County)

### Government

Good leadership, strong school community, sustainable economic growth. – Community Leader (Clay County)

Effective leadership. Community engagement. Access to treatment – medical, mental, substance use, etc. – Community Leader (Clay County)

## SECOND MENTION

### Access to Care/Services

Access to quality treatment – health (mental and physical) including substance use treatment. – Community Leader (Clay County)

Availability of affordable health care services. – Community Leader (Clay County)

Having options for providers. – Other Health Provider (Clay County)

Healthcare. – Community Leader (Clay County)

### Awareness/Education

Strong educational systems. – Other Health Provider (Clay County)

### Community Connections/Support

Citizen involvement, local and state agencies working together. – Community Leader (Clay County)

Collaboration of agencies in personnel to identify the most important problematic issues. – Other Health Provider (Clay County)

### Built Environment

Community groups that foster improved health, outdoor or indoor spaces where residents may exercise. – Other Health Provider (Clay County)

### Diversity

It is not stagnant. A health community looks to learn and grow. If a community remains stuck in old ways, this can create stagnation. – Social Services Provider (Clay County)

## THIRD MENTION

### Employment & Opportunity

Access to affordable basic needs, such as food, water, clean air, and education. – Community Leader (Clay County)

> Jobs. – Other Health Provider (Clay County)

## Awareness/Education

> Having accessible programming to educate the community (substance use, parenting). – Other Health Provider (Clay County)

> Schools. – Community Leader (Clay County)

## Affordable Housing

> Safe and affordable housing. – Community Leader (Clay County)

## Built Environment

> Protecting the beauty and environment during growth periods. – Community Leader (Clay County)

## SOCIAL DETERMINANTS OF HEALTH

### Key Informant Perceptions of Social Determinants of Health & Physical Environment

In the Online Key Informant Survey, community stakeholder respondents were asked to identify up to three social determinants of health about which they feel they have personal or professional insight, experience, or knowledge. For each of these, respondents were then asked to identify strengths and challenges for that issue, as well as populations they feel are most impacted.

#### Accessible & Affordable Healthy Foods

##### STRENGTHS
##### Access to Healthy Foods

> Clay County has two major food pantries open every week, Clay County Food Pantry and Ministry. Both pantries provide a wide variety of healthy foods, personal hygiene items and cleaning supplies.  Both have delivery options to homebound seniors, those without transportation and the disabled. - Community Leader (Clay County)

> Click any food pantry.  Matt's ministry.  Volunteerism in providing to the two above services. - Other Health Provider (Clay County)

##### Community Partners

> Local food pantries, local schools. - Community Leader (Clay County)

> Matt's Ministry and other food banks. - Other Health Provider (Clay County)

##### CHALLENGES
##### Awareness/Education

> Communicating the availability and options to the people in need. - Community Leader (Clay County)

> Lack of knowledge of services that are available.  Also, transportation or lack thereof. - Other Health Provider (Clay County)

##### Income/Poverty

> Poverty. - Community Leader (Clay County)

> Income and education. - Other Health Provider (Clay County)

##### POPULATIONS IMPACTED
##### Older Adults

> Older adults. - Other Health Provider (Clay County)

Older adults and those who live in poverty. - Other Health Provider (Clay County)

### Children and Older Adults

Seniors and children. - Community Leader (Clay County)

Children and elderly. - Community Leader (Clay County)

## Adverse Childhood Experiences/Childhood Trauma

### STRENGTHS

### Awareness/Education

Education about trauma-informed care and increasing protective factors. My own personal education around this subject has shown the importance of helping promote positive, live-giving connections. This includes making sure that basic needs are met, such as housing, food, health care/dental care, and childcare. Employment also supports health and wellbeing. – Social Services Provider (Clay County)

### School System

School nurses, school counselors however there are not enough of them and they are shared between schools. – Other Health Provider (Clay County)

Good and adequate counseling resources in our school system and mental health system. – Other Health Provider (Clay County)

### Access to Care/Services

More qualified providers to serve this population. – Community Leader (Clay County)

### Health Department

Health Department, DSS, Clay County Smart Start team, and Juvenile Justice Prevention. – Community Leader (Clay County)

### Mentors

Mentors from outside of family, positive activities for children and youth. Not only athletic, parent education on building resiliency in children. – Community Leader (Clay County)

### CHALLENGES

### Awareness/Education

Lack of parent education, substance use, stigma, and the lack of people having access to safe and fun activities. – Other Health Provider (Clay County)

