

2016

Swain Community Hospital

Community Health Needs Assessment

Swain County, North Carolina

Paper copies of this document may be obtained at Swain Community Hospital, 45 Plateau St. Bryson City, NC 28713 or by phone 828.488.2155. This document is also available electronically via the hospital website <http://www.myswaincommunity.com/>

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Perspective/Overview

—creating a culture of health in the community



Sourced from the *Robert Wood Johnson Foundation's County Health Rankings* website: <http://www.countyhealthrankings.org/roadmaps/action-center>

The Community Health Needs Assessment (CHNA) or Community Health Assessment (CHA) defines priorities for health improvement, creates a collaborative community environment to

engage stakeholders, and an open and transparent process to listen and truly understand the health needs of Swain County, North Carolina. It is an important part of improving and promoting the health of county residents. CHA is a key step in the ongoing community health improvement process outlined above.

Swain County Health Department partnered with WNC Healthy Impact to conduct a community health assessment in 2015. WNC Healthy Impact is a partnership between hospitals and health departments in western North Carolina to improve community health. This document summarizes both 2015 assessments and includes sections of the 2013 Eastern Band of Cherokee Indians (EBCI) Tribal Health Assessment (THA). The five NC counties with EBCI Tribal lands (Swain, Jackson, Haywood, Graham, and Cherokee Counties) perform CHAs that include EBCI populations within their borders, but a CHA specific to EBCI as a Tribe had never been conducted prior to this one. The jurisdictional boundaries of the EBCI include more than 56,000 acres of mountainous land in the five westernmost counties of North Carolina. The largest contiguous parcel of EBCI trust land is the Qualla Boundary, which spans the Swain County border and includes the town of Cherokee.

LifePoint engaged Stratasan, a healthcare analytics and facilitation company out of Nashville, Tennessee to review the process and provide community health process and facilitation expertise. Stratasan conducted a community focus group, reviewed the 2015 Swain County Health Department Community Health Assessments and created this Swain Community Hospital community report. Much of the content of this document is taken from the, Swain County Health Department Community Health Assessment 2015. This documents is available on their respective Health Department website as well as Swain Community Hospital's website.

Swain County CHA:

http://www.swaincountync.gov/page_files/health/CHA/2015SwainCHA.pdf

The Eastern Band of Cherokee Indians Tribal Health Assessment 2013 is available at the National Indian Health Board Website. Portions of this CHA are also included in this analysis. - <http://www.nihb.org/docs/11042015/Eastern%20Band%20of%20Cherokee%20THA%20Full%20Report%20and%20Tool.pdf>

In 2015, the EBCI created the Tribal Health Improvement Plan 2015-2017 based on the 2013 Tribal Health Assessment and is available at: <http://www.cherokee-hmd.com/pdfs/THIPFINAL2015.pdf>

Swain Community Hospital (SCH) board of directors approved and adopted these CHNAs on December 13, 2016.

Starting on December 31, 2016, this report and the Community Health Assessments were made widely available to the community via Swain Community Hospital's website, www.myswaincommunity.com, and paper copies are available free of charge at Swain Community Hospital.

Participants

Over thirty-five individuals from over twenty-five community and health care organizations collaborated to conduct a comprehensive CHNA process focused on identifying and defining significant health needs, issues, and concerns of Swain County. These community partners will be referred to as "The Partnership" throughout this document. The ten-month process centered on gathering and analyzing data as well as receiving input from persons who represented the broad interests of the community and had special knowledge of or expertise in public health to provide direction for the community and hospital to create a plan to improve the health of the community.

Project goals

1. To coordinate with the Health Department in a formal and comprehensive community health assessment process that will allow for the identification and prioritization of significant health needs of the community to allow for resource allocation, informed decision-making and collective action that will improve health.
2. To continue a collaborative partnership between all stakeholders in the community by seeking input from persons who represent the broad interests of the community.
3. To support the existing infrastructure and utilize resources available in the community to instigate health improvement in the community.

"We collaborated with The Partnership to conduct the Community Health Needs Assessment with the goals of analyzing significant health needs and priorities and address those needs," said Steve Heatherly, Chief Executive Officer, Swain Community Hospital. "It is our goal to use our findings as a catalyst for community mobilization to improve the health of our residents."

