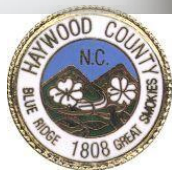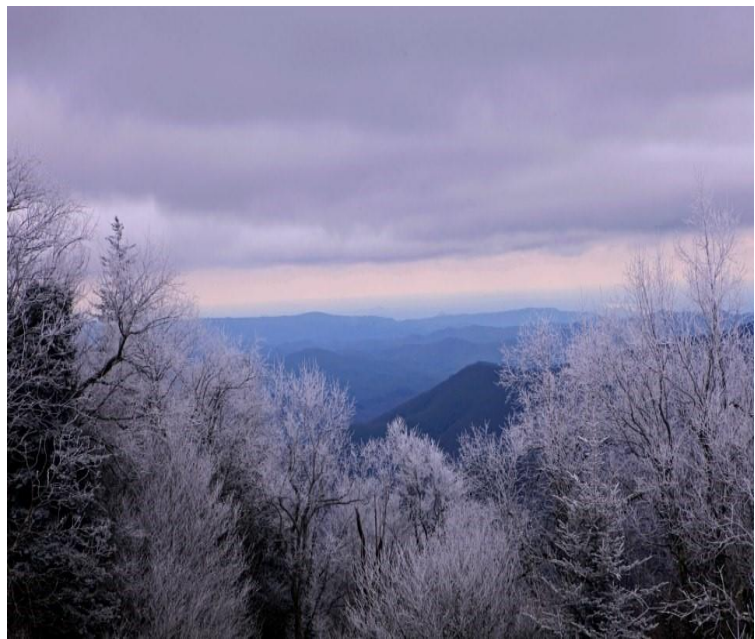# 2018
Haywood County Community Health Assessment

March 4, 2019

HAYWOOD COUNTY
COMMUNITY HEALTH ASSESSMENT

ACKNOWLEDGEMENTS

This document was developed by Haywood County Health & Human Services Agency in partnership with Haywood Regional Medical Center, the Healthy Haywood coalition and community members as part of a local community health (needs) assessment process. We would like to thank and acknowledge many agencies and individuals for their contributions and support in conducting this health assessment.

To better meet both North Carolina public health and hospital (needs) assessment requirements, acknowledgements are made in detail at the conclusion of the Community Health Assessment Executive Summary section of this document beginning on **page eight**.

TABLE OF CONTENTS

Photo courtesy of Kara Sither

HAYWOOD COUNTY
2018 COMMUNITY HEALTH ASSESSMENT
EXECUTIVE SUMMARY

Community Results Statement

Our ultimate goal for Haywood County is a healthy and resilient community. We will strive to ensure this for all Haywood County residents though our health priorities.

Leadership for the Community Health Assessment Process

Haywood County Health & Human Services Agency (HHSA) Public Health staff leads the Community Health Assessment (CHA). Haywood Regional Medical Center (HRMC) staff are invaluable partners in this effort. CHA leaders are denoted in blue in the Acknowledgments table.

Community Results Statement:

Our goal for Haywood County is a healthy and resilient community

---

Partnerships

CHA partners include ongoing and new members of the Healthy Haywood Coalition and community members who volunteered their time and input during the CHA process. They are denoted by green shading in the Acknowledgements table.

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 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,** the alliance of hospitals 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

Haywood County's collaborative process is supported by WNC Healthy Impact regionally. Phase One began in January, 2018 with the collection of community health data. Throughout 2018, our Healthy Haywood coalition reviewed the survey data, key informant interview results, and

secondary data over multiple meetings. In November 2018, 55 Healthy Haywood and community members reviewed and discussed the health priorities and used a modified Hanlon method to rank them. In January 2019, this group further discussed and voted on the top three health issues. For more details, see **Chapter 1 – CHA Process**.

Key Findings
Haywood County
Located in mountainous Western North Carolina (WNC), our county is home to the towns of Waynesville, Canton, Clyde and Maggie Valley. Popular among tourists and outdoor enthusiasts, Haywood County possesses rich natural beauty. It had a population of 59,577 at last count with a racial/ethnic makeup that is 95.9% White, 1.1% African American and 3.6% Hispanic/Latino (US Census Bureau, 2017). The median age is 47.1, older than regional (45.9) or state (38.3) median (US Census Bureau, 2017).

Social Determinants
Our 2018 CHA process highlighted the impact of key factors - poverty, income, education, housing, crime, and the physical environment - on health. Though the overall poverty rate in Haywood County is 16.7%, the rate of **poverty among children under five is 45.3%** (US Census Bureau, 2017). Furthermore, over 23% of adults in Haywood County are food insecure.

Health Status

Mental Health: For the first time in our survey, adults were asked about **Adverse Childhood Experiences (ACEs)**, traumatic experiences of abuse, neglect or substance use with lasting impacts on health. The most common experiences in Haywood County were emotional abuse (35.6%) and parental separation or divorce (30.5%) (WNC Health Network Community Health Survey, 2018).

Substance Use: Nonfatal opioid overdoses declined slightly in 2018 from an all-time high of 86 in 2017 (NC Detect, 2019). Tobacco use rates, including smoking (17.6%) and vaping (5.6%), remain high (WNC Health Network Community Health Survey, 2018); and alcohol is the most commonly misused substance of those tracked in NC DETECT (2019). The relationship between mental health and substance use and activism here led them to jointly become a top 2018 health priority.

38% of Haywood County residents state that substance use has had a negative effect on their life.
(WNC Health Network Community Health Survey, 2018)

Perinatal & Early Childhood Health: Concerns over prenatal substance use and the accompanying risks of low birth weight and neonatal abstinence syndrome coupled with high rates of child poverty prompted the community to prioritize perinatal and early child health in 2018. The launch of the NC Early Childhood Action Plan in 2019 lends support to our work.

Chronic Disease: Diabetes is our most common chronic disease, affecting 16.6% of residents (WNC Health Network Community Health Survey, 2018) and heart disease is the top cause of death in Haywood County (NC State Center for Health Statistics, 2019). Key lifestyle factors, including nutrition and physical activity, keep this priority relevant: 96.1% of Haywood County adults did not meet recommended levels of fruit and vegetable consumption; and 81.1% did not meet physical activity guidelines (WNC Health Network Community Health Survey, 2018).

Health Priorities

The top health priorities selected for the 2018 CHA are:

Mental Health & Substance Use
Perinatal & Early Childhood Health
Chronic Disease Prevention

Next Steps

Next steps for developing the community health improvement plan:

- Monthly meetings of work groups based on each health priority;
- Engage existing and new partners in the work groups;
- Identify what works to do better: evidence-based strategies and community suggestions;
- Select priority strategies and performances measures to help us evaluate progress;
- Publish the Community Health Improvement Plan (CHIP) on an electronic Scorecard that the public may access to monitor progress.
- To access the full data set (all secondary and survey data), contact lauren.wood@haywoodcountync.gov

Haywood County's natural beauty. Photo courtesy of Kara Sither.

ACKNOWLEDGEMENTS

We would like to thank our community residents who participated in the data collection process. In addition to those unnamed residents, the following individuals and agencies enabled completion of the CHA in Haywood County:

Name	Agency	Title / CHA Role or Contribution	Duration	Agency Website
Claire Carleton	Haywood County Recreation & Parks	Director / Healthy Haywood member	2018-2019	www.haywoodcountync.gov
Greg Christopher	Haywood County Sheriff's Office	Haywood County Sheriff / Healthy Haywood member	2018-2019	www.haywoodncsheriff.com
Savannah Clark	KARE	Executive Director / CHA partner	Winter 2019	www.karehouse.org
Shaina Clark	Mountainwise	Marketing & Development Coordinator / Healthy Haywood member	2018-2019	www.mountainwise.org
Rhonda Cole Schandevel	Community member	CHA partner	Fall/winter 2018-19	
Michael Coleman	Haywood Community College	Vice President for Student Services / CHA partner	Winter 2019	https://www.haywood.edu/
Kim Czaja	Haywood Chamber of Commerce	Member & Business Relations	Winter 2019	www.haywoodchamber.com
Julie Davis	Vaya Health	Family Partner / CHA partner	Winter 2019	www.vayahealth.com
Lisa Davis	HCHHSA	Nursing Director / CHA partner	Winter 2019	www.haywoodcountync.gov
Travis Donaldson	Haywood County EMS	CHA partner	Fall/winter 2018-19	Www.haywoodcountync.gov
Ira Dove	HCHHSA	HHS Director / CHA partner	Fall/winter 2018-19	www.haywoodcountync.gov
Jesse-Lee Dunlap	NCHRC	Post-Overdose Outreach Specialist / CHA partner	Winter 2019	www.nchrc.org
Janice Edgerton	Region A Partnership for Children	Executive Director / CHA partner	Fall/winter 2018-19	https://rapc.org/
Shelly Foreman	Vaya Health	Western Region Community Relations Representative / Healthy Haywood member	2018-2019	www.vayahealth.com
Jessica Garnes	Blue Ridge Community Health	Medical Office Assistant/ CHA partner	Fall/winter 2018-19	www.brchs.com
Jim Geenen	Down Home NC	Member / CHA partner	Fall/winter 2018-19	www.downhomenc.org
Ann Geers	HCHHSA Board	Board member/ CHA partner	Fall 2018	
Aleasa Glance	Haywood County Schools	Student Services Director/ CHA partner	Fall-winter 2018-19	www.haywood.k12.nc.us
Vicki Gribble	Mountain Projects	Health Care Navigator / CHA partner	Winter 2019	www.mountainprojects.org
Virgil Hayes	NC Harm Reduction Coalition	Appalachian Services Coordinator	2018-2019	www.nchrc.org
Mandy Haithcox	Haywood Pathways	Executive Director / Healthy Haywood member	Fall/winter 2018-19	www.haywoodpathways.org

Name	Agency	Title / CHA Role or Contribution	Duration	Agency Website
Susannah High	HCC	Student Wellness Director/CHA partner		https://www.haywood.edu/
Vicki Hyatt	*The Mountaineer*	Editor / CHA partner	Winter 2019	www.themountaineer.com
Nan Kramer	Mountainwise	Regional Community Engagement Coordinator / Healthy Haywood member	2018-19	www.mountainwise.org
Ginger Lang	HCHHSA Board	Board Member / CHA partner	Fall/winter 2018-19	
Tobin Lee	Mountainwise	Regional Tobacco Prevention Manager / Healthy Haywood member	2018-2019	www.mountainwise.org
Aubrey Masters	Groups Recover Together	Office Coordinator / CHA partner	Fall/winter 2018-19	www.joingroups.com
Rebecca Mathis	Blue Ridge	Community Engagement Coordinator / CHA partner		www.brchs.com
Joel Misler	Groups Recover Together	Counselor / CHA partner	Fall/winter 2018-19	www.joingroups.com
Anna Mooney	Mountain Pediatric Group	Pediatrician / CHA Partner	Fall/winter 2018-19	www.mountainpediatric.com
Jackie Moore	Active Routes to School	Regional Coordinator / Healthy Haywood member	Fall/winter 2018-19	http://transforminghealthnc.org/active-routes-to-school-arts/
Bryant Morehead	Haywood County Government	County Manager / CHA partner	Fall/winter 2018-19	www.haywoodcountync.gov
Jean Parris	Drugs in Our Midst	Founder/Director / Healthy Haywood member	2018-2019	
William Pertet	Mountainwise	Minority Diabetes Coordinator / CHA Partner	Fall/winter 2018-19	
Tammy Quinn	HCHHSA	School Nursing Supervisor / CHA partner	Fall 2018	www.haywoodcountync.gov
Lindsay Regner	Haywood County Sheriff's Office	Public Information Officer/ Healthy Haywood member	2018-2019	www.haywoodncsheriff.com
Carmine Rocco	Macon County Health Department	Interim Health Director / Healthy Haywood member	2018	
Rusty Ross	HCHHSA Board	Board Member / Healthy Haywood member	2018-2019	
Joslyn Schaefer	Grace Church in the Mountains	Rector / CHA partner	Winter 2019	www.gracewaynesville.com
Paige Schell	Waynesville Police Department	Detective / Healthy Haywood member	2018-2019	www.waynesvillenc.gov/police
Jody Schmidt	Haywood Womens Medical Center	Certified Nurse Midwife / Healthy Haywood member	Fall/winter 2018-19	www.haywoodwomenscare.com
Jeremy Sharp	NC Harm Reduction Coalition	Outreach Worker / Healthy Haywood member	2018-19	www.nchrc.org
Andria Smith	HRMC	Women's Center Director/ CHA partner	Fall/winter 2018-19	www.myhaywoodregional.com

Name	Agency	Title / CHA Role or Contribution	Duration	Agency Website
Mike Simonson	Fitness Connection	Community member/ Healthy Haywood member	2018-19	https://sites.google.com/view/thefitnessconnection/home
Kasey Valentine-Steffen	Haywood Pediatrics	Lactation Consultant / CHA partner	Fall/winter 2019	www.haywoodpediatrics.com
Amy Stevens	HCHHSA	Administrative Assistant/ CHA partner	Fall 2018	www.haywoodcountync.gov
John Stoeckel	HCHHSA Board	Board Member/ CHA partner	Fall 2018	
Jennifer Stuart	Haywood County Library	Librarian / Healthy Haywood member	2018-19	http://haywoodlibrary.org
Amy Swanger	NAMI	Community member / CHA partner	Winter 2019	
Kelly Teague	Community Impact NC	Regional Coordinator/ CHA partner	Fall/winter 2018-19	
Shay Teague	Mountain Projects	Prevention Specialist / Healthy Haywood member	2018-19	www.mountainprojects.org
Sarah Tennyson	Mountainwise (formerly)	Project Director (formerly)/ CHA partner	Fall/winter 2018-19	www.mountainwise.org
Keith Turman	First United Methodist Church Waynesville	Senior Pastor / CHA partner	Fall/winter 2018-19	www.fumc-waynesville.com
Lisa Verges	HCHHSA Board	Board Member / CHA partner	Fall 2018	
Mary Ann Widenhouse	Vaya Consumer & Family Advisory Committee/ NAMI	Healthy Haywood member	2018-19	
Chelsea White	Down Home NC	Community Organizer/ Healthy Haywood member	2018-19	www.downhomenc.org
Sam Wilds	Down Home NC	Down Home Member/ CHA partner	Winter 2019	
Celesa Willett	United Way Haywood County	Executive Director / CHA partner	Winter 2019	www.uwhaywood.org
Florence Willis	Blue Ridge Community Health	Case Manager / CHA partner	Fall/winter 2018-19	www.brchs.com
Amy Wilson	Meridian Behavioral Health Services	Haywood County Adult Services Manager / Healthy Haywood member	2018-19	www.meridianbhs.org
Murat Yazan	Region A Partnership for Children/ HHSA Board/	Evaluator/Technology Specialist / Board member/ CHA Partner	2018-19	https://rapc.org/
Gariann Yochym	NC Harm Reduction Coalition	LEAD Case Manager/ Healthy Haywood member	2018-19	www.nchrc.org

Healthy Haywood member indicates previous participation in Healthy Haywood Coalition and/or priority work groups*; CHA partner* indicates participation in the prioritization process.

CHAPTER 1 – COMMUNITY HEALTH ASSESSMENT PROCESS

Purpose

Community health assessment (CHA) is an important part of improving and promoting the health of community residents. A community health assessment (CHA) –a process that results in a public report – 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.

What are the key phases of the Community Health Improvement Process?

In the **first phase** of the cycle, process leaders for the CHA collect and analyze community data – deciding what data they need and making sense of it. They then decide what is most important to act on by clarifying the desired conditions of wellbeing for their population and by then determining local health priorities.

