# AVERY COUNTY COMMUNITY HEALTH ASSESSMENT

## ACKNOWLEDGEMENTS

This document was developed by Avery County Health Department, in partnership with Health Carolinians 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:

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<td>Phone: 828-264-1532</td>
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Purpose and Process

The purpose of this Community Health Assessment is to learn about the health status and quality of life concerns of Avery County residents, collaborate with citizens by soliciting input from the community, and to provide an overview of resources that exist for handling those concerns. This document is the result of collaboration between Toe River Health District and the Healthy Carolinians Partnership. The Community Health Assessment employed both primary and secondary data to identify and examine the concerns and strengths of Avery County.

Overview

The 2016 Community Health Assessment, completed every four years, outlines the community’s current health status. Based upon findings, steps have been developed to implement interventions, as well as, community resources to address these health issues. The Community Health Assessment team is comprised of many participants representing area agencies in Avery County, North Carolina. Many local organizations assisted the local health department with the creation of this document. Among those were community leaders, public health agencies, businesses, medical community, school systems, and local faith-based organizations and churches. This team worked to identify, collect, analyze, and disseminate information on community assets, strengths, resources, and needs.

Data Summary

Community

Avery County is a rural county with a population 17,516 (93.6% white, 4.4% Black, 4.8% Hispanic) the county is located in the Blue Ridge Mountains of Western North Carolina and faces a crisis in the burden of chronic disease. According to the North Carolina State Center for Health Statistics, the rates of heart disease, cancer, and respiratory disease are higher for Avery County than for the State. Additionally, there is a high prevalence of the risk factors linked to these diseases. Per Western NC regional data 61% of adults are overweight or obese; 56% do not meet national recommendations for physical activity; 71% consume less than 5 servings of fruits and vegetables daily; and 22% of adults currently smoke, a rate higher than the state. Additionally, Avery County has a rapidly growing older population; currently at 20.9%. By 2030, projections estimate that there will be more than 26%, which is almost 4,000 people 65+ that will be living in the area.

Avery County, like the United States, is undergoing significant societal changes that make it increasingly difficult for people to engage in healthy lifestyle behaviors. Residents are facing challenges related to limited access to fresh fruits and vegetables, limited opportunities for physical activity, less physical activity in schools, and problems with physical education in schools. In addition, people living in Avery County face challenges unique to the rural mountain region. These challenges include: geographic isolation with limited roadways and transportation
systems; limited economic development with few employers able to provide health insurance plans contributing to high rates of uninsured (17.6%); and high rates of people living in poverty (19.8%).

Health Outcomes

A health department-led comprehensive Community Health Assessment (CHA) in 2012 provided community insight into the health status of the county. Through the use of surveys, focus groups, interviews, community members, local government and business leaders, and health professionals came together to identify and prioritize health issues. Lack of adequate transportation, lack of education relating to healthy lifestyle behaviors, and a high number of senior residents with multiple chronic diseases were all identified as priority issues. Participating in the assessment process put the county in a position to take the next steps in developing policy, environment, and system changes that support healthy lifestyles and behaviors.

Currently in Avery County there is a coalition to bring together all the organizations and individuals that are committed to improving health in the county. This group consists of motivated individuals who are advocates on behalf of a broad range of community members and can represent appropriately the concerns of various populations within the county. The limited resources available in the county demonstrates a need for a coalition who will take responsibility and provide leadership for promoting and supporting policy, systems and environmental change that support healthy eating, and increase physical activity and prevent tobacco use throughout the county to combat most chronic disease conditions.

Health Priorities

During monthly meetings, standards for the Community Health Assessment Process and Accreditation were discussed and reviewed for publication in the 2016 Community Health Assessment. Each member reviewed and approved of the Community Health Assessment Survey and Community Resource Directory included in the assessment. After the analysis was completed, of 220 random surveys, qualitative and quantitative data findings were presented to the Community Health Assessment team. The team reviewed the data and developed the top ten major health issues based upon statistical data and community survey results.

Prioritizing Health Concerns

During the months of February through August 2016, a community-wide, 76-question survey was conducted to give residents an opportunity to express concerns and opinions about the quality of life in Avery County. This included questions about the quality of life, economy, education, environment, health, housing, leisure activities, safety, social issues, transportation, and emergency preparedness. Surveys were emailed and passed out strategically across the county in an effort to reach a wide variety of the population. A total of 220 surveys were included in the final analysis. Based on findings from the community survey combined with secondary health data, in August 2016, Healthy Carolinians of Avery County members identified ten (10) chief health concerns for the county.
The top ten health concerns are as follows:
1. Chronic Disease
2. Cancer
3. Substance Abuse
4. Health Behaviors/Lifestyles
5. Access to Healthcare
6. Mental Health
7. Positive Activities for Youth/Teenagers
8. Social Determinants of Health
9. Availability of Employment
10. Sexually Transmitted Diseases

In November 2016, Healthy Carolinians of Avery County along with the CHA Team members participated in a prioritization activity to determine the three leading health concerns to be addressed during 2015-2019. The worksheet asked that each of the ten concerns be ranked, as to find a top three concerns to take action.

The results from the prioritization process are reviewed and discussed at the meeting. The final health concerns are named as the focus for the next four-year cycle, 2016-2020.

Results of these worksheets were calculated to come up with the top three priorities, which are as follows:
1. Substance Misuse and Abuse
2. Cancer
3. Unhealthy Behaviors and/or Lifestyles

Next Steps

The 2016 CHA will be disseminated in a variety of ways. To begin, the document will be made available online at http://www.toeriverhealth.org/Comm_Health.asp. Hard copies will also be available at the Health Department, local library, and printed upon request.

The CHA Facilitator will present the CHA data during a Board of Health Meeting, Healthy Carolinians of Avery County steering committee meeting, Avery County Health Department staff meeting, and upon request.

Further steps will be taken including the development of a community health improvement plan based on the findings from the CHA. The CHA Facilitator will convene community members and partners interested in moving forward on the selected health priorities. Action teams will emerge from the selected health priorities and the teams will begin brainstorming evidence-based strategies. While much work has already been done to improve the health of our community’s residents, more work is left to do to ensure that Avery County is the healthiest place to live, learn, work, and play.
CHAPTER 1 – COMMUNITY HEALTH ASSESSMENT PROCESS

Purpose

Community health assessment (CHA) is an important part of improving and promoting the health of county residents. Community-health assessment is a key step in the ongoing community health improvement process.

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

Definition of Community

Community is defined as "county" for the purposes of the North Carolina Community Health Assessment Process. Avery County is included in Healthy Carolinians Partnership for the purposes of community health improvement, and as such they were key partner in this local level assessment.

Data Collection

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

Core Dataset Collection

The data reviewed as part of our community’s health assessment came from regional core set of data and additional local data compiled and reviewed by our local CHA team. The core regional dataset includes secondary (existing) and primary (newly collected) data compiled to reflect a comprehensive look at health. The following data set elements and collection are supported by the CHA 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 as “peer”
- Set of maps accessed from Community Commons and NC Center for Health Statistics
• Telephone, email, and handwritten survey of a random sample of adults in the county
• Email key-informant survey

Health Resources Inventory

An inventory of available resources of our community was conducted through reviewing a subset of existing resources currently listed in the 2-1-1 database for our county as well as working with partners to fill in additional information. Where gaps were identified, we partnered with 2-1-1 to fill in or update this information when applicable. See Chapter 7 for more details related to this process.

Community Input & Engagement

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

• Partnership on conducting the health assessment process
• Through primary data collection efforts
• In the identification and prioritization of health issues

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

At-Risk & Vulnerable Populations

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

To assist in data analysis, reporting prioritization and health improvement planning, we came up with the following definitions and examples for underserved, at-risk, and vulnerable populations.