"The information gathered both from public health data and from community stakeholders provided the insight the community needed to set priorities for significant health issues and was used by SCH to create implementation plan." added Anetra Jones, Chief Nursing Executive

at Swain Community Hospital. “The prioritization meeting was the final step in the assessment process. Now the real work—improving the health of the community begins.”

Community Input and Engagement

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

- Participation with The Partnership on conducting the health assessment process
- Through primary data collection efforts (community survey, key stakeholder interviews and listening sessions)
- In the identification and prioritization of health issues

At-Risk & Vulnerable Populations

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

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

Swain County

- Young children
- Residents living in poverty
- Elderly
- Uninsured adults

Data Collection and Timeline – Swain County CHA

- Community Health Assessment (CHA) Steering Committee involved five individuals who provided unique knowledge and community connectivity to the CHA process. The steering team provided the governing structure and insight into the community engagement aspects of the CHA. They meet quarterly.
- Information gathering, using secondary public health sources occurred in February through October, 2015.
- 200 community surveys were conducted by phone from March 23 to May 28, 2015 to hear about their concerns and priorities.

- Nineteen Swain County leaders were surveyed via e-mail (Key Informant Survey) regarding their perspectives on community health status and needs from August 17-September 9, 2015.
- On January 14, 2016 the CHA Team met to review the data and preliminarily prioritize the significant health issues.
- On January 26, 2016 nine community members participated in a meeting to hear the results of the information and to prioritize the health issues.
- A community focus group was held on March 15, 2016 with 9 community members participating in a focus group for their perspectives on implementation strategies. The community members were invited based on their representation of low-income, medically underserved, minorities and the community in general.
- Action plans were developed between March and September, 2016.

As mentioned previously, over thirty-five individuals from over twenty-five community and health care organizations collaborated to conduct a comprehensive CHA process focused on identifying and defining significant health needs, issues, and concerns of Swain County. Below is a list of the organizations that participated, the population they represented, and how they were involved in the process.

Organization	Population Represented (kids, low income, minorities, those w/o access)	How Involved	Low-Income Resident	Minority Populatio	Medically Underserv
Big Brothers and Big Sisters of Swain		Key Informant Survey Participation	✓	✓	✓
Coalition for a Drug Free Swain		Key Informant Survey Participation	✓	✓	✓
Harris Regional Hospital and Swain Community Hospital	All	Jackson Community Meeting, Jackson & Swain CHA Steering Committees, Key Informant Survey	✓	✓	✓
Smoky Mountain Times		Swain CHA Team, Key Informant Survey Participant			✓
Smoky Mountain Urgent Care		Swain CHA Team			
Swain Community Hospital	All	Swain CHA Team	✓	✓	✓
Swain County Health Dept	All	Focus Group, Key Informant Survey Participant, Swain CHA Steering Committee, Swain CHA Team	✓	✓	✓
Swain County Schools		Swain CHA Team, Key Informant Survey Participant	✓	✓	✓
Swain County Schools Health		Swain CHA Team			
Swain County Sheriff		Swain CHA Team			
Swain Economic Development		Swain Steering Committee			
Swain School Nurse		Swain CHA Team			
Town of Bryson City		Key Informant Survey Participation			
WNC Healthy Impact		Key Informant Survey Participation	✓	✓	✓

In many cases, several representatives from each organization participated.

Input of Public Health Officials

North Carolina Health Departments are extremely robust and in many instances lead the CHA and Improvement processes. Swain Health Department was the conveners of the stakeholders, along with WNC Healthy Impact, to gather the secondary community health

information, and conducted the primary research. They also convened the Community Health meetings to receive input on the health priorities.

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

The previous identifies each organization that was involved in the CHAs , how 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:

- African American
- American Indian
- Asian
- Children
- Disabled
- Hispanic/Latino
- Low income

Medically underserved populations represented:

- Adults
- Children
- Dental Services
- Dental Services for Children
- Elderly
- Hispanic/Latino
- Immigrants
- Low Income
- Mentally Ill
- Substance abusers
- Unemployed
- Uninsured/Underinsured