### Access to Care/Services

> Not enough of face to face care right now. – Community Leader (Clay County)

> Lack of adequate resources for identification and treatment. – Other Health Provider (Clay County)

### Alcohol/Drug Use

> Unfortunately, research suggests a strong link between substance misuse and ACEs/Childhood Trauma.  Clay County struggles with substance misuse.  Substance misuse is the leading cause for CPS reports, as well as the leading contributing factor for children entering foster care in Clay County.  The problems can increase exponentially to the children because of the loss of connections the children and parents suffer. There is a lack of services in Clay County for providing trauma-informed care/therapy.  This is a need. – Social Services Provider (Clay County)

### Denial/Stigma

> Fear of being known, low self confidence and respect.  Abusers controlling victims. – Community Leader (Clay County)

### Cultural/Personal Beliefs

> Cultural negativity around seeking help, not affordable, lack of opportunities outside of school, transportation, costs of those activities. – Community Leader (Clay County)

## POPULATIONS IMPACTED

### Children

> Children in particular, especially younger children. – Other Health Provider (Clay County)

> Children and older adults. – Community Leader (Clay County)

### Low Income

> Low income families. – Community Leader (Clay County)

### All Populations

> All segments are impacted.  This crosses over and touches all socio-economic groups.  I think it is most easily identified with parents and children because of the extra eyes through the schools, doctors, coaches, etc. – Social Services Provider (Clay County)

### Low Income Children

> Children living in poverty and children in Appalachia in general. – Community Leader (Clay County)

### Substance Abusers

> Substance users having babies. – Other Health Provider (Clay County)

## Availability of Primary Care Providers, Specialists, Hospitals, or Other Places That Provide Healthcare Services

### STRENGTHS

#### Local Providers

> There are several practices that have recently opened up within our community and the surrounding tri-state area that has primary care offices available. There is also collaborative efforts within those practices in which they share information systems with local hospitals. This helps when patients are admitted to facilities locally. - Community Leader (Clay County)

#### Access to Care/Services

> Access to primary care providers and specialists, especially in this area.  As a dentist, my patients are required to travel long distances in order to see a specialist. - Other Health Provider (Clay County)

> As more PCP and specialists are relocating, most residents still have to travel to receive care. - Community Leader (Clay County)

#### Access to Care for Uninsured/Underinsured

> Majority of individuals in the county qualify for Medicaid. - Other Health Provider (Clay County)

### CHALLENGES

#### Access to Care/Services

> Lack of access to specialists. - Other Health Provider (Clay County)

#### Lack of Providers

> Lack of providers. - Other Health Provider (Clay County)

#### Transportation

> Transportation and distance. - Community Leader (Clay County)

#### Affordable Care/Services

> Although there are several options of primary care offices, there is still an issue with payment. Financial barriers are one of the biggest issues that we face when it comes to seeking health care. Many residents are not even insured so they are responsible for paying for services out-of-pocket. This can get costly for patients who have several healthcare issues. It is not just the appointments that can become costly. The cost of medication can also raise issues with compliance and therapeutic management. - Community Leader (Clay County)

## POPULATIONS IMPACTED

### Low Income

> The general population is effected.  In particular are low income families.  Also, elderly patients have a difficult time traveling long distances. - Other Health Provider (Clay County)

### All Populations

> All. - Other Health Provider (Clay County)

### Veterans

> Veterans and older adults. - Community Leader (Clay County)

### Immigrants/Refugees

> This issue is noted with immigrants in our area, lower socioeconomic class residents of all races and ethnic groups, and all ages. - Community Leader (Clay County)

## Community Safety

## STRENGTHS

### Community Partners

> Community partners working together. – Community Leader (Clay County)
>
> The schools and churches support the health and well-being. – Other Health Provider (Clay County)

## CHALLENGES

### Access to Care

> Not enough treatment providers for residents with addictions. – Community Leader (Clay County)

### Politics

> Politics over facts. – Other Health Provider (Clay County)

## POPULATIONS IMPACTED

### All Populations

> Middle age to older adults. – Community Leader (Clay County)

### Elderly

> Older adults, specifically men. – Other Health Provider (Clay County)

## STRENGTHS

### School System

> We have several local partnerships with groups within the school system. Communities for Students is a phenomenal group that supports "background" issues in these students lives that may be affecting their ability to obtain a proper education or focus on school itself. – Community Leader (Clay County)