The **second phase** of the cycle is community health strategic planning. In this phase, process leaders work with partners to understand the root causes of the identified health priorities, both what's helping and what's hurting. Together, they make a plan about what works to do better, form workgroups around each strategic area, clarify customers, and determine how they will know people are better off because of their efforts.

In the **third phase** of the cycle, process leaders for the CHA take action and evaluate health improvement efforts. They do this by planning how to achieve customer results and putting the plan into action. Work groups continue to meet, monitor results and make changes to the plan as needed. This phase is vital to helping work groups understand the contribution their efforts are making toward their desired community results.

Definition of Community

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

WNC Healthy Impact

WNC Healthy Impact is 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 regional initiative is designed to support and enhance local efforts by:

- Standardizing and conducting data collection;
- Creating communication and report templates and tools;
- Encouraging collaboration;
- Providing training and technical assistance;
- Addressing regional priorities; and
- Sharing evidence-based and promising practices.

This innovative regional effort is supported by financial and in-kind contributions from hospitals, public health agencies, and partners, and is coordinated by **WNC Health Network**. WNC Health Network, Inc. is an alliance of hospitals working together, and with partners, to improve health and healthcare. Learn more at www.WNCHN.org.

WNC**HEALTHY**IMPACT

1 Erlanger Western Carolina Hospital	10 Cherokee Indian Hospital	17 Transylvania Regional Hospital	25 Toe River Health District–Yancey
2 Cherokee County Health Dept.	11 EBCI Public Health and Human Services	18 Madison County Health Dept.	26 RPM Health District–Polk
3 Graham County Dept. of Public Health	12 Jackson County Dept. of Public Health	19 Buncombe County Health and Human Services	27 Saint Luke's Hospital
4 Clay County Health Dept.	13 Harris Regional Hospital	20 Mission Hospital	28 Toe River Health District– Mitchell
5 Swain County Health Dept.	14 Haywood County Health & Human Services Agency	21 CarePartners Health Services	29 Blue Ridge Regional Hospital
6 Swain Community Hospital	15 Haywood Regional Medical Center	22 AdventHealth Hendersonville	30 RPM Health District– McDowell
7 Macon County Public Health Center	16 Transylvania Public Health	23 Pardee UNC Health Care	31 Mission Hospital McDowell
8 Angel Medical Center		24 Henderson County Department of Public Health	32 Rutherford Regional Health System
9 Highlands-Cashiers Hospital			33 RPM Health District– Rutherford

Data Collection

The set of data reviewed for our CHA process is comprehensive, though not all of it is presented in this document. Within this CHA, 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 resources available to help address our most pressing issues.

Core Dataset Collection

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

- A comprehensive set of publicly available secondary data metrics with our county compared to the sixteen county WNC region
- Set of maps accessed from Community Commons and NC Center for Health Statistics
- 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

Additional data collected and reviewed in Haywood County included:
- General online community health survey – taken by 153 respondents;
- Focus group of community members at the Canton Senior Center;
- NC DETECT Data - Emergency department statistics from 2009 – 2018 for key substance use indicators;
- School data – NC Department of Public Instruction reportable crimes;
- DSS data – Infant Plan of Safe Care and foster care statistics.

Health Resources Inventory

We conducted an inventory of available resources of our community by reviewing existing resources currently listed in the 2-1-1 database for our county as well as working with community partners to identify additional resources. Where gaps were identified, we partnered with 2-1-1 to update this information when applicable. See **Chapter 7** for more details related to this process.

Community Input & Engagement

Including input from the community is a critical element of the CHA 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: PRC survey, online survey, key informant interviews, and listening sessions.
- By reviewing and making sense of the data to better understand the story behind the numbers. HHSA staff internally reviewed morbidity, mortality, health behavior and social determinants data. Our data was shared with shared with the Healthy Haywood coalition; was reviewed in greater detail with volunteers from Healthy Haywood; and discussed in our Substance Use Prevention Alliance.
- In the identification and prioritization of health issues.

First community prioritization meeting, November 2018

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.

Underserved, At-Risk & Vulnerable Populations

Throughout our community health assessment process, we focused on understanding general health status and related factors for the entire population of our county as well as groups at increased risk for health disparities or adverse health outcomes. For the purposes of the overall CHA, 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.

Although there are not universally accepted definitions of the three groups, below 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, etc.
- **At-risk populations** are the members of a particular group who are likely to, or who have the potential to, develop 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 race/ethnicity, socio-economic status, cultural factors and age groups.

Racial stratification in our data was seldom possible due to the very low numbers of minority groups residing in Haywood County. The underserved, at-risk, and vulnerable populations of focus for our process include the following:

- **Underserved Populations**:
  - **People who speak English as a Second Language** – Underserved due to language barriers, perceptions of limited access, or limited access due to citizenship requirements for Medicaid coverage
  - **People Who Use Drugs/Injection Drugs** – Underserved due to limited access to treatment and health coverage, perception/stigma

- o **People lacking health insurance (or underinsured)** - Underserved due to inability to access or afford certain health services.

- **At-risk Populations**:
  - o **Pregnant women who smoke** – At risk for poor birth outcomes
  - o **Population with pre-diabetes** – At risk for diabetes and other complications
  - o **Children with multiple Adverse Childhood Experiences** – At risk for poor health outcomes, substance use and addiction, and mental health conditions
  - o **People who use injection drugs** – At risk for infectious diseases such as Hepatitis and HIV

- **Vulnerable Populations:**
  - o **Seniors** – Vulnerable to more chronic disease and to complications related to falls
  - o **Children under 5** – Vulnerable due to high poverty rate in Haywood County, impact of ACEs on development; generally vulnerable due to dependence on others for care
  - o **Persons in Poverty -** Vulnerable to health concerns due to limited resources or lower income for meeting basic needs, food insecurity

Annual Elder Awareness Walk in downtown Waynesville.
Photo courtesy of Haywood County Health & Human Services Agency
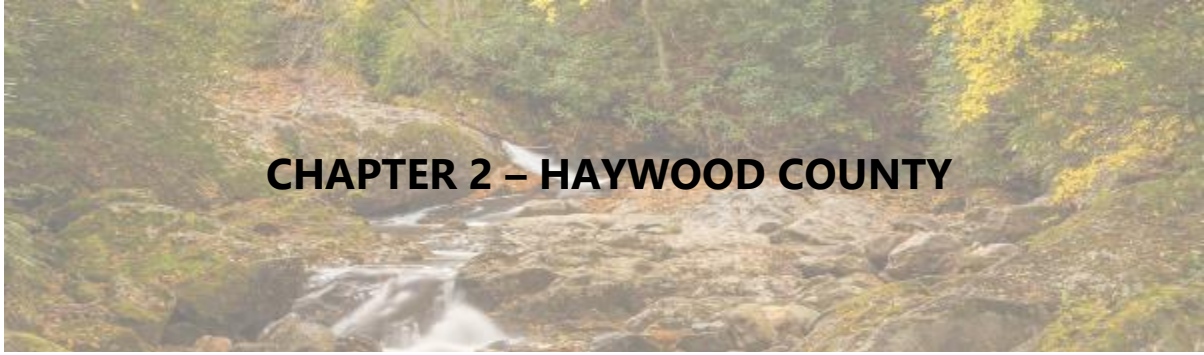
CHAPTER 2 – HAYWOOD COUNTY

Location, Geography, and History

Haywood County, founded in 1808, is located in the heart of mountainous Western North Carolina (WNC). It is home to four towns: Waynesville, the county seat, Canton, Maggie Valley, and Clyde. Popular among tourists, outdoor enthusiasts and retirees, the county contains portions of the Great Smoky Mountains National Park, Cherokee and Pisgah National Forests, the Blue Ridge Parkway, and beautiful forests, waterfalls and scenic vistas.
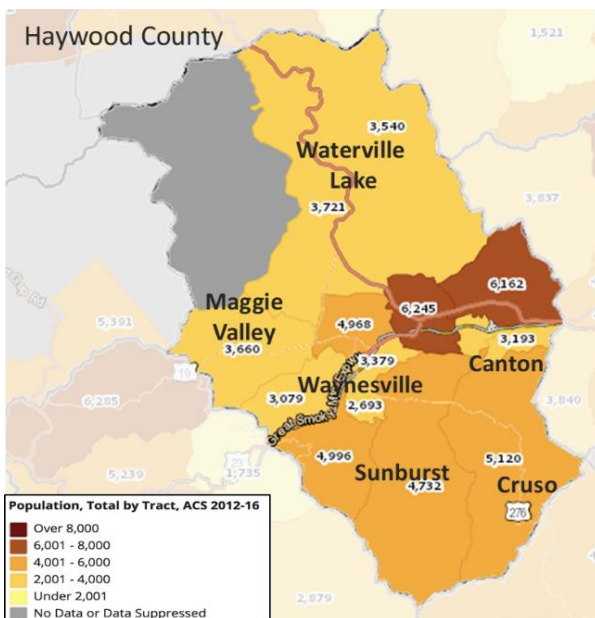
(UNC University Library, 2019)

The population of Haywood County is concentrated most heavily around the town of Canton, followed by the towns of Waynesville and Clyde.

Neighboring Buncombe County, home to the city of Asheville, lies directly to the east of Haywood County, and its development continues to reach westward into Canton.

Source: ACS 2012-2016

Population

The population of Haywood County was 59,577 at last count (US Census Bureau, 2017). See the table below for a breakdown by race/ethnicity, sex and age. There is relatively little racial or ethnic diversity in Haywood County, though the Hispanic/Latino population has grown slightly since the 2010 Census. The county population is older than regional or state averages, as demonstrated by a median age of 47.1 in Haywood County compared to 38.3 for the state and 45.9 for the WNC region (US Census Bureau, 2018). Both the small minority population and larger share of older residents have implications on health status as discussed further in **Chapter 5 - Health Status.**

Population by Race/Ethnicity		Population by Sex	
Race/Ethnicity	**%**	**% Male**	**% Female**
White alone	95.9	48.2	51.8
Black or African American	1.1		
American Indian, Alaskan Native	0.3	**Population by Age**	
Asian	0.5	**% under 5**	4.9
Native Hawaiian, Other Pacific Islander	0.0	**% 5-19 years old**	15.6
Some Other Race	0.7	**% 20-64 years old**	56.0
Two or More Races	1.5	**% 65 & older**	24.4
Hispanic or Latino (of any race)	3.6	Source: ACS/US Census Bureau, 2017	
Total Population	**59,577**		

Change in Percent of Population 65 and Older

—— Haywood   —— WNC Region   —— North Carolina

19.0   21.1   25.8   28.5   29.1

2000   2010   2020   2030   2037
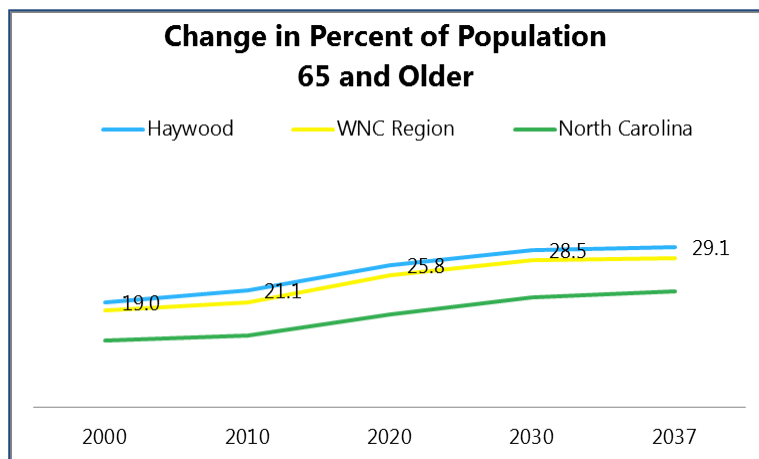
The share of Haywood County's population over age 65 is higher than regional and state levels, and is projected to increase.

Source: WNCHN – WNC Healthy Impact Community Health Survey, 2018

CHAPTER 3 – A HEALTHY HAYWOOD COUNTY

Elements of a Healthy Community

In the online survey, key informants were asked to list characteristics of a healthy community and to select the health issues or behaviors that they believe are the most critical to address collaboratively in their own community. Follow-up questions asked them to describe which contributors to progress and impediments of progress exist for these issues, as well as the likelihood that collaborative effort could make a positive change for these issues.

When key informants were asked to describe what they believed contributed to a healthy community in our county, their top responses included:

- **Awareness and education**
- **Access to care and services**
- **Economic and social justice for all**
- **Healthy lifestyles**, including physical activity, recreational activities, and access to healthy foods/eating

During our collaborative prioritization process, the County Health Rankings health outcomes chart at right resonated with participants. In particular, the realization that approximately 50% of our health outcomes may be determined by socioeconomic factors and the physical environment (social determinants of health) was powerful. This contributed to a rich discussion about the social determinants of health in Haywood County, including income, education, employment, housing, crime, and the physical environment.

Our online community health survey, administered in summer 2018, invited respondents to identify what enables them to be healthy and what acts as a barrier to health. The following word clouds were generated from the responses to those questions, with larger words representing those more often cited.

Survey responses word cloud: **What allows you to be healthy where you live?**

Survey responses word cloud: **What are the health issues of highest concern to you?**
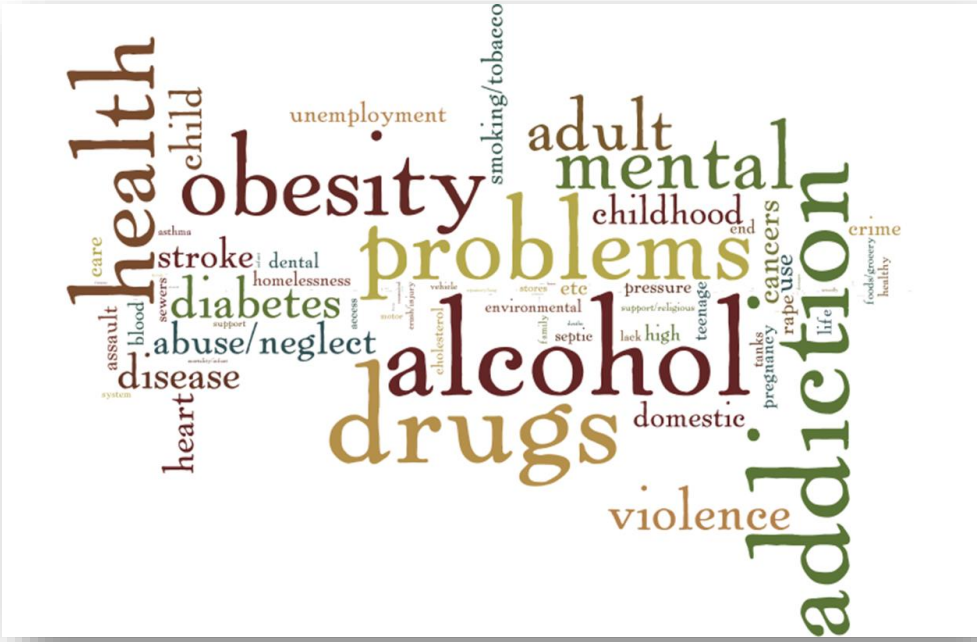
During our collaborative planning efforts and next steps, we will further explore these concepts and the results our community has in mind.