Community Engagement and Transparency

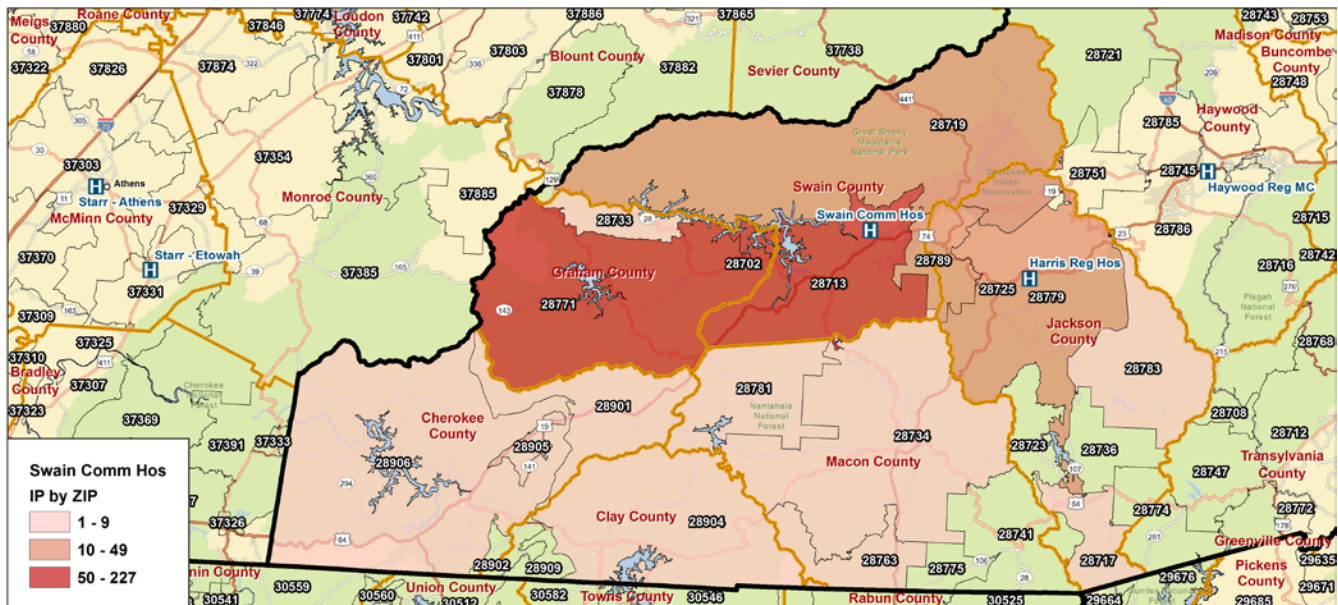
We are pleased to share the results of the Community Health Needs Assessment with our communities in hopes of attracting more advocates and volunteers to improve the health of the communities. The following pages highlight key findings of the assessments. We hope you will take the time to review the health needs of our community as the findings impact each and every citizen in one way or another; and join in the improvement efforts. The comprehensive data analysis may be obtained at Swain Community Hospital, 45 Plateau St. Bryson City, NC 28713 or by phone 828.488.2155. This document is also available electronically via the hospital website <http://www.myswaincommunity.com>.

Community Selected for Assessment

Swain Community Hospital's (SCH) health information provided the basis for the geographic focus of the CHNA. The map below shows where SCH received its patients; most of SCH's inpatients came from Swain County with 56% patient origin. Therefore, it was reasonable to select the Swain County as the primary focus of the CHNA. However, surrounding counties could benefit from efforts to improve health in the Swain County.

The community included medically underserved, low-income or minority populations who live in the geographic areas from which SCH draws its patients. All patients were used to determine the service area without regard to insurance coverage or eligibility for financial assistance under SCH's Financial Assistance Policy.

Swain Community Hospital Patients – 2015



Key Findings of the Community Health Assessment

Information Gaps

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

For example, certain population groups (such as the homeless, institutionalized persons, or those who only speak a language other than English) were not represented in the primary data.

Other population groups (for example, pregnant women, lesbian/gay/bisexual/transgender residents, undocumented residents, and members of certain racial/ethnic or immigrant groups) might not be identifiable or might not be represented in numbers sufficient for independent analyses.