> Schools and churches. – Community Leader (Clay County)

### Awareness/Education

> Lack of parental support early in life. – Other Health Provider (Clay County)

> The hiring of good and competent educational personnel. – Other Health Provider (Clay County)

### Community Partners

> Local agencies. – Community Leader (Clay County)

### Awareness/Education

> One of the major issues within our community is the lower education level of residents. These parents and grandparents, who are sometimes responsible for raising these children, have a lower-level education and find it hard to complete assignments with the kids. Students may have a support system, but that system may not be able to help them because of their educational deficits. Being rural so rural we also have a lower socioeconomic class which, are statistically higher to have low educational achievements. – Community Leader (Clay County)

### Income/Poverty

> Poverty. – Community Leader (Clay County)

> Income and lack of parental interest. – Other Health Provider (Clay County)

### Transportation

> Transportation, no family support. – Community Leader (Clay County)

### Employment

> Low pay for teachers and support personnel in the school system. – Other Health Provider (Clay County)

## POPULATIONS IMPACTED

### Children

> School aged children. – Community Leader (Clay County)

> Children and single parents. – Community Leader (Clay County)

> Children. – Community Leader (Clay County)

Children. – Other Health Provider (Clay County)

## Family & Social Support

### STRENGTHS

### Family and Social Supports

Strong families looking out for one another. – Other Health Provider (Clay County)

There have been some successes with family and social supports.  Rock Bottom Recovery, AA Groups, Celebrate Recovery, Peer Support and Sweetwater Church have all been wonderful supports for Substance Misuse Recovery.  These supports are not only for the person struggling with addiction, but also for the person's family.  There are many grandparents, aunts, uncles, and even great-grandparents raising children.  The community has tried to recognize this and provide extra support for these families as needs arise.  The community has a support group for this.  Clay County has a strong faith-based support network that works to support families.  There is just such a strong "informal" support network within the county. – Social Services Provider (Clay County)

### CHALLENGES

### Awareness/Education

Education. – Community Leader (Clay County)

### Mental Health

Clay County struggles with formal supports, such as mental health services, that are rooted in trauma-informed care.  It would be helpful to expand the number of safe, quality activities available to young people.  This supports the family and social structure. Affordable childcare is always needed to support working families. Additional home health agencies needed to support the elderly and disabled. – Social Services Provider (Clay County)

### Alcohol/Drug Use

Scattered families often due to drug abuse. – Other Health Provider (Clay County)

### POPULATIONS IMPACTED

### Low Income

Lower income families. – Other Health Provider (Clay County)

### Single Parent Homes

Single parents. – Community Leader (Clay County)

## Income & Employment

### STRENGTHS

#### Community Partners

> Local agencies including non-profits like Four Square Community Action, Hinton Rural Life and area churches. Places for activities are vital as well such as the park, and lake. – Community Leader (Clay County)

> A good community is dependent on people being able to sustain themselves and their families through employment. There are good programs that support employment and education, such as the WIOA program through Tri-County Community College. Additionally, the programs available through Tri-County Community College allow people to get vocational degrees at little or no cost. These are valuable programs, but they appear to be under-utilized. – Social Services Provider (Clay County)

### CHALLENGES

#### Employment

> It appears that there low-paying jobs available, but there appears to be lack of incentive to take these positions because of the current enhanced unemployment. Additionally, substance misuse is a major barrier towards motivation to obtain and maintain employment. The barriers created by this include a criminal background (making employers reluctant to hire), possibly lose of driver's license, loss of motivation, in and out of jail, loss of life skills. There is a segment of the population that struggles with basic life skills, such as maintaining housing and employment. – Social Services Provider (Clay County)

#### Income/Poverty

> Costs and poverty level of individuals seeking services as well as what I refer to as Western Appalachian Pride. The not ask for help or anything attitude. – Community Leader (Clay County)

### POPULATIONS IMPACTED

#### All Populations

> People that are older and in the very low to poverty level brackets as well as native American descendants and older adults. Veterans also encounter issues as do specific neighborhood residents. – Community Leader (Clay County)

#### Teens/Young Adults

> I believe it is the early adulthood segment of the population. – Social Services Provider (Clay County)

## Intimate Partner Violence (IPV)

### STRENGTHS

#### Community Partners

> Have a domestic violence program and shelter. – Community Leader (Clay County)