CHAPTER 4 – SOCIAL & ECONOMIC FACTORS

As described by Healthy People 2020, economic stability, education, health and healthcare, neighborhood and built environment, and social community and context are five important domains of social determinants of health. These factors are strongly correlated with individual health. People with higher incomes, more years of education, and a healthy and safe environment have better health outcomes and longer life expectancies. Although each factor independently affects health, they also have interactive effects on each other and on health. For example, people in poverty are more likely to engage in high-risk health behaviors and less likely to have affordable, stable housing. In turn, families struggling to pay rent and utilities are more likely to report barriers to accessing health care, higher use of the emergency department and more hospitalizations.

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, 2018).

The median household income in Haywood County ($43,097) is above the WNC regional median ($40,004), but well below the state median ($48,256) (US Census Bureau, 2018).

The overall poverty rate in Haywood County of 16.7% is comparable to the WNC region and state. When the poverty rate is shown separately for children under 18 (28.2%) and children under five (45.3%), however, the differences are stark, as shown in the graph below (US Census Bureau, 2018). Reflected in the graph are income disparities between the older general population and younger families with children. It illustrates the inadequacy of reporting an overall poverty rate that masks the poverty rate among children, especially young children. This disparity was one reason for a health priority focused on early childhood.

Percent Below Poverty by Age (2016)

Legend: ■ Haywood   ■ WNC Region   ■ North Carolina

Category	Haywood	WNC Region	North Carolina
Total Population	16.7	16.5	16.8
Children under 18	28.2	24.7	23.9
Children under 5	45.3	27.4	27.3
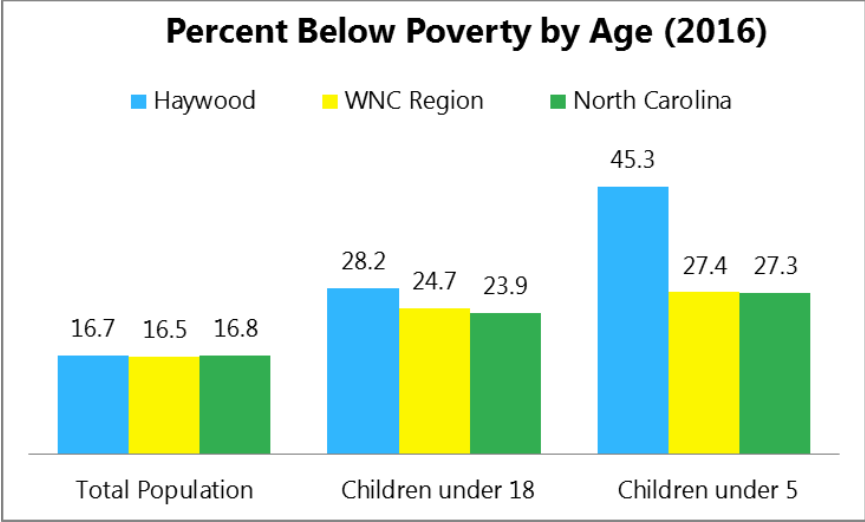
While the overall poverty rate in Haywood County is comparable to the region and state, the **child poverty rate** is higher than either the state or region. The poverty rate among **children under five** is dramatically higher than that of the state or region. (US Census Bureau, 2018).

The overall poverty rate by race also reflects disparities; the poverty rate among African Americans, American Indian, Asian, and Hispanic groups is several percentage points higher than among Whites (US Census Bureau, 2018). Unfortunately, the low numbers of minority groups do not allow for further stratification (e.g. by age) within race.

Percent Below Poverty by Race (2016)

Legend: ■ Haywood   ■ WNC Region   ■ North Carolina

Category	Haywood	WNC Region	North Carolina
Total Population	16.7	16.5	16.8
White	16.3	15.3	13.0
Black/African American	25.6	31.7	26.1
AI/AN	18.6	24.1	28.1
Asian	21.3	10.8	12.9
Hispanic	27.5	36.0	31.5
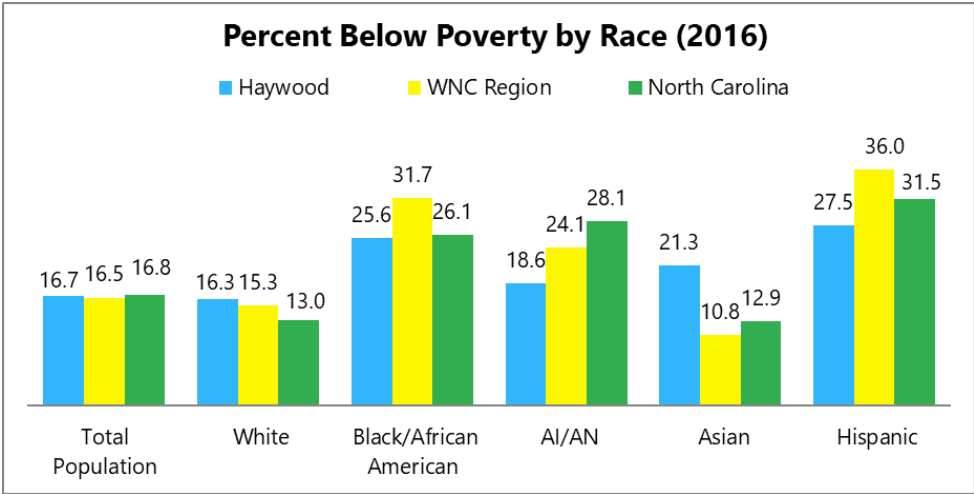
Another measure of income is Food & Nutrition Services (known nationally as Supplemental Nutrition Assistant Program or SNAP) participation. In Haywood County in January 2018 there were 9,869 FNS participants, or 16.5% of the population. Thirty-seven percent of the participants were children under 18 (UNC Jordan Institute, 2018).

Among school-aged children in Haywood County, 57% of students are eligible for either free-or reduced-price school meals, which is comparable to the state and region. A sizeable number of children in Haywood County reside in households with an income hovering at or right above the poverty line.

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, 2018).

Since the most recent economic recession, the unemployment rate in Haywood County has decreased to 4.1% and is lower than the state rate (US Department of Commerce, 2018).
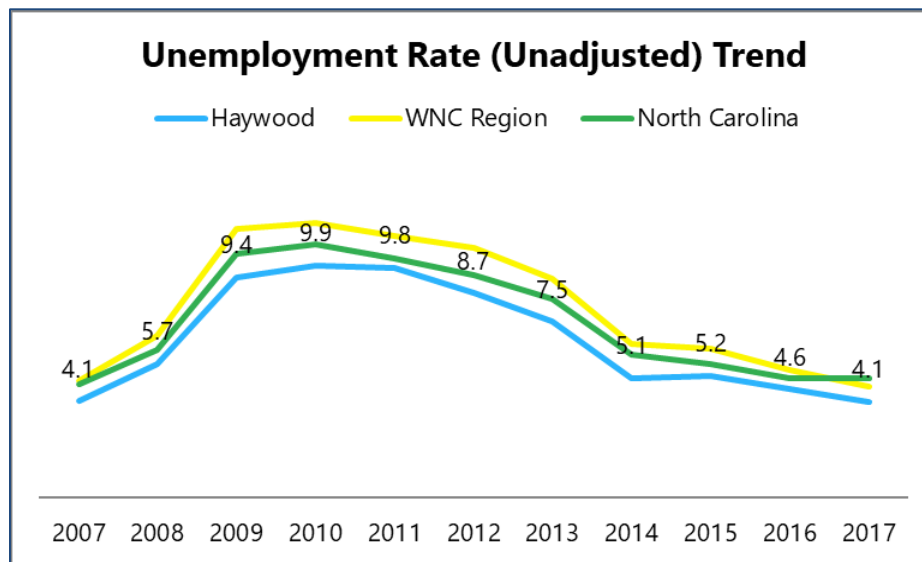
US Department of Commerce, 2018

Unemployment may be low, but the top employment sectors in Haywood reflect traditionally lower-wage jobs such as retail and food services. The top employment sectors in Haywood County compared to NC are as follows:

Top Sectors, Haywood County	% employment by sector		Top Sectors, North Carolina	% employment by sector
Retail Trade	17.94		Health Care & Social Assistance	14.02
Health Care & Social Assistance	15.56		Retail Trade	11.67
Manufacturing	14.69		Manufacturing	10.8
Accommodation & Food Services	13.31		Accommodation & Food Services	9.78
Educational Services	9.03		Educational Services	8.8
Public Administration	6.68		Administrative & Waste Services	6.84
Construction	4.68		Professional, Scientific & Technical Services	5.61

The average gross weekly wage in Haywood County is $741.45, slightly above the WNC regional average wage of $725.51. Wages in the county and region are far below the NC average weekly wage of $1,076.29 (NC Employment Security Commission, 2017).

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 taken into account" (County Health Rankings, 2018). The chart below reflects the highest educational attainment of adults over 25 in Haywood County. A total of 74.6% of adults over age 25 possess a high school diploma, some college or secondary degree or higher. The remaining 25.5% of adults have not completed high school (US Census Bureau, 2016).

Highest Educational Attainment of Population Over 25 (2016)

■ Haywood　　■ WNC Region　　■ North Carolina

% High School Graduates	% Some College	% Bachelor's Degree or Higher
28.6 30.6 26.4	22.2 21.8 21.8	23.8 23.2 29.0
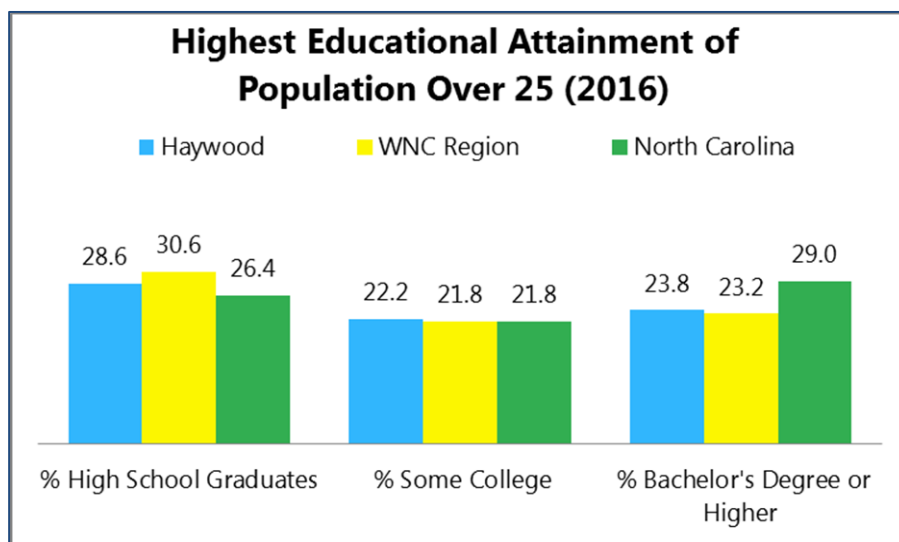
In the 2016-2017 school year, the latest year for which data is available, 7,723 students were enrolled in Haywood County Schools and one charter public school (NC Department of Public Instruction, 2018). Haywood County is home to Haywood Community College, which reported 3,677 continuing and adult education students in 2017 (Haywood Community College, 2019).

The high school drop-out rate in Haywood County in the same school year was 2.46% (60 students), which is higher than the WNC region (2.13%) or state (2.31%) rates. Also for that school year, the four-year graduation rates (85.8%) were slightly lower than the WNC regional average (88.4%) and state (86.5%) (Public Schools of NC, 2018).

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 1 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, 2018).

Index Crime Rate Trend (per 100,000 population)

Legend: Haywood — WNC Region — North Carolina
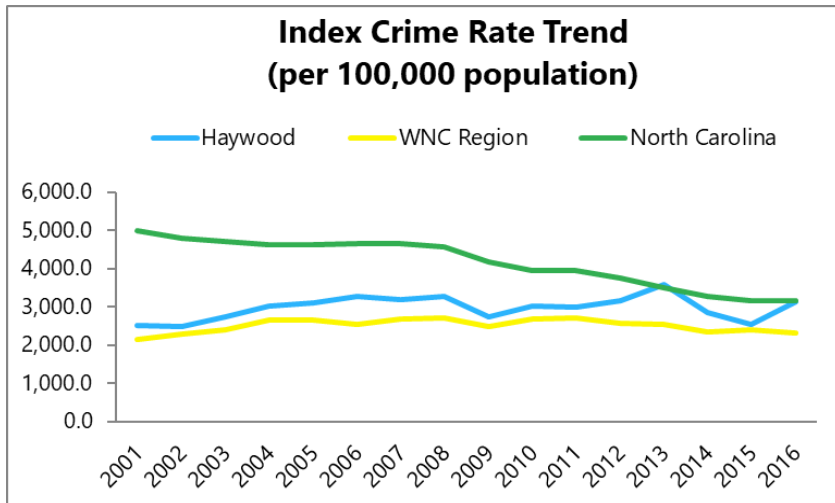
The overall crime rate in Haywood County, including violent and property crime, has been on the increase since 2015 (NC Department of Justice, 2018). The uptick in both types of crime is related to the opioid crisis, per comments by Haywood County Sheriff Greg Christopher (Health Prioritization Meeting discussion, 2018).

Housing

"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, 2018).

Almost 43% of rented units in Haywood County spent more than 30% of their household income on housing (US Census Bureau, 2017). This tracks with the WNC region but fluctuates each year, suggesting housing market instability.

Percent of Rented Units Spending > 30% of Household Income on Housing

Legend: Haywood — WNC Region — North Carolina

39.3   43.7   41.4   44.2   42.4   45.2   42.7

2010   2011   2012   2013   2014   2015   2016

Haywood County

Cost Burdened Households (Housing Costs Exceed 30% of Household Income), Percent by Tract, ACS 2012-16
- Over 35.1%
- 28.1 - 35.0%
- 21.1 - 28.0%
- Under 21.1%
- No Data or Data Suppressed
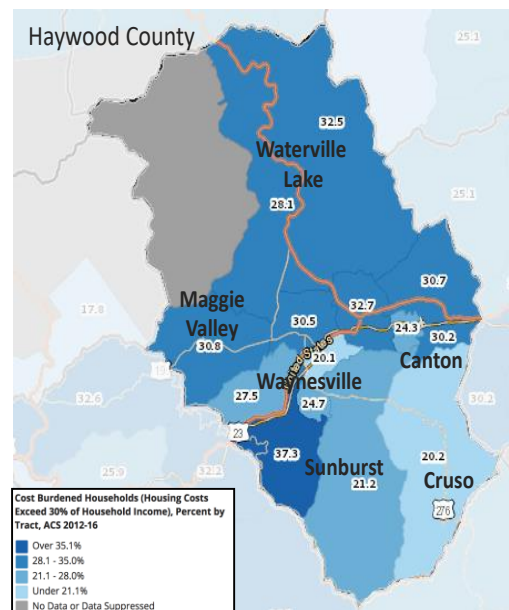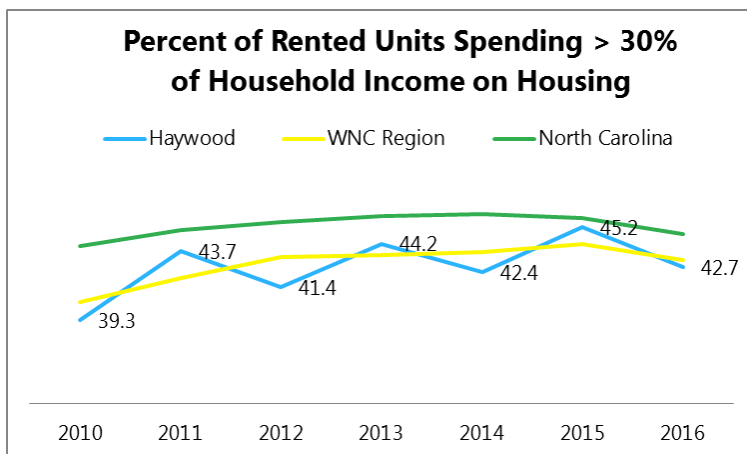
The **housing cost burden** indicates when housing costs (rented or owned) are over 30%. As demonstrated by the map above, the burden for households that rent and own in Haywood County is not particular to any one area, but is distributed throughout the county's census tracts.

