



2019

SWAIN
COMMUNITY HOSPITAL

A Duke LifePoint Hospital

Community Health Needs Assessment (CHNA)

Board Approved: November 12th, 2019

Available: December 1st, 2019





This document is a hospital facility-specific Community Health Needs Assessment (CHNA) Executive Summary. For more process and data details on counties within our defined community, specific health data, and the collaborative community health assessments see:

- [Swain County – Community Health Assessment](#)
- **Link:** http://www.swaincountync.gov/page_files/health/CHA/2018SwainCHA.pdf

The Swain County Health Department in collaboration with The Community Wellness Action Team (C-WAT) of Swain County Partnership, Swain Community Hospital, and WNC Healthy Impact produced and sponsored a community health assessment (CHA) in 2018. C-WAT was established as a community health assessment team to assess community data, set priorities, and work on action plans to move the needle in a positive direction; more importantly, C-WAT was an important step to engage community members in the process to take healthy action. The vision of the group is devoted to the betterment of individuals living in Swain County; this vision is steadfast, but specifics have the power to change with each community health needs assessment cycle. In the next three years, Swain County will strive to improve the health of its community members by: implementing or improving programs, decreasing the number of chronic disease as it relates to obesity, and collaborating with local coalitions to reduce substance use and abuse as well as increase health education. Our goal is to design and implement strategies positively benefiting overall health while simultaneously collaborating with various entities to initiate programs working toward a healthier and safer Swain County.

Process

Every three years Swain County re-evaluates the health of the community using current data. The updated information is then used to help assess how well the previous community initiatives are doing, and what actions are needed moving forward.

WNC Healthy Impact, a partnership between hospitals and health departments, produced a community health needs assessment in 2018. The organization took extraordinary measures to gather all data for the eight counties in Western North Carolina. On August 17th, WNC Healthy Impact released the CHA data to hospitals and health departments across the region. Swain Community Hospital CHNA facilitator and Swain County Health Department CHA facilitator

diligently worked together on August 17th to sift through 2018 health data. The two facilitators met on August 21st and 23rd to identify significant health issues.

We used the following criteria to identify significant health issues:

- Size and severity
- Disparities
- Community concerns
- County data deviates notable from the region, state or benchmark

The Hospital and Health Department facilitators then brought the expansive list of identified significant health issues to C-WAT for the first time on September 3rd. The CHA action team devoted the next two months to narrowing significant health issues and presenting them to the community for feedback as well as support.

This process, often called health issue prioritization, is an opportunity for various community stakeholders, such as Swain Community Hospital, Swain County Health Department, Swain County Board of Commissioners, Coalition for a Safe and Drug Free Swain County, Town of Bryson City, Swain County School Board, Swain County School Health Advisory Board and the Community Wellness Action Team to agree on community health issues. The process ultimately identifies priorities that are relevant, impactful, and feasible for our community, which is defined below.

Health Priorities

During our health issue prioritization, the following criteria were applied in order to efficiently select priority health issues of focus for our community over the next three years:

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

Swain County Health Department CHA facilitator, Swain Community Hospital CHNA facilitator, and C-WAT analyzed the secondary and primary data from WNC Healthy Impact; participants used a modified Hanlon method (a well-respected technique used to prioritize health problems through consideration of explicitly defined criteria and feasibility factors) to rate the priorities using the criteria listed above. Then multi-voting techniques were used to narrow the top two health priority issues, which were presented to stakeholders as a recommendation moving

forward. From there, stakeholders were asked to provide feedback and vote on the recommended health priorities presented. In a unanimous decision, all stakeholders agreed on the priorities, allowing the process to move forward.

Identified Priorities

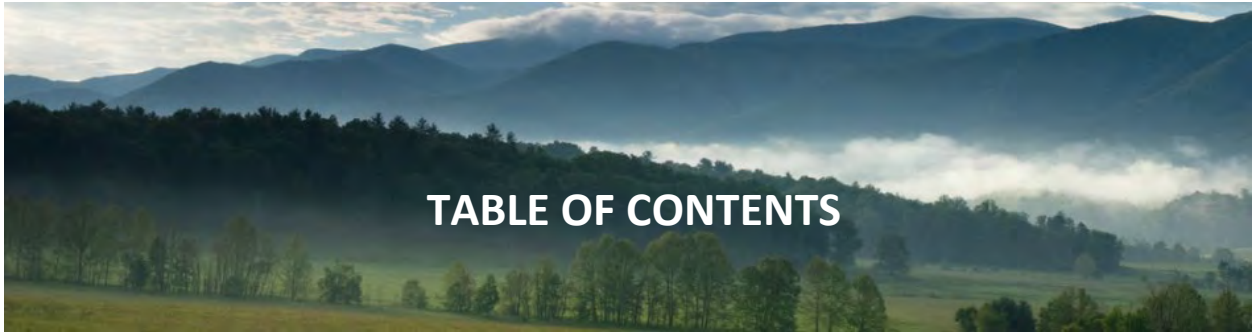
The following are the finalized health priorities for Swain County, selected by the community:

- **Health Priority 1 - Chronic Disease as it relates to obesity with Swain County community members**
- **Health Priority 2 – Substance use prevention and reducing substance abuse in our community**

The CHNA report was developed by Swain Community Hospital in partnership with the Swain County Health Department as part of a local community health needs assessment process. For a more detailed acknowledgment of all of the partners involved in the creation of this assessment please see “Community Input and Engagement” on page 18.

Our community health needs assessment process and products were supported collaboratively by **WNC Healthy Impact**, a partnership between hospitals and health departments to improve community health in western North Carolina. This innovative regional effort is coordinated, housed and financially supported by **WNC Health Network**, the alliance of western NC hospitals working together to improve health and healthcare. Learn more at www.WNCHN.org.





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CHAPTER 1 -- EVALUATION OF ACTIONS TAKEN SINCE PREVIOUS (2016) CHNA

Making a difference on population level health priorities requires an array of initiatives across the community, and involves the collective participation of the programs, agencies, and service systems striving to address these priority health issues. As part of a collaborative response to addressing health needs in our community, our hospital facility is an important contributor to meaningful progress on these health priorities.

The brief summary below provides an overview of the progress and impact of actions taken since our last CHNA that was conducted in 2016.

2015 Priority Area 1: Heart Disease, Stroke, and Diabetes Prevention

Population Level Data:

The Center for Disease Control indicated heart disease as the leading cause of death in the United States during the year of 2015. Over three years later and the statistics are alarmingly the same – heart disease remains the number one killer of Americans in 2018. In 2015, the top three leading causes of death in Swain were heart disease, stroke, and cancer. Cardiovascular disease was the leading cause of death in Swain County (217 deaths), and remains the leading cause of death in the county as well as the country. Diabetes was the sixth leading cause of death overall. The prevalence of diabetes within the county was indicating an upward trend in 2015, and has steadily continued to increase in the last three years. A survey conducted in 2015 revealed that 66.7% of residents reported diabetes and roughly 40% reported heart disease and stroke as major concerns in the community.

The obesity prevalence in 2018 has risen to approximately 50% of the population – increasing by 8.4% in three years (2015). The prevalence of overweight/obese individuals is at a 75.5% in 2018, which is roughly a 2.9% increase in three years.

Collaborative Efforts:

Swain Community Hospital with Harris Regional Hospital became accredited chest pain centers through the Society of Cardiovascular Patient Care. There were key collaborations within the community to make the accreditation successful.




Swain Community Hospital with Harris Regional Hospital collaborated with Western Carolina University to create a community initiative named Tuesdays to Thrive through the Ascent Partnership. The initiative was intended to pique the interest of community residents and engage in events promoting health education as well as activity. Swain Community Hospital, Harris Regional Hospital, and Western Carolina University partnered in hopes of generating positive

health behavior change and benefiting the communities in WNC.

During this time, Swain Community Hospital also partnered with the Swain County Public School System to create a worksite wellness program. The school system initiative was named Maroon Strong, promoting positive healthy behavior change through monetary incentives in a team atmosphere. The program Maroon Strong was wildly successful, pushing the Swain Health Department to create their own wellness program for government employees. The Swain County Health Department and Swain Community Hospital collaborated to form their wellness initiative that is paid for by the hospital.

In addition, the hospital partnered with the Healthy Carolinians at the Jackson County Health Department to sponsor a community wide physical activity initiative called WNC Get Fit Challenge. The Challenge was made available for all residents across WNC that wanted to participate.

Implementation Strategy Update

Hospital Strategy	Evaluation/Note (Prioritize “How Well & Better Off” Measures)
<p>Hospital strategy 1:</p> <p>Became an accredited chest pain center through the Society of Cardiovascular Patient Care</p>	<p>How much did we do?</p> <p>Swain Community Hospital, with Harris Regional Hospital, employed a cardiologist and expanded cardiovascular services including becoming an accredited chest pain center through the Society of Cardiovascular Patient Care.</p> 

	<p>How well did we do it?</p> <p>All of the community initiatives discussed have been successful:</p> <ul style="list-style-type: none"> • Tuesdays to Thrive averaged a dozen people in attendance per event • Maroon Strong was able to provide health assessments to a quarter of the employee staff twice a year • WNC Get Fit Challenge has had over 400 participants in one year • The Swain Government program has witnessed 100 pounds lost between just two people alone
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2015 Priority Area 2: Reduce Substance Abuse in our community

Population Level Data:

In general, the mortality rates due to unintentional poisoning (by medication and drug overdose) rose dramatically in 2015. Swain County had mortality rates due to poisoning and drug overdoses higher than the state average. 17 out of 22 unintentional poisoning deaths in the county during 2009-2013 were due to medication or drug overdoses, which is equivalent to 77.3%. During 2015, the county saw a significant increase in reported Hepatitis B cases – in 2014 there were two reported cases, and in one year (2015), 21 cases were reported.

Fast forward three years and EMS naloxone administrations in Swain County are one of the highest reported in Western North Carolina, and this data was only indicative of the first quarter in 2018. Approximately 40% of opioid deaths in the 4th quarter of 2017 involved heroin or fentanyl, which was found to be alarmingly high in the smaller community of Swain. The community perceived drugs as being a major issue; 50% of individuals surveyed stated their life had been negatively affected by substance abuse, and 13.6% reported using an illicit drug (self or someone they know) in the past month, which was 4% higher than the WNC average.

Collaborative Efforts:

The hospital continues to support the efforts of the Swain County Health Department to work in collaboration in reducing substance abuse. The CHNA facilitator sits on the Coalition for a Safe and Drug Free Swain County as well as the WNC Harm Reduction Alliance. As a hospital organization, we continue to strive towards being a conduit in facilitating key conversations in our community in regards to what the community members see, and their input on what is needed to reduce the pandemic.

Implementation Strategy Update

Hospital Strategy	Evaluation/Note
<p style="text-align: center;">Community Collaboration</p>	<p>How much did we do?</p> <p>The CHNA facilitator sits on the Coalition for a Safe and Drug Free Swain County. The Coalition represents an organization comprised of concerned and dedicated community members striving to educate as well as prevent substance abuse. In addition to attending meetings, the facilitator provided space for various meetings and events in Swain Community Hospital and partnered with non-profit organizations to bring continued medical education programs to discuss substance abuse to physicians and providers.</p> <p>Swain Community Hospital also added Swain Comprehensive Pain Services in the community to provide interventional pain services. Dr. Mills joined the team during this CHA cycle, aiding in pain management and reducing the number of prescription pills being distributed in the community.</p> <p>How well did we do it?</p> <p>In 2015, the prescription rate in Swain County was 8.6 and in 2016 the prescription rate decreased to 7.12, indicating a downward trend in a positive direction. The data was not updated after 2016. The national prescription rate per 100 persons in 2015 was 70.6, decreasing to 66.5 in 2016 and 58.5 in 2017; we can only assume that our community's prescription rate would follow the same trend from 2016 to 2017. This data indicates a compliance among physicians and providers in the new prescription regulations, as well as, our hospital network being well informed and educated on community substance abuse issues. We can potentially attribute this awareness to CME courses targeting physicians in regards to substance abuse and opioid epidemic; we can also attribute potential success to the Swain Comprehensive Pain Center taking a holistic approach through interventional pain services.</p> <p>Is anyone better off?</p>

	A lower prescription rate means less access to abuse prescription pills, and more control on substance abuse.
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2015 Priority Area 3: Promote a healthy environment

Population Level Data:

The Swain County CHA team identified an assortment of environmental challenges in 2015, which caused special consideration to be ranked as a priority health issue. Promoting a healthy environment was comprised of issues such as youth tobacco use, mothers who smoke, tobacco use at the Swain County Parks and Recreation areas as well as school sporting events, teen pregnancy and Hepatitis B cases. As these issues were dissected and discussed at length, the commonality was their link to our environment. The following were targeted in the 2015 CHA cycle:

- Radon - high levels reported in Swain County
- Reduction of Teen Pregnancy – advocated free condom dispensers located within the community with accessibility
- Coalition for a Safe and Drug Free County – environmental scan would be effective to determine what locations of the community were impacted by discarded and disposed needs (hot spots for drug use)
- Swain County Schools – tobacco usage (Cigarette butts)

Western North Carolina had the highest radon levels in the state during 2015. The arithmetic mean indoor radon level for the 16 counties of the WNC region is 4.1 pCi/L which is 3.2 times the average national indoor radon level. In Swain County, the current average indoor radon level is 4.7 pCi/L, 15% higher than the regional mean, and 3.6 times the average national level. In 2018, Swain County still leads WNC in higher average indoor radon levels (4.7%).

Among Swain County women aged 15-44 this new rate was 104.6 would have been the highest pregnancy rate among the stratified groups. Among Swain County teens, the pregnancy rate for non-Hispanic American Indians was suppressed, due to a below threshold number of pregnancies (n=3).

Collaborative Efforts:

The hospital has focused on promoting a healthy environment through the implementation and/or updating of hospital policies including a tobacco free campus policy, healthy food policy, and others. Swain Community Hospital has provided signage addressing our tobacco free campus policy and moved towards a progressive healthy menu.

Implementation Strategy Update

Hospital Strategy	Evaluation/Note
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<p>Tobacco Policy</p>	<p>How much did we do? The campus of the hospital remains tobacco free but the signage was updated to be more prominent of hoping to reinforce the standard. The signs are posted along every entrance with clear writing and bold indicators stating no smoking allowed.</p> <p>How well did we do it? In 2015, 28.6% of people surveyed reported smoking cigarettes, and in three years we are seeing a 6% decrease among those who report they are currently smoking cigarettes. We cannot attribute this decrease to our policy, but we can utilize it as a tool that promoted tobacco cessation.</p> <p>Is anyone better off? The reduction of cigarette users is a good indication that people are better off. Tobacco products cause cancer, heart disease, stroke, and decrease quality of life.</p>
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CHAPTER 2 -- COMMUNITY HEALTH NEEDS ASSESSMENT PROCESS

PURPOSE

Community Health Needs Assessment (CHNA) is a vital part of evaluating, promoting, and improving positive health outcomes within our community. The CHNA is a written report describing the current health status of the community, what has changed since the prior CHNA in 2015, and what indicators/health factors we need to impact to make our community healthier and happier.

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 the issues. 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. Workgroups continue to meet, and monitor customer 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.



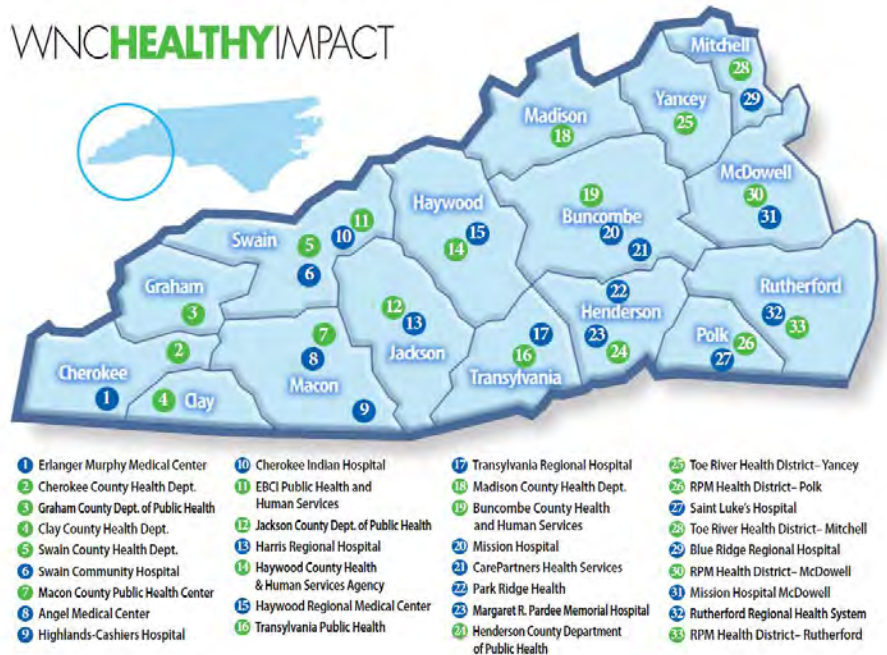
WNC Healthy Impact

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.

Data Collection Process

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

Core Dataset Collection

The data reviewed as part of our community's health needs 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

Health Resources Inventory

We conducted an inventory of available resources of our community by reviewing a subset of existing resources currently listed in the 2-1-1 database for Swain County as well as formalizing a committee with community partners to gather all available resources. Where gaps were identified, we partnered with 2-1-1 to fill in, and we will continue to update this information throughout committee meetings to be sure we are providing current information.

Community Input and Engagement

The community's input and engagement was and is a vital part of the community health needs assessment. Swain Community Hospital partnered with Swain County Health Department in promoting and hosting a community listening session as well as presenting the CHA process and data to various community entities. The Community Wellness Action Team (CWAT) consists of the CHNA facilitator, health department CHA facilitator, and concerned or passionate community members; CWAT is intended to be a true representation of Swain County residents through the engagement of community members sitting on the committee in response to the CHA. The hospital and health department facilitators presented the community health assessment data to the CWAT committee, allowing them to narrow their focus for community presentations.

On Thursday, December 6th 2018 the hospital's CHNA facilitator hosted a community listening session at the United Community Bank to discuss health disparities within Swain County. The listening session included an intimate group of concerned citizens, where the group spoke about personal observations and opinions of health in the community, and what they would like to see in the upcoming years. This listening session was recorded, transcribed and shared with C-WAT to better inform the health prioritization process.

The health department and hospital partnered together to present the community health needs assessment process and data to the following groups (dates included):

- Swain Town Aldermen – Monday, December 3rd
- Swain County Commissioners – Thursday, December 13th
- Swain County School Board – Monday, January 14th

Each of these presentations were done at a public meeting on the individual group's regularly scheduled meeting times. The presentations were done in front of community members, and all individual's present were requested to provide feedback and input. In addition to these scheduled presentations, the presentation was also casually given at the School Health Advisory Council meeting, the Safe and Drug Free Swain County Coalition meeting, and the Greenway Committee meeting in the winter of 2018.

Timeline:

- March to June 2018 -- WNC Healthy Impact Community Health Survey (cell phone, landline, and internet-based survey) was conducted
 - A random sample of 200 adults in Swain County
- May 1st – WNC Healthy Impact Online Key Informant Survey began and left open for 3 weeks in 2018
 - 24 community stakeholders in Swain County (please view the participation table below on page 17)
- August 17th, 2018 – data workbook released to health departments and hospitals across WNC
- August 21st and 23rd – Swain Community Hospital CHNA facilitator and Swain County Health Department CHA facilitator met to identify significant health disparities
- September 5th – Significant health disparities were presented to C-WAT for discussion
- October 3rd – Significant health disparities discussion continued with C-WAT; Hanlon method used to narrow priority focus
- November 1st – Significant health disparities presentation given to the Safe and Drug Free Swain County Coalition meeting
- November 7th – Suggested priorities set by C-WAT
- December 3rd – Suggested priorities presented to Bryson City Town Aldermen
 - 15 people in attendance
- December 6th – Health disparity listening session
 - 15 people in attendance
 - Organizations represented:
 - Swain County EMS
 - Cherokee Pharmacy
 - Rez Hope
 - First Baptist Church of Bryson City
 - Cherokee Indian Hospital
 - RTI
 - Swain Community Hospital
 - Swain Health Department

Several concerned community members attended this event representing their families and themselves. These community members could be identified as medically underserved residents of Swain County.

- December 13th – Suggested priorities presented to Swain County Commissioners
 - 30 people in attendance
- January 14th – Suggested priorities presented to Swain County School Board
 - 40 people in attendance

Following the January 14th presentation, the suggested priorities were cemented, allowing the full Swain [CHA](#) document to be written and published.

- February 27th -- CHA submitted by Swain County Health Department
- April 3rd – C-WAT action plan meeting for priority #2
- April 4th – Coalition action plan meeting for priority #2
- May 1st – Follow-up C-WAT action plan meeting for priority #2
- May 2nd – Follow-up Coalition action plan meeting for priority #2
- June 5th – C-WAT action plan meeting for priority #1
- July 3rd – Follow-up C-WAT action plan meeting for priority #1
- August 7th – Follow up C-WAT action plan meeting for priority #1
- End of August – Action plan will be submitted

No written comments were received on the previous plan. There is an opportunity to provide comments on the 2018 CHA and implementation plan on the Swain Community Hospital website.

Public Health Department

North Carolina Health Departments are extremely robust and in many instances lead the CHA and Improvement process. Swain County Health Department was the convener of the stakeholders, along with Swain Community Hospital and WNC Healthy Impact, to gather the secondary community health information, and conducted the primary research. They also convened the Community Health meetings with Swain Community Hospital to receive input on the health priorities.

In the collaborative assessment process for our community, the Swain County Health Department is a key partner. They provided coordination for the local process that we help support and partner to implement. We are close partners, working on the CHNA process together step-by-step.

Participation

In all, 24 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 Participated
Community Leader	28	17
Other Health Provider	4	2
Physician	3	2
Public Health Representative	2	2
Social Services Provider	3	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.

Acknowledgements

Throughout the collaborative health needs assessment process in our community, input was obtained in a number of ways. See below for a list of all of the organizations that provided input into this process, the period of time they were involved, how their input was obtained, and the nature and extent of their input

Name	Agency	Role/ Contribution	Duration of Participant	Agency Website
Trish Hipgrave	Swain County Health Department	Chair of CHA Advisory Committee (C-WAT) & Chair of Coalition	Fall 2017	www.swaincountync.gov

Chelsea Burrell	Swain Community Hospital	Vice Chair C-WAT & CHNA Facilitator	Winter 2018	www.myswaincommunity.com
Lucretia Stargell	Swain Community Hospital	C-WAT Committee	Fall 2017	www.myswaincommunity.com
Alison Cochran	Swain County Health Department	C-WAT Committee	Fall 2017	www.swaincountync.gov
Amber Frost	Swain County Health Department	C-WAT Committee	Fall 2017	www.swaincountync.gov
Gwen Bushyhead	Community Member	C-WAT Committee	Summer 2018	N/A
Dee Decker	Swain County Cooperative Extension	C-WAT Committee	Summer 2018	https://swain.ces.ncsu.edu/
Bunny Johns	Community Member	C-WAT Committee	Summer 2018	N/A
Mark Pilon	Mountain Project	C-WAT Committee & Coalition Committee	Summer 2018	https://mountainprojects.org/
Patti Tiberi	Mountain Projects	Support	Summer 2018	https://mountainprojects.org/
Robyn Duncan	SHIFT Wellness and Performance	Other Health Provider	Summer 2018	https://www.shiftwnc.com/
Wayne Dickert	BC Methodist Church	C-WAT Committee & Coalition Committee	Winter 2018	www.facebook.com/SwainCoalition
Ben Bushyhead	Commissioner - Swain County	Community Leader	Winter 2018	www.swaincountync.gov
Danny Burns	Commissioner - Swain County	Community Leader	Winter 2018	www.swaincountync.gov
Roger Parsons	Commissioner – Swain County	Community Leader	Winter 2018	www.swaincountync.gov
Kenneth Parton	Commissioner - Swain County	Community Leader	Summer 2018	www.swaincountync.gov
Kevin Seagle	Commissioner - Swain County	Community Leader	Winter 2019	www.swaincountync.gov
Tom Sutton	Town of Bryson City - Mayor	Community Leader	Winter 2018	www.brysoncitync.gov

Jim Gribble	Town of Bryson City - Mayor Pro-Term	Community Leader	Winter 2018	www.brysoncitync.gov
Heidi Ramsey-Woodard	Town of Bryson - Alderman	Community Leader	Winter 2018	www.brysoncitync.gov
Janine Crisp	Town of Bryson - Alderman	Community Leader	Winter 2018	www.brysoncitync.gov
Regina Mathis	Town of Bryson City Manager	Community Leader	Winter 2018	www.brysoncitync.gov
Ben King	Town of Bryson-Alderman	Community Leader	Winter 2018	www.brysoncitync.gov
Mark Engel, MD	Swain Community Hospital	Physician	Winter 2018	www.myswaincommunity.com
Brooke Budde, DO	Swain Family Care	Physician	Winter 2018	www.myswaincommunity.com
Jason Gardner	Swain County Sheriff's Department	Coalition Committee	Winter 2018	www.facebook.com/SwainCoalition
Jessica Webb	Smoky Mountain Times	Vice Chair Coalition Committee	Winter 2018	www.facebook.com/SwainCoalition
John Tagliarini	First Baptist Church	Community Leader	Winter 2018	http://firstbaptistchurchbc.org/
Marlene Vincent	Swain County Transit	Swain Public Transit & Swain Senior Center	Winter 2018	www.swaincountync.gov
Sonya Blankenship	Swain Co. Schools	High School Principal	Summer 2018	www.swain.k12.nc.us
George Mackel	Cherokee Indian Hospital	Nurse Practitioner	Winter 2018	http://cherokeehospital.org/
Ted Duncan	First Baptist Church	Community Leader	Winter 2018	http://firstbaptistchurchbc.org/
Brandon Wiggins	Swain County EMS	EMS (Medical Examiner)	Winter 2018	http://www.swaincountync.gov/emergency-medical-services.html
Rebecca Mattson	Cherokee Pharmacy	Pharmacist	Winter 2018	https://stores.healthmart.com/cherokeepharmacy/stores.aspx
Kallup McCoy II	Rez Hope	Community Leader	Fall 2018	https://www.facebook.com/rez.hope.96
Katelynn Ledford	Rez Hope	Community Leader	Fall 2018	https://www.facebook.com/rez.hope.96

Georgia Mitchell	RTI International	Research Leader	Winter 2018	https://www.rti.org/
Kim Carpenter	Swain County Board of Education	Attorney/Community Leader	Winter 2018	http://www.swain.k12.nc.us/board-of-education
Travis Hyatt	Swain County Board of Education	Community Leader	Winter 2018	http://www.swain.k12.nc.us/board-of-education
Mellie Burns	Swain County Board of Education	School Board Chair	Winter 2018	http://www.swain.k12.nc.us/board-of-education
Jerry McKinney	Swain County Board of Education	Community Leader	Winter 2018	http://www.swain.k12.nc.us/board-of-education
Mark Sale	Swain County Schools	Superintendent	Fall 2018	http://www.swain.k12.nc.us/
Mike Treadway	Swain County Schools	School Healthy Advisory Committee	Winter 2018	http://www.swain.k12.nc.us/
Dennis Jones	Swain County Schools	Student Health Action Coalition Member	Fall 2018	http://www.swain.k12.nc.us/
Tobin Lee	MountainWise	Regional Tobacco Manager	Fall 2018	http://mountainwise.org/

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

The previous identified each participant that was involved in the CHA, how long they provided their input and what groups they represented. Many of the organizations involved represent the medically underserved, low income, and minority populations.