• The underserved are community members who do not access health care either because there is a lack of services or providers available or because of limitations of income, literacy, or understanding on how to access services. Avery County has high Health Professional Shortage Area (HPSA) score (Mental Health: 12; Primary Care: 17; and Dental Health: N/A) proving that all residents in Avery County are underserved. More specific examples of underserved populations in Avery County include the un- or under-insured, residents living below poverty level, residents with limited educational attainment, etc.
• Those at-risk are community members of a group who are likely to, or have the potential to, get a specified health condition. Examples of at-risk populations in Avery County include residents who are low income, minorities, who are un- or under-insured, who smoke, who abuse substances, are obese/overweight, who are sedentary, do not eat the recommended amount of fruits and vegetables, etc.

• The vulnerable are community members that may be more susceptible than the general population to risk factors that lead to poor health outcomes. Examples of vulnerable populations in Avery County include residents living below poverty level, residents using WIC/FNS services, older adults, etc.
CHAPTER 2 – AVERY COUNTY

Location and Geography

Avery County is a natural wonderland, with a rugged terrain and a unique climate; straddling the eastern continental divide at 4,000 feet above sea level. The Blue Ridge Parkway snakes through Avery County’s backyard combining nature and the human achievement of the Linn Cove Viaduct. Temperatures in Avery County average ten degrees cooler than in cities like Asheville and Charlotte. The average high temperatures are in the seventies in the summer and in the thirties in the winter. The highest temperature ever recorded at the US Weather Service reporting station on Grandfather Mountain was 83 degrees in August, 1983, and the lowest was minus 32 degrees in January, 1985. The average winter snowfall is 58 inches. This combined with artificial snow made at the ski resorts keeps the slopes covered from mid-November through March. Average rainfall is 57 inches. This combined with the snowfall keeps the land plush and mountain streams full.

History

Avery County was named after Colonel Waightstill Avery of Morganton, NC. Colonel Avery served in the Revolutionary War from 1779 until 1781. He became the first Attorney General of North Carolina after the Declaration of Independence was signed. The town of Newland, at 3,589 feet in elevation, is the highest county seat in eastern America. Its original name was "Old Fields of Toe" because it is located in a broad flat valley and is at the headwaters of the Toe River. Avery County was formed in 1911 from parts of Caldwell County, Mitchell County, and Watauga County. It is often noted for the large amount of Christmas trees that the county produces. "A History of Avery County" was published in 1972 by Horton Edward Cooper. In it he noted: “Because people make history, our citizens show an intense interest in the events of the past and are displaying eagerness more than ever in local history; too, they have become eagerly interested in genealogy. All mountaineers enjoy a good anecdote. The people of Avery County are not all descendants of pioneers who came into this rugged land a good many generations ago, but we are proud of those and their descendants who can trace their ancestry to the four points of
the compass... As a rule, our families are close-knit units and family pride exists no higher on earth than here. No stronger love for America and the American flag can be found anywhere in our country. We are proud of our inheritance, which for our rugged pioneer ancestors and several generations meant hardship, often disappointing toil, loneliness, self-sufficiency and a struggle for survival.”

**Population**

Understanding the growth patterns and age, gender, and racial/ethnic distribution of the population in Avery County will be keys in planning the allocation of health care resources for the county in both the near and long term.

**Current Population (Stratified by Gender, Age, and Race/Ethnicity)**

Per data from the 2010 US Census, the total population of Avery County is 17,516. In Avery County, as region-wide and statewide, there is a higher proportion of males than females (54.4% vs. 45.6%).

<table>
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<th>Overall Population and Distribution, by Gender</th>
<th>Total Population (2010)</th>
<th># Males</th>
<th>% Males</th>
<th># Females</th>
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<td>Avery County</td>
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In Avery County 17.4% of the population is in the 65-and-older age group, compared to 19.0% region-wide and 12.9% statewide. The median age in Avery County is 42.3, while the regional mean median age is 44.7 years and the state median age is 37.4 years.

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<td>60.2</td>
<td>1,234,079</td>
<td>12.9</td>
</tr>
</tbody>
</table>

In terms of racial and ethnic diversity, Avery County is less diverse than either WNC or NC as a whole. In Avery County the population is 91.9% white/Caucasian and 4.7% non-white. Region-wide, the population is 89.3% white/Caucasian and 11.7% non-white. Statewide, the comparable figures are 68.5% white and 31.5% non-white. The proportion of the population that self-identifies as Hispanic or Latino of any race is 4.5% in Avery County, 5.4% region-wide, and 8.4% statewide.
Population Distribution, by Racial/Ethnic Groups

<table>
<thead>
<tr>
<th>Population Distribution, by Racial/Ethnic Groups</th>
<th>White</th>
<th>Black or African American</th>
<th>America n Indian, Alaskan Native</th>
<th>Asian</th>
<th>Native Hawaiian, Other Pacific Islander</th>
<th>Other Race</th>
<th>Two or More Races</th>
<th>Hispanic or Latino (of any race)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avery County</td>
<td>91.9</td>
<td>4.0</td>
<td>0.4</td>
<td>0.3</td>
<td>0.0</td>
<td>2.4</td>
<td>0.8</td>
<td>4.5</td>
</tr>
<tr>
<td>Regional Total</td>
<td>89.3</td>
<td>4.2</td>
<td>1.5</td>
<td>0.7</td>
<td>0.1</td>
<td>2.5</td>
<td>1.8</td>
<td>5.4</td>
</tr>
<tr>
<td>State Total</td>
<td>68.5</td>
<td>21.5</td>
<td>1.3</td>
<td>2.2</td>
<td>0.1</td>
<td>4.3</td>
<td>2.2</td>
<td>8.4</td>
</tr>
</tbody>
</table>

Population Growth Trend

Between the 2000 and 2010 US Censuses the population of Avery County decreased by 0.3% while the population of WNC grew by 13%. The rate of population is projected to grow in Avery County, but at a slow rate of 0.7%, 1.1%, and 0.6%. Double-digit (or near double-digit) positive population growth figures are projected for WNC and for NC over the same period.

<table>
<thead>
<tr>
<th>Decadal Population Growth Rate by Geography; % Total Population Growth</th>
<th>2000 to 2010</th>
<th>2010 to 2020</th>
<th>2020 to 2030</th>
<th>2030 to 2036</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avery County</td>
<td>-0.3</td>
<td>0.7</td>
<td>1.1</td>
<td>0.6</td>
</tr>
<tr>
<td>Regional Total</td>
<td>13.0</td>
<td>11.6</td>
<td>9.6</td>
<td>38.2</td>
</tr>
<tr>
<td>State Total</td>
<td>15.6</td>
<td>11.3</td>
<td>9.6</td>
<td>44.5</td>
</tr>
</tbody>
</table>