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, 2018).

When asked for their overall impression of living in Haywood County, only 9.1% of respondents of the Community Health Assessment survey indicated that it was a "fair" or "poor" place to live. The remaining 90.9% selected "good" or "excellent".
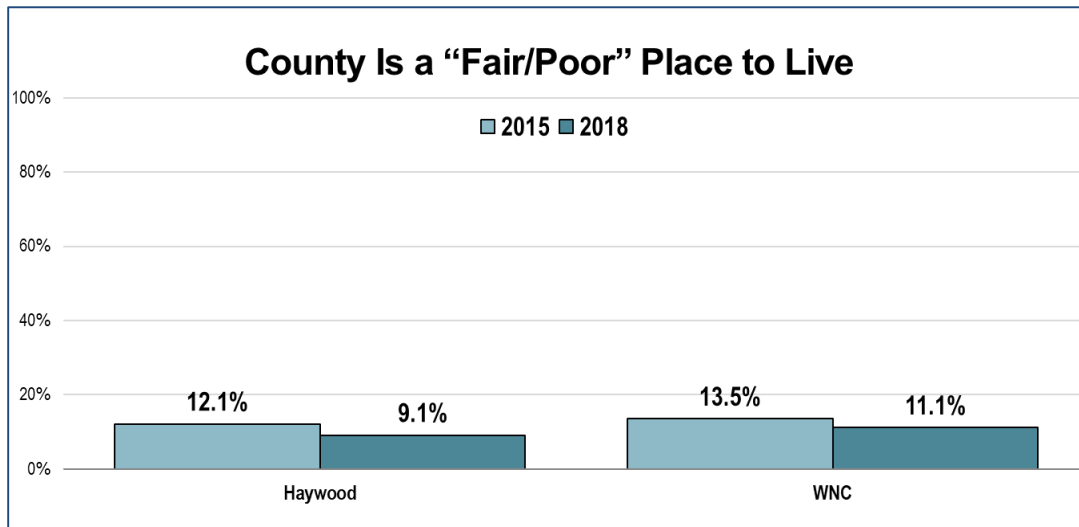
With regards to social and emotional support, 78.4% of respondents reported "always" or "usually" getting the support needed. This is above the WNC regional level, but it reflects that 21.6% of respondents "rarely" or "never" got the support they needed.
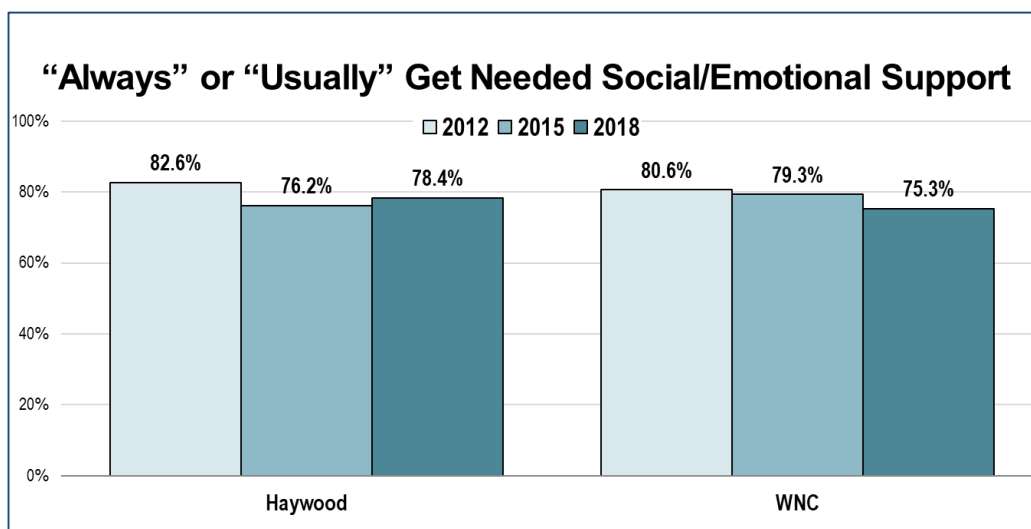
Other data related to family and social support, including Adverse Childhood Experiences (ACEs) and access to resources, are contained in **chapter 8 - Identifying Health Priorities**.

CHAPTER 5 – HEALTH DATA FINDINGS SUMMARY

This chapter is intended to serve as an overall review of the health status in Haywood County. Data relevant to the selection of priority health issues is covered in **Chapter 8 - Identification of Health Priorities**. Population characteristics, socioeconomic, and environmental factors also have separate sections within this document.

Mortality

According to the most recent data available and as shown in the table below, the top three causes of death in Haywood County are heart disease; cancer; and chronic lower respiratory diseases (such as chronic obstructive pulmonary disease and emphysema), followed closely by unintentional injuries, which include drug overdoses. Of the various forms of cancer, lung, prostate and breast cancers are the most common causes of death (NC State Center for Health Statistics, 2019).

Haywood County's 2018 County Health Ranking:

44

of 100 NC counties

This ranking system considers both health factors and health outcomes. See the latest details here. (County Health Rankings, 2018)

Rank	Cause of Death (Age-Adjusted, 2013-2017)	# Deaths	Rate per 100,000
1	**Diseases of Heart**	**941**	**190.0**
2	**Cancer**	**806**	**159.8**
3	**Chronic Lower Respiratory Diseases**	**255**	**48.4**
4	**All Other Unintentional Injuries**	**181**	**48.2**
5	Cerebrovascular Disease	191	36.2
6	Pneumonia and Influenza	116	23.6
7	Alzheimer's disease	96	18.2
8	Suicide	60	17.7
9	Unintentional Motor Vehicle Injuries	57	16.6
10	Nephritis, Nephrotic Syndrome, & Nephrosis	80	15.8
11	Diabetes Mellitus	65	13.8
12	Chronic Liver Disease and Cirrhosis	55	14.3
13	Septicemia	48	10.0
14	Homicide	11	N/A
	All Causes	**3,821**	**795.9**

In Haywood County, the 2015-2017 overall life expectancy at birth is 77.4; for women, it is 79.9; and for men, it is 74.9 (NC Center for Health Statistics, 2019).

Health Status & Behaviors

When asked to characterize their overall health, 20.1% of Haywood County residents characterized it as "fair" or "poor" (WNCHN – WNC Healthy Impact Community Health Survey, 2018). This is a higher percentage of residents reporting a "fair" or "poor" health status than was reported across the region, in NC, or in the US, which may relate to the higher share of adults over 65 in Haywood County as compared with the region or state.

Experience "Fair" or "Poor" Overall Health

☐ 2012   ☐ 2015   ■ 2018

	Haywood	WNC	NC	US
2012	18.5%	19.0%	18.1%	16.8%
2015	17.0%	17.3%	19.2%	15.3%
2018	20.1%	17.3%	18.3%	18.1%
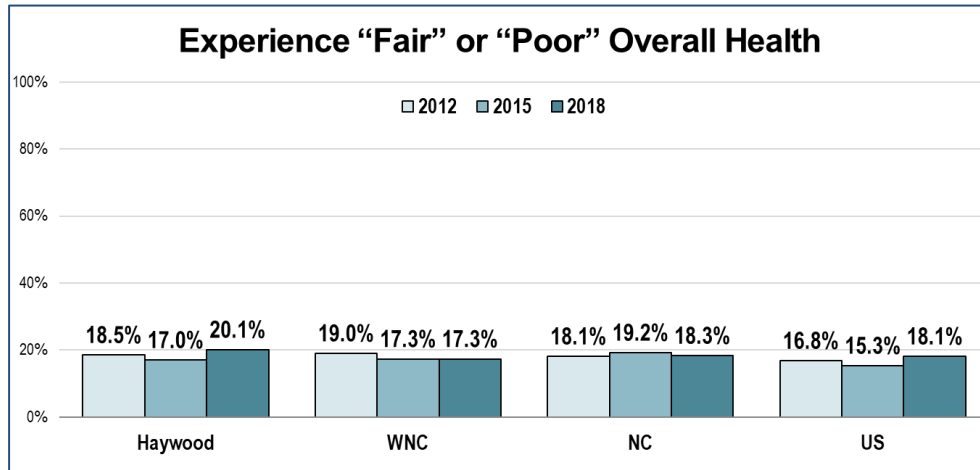
Another overall aspect of health relates to being able to perform daily activities without limitation. More than a quarter (26.7%) of Haywood County residents reported being limited in their activities due to a physical, mental or emotional problem. The top two limitations were back or neck problems and mental health or depression (WNCHN – WNC Healthy Impact Community Health Survey, 2018).

Limited in Activities in Some Way Due to a Physical, Mental, or Emotional Problem

☐ 2012   ☐ 2015   ■ 2018

	Haywood	WNC	NC	US
2012	28.9%	28.1%	21.2%	17.0%
2015	31.9%	28.1%	21.2%	21.5%
2018	26.7%	30.7%	21.6%	25.0%
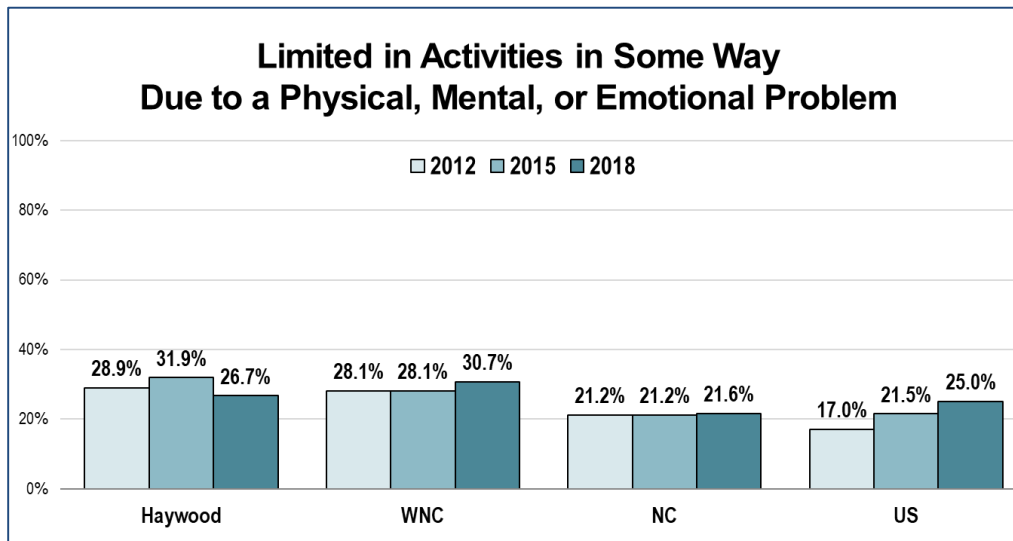
Chronic disease rates, including heart disease, diabetes and obesity, and the health behaviors that impact them, including healthy diets and physical activity, are of great concern in Haywood County. The impact of mental health concerns and substance use on our county residents were also of high interest. Key morbidity and health behavior data relating to these issues are presented in **Chapter 8: Identifying Health Priorities** in the sections for each health priority.

With regard to infectious disease, the most common sexually transmitted infection in Haywood County is chlamydia. The rate of new chlamydia infection in Haywood County has steadily increased to 141.2 in 2017 to 227.6 per 100,000 people (NC DHHS, 2018).

Clinical Care & Access

Access to insurance coverage in Haywood County is not universal. Among adults ages 18-64, 17.1% still report lacking health insurance coverage (WNCHN – WNC Healthy Impact Community Health Survey, 2018).

Adults (18-64) lacking Healthcare Insurance Coverage
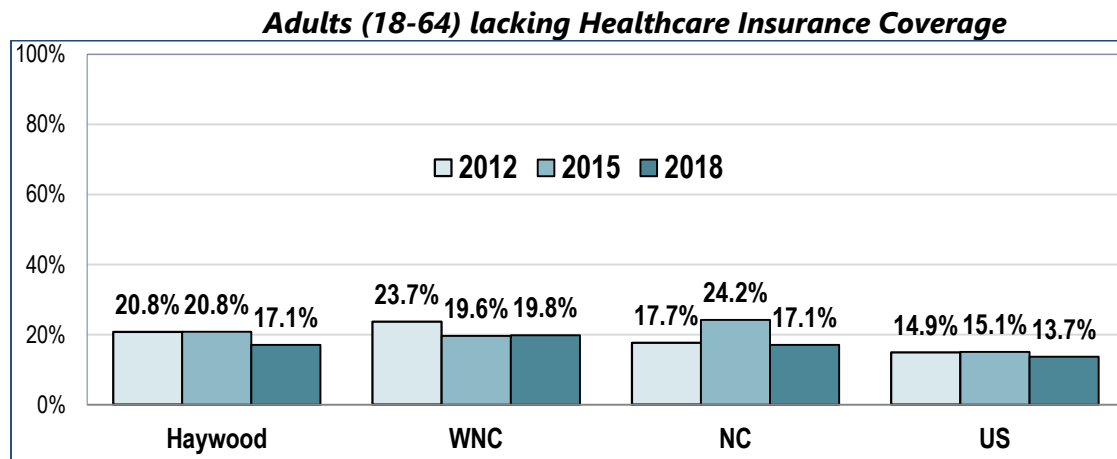
Independent of health insurance coverage status, approximately 12% of residents reported *not* having a specific source of ongoing medical care (WNCHN – WNC Healthy Impact Community Health Survey, 2018). The arrival of the Federally Qualified Health Center Blue Ridge Community Health Services in 2016 and expansion in 2018 has undoubtedly contributed to increased medical care access for residents, with or without insurance coverage.

Have a Specific Source of Ongoing Medical Care
Healthy People 2020 Target = 95.0% or Higher
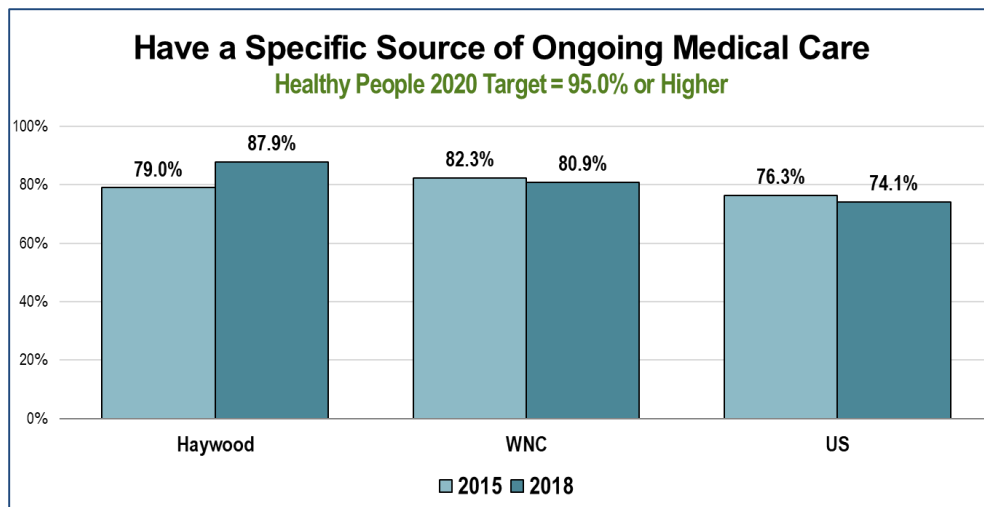
In Haywood County, 25.5% of the population was eligible for Medicaid in Fiscal Year 2017, a steady increase from FY 2004 (NC DHHS, 2018). North Carolina did not choose to expand Medicaid after the adoption of the Affordable Care Act in 2010, but there are efforts to do so now, which will increase the share of the population eligible for and served by Medicaid.