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

Minority Populations Represented:	Medically Underserved Populations Represented:
African American	Adults
American Indian	Children
Asian	Dental Services
Children	Dental Services for Children
Disabled	Elderly

Hispanic/Latino	Hispanic/Latino
Low income	Immigrants
	Low income
	Mentally Ill
	Substance Abusers
	Unemployed
	Uninsured/Underinsured

At-Risk & Vulnerable Populations

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

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

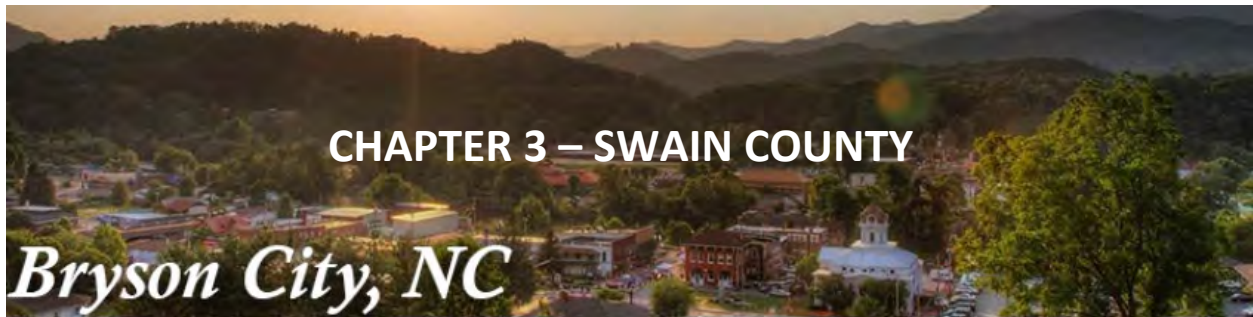
Underserved populations relate to those who do not access health care either because there is a lack of services or providers available or because of limitations such as income, literacy/language barriers or understanding on how to access services, cultural competency of clinicians, trust, transportation,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

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

A vulnerable population is one that may be more susceptible than the general population to risk factors that lead to poor health outcomes. Vulnerable populations, a type of at-risk population, can be classified by such factors as race/ethnicity, socio-economic status, cultural factors and age groups. The at-risk and vulnerable populations, the focus for our process and product include:

- Native American (26% in Swain County)
- Below poverty level
 - 17.4% of white (64.2% is white)
 - 95.8% of Black 159/166 below poverty level (1.3% of population is Black)
 - 31.2% of Natives 1,217/3,897 (27.8% is native)
 - 26.9% of Asians 14/52 (.4%)
 - 42% of Hispanics 282/872 (4.7%)
- Uninsured rate is below 10% of residents in the county, which is the lowest rate in WNC.

Individuals in minority groups, the uninsured, or low-income may have unmet needs related to primary and chronic disease. In addition, those who do not have reliable transportation are at risk of poor health outcomes related to a lack of access to necessary health care, healthy food, facilities for physical activity and other resources.



Location, Geography, and History of Swain County

Consisting of just over 525 square miles of land area, Swain County is located in the far western region of North Carolina and is adjacent to the federal government’s Smoky Mountain National Park, and the Eastern Band of Cherokee Indian Reservation (EBCI). This rural, mountainous area of the Southern Appalachians is often recognized for its spectacular geographic diversity. With much of the land area located within the Great Smoky Mountains National Park, including its highest peak, Clingmans Dome, the area includes the scenic beauty of four rivers, the Nantahala, the Tuckasegee, the Oconaluftee and the Little Tennessee, and a major creek, Deep Creek, which flow through the county and helps to form the sprawling Lake Fontana located just minutes west of Bryson City, the county seat. The county also encompasses much of the Cherokee Indian Reservation, with its own independent government. Given this unique geography and co-location with two independent government organizations, Swain County government’s capability to raise significant program revenues to support programs and services is particularly acute given that over 85% of Swain County’s total land area is currently not taxable by local governmental units due to its ownership by either the national government or the Cherokee Indian Tribal government. A funding scenario that provides minimal revenue generating potential at the local level while the local community attempts to address a growing high demand for services.

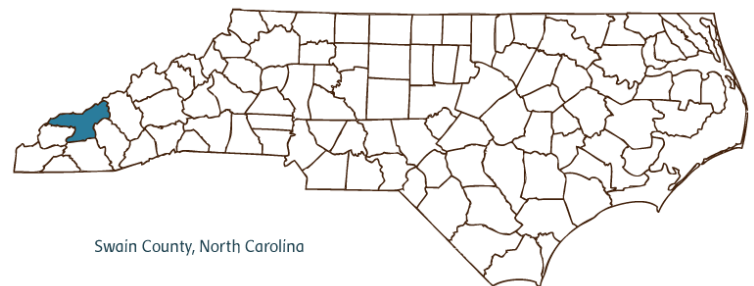


Figure 1: Swain County, North Carolina.
<https://www.ncpedia.org/geography/swain>

Formed in 1871 from parts of Jackson County and Swain County, the county was named for David L. Swain, governor of North Carolina from 1832 to 1835. With a population of just over 14,163 individuals according to 2016 census and other population estimates, Swain County is the 89th least populated of 100 counties in the state. Moreover, economic data indicates that despite significant increases in employment and income, Swain County continues to rank as 83rd of the 100 counties in terms of the number of children in poverty, nearly 10% points worse than the state average. Today, the average population density is still less than 26.5 people per square mile and the per capita income is less than \$21,000 per year. A population that is often isolated in terms of socialization activities due to the non-existence of public transportation resources and difficulties in travel due to the mountainous nature of the local terrain. The

major roadways that provide regional transit routes for Swain County include: US Highways 74 and 19 and State Highways 28. Most of the county's development occurs along these corridors and around the areas of the highway intersections including the area around the only incorporated municipality. The county is home to one incorporated municipality, Bryson City, and a number of local communities including but not limited to Alarka, Ela, Almond, Wesser, Lauda, Whittier, Deep Creek, and Fontana Lake. Major geographic attractions include the water oriented recreational uses of the Deep Creek and Fontana Lake areas as well as areas along the Tuckasegee River. Additional geographic attractions include the many hiking and trail paths including those in and out of the Smoky Mountain National Park areas and along other areas of the Great Smoky Mountains.

Physical Environment

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 such as fine particulate matter, ground-level ozone, sulfur oxides, nitrogen oxides, carbon monoxide, and greenhouse gases 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).

Swain County was able to accumulate 365 days of data with the air quality index. The air quality index is rated from 0 to 500, with 0 being the best and 500 being the worst air quality. The county reported 309 days of good air quality, which is an exceptional category (0-50 AQI; United States Environmental Protection Agency, 2018). There were only 56 days within the category of moderate (51-100 AQI). Unfortunately, Swain encountered 179 days with O₃ air pollutant, which is ground-level Ozone, harmful to individuals in the area. The United States Environmental Protection Agency developed an ambient air quality trend for particle pollution – Particulate matter (PM). The term PM_{2.5} refers to fine inhalable particles, with diameters typically less than 2.5 micrometers. Swain reported 186 days when air pollutant was considered to be PM_{2.5}, which is below the national standard. In 2018, 26.4% of individuals polled reported breathing smoke at work in the prior week, which is a 5.4% increase in three years and a 6.1% increase in six years.

Surprisingly, the county averaged a level of 4.7% indoor radon levels, higher than the average in WNC; WNC had an arithmetic mean of 4.1 (North Carolina Radon Information, 2015; North Carolina Department of Environment and Natural Resources, 2015).

According to the U.S. Census Bureau (2018) and the United States Environmental Protection Agency (2018) a total of 5,210 individuals were served by community water systems as of July

2018, which is 36.6% of the population in Swain County. The WNC average of population served by community water systems was 46.1% in 2018.

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). In 2018, 28% of citizens surveyed reported often worrying about whether food would run out before pay day, which is roughly 7% higher than the WNC average of 21.4%. Further, 21.7% reported often buying food, running out, and not having enough money to buy more food. These statistics were not available in previous years, therefore, it cannot be compared during this CHA cycle.

In comparison to other rural counties, Swain has more farmers’ markets and grocery stores available. The Farmers Market Coalition defines a farmers’ market as a “public and recurring assembly of farmers or their representatives selling the food that they produced directly to consumers” (Farmers Market Coalition, n.d.). In 2016, the county had three farmers’ markets and in 2014, access to three grocery stores. In 2018, two grocery stores in close proximity and three farmers’ markets in the area (U.S. Department of Agriculture Economic Research Service, 2018). Fast food restaurants decreased from 2009 to 2014, however, this data has not been updated for 2018. Coincidentally, the data indicated that servings of fruits and vegetables has dramatically decreased in the previous years. It is important to note that the question was asked differently in 2018 from 2012 and 2015, which resulted in different answers, making it difficult to compare previous years. Approximately 4.12% (in 2015) of the population reported a household with no car and low access, which was a 2.6% decrease in three years from 2012 (U.S. Department of Agriculture Economic Research Service, 2018). Unfortunately, the data for this particular statistic was not updated in 2018, therefore, we do not have current data to report.

There was only one recreational fitness facility reported in 2014, and there are now at least 4 recreational fitness facilities available in the county (U.S. Department of Agriculture Economic Research Service, 2018).

There has been discussion regarding availability of resources for adults and senior citizens in the community. Over half of the individuals polled reported resources for seniors being sufficient (52.3%), and roughly 36% reported resources being insufficient.

Social and 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 to live in, have better health outcomes and generally have longer life expectancies. Although these factors affect health independently, they also have interactive effects on each other and thus on health. For example, people in poverty are more likely to engage in risky health behaviors, and they are also less likely to have affordable housing. In turn, families with difficulties in paying 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).

Income and Poverty Levels in Swain County	
Median Household Income	\$33,598
Median Family Income	\$44,370
Per Capita Income	\$20,256
Population Below Poverty Line	23.0%
Children Under 18 Below Poverty Level	42.2%
Children Under 5 Below Poverty Level	45.2%
Caucasians Below Poverty Level	23.4%
African Americans Below Poverty Level	95.8%
Native Americans Below Poverty Level	31.2%
Asian Americans Below Poverty Level	26.9%
Hispanics Below Poverty Level	42%

FNS Participation (January 2018)	2,254 individuals
Percentage of Economically Disadvantaged Students in 2016-2017 School Year	67.43%

Table 1: Income and Poverty Levels in Swain County.

U.S. Census Bureau (2018).

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).

Employment in Swain County		
Sector	Percentage	Weekly Wage
Arts, Entertainment, & Recreation	39.23%	\$712.81
Public Administration	22.52%	\$892.37
Foods and Services	9.13%	\$358.51
Health Care & Social Assistance	8.24%	\$761.26
Retail Trade	6.5%	\$396.23
Manufacturing	4.43%	\$857.05
Transportation & Warehousing	2.35%	\$580.21
Construction	2.24%	\$704.84
Public Administration & Other Services	2.22%	\$892.37
Finance and Insurance	.79%	\$744.77
Real Estate	.59%	\$486.50
Information	.55%	\$468.85
Administrative	.54%	\$439.89

Table 2: Employment and Wages by Sector in Swain County. NC Employment Security Commission (2018).

The average unemployment rate in Swain County for 2017 was roughly 5%, which is the lowest it has been in over ten years.

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 educational attainment rate from 2012-2016 also appears to be lower than other neighboring counties. Roughly 32.8% of the indicated population obtained a high school diploma or the equivalent to a high school diploma; 23.2% report some college but did not achieve a degree; and only 15.3% report achieving a bachelor’s degree or higher (U.S. Census Bureau, 2018). Swain County has one of the lower education attainment rates within WNC.

Educational Attainment in Swain County (2016-2017)	
Percentage of High School Graduates	32.8%
Percentage of Some College, no degree	23.2%
Percentage of bachelor’s degree or higher	15.3%

Table 3: Educational Attainment in Swain County During the 2016-2017 School Year. U.S. Census Bureau (2018).

School Enrollment in Swain County (2016-2017)	
Total enrollment	2,039
Elementary School Age (K-5 th)	939
Middle School Age (6 th -8 th)	479
High School Age (9 th -12 th)	621
Drop-out Rate	4.95

Table 4: School Enrollment in Swain County During the 2016-2017 School Year. NC Department of Public Instruction (2018).

Graduation Rates in Swain County	
Percentage of Students Graduating	83.1%
Percentage of Male Students Graduating	80.3%
Percentage of Female Students Graduating	85.9%
Percentage of Economically Disadvantaged Students Graduating	82.9%

Table 5: Graduation Rates in Swain County During the 2016-2017 School Year. Public Schools of North Carolina (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).

Crime in Swain County in 2016	
Crime	Incidents
Murder	0
Rape	4
Robbery	2
Aggravated Assault	14
Burglary	101
Larceny	89
Motor Vehicle Theft	15
Total Crime Rate	225

Table 5: Crime Rate Report in Swain County for 2016. North Carolina Department of Justice (2018).

Sexual Assault and Domestic Violence in Swain County (2016-2017)	
Type of Assault	Incidents Reported
Date Rape	2
Adult Survivor of Child Sexual Assault	4
Child Sexual Offense	3
Incest	1
Other	1
Domestic Violence Homicide	0
Total	14

Table 6: Sexual Assault and Domestic Violence in Swain County. North Carolina Department of Administration (2018).

Juvenile Justice Reports in Swain County (2017)	
Complaints	Incidents Reported
Number Undisciplined	8
Number Delinquent	20
Number Transferred to Superior Court	0
Number Placed in Detention Centers	0

Number Committed to Youth Development Center	0
Number Served in Community Programs	28
Total Complaints	28

Reported		Incidence Rate
Total Substantiated Findings		10
Unsubstantiated Findings		5
Number of Children with Investigated Reports of Abuse and Neglect		108
Reports by Race		Incidence Rate
	White	8
	African American	0
	Native American	2
	Other	0
	Hispanic	0

Table 7 & 8: Juvenile Justice Reports in Swain County During 2017. NC Department of Public Safety (2018).

School Violence in Swain County (2016-2017)	
Reported Crime	Incidents
Serious Injury	1
Assault on School Personnel	4
Burning of School Building	6
Possession of Alcohol	1
Possession of Controlled Substance	12
Possession of Weapon	5
Sexual Assault	1
Total Acts Committed	30

Table 9: School Violence in Swain County Schools During the 2016-2017 School Year. NC Department of Public Instruction (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).

The number of total family households in 2016 was approximately 3,471 in comparison to 5,425 total households in Swain County (U.S. Census Bureau, 2018). Roughly 12% of those family households are legally married couples with children under the age of 18; 1.7% are households-maintained by single men with children under the age of 18; and 6.9% are households-maintained by single women with children under the age of 18 (U.S. Census Bureau, 2018). Among the non-family households established, 33% live by themselves and 13.8% are 65 years and over.

Housing in Swain County (2016-2017)	
Renting Issues	Rates
Units spending more than 30% of income on housing	33.7%
Units spending more than 50% of income on housing	12.9%
Median Gross Rent	\$597
Owning Issues	Rates
Units spending more than 30% of income on housing	13.4%
Units spending more than 50% of income on housing	5.1%
Median Monthly Owner Costs	\$1,004

Table 10: Housing in Swain County During the 2016-2017 Fiscal Year. U.S. Census Bureau (2017).

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).

Family & Social Support in Swain County	
Support	Rate/Incidents
“Always/Usually” Get Needed Social and Emotional Support in 2015	78.8%
“Always/Usually” Get Needed Social and Emotional Support in 2018	74%

Table 11: Emotional Support Available or Obtained in Swain County During 2018. WNCHN – WNC Healthy Impact Community Health Survey (2018).



CHAPTER 4 – COMMUNITY SERVED

Population

The Great Smoky Mountains National Park is one of the nation’s most-visited national parks (National Park Foundation, n.d.). Approximately 40% of the Great Smoky Mountains National Park is housed on Swain County property lines (Swain County Chamber of Commerce, n.d.). Swain County is extremely scenic – roughly 87% of the property is protected from development as part of the Great Smoky Mountains National Park, Tennessee Valley Authority waters, Nantahala National forest, or the Cherokee Indian Reservation (Swain County Chamber of Commerce, n.d.). The total population in 2016 was 14,234 people, which was a 1.8% increase from 2010 (U.S. Census Bureau, 2018). The population is rather evenly distributed with 48.8% being males and 51.2% being females (U.S. Census Bureau, 2018). The average age of individuals living in Swain County was roughly 41 in 2016. The county is primarily comprised of Caucasians (64.2%) and Native Americans (27.8%). Swain County averages the highest percentage of Native Americans within the population as it houses the Qualla Boundary, otherwise known as the Eastern Band of Cherokee Indian Reservation (EBCI). The population change from 2010-2020 is estimated to grow by roughly 3% and slowly decline for the next few decades (see Figure 2; U.S. Census Bureau, 2018; North Carolina Office of State Budget and Management, 2018). The elderly population is estimated to continue to steadily increase in the upcoming years (see Figure 3).

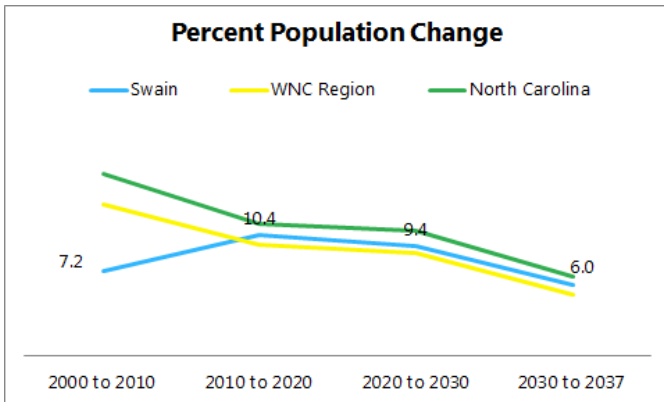


Figure 2: Percent of Population Change in Swain County. U.S. Census Bureau (2018) and North Carolina Office of State Budget and Management (2018).

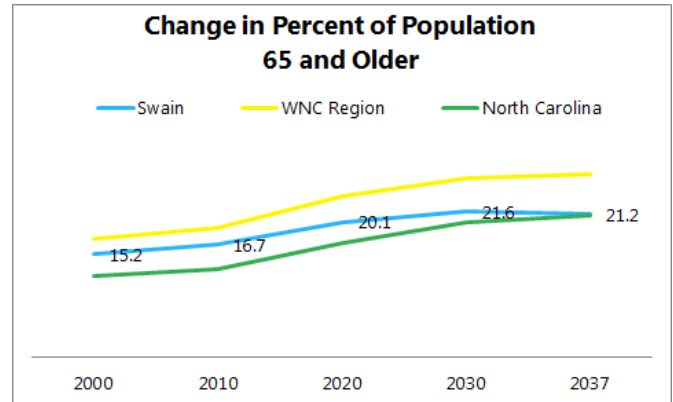


Figure 3: Change in Percent of Population 65 and Older in Swain County. U.S. Census Bureau (2018) and North Carolina Office of State Budget and Management (2018).

The youth rate will slowly increase of the upcoming years, but it will be a slow and steady climb. Birth rate statistics indicate a small decrease in the total birth rates, and an increase in birth rates among the Hispanic and African American populations. Both minority populations increased by 2% in 2016 (NC SCHS, 2018). Approximately 188 households identify as non-English speaking, equating to around 3.5% of the total households (U.S. Census Bureau, 2018). 63 households in Swain County identify as predominantly Spanish speaking, and only 7 out of the 63 are strictly non-English speaking. No other language was identified as a dominant language or potential barrier.

Military veterans account for 859 out of 10,942 individuals, which is roughly 8% of the eligible population (U.S. Census Bureau, 2018). The military veteran population is dominated by men (97.1% of the population), with 2.7% being 18 to 34 years of age, 23.7% being 35 to 54 years of age, 16.3% being 55 to 64 years of age, 29.8% being 65 to 74 years of age, and 27.5% being 75 years and over (U.S. Census Bureau, 2018).

The number of homeless individuals has increased dramatically within the last decade. In 2010 the county reported nine homeless individuals, where it averaged around ten for the next few years. In 2013, Swain County saw an all-time high of homelessness with 77 individuals reported. In the following year it decreased by roughly 30, but almost doubled by 2015 (97 individuals reported; North Carolina Coalition to End Homelessness, 2018). After 2015, the average number of homeless individuals reported has been approximately 50, which is seemingly much greater than surrounding areas.

The life expectancy from 2014-2016 reported to be an average of 75.2 years. Men are estimated to live on average to be 71.8 years old, and women are estimated to live 78.7 years (see Figure 4; U.S. Census Bureau, 2018). The secondary data on ethnicity and race is limited for the Swain County population. This data set is limited to Caucasian and African-American statistics only, and roughly 26% of the population identify as Native American. According to this

data, Caucasians reportedly live to be 77.5 years of age on average with no data available for African Americans or Native Americans (U.S. Census Bureau, 2018). It would seem that this data set would need to be updated to reflect the potential races inhabiting the counties of WNC, such as Native Americans as well as Hispanics.

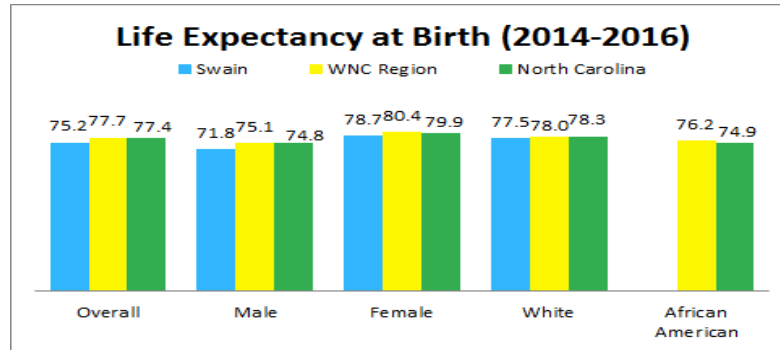


Figure 4: Life Expectancy at Birth in Swain County from 2014-2016. U.S. Census Bureau (2018).

According to the Services,

and Alaskan Natives born today have a life expectancy that is on average 5.5 years less than all races in the U.S. (Indian Health Service, n.d.). American Indians and Alaskan Natives continue to die at a higher rate than other Americans due to chronic liver disease and cirrhosis, diabetes, unintentional injuries, assault/homicide, and chronic lower respiratory diseases (Indian Health Service, n.d.).

Indian Health American Indians

Causes of Death in Swain

Rank	Cause of Death	Swain	
		# Deaths	Rate
1	Diseases of Heart	181	189.4
2	Cancer	176	178.1
3	Chronic Lower Respiratory Diseases	64	64.7
4	Cerebrovascular Disease	50	59.8
5	Diabetes Mellitus	47	51.0
6	All Other Unintentional Injuries	35	44.8
7	Alzheimer's disease	37	41.0
8	Chronic Liver Disease and Cirrhosis	21	25.0
9	Pneumonia and Influenza	22	23.6
10	Nephritis, Nephrotic Syndrome, and Nephrosis	21	22.3
11	Unintentional Motor Vehicle Injuries	12	18.7
12	Septicemia	15	16.6
13	Suicide	10	14.2
14	Homicide	3	4.5
15	Acquired Immune Deficiency Syndrome	0	0.0
All Causes (some not listed)		888	973.9

- Ranking is based on **Death Rate** and not # **Deaths**.
- This is because # **Deaths** only represents the total number of deaths during a stated time frame. The number cannot be age-adjusted, and therefore cannot be used for comparison or ranking.
- **Death rate**, in this table, is age-adjusted to the "standard" population. It represents the number of deaths in the population during stated time frame/population x 1,000.
- **Age adjusting rates** is a way to make fairer comparisons between groups or communities with different age distributions.
 - A county with a higher percentage of older adults may have a higher rate of death or hospitalization than a county with a younger population, merely because older adults are more likely to die or become hospitalized.