### CHALLENGES

#### Contributing Factors

> Attitudes that domestic violence is ok. Challenges for victim when reporting it.  Cost, missing work, derogatory comments by professionals involved.  If you live in poverty, likely that you do not have the support to follow through with charges.  Law enforcements attitude. – Community Leader (Clay County)

### POPULATIONS IMPACTED

#### Women and Children

> Women in poverty with children and no means of surviving independently. – Community Leader (Clay County)


## Public Transportation

### STRENGTHS

#### Transportation Options

> Public transportation provides access to medical appointments, as well as meals at the senior center, transportation to employment, grocery shopping, etc. – Community Leader (Clay County)

### CHALLENGES

#### Funding

> There are challenges in planning growth for the transit system.  Grant funding has been uncertain for the past couple of years. – Community Leader (Clay County)

## Safe & Healthy Housing

### STRENGTHS

#### Community Partners

> Department of Social Services. – Other Health Provider (Clay County)

> Hinton Rural Life Center.  Safe and healthy homes check, and working on community education initiative.  Church volunteers. – Community Leader (Clay County)

### CHALLENGES

#### Housing

> There are not enough affordable housing in the area.  There is a lack of apartments, complexes that promote single parent, single income living. – Other Health Provider (Clay County)

> Poverty, lack of available housing. – Community Leader (Clay County)

> Lack of understanding of impact of substandard housing on health.  Missing big picture – of cost of minor repair versus cost of medical bills or loss of job due to illness/injury as a result of poor housing.  No outside agency regulating substandard housing.  Housing stock limited, so renters take what they can get.  Houses are passed down from family member to family member without assessment of home that would occur in a sale of property. – Community Leader (Clay County)

### POPULATIONS IMPACTED

#### Low Income

> Those living in poverty. – Community Leader (Clay County)

#### Elderly

> Elderly. – Community Leader (Clay County)

#### Disabled

> Individuals on disability. – Other Health Provider (Clay County)

## Tobacco-Free Spaces

### STRENGTHS

#### Tobacco-Free Space Policies

> We have tobacco safety campaigns that are promoted by the LHD and also offer pamphlets with quit line instructions.  There are also resources for tools to help stop smoking such as, the gum or patches. – Community Leader (Clay County)

## CHALLENGES

### Tobacco Use

> Our community is true Appalachian and many of our residents were raised in tobacco fields and started smoking at earlier ages. Children are more likely to smoke if they come from a home where there is smoking. Also, lower socioeconomic class individuals are more likely to smoke as well. Our community may have several promotional mitigation strategies for smoking cessation but, there isn't a lot of engagement from our population. Individuals may initiate cessation but, there is also an issue of follow through. – Community Leader (Clay County)

## POPULATIONS IMPACTED

### Low Income

> Lower class Caucasian residents. – Community Leader (Clay County)

## Uninsured/Underinsured

## STRENGTHS

### Access to Care for Uninsured/Underinsured

> Improving access to specialists. – Other Health Provider (Clay County)

## CHALLENGES

### Access to Care/Services

> Lack of specialists in this area. – Other Health Provider (Clay County)

## POPULATIONS IMPACTED

### All Populations

> All. – Other Health Provider (Clay County)

**Key informants taking part in the Online Key Informant Survey were asked to rate each of 14 health issues; the following chart illustrates those most often identified as "major problems" in their own communities.**

## Clay County Key Informants: Relative Position of Health Topics as Problems in the Community

Legend: ■ Major Problem ■ Moderate Problem ■ Minor Problem ■ No Problem At All

| Health Topic | Major Problem | Moderate Problem |
|---|---|---|
| Substance Misuse | 100.0% | |
| Mental Health | 85.7% | 14.3% |
| Heart Disease and Stroke | 71.4% | 28.6% |
| Obesity | 71.4% | 28.6% |
| Dementia/Cognitive Decline | 61.5% | 30.8% |
| Cancer (All Types) | 57.1% | 42.9% |
| Pre-Diabetes/Diabetes | 57.1% | 42.9% |
| Oral Health | 35.7% | 50.0% |
| Chronic Lung Disease | 30.8% | 61.5% |
| Unintentional Falls | 23.1% | 61.5% |
| Asthma | 15.4% | 53.8% |
| HIV/Hepatitis B/Hepatitis C | 15.4% | 30.8% |
| Sexually Transmitted Infections | 9.1% | 63.6% |
| Birth Outcomes/Infant Mortality | 18.2% | |