Percent of the Population Eligible for Medicaid

Haywood — WNC Region — North Carolina

19.48 19.60 20.27 20.44 20.55 22.37 22.66 23.90 23.68 23.04 24.21 24.90 25.5

SFY04 SFY05 SFY06 SFY07 SFY08 SFY10 SFY11 SFY12 SFY13 SFY14 SFY15 SFY16 SFY17
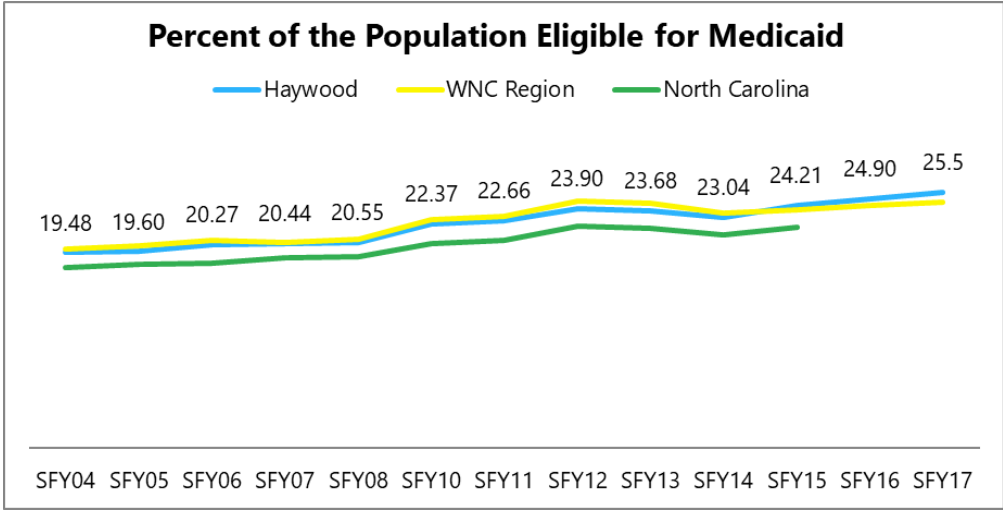
At Risk Populations

Haywood County death certificates show that adults in Haywood County whose deaths were related to substance use (SU) died at much younger ages than the general public (HHSA, 2019).

Comparison of Average Age at Death, 2016 - 2018

Year	Average Age of SU Deaths	Average Age of All Deaths
2016	50.4	75
2017	50.6	74.4
2018	47.7	74.3
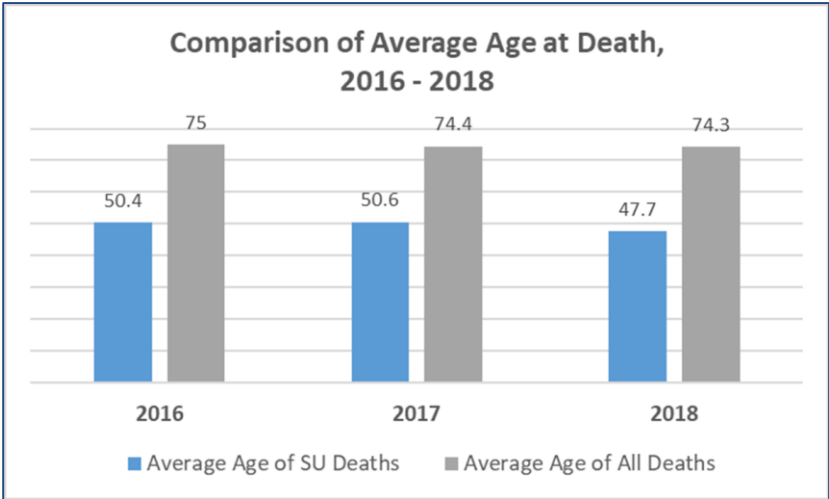
Health status data relating to at risk populations is further discussed in **chapter 8 - Identifying Health Priorities**.

CHAPTER 6 – PHYSICAL ENVIRONMENT

The physical environment – comprising the places where we live, learn, work, and play - is important to the health of our community. Put another way: "Our zip code can be more important than our genetic code" (Center for Disease Control & Prevention, 2018).

Photos courtesy of Patrick Jackson. Haywood County's natural beauty and Cataloochee elk

Air & Water 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. Clean air and water support healthy brain and body function, growth, and development. Air pollutants...can harm our health and the environment. Excess nitrogen and phosphorus run-off, medicines, chemicals, lead, and pesticides in water also pose threats to well-being and quality of life" (County Health Rankings, 2018).

Haywood County is unique in that all water originates in the county. County residents enjoy fishing and utilizing the waterways, including the Pigeon River and Richland Creek. Sixty-six percent of county residents are served by community water systems, which is well above the WNC regional average (US Environmental Protection Agency, 2018). Community water systems help ensure adequate water treatment and safety.

As for air quality, secondhand smoke is a noticeable health concern: 18.2% of employed survey respondents reported breathing smoke at work (WNCHN – WNC Healthy Impact Community Health Survey, 2018).

The Environmental Protection Agency measures air quality and toxic releases nationwide. In 2017, Haywood County's air quality index was available for 359 days; forty-five days were considered unhealthy or unhealthy for sensitive groups and another 93 were deemed moderate. Haywood County ranked ninth of 85 counties in the state reporting for total toxic releases. Compounds of greatest release in Haywood County included methanol, manganese compounds, sulfuric acid, ammonia, hydrogen sulfide, hydrochloric acid, barium compounds, hydrogen fluoride, cresol, vanadium compounds, zinc compounds, and formaldehyde (Environmental Protection Agency, 2017).

Access to Healthy Food & Places

"Food security exists when all people, at all times, 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 (Food and Agriculture Organization, 2006). The environments where we live, learn, work, and play affect our access to healthy food and opportunities for physical activity which, along with genetic factors and personal choices, shape our health and our risk of being overweight and obese. As of 2013, 29 million Americans lived in a food desert, without access to affordable, healthy food. Those with lower education levels, already at-risk for poor health outcomes, frequently live in food deserts" (County Health Rankings, 2018).

The USDA Food Environment Atlas measures access and proximity to healthy foods and places. Below is a comparison of Haywood County residents' access to farmer's markets, recreation facilities, grocery stores and fast food establishments (USDA, 2015). The ready access to fast food compared with farmer's markets, recreation facilities, or grocery stores points to a potential imbalance in the Haywood County environment that makes healthy choices more difficult.

Graph created with data from USDA Food Environment Atlas, 2015

Health Resources

Process

In late 2018 and early 2019, the CHA team reviewed a comprehensive download of Haywood County resources from United Way of North Carolina's resource web- and phone-based database 2-1-1. Upon contacting each agency to verify services and information, HHSA staff noted and reported back to 2-1-1 any changes and gaps. The goal is that this community tool (2-1-1) continues to serve as the updated resource list accessible via phone and online 24/7. In addition, the prioritization process involved a detailed consideration and discussion of health resources relating to the top priorities. The resource list is available on the Healthy Haywood website here.

> *"There are many resources available and a willingness to collaborate. If we work together, we can communicate more effectively with the community about what is available and how to access it."*
>
> -Haywood County community leader

Findings

Through the data review and community prioritization process, 2-1-1 review, and from a regional perspective, it is clear that Haywood County is fortunate to possess varied health resources. There is decidedly an uneven distribution of resources accessible among county residents, and a need to better promote the services available. Below is some feedback from key informant interviews about what is contributing and what is inhibiting progress on this issue (WNC Health Network Key Informant Survey, 2018).

What's Helping?	What's Hurting?
• *Expansion of health and behavioral health through Blue Ridge FQHC; HRMC health system recruitment of primary and specialty care providers; access to behavioral health services for indigent/Medicaid individuals.* • *There are many resources available and a willingness to collaborate. If we work together, we could communicate more effectively with the community about what is available and how to access it.* • *We have a number of health providers in our*	• *Many people still lack insurance or are underinsured.* • *Failure to get preventative/primary care.* • *Higher level/long term care for mental health and substance use issues difficult to fund/maintain.* • *Lack of funding for marketing and outreach to promote resources that are available to the community and reach those that need them.*

county. A coordinated effort with all entities placing self-interest aside would allow great progress to be made in a short period of time. • *Willingness of leaders and the business community to see the need, and community and corporate groups addressing this problem for the disadvantaged and the elderly.*	• *Not enough resources for the poor.* • *Some abuse of the system.* • *People still utilizing the emergency department for primary care and issues that are better addressed by a primary care physician. More FNPs and PAs and CNMs are good for the community.*

Highlights of Available Resources:

Hospital System and affiliated providers	The county is home to Haywood Regional Medical Center (HRMC), which offers orthopedics, spine services, cardiology, general surgery, women's care, emergency medicine, behavioral health, and 11 multi-specialty physician clinics. The campus in Clyde is home to the 54,000 square foot Haywood Regional Health & Fitness Center, and the 44,000 square foot Outpatient Care Center. HRMC also operates two urgent care centers, in Hazelwood and Canton (HRMC, 2019).
Primary Care and other health providers:	The county has numerous primary care and specialty physicians. Blue Ridge Community Health Services, a Federally Qualified Health Center, expanded to Haywood County in 2016 and offers primary care, OB/GYN, and behavioral health services. Haywood County Health & Human Services Agency offers clinical public health and dental services.
Behavioral Health	Vaya Health is the local LME/MCO. Meridian Behavioral Health Services, Appalachian Community Services and Blue Ridge Community Health Services provide community outpatient services and treatment; there are also private providers.
Recreation	There are Town of Waynesville & Canton recreation facilities and town and County sports programs/leagues; hospital-based fitness center and private gyms; Waynesville Greenway; school, church and public playgrounds, Lake Junaluska walking trails; Active Routes to School walking/biking programs; Girls on the Run; "Locker Room" nonprofit making sports equipment available to low-income families; Girl/Boy Scouts; ready access to hiking trails.
Food Security/Nutrition	Through HHSA: WIC, SNAP/FNS, Meals on Wheels; Haywood Gleaners; MANNA Food Bank serves, Haywood Christian Ministries and other food pantries; School Nutrition services; Open Door and Canton Community Kitchen; Community garden at Grace Church; Publix partnership with Haywood Pathways; Cooperative Extension Programs; Backpack nutrition programs (through Rotary, churches, schools, MANNA); Farmers Markets that accept SNAP and will soon offer Double Up Food Bucks.

Resource Gaps

Some noted gaps in the 2-1-1 information relate primarily to new resources available in Haywood County, such as Blue Ridge Community Health Services (its services expanded in 2018); NAMI, which returned to the area in 2018; and a new substance use treatment facility, Groups Recover Together, that opened in late 2018. Support groups like Alcoholics Anonymous and Narcotics Anonymous aren't shown on 211, though there are many, including groups held at the Grace Church in the Mountains, Waynesville First United Methodist Church, and Waynesville Triangle Club. 2-1-1 doesn't capture some of the more informal food security resources, such as backpack programs. These gaps have been reported to 2-1-1.

Most resource gaps in Haywood County relate to social determinants of health. Public transportation is available but limited (unavailable on weekends) and requires an appointment. Housing affordability and adequacy are recognized as key barriers to health in Haywood County, as is affordable childcare. Like many rural and mountainous counties, Haywood County lacks sidewalks and bike lanes. A greenway exists with a dedicated planning group, but there is much room for development; currently, funding is needed for a feasibility study and eventual construction. Even in areas with sidewalks, there is a lack of continuity and accessibility (not very accommodating to strollers and wheelchairs). Many service providers provide a variety of resources, but often operate on limited budgets or are stretched thin due to providing coverage to the multiple counties. Finally, as long as the insurance coverage gap remains, some health services will be unattainable to many.

Getting an eye exam at Haywood Family Eye Care. Photo courtesy of *The Mountaineer*

NC 2-1-1 Help Starts Here

Search the 2-1-1 database by clicking the logo at left

CHAPTER 8 – IDENTIFICATION OF HEALTH PRIORITIES

Health Priority Identification

Process

Every three years, we pause our usual work, step back and take a fresh look at current data reflecting the health of our community. We use this information to help us assess our work and the actions we need to take moving forward. Beginning in August 2018, our team spent time understanding the data and uncovering what issues were affecting the most people in our community. We interviewed community leaders to find out what they were most concerned about. To identify the significant health issues in our community, our key partners (see a full list in the Executive Summary) reviewed and discussed data, 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 a high community concern;
- Haywood County data deviates notably from the region, state or benchmark

Once our team made sense of the data, we presented key health issues to Healthy Haywood and community members. This health prioritization process is an opportunity for community stakeholders, such as the hospital, HHSA, representatives of other government agencies, non-profit organizations, and business groups to agree on which health issues and results we can all contribute to – thereby increasing the likelihood that we'll make a difference in people's lives.

Identified Issues

During the above process, Healthy Haywood members reviewed many pieces of data. HHSA staff structured the following health issues comprised of multiple indicators of concern:
- **Chronic Disease Prevention**: Chronic conditions affecting higher rates of Haywood County residents, including heart disease, diabetes and obesity;
- **Elder Health**: Given the high and growing proportion of residents over 65, a focus on relevant elder health concerns including falls, dementia/Alzheimer and chronic disease rates;
- **Mental Health**: Focusing on addressing Adverse Childhood Experiences (ACES) and the impact of mental health concerns on substance use and suicide prevention;
- **Nutrition & Physical Activity**: Healthy eating and physical activity behaviors and interventions that impact chronic disease outcomes;
- **Perinatal & Early Child Health**: A focus on a healthy pregnancy and early childhood health outcomes which, if addressed, can impact the entire lifespan;

- *Social Determinants of Health*: An intentional recognition of the importance of access to health resources, income, education, housing and other determinants on health outcomes;
- *Substance Use*: A focus on the use and misuse of drugs, alcohol and tobacco, related health outcomes, and prevention efforts.

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:

- **Relevant** – How important is this issue? *(Urgency to solve problem; community concern; Focus on equity; Linked to other important issues)*
- **Impactful** – What will we get out of addressing this issue? *(Availability of solutions/proven strategies; Builds on or enhances current work; Consequences of not addressing issue now)*
- **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; Can identify easy, short-term wins)*

Photos from HHSA staff: CHA Prioritization meeting participants; Modified Hanlon sticky note voting

Participants used a modified Hanlon method to rate the priorities using the criteria listed above. Afterwards, modified dot-voting (using sticky notes) was used to narrow to the top three priority health issues. The group then proposed the merging of some health issues to arrive at the top three priorities. In a follow-up meeting, they voted unanimously for their approval.

Identified Priorities

The following priority health issues were selected through the process described above:

- **Mental Health & Substance Use**: Merging mental health and substance use was widely proposed as they are interrelated, have similar roots, involve similar stakeholders, and may require similar strategies.
- **Perinatal & Early Child Health:** The community acknowledged the potential for lifelong improvement by appropriate action at this time in the lifespan, and an opportunity to build on current efforts.
- **Chronic Disease Prevention:** Chronic disease prevention was merged with nutrition and physical activity to allow room for varied strategies rooted in preventing chronic disease.