The growth rate of a population is a function of emigration and death rates on the negative side, and immigration and birth rates on the positive side. As illustrated by the data below, the birth rate in Avery County, higher in most years except one of the comparable mean WNC and NC rates, remained roughly static at around 11.4 births per 1,000 persons over the five aggregate periods between 2003-2007 and 2004-2008; and keeps dropping throughout the periods of 2005-2009 to 2006-2010. The birth rate from 2008-2012 also decreased to 10.3, and kept decreasing from 2009-2013 to 9.0. Initially the latest data has the birth rate increasing from that of 2009-2013 with the 2010-2014 data reading 9.9, up 0.9 from the earlier years.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Avery County</td>
<td>11.4</td>
<td>11.4</td>
<td>11.3</td>
<td>11.1</td>
<td>10.7</td>
<td>10.3</td>
<td>9.0</td>
<td>9.9</td>
</tr>
<tr>
<td>Regional Arithmetic Mean</td>
<td>10.8</td>
<td>10.8</td>
<td>10.8</td>
<td>10.7</td>
<td>10.5</td>
<td>10.2</td>
<td>9.8</td>
<td>9.6</td>
</tr>
<tr>
<td>State Total</td>
<td>14.2</td>
<td>14.2</td>
<td>14.2</td>
<td>14.1</td>
<td>13.8</td>
<td>13.5</td>
<td>13.0</td>
<td>12.6</td>
</tr>
</tbody>
</table>

Older Adult Population Growth Trend

As noted previously, the age 65-and-older segment of the population represents a larger proportion of the overall population in Avery County and WNC than in the state as a whole. In terms of future health resource planning, it will be important to understand how this segment of the population, a group that utilizes health care services at a higher rate than other age groups, is going to change in the coming years. The table below represents the growth trend within Avery County in the years 2013-2015. It is clear that besides one exception the elderly population is increasing within Avery County North Carolina. Ages 75-84 years old have shown slow, but
steady increase. The same is true for ages 65 to 74, and ages 55 to 59. Age 85 and older has shown to stay close to the same. With this said it is clear that the baby boomer generation has increased the older community within Avery County. This is leading to a decrease in Christmas tree farming as the younger generation is taking on different work opportunities. This will lead to new problems within the Avery County area of trying to take care of this older generation that is slowly a slow but steady increase.

<table>
<thead>
<tr>
<th>Percent of Population</th>
<th>55 to 59 Years Old</th>
<th>60 to 64 Years Old</th>
<th>65 to 74 Years Old</th>
<th>75 to 84 Years Old</th>
<th>85 Years and Older</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>7.1%</td>
<td>6.6%</td>
<td>10.3%</td>
<td>6.1%</td>
<td>1.8%</td>
</tr>
<tr>
<td>2014</td>
<td>7.7%</td>
<td>6.0%</td>
<td>10.8%</td>
<td>6.0%</td>
<td>2.1%</td>
</tr>
<tr>
<td>2015</td>
<td>8.1%</td>
<td>5.5%</td>
<td>11.4%</td>
<td>6.5%</td>
<td>1.9%</td>
</tr>
</tbody>
</table>
Chapter 3 – A Healthy Avery County

Elements of a Healthy Community

The people of Avery County completed a survey describing the quality of their community and the elements they thought contributed to making it healthy. These questions from the survey assessed the quality of living, what could improve, and the reasons as to why the community has suffered. This section will summarize and assess the main questions that were asked. When asked about how Avery County was an overall place to live approximately 10% assessed it was excellent, 40% said very good, approximately 30% said good, under 10% said fair, while below 5% said poor (located in the graph to the left). When asked what would be the one thing that needs the most improvement the three highest answer choices were availability of employment, higher paying employment, and positive teen activities. Another question asked on the survey was if there was a time in the past twelve months when they needed medical care but could not access it, and under 20% said yes while approximately 80% said no. When the people of Avery County were asked the last time they had a routine check up they answered majority within the past year 60%, 20% approximately 20% answered within the past two years, and within 5 years/ 5 or more years both were approximately 10%. The main reason for not getting this care was overwhelmingly cost or no insurance.

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

- Beautiful land geographically, beautiful country
- Citizens who have lived their whole lived there
- Raising families and generations there
- History and connectedness within the population and communities
- Location/Outdoor spaces and opportunities for recreation (hiking, hunting, fishing, and other recreation for the mountains)
- Willingness to help others
- Agencies come together to network and attempt to address health issues facing the community
- New resources available in the area (dental clinic and community health center)
- Networking of the local churches and faith community
- Tourism opportunities
CHAPTER 4 – SOCIAL & ECONOMIC FACTORS

Income

Median Household and Family Income

As calculated from the most recent estimate (2007-2011), the median household income in Avery County was $37,985, compared to a mean WNC median household income of $37,815, a similar figure to Avery County’s rate.

Population in Poverty

The poverty rate is the percent of the population (both individuals and families) whose money income (which includes job earnings, unemployment compensation, social security income, public assistance, pension/retirement, royalties, child support, etc.) is below a federally established threshold. (This is the “100%-level” figure.)

The 100%-level poverty rate was 19.7% in Avery County in 2011-2015 period. The poverty rate in Avery County was higher than the comparable rates in both WNC and NC. The current poverty rate for NC is 17.2%; the rate for WNC is 23.4%.

Employment

Employment provides income and benefits that can support healthy lifestyle choices. Conversely, unemployment and under-employment can limit these choices. With adults spending nearly half of their waking hours at work, it is ideal to work in a supportive workplace that provides benefits such as health insurance, paid sick leave, and even workplace wellness programs. Unfortunately, the “working poor” do not see many of these opportunities – they may not be able to afford quality child care and can lack paid leave to care for their families and themselves. Further, the unemployed face challenges such as low-income, lack of health insurance, and greater risk of increased stress, high blood pressure, heart disease, and depression.

As of 2012, the top ten employment sectors in Avery County with the largest proportions of workers (and approximate number of employees) were:

1. State of NC Department of Corrections (500-999)
2. Avery County Schools (250-499)
3. County of Avery (250-499)
4. Appalachian Regional Healthcare System (100-249)
5. Lees-McRae College (100-249)
6. Sugar Mountain Resort (100-249)
7. Consolidated Resources Health Care (Hospital) (100-249)
8. High Country Home Care (100-249)
9. Lowers Food Stores (50-99)
10. Lowes Home Center (50-99)

Avery County has no major industries. Tourism is the leading industry in Avery, generating $51 million in sales each year. The second largest industry is home construction. The third greatest
source of income, comes from agricultural production. Being that Avery County is known as the “Christmas Tree Capital of the World” and this agriculture industry brings in roughly $34 million dollars in income annually.

Unemployment

This table summarizes the annual unemployment rate for 2009 through 2014. From these data, it appears that the unemployment rate in Avery County was similar to comparable figures for both WNC and NC as a whole throughout the period from 2009-2014. With Avery County being 0.3% higher than the state average of unemployment.

<table>
<thead>
<tr>
<th>Geography</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avery County</td>
<td>8.4</td>
<td>10.4</td>
<td>9.8</td>
<td>11.2</td>
<td>8.5</td>
<td>6.4</td>
</tr>
<tr>
<td>Regional Arithmetic Mean</td>
<td>11.8</td>
<td>11.8</td>
<td>11.5</td>
<td>10.6</td>
<td>9.3</td>
<td>6.5</td>
</tr>
<tr>
<td>State Total</td>
<td>10.5</td>
<td>10.9</td>
<td>10.5</td>
<td>7.8</td>
<td>8.4</td>
<td>6.1</td>
</tr>
</tbody>
</table>

Education

It is helpful to understand the level of education of the general population, and with what frequency current students stay in school and eventually graduate.