Figure 5: Cause of Death in Swain County.

WNCHN – WNC Healthy Impact Health Survey, 2018.

Heart disease continues to be the leading cause of death in Swain County. Reported diagnoses of high blood pressure are increasing at an alarming rate in junction with heart disease. As of 2018, Swain County has the highest percentage of heart disease in comparison with all counties across WNC. Further, Swain has the highest percentage of heart disease in WNC for the last decade. With that being said, we are seeing a positive influx of individuals taking action to control their high blood pressure and seeking treatment, as well as rates of heart disease slowly decreasing from 2015.

Community Served

Swain Community Hospital's health information provided the basis for the geographic focus on the CHNA. The map below (view figure 6) shows where Swain Community Hospital received its patients; most of the hospital's inpatients came from Swain County. Specifically, approximately 199 in-patient experiences were residents whom indicated they resided in Swain County, which is 53% of our patients at Swain Community Hospital. It was reasonable to select the Swain Community Hospital as a primary focus of the CHNA due to half of inpatient activity traffic to the hospital being from Swain County. With that being said, surrounding counties could benefit from efforts to improve health in the county.

The service area includes medically underserved, low-income and minority populations who live in the geographic area from which the hospital draws its patients. All patients were used to determine the service area without regard to insurance coverage or eligibility for financial assistance under the hospital's financial assistance policy.

Swain Community Hospital Patients – 2018



Figure 6: 2018 Planning Service Area Definition. *Casemix*, 2018.

CHAPTER 5 -- HEALTH NEEDS IN OUR COMMUNITY



Health Status

Data on the health status of our community [Swain County](#), and health factors that influence health are included in the full community health assessments for Swain County.

The collaborative local assessments include a **basic review of trends and progress and changes in health status** for the broad community. These assessments also include **details on populations at risk or facing health disparities** in our community.

Health Status & Behaviors

In 2016, Swain County was ranked 93rd overall (out of 100) in county health rankings. The county was ranked dead last in terms of length of life. The other health outcomes included – quality of life, which Swain ranked 73rd, and overall health outcome ranking, which was 92nd out of 100. Ranking of county health factors were as follows:

- Health Behaviors – 91st
 - Includes adult smoking, adult obesity, physical inactivity, access to exercise opportunities, alcohol-impaired driving deaths, and more.
- Clinical Care – 99th
 - Includes uninsured, primary care physicians, dentists, mental health providers, mammography screenings, and more
- Social & Economic Factors – 83rd
 - Includes high school graduation, unemployment, children in poverty, social associations, violent crime, and more.
- Physical Environment – 76th
 - Includes air pollution-particulate matter, drinking water violations, severe housing problems, and more.

As the county is clearly in the lower quartile of all counties in North Carolina in terms of both health outcomes and health factors, there are an exponential number of items to improve upon in 2018. Although county rankings appear to be negative, it did not seem to reflect in resident’s perceptions of Swain County as a place to live – respondents’ negative perceptions of the county as a place to live decreased by roughly 6% in three years (WNCHN – Online Key Informant Survey, 2018). Further, only 9.9% surveyed indicated the county was a “fair/poor”

place to live, which is on average lower than WNC responses. 2018 health data suggests that Swain residents are starting to experience better overall health, as the experiences of “fair” or “poor” health has decreased by 2% in three years. With that being said, approximately 27.4% of residents stated they experienced “fair” or “poor” overall health, which is significantly higher than WNC, NC, and national averages (WNCHN – Online Key Informant Survey, 2018).

Chronic Disease and Health

Roughly 13.7% of the population surveyed in 2018 were diagnosed with heart disease, which is a small decrease from 2015, indicating a steady decline. The secondary data showed a 181 mortality trend from 2012-2016 (88 females and 93 males; North Carolina State Center for Health Statistics, 2016). The diagnosis of strokes continues to climb in Swain County; the county has seen a 1% increase in the previous years, and the incidents of strokes was highest in Swain County in comparison to WNC. Heart disease was the leading cause of death in Swain County, and the county leads Western North Carolina in heart disease statistics. Cancer was the second leading cause of death indicated. Mortality trends showed 176 deaths as a result of cancer – 107 males and 69 females affected. The cancer incidence trends from 2012-2016 were 525, which is the highest in all counties in WNC. Chronic respiratory disease was found to be the third leading cause of death in Swain. Approximately 20.6% of individuals surveyed in 2018 reported being diagnosed with Chronic Obstructive Pulmonary Disease, which is a small decrease from 2015.

The mortality trend of diabetes from 2012-2016 was found to be at a 41% rate, impacting 19 men and 28 women (North Carolina State Center for Health Statistics, 2016). According to the secondary mortality trend, women are reportedly being diagnosed with Diabetes at a 51.3% rate (North Carolina State Center for Health Statistics, 2016). The diabetes data is extraordinarily helpful for Swain County as it houses the Cherokee Indian Reservation. Research has shown the strong implications between diabetes prevalence and Cherokee Native Americans. According to the secondary data, Native Americans were reportedly higher in diabetes rates in comparison to Caucasian individuals (North Carolina State Center for Health Statistics, 2016).

The primary data indicated that high cholesterol rates are decreasing, according to data 34.9% of residents surveyed reported having high cholesterol, which is an approximate 3% decline since 2015 (WNCHN – WNC Healthy Impact Community Health Survey, 2018). In contrast, action to control cholesterol seems to be diminishing – close to 90% of residents reported taking action in 2015, however, this number has decreased by 4% in 2018 (WNCHN – WNC Healthy Impact Community Health Survey, 2018). This data is confounding with no true explanation.

Unfortunately, high blood pressure diagnoses continue to increase in the county – the data showed a 5% increase in six years (WNCHN – WNC Healthy Impact Community Health Survey,

2018). As high blood pressure is correlated with various heart conditions, we can speculate that these rates are simultaneous.

Maternal & Infant Health

Unfortunately, maternal and infant health was not updated to 2018, but we can find growing trends over the previous years. The pregnancy rate in Swain County for women aged 15-44 has bounced up and down over the past decade, however, the rate significantly diminished from 2015 to 2016. In 2016, Swain County's pregnancy rate was on par with the State rate (70.3; North Carolina State Center for Health Statistics, 2016). Among Swain County women age 15-44 years, the highest pregnancy rates appear to occur among White Non-Hispanics. The total number of pregnancies in 2016 was 184, and roughly 70.3% of women received prenatal care in the first trimester. On average, well over half of pregnant women in the county received prenatal care -- 75% Caucasian, 100% African American, 76.9% Hispanic, and 69.3% Non-Hispanic (North Carolina State Center for Health Statistics, 2016). In full disclosure, the African American population statistic is higher as only one woman was reported giving birth. Only 8.9% of babies delivered in 2016 were reported to have low birth weight, and 1.3% were reported to have very low weight; babies delivered as low birth weight by ethnicity/race -- 8.5% Caucasian, 16.7% African American, 9.2% Non-Hispanic, and 9.1% Hispanic (North Carolina State Center for Health Statistics, 2016).

Injury & Violence

Falls reported among those 65 years or older appears to be steadily climbing, however, no data was reported in 2018. Data in 2012 indicated that 23.9% reported falling and 2015 indicated that 43.1% reported falling (WNCHN – WNC Healthy Impact Community Health Survey, 2018). Based on these statistics we could make an assumption that 2018 would have resulted in an incline matching that of the 2012-2015.

Substance Use

In 2018, more rural community residents were reporting overwhelming concerns about opioid addiction. According to the North Carolina Opioid Dashboard, in the fourth quarter of 2017, 270,000 pills were dispensed in Swain County alone, and by the end of the year 1,125,000 pills were dispensed. As recent as December 2018, the number of EMS naloxone administrations was as high as 17, and this is not including any administrations outside of Swain County Emergency Management Services. At the end of the third quarter in 2017, five individuals died from an unintentional opioid incident, further, data, showed that approximately 40% of drug related deaths involved fentanyl. Less than ten individuals were brought into the Swain Community Hospital's Emergency Department for an overdose diagnosis.

In 2016, the opioid prescription rate in Swain County was one of the highest in WNC (7.12%), however, the prescription rate has dropped by roughly .83%, which is also one of the highest in WNC (North Carolina Department of Health and Human Services, 2017). The total opioid

prescription claims were 61,024 – one of the lowest claims in WNC. There were 36 total Part D Prescribers in Swain County in 2016.

According to the primary survey conducted in 2018, individuals reported a 10% decrease in social and emotional support available in Swain over the last decade – in 2012 84.3% reported having positive social and emotional support available, 2015 78.8% reported having support available, and 2018 reported 74% support availability (WNCHN – Online Key Informant Survey, 2018). A 10% decrease is a tremendous divot in mental health support within Swain County. Participants in the survey also indicated a 7% decrease in more than seven days of poor mental health. The suicide mortality trends from 2012 to 2016 indicated 10 individuals taking their own lives per 1,000 people in a population.

Yearly Wellness Exams

We are seeing a downward trend among those seeking a yearly wellness exam; in 2018, 70.6% reported they had gone to a physician for a checkup in the prior year, which is 4% lower than 2012 (74.8%; WNCHN – WNC Healthy Impact Community Health Survey, 2018). Further, we are seeing a perceived decrease in medical access – more than 10% of residents surveyed indicated they did not get medical care needed in the previous year (12.6% in 2018 and 7.7% in 2015). Approximately half of people surveyed in 2018 reported having a dental visit in the previous year (48.6%), which is almost a 10% decrease from 2012 (57.6%; WNCHN – WNC Healthy Impact Community Health Survey, 2018).

Clinical Care & Access

The secondary data in 2017, communicated a potentially lacking healthcare workforce in Swain County. The number of health professionals in 2017 in accordance with the number of active health professionals per 10,000 population ratio is as follows: 22 physicians, 9.3 primary care physicians, 5.3 dentists, 110 registered nurses, 12 physician assistants, and 8 nurse practitioners (North Carolina Health Professions Data System, 2017). The healthcare workforce in Swain is aging. Roughly 25% of the dentists are over the age of 65, with the physicians closely behind at 18.2% (North Carolina Health Professions Data System, 2017).

Roughly 71% of individuals surveyed denoted seeing a doctor in the prior year, which is lower than the WNC and NC averages, but higher than the national average. 76.1% of Swain residents reported having a specific source of ongoing medical care, which is lower than the WNC average (80.9%), but higher than the national average (74.1%). 73.3% of women participating in the survey communicated that they had a mammogram in the past two years (WNCHN – WNC Healthy Impact Community Health Survey, 2018).

Swain County has the lowest percentage among those **without** health insurance in WNC from ages 18 to 64, meaning roughly 90% of the population in Swain have health insurance. (WNCHN

– WNC Healthy Impact Community Health Survey, 2018). As of 2018, Swain has the lowest uninsured rate across WNC.

Through the year of 2017, there were 4,378 individuals eligible for Medicaid. Of those individuals authorized for Medicaid, the distribution is as follows: 1,771 Aid to Families with Dependent Children (AFDC), 713 infants and children, 593 disabled, 437 family planning, 328 aged, 67 foster care, 38 pregnant women, and 1 blind (Medicaid North Carolina, Annual Report, 2017). As of June 2018, there were approximately 4,521 individuals eligible for Medicaid (Medicaid North Carolina, Annual Report, 2018). Please see the graph indicated below.

The licensed facilities reported are limited in Swain. There are only three licensed adult care facilities as of July, 2018, and they only house 230 individuals combined (North Carolina Department of Health and Human Services, 2018). The Bryson Senior Living Center has a max capacity of 50 residents, and the Mountain View Manor Nursing Home has a max capacity of 120 residents. Tsali Care is located on EBCI Reservation and has a max capacity of 60 residents. Unfortunately, there is only one licensed home health and hospice center, which is the PRN Nursing Services. The PRN Nursing Services is the only accredited home health service in the county as of July, 2018. The licensed mental health facilities are no different in Swain; the facilities are Bryson City Home, Foundations: Swain Middle, Foundations: Swain West Elementary, and Swain Foundation. The Bryson City Home has a max capacity of three residents, and this is the only facility listed in June of 2018 that is beyond day treatment. Swain Foundation is available as day treatment for students at Swain Middle School and Swain West Elementary.

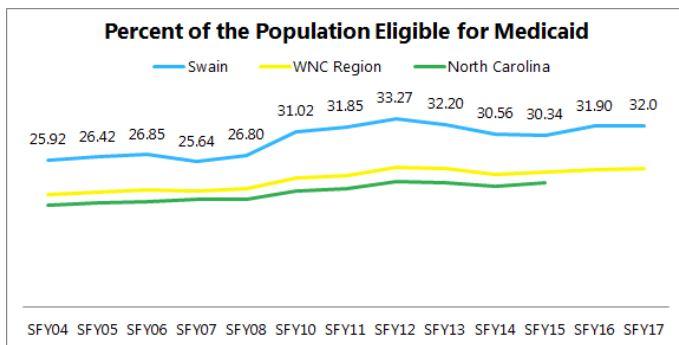


Figure 7: Percent of the Population in Swain Eligible for Medicaid. Medicaid North Carolina, Annual Report (2017)

Residents of Swain County indicated that 24.5% of the population surveyed felt they were in excellent mental health, 29.8% reported being in very good mental health, 28.5% reported being in good mental health, 13.6% reported being in fair mental health, and 3.6% reported being in poor mental health (WNCHN – WNC Healthy Impact Community Health Survey, 2018). Swain is lower in almost every health category in comparison to the national average. Survey participants

disclosed a 6% increase, within three years, on the inability to receive needed mental health services in the prior year. 11.3% of people surveyed in Swain reported they were unable to receive the mental health services needed in 2018, which is a dramatic increase from 5.3% in 2015 (WNCHN – WNC Healthy Impact Community Health Survey, 2018). The individuals served in mental health programs was 993 in 2017, and five people were admitted into a North Carolina Psychiatric Hospital (North Carolina Office of State Budget and Management, 2017).

Medically underserved, low-income, and minority populations

Swain County residents who completed the survey indicated that roughly 27.4% are in “fair/poor” physical health, indicating health disparities. Unfortunately, this percentage was among one of the highest in WNC. The county is predominantly comprised of Caucasian Americans, with well over half of the population identifying as “white” (64.2%). The next highest race and ethnicity identification within the county is Native American, and approximately 27.8% identify as Native American, which is 3,952 individuals. The highest level of poverty is seen among African American residents of the county, whom make up 1.3% of the population.

The low-income and underserved individuals are of the highest percentage among African Americans and Hispanics, both making up less than 7% of the population in Swain County.

- Native American (27.8% in Swain County)
- Below poverty level
 - 17.4% of Caucasian (64.2% is white)
 - 95.8% of Black 159/166 below poverty level (1.3% of population is Black)
 - 31.2% of Natives 1,217/3,897 (27.8% is native)
 - 26.9% of Asians 14/52 (.4%)
 - 42% of Hispanics 282/872 (4.7%)

The percentage of people unable to get needed medical care in the previous year in Swain County rose by roughly 5% in three years; in 2015, 7.7% surveyed indicated they were unable to receive medical care within that year, and in 2018 that number jumped to 12.6%. Although the population indicating a need for medical care increased, the lack of health insurance between the ages of 18 and 64 decreased. The community saw an approximate 6% decrease among those without health insurance, which is a great sign for the county.

Health Issues

Process

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

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

Participants used a modified Hanlon method to rate the priorities using the criteria listed above. Then C-WAT used various techniques to narrow to the top two priority health issues.

Identified Indicators

During the above process, the Community Wellness Action Team identified the following health indicators:

- **Obesity:** A weight that is higher than what is considered healthy for a specific height. 49.7% of the population in Swain County reported being obese, which is an 8% increase in 3 years.
- **Physical Activity:** Movement that is produced by skeletal muscles requiring caloric expenditure. Approximately 20.2% surveyed reported participating in no physical activity.
- **Nutrition:** Obtaining the recommended amount of nutrients within a day yielding positive health results. Only 2.1% of people surveyed indicated that they got 5 or more servings of fruits and/or vegetables in a day, which was 4% lower than the WNC average.
- **Food Insecurity:** Unreliable access to a sufficient quantity of affordable nutritious food. Roughly 30% of citizens in Swain County in the survey indicated having food insecurity in 2018, which is 6% higher than the WNC average and 2% higher than the National average.
- **Heart Disease:** A disease that affects the heart muscles, valves, or rhythm. Heart disease is the leading cause of death in Swain County as well as the nation.
- **Diabetes:** The body's inability to produce or respond to the hormone insulin, resulting in abnormal metabolism of carbohydrates and elevated levels of glucose in the blood and urine. Diabetes has increased by approximately 13% in three years, resulting in 23% of people surveyed being diagnosed with Diabetes.
- **COPD:** A lung disease indicated by chronic obstruction of airflow that interferes with normal breathing and cannot be reversed. 21.7% of individuals surveyed reported having COPD, which is a 1% increase in three years.
- **Opioids:** Opioids are prescribed by physicians as pain relievers and can be extremely addictive. 25.7% of individuals in the survey reported using opioids in the past year with or without a prescription, and approximately 49.4% reported that their life had been negatively affected by substance abuse.
- **Tobacco:** With e-cigarettes on the market, the use of e-cigarettes has increased by 2% in three years, becoming a 9.2% of individuals surveyed.

Identified Priorities

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

- Chronic Disease as it relates to obesity with Swain County community members – Chronic disease emerged as a health priority during the 2015 Community Health Assessment, and obesity was identified as a priority in 2011. Progress has occurred in several areas related to chronic disease, however, much improvement is still to be made, based on our overweight/obesity rates, fruit/vegetable consumption rates, and heart disease rates. During the prioritization process, community members voted for the following identified health indicators:
 - Obesity
 - Heart Disease
 - Food Insecurity

C-WAT opted to combine chronic disease and overweight/obesity to form one healthy priority (chronic disease as it relates to obesity) with hopes of addressing all-encompassing aspects of this priority. This health priority is also in line with the NC Healthy People 2020 objectives:

- Increase the percentage of high school students who are neither overweight nor obese (from 72% to 79.2%)
 - Increase the percentage of adults getting the recommended amount of physical activity (from 46.4% to 60.6%)
 - Increase the percentage of adults who consume five or more servings of fruits and vegetables daily (from 20.6% to 29.3%)
- Substance Use Prevention and Reducing Substance Abuse – Substance abuse emerged as a health priority during the 2011 and 2015 CHA cycles. During the 2011 cycle, the community focused on risky behaviors in adolescents, specifically targeting healthier lifestyles among teens. In 2015, the priority of substance abuse expanded into high mortality rates due to unintentional poisoning, specifically by medication and drug overdoses. During this cycle, the community health assessment also began to focus on Hepatitis B cases. The 2015 substance abuse priority was targeted by implementing prescription take back events, permanent drop box locations, naloxone distribution, and the creation of the Coalition for a Safe and Drug Free Swain County.

Progress has been made in various subsets of the substance abuse priority, however, the opioid pandemic continues as evidence by the data. In 2018, Swain County will continue to work on substance use prevention and reducing substance abuse in partnership with the Coalition for a Safe and Drug Free Swain County. During the prioritization process, community members voted for the following identified health indicators:

- Opioids
- Tobacco

Priority Health Issues

Priority Indicator #1: Chronic Disease as it Relates to Obesity



Swain County's leading cause of death, as well as many of the morbidity statistics of concern, are directly related to weight, physical activity, and nutrition. Excess weight increases risk of type 2 diabetes, high blood pressure, heart disease, certain cancers, and stroke.

Chronic disease in relation to obesity has been a priority in Swain County for a decade, being identified in various formats. In 2009 the community health assessment resulted in obesity being a priority. In the following CHA cycle (2012), the health concerns remained current, and did not dramatically change. In 2012, the Swain County Health Department partnered with Swain County Schools to work on Youth Risky Behaviors and Obesity. The Swain School Health Advisory Committee (SHAC) adopted obesity as a focus – elementary schools used the fitness gram program to evaluate K-5 fitness as well as body mass index, and these results were sent home to parents informing them of their child's overall physical fitness level. Health seminars were also offered to school staff, including health checks and classes on stress reduction, yoga, cross-fit, and CPR.

In 2015, Swain County recorded high rates of heart disease, diabetes, and cancer. Approximately 14.4% of individuals' survey in 2015 reported having heart disease; 10.6% reported having diabetes/high blood sugar. There is no primary survey data available for individuals reporting cancer diagnoses, and unfortunately, there is no primary survey data available for 2012 heart disease or diabetes rates to compare. During the 2015 CHA cycle, Diabetes Self-Management Education and Diabetes Prevention Program were implemented at the Swain Health Department in hopes of decreasing chronic disease. Swain Community Hospital partnered in the Diabetes Self-Management Education Program, aiding in classes as well as referring patients to these programs. The hospital also created the Maroon Strong wellness program in hopes of combatting these health issues. The Maroon Strong program has grown tremendously in the last 3-4 years, increasing in volume and success stories. Participants involved in the program have lost countless pounds, decreased blood pressure, and improved their lifestyle.

The county is currently seeing a decrease in heart disease rates, and we would like to speculate that our efforts over the last decade are creating healthier habits. In 2015, roughly 14.4% of individuals reported having heart disease and in 2018 that number decreased to 13.7%, which is a minimal decrease, but a decrease for the betterment of citizens in Swain County. A significant amount of work has been completed in this area, but it is evident that much work still needs to be done. Using input from the community and members of the C-WAT committee, it was determined that chronic disease and obesity were still a prominent health issue and deserved to be pursued further to truly make a difference in the community's health.

Data Highlights

Health Indicators

Approximately, 2.1% of citizens that participated in the survey reported eating 5+ servings of fruits/vegetables each day, which is the lowest average across WNC (WNCHN – WNC Healthy Impact Community Health Survey, 2018). In the 2018 survey, the question was asked differently and didn't differentiate between fruits or vegetables, but instead, included both in one question. In previous years, the survey respondents were asked about fruit and vegetable in take separately, which was indicating a downward trend from 2012 to 2015. We could speculate that the average servings of fruit and vegetables would continue to decrease through 2018. Although the county has the lowest average, it is important to note that the average has increased by a small margin in the last three years (view the graph below).

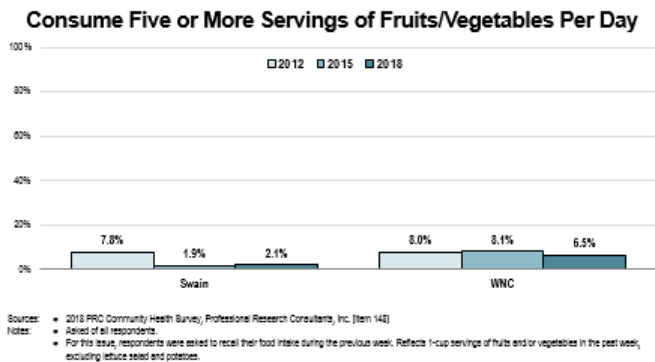


Figure 8: Servings of Fruits/Vegetables Consumed Per Day by Residents in Swain County. WNCN – WNC Healthy Impact Community Health Survey (2018).

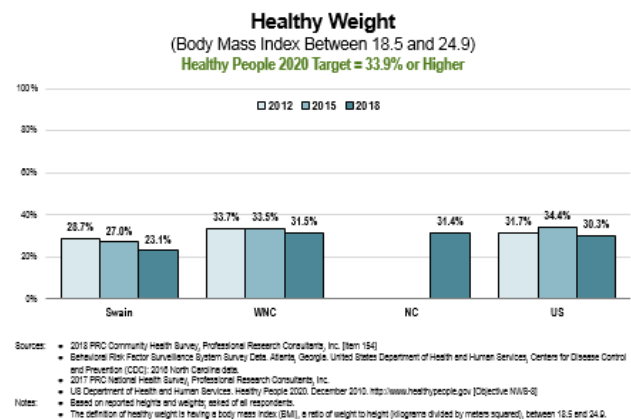


Figure 9: Healthy Weight in Swain. WNCHN – WNC Healthy Impact Community Health Survey (2018).

Swain County is in alignment with the State average of food insecurity, which is 17% (County Health Rankings and Roadmaps, 2018). Although the county is at the same average as the State, 17% is significantly high for the total population in Swain County. Participants in the key informant survey were asked the following question – “In your opinion, what are the most important characteristics of a healthy community” and key informants could list up to three responses; the number one answer provided by respondents was physical activity (31.9%; WNCHN – Online Key Informant Survey, 2018).

As poor nutrition and physical inactivity often go hand-in-hand, the outcome of both can be overweight/obesity. The Healthy People 2020 Target for healthy weight (percent of adults with a body mass index between 18.5 and 24.9) is 33.9% or higher. In Swain County, approximately 23.1% of residents reported being at a healthy weight in comparison to the WNC average of 31.5%, far --

below the Healthy People 2020 Target of 33.9% or higher (WNCHN – WNC Healthy Impact Community Health Survey, 2018; Centers for Disease Control and Prevention, 2013). In conjunction with this data, approximately 75.5% of individuals participating in the survey reported being overweight or obese, indicating an upward climb across the previous six years; and 50% (49.7%) of individuals reported being obese, which is a 12% increase since 2012 (WNCHN – WNC Healthy Impact Community Health Survey, 2018). Only a quarter of county residents indicated they received the recommended amount of daily physical activity, and one third reported being limited in activity due to a physical, mental, or emotional problem (WNCHN – WNC Healthy Impact Community Health Survey, 2018).