PRIORITY ISSUE #1: MENTAL HEALTH & SUBSTANCE USE

Mental health was identified as a top priority in the 2015 CHA. For the first time, this year's survey addressed Adverse Childhood Experiences; suicide in Haywood County is also a concern. Substance use, including tobacco, alcohol and drugs, was another top priority noted in 2015. Mental health and substance use remain issues of concern, action, and discussion in Haywood County and surfaced throughout the data collection process. There is still much work to do, and participants in the process recommended addressing the issues together.

What Do the Numbers Say?

Experienced Adverse Childhood Experiences Before Age 18 (2018)
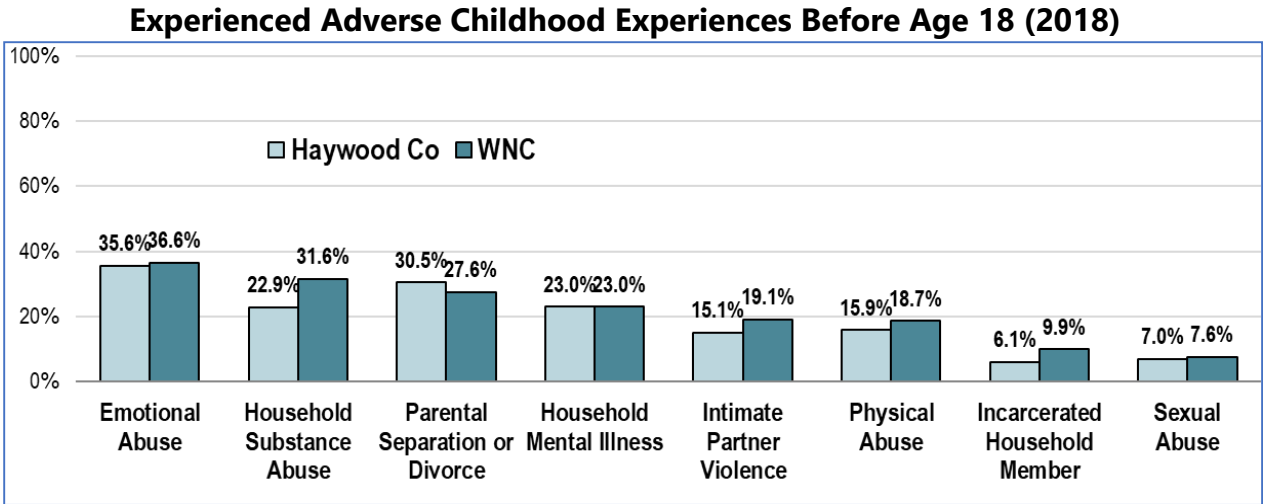
Surveyed adults reported experiencing the above ACES prior to age 18. More than 35% of Haywood County adults reported experiencing emotional abuse in childhood, and more than 30% experienced parental separation or divorce. Ten percent of respondents experienced four or more of the ACES above (WNCHN – WNC Healthy Impact Community Health Survey, 2018). Experiencing ACES disrupts numerous systems in the body and brain, increasing the risks of substance use, serious behavioral and mental health conditions, chronic diseases and lower life expectancy (Center for Youth Wellness, 2019). Addressing trauma and building resilient skills can mitigate these risks and improve health.

The negative impact of substance use on the lives of Haywood County residents is startlingly common: 38% of surveyed residents said their lives have been negatively affected by substance use, whether their own or someone else's (WNCHN – WNC Healthy Impact Community Health Survey, 2018).

Substance use data is most readily captured in NC by Emergency Department (ED) data. From 2009 through 2018, ED visits relating to substance use reflect increasing numbers of non-fatal opioid and heroin overdoses with a peak in 2017 of 86 and 48, respectively. Alcohol remains the most misused substance in Haywood County, as measured by dependence and by toxicity, shown below (NC DETECT, 2019).
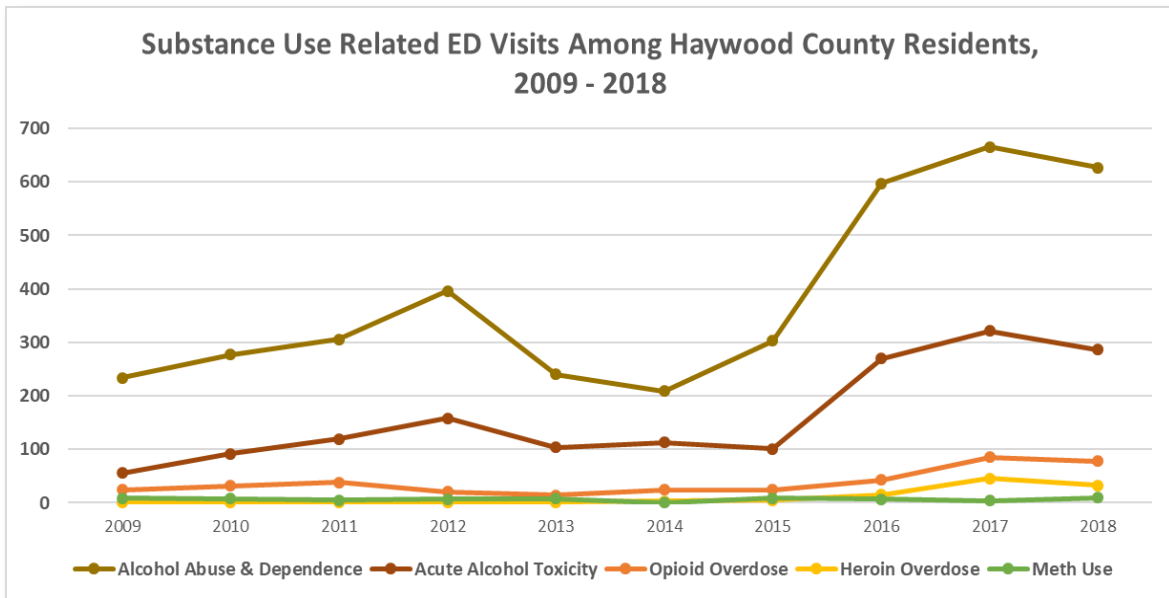
What Did the Community Say?

Below are some themes cited in the Key Informant Survey, online survey and listening sessions about what is helping and hurting regarding mental health and substance use.

What's Helping?	What's Hurting?
• *Community partnerships/task forces* • *Increasing trauma-informed treatment, training in resilient skill-building* • *Suicide: schools are doing their best; increasing awareness of deaths of despair* • *Law enforcement leadership, combined with government and healthcare leadership, to tackle the issue as a whole; collaboration* • *Widespread community focus on Substance Use Disorders (SUD), treatment options available; community focus on recovery.* • *Prevention education in schools*	• *Lack of priority/focus in school* • *Lack of community awareness/resources* • *Difficult to break the cycle* • *Suicide: stigma to address, lack of youth awareness* • *Limited resources for prevention and rehabilitation and long term care* • *Stigma and apathy, lack of participation from community and faith leaders.* • *Lack of adequate housing, jobs; poor mental health*

What Else Do We Know?

Mental health: More than 17% of Haywood County adults report that they experienced more than 7 days of poor mental health in the past month and more than 9% of adults did not

receive mental health treatment when they needed it (WNCHN – WNC Healthy Impact Community Health Survey, 2018).

Tobacco Use: In 2018, 17.6% of adults reported smoking cigarettes and 7.6% using smokeless tobacco, both slight declines from 2015. The use of e-cigarettes (5.6%) is increasing among adults and youth, though only national data is available for the latter (WNCHN – WNC Healthy Impact Community Health Survey, 2018). Lower respiratory diseases like Chronic Obstructive Pulmonary Disease (COPD) are the third highest cause of death in Haywood County (NC Center for Health Statistics, 2018).

Deaths of Despair: Haywood County HHSA tracks suicides and substance use related deaths as part of its vital record-keeping. There were 9 suicides in 2016; 20 in 2017 and 16 in 2018. Substance use deaths, due to either alcohol or drug toxicity, rose from 22 in 2016 to 28 in 2017 to 31 in 2018 (HHSA, 2019).

Bottom Line: The direct links between trauma in childhood and substance abuse, mental health and behavioral issues, risky behaviors, and chronic health problems is well established and intergenerational. The consequences of not doing more can also be tracked in terms of indirect and direct costs of treating and dealing with illegal drug use, alcohol use, serious mental health issues, and tobacco use as compared with primary prevention and promoting resilience. Prevention, treatment, and recovery must all be addressed to make progress; and all substances, whether legal or illegal, deserve our attention.

What is Already Happening?

Available Mental/Behavioral Health Services: Outpatient providers include Meridian Behavioral Health, Appalachian Community Services, Blue Ridge Community Health Services, and private providers; Vaya Health is the MCO; in-patient Behavioral Health Unit and Senior/Geriatric Psychiatric Units at HRMC; in-patient unit and 24-hour Behavioral Health Urgent Care at Balsam Center; Haywood Pediatrics ACES screenings and onsite Licensed Clinical Social Worker; office-based substance use treatment at Appalachian Community Services; Behavioral Health Group, Blue Ridge Community Health Services, Hazelwood Family Practice, Join Groups, Haywood Women's Medical Center, Meridian Behavioral Health, Mission Community Primary Care Haywood, and Mountain Medical Associates.

Community-based Mental Health Promotion: National Alliance for Mental Illness (NAMI) advocacy and support groups; resilience-focused programming at Mountain Projects/Head Start, Region A Partnership for Children, Pigeon Center; Resilience and mental health first aid training, awareness, film screenings; infant mental health work at CDSA; REACH Safe Dates program; *In Schools:* additional staff hired for crisis intervention; Students Against Violence Everywhere (SAVE) Clubs; Meridian PP federal grant; increasing school counselors/social workers recommended; Bridges Academy.

Drugs: Prevention, Awareness/Campaigns, Harm Reduction, Enforcement, Recovery Supports: Drugs in Our Midst prevention education; Substance Use Prevention Alliance group;

Law enforcement carries Naloxone, supports post-overdose outreach; Law Enforcement Assisted Diversion (LEAD); Pathways grant supporting peer support specialists in Detention Center; HHSA grant for post-overdose outreach; Lock Your Meds and Naloxone distribution campaigns; frequent media attention by local newspapers *The Mountaineer* and *Smoky Mountain News*; NC Harm Reduction Coalition-hosted Syringe Exchange, post-overdose outreach; Church of Jesus Christ of Latter Day Saints Addiction Recovery Program; Recovery Support Groups & Meetings at two area churches and Waynesville Triangle Club.

Drugs in our Midst Prayer Walk, downtown Waynesville. Photo courtesy of Patrick Jackson

Tobacco & Alcohol Prevention/Cessation: Tobacco-free ordinances in Waynesville and Haywood County; tobacco prevention supported by MountainWise; Drugs in Our Midst prevention education; smoking cessation grant for pregnant and postpartum women at HHSA; Mountain Projects Tobacco Merchant Education, Alcohol Merchant Education, and Responsible Alcohol Servers & Sellers Trainings.

What Change Do We Want to See?

Our collaborative strategic planning process will further define our ideal results, strategies to reach them, and data to track. But we know we would like to create **a more resilient Haywood County**: a community with less trauma, fewer serious mental health concerns and reduced substance use, and residents that are better able to cope with the effects of the trauma, mental health and substance use that is present.

A few of the key indicators we will be tracking include the number of opioid and heroin overdoses and the number of alcohol-, mental health- and suicide-related ED visits, all of which are available through NC Detect. We will focus on data in certain key populations, including: substance use among pregnant women and exposure to newborns and suicide-related concerns among youth. We will also pay close attention to the number of trainings or educational opportunities related to responding to trauma as we work to strengthen our collective resilience.

PRIORITY ISSUE #2: PERINATAL & EARLY CHILD HEALTH

Perinatal and early child health is a new health priority for Haywood County. Concerns over the high childhood and under-five poverty rates, low levels of prenatal care, high rates of prenatal smoking, and perinatal substance use and exposure raised the profile of this issue. It was recognized throughout our collaborative process that the potential impact in this period could be great and lasting, and that there was a need to strengthen the collective impact of current, disparate efforts.

What Do the Numbers Say?

Health Indicators

2016 Percent of Pregnancies Receiving Prental Care in the First Trimester, by Race

Legend: Haywood, WNC Region, North Carolina

	Haywood	WNC Region	North Carolina
White Non-Hispanic	80.9	79.8	75.6
African American Non-Hispanic	53.8	61.9	61.4
Other Non-Hispanic	75.0	73.7	67.3
Hispanic	65.5	75.3	58.0

Percent of Births to Mothers who Smoked Prenatally

Legend: Haywood, WNC Region, North Carolina

Haywood: 21.1 (2011), 21.1 (2012), 20.6 (2013), 18.5, 15.1 (2015), 17.7 (2016)

Overall, 20.5% of pregnancies in Haywood County did not receive prenatal care in the first trimester. More than 45% of pregnancies among African-American and almost 35% of pregnancies among Hispanic women did not receive prenatal care in the first trimester (NC Center for Health Statistics, 2017).
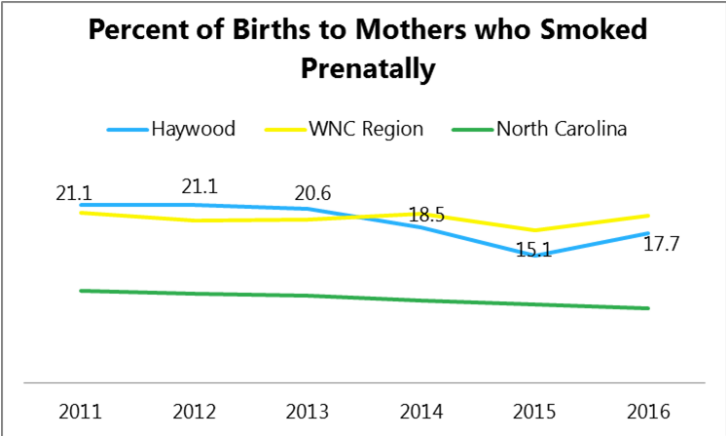
In Haywood County, 17.7% of babies born had mothers who smoked prenatally (NC Center for Health Statistics, 2017). This is roughly the same proportion of all residents that smoke in Haywood County.

What Did the Community Say?

Below are some themes cited in the Key Informant Survey about what is helping and hurting regarding perinatal and early child health.

What's Helping?	What's Hurting?
• *Perinatal collaborative* • *Breastfeeding program* • *Better infant/child care education* • *Public health and community programs doing a pretty good job, but coordination could improve efforts*	• *Lack of funding, expense of care* • *Lack of parental involvement, inadequate support for parents* • *Lack of awareness, education, getting community buy-in* • *Extremely low pay for child care professionals*

What Else Do We Know?

The effect of substance use in pregnancy: Prenatal smoking and substance use are both linked to low birth weight and pre-term birth, which are on the increase. 9.6% of births in Haywood County are low birth weight and 11.5% of births are pre-term (NC Center for Health Statistics, 2018).

Infants born with positive toxicology screens in 2018: 71 of 345 infants born = 20.5%

(Per referrals to HHSA from area hospitals)

Children in Foster Care in which substance use is a factor in case: 54 of 105 children = 51.4%

Per HHSA Social Work Division case files

Bottom Line: The costs for caring for infants born premature, low birth weight, or substance exposed (neonatal abstinence syndrome) at birth and as the child develops are unclear, but are much higher than investing in preventing them. A lack of a unified focus or collaboration in Haywood County will perpetuate loss of momentum; a Birth to Five Initiative begun in 2016 has dropped off. We have a perfectly time opportunity to capitalize on the recently launched framework of the North Carolina Early Childhood Action Plan, which emphasizes themes of children being healthy, safe and nurtured and learning and ready to succeed (NC DHHS, 2019).