Educational Attainment

The table below provides data on the proportion of the population age 25 and older with one of two levels of educational attainment: high school or equivalent and a bachelor’s degree or higher. In these terms, the most current data shows in 2010-2014, Avery County had a high school graduation rate of 79.5%, compared to the NC rate of 76.6%. At the bachelor’s and greater level the proportional attainment in the county 18.9% compared to the NC rate at 27.8%.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Avery</td>
<td>NC</td>
<td>Avery</td>
</tr>
<tr>
<td>High School graduate or higher (% of people 25+)</td>
<td>81.3</td>
<td>83.6</td>
<td>81.5</td>
</tr>
<tr>
<td>Bachelor’s Degree or higher (% of people 25+)</td>
<td>20.3</td>
<td>26.1</td>
<td>19.3</td>
</tr>
</tbody>
</table>

Current High School Graduation Rate

Avery County Schools ranked fourth in the state with a graduation achievement of 90.1 percent, the first time ever for Avery County Schools. Avery County Schools is very proud of having the fourth highest graduation rate in North Carolina. Many people throughout the school system and the Avery community deserve credit for their contributions to this first time ever top 10 result. It was not too long ago that Avery’s graduation rate stood at a much lower percentage. The
improved, higher graduation rate comes as a result of the dedication of the students and hard work of adults who surround the students with support. It is amazing what thinking differently, opening up curricular offerings and making things relevant to students can do for a school. However, Avery County Schools cannot be satisfied nor shift into cruise control because the ultimate target is to have 100 percent of the students graduate from high school with their peers.

**Housing**

Because the cost of housing is a major component of the overall cost of living for individuals and families it merits close examination. In Avery County, the percentage of rental housing units in 2010 was 23.5%, compared to the state rate of 46.1%. In WNC, the comparable percentage was 43.7% in the 2010-2014 period. These percentages correspond to state figures of 43.0% and 44.0%, respectively, with a state-level increase of only 2%. Comparable figures for mortgaged housing units in WNC stood at 33.0% in 2005-2009 and 32.6% in 2006-2010, a decrease of 1%. These percentages compare to state figures of 31.4% and 31.7% in the same periods, and a state-level increase of not quite 1%. The total homeowner vacancy rate in 2010 was 4.5% compared to that in 2000 of 1.4%. Total occupied housing units in 2010 were 6,664. The average population in an owner-occupied housing unit was 2.29. The total owner-occupied home in Avery County in 2010 was a grand total of 5,097 compared to the rate of 5,265 in the year of 2000.

**Family & Social Support**

People with greater social support, less isolation, and greater interpersonal trust live longer lives than those who are socially isolated. Therefore, neighborhoods richer in social capital provide residents with greater access to support and resources than those with less social capital. Social support stems from relationships – relationships with family members, friends, colleagues, neighbors, acquaintances. These relationships protect physical and mental health while facilitating healthy behaviors and choices. Conversely, those without social support are at increased risk for poor health outcomes such as increased vulnerability to the effects of stress, cardiovascular disease, overeating, in adults, smoking in adults, and obesity in children. Social associations are a way to measure family and social support. Social associations are the number of membership associations (civic organizations, golf clubs, sports organizations, religious organizations, and more) per 10,000. Avery County as a whole has multiple organizations dedicated to helping including Avery County Rotary Club, Avery County Lions Club, and Avery County Shrine Club. Here are a few of the organizations expanded on The Avery County Rotary Club is a charitable organization in Avery County that participates among the community. They do things such as create and maintain the Cannon Memorial Hospital Playground, they give scholarships to Mayland Community College, purchasing electronic books for Avery County Schools. The Rotary Club also donates to
Grandfather Home, 4H, YMCA, and Habitat for Humanity, and other organizations around Avery County. The Rotary Club also partners with Lees McRae College to help benefit Avery County in the best way possible. The Avery County Shrine Club is another public club that helps assist Avery County. Their mission is to assist Shriners hospitals in providing the best care possible for children while involving the local community. They try to help local children receive care through one of the 22 Shriners Hospitals nationwide.

Another measure of family and social support is the percentage of children in family households that live in a household headed by a single parent. Adults and children in single-parent households are at risk for adverse health outcomes such as mental health problems (substance abuse, depression, suicide) and unhealthy behaviors (smoking, excessive alcohol use). In Avery County, 23.07% of children live in single parent households, compared to 36% as the state rate for NC.
Chapter 5 – Health Data Findings Summary

Mortality

*Life expectancy* is the average number of additional years that someone at a given age would be expected to live if current mortality conditions remained constant throughout their lifetime. The table below presents a recent summary of life expectancy for Avery County, WNC, and NC. The overall life expectancy in Avery County is 79.2 years. This is slightly higher than that of NC (77.7 years). For persons born in 2013-2015, life expectancy among comparator jurisdictions in longest among women than men. From this data, it appears that females born in Avery County in the period cited could expect to live 3 more years longer than males born at the same time.

<table>
<thead>
<tr>
<th>County</th>
<th>Overall</th>
<th>Sex</th>
<th>Race</th>
<th>Sex</th>
<th>Race</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Male</td>
<td>Female</td>
<td>White</td>
<td>African-American</td>
</tr>
<tr>
<td>Avery</td>
<td>79.2</td>
<td>74.7</td>
<td>80.8</td>
<td>77.7</td>
<td>n/a</td>
</tr>
<tr>
<td>WNC (Regional) Total</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>State Total</td>
<td>77.7</td>
<td>75.2</td>
<td>80.2</td>
<td>78.5</td>
<td>75.4</td>
</tr>
</tbody>
</table>

The table below compares the mean rank order of the 10 leading causes of death in Avery County and NC for the five-year aggregate period 2011-2015. (The causes of death are listed in descending rank order for Avery County.) From this data it appears that cancer, heart disease, chronic lower respiratory disease, unintentional injuries, Alzheimer’s disease, cerebrovascular disease, and pneumonia and flu have higher county causes of death rates than the state as a whole.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td># Deaths</td>
<td>Death Rate</td>
<td># Deaths</td>
</tr>
<tr>
<td>1</td>
<td>Diseases of the heart</td>
<td>211</td>
<td>238.5</td>
</tr>
<tr>
<td>2</td>
<td>Cancer - All Sites</td>
<td>181</td>
<td>204.6</td>
</tr>
<tr>
<td>3</td>
<td>Chronic lower respiratory diseases</td>
<td>89</td>
<td>100.6</td>
</tr>
<tr>
<td>4</td>
<td>Alzheimer's disease</td>
<td>53</td>
<td>59.9</td>
</tr>
<tr>
<td>5</td>
<td>Cerebrovascular disease</td>
<td>42</td>
<td>47.5</td>
</tr>
<tr>
<td>6</td>
<td>Pneumonia &amp; influenza</td>
<td>40</td>
<td>45.2</td>
</tr>
<tr>
<td>7</td>
<td>Other Unintentional injuries</td>
<td>39</td>
<td>44.1</td>
</tr>
<tr>
<td>8</td>
<td>Septicemia</td>
<td>18</td>
<td>20.3</td>
</tr>
<tr>
<td></td>
<td>Nephritis, nephrotic syndrome, &amp; nephros</td>
<td>18</td>
<td>20.3</td>
</tr>
<tr>
<td></td>
<td>Suicide</td>
<td>18</td>
<td>20.3</td>
</tr>
</tbody>
</table>
Health Status & Behaviors

- Injury & Violence
- Mental Health & Substance Abuse
- Oral Health

Health Status & Behaviors

According to American’s Health Rankings, the state of NC ranked 35th overall out of 50 United States of America. Bringing this closer to home, the 2015 County Health Rankings ranked Mitchell County 25th overall among 100 NC counties. In terms of health outcomes, Avery County ranked:
- 13th In length of life (includes premature death)
- 29th In quality of life (includes poor or fair health, poor physical health days, poor mental health days, low birthweight)

In terms of health factors, Avery County ranked:
- 17th in health behaviors (including adult smoking, adult obesity, physical inactivity, access to exercise opportunities, alcohol-impaired driving deaths, and more)
- 99th in clinical care (including uninsured, primary care physicians, dentists, mental health providers, mammography screenings, and more)
- 21st in social and economic factors (includes high school graduation, unemployment, children in poverty, social associations, violent crime, and more)
- 19th in physical environment (includes air pollution-particulate matter, drinking water violations, severe housing problems, and more)

A significant amount of data was collected throughout the CHA survey process on self-reports health status. Only 8.8% of Avery County residents that were surveyed stated that this county is a fair/poor place to live. Finally, of those who reported that they were limited in activity in some way due to physical, mental, or emotional problems, most listed difficulty walking, back/neck problems.