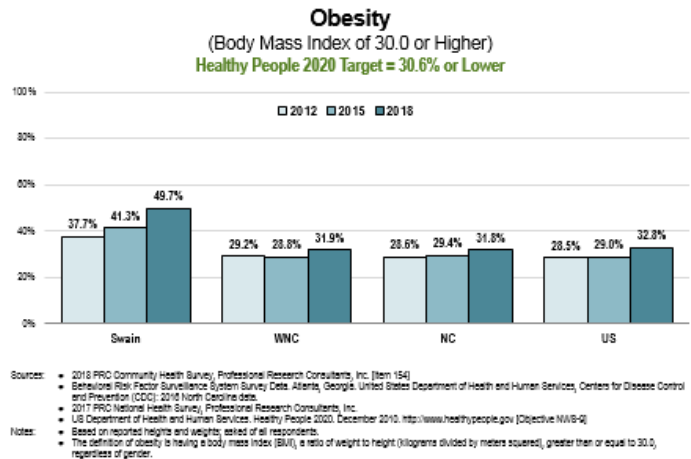


Figure 10: Obesity in Swain. WNCHN – WNC Healthy Impact Community Health Survey (2018).

Understanding the Issue

Key informants were given a list of chronic disease and known factors that contribute to those diseases, then asked to select up to three health concerns that are the most critical to address in Swain County. Residents indicated that obesity/nutrition/physical activity were the top priority in the community, followed by diabetes and heart disease.

Rank	Health Issue	Identified as Critical to Address
1	Obesity/Nutrition/Physical Activity	22
2	Diabetes	18
3	Heart Disease/Stroke	13
4	Cancer	10
5	Chronic Pain	9
6	Chronic Obstructive Pulmonary Disease (COPD)	2
7	Chronic Kidney Disease	1

8	Arthritis/Osteoporosis	1
9	Upper Respiratory Diseases (such as Asthma)	0

Table 12: Key Informant Responses to Top Health Issues in Swain County. WNCHN – Online Key Informant Survey (2018).

Key informants reported impedances of progress on these health conditions – “Bad or unhealthy food is easier to prepare and cheaper to buy;” “Learned behaviors and the convenience of fast food;” “Poor health habits from low income as well as lack of adequate education;” “Poverty and many people not necessarily knowing how to eat healthy on a limited budget. Adults not necessarily having the time to invest in their health and to be physically active. The rural nature of the community, where it can be difficult for people to access parks or recreational opportunities” (WNCHN – Online Key Informant Survey, 2018).

Fully evaluating this issue, we know it is difficult to adopt healthy behaviors if we do not live in a conducive environment to promote success. Proper nutrition, physical activity, and health are closely related to obesity and chronic disease. These topics could be considered social norms and traditions as well as geography and the economy. In rural counties, there are limited well-paying jobs, high cost of housing resulting in commute, less money for groceries and recreation, and limited access to stores that sell nutritious food.

According to the United States Census Bureau, roughly 23.4% of residents in Swain County live below the poverty line. In 2018, 28% of citizens surveyed reported often worrying about whether food would run out before pay day, which is roughly 7% higher than the WNC average of 21.4% (WNCHN – WNC Healthy Impact Community Health Survey, 2018). Further, 21.7% reported often buying food, running out, and not having enough money to buy more food. These statistics were not available in previous years, therefore, it cannot be compared during this CHA cycle.

Although Swain County has an outdoor friendly environment, a large percentage of the community does not have an active lifestyle. Hiking and bike riding are popular recreational activities, and draw visitors into the county, however, only a quarter of the community is participating in regular physical activity despite the environmental advantages the county has to offer.

Swain County has a long standing history of self-sustenance in producing family gardens for fresh herbs and vegetables. The county offers the popular, and ever growing, Darnell Farms, which is a thriving farmers market. Although the county has several farmers’ markets, eating out is an instinctual habit for the working class families. The distinct “fast-food culture” developed as a result of long distances to and from work, lack of knowledge and education, and lack of income. Families stretching their grocery budget struggle with affording nutritious food,

or may not be able to travel to stores that sell nutritious items. Items provided in local food pantries typically are limited to shelf-stability, resulting in less nutritional value.

In 2016 the CDC reported that individuals who eat a healthy diet and participate in regular physical activity live longer and have fewer chronic diseases, such as obesity, heart disease, and diabetes. The CDC is leading the fight against chronic disease by promoting good nutrition, regular physical activity, and a healthy weight in relation to where people are living, working, and playing (2016).

Chronic disease is directly correlated with nutrition, physical activity, and weight. In focusing on nutrition, physical activity, and weight, we can limit as well as reduce chronic disease.

Specific Populations At-Risk

All residents in Swain County can benefit from strategies that focus on chronic disease as it relates to obesity through physical activity and nutrition, the lives of at-risk populations may be greatly improved. According to the CDC, Hispanics (47%) had the highest age-adjusted prevalence of obesity, followed by Caucasians (37.9%), and non-Hispanic Asians (12.7%; Centers for Disease Control and Prevention, 2018). Unfortunately, the CDC did not include Native Americans within this data, which is a large part of the population in Swain County. In 2015, approximately 16.2% of children age 2 through 18 years were considered overweight, and 14.1% were considered obese (WNCHN – WNC Healthy Impact Community Health Survey, 2018).

Overall, men and women with college degrees resulted in lower obesity prevalence rates in comparison with those with less education (Centers for Disease Control and Prevention). Low income and food insecure residents within the county often do not have full access to grocery stores with nutritious options, are less likely to have their own mode of transportation, have greater availability to fast food restaurants, and live between deprivation and over-eating. Further, low income residents typically live in neighborhoods with limited physical activity resources, are less likely to participate in organized sports, and do not have equal opportunity in physical education in comparison to students of higher-income schools. Those with limited resources are unable to access many of the opportunities available within the county for physical activity or sources of nutritious.

Health Resources Available/Needed

As chronic disease and obesity have been noted as health priorities from the 2009 CHA, many health resources are available to the community, however, as funding continues to diminish, the resources are limited. There is still a vast list of resources needed to fully combat this health priority in Swain County.

Available Health Resources		
Resource	Lead Agency	2018 Highlights
Swain Family Care	Swain Community Hospital	Services continuing to grow in aiding chronic disease management
New CT Scanner	Swain Community Hospital	
Health Promotion Program	Swain County Health Department, Swain Community Hospital	Multiple participants; Hospital recently involved in creating “how to” videos
Swain Government Wellness Program	Swain County Health Department, Swain Community Hospital	Over 50 members enrolled; 100 pounds lost among one team alone last year
Swain County Schools Wellness Program – Maroon Strong	Swain Community Hospital	100 members enrolled; 180 pounds lost in 5 months (half-way through program)
Healthy Initiatives Cooperative Extension Office	Swain Cooperative Extension Office	Multiple participants; over a dozen of healthy education classes offered
ODHDSP Grant	MountainWise	Working on community-clinical connections for obesity, diabetes, heart disease, and stroke
Community Eligibility Program	Swain County Schools	All students eligible enrolled
Summer Feeding Program	Swain County Schools, Giving Spoon	Successfully fed over 100 meals in the summer
Annual Heart Health Fair	Swain County Health Department, Swain Community Hospital	70 attendees
Cooking Matters at the Store	Swain County Health Department	Four Tours Completed
Community Table – Free Meals	Giving Spoon	Over 300 meals distributed in 3 months

Needed Health Resources	
Resource	Potential Community Partner

Greenways/sidewalks	NC DOT, Commissioners, Greenways Committee
Gym facility accessible to all	Commissioners, Town Aldermen, Chamber of Commerce
Health education for youth	Swain County Health Department and Swain Community Hospital
Health education for parents	Swain County Health Department and Swain Community Hospital
Physical Activity Education	Swain County Health Department and Swain Community Hospital

Priority Indicator #2: Substance Use Prevention and Reducing Substance



Swain Opioid Discussion

WNC Comes Together – How Can We Help?

The number of opioid related deaths in NC has risen from 170 to 601 in 5 years, Heroin deaths have increased by 584% during that time. In 2018, 26.7% in Swain County reported using opioids. What can we do?

Please join Brandon Wiggins (Swain EMS), Kallup McCoy (Rez Hope), Ted Duncan (Bryson City First Baptist Church), Rebecca Hoffman (Cherokee Pharmacy), and George Mackel (Family Nurse Practitioner at Cherokee Indian Hospital) to address and discuss questions related to opioid prevention, use, and treatment. This series is meant to unite WNC communities, and learn from the community members – you are the experts in the area. We encourage EVERYONE to be a part of the discussion. Together, we can find a solution.

HARRIS SWAIN
COMMUNITY HEALTH PARTNERSHIP

Panel:
 Brandon Wiggins
 Kallup McCoy
 Ted Duncan
 Rebecca Hoffman
 George Mackel
Date: Thursday, December 6th
Location: Swain United Community Bank, Community Room
Time: 5:30 PM

In the 2011 CHA cycle, the community identified tobacco use as a main health priority, and in 2015 the community expanded to substance abuse targeting youth. An action team was created in hopes of enacting diligent work to reduce the percentage of survey respondents who reported their life had been negatively impacted by substance abuse (39%; WNCHN – Online Key Informant Survey, 2018). In 2015, 10% of 8th graders in Swain County admitted to trying drugs (Swain County Pride Survey, 2015). The Safe and Drug Free Swain County Coalition partnered with Project Lazarus, giving out 50 lock boxes. Further, a campaign blitz was held on prescription medications: Store Securely, Take Correctly, Never Share, and Dispose Properly. Over the course of three years, the coalition saw a new health priority arise in this field and

responded in the action of continuous expansion of the substance abuse priority. During the data collection for the 2018 CHA, there was an evident increase in negative responses toward substance abuse – from 2015 to 2018 there was a 2.6% increase in respondents stating their life had been negatively affected by substance abuse “a great deal”; a 4% increase in respondents stating their life had been negatively affected by substance abuse “somewhat”; and a 6% decrease in respondents stating their life had been affected by substance abuse “a little” (WNCHN – WNC Healthy Impact Community Health Survey, 2018). Roughly 13.6% of respondents to the survey reported using (or someone they know) an illicit during in the past month, which is 5% higher than the WNC average (8.6%; WNCHN – WNC Healthy Impact Community Health Survey, 2018). These statistics in conjunction with listening sessions in the community indicate that substance abuse is beginning to affect more and more individuals. To continue the work begun in 2011 but account for all substance misuse and abuse, we expanded the health priority to Substance Use Prevention and Reducing Substance.

Data Highlights

Health Indicators

Unintentional injury is included in all-cause mortality data, indicating that Swain County reported 35 deaths in 2018 due to an unintentional injury, which is a rate of 44. Unintentional injuries are defined as harmful acts that occur without any true intention of causing damage to oneself or others (Cheprasov, n.d.). For people 65 years or older, unintentional falls are the number one cause of unintentional death, however, individuals in the age category of 25-64 are more likely to report unintentional poisoning with substances at home.

Cause of Death	Swain		Comparison to WNC Regional Average Rate		Comparison to NC Rate	
	# Deaths	Death Rate	Rate	% Difference	Rate	% Difference
Acquired Immune Deficiency Syndrome	0	0.0	0.9	-100.0%	2.2	-100.0%
All Other Unintentional Injuries	35	44.8	45.8	-2.2%	31.9	40.4%
Alzheimer's disease	37	41.0	31.7	29.5%	31.9	28.5%
Cancer	176	178.1	165.5	7.6%	166.5	7.0%
Cerebrovascular Disease	50	59.8	40.2	48.9%	43.1	38.7%
Chronic Liver Disease and Cirrhosis	21	25.0	13.6	83.7%	10.3	142.7%
Chronic Lower Respiratory Diseases	64	64.7	54.3	19.2%	45.6	41.9%
Diabetes Mellitus	47	51.0	22.4	127.5%	23.0	121.7%
Diseases of Heart	181	189.4	164.4	15.2%	161.3	17.4%
Homicide	3	4.5	4.1	10.1%	6.2	-27.4%
Nephritis, Nephrotic Syndrome, and Nephrosis	21	22.3	14.6	52.9%	16.4	36.0%
Pneumonia and Influenza	22	23.6	17.4	35.3%	17.8	32.6%
Septicemia	15	16.6	9.0	85.0%	13.1	26.7%
Suicide	10	14.2	19.0	-25.1%	12.9	10.1%
Unintentional Motor Vehicle Injuries	12	18.7	15.5	20.3%	14.1	32.6%
All Causes (some not listed)	888	973.9	800.7	21.6%	781.8	24.6%

Table 13: Cause of Death in Swain County Compared to the Regional and State. WNCHN – WNC Healthy Impact Community Health Survey (2018).

There is a 40.4% difference between Swain County's death rate due to unintentional injuries and the State's death rate (WNCHN, 2018). It is important to note that the unintentional injury rate is much higher than the motor vehicle injuries statistics as well as the suicide rate.

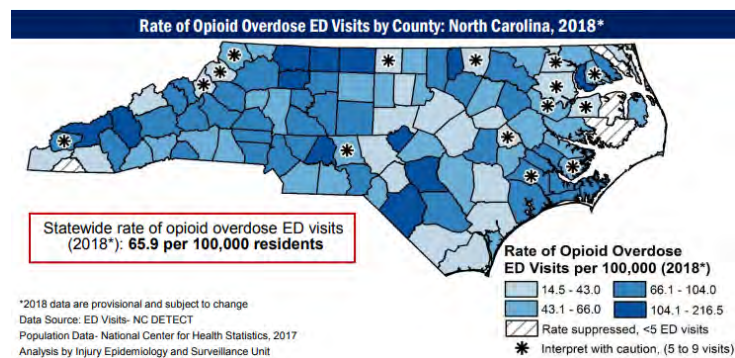


Figure 11: Rate of Opioid Overdose ED Visits by County in NC During 2018. NC Detect (2018).

In 2018, Swain County had the third highest rate of opioid overdose ED visits with 139.9 overdose ED visits per 100,000 residents (view to the left; NC DETECT). According to the North Carolina State Center for Health Statistics, vital Statistics Death Certificate Data, Swain County's unintentional medication and drug poisoning deaths have averaged around 1 death in the last 5 years, but rose to 6 deaths in 2017 (North Carolina State Center for Health

Statistics, 2017). The county averaged 1 overdose death due to opioid poisoning from 2011 to 2017, where 2017 saw 5 overdose deaths due to opioids (North Carolina State Center for Health Statistics, 2017).

The unintentional ED visits in Swain County have dramatically increased from 2016-2017, indicated in the table below.

County	Unintentional Medication/Drug Poisoning ED Visits		Unintentional Opioid Poisoning ED Visits	
	2016	2017	2016	2017
Swain	17	50	6	30

Table 14: Unintentional Poisoning ED Visits in 2016 and 2017. NC Opioid Dashboard (2017).

North Carolina State Center for Health Statistics indicates that unintentional poisoning ED visits in 2017 were caused by the following drugs:

- Psychostimulant (7)
 - Adderall
 - Ritalin
 - Mixed salts of a single-entity amphetamine product
- Benzodiazepine (3)
 - Xanax
 - Klonopin
 - Valium
 - Ativan
- Methadone (1)
- Heroin (1)

Unintentional opioid poisonings caused over half of the medication/drug ED visits in 2017. Opioids could include hydrocodone, oxycodone, morphine, codeine, and other related drugs. The top three leading causes of death in Swain County could be related to tobacco products. According to the CDC, smoking can cause heart disease, stroke, cancer, lung diseases, diabetes, and chronic obstructive pulmonary disease (COPD; “Smoking & Tobacco Use”). The county reported the lowest percentage of current smokers in six years – in 2012, 29% of respondents reported smoking and in 2018 that percentage decreased to 22.5% (WNCHN, 2018).

Although the percentage of smokers is decreasing, the use of smokeless tobacco and e-cigarettes is rapidly increasing in Swain County. The percentage of individuals using smokeless tobacco has increased by 6% in six years, and the use of e-cigarettes has risen by roughly 3% in three years (WNCHN, 2018). The 2017 North Carolina Youth Tobacco Survey reported that 16.9% of high school students in North Carolina had used an e-cigarette in the previous 30 days.

Understanding the Issue

Substance abuse was identified by key informants as a the most critical condition to address in mental health. Reasons for identifying substance abuse as a problem include easy access to illegal substances, poverty, lack of treatment and support facilities, no mental health specialists in the area, minimal funding to combat the issue, not enough employment opportunities, “nothing to do” for youth, and lack of overall education.

Some reasons include people begin taking drugs include peer pressure, negative home life, self-medication, curiosity, higher ACE scores, availability, and performing better in athletic or academic settings.

Cultural factors are becoming an increasing factor in regard to substance abuse. Consumption of alcohol, vaping/e-cigarettes, marijuana, pain killers, and anxiety medication are becoming more common and culturally acceptable. Swain County now houses a vape shop located at the bottom of the hill to the high school. The store sells various CBD and vape products in the Bryson City area.

Specific Populations At-Risk

Substance abuse affects all populations, but there are distinct differentiations between various groups in relation to substance misuse and abuse. Minorities, specifically Native Americans, and white males are at a higher risk of both substances abuse and overdose in Swain County; Native American substance abuse disorder rates are double the average population (Centers for Disease Control and Prevention, 2018).

The American Indian and Alaskan Native people had the largest drug overdose death rate in 2015 (Centers for Disease Control and Prevention, 2018). The Bureau of Indian Affairs reported a 56% increase in heroin seizures and a 109% increase in meth seizures between 2015 and 2016 (Bureau of Indian Affairs, 2016). Native Americans saw dramatic increase in overdose deaths from 1999 to 2015; Dr. Michael Toedt, the Indian Health Services' chief medical officer, testified that the rise of overdoses represents the largest increase of any racial group during that period of time.

In 2018, the average demographics for overdose ED visits are as follows: 59% men, 75% white non-Hispanic, and 35% ages 25-34. The population at highest risk outside of Native Americans would be Caucasian men between the age of 25 and 34 (see below).

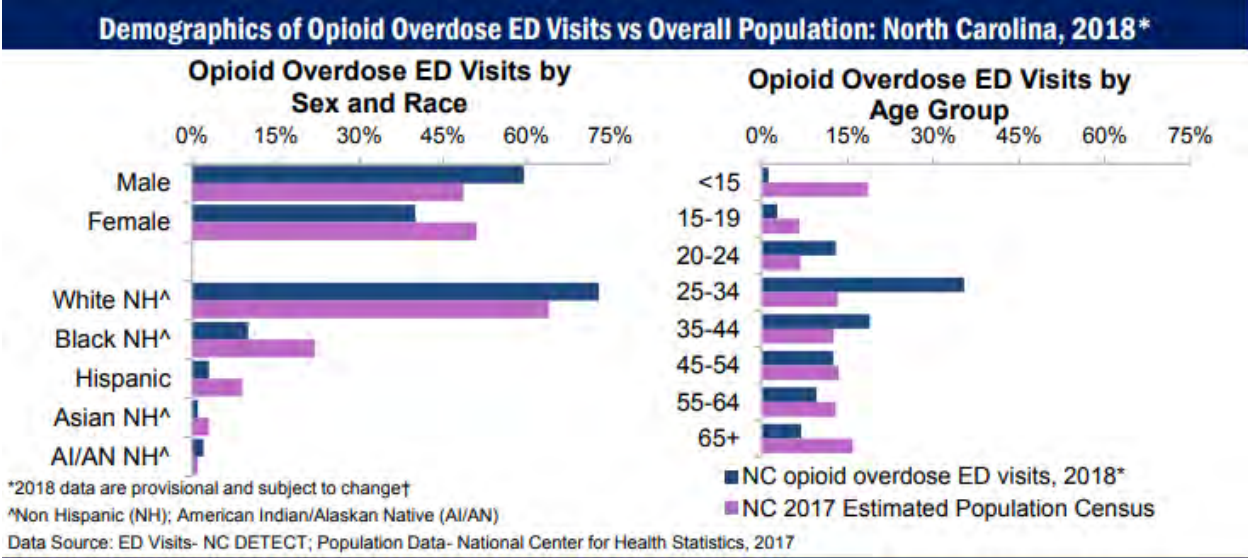


Figure 12: Demographics of Opioid Overdose ED Visits in North Carolina During 2018. NC Detect (2018).

Other risk factors to consider would include:

- Socioeconomic status
- Family history of addiction
- History of chronic pain
- Mental health disorder
- ACE score
- Exposure to drugs earlier in life
- Poor social skills
- Availability/access
- High stress environment

All low-income residents in Swain County are also at a greater risk for unintentional injuries, including overdose. Another population to consider would be pregnant women who use illicit substances as well as the babies delivered from these women.

Health Resources Available/Needed

The Coalition for a Safe and Drug Free Swain County is funded through a grant from Project Lazarus. The Coalition is comprised of concerned community members, including parents and students from the local high school. The organization has partnered with a multitude of key stakeholders in the community to work on substance abuse in Swain County, and the Coalition will continue to spearhead this priority in 2018.

Available Health Resources		
Resource	Association and Description	Availability
Lock Boxes for Medication	Coalition for a Safe and Drug Free Swain County and Swain County Health Department	Permanent
Promotion of Naloxone	Coalition for a Safe and Drug Free Swain County and Swain County Health Department	Ongoing
Prevention of Overdose through Education and Information	Coalition for a Safe and Drug Free Swain County and Swain County Health Department	Ongoing
Red Ribbon Week	Coalition for a Safe and Drug Free Swain County and Swain County Health Department	Yearly
Alcohol Free Prom Night Campaign	Mountain Projects, Coalition for a Safe and Drug Free Swain County, and Swain County Health Department	Yearly
Tobacco Free Parks Committee	Swain County Health Department and the Parks and Recreation Services	Ongoing
Trick or Treat on Everett Street Event	Mountain Projects, Coalition for a Safe and Drug Free Swain County, and Swain County Health Department	Yearly

Needed Health Resources	
Resource	Potential Community Partner
Substance abuse prevention programs for youth	Mountain Projects, Coalition for a Safe and Drug Free Swain County, and Swain County Health Department
Education for youth	Mountain Projects, Coalition for a Safe and Drug Free Swain County, Swain County Health Department, Swain Community Hospital, School Health Advisory Committee, and Swain County Schools
Education for parents	Mountain Projects, Coalition for a Safe and Drug Free Swain County, Swain County

	Health Department, Swain Community Hospital, and Swain County Schools
Increased naloxone distribution	Mountain Projects, Coalition for a Safe and Drug Free Swain County, and Swain County Health Department
Needle exchange program	WNC Harm Reduction Alliance, County Commissioners, Coalition for a Safe and Drug Free Swain County, and Swain County Health Department
Needle exchange boxes throughout county	WNC Harm Reduction Alliance, County Commissioners, Chamber of Commerce, Coalition for a Safe and Drug Free Swain County, and Swain County Health Department
Local in-patient treatment centers	Swain Community Hospital
Support for parents and families of those suffering from addiction	Swain Community Hospital, County Commissioners

For more information about the community health priorities selected for Swain, read the Priority Issue sections in [LINK TO CHA](#). In our facility-specific Implementation Strategy, we will discuss what role our facility will have in leading, collaborating on, or supporting others in responding to these health issues. The Implementation Strategy will be complete by 09/01/2019 and available to the public in September on the Swain Community Hospital website as well as the Swain County Health Department website.



Health Resources

An inventory of available resources of our community was conducted through reviewing a subset of existing resources currently listed in the 2-1-1 database for our county as well as working with partners to include additional information. Where gaps were identified, we partnered with 2-1-1 to fill in or update this information when applicable. [2-1-1](#) is a free and confidential service that helps connect people across the country to the local resources that they need. Some examples of topics include emergencies and disasters, food, housing and utilities, human trafficking, and crises.

Health Resources Inventory

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The county currently has two separate resource avenues for communicating resources with community members. The first is NC 2-1-1 and the second is a new Community Resource Meeting group.

NC 2-1-1 is an information and referral service that links people to community health and human services and maintains a database of community resources to support this service. NC 2-1-1 is free, confidential and available 24/7 to speakers of all languages. Resources are available through phone, web and iPhone app. The community tool (2-1-1) continues to serve as the updated resource list accessible via phone and web 24/7 – instead of your team compiling a printed directory. Our 2-1-1 datasets are reviewed every year by either the Health Department or the Region A Community Engagement Coordinator. In, May 2018, NC 2-1-1 provided a list of health resources available to residents of Swain County (even if they are located in another county) to the Swain County Health Department.

This listing includes the following information about each health resource:

- Agency name, program, description, address, website and contact information
- A program point person and their contact information
- Hours, provider language, fees, eligibility
- URL for the resource link on the NC 2-1-1 website

CHA team members reviewed the listing for completeness and encouraged additional agencies to add their information to the NC 2-1-1 directory in order to keep this resource current.

The NC 2-1-1 directory listings can be found in Appendix F.

An email with the proper paper work and contact information for updating or adding their resource to the NC 2-1-1 dataset will continue to be sent to all new members of the Community Resource Meeting group.