What is Already Happening?

Existing government services and resources: Pregnancy Care Management (OBCM), Women Infant Children Program (WIC), Care Coordination for Children (CC4C) and Family Planning Programs at HHSA; Nurse Family Partnership; Infant Toddler Program through Child Development Services Alliance (up to age three); Exceptional Children's Program in Haywood County Schools (ages 3-5); Guardian Ad Litem program.

Community based services for women: HRMC (Women's Services office and hotline, childbirth classes), prenatal providers (Haywood Womens, Blue Ridge, MAHEC); medication-assisted treatment (MAT) available for pregnant women; Perinatal Substance Use/Exposure Collaborative with participation from medical and behavioral health providers, care managers, social workers; WNC Perinatal Oral Health Collaborative; Cherish Every Moment Pregnancy Hotline; REACH domestic violence shelter and programming.

Community based services for families and children: Southwest Child Development Commission funds and oversees child development centers; Ending Area Child Homelessness (EACH), Haywood Pathways shelter; Haywood Pediatrics Parenting and Breastfeeding Classes; Every Student Succeed Act (ESSA); Parents as Teachers; program; Head Start Programs & Child Care Centers; Haywood Community College fund for students with children; Kids Advocacy Resource Effort (KARE) victim's advocacy and parenting programs.

What Change Do We Want to See?

Our collaborative strategic planning process will further define our ideal results, strategies to reach them, and data to track. But we know we would like to **support families and mothers in having healthy babies and children,** accessing the care they need, and reaching their full potential**.**

A few of the key indicators we will pay special attention to include the ongoing referrals of substance-exposed newborns by hospitals to HHSA, the rates of women receiving prenatal care in the first trimester and throughout their pregnancy; and prenatal smoking rates. As a new priority, this health issue will require further development and definition.

PRIORITY ISSUE #3: CHRONIC DISEASE PREVENTION

Nutrition & Physical Activity were selected in 2015 as a top health priority, and the importance of an active lifestyle and healthy eating on health was recognized again in 2018. Haywood County has not turned the curve on meeting physical activity and nutrition and nutrition guidelines. Key related chronic disease outcomes were also recognized: diabetes is the most prevalent chronic disease in Haywood County; heart disease is the top cause of death; and obesity prevalence continues to rise. During the collaborative process, our community opted to rename this priority Chronic Disease Prevention, to emphasize the ultimate outcome and allow space for clinical strategies as well as those focused on healthy eating and physical activity.

What Do the Numbers Say?

Key Health Indicators
Physical Activity: Only 18.9% of Haywood County adults met the recommended amount of physical activity (150 minutes/week) in the prior month (WNCHN – WNC Healthy Impact Community Health Survey, 2018).

Meets Physical Activity Recommendations
(2018)
Healthy People 2020 Target = 20.1% or Higher

	Haywood	WNC	NC	US
	18.9%	21.3%	18.9%	22.8%
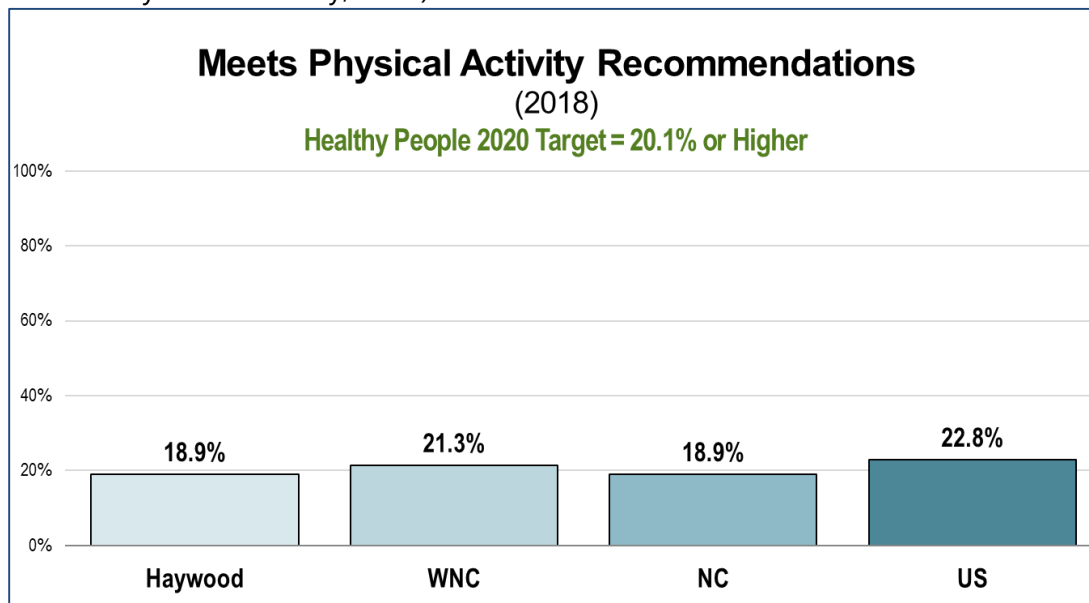
Diabetes
12.9% of surveyed adults reported having pre-diabetes or borderline diabetes (WNCHN – WNC Healthy Impact Community Health Survey, 2018). This self-reported measure is increasing.

Prevalence of Borderline or Pre-Diabetes

Legend: ☐ 2012 ☐ 2015

Location	2012	2015	(third bar)
Haywood	9.8%	12.6%	12.9%
WNC	7.6%	12.2%	7.5%
US		5.8%	9.5%
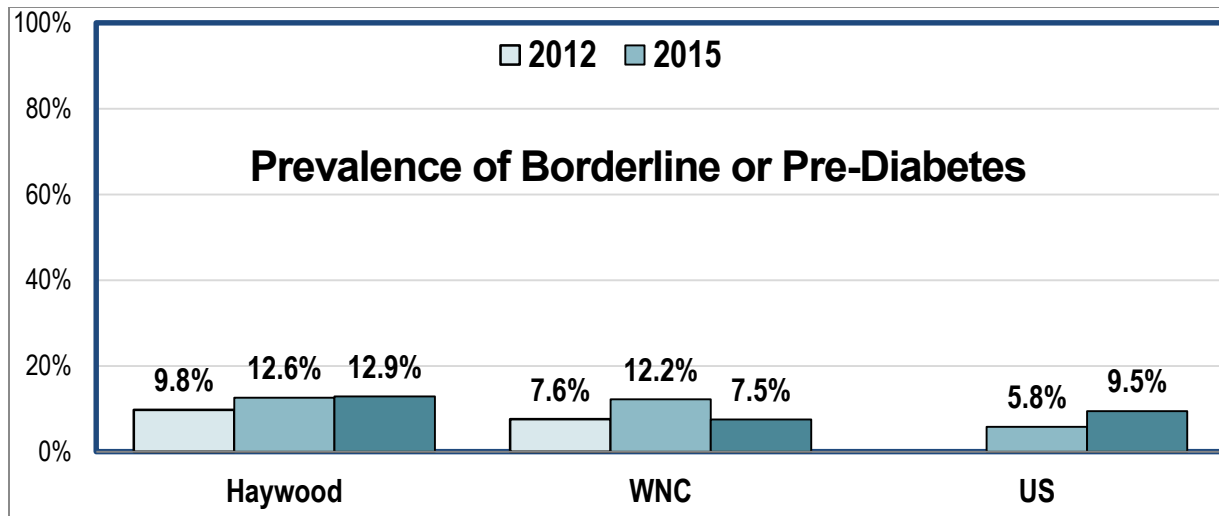
What Did the Community Say?

What's Helping?	What's Hurting?
• *Abundant Recreational/outdoor opportunities* • *Increased awareness and education* • *Worksite wellness programs* • *Resources for nutrition/food security* • *More access to care and services from doctors, workplace wellness and prevention programs* • *Earlier identification and treatment of risk factors*	• *Built environment (fast food, driving)* • *Generational obesity* • *Time, lack of knowledge about how to buy, prepare, budget for healthy food* • *Lifestyle: Lack of physical activity or nutrition, not understanding the consequences* • *High cost of medication and supplies* • *No coordinated action*

What Else Do We Know?

Obesity: 32.5% of adults are obese, an increase from 27.9% in 2015; when combining overweight and obesity, the proportion climbs to 64.5% of Haywood County adults (WNCHN – WNC Healthy Impact Community Health Survey, 2018). Childhood overweight is 14.2% and childhood obesity is 15.7% (Eat Smart Move More NC).

Nutrition/Food Security: <4% of the adult population got the recommended five fruits/vegetables per day. Less than a quarter (23%) of the adult population in Haywood County is food insecure (WNCHN – WNC Healthy Impact Community Health Survey, 2018).

Chronic Disease: 12% of Haywood County adults reported having heart disease, including a previous heart attack, angina, or coronary disease. **High blood pressure** (44% of adults in Haywood County); **High blood cholesterol** (~35% of adults in Haywood County); more than 16% of Haywood County adults had been told they had diabetes (WNCHN – WNC Healthy Impact Community Health Survey, 2018); all are important risk factors for heart disease:

Bottom Line: Treating and managing chronic diseases are some of the costliest conditions, and direct medical costs and indirect costs continue to increase. As an example, heart disease costs the US $555 billion and is projected to rise to $1 trillion by 2035 (American Heart Association, 2017). Diabetes costs in 2017 were $327 billion (CDC, 2018). Major morbidities and complications result from diabetes, heart disease and stroke, and they are *preventable* diseases. Unhealthy diet and inadequate physical activity are major modifiable risk factors for most chronic diseases, and encouraging and enabling a healthy diet and active lifestyle will improve health and quality of life across the county.

What is Already Happening?

A key regional public health partner, MountainWise "works with the eight westernmost counties of NC to provide opportunities for physical activity, access to local fresh fruits and vegetables, provide support for tobacco-free places and access to services for chronic-disease management" (Mountainwise, 2019).

Kids' Fishing Clinic at Haywood Community College. Photo courtesy of the Mountaineer.

Opportunities for Physical activity: Recreation facilities, fitness centers, private gyms, sports leagues, senior games; Greenway, playgrounds, walking, hiking and biking trails; Active Routes to School programs; Girls on the Run; "Locker Room" nonprofit program to make sports equipment available to low-income families; Girl/Boy Scouts.

Nutrition/Food Security Programs: WIC, SNAP/FNS, Meals on Wheels, Haywood Gleaners, MANNA, Haywood Christian Ministry, School Nutrition (including summer meals), food pantries, soup kitchen, community garden at Grace; Publix partnership w/ Haywood Pathways; Double-Up

Food Bucks; Cooperative Extension Nutrition Programs; Backpack nutrition programs (Rotary, churches, MANNA); Farmers Markets (accept SNAP); BRH nutrition services.

Chronic Disease Prevention: Worksite Wellness Programs, Haywood Workwise Council (linking employers that offer worksite wellness); New Appalachian Regional Commission MountainWise worksite wellness grant for manufacturing facilities Haywood Vocational Opportunities, Evergreen Packaging, and others; Diabetes Prevention Programs (HHSA, Senior Resource Center); Diabetes Management at HRMC; Individual medical providers; hospital-based cardiology programs, trained staff for blood pressure management at HHSA/Senior Center

Fourth of July Parade in downtown Waynesville. Photo courtesy of The Mountaineer

What Change Do We Want to See?

Our collaborative strategic planning process will further define our ideal results, strategies to reach them, and data to track. However, we know we want to continue to promote an **Active, well-nourished and healthy weight community** in Haywood County to prevent chronic disease.

Some of the indicators we will track include physical activity levels (physical inactivity available annually through County Health Rankings), adherence to a healthy diet, and data related to pre-diabetes levels.
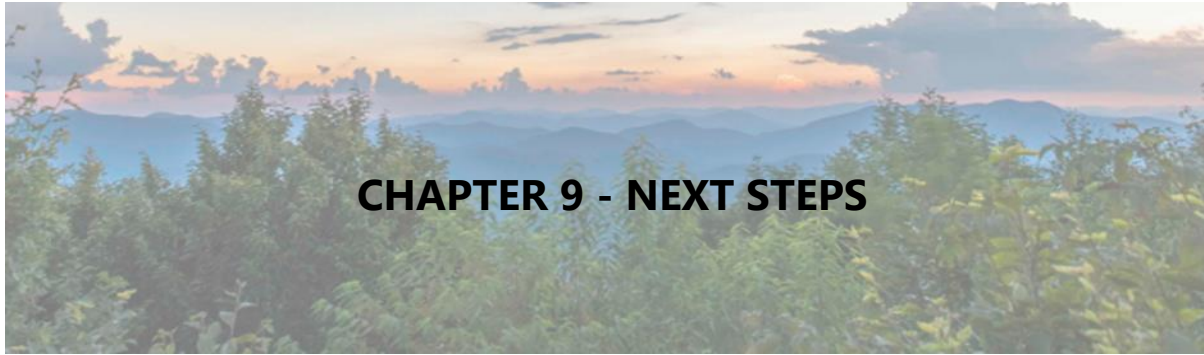
CHAPTER 9 - NEXT STEPS

Collaborative Planning

Collaborative planning with hospitals and other community partners through Healthy Haywood will result in the creation of a community-wide plan. This plan will outline what will be aligned, supported, and implemented to address the priority health issues identified through this assessment process.

We have established action teams for each of the three health priorities with regular meeting dates. The action teams will develop community health improvement plans over the course of spring and summer 2019.

Sharing Findings

We will present the CHA to our HHS Board and to our Healthy Haywood Coalition as well as any others upon request. The CHA is also being developed into a brief video overview that will be shared at meetings. We will send a press release to local media outlets.

Haywood County CHA Distribution:
- *Press releases*
- *Posted on agency and coalition websites and linked from social media*
- *Shared with government, nonprofit, hospital, and business partners for posting electronic copies or printing hard copies*
- *Video overview*
- *Contact HHSA Public Health Education Supervisor Lauren Wood for more*

Where to Access this Report

This report will be available in Haywood County government offices, including the Administration, Health & Human Services Agency, Recreation & Parks, and County Library branches. An electronic version of the report will be posted on our County and Healthy Haywood websites and linked from our respective social media sites. Copies of the report, both electronic and hard copies, will be shared with coalition and community partners, including the hospital, other government agencies, community nonprofits and businesses.

For More Information and to Get Involved

For more information about Haywood County, please visit www.haywoodcountync.gov. For more information about community health improvement, to get involved in Healthy Haywood, or to request a copy of the Community Health Assessment or other data, please visit www.healthyhaywood.com or contact **lauren.wood@haywoodcountync.gov**.

WORKS CITED

American Heart Association (2017). *Cardiovascular Disease: A Costly Burden for America. Projects Through 2035* [publication]. Available from: https://healthmetrics.heart.org/wp-content/uploads/2017/10/Cardiovascular-Disease-A-Costly-Burden.pdf

Center for Youth Wellness (2019). *The Science.* Available from: *https://centerforyouthwellness.org/the-science/*

Centers for Disease Control & Prevention. (2018). CDC Community Health Improvement Navigator. Retrieved from http://www.cdc.gov/chinav/resources/index.html

Centers for Disease Control & Prevention (2019). *Calculate What Diabetes Costs your Business*. Available from: https://www.cdc.gov/diabetes/diabetesatwork/plan/costs.html

County Health Rankings. (2018). *Health Factors*. Retrieved from: http://www.countyhealthrankings.org/explore-health-rankings/what-and-why-we-rank/health-factors.