Pregnancy and Birth Data

The NC SCHS stratifies much of the pregnancy-related data it maintains into two age groups: ages 15-44 (all women of reproductive age) and ages 15-19 (“teens”). Figures below present
pregnancy rate data for ages 15-44 and 15-19 from 2011-2015. Note that regional rates are presented as *arithmetic means* (sums of individual county rates divided by the number of county rates). These means are approximations of true regional rates, which NC SCHS does not compute.

The pregnancy rate for women ages 15-44 in Avery County (50.3%) was lower than the comparable state rate (60.9%) and lower than the mean WNC rate (57.1%) over the period 2011-2015. The pregnancy rate in Avery County was more variable over the same period, but fell overall, from 69.9 in 2006 to 56.3 in 2009, and an additional decrease to 50.3%. The chart below also shows the different birth rates by race in the age groups of 15-44 of women in Avery County.

<table>
<thead>
<tr>
<th></th>
<th>Total Births</th>
<th>Fertility Rate</th>
<th>White Non-</th>
<th>Fertility Rate</th>
<th>Af. Am. Non-</th>
<th>Fertility Rate</th>
<th>Other Non-</th>
<th>Fertility Rate</th>
<th>Hispanic Births</th>
<th>Fertility Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avery</td>
<td>698</td>
<td>50.3</td>
<td>609</td>
<td>48</td>
<td>5</td>
<td>7</td>
<td>77</td>
<td>110.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Western NC</td>
<td>38,096</td>
<td>57.1</td>
<td>30,622</td>
<td>54.3</td>
<td>1,945</td>
<td>56.6</td>
<td>1,525</td>
<td>72.7</td>
<td>4,004</td>
<td>83.7</td>
</tr>
<tr>
<td>North Carolina</td>
<td>600,927</td>
<td>60.9</td>
<td>335,127</td>
<td>56.2</td>
<td>143,455</td>
<td>59.3</td>
<td>32,809</td>
<td>67.9</td>
<td>89,536</td>
<td>89.6</td>
</tr>
</tbody>
</table>

The pregnancy rate for teens (ages 15-19) in Avery County was quite variable, trending both below and above the mean WNC and NC rates over the period 2011-2015. Avery County’s teen pregnancy rate was 22.1% in the period of 2011-2015. Which represented to be both lower when compared to the WNC rate and the rate of North Carolina. Which were 31.3% and 28.8% respectively. Below shows the teen pregnancy (15-19) rates from 2011 to 2015.

<table>
<thead>
<tr>
<th></th>
<th>Total Births</th>
<th>Fertility Rate</th>
<th>White Non-</th>
<th>Fertility Rate</th>
<th>Af. Am. Non-</th>
<th>Fertility Rate</th>
<th>Other Non-</th>
<th>Fertility Rate</th>
<th>Hispanic Births</th>
<th>Fertility Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avery</td>
<td>61</td>
<td>22.1</td>
<td>54</td>
<td>22.2</td>
<td>0</td>
<td>0</td>
<td>7</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Western NC</td>
<td>3,386</td>
<td>31.3</td>
<td>2,566</td>
<td>29</td>
<td>272</td>
<td>38.6</td>
<td>157</td>
<td>41.8</td>
<td>391</td>
<td>43.7</td>
</tr>
<tr>
<td>North Carolina</td>
<td>46,057</td>
<td>28.8</td>
<td>19,396</td>
<td>20.9</td>
<td>16,037</td>
<td>37.4</td>
<td>1,767</td>
<td>26</td>
<td>8,857</td>
<td>51.2</td>
</tr>
</tbody>
</table>

**Chronic Disease**

**Heart Disease**

Heart disease is an abnormal organic condition of the heart or of the heart and circulation. Heart disease is the number one killer in the US. It is also a major cause of disability. The most common cause of heart disease, coronary artery disease, is a narrowing or blockage of the coronary arteries, the blood vessels that supply blood to the heart itself. This is the major reason people have heart attacks (US National Library of Medicine).

Heart disease was the leading cause of death in WNC, NC and Avery County in the 2009-2013 aggregate period. The heart disease mortality rate in Avery County was somewhat comparable rates for WNC and NC for the past aggregate periods, and other periods the rate jumped dramatically. In the 2006-2010 aggregate period, the rate was 244.8, during the 2011-2015 aggregated period this rate dropped in Avery County to 238.5. On the other hand, heart disease
mortality rates decreased in both Avery County and NC. In NC, the heart disease mortality rate fell from 184.9 for the 2006-2010 aggregate period, and in the 2009-2013 period it was 181.2.

**Total Cancer Mortality**

Cancer is a term for diseases in which abnormal cells divide without control and can invade nearby tissues. Cancer cells also can spread to other parts of the body through the blood and lymph systems. If the disease remains unchecked, it can result in death (National Cancer Institute).

Taken together, cancers of all types compose the second leading cause of death in WNC, NC and Avery County in 2011-2015.

The total cancer mortality rate in Avery County dropped from 237.0 in 2006-2010 to 204.6 in 2011-2015. The total cancer mortality rate for the state was risen from 179.7 to 190.6 over the years of 2007-2015. Avery County’s rates for cancer mortality are still higher than the state averages, but there is a significant decrease in the rate of the pasted five aggregated years.

**Injury and Violence**

Unintentional Injuries are the second leading cause of death for age group 0-19, the second leading cause of death for the age group 20-39, and the fourth leading cause of death for the age group 40-64 years in Avery County.

In 2011-2015 unintentional mortality rates for Avery County where 44.1, the North Carolina rate was 31.5, while WNC’s rate was 44.5. As a county Avery is about equivalent to the regions rate while Avery is still much higher than the North Carolinas rate.

- Chronic Disease (including cardiovascular disease and cancer)
- Injury & Violence
- Mental Health and Substance Abuse
- Oral Health

**Clinical Care & Access**

- Health Insurance
- Health Provider ratios
- Survey data on self-reported access to care and barriers
- May also have key informant data on access to specific care and services

**At Risk Populations**

- Primary and chronic disease needs by uninsured, low-income, and minority groups
CHAPTER 6 – PHYSICAL ENVIRONMENT

Air Quality

Nationally, outdoor air quality monitoring is the responsibility of the Environmental Protection Agency (EPA). In NC, the agency responsible for monitoring air quality is the Division of Air Quality (DAQ) in the NC Department of Environment and Natural Resources (NC DENR). Air pollution is a major environmental risk to health. Poor air quality can lead to many adverse health effects especially in those who are immunocompromised such as the elderly and young children. Poor air quality also heavily affects those with chronic health conditions such as asthma and obstructive pulmonary disorder. Avery County has the highest asthma rate diagnosis rate among adults in North Carolina at 130.9 diagnoses per 100,000 people. Based off the Avery County Community Survey approximately 10% of people in Avery County stated that they either suffered from or had been diagnosed with COPD. This is lower than the prevalence in Western North Carolina (13.5%), but higher than the prevalence in the state of North Carolina (7.4%). Issues related to air quality contribute to cases of both asthma and COPD and worsen the symptoms of existing cases. The average daily density of fine particulate matter in Avery County is 13.01PM/2.5 compared to the overall average of 12.2PM/2.5 in North Carolina (County Health Rankings, 2015). This has remained steady with a slight decrease in the past few years.