Findings

Learning the barriers of those in need. There are some programs offering free fresh fruits and vegetables, but community members do not use them. What else is needed for community members. – Public Health Representative

NC 2-1-1 - Many resources available to Swain County residents are actually located in other counties. For some, access to these resources (via transportation or phone) may be a barrier to receiving services. Some services that do exist in the county are not listed in the directory, and others have out-of-date information or are not described in a way that makes it easy to understand the services available and how to access them. Other services exist and are listed, but there is a perception

that those types of services are not available in the community. Additional education or promotion may be needed to make people more aware of existing services.

Community Resource Meeting group - The findings in 2018 showed a lack of communication among organizations who are providing resources. These findings coincided with the development of a new Community Resource Meeting, hosted by Swain County Department of Social Services held quarterly. The purpose of the meetings is to gather community partners to share resources offered, to better serve the citizens of Swain County. A roundtable discussion is held to inform of services, barriers and solutions. The meeting group is currently working on a Social Media platform to inform not only other community resource partners of their services, but the community members as well.



Sharing Findings

Our facility will post its CHNA report on the [Swain Community Hospital](https://www.myswaincommunity.com/) website. The paper copy of our CHNA will be made available, upon request, at our hospital free of charge. Comments and suggestions from the public are welcome, and may be submitted via contact information on this webpage: <https://www.myswaincommunity.com/for-patients-and-visitors/community-health-needs-assessment>

Collaborative Planning

Our hospital facility will participate in a collaborative planning process with our community partners which results in the creation of a community-wide plan at the county level. This plan outlines what strategies and related programs will be aligned, supported and/or implemented to address the priority health issues identified through this assessment process. Our hospital will then develop a facility-specific implementation strategy that speaks to our specific contributions to the identified priority health issues. We aim to leverage existing assets, avoid duplication, and implement evidence-based and innovative efforts, that contribute to the community-wide effort to build a healthy and thriving place to live, work and play.

4/18/2019

Date authorized by Chelsea Burrell, Community Wellness Outreach Coordinator, body of Swain Community Hospital facility.



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Appendix A – Swain County Community Health Assessment



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Our community health assessment process and products were supported collaboratively by **WNC Healthy Impact**, a partnership between hospitals and health departments to improve community health in western North Carolina. This innovative regional effort is coordinated, housed and financially supported by **WNC Health Network**, the alliance of western NC hospitals working together to improve health and healthcare. Learn more at www.WNCHN.org.

WNC**HEALTHY**IMPACT



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SWAIN COUNTY 2018 COMMUNITY HEALTH ASSESSMENT EXECUTIVE SUMMARY

Vision

The Community Wellness Action Team works in conjunction with the Community Health Assessment (CHA), conducted every three years. The team hopes to gain community member involvement in decision-making to create a healthier Swain County. The vision of the group is devoted to the betterment of individuals living in Swain County; this vision is steadfast, but specifics have the power to change with each Community Health Assessment cycle. In the next three years, Swain County will strive to improve the health of

In the next 3 years, Swain County will strive to improve the health of its community members.

its community members by: implementing or improving programs, decreasing the number of chronic disease as it relates to obesity, and collaborating with local coalitions to reduce substance use and abuse as well as increase health education. Our goal is to design and implement strategies positively benefiting overall health while simultaneously collaborating with various entities to initiate programs working toward a healthier and safer Swain County. The Community Wellness Action Team is driven to create and maintain initiatives potentially increasing the health and happiness of citizens living in Swain County.

Leadership for the Community Health Assessment Process

During the 2018 Community Health Assessment (CHA), the Community Wellness Action Team spearheaded the CHA process for Swain County.

Name	Agency	Title	Agency Website
Trish Hipgrave	Swain County Health Department and Community Wellness Action Team (C-WAT)	Chair of C-WAT	www.swaincountync.gov
Chelsea Burrell	Swain Community Hospital and Community	Vice Chair C-WAT	www.myswaincommunity.com

	Wellness Action Team		
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Partnerships

Many key partners are participating in our ongoing Community Health Assessment process. Partners include: WNC Healthy Impact, Swain County Health Department, Swain Community Hospital, Community Wellness Action Team (C-WAT), Coalition for a Safe and Drug Free Swain County, Swain County Board of Commissioners, Bryson City Town Board of Alderman, Swain County Economic Development, Swain County Schools, Mountain Projects Inc., and Smoky Mountain Times. All entities and organizations provide great insight into this process, offering opinions on the health status of this community. It is through their partnership and collaboration that we were able to create an assessment and plan with the community, by the community, and for the community.

Community Input & Engagement

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

- Primary data collection included county residents answering questions regarding their experiences
 - Key informant interviews were submitted by selected community leaders
- Listening sessions were conducted (all community members invited)
- Partnership on conducting the health assessment process (Health Department, Hospital, and C-WAT, WNC Healthy Impact)
- C-WAT is comprised of volunteer community members interested in the health of their county
 - C-WAT reviewed and made sense of the data to better understand the story behind the statistics
- In the identification and prioritization of health issues
 - C-WAT
 - Coalition for a Safe and Drug Free Swain County
 - Board of Commissioners Meetings (community members invited to participate)
 - Bryson City Town Board of Aldermen Meeting (community members invited to participate)
 - Swain County School Board Meeting (community members invited to participate)
 - Swain County School Health Advisory Committee Meeting



Community engagement will be an ongoing focus moving into the collaborative planning phase of the community health assessment process. Partners and stakeholders will continue to be

engaged as appropriate in their individual roles. Programs and strategies will be a collaborative effort in our community to ensure the potential for successful impact.

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 (WNC) working towards a vision of improved community health. We work together locally and regionally to assess health needs, develop collaborative plans, take action, and evaluate progress and impact. This innovative regional effort is coordinated and supported by **WNC Health Network**. WNC Health Network is the alliance of 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.

Through WNC Healthy Impact, all hospitals and their public health partners can access tailored Results-Based Accountability training and coaching; scorecard licenses and development (including the electronic Hospital Implementation Strategy); and scorecard training and technical assistance.

Collaborative Process Summary

Swain County's collaborative process is supported by WNC Healthy Impact, which works at the regional level. Locally, our process is collaborative and integrated to better suit our community. Phase 1 of the process began in January 2018 with the collection of community health data. For more details on this process see Chapter 1 – Community Health Assessment Process. Phase 2 of the process was the release of the data to local Health Departments and Hospitals. During this phase, Swain County Health Department's Public Health Educator, Trish Hipgrave, and Swain Community Hospital's Community Wellness Outreach Coordinator, Chelsea Burrell, sifted through the data to evaluate morbidity and mortality rates in Swain County. Health conditions such as heart disease, Diabetes, and COPD were previously identified as areas of concern, and during this phase of CHA it was critical to thoroughly analyze the trending numbers of the previous decade in relation to the current morbidity rates. From there, information was broken down into two main categories – chronic disease and substance use and abuse – and presented to the Community Wellness Action Team (C-WAT).

Members of C-WAT were given the statistical information found pertinent to the broad theme of chronic disease as well as substance use and abuse. The data provided to them were as follows: causes of death in Swain, total overweight (overweight or obese), obesity, consume

five or more servings of fruits/vegetables per day, food insecurity, prevalence of heart disease, prevalence of stroke, prevalence of high blood pressure, prevalence of high blood cholesterol, prevalence of borderline or pre-diabetes, prevalence of diabetes, prevalence of COPD, used opiates/opioids in the past year, life has been negatively affected by substance abuse, current smokers, currently use smokeless tobacco products, currently use vaping products, and the Swain County PRC specific questions. Each member was given this information prior to the CHA data kick-off meeting. Preceding the kick-off meeting were meetings dedicated to substance use and abuse, where members were asked to rate each data point based upon feasibility, relevancy, and the overall impact. Upon finalizing a recommended priority for substance use and abuse, attention turned to chronic disease. Members were asked again to rate each data point based upon feasibility, relevancy, and the overall impact, finalizing the second recommended priority.

C-WAT suggested two potential priorities – chronic disease as it relates to obesity in our community and substance use prevention and reducing substance abuse in our community. As C-WAT is only one small representation of the county population, the potential priorities were then presented to the Bryson City Town Board of Aldermen, Swain County Commissioners, School Health Advisory Committee (SHAC), and the Swain County School Board for approval and acceptance of these priorities moving forward. Throughout the process, involvement within the community could be challenging, therefore, the potential priorities were brought to public meetings, such as the Bryson City Town Board of Aldermen on December 3rd, the Swain County Commissioners meeting on December 13th, and the Swain County School Board on January 14th. In sharing the potential CHA priorities at public meetings, the priorities data was also shared with Swain Community members in attendance, where they could provide their input. Gaining the acceptance, approval, and support from these local officials and community members, we were able to set our two CHA priorities for Swain County.

Key Findings

According to the secondary data, the leading cause of death in Swain County is disease of the heart (North Carolina State Center for Health Statistics, 2018). The most common types of heart disease are the following: coronary artery disease, high blood pressure, arrhythmia, stroke, peripheral artery disease, and congenital heart disease. Primary data indicated several major findings that heavily influenced priority selection. The prevalence of high blood pressure has increased by 5.1% in six years, and 4% in three years; please note that high blood pressure is one of the most common types of heart disease (WNCHN – WNC Healthy Impact Community Health Survey, 2018). The obesity prevalence is about 50% in the county (49.7%), increasing by 12% in six years and 8.4% in three years. The prevalence of overweight/obese individuals is at 75.5% in 2018, which is approximately a 4% increase in six years and a 2.9% increase in three years. Diabetes continues to increase at an alarming pace in Swain County, one in which is quite disturbing to those in the public health community.

The second leading cause of death in Swain County is lower respiratory disease, which is also known as Chronic Obstructive Pulmonary Disease (COPD). Chronic obstructive pulmonary disease has steadily been on an uphill climb over the previous decade, indicating an approximate 1% increase in three years (WNCHN – WNC Healthy Impact Community Health Survey, 2018). The primary data also resulted in significant increase of smokeless and e-cigarette use; smokeless tobacco products increased by 1.7% in three years and 5.7% in six years, in addition, e-cigarette products increased by 1.6% in three years (WNCHN – WNC Healthy Impact Community Health Survey, 2018).

Secondary data indicates the number of EMS naloxone administrations as being one of the highest in Western North Carolina, and this data was only indicative of the first quarter in 2018 (NC Opioid Action Plan Dashboard, 2018). 40% of opioid deaths in the 4th quarter of 2017 involved heroin or fentanyl, which was found to be alarmingly high in the smaller community of Swain. Major findings within the secondary were difficult to identify as the statistics were not current, a majority of secondary data was only current to 2016, and sometimes 2013, making it difficult to utilize.

The county specific questions indicated three perceived issues – road maintenance, drugs, and “nothing” were the given responses (WNCHN – Online Key Informant Survey, 2018). The community perception of drugs being a major issue, was a stronger indicator. The degree to which life has been negatively affected by substance abuse showed a 3% increase; 13.6% of individuals polled reported using an illicit drug in the past month (self or someone they know), which is 4% higher than the WNC average (WNCHN – Online Key Informant Survey, 2018).

Mortality

The overall life expectancy for those in Swain County is reported to be 75.2 years of age (North Carolina State Center for Health Statistics, 2018). Men are estimated to live on average to be 71.8 years old, and women are estimated to live to be 78.7 years of age. The secondary data provided on ethnicity and race in Swain County for life expectation is extremely limited, therefore, not included. This data set is limited to Caucasian and African-American statistics only, and roughly 26% of the population identify as Native American (WNCHN – Online Key Informant Survey, 2018). According to this data, Caucasians reportedly live to be 77.5 years of age on average with no data available for African Americans or Native Americans. This data needs to be updated to reflect the potential races inhabiting the counties of WNC, such as Native Americans as well as Hispanics. This would be done through WNC Healthy Impact.

According to the Indian Health Services, American Indians and Alaska Natives have an average life 5.5 years less than all races in the U.S. (Indian Health Service, n.d.). American Indians and Alaska Natives continue to die at a higher rate than other Americans due to chronic liver disease and cirrhosis, diabetes, unintentional injuries, assault/homicide, and chronic lower respiratory diseases (Indian Health Service, n.d.).

Heart disease continues to be the leading cause of death in Swain County. Reported diagnoses of high blood pressure are increasing at an alarming rate in conjunction with heart disease. As of 2018, Swain County has the highest percentage of heart disease in comparison with all counties across WNC. Further, Swain has continued to have the highest percentage of heart disease across WNC for the last decade. Data indicates a positive influx of individuals taking action to control their high blood pressure and seeking treatment.

Health Priorities

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

4. Relevant – How important is this issue? (*Urgency to solve problem; community concern; Focus on equity; Linked to other important issues*)
5. Impactful – What will we get out of addressing this issue? (*Availability of solutions/proven strategies; Builds on or enhances current work; Significant consequences of not addressing issue now*)
6. Feasible – Can we adequately address this issue? (*Availability of resources to address the issue; Political capacity/will; Community/social acceptability; Appropriate socio-culturally; Can identify easy, short-term wins*)

Swain County Health Department Community Health Assessment (CHA) facilitator, Swain Community Hospital Community Health Needs Assessment (CHNA) facilitator, and Community Wellness Action Team (C-WAT) analyzed the secondary and primary data from WNC Healthy Impact; participants used a modified Hanlon method to rate the priorities using the criteria listed above. Then multi-voting techniques were used to narrow the top two health priority issues, which were presented to stakeholders as a recommendation moving forward. From there, stakeholders were asked to provide feedback and vote on the recommended health priorities presented. In a unanimous decision, all stakeholders agreed on the priorities, allowing the process to move forward.

Identified Priorities

The following are the finalized health priorities for Swain County, selected by the community:

- **Health Priority 1 - Chronic Disease as it Relates to Obesity with Swain County Community members**
- **Health Priority 2 – Substance Use Prevention and Reducing Substance Abuse in Our Community**

Health Resources Inventory

Inventory of available resources was conducted for our community by reviewing a subset of existing resources currently listed in the 2-1-1 database for our county as well as working with partners to include additional information. Where gaps were identified, we partnered with 2-1-1 to fill in or update this information when applicable. In addition, a Community Resource quarterly meeting was established by Swain County Department of Social Services to bring key partners together to discuss services and avenues in which the county can disseminate and communicate better with community members.

Next Steps

The 2018 CHA priorities have been presented to the community through key county group meetings – Board of Commissioners, Bryson City Town Aldermen, Swain County School Board, and the School Health Advisory Committee. The CHA and CHNA facilitators will continue to disseminate the report in a multitude of ways; the final CHA will be shared with the above committees, as well as, being made available online at www.swaincountync.gov and <https://www.myswaincommunity.com/for-patients-and-visitors/community-health-needs-assessment>. These links will also be posted on the Facebook page of Swain County Health Department, Swain Community Hospital, and The Coalition for a Safe and Drug Free Swain County. Hard copies will also be available at the Health Department, Marianna Black Library, and printed upon request.

Next steps will include the development of a community health improvement plan based on the findings of the CHA. The CHA and CHNA facilitators will assemble a meeting of C-WAT to develop objectives and strategies to move forward on the identified two health priority issues. The team will develop and implement initiatives utilizing evidence-based strategies. Community policy change and education will remain vital tools in, not only generating, but also maintaining healthy behavior within Swain County.



Location, Geography, and History of Swain County

Consisting of just over 525 square miles of land area, Swain County is located in the far western region of North Carolina and is adjacent to the federal government’s Smoky Mountain National Park, and the Eastern Band of Cherokee Indian Reservation (EBCI). This rural, mountainous area of the Southern Appalachians is often recognized for its spectacular geographic diversity. With much of the land area located within the Great Smoky Mountains National Park, including its highest peak, Clingmans Dome, the area includes the scenic beauty of four rivers, the Nantahala, the Tuckasegee, the Oconaluftee and the Little Tennessee, and a major creek, Deep Creek, which flow through the county and helps to form the sprawling Lake Fontana located just minutes west of Bryson City, the county seat. The county also encompasses much of the Cherokee Indian Reservation, with its own independent government. Given this unique geography and co-location with two independent government organizations, Swain County government’s capability to raise significant program revenues to support programs and services is particularly acute given that over eighty-five (85) percent of Swain County’s total land area is currently not taxable by local governmental units due to its ownership by either the national government or the Cherokee Indian Tribal government. A funding scenario that provides minimal revenue generating potential at the local level while the local community attempts to address a growing high demand for services. (Swain County Master Plan, 2018)

Formed in 1871 from parts of Jackson County and Swain County, the county was named for David L. Swain, governor of North Carolina from 1832 to 1835. With a population of just over 14,163 individuals according to 2016 census and other population estimates, Swain County is the 89th least populated of 100 counties in the state. Moreover, economic data indicates that despite significant increases in employment and income, Swain County continues to rank as 83rd of the 100 counties in terms of the number of children in poverty, nearly ten percentage points worse than the state average. Today, the average population density is still less than 26.5 people per square mile and the per capita income is less than \$21,000 per year. A population that is often isolated in terms of socialization activities due to the non-existence of public transportation resources and difficulties in travel due to the mountainous nature of the local terrain. The major roadways that provide regional transit routes for Swain County include: US Highways 74 and 19 and State Highways 28. Most of the county’s development occurs along these corridors and around the areas of the highway intersections including the area around the only incorporated municipality. The county is home to one incorporated municipality, Bryson City, and a number of local communities including but not limited to Alarka, Ela,

Almond, Wesser, Lauda, Whittier, Deep Creek, and Fontana Lake. Major geographic attractions include the water oriented recreational uses of the Deep Creek and Fontana Lake areas as well as areas along the Tuckasegee River. Additional geographic attractions include the many hiking and trail paths including those in and out of the Smoky Mountain National Park areas and along other areas of the Great Smoky Mountains. (Swain County Master Plan, 2018)

Population

The Great Smoky Mountains National Park is one of the nation’s most-visited national parks (National Park Foundation, n.d.). Approximately 40% of the Great Smoky Mountains National Park is housed on Swain County property lines (Swain County Chamber of Commerce, n.d.). Swain County is extremely scenic – roughly 87% of the property is protected from development as part of the Great Smoky Mountains National Park, Tennessee Valley Authority waters, Nantahala National forest, or the Cherokee Indian Reservation (Swain County Chamber of Commerce, n.d.). The total population in 2016 was 14,234 people, which was a 1.8% increase from 2010 (U.S. Census Bureau, 2018). The population is rather evenly distributed with 48.8% being males and 51.2% being females (U.S. Census Bureau, 2018). The average age of individuals living in Swain County was roughly 41 in 2016. The county is primarily comprised of Caucasians (64.2%) and Native Americans (27.8%). Swain County averages the highest percentage of Native Americans within the population as it houses the Qualla Boundary, otherwise known as the Eastern Band of Cherokee Indian Reservation (EBCI). The population change from 2010-2020 is estimated to grow by roughly 3% and slowly decline for the next few decades (indicated in the graph below; U.S. Census Bureau, 2018; North Carolina Office of State Budget and Management, 2018).

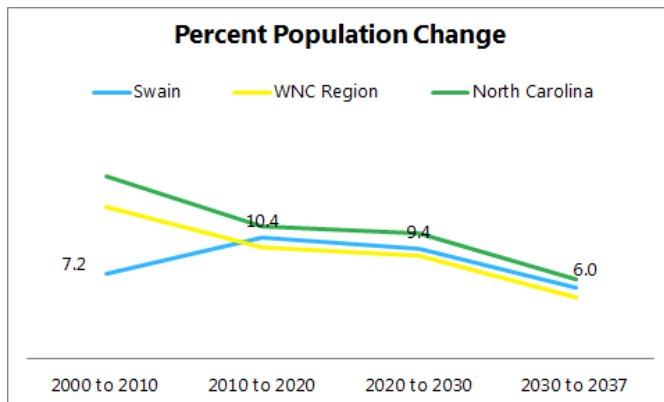


Figure 1: Percent of Population Change in Swain County. U.S. Census Bureau (2018) and North Carolina Office of State Budget and Management (2018)

The elderly population is estimated to continue to steadily increase in the upcoming years.

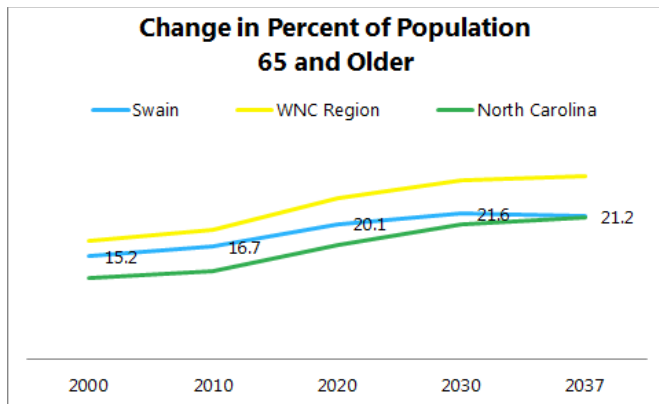


Figure 2: Change in Percent of Population 65 and Older in Swain County. U.S. Census Bureau (2018) and North Carolina Office of State Budget and Management (2018).

The youth rate will slowly increase of the upcoming years, but it will be a slow and steady climb. Birth rate statistics indicate a small decrease in the total birth rates, and an increase in birth rates among the Hispanic and African American populations. Both minority populations increased by 2% in 2016 (NC SCHS, 2018). Approximately 188 households identify as non-English speaking, equating to around 3.5% of the total households (U.S. Census Bureau, 2018). 63 households in Swain County identify as predominantly Spanish speaking, and only 7 out of the 63 households are strictly non-English speaking. No other language was identified as a dominant language or potential barrier.

The number of total family households in 2016 was approximately 3,471 in comparison to 5,425 total households in Swain County (U.S. Census Bureau, 2018). Roughly 12% of those family households are legally married couples with children under the age of 18; 1.7% are households-maintained by single men with children under the age of 18; and 6.9% are households-maintained by single women with children under the age of 18 (U.S. Census Bureau, 2018). Among the non-family households established, 33% live by themselves and 13.8% are 65 years and over.

Military veterans account for 859 out of 10,942 individuals, which is roughly 8% of the eligible population (U.S. Census Bureau, 2018). The military veteran population is dominated by men (97.1% of the population), with 2.7% being 18 to 34 years of age, 23.7% being 35 to 54 years of age, 16.3% being 55 to 64 years of age, 29.8% being 65 to 74 years of age, and 27.5% being 75 years and over (U.S. Census Bureau, 2018).

Approximately 231 individuals living in Swain County were born outside of the United States, which is the second lowest county across WNC (U.S. Census Bureau, 2017).

In 2017, 10,165 individuals were classified as registered voters in Swain County. Statistics show that 78.5% of the registered voters in the county were identified as Caucasian, 1.2% registered as African American, 20.3% registered under “other” ethnicity, and .6% registered as Hispanic (North Carolina Office of State Budget and Management, 2017).

The number of homeless individuals has increased dramatically within the last decade. In 2010 the county reported nine homeless individuals, where it averaged around ten for the next few years. In 2013, Swain County saw an all-time high of homelessness with 77 individuals reported. In the following year it decreased by roughly 30 individuals, but almost doubled by 2015 (97 individuals reported; North Carolina Coalition to End Homelessness, 2018). After 2015, the average number of homeless individuals reported has been approximately 50, which is seemingly much greater than surrounding areas.

The educational attainment rate from 2012-2016 also appears to be lower than other neighboring counties. Roughly 32.8% of the indicated population obtained a high school diploma or the equivalent to a high school diploma; 23.2% report some college but did not achieve a degree; and only 15.3% report achieving a bachelor’s degree or higher (U.S. Census Bureau, 2018). Swain County has one of the lower rates within WNC in relation to education attainment.



CHAPTER 2 – 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 to live in, have better health outcomes and generally have longer life expectancies. Although these factors affect health independently, they also have interactive effects on each other and thus on health. For example, people in poverty are more likely to engage in risky health behaviors, and they are also less likely to have affordable housing. In turn, families with difficulties in paying 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).

Income and Poverty Levels in Swain County	
Median Household Income	\$33,598
Median Family Income	\$44,370
Per Capita Income	\$20,256
Population Below Poverty Line	23.0%
Children Under 18 Below Poverty Level	42.2%
Children Under 5 Below Poverty Level	45.2%
Caucasians Below Poverty Level	23.4%

African Americans Below Poverty Level	95.8%
Native Americans Below Poverty Level	31.2%
Asian Americans Below Poverty Level	26.9%
Hispanics Below Poverty Level	42%
FNS Participation (January 2018)	2,254 individuals
Percentage of Economically Disadvantaged Students in 2016-2017 School Year	67.43%

Table 1: Income and Poverty Levels in Swain County.

U.S. Census Bureau (2018)

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).

Employment in Swain County		
Sector	Percentage	Weekly Wage
Arts, Entertainment, & Recreation	39.23%	\$712.81
Public Administration	22.52%	\$892.37
Foods and Services	9.13%	\$358.51
Health Care & Social Assistance	8.24%	\$761.26
Retail Trade	6.5%	\$396.23
Manufacturing	4.43%	\$857.05
Transportation & Warehousing	2.35%	\$580.21
Construction	2.24%	\$704.84

Public Administration & Other Services	2.22%	\$892.37
Finance and Insurance	.79%	\$744.77
Real Estate	.59%	\$486.50
Information	.55%	\$468.85
Administrative	.54%	\$439.89

Table 2: Employment and Wages by Sector in Swain County. NC Employment Security Commission (2018).

The average unemployment rate in Swain County for 2017 was roughly 5%, which is the lowest it has been in over ten years.

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).