County Health Rankings (2019). Haywood County, North Carolina. Retrieved from: http://www.countyhealthrankings.org/app/north-carolina/2018/rankings/haywood/county/outcomes/overall/snapshot

Eat Smart Move More NC. *2015 NC-PedNESS: Obesity in Children Ages 2 to 18 by County*. Retrieved July 9, 2017, from Eat Smart Move More, Data on Children and Youth website: http://www.eatsmartmovemorenc.com/Data/ChildAndYouthData.html

Haywood Community College (2019). *Enrollment and FTEs - Continuing Education*. Retrieved from: https://www.haywood.edu/institutional-excellence-research-and-grants/enrollment-and-ftes-continuing-education

Haywood County Health & Human Services Agency (2019). *Deaths of Despair*. [Death certificates]. Unpublished data.

Haywood County Health & Human Services Agency (2019). Infant Plan of Safe Care and Foster Care statistics obtained from Gayla Jones, Social Work Division Director.

Haywood Regional Medical Center (2019). *About Us*. Available from: https://www.myhaywoodregional.com/contact-us/about-us

MountainWise (2019). *What is MountainWise*? Available from www.mountainwise.org/what-is/

NC Center for Health Statistics (2018). *2012-2016 North Carolina Resident Live Births by County of Residence: Number and Percent of Low (<=2500 grams) and Very Low (<=1500 grams)*

Weight Births by Race and Ethnicity. Retrieved June 22, 2018, from North Carolina State Center for Health Statistics (NC SCHS), 2018 County Health Data Book website: https://schs.dph.ncdhhs.gov/data/databook/

NC Center for Health Statistics (2019). *2013-2017 Race-Specific and Sex-Specific Age-Adjusted Death Rates by County (CD12A).* Retrieved on February 28, 2019, from North Carolina State Center for Health Statistics (NC SCHS), 2019 County Health Data Book website: *https://schs.dph.ncdhhs.gov/data/databook/*

NC Center for Health Statistics (2018). *Birth Indicator Tables by State and County.* Trimester Care Began: First. Retrieved June 21, 2018, from North Carolina State Center for Health Statistics, 2018 County Health Databook website: https://schs.dph.ncdhhs.gov/data/databook/

NC Center for Health Statistics (2018). *Number and Percent of NC Resident Births Delivered by Gestation, 2012-2016.* Retrieved June 22, 2018, from North Carolina Center for Health Statistics (NC SCHS), 2018 County Health Data Book website: https://schs.dph.ncdhhs.gov/data/databook/

NC Center for Health Statistics (2018). *Selected Vital Statistics, Volume 1 - 2016 and 2012-2016.* Retrieved June 21, 2018, from North Carolina State Center for Health Statistics (NC SCHS), North Carolina Vital Statistics Volume 1 - 2016, website: https://schs.dph.ncdhhs.gov/data/vital/pregnancies/2016/

NC Department of Health & Human Services (2019). *Early Childhood Action Plan. Retrieved from:* https://www.ncdhhs.gov/about/department-initiatives/early-childhood/early-childhood-action-plan

NC Department of Health & Human Services (2017). *N.C. Medicaid Eligibility and Program Expenditures for Which the County is Responsible for Its Computable Share, SFY 2017*, from *Medicaid North Carolina, Annual Report, State Fiscal Year 2017.* Retrieved July 10, 2018, from: https://dma.ncdhhs.gov/reports/annual-reports-and-tables

NC Department of Health & Human Services (2018). *Table 12, Newly Diagnosed Chlamydia Annual Rates in North Carolina by County of Diagnosis and Year of Diagnosis, 2013-2017,* from *2017 North Carolina HIV/STD Surveillance Report.* Retrieved March 3, 2019, from the Communicable Disease Branch, Epidemiology Section, Division of Public Health, NCDHHS website: https://epi.publichealth.nc.gov/cd/stds/figures/std17rpt_rev12142018.pdf

NC Department of Justice (2018). *Crime Trends - Offenses and Rates per 100,000: County Rates, Ten Year Trend.* Retrieved April 24, 2018, from North Carolina Department of Justice, State Bureau of Investigation website: http://crimereporting.ncsbi.gov/

NC Department of Public Instruction *(2018). High School Dropout Counts and Rates, 2010-2011 through 2016-2017 (Table D5),* from Consolidated Data Reports. Retrieved April 2, 2018, from Public Schools of North Carolina, Annual Dropout Reports website: http://www.ncpublicschools.org/research/dropout/reports/

NC Department of Public Instruction *(2018). 4-Year Cohort Graduation Rate Report, 2012-2013 Entering 9th Graders Graduating in 2015-16 or Earlier - LEA Results*. Retrieved April 2, 2018, from Public Schools of North Carolina, Cohort Graduation Rates website: http://www.ncpublicschools.org/accountability/reporting/cohortgradrate

US Census Bureau (2018). *ACS Demographic and Housing Estimates (DP05).* 2016 ACS 5-year estimates. Retrieved on March 28, 2018, from U.S. Census Bureau, American FactFinder website: http://factfinder2.census.gov

US Census Bureau (2018). *Poverty Status in the Past 12 Months*, 2012-2016 American Community Survey 5-Year Estimates (S1701). Retrieved April 3, 2018, from U.S. Census Bureau American FactFinder website: http://factfinder2.census.gov

US Census Bureau (2018). *Selected Economic Characteristics*, 2012-2016 American Community Survey 5-Year Estimates (DP03). Retrieved April 3, 2018, from U.S. Census Bureau American FactFinder website: http://factfinder2.census.gov

US Environmental Protection Agency. *Safe Drinking Water Search for the State of North Carolina,* (Data extracted on July 10, 2018). Retrieved on July 12, 2018, from United States Environmental Protection Agency Envirofacts Safe Drinking Water Information System (SDWIS) website: https://www.epa.gov/enviro/sdwis-search

US Department of Health & Human Services Office of Disease Prevention and Health Promotion. (2018). Healthy People 2020. Retrieved from https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-health/interventions-resources/early-childhood-0.

University of North Carolina - Chapel Hill University Library (2019). *North Carolina Maps*. Available from: https://web.lib.unc.edu/nc-maps/browse_location.php

WNC Health Network. (2018). *2018 WNC Healthy Impact Community Health Survey: Data Workbook*. [Data set]. Available from https://www.wnchn.org/partner-resources/

PHOTOGRAPHY CREDITS

- Photos used on the cover and in headers from www.pexels.com; accessed October, 2018.
- WNC landscape photos used in the headers courtesy of Patrick Williams, Ecocline Photography.
- Local Haywood County landscape photos used on the cover and in body of report courtesy of Patrick Jackson, https://www.intheeyephoto.com/
- Local Haywood County landscape photos used in the Table of Contents and Executive Summary courtesy of Kara Sither.
- Active living photos used courtesy of *The Mountaineer*, www.themountaineer.com

APPENDICES

Appendix A – Data Collection Methods & Limitations

Appendix B - WNC Healthy Impact Community Health Survey Core Questions

Appendix C - WNC Healthy Impact Key Informant Survey Questions

Appendix D - Haywood County Community Health Assessment Data Slides 2018

Appendix E - Haywood County 2-1-1 Resources List

APPENDIX A - DATA COLLECTION METHODS & LIMITATIONS

Secondary Data from Regional Core

Secondary Data Methodology

In order to learn about the specific factors affecting the health and quality of life of residents of WNC, the WNC Healthy Impact data workgroup and 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; Log Into North Carolina (LINC); NC Department of Health and Human Services; NC Office of State Budget and Management; NC Department of Commerce; Employment Security Commission of NC; UNC-CH Jordan Institute for Families; NC Department of Public Instruction; NC Department of Justice; NC Division of Medical Assistance; 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 report was prepared. It was not possible to continually update the data past a certain date; in most cases that end-point was August 2018.

The principal source of secondary health data for this report was the NC State Center for Health Statistics (NC SCHS), including its County Health Data Books, Behavioral Risk Factor Surveillance System, Vital Statistics unit, and Cancer Registry. Other health data sources included NC Division of Public Health (DPH) Epidemiology Section; NC Division of Mental Health, Developmental Disabilities and Substance Abuse Services; the Centers for Disease Control and Prevention; National Center for Health Statistics; NC DPH Nutrition Services Branch; and NC DETECT.

Environmental data was 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.

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

Gaps in Available Information

One gap noted by the Substance Use Prevention Alliance (SUPA) group was the lack of data regarding youth health behavior and substance use data, as Haywood County Schools does not participate in a youth health survey.   A lack of representative survey data about youth in Haywood County is a major gap.

WNC Healthy Impact Survey (Primary Data)

Survey Methodology
The 2018 WNC Healthy Impact Community Health Survey was conducted from March to June. The purpose of the survey was to collect primary data to supplement the secondary core dataset, allow individual counties in the region to collect data on specific issues of concern, and hear from community members about their concerns and priorities. 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 survey methodology, which included a combination of telephone (both landline and cell phone) interviews, as well as an online survey. 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 2018 survey were:
1) In the last year, did you need dental care but did not get it?
2) If yes: What was the reason you did not get needed dental care?
3) What is your perceived level of stress on a typical day? [Extremely stressful to not at all stressful]

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 (here, 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 29 percent cell phone-based survey respondents and 71 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 also worked with a third-party provider to identify and invite potential respondents for an online survey for a small proportion (20%) 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.

About the Haywood County Sample

Size: The total regional sample size was 3,265 individuals age 18 and older, with 200 from our county. PRC conducted all analysis of the final, raw dataset.

Sampling Error: For our county-level findings, the maximum error rate at the 95% confidence level is 6.9%. Expected Error Ranges for a Sample of 200 Respondents at the 95 Percent Level of Confidence examples:
- If 10% of a sample of 200 respondents answered a certain question with a "yes," it can be asserted that between 5.8% and 14.2% (10% ± 4.2%) of the total population would offer this response.
- If 50% of respondents said "yes," one could be certain with a 95 percent level of confidence that between 43.1% and 56.9% (50% ± 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 our 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; Haywood County, 2018)

Chart legend: □ Actual Population ■ PRC Survey Sample

Category	Actual Population	PRC Survey Sample
Men	47.8%	47.7%
Women	52.2%	52.3%
18 to 39	27.1%	26.7%
40 to 64	44.7%	42.4%
65+	28.2%	29.8%
Non-Hispanic White	94.4%	94.3%
Hispanic	2.7%	3.0%
Other	2.9%	2.7%
<Poverty	17.2%	17.4%
100%-199% FPL	19.5%	19.5%
200%+ FPL	63.3%	63.2%

"Other" includes:
Non-Hispanic Asian	1.6%
Non-Hispanic Black	0.5%
Non-Hisp American Native	0.4%
Other/Multiple Races	0.2%

North Carolina Risk Factor Data

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

Nationwide Risk Factor Data

Nationwide risk factor data, which are also provided in comparison charts where available, are taken from the 2017 PRC National Health Survey; the methodological approach for the national study is identical to that employed in this assessment, and these data may be generalized to the US population with a high degree of confidence.

Healthy People 2020

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

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

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

Information Gaps

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

For example, certain population groups (such as the homeless, institutionalized persons, or those who only speak a language other than English or Spanish) are not represented in the survey data. Other population groups (for example, pregnant women, lesbian/gay/bisexual/transgender residents, undocumented residents, and members of certain racial/ethnic or immigrant groups) might not be identifiable or might not be represented in numbers sufficient for independent analyses.

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

Online Key Informant Survey (Primary Data)

Online Survey Methodology

Purpose and Survey Administration

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 of 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.

Online Survey instrument

The survey provided respondents the opportunity to identify critical health issues in their community, the feasibility of collaborative efforts around health issues, and what is helping/hurting their community's ability to make progress on health issues.

Participation

In all, 21 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	31	16
Other Health Provider	5	3
Physician	1	1
Public Health Representative	4	3
Social Services Provider	1	1

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

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

To collect this data, purposive sampling (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.

Local Survey Data or Listening Sessions
Additional data collected and reviewed in Haywood County included:
- General Online community health survey – taken by 153 respondents
- Focus group (Canton Senior Center)
- NC DETECT Data: Obtained emergency department statistics from 2009 – 2018 for opioid overdoses, heroin overdoses, methamphetamine use, alcohol toxicity, alcohol dependence and underage alcohol use
- School data – NC Department of Public Instruction reportable crimes
- DSS data – foster care statistics, newborns with substance exposure cases

Data Definitions
Reports of this type customarily employ a range of technical terms, some of which may be unfamiliar to many readers. Health data, which composes a large proportion of the information included in this report, employs a series of very specific terms which are important to interpreting the significance of the data. While these technical health data terms are defined in the report at the appropriate time, there are some data caveats that should be applied from the onset.

Error
First, readers should note that there is some error associated with every health data source. Surveillance systems for communicable diseases and cancer diagnoses, for instance, rely on

reports submitted by health care facilities across the state and are likely to miss a small number of cases, and mortality statistics are dependent on the primary cause of death listed on death certificates without consideration of co-occurring conditions.

Age-adjusting
Secondly, since much of the information included in this report relies on mortality data, it is important to recognize that many factors can affect the risk of death, including race, gender, occupation, education and income. The most significant factor is age, because an individual's risk of death inevitably increases with age. As a population ages, its collective risk of death increases; therefore, an older population will automatically have a higher overall death rate just because of its age distribution. At any one time some communities have higher proportions of "young" people, and other communities have a higher proportion of "old" people. In order to compare mortality data from one community with the same kind of data from another, it is necessary first to control for differences in the age composition of the communities being compared. This is accomplished by age-adjusting the data.

Age-adjustment is a statistical manipulation usually performed by 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 health data from one population or community to another and have been used here 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/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, etc.) for that rate.

While rates help make data comparable, it should be noted that small numbers of events tend to yield rates that are highly unstable, since a small change in the raw count may translate to a large change in rate. To overcome rate instability, another convention typically used in the presentation of health statistics is data aggregation, which involves combining like data gathered over a multi-year period, usually three or five years. Presenting aggregated data avoids the instability typically associated with using highly variable year-by-year data, especially for measures consisting of relatively few cases or events. The calculation is performed by dividing the sum number of cases or deaths in a population due to a particular cause over a period of years by the sum of the population size for each of the years in the same period.

Health data for multiple years or multiple aggregate periods is included in this report wherever possible. Sometimes, however, even aggregating data is not sufficient, so the NC SCHS recommends that rates based on fewer than 20 events—whether covering an aggregate period or not—be considered unstable. In fact, in some of its data sets the NC SCHS no longer calculates rates based on fewer than 20 events. To be sure that unstable data do not become the basis for local decision-making, this report will highlight and discuss primarily rates based on

20 or more events in a five-year aggregate period, or 10 or more events in a single year. Where exceptions occur, the text will highlight the potential instability of the rate being discussed.

Regional arithmetic mean

Fourthly, sometimes in order to develop a representative regional composite figure from 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 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 12.0 one year and 18.0 five years later. The simple mathematical difference between these rates is 6.0. Suppose also there is another set of rates that are 212.0 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 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 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.

Note: For ease of accessing large files, Appendices B-E are available online.

Appendix B - WNC Healthy Impact Community Health Survey Core Questions

Available here: http://www.healthyhaywood.com/events/community-health-assessment-2018

Appendix C - WNC Healthy Impact Key Informant Survey Questions

Available here: http://www.healthyhaywood.com/events/community-health-assessment-2018

Appendix D - Haywood County Community Health Assessment Data Slides 2018

Available here: http://www.healthyhaywood.com/events/community-health-assessment-2018

Appendix E - Haywood County 2-1-1 Resources List

Available here: http://www.healthyhaywood.com/events/community-health-assessment-2018