Toxic Chemical Releases

Over 4 billion pounds of toxic chemicals are released into the nation’s environment each year. The US Toxic Releases Inventory (TRI) program, created in 1986 as part of the Emergency Planning and Community Right to Know Act, is the tool the EPA uses to track these releases. Approximately 20,000 industrial facilities are required to report estimates of their environmental releases and waste generation annually to the TRI program office. These reports do not cover all toxic chemicals, and they omit pollution from motor vehicles and small businesses (US Environmental Protection Agency, 2015).

North Carolina as a whole ranks 16 out of 56 states/territories nationwide based on total releases per square mile. When looking into the toxic chemical release within Avery County data from 2015 shows that in total on-site and off-site disposal or other releases is 0lbs while the United States compares at 3.3 billion lbs. Total on-site specific releases are as follows air is 0 lbs compared to 687.5 million lbs of the US. Water is 0 lbs while the US is 191.1 million lbs, and land is 0 lbs compared to 2.0 billion of the US. Total off-site production is 0 lbs while the US compares at 500.8 million lbs.

Radon

Radon is a naturally occurring, invisible, odorless gas that comes from soil, rock, and water. It is a radioactive decay product of radium, which is in turn a decay product of uranium; both radium and uranium are common elements in soil. Radon usually is harmlessly dispersed in outdoor air, but when trapped in buildings it can be harmful. Most indoor radon enters a home from the soil or rock beneath it, in the same way air and other soil gases enter: through cracks in the
foundation, floors, hollow-block walls, and openings around floor drains, heating and cooling ductwork, pipes, and sump pumps. The average outdoor level of radon in the air is normally so low that it is not a problem (NC Department of Environment and Natural Resources).

Radon may also be dissolved in water as it flows over radium-rich rock formations. Dissolved radon can be a health hazard, although to a lesser extent than radon in indoor air. Homes supplied with drinking water from private wells or from community water systems that use wells as water sources generally have a greater risk of exposure to radon in water than homes receiving drinking water from municipal water treatment systems. This is because well water comes from ground water, which has much higher levels of radon than surface waters. Municipal water tends to come from surface water sources, which are naturally lower in radon, and the municipal water treatment process itself tends to reduce radon levels even further (NC Department of Environment and Natural Resources).

There are no immediate symptoms to indicate exposure to radon. The primary risk of exposure to radon gas is an increased risk of lung cancer (after an estimated 5-25 years of exposure). Smokers are at higher risk of developing radon-induced lung cancer than non-smokers. There is no evidence that other respiratory diseases, such as asthma, are caused by radon exposure, nor is there evidence that children are at any greater risk of radon-induced lung cancer than are adults (NC Department of Environment and Natural Resources).

Elevated levels of radon have been found in many counties in NC, but the highest levels have been detected primarily in the upper Piedmont and mountain areas of the state where the soils contain the types of rock (gneiss, schist and granite) that have naturally higher concentrations of uranium and radium (NC Department of Environment and Natural Resources). Eight counties in NC historically have had the highest levels of radon, exceeding, on average, 4 pCi/L (pico curies per liter). These counties are Alleghany, Buncombe, Cherokee, Henderson, Mitchell, Rockingham, Transylvania and Watauga, five of which are in the WNC region. There are an additional 31 counties in the central and western Piedmont area of the state with radon levels in the 2-4 pCi/L range; the remaining 61 NC counties, mostly in the piedmont and eastern regions of the state have predicted indoor radon levels of less than 2 pCi/L (NC Department of Environment and Natural Resources).

According to one recent assessment, the regional mean indoor radon level for the 16 counties of WNC was 4.3 pCi/L, over three times the national indoor radon level of 1.3 pCi/L. According to this same source, the level for Avery County was 4.7 pCi/L, higher than the regional level, and over 3 times the national indoor radon level.

**Water**

Water is a fundamental human need and clean water is vital to human health. Access to clean water is crucial to not only our health, but our community and economy as well. Many people in Avery County access their water from local wells or springs. In Avery County, 12,884 county residents were being served by community waters systems in February of 2012.
Access to Healthy Food & Places

Access within Avery County to healthy food and places varies among the county. The county does have access to a farmers market that is located in Banner Elk, North Carolina. Avery County also has access to grocery stores including Lowes Foods, Food Lion, Ingles, and more. There are beautiful places to exercise located throughout Avery County including Grandfather Mountain, Linville Falls, and the Blue Ridge Parkway. Individuals in Avery County can walk through beautiful greenways including Banner Elk Greenway and Newland River Walk. Lacking within the Avery County community is a playground in Newland as the playground there currently is a health hazard. This is an important facility to clearly support physical activity among the child population.

![Importance of Public Access to Facilities](image)

Surveys are taken among the Avery County Community that engaged the community members on their outlook of healthy places within the community. When assessing the difficulty of buying fresh fruits and vegetables that you can afford approximately 7% said it is very difficult to purchase fruits and vegetables, 30.05% said somewhat difficult, 36.15% said not too difficult, and 26.29% said not difficult at all and the rest said they were not sure. When asked if community members had participated in physical activity other than their regular job such as golf, gardening, or running 76.17% said yes while 22.90% said no and the rest stated they were not sure. The community was asked their take on the importance of increased access to facilities to support physical activity (shown in the graph above) such as public walking, parks, or biking trails 66.51% stated they believe this access is very important, 27.83% said it is somewhat important, and 1.89% said it was not important at all, while the rest said they were not sure.
CHAPTER 7- HEALTH RESOURCES

Health Resources

Process

To compile a Health Resource List, the CHA Work Team began by reviewing the Health Resource List developed during the 2013 CHA. Any outdated or incorrect information was edited and saved for future reference. The Team split the list into three categories:

- Health resources
- Supportive services
- Needed resources

Additionally, the CHA Facilitator met with the local community partners to compare our Health Resource List. Further additions and edits were made.

Finally, the CHA Facilitator compared all data gathered to the 2-1-1 dataset. Further additions and edits were made and sent to the 2-1-1 coordinator so that the 2-1-1 online directory could be updated. In lieu of a printed directory, the CHA Work Team opted to focus on updating the 2-1-1 online directory for several reasons. The reasons are as follows:

- 2-1-1 is an easy to remember, three-digit telephone number that connects people with important community services to meet every day needs and the immediate needs of people in crisis.
- 2-1-1 is free, confidential, and available 24 hours a day.
- 2-1-1 can be accessed through the internet (www.nc211.org) or by calling 2-1-1 from any home, office or cell phone or the toll-free number of 1-888-892-1162.
- 2-1-1 can be updated in real-time, by sending updates to the 2-1-1 coordinator out of Asheville, NC.

Online/telephone directories such as 2-1-1 have an advantage over printed directories, as they are accessible remotely, can be updated easily, and do not require printing costs.

Findings

In working with the 2012 Community Resource List and various community partners, the CHA Work Team updated the 2-1-1 Directory for Avery County. Resources available to our residents can be found by visiting www.nc211.org or by calling 2-1-1. During this updating process, much was found in terms of available health resources and supportive services.

To begin, Avery County has many health and supportive services in place for our children and older adults. One example would be our local Department of Social Services works closely with all ages and demographics across the community, identifying their needs—whether they be housing-, insurance-, medical-, or else-related—and assists the older adults in accessing these services.
Our community has access to many support groups (Mayland Community College (Avery Campus), one of the best YMCA facilities in the state of North Carolina, Abused Women Support Groups, etc.). Further, our community provides resources for those who are uninsured or under-insured (High Country Community Care Dental and Health Clinics, Health Department, Baker Center for Primary Care, and more). Finally, Avery County offers a plethora of county services to its residents (Animal Shelter, Senior Center, Recreation Department, Department of Social Services, Emergency Management, and more).