Educational Attainment in Swain County (2016-2017)	
Percentage of High School Graduates	32.8%
Percentage of Some College, no degree	23.2%
Percentage of bachelor’s degree or higher	15.3%

Table 3: Educational Attainment in Swain County During the 2016-2017 School Year. U.S. Census Bureau (2018).

School Enrollment in Swain County (2016-2017)	
Total enrollment	2,039
Elementary School Age (K-5 th)	939
Middle School Age (6 th -8 th)	479
High School Age (9 th -12 th)	621
Drop-out Rate	4.95

Table 4: School Enrollment in Swain County During the 2016-2017 School Year. NC Department of Public Instruction (2018).

Graduation Rates in Swain County	
Percentage of Students Graduating	83.1%
Percentage of Male Students Graduating	80.3%
Percentage of Female Students Graduating	85.9%

Percentage of Economically Disadvantaged Students Graduating	82.9%
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Table 5: Graduation Rates in Swain County During the 2016-2017 School Year. Public Schools of North Carolina (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).

Crime in Swain County in 2016	
Crime	Incidents
Murder	0
Rape	4
Robbery	2
Aggravated Assault	14
Burglary	101
Larceny	89
Motor Vehicle Theft	15
Total Crime Rate	225

Table 5: Crime Rate Report in Swain County for 2016. North Carolina Department of Justice (2018).

Sexual Assault and Domestic Violence in Swain County (2016-2017)	
Type of Assault	Incidents Reported
Date Rape	2
Adult Survivor of Child Sexual Assault	4
Child Sexual Offense	3
Incest	1
Other	1
Domestic Violence Homicide	0

Total	14
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Table 6: Sexual Assault and Domestic Violence in Swain County. North Carolina Department of Administration (2018).

Juvenile Justice Reports in Swain County (2017)	
Complaints	Incidents Reported
Number Undisciplined	8
Number Delinquent	20
Number Transferred to Superior Court	0
Number Placed in Detention Centers	0
Number Committed to Youth Development Center	0
Number Served in Community Programs	28
Total Complaints	28

Reported		Incidence Rate
Total Substantiated Findings		10
Unsubstantiated Findings		5
Number of Children with Investigated Reports of Abuse and Neglect		108
Reports by Race		Incidence Rate
	White	8
	African American	0
	Native American	2
	Other	0
	Hispanic	0

Table 7 & 8: Juvenile Justice Reports in Swain County During 2017. NC Department of Public Safety (2018).

School Violence in Swain County (2016-2017)	
Reported Crime	Incidents
Serious Injury	1
Assault on School Personnel	4
Burning of School Building	6
Possession of Alcohol	1
Possession of Controlled Substance	12
Possession of Weapon	5
Sexual Assault	1
Total Acts Committed	30

Table 9: School Violence in Swain County Schools During the 2016-2017 School Year. NC Department of Public Instruction (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).

Housing in Swain County (2016-2017)	
Renting Issues	Rates
Units spending more than 30% of income on housing	33.7%
Units spending more than 50% of income on housing	12.9%
Median Gross Rent	\$597
Owning Issues	Rates
Units spending more than 30% of income on housing	13.4%
Units spending more than 50% of income on housing	5.1%
Median Monthly Owner Costs	\$1,004

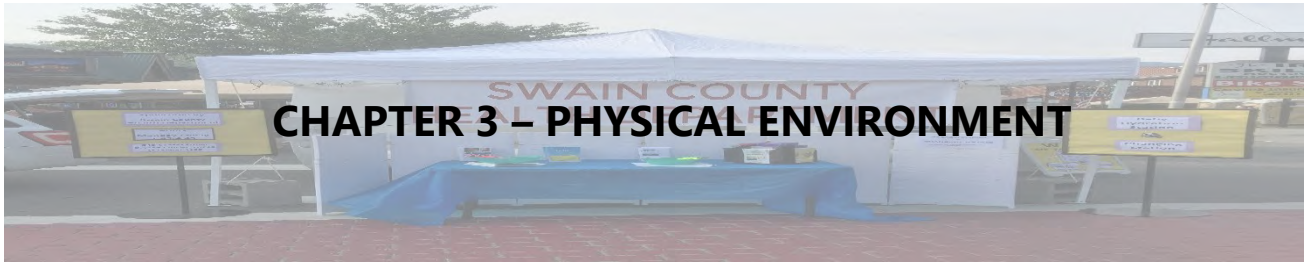
Table 10: Housing in Swain County During the 2016-2017 Fiscal Year. U.S. Census Bureau (2017).

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).

Family & Social Support in Swain County	
Support	Rate/Incidents
“Always/Usually” Get Needed Social and Emotional Support in 2015	78.8%
“Always/Usually” Get Needed Social and Emotional Support in 2018	74%

Table 11: Emotional Support Available or Obtained in Swain County During 2018. WNCHN – WNC Healthy Impact Community Health Survey (2018).



CHAPTER 3 – PHYSICAL ENVIRONMENT

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 such as fine particulate matter, ground-level ozone, sulfur oxides, nitrogen oxides, carbon monoxide, and greenhouse gases 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).

Swain County was able to accumulate 365 days of data with the air quality index. The air quality index is rated from 0 to 500, with 0 being the best and 500 being the worst air quality. The county reported 309 days of good air quality, which is an exceptional category (0-50 AQI; United States Environmental Protection Agency, 2018). There were only 56 days within the category of moderate (51-100 AQI). Unfortunately, Swain encountered 179 days with O₃ air pollutant, which is ground-level Ozone, harmful to individuals in the area. The United States Environmental Protection Agency developed an ambient air quality trend for particle pollution – Particulate matter (PM). The term PM_{2.5} refers to fine inhalable particles, with diameters typically less than 2.5 micrometers. Swain reported 186 days when air pollutant was considered to be PM_{2.5}, which is below the national standard. In 2018, 26.4% of individuals polled reported breathing smoke at work in the prior week, which is a 5.4% increase in three years and a 6.1% increase in six years.

Surprisingly, the county averaged a level of 4.7% indoor radon levels, higher than the average in WNC; WNC had an arithmetic mean of 4.1 (North Carolina Radon Information, 2015; North Carolina Department of Environment and Natural Resources, 2015).

According to the U.S. Census Bureau (2018) and the United States Environmental Protection Agency (2018) a total of 5,210 individuals were served by community water systems as of July 2018, which is 36.6% of the population in Swain County. The WNC average of population served by community water systems was 46.1% in 2018.

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). In 2018, 28% of citizens surveyed reported often worrying about whether food would run out before pay day, which is roughly 7% higher than the WNC average of 21.4%. Further, 21.7% reported often buying food, running out, and not having enough money to buy more food. These statistics were not available in previous years; therefore, it cannot be compared during this CHA cycle.

In comparison to other rural counties, Swain has more farmers’ markets and grocery stores available. The Farmers Market Coalition defines a farmers’ market as a “public and recurring assembly of farmers or their representatives selling the food that they produced directly to consumers” (Farmers Market Coalition, n.d.). In 2016, the county had three farmers’ markets and in 2014, access to three grocery stores. In 2018, two grocery stores in close proximity and three farmers’ markets in the area (U.S. Department of Agriculture Economic Research Service, 2018). Fast food restaurants decreased from 2009 to 2014, however, this data has not been updated for 2018. Coincidentally, the data indicated that servings of fruits and vegetables has dramatically decreased in the previous years. It is important to note that the question was asked differently in 2018 from 2012 and 2015, which resulted in different answers, making it difficult to compare previous years. Approximately 4.12% (in 2015) of the population reported a household with no car and low access, which was a 2.6% decrease in three years from 2012 (U.S. Department of Agriculture Economic Research Service, 2018). Unfortunately, the data for this particular statistic was not updated in 2018, therefore, we do not have current data to report.

There was only one recreational fitness facility reported in 2014, and there are now at least 4 recreational fitness facilities available in the county (U.S. Department of Agriculture Economic Research Service, 2018).

There has been discussion regarding availability of resources for adults and senior citizens in the community. Over half of the individuals polled reported resources for seniors being sufficient (52.3%), and roughly 36% reported resources being insufficient.



CHAPTER 4 – A HEALTHY SWAIN COUNTY

Elements of a Healthy Community

In the online survey, key informants were asked to list characteristics of a healthy community. They were also asked to select the health issues or behaviors that they feel are the most critical to address collaboratively in their own community over the next three years or more. 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 elements, they felt contributed to a health community in our county, they reported the top three to be:

- Physical Activity
- Healthy Lifestyles
- Healthy Citizens

Swain County has a Community Wellness Action Team. Founded in the 2015, this team has grown and developed to become a community-based advocacy group of volunteer agencies and individual community members, working to improve the quality of health for all residents of Swain County through:

- Employee Wellness Programs
- Health Education
- Community Health Events

Additionally, the Community Wellness Action Team plays a large role in the CHA process. Members of the Team act as the CHA Steering Committee, advising the process, providing input, and confirming the identified health priorities. The Community Wellness Action Team will also be charged with developing strategies to address each health priority.



CHAPTER 5 – COMMUNITY HEALTH ASSESSMENT PROCESS

Purpose

Community health assessment (CHA) is an important part of improving and promoting the health of county residents. A community health assessment (CHA) – which is 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 the issues. 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. Workgroups continue to meet and monitor customer 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. Swain County is included in Swain Community Hospital’s community for the purposes of community health improvement, and as such they were key partner in this local level assessment.

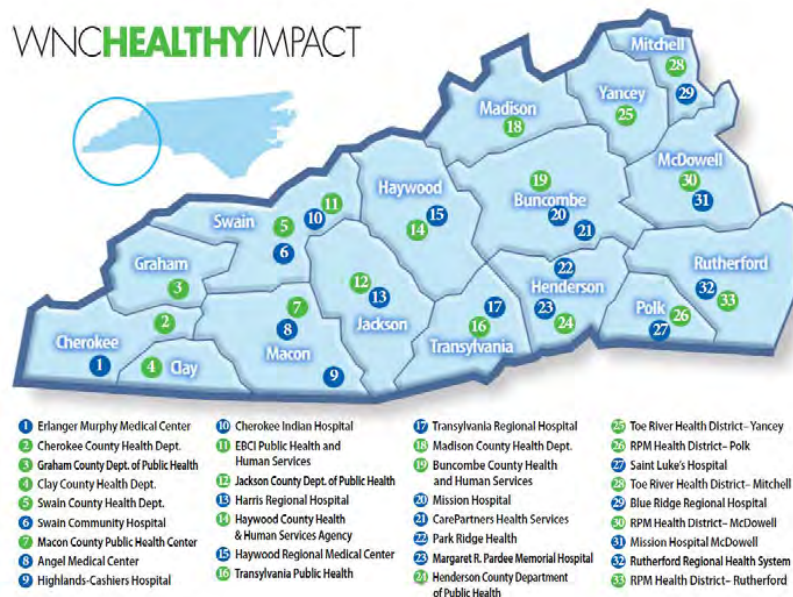
WNC Healthy Impact

WNC Healthy Impact is a partnership 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.



Data Collection

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

Core Dataset Collection

The data 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.



CHAPTER 6 – HEALTH DATA FINDINGS SUMMARY

Mortality

The life expectancy averaged from 2014-2016 reported to be 75.2 years of age. Men are estimated to live on average to be 71.8 years old, and women are estimated to live to be 78.7 years of age on average (see chart below; U.S. Census Bureau, 2018). The secondary data provided on ethnicity and race on life expectancy is limited for the Swain County population. This data set is limited to Caucasian and African-American statistics only, and roughly 26% of the population identify as Native American. According to this data, Caucasians reportedly live to be 77.5 years of age on average with no data available for African Americans or Native Americans (U.S. Census Bureau, 2018). This data set would need to be updated to reflect the potential races inhabiting the counties of WNC, such as Native Americans as well as Hispanics.

According to the Indian Health Services, American Indians and Alaska Natives born today have a life expectancy that is on average 5.5 years less than all races in the U.S. (Indian Health Service, n.d.). American Indians and Alaska Natives continue to die at a higher rate than other Americans due to chronic liver disease and cirrhosis, diabetes, unintentional injuries, assault/homicide, and chronic lower respiratory diseases (Indian Health Service, n.d.).

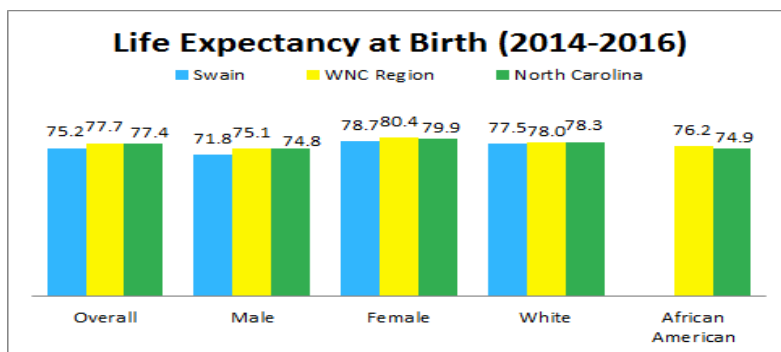


Figure 3: Life Expectancy at Birth in Swain County from 2014-2016. U.S. Census Bureau (2018).

Heart disease continues to be the leading cause of death in Swain County. Reported diagnoses of high blood pressure are increasing at an alarming rate in junction with heart disease. As of 2018, Swain County has the highest percentage of heart disease in comparison with all counties across WNC. Further, Swain has had the highest percentage of heart disease in WNC for the last decade. With that being said, we are seeing a positive influx of individuals taking action to control their high blood pressure and seeking treatment.

Causes of Death in Swain

Rank	Cause of Death	Swain	
		# Deaths	Death Rate
1	Diseases of Heart	181	189.4
2	Cancer	176	178.1
3	Chronic Lower Respiratory Diseases	64	64.7
4	Cerebrovascular Disease	50	59.8
5	Diabetes Mellitus	47	51.0
6	All Other Unintentional Injuries	35	44.8
7	Alzheimer's disease	37	41.0
8	Chronic Liver Disease and Cirrhosis	21	25.0
9	Pneumonia and Influenza	22	23.6
10	Nephritis, Nephrotic Syndrome, and Nephrosis	21	22.3
11	Unintentional Motor Vehicle Injuries	12	18.7
12	Septicemia	15	16.6
13	Suicide	10	14.2
14	Homicide	3	4.5
15	Acquired Immune Deficiency Syndrome	0	0.0
All Causes (some not listed)		888	973.9

- Ranking is based on **Death Rate** and not **# Deaths**.
- This is because **# Deaths** only represents the total number of deaths during a stated time frame. The number cannot be age-adjusted, and therefore cannot be used for comparison or ranking.
- **Death rate**, in this table, is age-adjusted to the "standard" population. It represents the number of deaths in the population during stated time frame/population x 1,000.
- **Age adjusting rates** is a way to make fairer comparisons between groups or communities with different age distributions.
 - A county with a higher percentage of older adults may have a higher rate of death or hospitalization than a county with a younger population, merely because older adults are more likely to die or become hospitalized.



SWAIN
COMMUNITY HOSPITAL
A Duke LifePoint Hospital

WNC Health Network (2018).

Health Status & Behaviors

According to America's Health Rankings, the state of North Carolina was ranked 32nd overall in 2016 in the United States. In 2016, Swain County was ranked 93rd overall (out of 100) in county health rankings. The county was ranked dead last in terms of length of life within county health rankings (100th). The other health outcomes included – quality of life, which Swain ranked 73rd, and overall health outcome ranking, which was 92nd out of 100. Ranking of county health factors were as follows:

- Health Behaviors – 91st
 - Includes adult smoking, adult obesity, physical inactivity, access to exercise opportunities, alcohol-impaired driving deaths, and more.

- Clinical Care – 99th
 - Includes uninsured, primary care physicians, dentists, mental health providers, mammography screenings, and more
- Social & Economic Factors – 83rd
 - Includes high school graduation, unemployment, children in poverty, social associations, violent crime, and more.
- Physical Environment – 76th
 - Includes air pollution-particulate matter, drinking water violations, severe housing problems, and more.

As the county is clearly in the lower quartile of all counties in North Carolina in terms of both health outcomes and health factors, there are an exponential number of items to improve upon in 2018. Much data was collected throughout the CHA process on self-reported health status. Only 9.9% of Swain County residents that were surveyed reported that the county is a fair/poor place to live, which is a 6% decrease in a three-year span (WNCHN – Online Key Informant Survey, 2018). Approximately 27.4% of residents stated they experienced “fair” or “poor” overall health in 2018 (WNCHN – Online Key Informant Survey, 2018). This percentage, although a 2% decrease in the county over three years, is roughly 10% higher than the WNC, North Carolina, and national average. Although this average is abnormally high, 39.6% who reported they were limited in activity due to physical, mental, or emotional problems, identified back/neck problems as well as arthritis as major limitations to activity.

Maternal & Infant Health

The pregnancy rate in Swain County for women aged 15-44 has bounced up and down over the past decade, however, the rate significantly diminished from 2015 to 2016. In 2016, Swain County’s pregnancy rate was on par with the State rate, which was 72.2, and the county’s average rate was 70.3, under the state rate (North Carolina State Center for Health Statistics, 2016). Among Swain County women age 15-44 years, the highest pregnancy rates appear to occur among White Non-Hispanics.

Maternal and infant health was not updated to 2018. The total number of pregnancies in 2016 was 184. Approximately 70.3% of women pregnant in 2016 received prenatal care in the first trimester; 75% of Caucasian women received prenatal care, 100% of African American women received care, 76.9% of Hispanic women received care, and 69.3% of Non-Hispanic women received care (North Carolina State Center for Health Statistics, 2016). In full disclosure, the African American population statistic is higher as only one woman was reported giving birth. As close to ¾ of pregnant women received care, only seven babies died as a result of birth complications in 2016. Only 8.9% of babies delivered in 2016 were reported to have low birth weight, and 1.3% were reported to have very low weight; babies delivered as low birth weight by ethnicity/race -- 8.5% of Caucasian babies were low birth weight, 16.7% of African American babies delivered were low birth weight, 9.2% of Non-Hispanic babies delivered were low birth weight, and 9.1% of Hispanic babies delivered were low birth weight (North Carolina State Center for Health Statistics, 2016).

Chronic Disease and Health

In 2018, 27.4% of individuals surveyed reported to be in poor to fair health (WNCHN – Online Key Informant Survey, 2018). This number decreased by 1.7% in three years. Swain County is approximately 10% higher than the average of Western North Carolina, meaning that 10% more people reported poorer health in Swain than Western North Carolina. The county is roughly 9% higher than North Carolina as well as the United States.

Roughly 14.4% of the population surveyed in 2018 were diagnosed with heart disease, which is a small increase from 2015, indicating a steady incline. The secondary data showed a 181 mortality trend from 2012-2016 – 88 females and 93 males affected (North Carolina State Center for Health Statistics, 2016). There was no race data to include. The diagnosis of strokes continues to climb in Swain County. The county has seen a 1% increase in the previous years, and the incidents of strokes is highest in Swain County in comparison to WNC. Heart disease is the leading cause of death in Swain County, and the county leads Western North Carolina in heart disease statistics. Cancer is the second leading cause of death indicated. Mortality trends showed 176 deaths as a result of cancer – 107 males and 69 females affected. The cancer incidence trends from 2012-2016 were 525, which is the highest in all counties in WNC. Chronic respiratory disease was found to be the third leading cause of death in Swain. Approximately 20.6% of individuals surveyed in 2018 reported being diagnosed with Chronic Obstructive Pulmonary Disease, which is a small decrease from 2015.

The mortality trend of diabetes from 2012-2016 was found to be at a 41% rate, impacting 19 men and 28 women (North Carolina State Center for Health Statistics, 2016). According to the secondary mortality trend, women are reportedly being diagnosed with Diabetes at a 51.3% rate (North Carolina State Center for Health Statistics, 2016). The diabetes data is extraordinarily helpful for Swain County as it houses the Cherokee Indian Reservation. Research has shown the strong implications between diabetes prevalence and Cherokee Native Americans. According to the secondary data, Native Americans were reportedly higher in diabetes rates in comparison to Caucasian individuals (North Carolina State Center for Health Statistics, 2016).

The primary data indicates that high cholesterol rates are decreasing. According to data in 2018, 34.9% of residents surveyed reported having high cholesterol, which is an approximate 3% decline in three years (WNCHN – WNC Healthy Impact Community Health Survey, 2018). In contrast, action to control cholesterol seems to be diminishing. Roughly 89.6% of residents in Swain County reported taking action to control their cholesterol in 2015, and now in 2018, 85.9% of residents have reported taking action (WNCHN – WNC Healthy Impact Community Health Survey, 2018). This data is confounding with no true explanation.

Unfortunately, high blood pressure diagnoses continue to increase in the county – the data shows a 5% increase in six years (WNCHN – WNC Healthy Impact Community Health Survey, 2018). Further, the county has seen a 4% increase in a three-year span. As high blood pressure is correlated with various heart conditions, we can speculate that these rates are simultaneous.

Kidney disease is less prevalent, but relevant. The mortality trend for kidney disease was found to be 21 in 2012-2016, and more women than men were diagnosed with this disease (North Carolina Center for Health Statistics, 2016).

Injury & Violence

Falls reported among those 65 years or older appears to be steadily climbing, however, no data was reported in 2018. Data in 2012 indicated that 23.9% reported falling and 2015 indicated that 43.1% reported falling (WNCHN – WNC Healthy Impact Community Health Survey, 2018). Based on these statistics we could make an assumption that 2018 would have resulted in an incline matching that of the 2012-2015.

There were 192 reportable vehicle crashes with 96 injuries reported in 2017 (Connect NCDOT, Resources, Traffic Safety, 2017). Out of the 192 accidents, 19 were alcohol related, 1 was pedestrian related, and 17 were motorcycle related. Out of the 96 reportable injuries, 7 were alcohol related, 1 pedestrian related, and 18 motorcycle related. Unintentional motor vehicle injury mortality trends reported 10 male incidents and 12 female incidents; all other unintentional injury mortality rates reported 23 male incidents and 12 female incidents.

Substance Use

In 2018, more rural people were reporting overwhelming concerns about opioid addiction. Overall, the community health needs data workbook would support this notion in Swain County.

According to the North Carolina Opioid Dashboard, in the fourth quarter of 2017, 270,000 pills were dispensed in Swain County alone, and by the end of the year 1,125,000 pills were dispensed. As recent as December 2018, the number of EMS naloxone administrations was as high as 17, and this is not including any administrations outside of Swain County Emergency Management Services. At the end of the third quarter in 2017, five individuals died from an unintentional opioid incident, further, data, showed that approximately 40% of drug related deaths involved fentanyl. Less than ten individuals were brought into the Swain Community Hospital's Emergency Department for an overdose diagnosis.

In 2016, the opioid prescription rate in Swain County was one of the highest in WNC (7.12%), however, the prescription rate has dropped by roughly .83%, which is also one of the highest in WNC (North Carolina Department of Health and Human Services, 2017). The total opioid

prescription claims were 61,024 – one of the lowest claims in WNC. There were 36 total Part D Prescribers in Swain County in 2016.

According to the primary survey conducted in 2018, individuals reported a 10% decrease in social and emotional support available in Swain (WNCHN – Online Key Informant Survey, 2018). In 2012, 84.3% of individuals participating in the survey reported positive social and emotional support in their lives, or the resource of having social and emotional support; in 2015, individuals reported 78.8% of support, and in 2018, individuals reported 74% social and emotional support (WNCHN – Online Key Informant Survey, 2018). A 10% decrease is a tremendous divot in mental health support within Swain County. Participants in the survey also indicated a 7% decrease in more than seven days of poor mental health. According to survey results in 2012, approximately 20% of individuals reported having more than seven days of poor mental health. In 2015, roughly 15.8% reported having seven or more days of poor mental health, and in 2018, only 13.5% of individuals reported poor mental health for over a week. The suicide mortality trends from 2012 to 2016 indicated 10 individuals taking their own lives per 1,000 people in a population.

Yearly Wellness Exams

The primary data indicated a 4% decrease among those who get a yearly wellness exam. In 2018, 70.6% reported they had gone to a physician for a checkup in the prior year, which is 4% lower than 2012 (74.8%; WNCHN – WNC Healthy Impact Community Health Survey, 2018).

Approximately half of people surveyed in 2018 reported having a dental visit in the previous year (48.6%), which is almost a 10% decrease from 2012; in 2012, 57.6% of individuals reported having a dental visit and in 2015, 52.3% indicated they had visited a dental hygienist (WNCHN – WNC Healthy Impact Community Health Survey, 2018).

Participants were also asked if they were able to get medical care needed in the past year, 12.6% reported they were unable to get the care needed within the year. This number is higher than that of 2015, which was 7.7% (WNCHN – WNC Healthy Impact Community Health Survey, 2018).

Clinical Care & Access

The secondary data in 2017, communicated a potentially lacking health workforce in Swain County. The number of health professionals in 2017 in accordance with the number of active health professionals per 10,000 population ratio is as follows: 22 physicians, 9.3 primary care physicians, 5.3 dentists, 110 registered nurses, 12 physician assistants, and 8 nurse practitioners (North Carolina Health Professions Data System, 2017).

The health workforce in Swain is aging. Roughly 25% of the dentists are over the age of 65, with the physicians closely behind at 18.2% (North Carolina Health Professions Data System, 2017). The registered nurses in the county only reported 6.7% being over the age of 65, and 8.3% of the nurse practitioners being over 65.