**Resource Gaps**

Though many resources are available, there are gaps that need to be filled so that Avery County residents have adequate access to services. The following is a list of gaps identified through reviewing available resources, key stakeholder interviews, and listening sessions:

- **Affordable childcare:** High-quality, affordable childcare is a huge need in the community. Many parents have difficulty balancing work with childcare costs.
- **Affordable housing:** Few affordable housing options are available for residents, especially seniors.
- **Communication channels:** Living in a remote and isolated community, there needs to be more communication channels (newspapers, internet connectivity, radio stations, etc.).
- **Greenway system/sidewalks/fitness opportunities:** An extended, connected greenway would increase physical activity and active living opportunities for residents. Indoor and outdoor recreation facilities are in great need as well in order to increase physical activity among all ages and populations.
- **Healthy food options:** Healthy food options in the form of grocery stores, farm stands, etc. are needed to meet the needs of residents.
- **Medicaid expansion:** A large number of residents would benefit from Medicaid expansion.
- **Mental health services:** Services such as housing and treatment facilities would help those suffering from mental health issues. Helping our residents avoid incarceration or ED admittance is vital.
- **Access to health care (including specialty care):** Residents have difficulty accessing healthcare due to a lack of providers accepting new patients, financial constraints, and more. Further, many residents travel out of county for subspecialty care (neurology, endocrinology, etc.) Often, residents don’t have the means to travel and go without care.
- **Food Security:** There are people in Avery County who do not have to imagine or try to understand what it feels like to be without access to good food: this is their reality.
- **Free and Accessible Youth Programs:** Little opportunity exist for our children and youth in the community to keep them busy and steered away from boredom outside of school; to push down every day struggles of life and avoid addictive and destructive behavior. Our children need the community to provide more safe places, enjoyable opportunities, and resourceful services.
CHAPTER 8 – IDENTIFICATION OF HEALTH PRIORITIES

Health Issue Identification

Process

To identify the significant health issues in our community, our key partners reviewed data and discussed the facts and circumstances in our community. We looked at the issues identified in the 2013 community health assessment and looked at what we have made progress on as well as what still needs to be improved. Residents shared their concerns and priorities regarding the county’s health in surveys and community meeting and partakers of the CHA meeting voted on these health issues. The following criteria was used to identify significant health issues:

- County data deviates notably from the region, state or benchmark
- Significant disparities exist
- Data reflects a concerning trend related to burden, scope or severity
- Surfaced as a priority community concern via listening sessions

Prioritization Process & Criteria

During the 2016 Community Health Assessment Process, county data information was collected from community health resources. Committee members of the CHA Team compiled the information and reviewed a wide variety of quantitative data, highlighting areas of significance. This data was placed into the following categories:

1. Chronic Disease(s)
2. Cancer (All Types)
3. Substance Abuse (Prescription and Recreational Drugs and Alcohol)
4. Health Behaviors and Lifestyle (Obesity, Poor Nutrition, Physical Activity, Tobacco)
5. Access to Healthcare (Unable to get care and Lack of Health Care)
6. Mental Health
7. Positive Activities for Youth/Teenagers
8. Social Detriments of Health (Education, Income, Lack of Resources)
9. Availability of Employment
10. Maternal and Infant Health

To identify these top ten priority issues for Avery County to focus on over the next several years, the following process was used. The Avery County Community Health Assessment Team reviewed the CHA results. The CHA team discussed the community concerns, and concluded on the issues to be addressed over the next several years. The CHA Team thought if the health concerns were important enough to be brought up by citizens of Avery County and discussed among community members, these would be the priorities we would address.
Priority Health Issue Identification

To identify priority issues in our community, key partners met and reviewed data, health facts and circumstances, and had discussions on what our new health priorities should be. The partakers of the 2016 CHA team voted on health issues to determine what health issues the focus should be placed on. During our group process, the following criteria were used to select priority health issues of focus for our community over the next three years:

- **Criteria 1**—What was the **magnitude** of the problem?
  - In answering this question, community members were asked to consider the following:
    - Size of the problem (number of population affected)
    - Community concern

- **Criteria 2**—How **serious** are the consequences?
  - In answering this question, community members were asked to consider to following:
    - Groups of people affected (are all people affected? Specific groups?)
    - Urgency to solve the problem

- **Criteria 3**—How **feasible** will it be to correct the problem?
  - In answering this question, community members were asked to consider the following:
    - Availability of solutions/proven strategies
    - Availability of resources (money, community partners, staff, equipment)
    - Support system
    - Ethical
    - Political capacity/will

Members from the CHA team reviewed data from the top ten identified health issues during a community meeting. They ranked those health issues based on the above criteria (magnitude, seriousness, feasibility) and voted anonymously on which issues should be a top priority.

**Identified Priorities**

The following priority health issues are the final community-wide priorities for Avery County that were selected through the process described above.

1. Substance Misuse & Abuse
2. Cancer
3. Healthy Behaviors and/or Lifestyle
**Priority Issue #1: Substance Misuse and Abuse**

Substance abuse prevention and increasing availability/access to mental health services is an ongoing issue in Avery County. It was identified as a top health priority in both the 2009, 2013, and this CHA. Substance abuse can include a number of substances, including alcohol, prescription drugs, and illicit drugs. Improvement has been made on preventing substance abuse and increasing mental health services, but much more is to be done. This was chosen as a health priority due to the concern about abuse of illegal drugs among residents and misuse of prescription drugs among teens and adults as well as increased alcohol abuse and the amount of opioid related police calls in the recent years.

Avery County has launched a local lockbox program for the past three years that looks to secure medication in individual’s homes so that intruders, children, or just to feel a sense of security with their medication in general. Its campaign looks to start and create awareness regarding safe disposal and storage of prescription medications. This program has been very receptive throughout the community and has given local community member a sense of security. Over 200 of these medicine lockboxes have been distributed through the community with the help of several local agencies, including Avery County Health Department, Senior Center, OASIS, and Daymark Recovery Services. To compliment this initiative is the drug drop boxes located at Avery County Sherriff’s Department, in which several 1,000 pounds of prescription drugs have been collected through and disposed of properly.
Data Highlights

Health Indicators

When asked if they have shared a prescription medication with someone else, 7.1% of surveyed Avery County residents said yes, that they had, as compared to the 4.2% of WNC residents (Professional Research Consultants, Inc. 2015).

<table>
<thead>
<tr>
<th>Have Ever Shared Prescription Medication With Someone Else</th>
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<tbody>
<tr>
<td>(Western North Carolina; Avery County, 2015)</td>
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<tr>
<td>100.00%</td>
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<td>80.00%</td>
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<td>40.00%</td>
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<td>20.00%</td>
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<td>0.00%</td>
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</tbody>
</table>

Only 25% of the respondents in the CHA survey said that they keep their medicine locked in a place where no one else can access it. This is problematic, since it is important to keep medications locked away so other cannot gain access to them and abuse them (Professional Research Consultant, Inc.).

Substance Abuse:

- Disturbed by the misuse of prescription drugs among teens and adults
- Increased of methamphetamines in the community over the past few years
- Troubled by the risk factors of tobacco use rates continuing to be high
- Concerned about abuse of illegal drugs among residents
- Measured to be in the highest quartile of NC for outpatient prescribing rates for controlled substances in rural areas consisting of mainly populations with poor socio-demographic profiles.

In 2015 Avery County had a total of 14 unintentional poisonings (overdoses). This is a dramatic decline that was recorded in 2009 at a total of 28 unintentional poisonings that were recorded.
Health Resources available/needed

Avery County like most other counties in North Carolina has many problems related to substance abuse and misuse. There are resources in place to assist community members within Avery County. Appalachian Regional Healthcare Behavioral Health Section and Daymark provide counseling to children within public schools. Daymark Recovery Services is located in Newland, North Carolina. Daymark offers a walk-in service but requires insurance/Medicaid. This facility offers comprehensive behavioral healthcare to the community and the individuals in need of substance abuse treatment. There are many resources needed among the community when it comes to substance abuse and misuse. Avery County uses the Boone community to help individuals with substance abuse and misuse; therefore facilities within the county are limited. Overall, the need for substance abuse clinics within the Avery County community exists. With help from neighboring counties such as Watauga individuals can use these facilities to get the treatment they need, however, built facilities within the Avery County would be overall very helpful to those living in this beautiful community.
Priority Issue #2: Cancer in Avery County

Cancer in Avery County is an issue that hits directly at home of the Avery County community. From 2009-2013 in Avery County there were 959 total cases of cancer reported (NCSCHS). The Avery County rate for this time period was 477.9 compared to the North Carolina Rate of 483.4, so as a county Avery is slightly lower than the states rate, but this issue is expected to rise due to the aging population in Avery County. From 2011-2013, Cancer was the second leading cause of death for the community of Avery County.

The Susan G. Komen Foundation is a foundation that started with a promise from one sister to another to eradicate breast cancer forever. Today the foundation looks to save lives by meeting the most critical needs in the Avery County and other communities while also investing in research to prevent and cure breast cancer. Avery County received a grant supplying educational awareness kits to further educate the community on breast cancer prevention. Several activities went on throughout the Toe River Health District throughout this grant period including pink games involving high school athletics such as volleyball and football and a community wide campaign event was coordinated through the town of Newland that consisted of local interests (car show, BBQ, and a live band) in order to bring individuals within the community together to raise awareness for breast cancer. Health events are continuously being offered through the local hospital, health department, and medical offices to help educate and promote preventive testing annually.
Data Highlights

Of the 2009-2013 the rates per 100,000 population have been recorded and presented in the graph below. Showing that Avery County’s rates are slightly lower than the overall state rate, with the exception of prostate cancer being slightly higher than the North Caroline state rate.

Specific Populations At-Risk

The population at risk for developing cancer can vary in many different categories across the county. Per the data from the 2009-2013 the age groups from 40-69 are the most prone to being diagnosed with cancer in Avery County (NCSCHS). There is a lot to understand about the rising interest and issue of the cancer rates in Avery County.

Health Resources available/needed

Avery County has a few local resources to help with cancer patients located throughout the county. First, the Appalachian Regional Healthcare System is located in Linville and offers assistive services for cancer patients and their families who qualify for these services. Another resource offered is the Breast and Cervical Cancer Control Program this program is offered through the Toe River Health Department and provides free breast exams, mammograms, pelvic exams, and pap tests for women. Although these resources are available there is a need for other resources among the community to assist individuals in recovery from radiation and treatment of cancer.
Priority Issue #3: Unhealthy Behaviors and/or Lifestyles

Healthy living behaviors/lifestyles and chronic disease prevention go hand in hand. It is important to adapt healthy behaviors and lifestyles to prevent diseases from occurring. Primary prevention is the most effective form of prevention. Avery County has a high prevalence and incidence of many chronic diseases such as heart disease, stroke, diabetes, respiratory diseases and cancer. It is important to combat these diseases to promote the health and well-being of the citizens of our County.

Avery County has developed a program titled SPLASH. This program is done through the YMCA and looks to prevent drowning. It partners with the local schools and daycares and teaches approximately 275 Pre-K and second grade children safety while swimming and also certain skills that are involved while swimming. Along with this it also combats unhealthy behaviors by getting children outside and in the pool swimming which is a wonderful physical activity for children of all ages. While this program targets children safety it also teaches them a valuable lesson of having healthy behaviors which they can carry into their adult years.
**Data Highlights**

Per the data received in the 2016 CHA survey, approximately 37% of the individuals surveyed mentioned that they had a somewhat difficult or a difficult time accessing fresh fruits and vegetables. This is an issue for Avery County, being that access to fresh and nutrient rich foods is a must to support a healthy behavior and lifestyle.

With a diabetes prevalence of 10.6% for the county, where the North Carolina state rate is 10.7%. The obesity rate in Avery County is 25.9% where the North Carolina state rate is 30.1% for 2015. There shows plenty of room for the county of Avery to work on better the lifestyles of those people in the community. In efforts to lower those numbers of overall obesity rates of the county and to again lower the rates of the prevalence of diabetes with in the county.

**Specific Populations At-Risk**

All residents in Avery County can benefit from strategies that focus on preventative health care measures. There are many risk behaviors such as inactivity, poor nutrition, and tobacco use that can cause a greater risk of chronic diseases. Other vulnerable populations may include low-income residents and the un- or under-insured. These residents have issues with accessing health care on a regular basis. They are the populations who may not get regular check-ups, screenings and vaccinations, all of which are crucial to preventing chronic diseases.
Health Resources available/needed

Avery County has multiple resources available for individuals to participate in healthy behaviors. The County provides a parks and recreational department that allows children to participate in activities such as football, basketball, and soccer. They also offer adult league softball to help older individuals participate in physical activity. Avery County has a multitude of hiking trails to hike along places such as the Linville Falls, Blue Ridge Parkway, Grandfather Mountain, Elk Falls, and Linville Gorge. Sugar and Beech Mountain offer individuals the ability to snowboard, tube, or ski in the wintertime, which allows time to participate in physical activity in those cold winter months. With these resources regularly available to the population of Avery County one could inquire that the most needed resource of all is education. Many individuals who grow up in rural North Carolina do not know the benefits that come with being physically active, and they also do not know the detrimental health effects that come with being physically inactive. With such a beautiful environment it is important to educate and help people understand that getting outside and being physically active will not only help them physically feel better, but also mentally. With the beautiful Blue Ridge Mountains around them the Avery County population has the perfect environment to engage in these activities, and with the proper knowledge this population can prosper in healthy behaviors.
CHAPTER 9 - NEXT STEPS

Sharing Findings

The final Community Health Assessment will be shared specifically with the following stakeholders:

- Present to the Toe River Health District Board of Health
- Present to the Avery County Board of Commissioners
- Present to the Healthy Carolinians of Avery County
- Distribution to Avery County School Administration
- Distribution to doctors and nurses at Cannon Memorial Hospital
- Distribution to Avery County Senior Center
- Post on local radio station website www.wecr.com
- Conduct a Public Services Announcement with the local radio station
- Publish in the local newspapers websites: www.averymountaintimes.com and www.blueridgechristiannews.com and www.averypost.com
- Make available on local agency websites and local libraries in Newland and Banner Elk

Collaborative Action Planning

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

Next Steps

The next steps will be to formulate action plans regarding these three health concerns, starting with answering the questions to eliminate duplication of services and creating work that is not useful:

- What is currently going on regarding these top three health concerns?
- What would you like to see going on regarding the top three health concerns?

The health partnership will create subcommittees for each health concern and these committees will work on creating collaborative action planning and implementation efforts. Upcoming meetings will be scheduled and partners will be notified.
Bibliography

http://www.cancer.org/cancer/cancercauses/othercarcinogens/pollution/radon