The licensed facilities reported are limited in Swain. There are only three licensed adult care facilities as of July 2018, and they only house 230 individuals combined (North Carolina Department of Health and Human Services, 2018). The Bryson senior living center has a max capacity of 50 residents, and the Mountain View Manor Nursing Home has a max capacity of 120 residents. Tsali Care is located on EBCI Reservation and has a max capacity of 60 residents. Unfortunately, there is only one licensed home health and hospice center, which is the PRN Nursing Services. The PRN Nursing Services is the only accredited home health service in the county as of July 2018. The licensed mental health facilities are no different in Swain; the facilities are Bryson City Home, Foundations: Swain Middle, Foundations: Swain West Elementary, and Swain Foundation. The Bryson City Home has a max capacity of three residents, and this is the only facility listed in June of 2018 that is beyond day treatment. Swain Foundation is available as a day treatment in two locations, Swain Middle School and Swain West Elementary. Swain Foundation is available as day treatment for students at Swain Middle School and Swain West Elementary.

According to the primary data, only 12.6% of people reported an inability to get medical care needed within the previous year (WNCHN – WNC Healthy Impact Community Health Survey, 2018). Roughly 71% of individuals surveyed denoted seeing a doctor in the prior year, which is lower than the WNC and NC averages, but higher than the national average. 76.1% of Swain residents reported having a specific source of ongoing medical care, which is lower than the WNC average (80.9%), but higher than the national average (74.1%). 73.3% of women participating in the survey communicated that they had a mammogram in the past two years (WNCHN – WNC Healthy Impact Community Health Survey, 2018). Swain's average for mammograms in the previous two years is lower than WNC (78.7%), NC (79.3%), and the US (77%).

Swain County has the lowest percentage among those without health insurance in WNC from ages 18 to 64. There has been a significant decline in the county, by approximately 13%; in 2012, the county reported 22.1% of individuals without health insurance, in 2015, 16% reported without health insurance, and last year only 9.8% were without health insurance (WNCHN – WNC Healthy Impact Community Health Survey, 2018).

Through the year of 2017, there were 4,378 individuals eligible for Medicaid. Of those individuals authorized for Medicaid, the distribution is as follows: 1,771 Aid to Families with Dependent Children (AFDC), 713 infants and children, 593 disabled, 437 family planning, 328 aged, 67 foster care, 38 pregnant women, and 1 blind (Medicaid North Carolina, Annual Report,

2017). As of June 2018, there were approximately 4,521 individuals eligible for Medicaid (Medicaid North Carolina, Annual Report, 2018). Please see the graph indicated below.

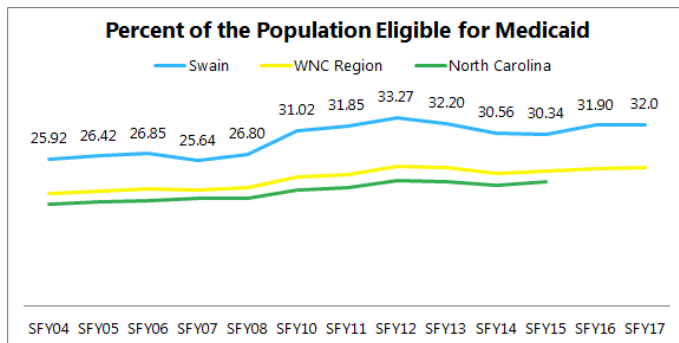


Figure 4: Percent of the Population in Swain Eligible for Medicaid. Medicaid North Carolina,

Residents of Swain County indicated that 24.5% of the population surveyed felt they were in excellent mental health, 29.8% reported being in very good mental health, 28.5% reported being in good mental health, 13.6% reported being in fair mental health, and 3.6% reported being in poor mental health (WNCHN – WNC Healthy Impact Community Health Survey, 2018). Swain is lower in almost every health category in comparison to

the national average. Survey participants disclosed a 6% increase, within three years, on the inability to receive needed mental health services in the prior year. 11.3% of people surveyed in Swain reported they were unable to receive the mental health services needed in 2018, which is a dramatic increase from 5.3% in 2015 (WNCHN – WNC Healthy Impact Community Health Survey, 2018). The individuals served in mental health programs was 993 in 2017, and five people were admitted into a North Carolina Psychiatric Hospital (North Carolina Office of State Budget and Management, 2017).

At-Risk & Vulnerable Populations

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

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

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

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

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

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

- Native American (26% in Swain County)
- Below poverty level
 - 17.4% of white (64.2% is white)
 - 95.8% of Black 159/166 below poverty level (1.3% of population is Black)
 - 31.2% of Natives 1,217/3,897 (27.8% is native)
 - 26.9% of Asians 14/52 (.4%)
 - 42% of Hispanics 282/872 (4.7%)
- Older Adults/Senior Citizens
- Youth
- Pregnant/Breastfeeding Women

Individuals in minority groups, the uninsured, or low-income may have unmet needs related to primary and chronic disease. In addition, those who do not have reliable transportation are at risk of poor health outcomes related to a lack of access to necessary health care, healthy food, facilities for physical activity and other resources.



Health Resources

Process

The county currently has two separate resource avenues for communicating resources with community members. The first is NC 2-1-1 and the second is a new Community Resource Meeting group.

NC 2-1-1 is an information and referral service that links people to community health and human services and maintains a database of community resources to support this service. NC 2-1-1 is free, confidential and available 24/7 to speakers of all languages. Resources are available through phone, web and iPhone app. The community tool (2-1-1) continues to serve as the updated resource list accessible via phone and web 24/7 – instead of your team compiling a printed directory. Our 2-1-1 datasets are reviewed every year by either the Health Department or the Region A Community Engagement Coordinator. In, May 2018, NC 2-1-1 provided a list of health resources available to residents of Swain County (even if they are located in another county) to the Swain County Health Department.

This listing includes the following information about each health resource:

- Agency name, program, description, address, website and contact information
- A program point person and their contact information
- Hours, provider language, fees, eligibility
- URL for the resource link on the NC 2-1-1 website

CHA team members reviewed the listing for completeness and encouraged additional agencies to add their information to the NC 2-1-1 directory in order to keep this resource current.

The NC 2-1-1 directory listings can be found in Appendix F.

An email with the proper paper work and contact information for updating or adding their resource to the NC 2-1-1 dataset will continue to be sent to all new members of the Community Resource Meeting group.

See **Appendix F** for resources available and un-met

Learning the barriers of those in need. There are some programs offering free fresh fruits and vegetables, but community members do not use them. What else is needed for community members. – Public Health Representative

Findings

NC 2-1-1 - Many resources available to Swain County residents are actually located in other counties. For some, access to these resources (via transportation or phone) may be a barrier to receiving services. Some services that do exist in the county are not listed in the directory, and others have out-of-date

information or are not described in a way that makes it easy to understand the services available and how to access them.

Other services exist and are listed, but there is a perception

that those types of services are not available in the community. Additional education or promotion may be needed to make

people more aware of existing services.

Community Resource Meeting group - The findings in 2018 showed a lack of communication among organizations who are providing resources. These findings coincided with the development of a new Community Resource Meeting, hosted by Swain County Department of Social Services held quarterly. The purpose of the meetings is to gather community partners to share resources offered, to better serve the citizens of Swain County. A roundtable discussion is held to inform of services, barriers and solutions. The meeting group is currently working on a Social Media platform to inform not only other community resource partners of their services, but the community members as well.

Resource Gaps

Based on local review of available resources and collaborative discussions around general availability of services, the resource gaps include: transportation, affordable housing, employment opportunities, substance use/recovery facilities, food insecurity, lack of specified health care (i.e. mental health, cardiac, endocrinologist, etc.), home meal delivery service expansion, volunteers, and funding for all services.



CHAPTER 8 – IDENTIFICATION OF HEALTH PRIORITIES

Health Priority Identification

Process

Beginning in August 2018, the Community Wellness Action Team spent considerable time reviewing the data to better understand issues affecting a majority of members in the county. Community Leaders were interviewed to gain insight into their main concerns within their scope of practice. Significant health issues in our community were identified by reviewing and discussing comprehensive health data with key stakeholders.

We used the following criteria to identify significant health issues:

- Size and severity
- Disparities
- Community concerns
- County data deviates notable from the region, state or benchmark

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

- Primary data collection included county residents answering questions in regard to their experiences
 - Key informant interviews were done by selected community leaders
- Listening sessions were conducted (all community members invited)
- Partnership on conducting the health assessment process (Health Department, Hospital, and C-WAT)
- C-WAT is comprised of volunteer community members interested in the health of their county
 - C-WAT reviewed and made sense of the data to better understand the story behind the statistics
- In the identification and prioritization of health issues
 - Board of Commissioners Meeting
 - Bryson City Town Aldermen Meeting
 - School Board Meeting
 - School Health Advisory Committee Meeting

Community engagement will be an ongoing focus moving into the collaborative planning phase of the community health assessment process. Partners and stakeholders will continue to be engaged as appropriate in their individual roles. Programs and strategies will be a collaborative effort in our community to ensure the potential for successful impact.

Steps of the County process:

1. Primary data was collected, stratified, and distributed to individual counties by WNC Healthy Impact.
2. Swain Health Department CHA facilitator and Swain Community Hospital CHNA facilitator met and carefully sifted through the data provided for Swain County's population. The data indicating significant health implications in relation to morbidity and mortality were highlighted and pulled out to be presented.
3. The highlighted indicators (listed above) were presented to C-WAT in two separate meetings. The Hanlon method was used to identify overarching topics as well as sub-topics to focus on during implementation (attached in the appendix). The group was also given a worksheet listing pertinent statistics on each indicator listed above, allowing them to vote on the relevance, impact, and feasibility.
 - a. During the first meeting, the topic of chronic diseases was discussed and voted upon through unanimous voting among the C-WAT group.
 - b. During the second meeting, the topic of substance abuse was discussed and voted upon through unanimous voting among the C-WAT group.

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

- Criteria 1 – Relevant – How important is this issue? (*Urgency to solve problem; community concern; Focus on equity; Linked to other important issues*)
 - Criteria 2 – Impactful – What will we get out of addressing this issue? (*Availability of solutions/proven strategies; Builds on or enhances current work; Significant consequences of not addressing issue now*)
 - Criteria 3 – Feasible – Can we adequately address this issue? (*Availability of resources (staff, community partners, time, money, equipment) to address the issue; Political capacity/will; Community/social acceptability; Appropriate socio-culturally; Can identify easy, short-term wins*)
4. The suggested priorities voted on by the C-WAT group were then presented to the County Commissioners, Town of Bryson City Aldermen, and the School Board for community input and approval. These presentations were conducted during their official meeting times while other community members were present, allowing for the input of community members at these events as well.
 - a. All attendees present for each meeting were in full support of the priorities and wanted to continue to be engaged in the implementation phase of the process.

Identified Indicators

During the above process, the Community Wellness Action Team identified the following health indicators:

- **Obesity:** A weight that is higher than what is considered healthy for a specific height. 49.7% of the population in Swain County reported being obese, which is an 8% increase in 3 years.
- **Physical Activity:** Movement that is produced by skeletal muscles requiring caloric expenditure. Approximately 20.2% surveyed reported participating in no physical activity.
- **Nutrition:** Obtaining the recommended amount of nutrients within a day yielding positive health results. Only 2.1% of people surveyed indicated that they got 5 or more servings of fruits and/or vegetables in a day, which was 4% lower than the WNC average.
- **Food Insecurity:** Unreliable access to a sufficient quantity of affordable nutritious food. Roughly 30% of citizens in Swain County in the survey indicated having food insecurity in 2018, which is 6% higher than the WNC average and 2% higher than the National average.
- **Heart Disease:** A disease that affects the heart muscles, valves, or rhythm. Heart disease is the leading cause of death in Swain County as well as the nation.
- **Diabetes:** The body's inability to produce or respond to the hormone insulin, resulting in abnormal metabolism of carbohydrates and elevated levels of glucose in the blood and urine. Diabetes has increased by approximately 13% in three years, resulting in 23% of people surveyed being diagnosed with Diabetes.
- **COPD:** A lung disease indicated by chronic obstruction of airflow that interferes with normal breathing and cannot be reversed. 21.7% of individuals surveyed reported having COPD, which is a 1% increase in three years.
- **Opioids:** Opioids are prescribed by physicians as pain relievers and can be extremely addictive. 25.7% of individuals in the survey reported using opioids in the past year with or without a prescription, and approximately 49.4% reported that their life had been negatively affected by substance abuse.
- **Tobacco:** With e-cigarettes on the market, the use of e-cigarettes has increased by 2% in three years, becoming a 9.2% of individuals surveyed.

Identified Priorities

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

- Chronic Disease as it relates to obesity with Swain County community members – Chronic disease emerged as a health priority during the 2015 Community Health Assessment, and obesity was identified as a priority in 2011. Progress has occurred in several areas related to chronic disease, however, much improvement is still to be made, based on our overweight/obesity rates, fruit/vegetable consumption rates, and heart disease rates. During the prioritization process, community members voted for the following identified health indicators:
 - Obesity
 - Heart Disease
 - Food Insecurity

C-WAT opted to combine chronic disease and overweight/obesity to form one healthy priority (chronic disease as it relates to obesity) with hopes of addressing all-encompassing aspects of this priority. This health priority is also in line with the NC Healthy People 2020 objectives:

- Increase the percentage of high school students who are neither overweight nor obese (from 72% to 79.2%)
 - Increase the percentage of adults getting the recommended amount of physical activity (from 46.4% to 60.6%)
 - Increase the percentage of adults who consume five or more servings of fruits and vegetables daily (from 20.6% to 29.3%)
- Substance Use Prevention and Reducing Substance Abuse – Substance abuse emerged as a health priority during the 2011 and 2015 CHA cycles. During the 2011 cycle, the community focused on risky behaviors in adolescents, specifically targeting healthier lifestyles among teens. In 2015, the priority of substance abuse expanded into high mortality rates due to unintentional poisoning, specifically by medication and drug overdoses. During this cycle, the community health assessment also began to focus on Hepatitis B cases. The 2015 substance abuse priority was targeted by implementing prescription take back events, permanent drop box locations, naloxone distribution, and the creation of the Coalition for a Safe and Drug Free Swain County.

Progress has been made in various subsets of the substance abuse priority, however, the opioid pandemic continues as evidence by the data. In 2018, Swain County will continue to work on substance use prevention and reducing substance abuse in partnership with the Coalition for a Safe and Drug Free Swain County. During the prioritization process, community members voted for the following identified health indicators:

- Opioids
- Tobacco

Priority Indicator #1: Chronic Disease as it Relates to Obesity



Swain County's leading cause of death, as well as many of the morbidity statistics of concern, are directly related to weight, physical activity, and nutrition. Excess weight increases risk of type 2 diabetes, high blood pressure, heart disease, certain cancers, and stroke.

Chronic disease in relation to obesity has been a priority in Swain County for a decade, being identified in various formats. In 2009 the community health assessment resulted in community obesity being a priority. In the following CHA cycle (2012), the health concerns remained current, and did not dramatically change. In 2012, the Swain

County Health Department partnered with Swain County Schools to work on Youth Risky Behaviors and Obesity. The Swain School Health Advisory Committee (SHAC) adopted obesity as a focus – elementary schools used the fitness gram program to evaluate K-5 fitness as well as body mass index, and these results were sent home to parents informing them of their child's overall physical fitness level. Health seminars were also offered to school staff, including health checks and classes on stress reduction, yoga, cross-fit, and CPR.

In 2015, Swain County recorded high rates of heart disease, diabetes, and cancer. Approximately 14.4% of individuals' survey in 2015 reported having heart disease; 10.6% reported having diabetes/high blood sugar. There is no primary survey data available for individuals reporting cancer diagnoses, and unfortunately, there is no primary survey data available for 2012 heart disease or diabetes rates to compare. During the 2015 CHA cycle, Diabetes Self-Management Education and Diabetes Prevention Program were implemented at the Swain Health Department in hopes of decreasing chronic disease.

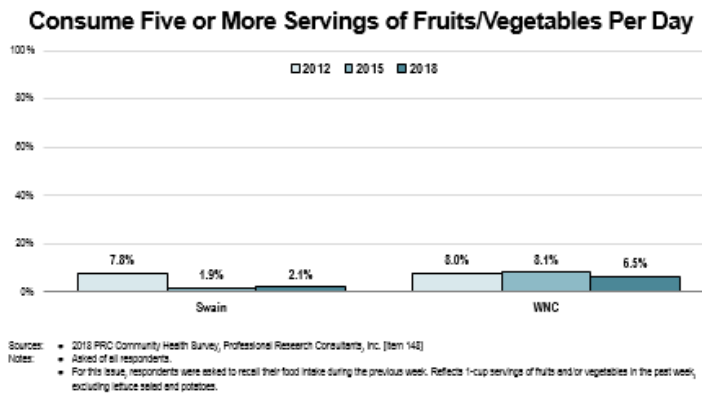
The county is currently seeing a decrease in heart disease rates, and we would like to speculate that our efforts over the last decade are creating healthier habits. In 2015, roughly 14.4% of individuals reported having heart disease and in 2018 that number decreased to 13.7%, which is a minimal decrease, but a decrease for the betterment of citizens in Swain County. A significant amount of work has been completed in this area, but it is evident that much work still needs to be done. Using input from the community and members of the C-WAT committee, it was determined that chronic disease and obesity were still a prominent health issue and deserved to be pursued further to truly make a difference in the community's health.

Data Highlights

Health Indicators

Approximately, 2.1% of citizens that participated in the survey reported eating 5+ servings of fruits/vegetables each day, which is the lowest average across WNC (WNCHN – WNC Healthy

Impact Community Health Survey, 2018). In the 2018 survey, the question was asked differently and didn't differentiate between fruits or vegetables, but instead, included both in one question. In previous years, the survey respondents were asked about fruit and vegetable in take separately, which was indicating a downward trend from 2012 to 2015. We could speculate that the average servings of fruit and vegetables would continue to decrease through 2018. Although the county has the lowest average, it is important to note that the average has increased by a small margin in the last three years (view the graph below).



Swain County is in alignment with the State average of food insecurity, which is 17% (County Health Rankings and Roadmaps, 2018). Although the county is at the same average as the State, 17% is significantly high for the total population in Swain County.

Figure 5: Servings of Fruits/Vegetables Consumed Per Day by Residents in Swain County. WNCN – WNC Healthy Impact Community Health Survey (2018).

Participants in the key informant survey were asked the following question – “In your opinion, what are the most important characteristics of a healthy community” and key informants could list up to three responses; The number one answer provided by respondents was physical activity (31.9%; WNCHN – Online Key Informant Survey, 2018).

As poor nutrition and physical inactivity often go hand-in-hand, the outcome of both can be overweight/obesity. The Healthy People 2020 Target for healthy weight (percent of adults with a body mass index between 18.5 and 24.9) is 33.9% or higher. In Swain County, approximately 23.1% of residents reported being at a healthy weight in comparison to the WNC average of 31.5%, far below the Healthy People 2020 Target of 33.9% or higher ((WNCHN – WNC Healthy Impact Community Health Survey, 2018; Centers for Disease Control and Prevention, 2013). In conjunction with this data, approximately 75.5% of individuals participating in the survey reported being overweight or obese, indicating an upward climb across the previous six years; and 50% (49.7%) of individuals reported being obese, which is a 12% increase since 2012 (WNCHN – WNC Healthy Impact Community Health Survey, 2018). Only a quarter of county residents indicated they received the recommended amount of daily physical activity, and one third reported being limited in activity due to a physical, mental, or emotional problem (WNCHN – WNC Healthy Impact Community Health Survey, 2018).

Understanding the Issue

Key informants were given a list of chronic disease and known factors that contribute to those diseases, then asked to select up to three health concerns that are the most critical to address in Swain County. Residents indicated that obesity/nutrition/physical activity were the top priority in the community, followed by diabetes and heart disease.

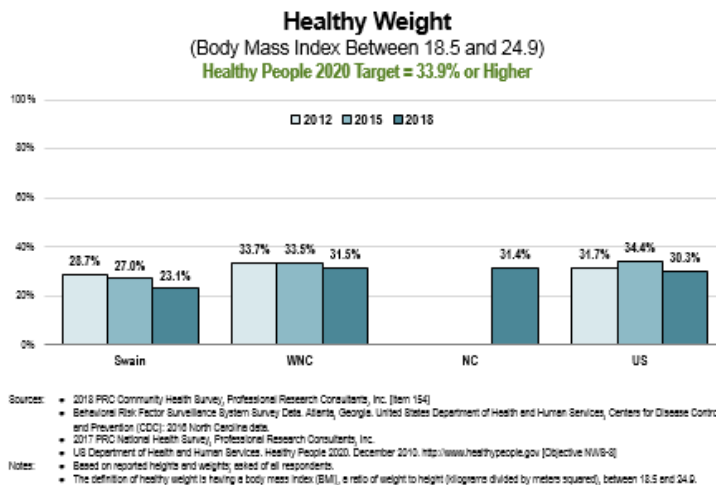


Figure 6: Healthy Weight in Swain. WNCHN – WNC Healthy Impact Community Health Survey (2018).

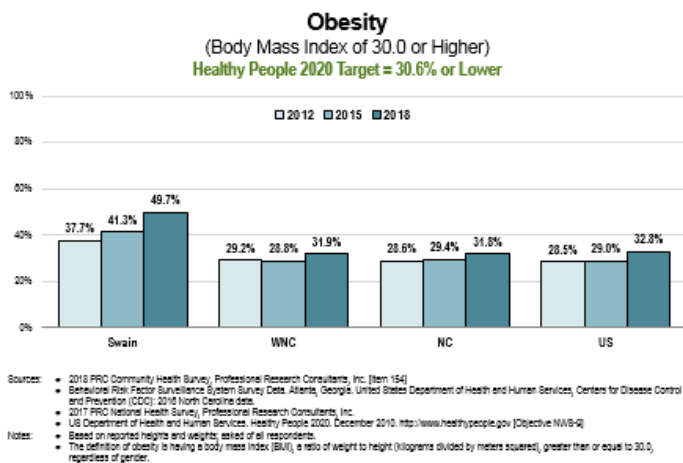


Figure 7: Obesity in Swain. WNCHN – WNC Healthy Impact Community Health Survey (2018).

Rank	Health Issue	Identified as Critical to Address
1	Obesity/Nutrition/Physical Activity	22
2	Diabetes	18
3	Heart Disease/Stroke	13
4	Cancer	10
5	Chronic Pain	9
6	Chronic Obstructive Pulmonary Disease (COPD)	2
7	Chronic Kidney Disease	1
8	Arthritis/Osteoporosis	1
9	Upper Respiratory Diseases (such as Asthma)	0

Table 12: Key Informant Responses to Top Health Issues in Swain County. WNCHN – Online Key Informant Survey (2018).

Key informants reported impedances of progress on these health conditions – “Bad or unhealthy food is easier to prepare and cheaper to buy;” “Learned behaviors and the convenience of fast food;” “Poor health habits from low income as well as lack of adequate education;” “Poverty and many people not necessarily knowing how to eat healthy on a limited budget. Adults not necessarily having the time to invest in their health and to be physically active. The rural nature of the community, where it can be difficult for people to access parks or recreational opportunities” (WNCHN – Online Key Informant Survey, 2018).

Fully evaluating this issue, we know it is difficult to adopt healthy behaviors if we do not live in a conducive environment to promote success. Proper nutrition, physical activity, and health are closely related to obesity and chronic disease. These topics could be considered social norms and traditions as well as geography and the economy. In rural counties, there are limited well-paying jobs, high cost of housing resulting in commute, less money for groceries and recreation, and limited access to stores that sell nutritious food.

According to the United States Census Bureau, roughly 23.4% of residents in Swain County live below the poverty line. In 2018, 28% of citizens surveyed reported often worrying about whether food would run out before pay day, which is roughly 7% higher than the WNC average of 21.4% (WNCHN – WNC Healthy Impact Community Health Survey, 2018). Further, 21.7% reported often buying food, running out, and not having enough money to buy more food. These statistics were not available in previous years; therefore, it cannot be compared during this CHA cycle.

Although Swain County has an outdoor friendly environment, a large percentage of the community does not have an active lifestyle. Hiking and bike riding are popular recreational activities, and draw visitors into the county, however, only a quarter of the community is participating in regular physical activity despite the environmental advantages the county has to offer.

Swain County has a long-standing history of self-sustenance in producing family gardens for fresh herbs and vegetables. The county offers the popular, and ever growing, Darnell Farms, which is a thriving farmers market. Although the county has several farmers' markets, eating out is an instinctual habit for the working-class families. The distinct "fast-food culture" developed as a result of long distances to and from work, lack of knowledge and education, and lack of income. Families stretching their grocery budget struggle with affording nutritious food, or may not be able to travel to stores that sell nutritious items. Items provided in local food pantries typically are limited to shelf-stability, resulting in less nutritional value.

In 2016 the CDC reported that individuals who eat a healthy diet and participate in regular physical activity live longer and have fewer chronic diseases, such as obesity, heart disease, and diabetes. The CDC is leading the fight against chronic disease by promoting good nutrition, regular physical activity, and a healthy weight in relation to where people are living, working, and playing (2016).

Chronic disease is directly correlated with nutrition, physical activity, and weight. In focusing on nutrition, physical activity, and weight, we can limit as well as reduce chronic disease.

Specific Populations At-Risk

All residents in Swain County can benefit from strategies that focus on chronic disease as it relates to obesity through physical activity and nutrition, the lives of at-risk populations may be greatly improved. According to the CDC, Hispanics (47%) had the highest age-adjusted prevalence of obesity, followed by Caucasians (37.9%), and non-Hispanic Asians (12.7%; Centers for Disease Control and Prevention, 2018). Unfortunately, the CDC did not include Native Americans within this data, which is a large part of the population in Swain County. In 2015, approximately 16.2% of children age 2 through 18 years were considered overweight, and

14.1% were considered obese (WNCHN – WNC Healthy Impact Community Health Survey, 2018).

Overall, men and women with college degrees resulted in lower obesity prevalence rates in comparison with those with less education (Centers for Disease Control and Prevention).

Low income and food insecure residents within the county often do not have full access to grocery stores with nutritious options, are less likely to have their own mode of transportation, have greater availability to fast food restaurants, and live between deprivation and over-eating. Further, low income residents typically live in neighborhoods with limited physical activity resources, are less likely to participate in organized sports, and do not have equal opportunity in physical education in comparison to students of higher-income schools. Those with limited resources are unable to access many of the opportunities available within the county for physical activity or sources of nutritious.

Health Resources Available/Needed

As chronic disease and obesity have been noted as health priorities from the 2009 CHA, many health resources are available to the community, however, as funding continues to diminish, the resources are limited. There is still a vast list of resources needed to fully combat this health priority in Swain County.

Available Health Resources		
Resource	Association and Description	Availability
Health Promotion Program	Swain County Health Department Services provided to promote healthy lifestyles.	
Diabetes Prevention Program	Swain County Health Department 8 week course offered to pre-diabetic individuals learning ways to lower A1C.	Funds limited – no longer available
Swain Government Wellness Program	Swain County Health Department A yearlong health focused program available to all Swain Government employees.	Open enrollment begins every July.

Swain County Schools Wellness Program – Maroon Strong	Swain Community Hospital An 8-month wellness program focused on all aspects of health, specifically targeting behavior change.	Open enrollment begins every August.
Community Eligibility Program	Swain County Schools Free lunch and breakfast for all students at schools that qualify based on federal guidelines.	Begins in August
Summer Feeding Program	Swain County Schools Feeding sites set up annually to help students and families in need throughout the summer.	Begins in June
Annual Heart Health Fair	Swain County Health Department and Swain Community Hospital An annual heart health event providing free screenings, heart health information, and other health information pertaining to heart health.	Every February
Cooking Matters at the Store	Swain County Health Department Grocery store tours initiated in May of 2016.	Four Tours Completed
Conducted MyPlate education and taste test at West Elementary School	Swain County Health Department	
Community Wellness Action Team	Created in 2016.	Monthly meetings
Nutritional Educational Sign Grant planning committee	Initiated 2016	Three meetings conducted
	Initiated in 2016.	

Growing Minds; Farm-to-School Campaign, an Appalachian Agriculture Program	Bulletin Boards change quarterly in the cafeterias of Swain East and West Elementary Schools, along with Swain County Middle School.	
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Needed Health Resources	
Resource	Potential Community Partner
Greenways/sidewalks	NC DOT, Commissioners, Greenways Committee
Health education for youth	Swain County Health Department and Swain Community Hospital
Health education for parents	Swain County Health Department and Swain Community Hospital
Physical Activity Education	Swain County Health Department and Swain Community Hospital
Nutritious Food Donations	Food relief agencies
Meal Prep and Cooking Education	Swain County Health Department and Swain Community Hospital
Soup Kitchen Availability	Swain County Health Department

Priority Indicator #2:

Substance Use Prevention and Reducing Substance

In the 2011 CHA cycle, the community identified tobacco use as a main health priority, and in 2015 the community expanded to substance abuse targeting youth. The Coalition for a Safe and Drug Free Swain County was updated in hopes of enacting diligent work to reduce the percentage of survey respondents who reported their life had been negatively impacted by substance abuse (39%; WNCHN – Online Key Informant Survey, 2018). In 2015, 10% of 8th graders in Swain County admitted to trying drugs (Swain County Pride Survey, 2015). The Coalition Safe and Drug Free Swain County Coalition partnered with Project Lazarus, giving out lock boxes. Further, a campaign on prescription medications included a Rx Take Back Event and Lock Your Meds was implemented. Over the course of three years, the coalition saw a new health priority arise in this field and responded in the action of continuous expansion of the substance abuse priority. During the data collection for the 2018 CHA, there was an evident increase in negative responses toward substance abuse – from 2015 to 2018 there was a 2.6% increase in respondents stating their life had been negatively affected by substance abuse “a great deal”; a 4% increase in respondents stating their life had been negatively affected by

substance abuse “somewhat”; and a 6% decrease in respondents stating their life had been affected by substance abuse “a little” (WNCHN – WNC Healthy Impact Community Health Survey, 2018). Roughly 13.6% of respondents to the survey reported using (or someone they know) an illicit drug in the past month, which is 5% higher than the WNC average (8.6%; WNCHN – WNC Healthy Impact Community Health Survey, 2018). These statistics in conjunction with listening sessions in the community indicate that substance abuse is beginning to affect more and more individuals. To continue the work begun in 2011 but account for all substance use and abuse, we expanded the health priority to substance use prevention and reducing substance abuse in our community.

Data Highlights

Health Indicators

Unintentional injury is included in all-cause mortality data, indicating that Swain County reported 35 deaths in 2018 due to an unintentional injury, which is a rate of 44. Unintentional injuries are defined as harmful acts that occur without any true intention of causing damage to oneself or others (Cheprasov, n.d.). For people 65 years or older, unintentional falls are the number one cause of unintentional death, however, individuals in the age

Cause of Death	Swain		Comparison to WNC Regional Average Rate		Comparison to NC Rate	
	# Deaths	Death Rate	Rate	% Difference	Rate	% Difference
Acquired Immune Deficiency Syndrome	0	0.0	0.9	-100.0%	2.2	-100.0%
All Other Unintentional Injuries	35	44.8	45.8	-2.2%	31.9	40.4%
Alzheimer's disease	37	41.0	31.7	29.5%	31.9	28.5%
Cancer	176	178.1	165.5	7.6%	166.5	7.0%
Cerebrovascular Disease	50	59.8	40.2	48.9%	43.1	38.7%
Chronic Liver Disease and Cirrhosis	21	25.0	13.6	83.7%	10.3	142.7%
Chronic Lower Respiratory Diseases	64	64.7	54.3	19.2%	45.6	41.9%
Diabetes Mellitus	47	51.0	22.4	127.5%	23.0	121.7%
Diseases of Heart	181	189.4	164.4	15.2%	161.3	17.4%
Homicide	3	4.5	4.1	10.1%	6.2	-27.4%
Nephritis, Nephrotic Syndrome, and Nephrosis	21	22.3	14.6	52.9%	16.4	36.0%
Pneumonia and Influenza	22	23.6	17.4	35.3%	17.8	32.6%
Septicemia	15	16.6	9.0	85.0%	13.1	26.7%
Suicide	10	14.2	19.0	-25.1%	12.9	10.1%
Unintentional Motor Vehicle Injuries	12	18.7	15.5	20.3%	14.1	32.6%
All Causes (some not listed)	888	973.9	800.7	21.6%	781.8	24.6%

Table 13: Cause of Death in Swain County Compared to the Regional and State. WNCHN – WNC Healthy Impact Community Health Survey

category of 25-64 are more likely to report unintentional poisoning with substances at home.

There is a 40.4% difference between Swain County’s death rate due to unintentional injuries and the State’s death rate (WNCHN, 2018). It is important to note that the unintentional injury rate is much higher than the motor vehicle injuries statistics as well as the suicide rate.

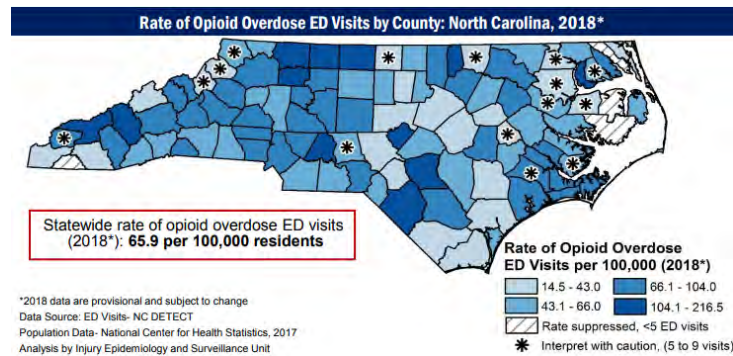


Figure 8: Rate of Opioid Overdose ED Visits by County in NC During 2018. NC Detect (2018).

In 2018, Swain County had the third highest rate of opioid overdose ED visits with 139.9 overdose ED visits per 100,000 residents (view to the left; NC DETECT). According to the North Carolina State Center for Health Statistics, vital Statistics Death Certificate Data, Swain County’s unintentional medication and drug poisoning deaths have averaged around 1 death in the last 5 years,

but rose to 6 deaths in 2017 (North Carolina State Center for Health Statistics, 2017). The county averaged 1 overdose death due to opioid poisoning from 2011 to 2017, where 2017 saw 5 overdose deaths due to opioids (North Carolina State Center for Health Statistics, 2017).

The unintentional Emergency Room (ED) visits in Swain County have dramatically increased from 2016-2017, indicated in the table below.

Table 14: Unintentional Poisoning ED Visits in 2016 and 2017. NC Opioid Dashboard (2017).

County	Unintentional Medication/Drug Poisoning ED Visits		Unintentional Opioid Poisoning ED Visits	
	2016	2017	2016	2017
Swain	17	50	6	30

North Carolina State Center for Health Statistics indicates that unintentional poisoning ED visits in 2017 were caused by the following drugs:

- Psychostimulant (7)
 - Adderall
 - Ritalin
 - Mixed salts of a single-entity amphetamine product
- Benzodiazepine (3)
 - Xanax
 - Klonopin
 - Valium
 - Ativan
- Methadone (1)
- Heroin (1)

Unintentional opioid poisonings caused over half of the medication/drug ED visits in 2017. Opioids could include hydrocodone, oxycodone, morphine, codeine, and other related drugs. The top three leading causes of death in Swain County could be related to tobacco products. According to the CDC, smoking can cause heart disease, stroke, cancer, lung diseases, diabetes, and chronic obstructive pulmonary disease (COPD; “Smoking & Tobacco Use”). The county reported the lowest percentage of current smokers in six years – in 2012, 29% of respondents reported smoking and in 2018 that percentage decreased to 22.5% (WNCHN, 2018).

Although the percentage of smokers is decreasing, the use of smokeless tobacco and e-cigarettes is rapidly increasing in Swain County. The percentage of individuals using smokeless

tobacco has increased by 6% in six years, and the use of e-cigarettes has risen by roughly 3% in three years (WNCHN, 2018). The 2017 North Carolina Youth Tobacco Survey reported that 16.9% of high school students in North Carolina had used an e-cigarette in the previous 30 days.

Understanding the Issue

Substance abuse was identified by key informants as the most critical condition to address in mental health. Reasons for identifying substance abuse as a problem include easy access to illegal substances, poverty, lack of treatment and support facilities, no mental health specialists in the area, minimal funding to combat the issue, not enough employment opportunities, “nothing to do” for youth, and lack of overall education.

Some reasons people begin taking drugs include peer pressure, negative home life, self-medication, curiosity, higher ACE scores, availability, to perform better in athletic and to perform better in academic.

Culture is a factor in regard to accepted use of certain substances. Consumption of alcohol, vaping/e-cigarettes, marijuana, pain killers, and anxiety medication are becoming more common and culturally acceptable. Swain County now houses a vape shop located at the bottom of the hill to the high school. The store sells various CBD and vape products in the Bryson City area.

Specific Populations At-Risk

Substance abuse affects all populations, but there are distinct differences between various groups in relation to substance misuse and abuse. Minorities, specifically Native Americans, and white males are at a higher risk of both substance abuse and overdose in Swain County; Native American substance abuse disorder rates double the rate of the average population (Centers for Disease Control and Prevention, 2018).

The American Indian and Alaskan Native people had the largest drug overdose death rate in 2015 (Centers for Disease Control and Prevention, 2018). The Bureau of Indian Affairs reported a 56% increase in heroin seizures and a 109% increase in meth seizures between 2015 and 2016 (Bureau of Indian Affairs, 2016). Native Americans saw dramatic increase in overdose deaths from 1999 to 2015; Dr. Michael Toedt, the Indian Health Services’ chief medical officer, testified that the rise of overdoses represents the largest increase of any racial group during that period of time. J;

In 2018, the average demographics for overdose ED visits are as follows: 59% men, 75% white non-Hispanic, and 35% ages 25-34. The population at highest risk outside of Native Americans would be Caucasian men between the age of 25 and 34 (see below).

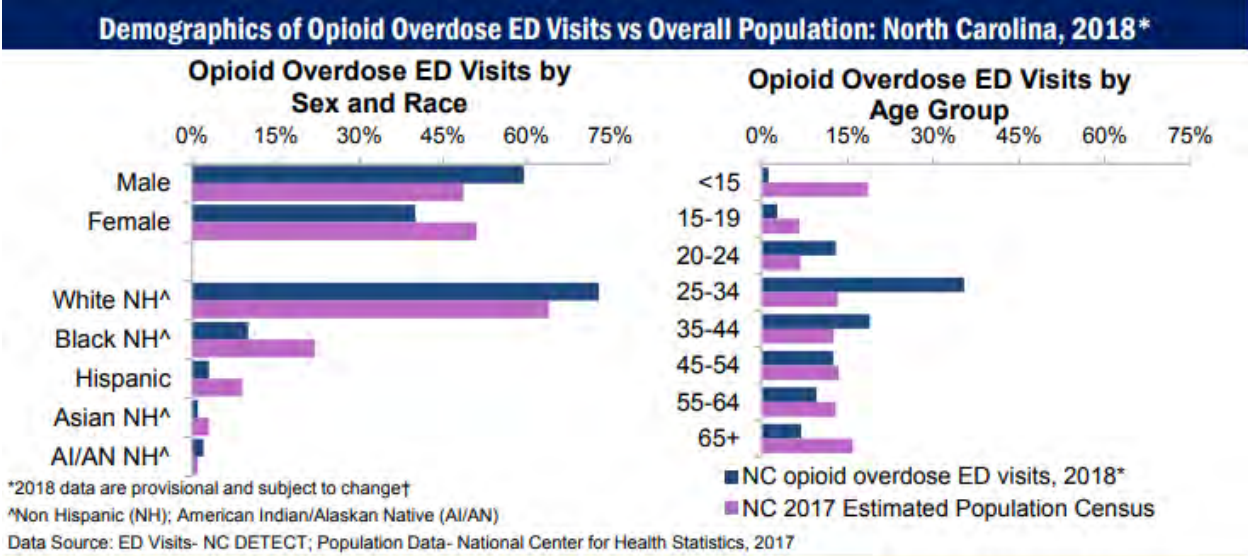


Figure 9: Demographics of Opioid Overdose ED Visits in North Carolina During 2018. NC Detect (2018).

Other risk factors to consider would include:

- Socioeconomic status
- Family history of addiction
- History of chronic pain
- Mental health disorder
- ACE score
- Exposure to drugs earlier in life
- Poor social skills
- Availability/access
- High stress environment

All low-income residents in Swain County are also at a greater risk for unintentional injuries, including overdose. Another population to consider would be pregnant women who use illicit substances as well as their babies.

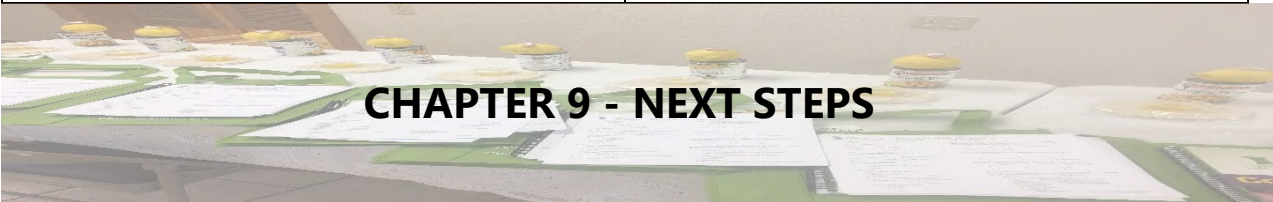
Health Resources Available/Needed

The Coalition for a Safe and Drug Free Swain County is comprised of concerned community members, including parents and students from the local high school. The organization has partnered with a multitude of key stakeholders in the community to work on substance abuse in Swain County, and the Coalition will continue to spearhead this priority in 2018.

Available Health Resources		
Resource	Association and Description	Availability

Sticker Shock Project	Coalition for a Safe and Drug Free Swain County and Swain County Schools	
RX Take Back Events	Coalition for a Safe and Drug Free Swain County and local Pharmacies	Yearly
Lock Boxes for Medication	Coalition for a Safe and Drug Free Swain County and Swain County Health Department	Permanent
Promotion of Naloxone	Coalition for a Safe and Drug Free Swain County and Swain County Health Department	Ongoing
Prevention of Overdose through Education and Information	Coalition for a Safe and Drug Free Swain County and Swain County Health Department	Ongoing
Red Ribbon Week	Coalition for a Safe and Drug Free Swain County and Swain County Health Department	Yearly
Alcohol Free Prom Night Campaign	Mountain Projects, Coalition for a Safe and Drug Free Swain County, and Swain County Health Department	Yearly
Tobacco Free Parks Committee	Swain County Health Department and the Parks and Recreation Services	Ongoing
Trick or Treat on Everett Street Event	Mountain Projects, Coalition for a Safe and Drug Free Swain County, and Swain County Health Department	Yearly
Needed Health Resources		
Resource	Potential Community Partner	
Substance abuse prevention programs for youth	Mountain Projects, Coalition for a Safe and Drug Free Swain County, and Swain County Health Department,	
Education for youth	Mountain Projects, Coalition for a Safe and Drug Free Swain County, Swain County Health Department, Swain Community	

	Hospital, School Health Advisory Committee, and Swain County Schools
Education for parents	Mountain Projects, Coalition for a Safe and Drug Free Swain County, Swain County Health Department, Swain Community Hospital, and Swain County Schools, Renew, Rez Hope
Increased naloxone distribution	Mountain Projects, Coalition for a Safe and Drug Free Swain County, and Swain County Health Department
Needle exchange program	WNC Harm Reduction Alliance, County Commissioners, Coalition for a Safe and Drug Free Swain County, and Swain County Health Department
Needle exchange boxes throughout county	WNC Harm Reduction Alliance, County Commissioners, Chamber of Commerce, Coalition for a Safe and Drug Free Swain County, and Swain County Health Department
Local in-patient treatment centers	Swain Community Hospital
Support for parents and families of those suffering from addiction	Swain Community Hospital, County Commissioners, Renew, Rez Hope



Sharing Findings

The Swain County Health Department will disseminate results of the 2018 Community Health Assessment and State of the County’s Health report to the local health department’s stakeholders, community partners, and general population. An electronic copy, as well as a link to the CHA will be sent to stakeholders and community partners:

- Swain County Community Wellness Action Team
- Swain County Board of Commissioners
- Swain Community Hospital Board
- Bryson City Town Board of Alderman
- Swain County School Board
- Swain County’s School Health Advisory Committee

- Coalition for a Safe and Drug Free Swain County

A link to the full CHA report, as well as where to find a hard copy of the report will be disseminated to the general population through social media.

Where to Access this Report

The full CHA report can be found in the following places:

- WNC Health Network website
- Swain County Government website
- Swain County Health Department - hard copy upon request
- Swain Community Hospital website
- Marianna Black Library - hard copy

For More Information and to Get Involved

To get involved in the local process and implementation plan, please email Trish Hipgrave at trish.hipgrave@swaincountync.gov or Chelsea Burrell at Chelsea.burrell@westcare.org. The Community Wellness Action Team is always looking for passionate and concerned members of Swain County to help lead community health initiatives.

For more information about CHA and the process, you may visit:

- <http://www.swaincountync.gov/health/health-home.html>
- <https://www.myswaincommunity.com/>
- <https://www.wnchn.org/wnc-healthy-impact/>

Collaborative Action Planning

Collaborative action planning with hospitals and other community partners will result in the creation of a community-wide plan that outlines what will be aligned, supported and/or implemented to address the priority health issues identified through this assessment process. The collaborative action planning process will start in the spring of 2019 when the Community Wellness Action Team will host a meeting with partners to develop strategies to improve the priority areas selected. The Community Health Assessment process is an ongoing process and must be adaptable. The Swain County Health Department is dedicated to the citizens of Swain County and will use this information obtained from the CHA process to continue to improve the health and well-being of this fine county.

Appendix B – 2-1-1 Resource List

Agency Name	What Specialists refer callers to this agency for
Appalachian Community Services	Court Ordered DUI Evaluations; DUI Offender Programs; Family Counseling; General Counseling Services; Adolescent/Youth Counseling; Substance Use Disorder Counseling
Camp Living Water	Residential Camps
Cherokee Historical Association	Historic Preservation
Ernestine Walkingstick Shelter	Crisis Shelter; Domestic Violence Support Groups; Abuse Counseling; Sexual Assault Counseling; Domestic/Family Violence Legal Services
Fontana Regional Library	Public Libraries
Jackson County Department of Social Services	Medicaid; Food Stamps/SNAP
NC Cooperative Extension Service - Swain County	Food Production Support Services; Consumer Education; Youth Agricultural Programs
NC Division of Motor Vehicles - Swain County	Driver Licenses; Identification Cards; Motor Vehicle Registration; Disability Parking Permits
NCWorks - Bryson City Workforce Center	Comprehensive Job Assistance Centers; Job Development; Job Search Resource Centers; Job Search/Placement; Ex-Offender Employment Programs; Job Training Formats; WIOA Programs
Oconaluftee Job Corps Civilian Conservation Center	Job Development; Job Corps
Southwestern Community College	Community Colleges; GED/High School Equivalency Test Instruction; Continuing Education
State of Franklin Health Council	Congregate Meals/Nutrition Sites; Senior Centers; Older Adult Social Clubs; Fans; General Paratransit/Community Ride Programs; Employment Related Transportation; Home Delivered Meals; Senior Community Service Employment Programs
Swain Arts Center	Arts/Humanities Councils
Swain Community Hospital	Hospitals; Emergency Room Care

Swain County Court System	Civil Marriages; Active Arrest Warrants; County Clerk of the Courts Offices; State Trial Courts
Swain County Department of Social Services	Adult Protective Intervention/Investigation; Public Guardianship/Conservatorship Programs; Representative Payee Services; Adult Residential Facility Complaints; Facility Licensing; Child Care Expense Assistance; Child Support Assistance/Enforcement; Children's Protective Services; Adoption Services; Foster Home Placement; Foster Parent/Family Recruitment; Foster Homes for Dependent Children; Food Stamps/SNAP; Long Term Care Options Counseling; Long Term Home Health Care; Non-Emergency Medical Transportation; Medicaid; State/Local Health Insurance Programs; Rent Payment Assistance; Electric Service Payment Assistance; Gas Service Payment Assistance; Heating Fuel Payment Assistance; Welfare to Work Programs; TANF
Swain County Family Resource Center	Christmas Programs; Parenting Skills Classes; Specialized Information and Referral
Swain County Government	County Board of Supervisors Offices; County Elections Director Offices; Election Information; County Executive Offices; County Offices of Emergency Services; 911 Services; County Recorder Offices; Marriage Licenses; Death Related Records/Permits; Emergency Communications; Local Tax Collection Agencies; Recreational Activities/Sports Volunteer Opportunities; Day Camps; Youth Enrichment Programs; Senior Olympics; Recreational Facilities; Refuse Disposal Facilities; Recycling; Sheriff; County Correctional Facilities; Veteran Benefits Assistance; Youth Agricultural Programs; Food Production Support Services
Swain County Health Department	Adolescent/Adult Immunizations; Childhood Immunizations; Travel Immunizations; Bereavement Counseling; Birth Certificates; Death Related Records/Permits; Birth Control; Pregnancy Testing; Cancer Detection; Developmental Assessment; Early Intervention for Children With Disabilities/Delays; Case/Care Management; Epidemic Investigation; Influenza Control; Epidemic Investigation; Tuberculosis Screening; HIV Testing; Sexually Transmitted Disease Screening; AIDS/HIV Prevention Counseling; Sexually Transmitted Disease Treatment; Housekeeping Assistance; Personal Care; Long Term Home Health Care; Prenatal Care; Adolescent Medicine; Family and Community Medicine; Public Health Permits; Public Health Information/Inspection/Remediation; Building and Safety; WIC; Organizes yearly Rabies Vaccinations
Swain County Public Schools	Elementary Schools; Secondary/High Schools; Student Disability Services

Swain/Qualla SAFE	Crisis Shelter; Crisis Intervention Hotlines/Helplines; Domestic Violence Support Groups; Domestic/Family Violence Legal Services
Town of Bryson City	City/Town Council Offices; Mayors Offices; Municipal Police; Recycling; Refuse Collection; Zoning
US Post Office - Swain County	Post Offices; Passports
Vocational Opportunities of Cherokee	Developmental Disabilities Day Habilitation Programs; Independent Living Skills Instruction
Western North Carolina AIDS Project	Case/Care Management; HIV Testing; AIDS/HIV Prevention Counseling; Subject Specific Public Awareness/Education

Top Unmet Needs

Top Unmet Needs	
Soup Kitchens	
Home Nursing	
Homeless Shelter	
Mobility Aids	
Motel Bill Payment Assistance	
Personal Financial Counseling	
Public Housing	
Rental Deposit Assistance	
Animal Control	
Undesignated Temporary Financial Assistance (this is case-by-case funding for a variety of needs)	