Process and Methods

Both primary and secondary data sources were used in the CHAs. Primary methods included:

- Community Health Opinion Survey – telephone survey of a random sample of adults in the counties
- Key Informant Survey (Swain)– e-mail survey of key stakeholders representing special populations
- Community meetings for prioritization of health issues.
- Community focus group

Secondary methods included:

- A comprehensive set of publicly available secondary data metrics with Swain County compared to the sixteen county WNC region as a “peer”
- Set of maps accessed from Community Commons and NC Center for Health Statistics
- NC State Center for Health Statistics
- County Health Rankings
- State of the County Health reports

All of Swain County – Bryson City, Cherokee, Proctor, and the Qualla Boundary of EBCI-- must come together now to improve the health of their communities. A summary of the community health assessment follows. The complete analysis is available in the [Swain County Health Department Community Health Assessment 2015](#) available on myswaincommunity.com website.

Demographics of the Community

Below are demographics and social & economic factors:

Swain County

- Swain County had 14,274 residents in 2014, an increase of 293 from 2010 or 2.1% increase.

- The median age of the Swain County population was 40.3 years, which was 4.4 years younger than WNC regional average and 2.9 years older than the NC average (WNCHI, 2015).
- The population age 75-84 was projected to increase 524 from 2010 to 2030. There will be more than 3,200 persons age 65+ in Swain County. (U.S. Census Bureau)
- The racial make-up of Swain County was 65% white, 28% American Indian, 1.3% black, and 4.7% Hispanic origin. (The numbers will total to over 100% due to Hispanic being an ethnic group, not a race)
- The median household income for Swain County was \$34,632, which was \$12,061 less than the median household income for North Carolina (U.S. Census Bureau, 2009-2013). 19.3% of Swain County lived in poverty compared to 17.2% in NC.
- In 2014, Swain County had an unemployment rate of 8%, having steadily declined since 2011, but still higher than WNC Region and NC. (NC Department of Commerce)

Eastern Band of Cherokee Indians

- 8,087 live on tribal lands and 6,609 live off tribal lands for a total of 14,696 enrolled member population (this 2013 enrollment is higher than the 2010 Census Bureau numbers due to collection methods). The majority of EBCI members live in Swain County, 8,654, representing 10.8 % of Jackson County and 30.9% of Swain County.
- The Tribal Health Assessment (THA) covered five counties: Cherokee, Graham, Haywood, Swain County. The median age of American Indian/Alaska Native (AI/AN refers to Native Americans as a whole) in the five counties was 28 (2007-2011 American Community Survey). The median age of white non-Hispanics in the same area was 46. The percentage 65 and over was 8.2% for the EBCI, compared to 12.9% for NC and 13.0% for the U.S.
- The median household income for AI/AN was \$20,696 compared to White non-Hispanics of \$30,381. (2007-2011 American Community Survey)
- In Swain County, the percentage of families in poverty with an AI/AN householder was 43.7% and 17.1% for Jackson County (2006-2010 American Community Survey)
- The unemployment rate for AI/AN population in the five counties was 12.1% compared to White non-Hispanics of 6.4%. According to the 2011 Casino Report, Assessing the Economic and Non-Economic Impacts of Harrah's Cherokee Casino, "directly and indirectly, casino operations have reduced the historically high unemployment rate in Swain County which was 1.87 times the state average through 1997." (Johnson, Jr., James H., Kasarda, John D., and Appold, Stephen J. UNC Frank Hawkins Institute of Private Enterprise. (2011) Assessing the Economic and Non-Economic Impacts of Harrah's Cherokee Casino, North Carolina. p.iii.)

Health Status Data

Causes of Death

The life expectancy for residents Swain County was 73.1. (2011-2013 NC Center for Health Statistics). The life expectancy at birth for American Indians/Alaska Natives (AI/AN) in the five county Contract Health Service Delivery Area (CHSDA) between 2003-2010 was 78.4. Swain County has a higher mortality rate than NC for eight of the leading causes of death. The leading causes of death in Swain County were heart disease followed by cancer, which mirrors the U.S., and cerebrovascular disease.

Age-adjusted Death Rates (2009-2013)	Swain Co. # of Deaths	Swain Co. Mortality Rate	Swain Co Rate Difference from NC
Cancer	196	216.5	25.0%
Diseases of the Heart	217	245.0	11.1%
Chronic lower respiratory disease	58	66.1	43.4%
All other unintentional injuries	41	56.4	92.5%
Alzheimer's Disease	30	35.8	23.9%
Cerebrovascular disease	58	71.6	63.8%
Pneumonia and influenza	27	32.3	80.4%
Diabetes Mellitus	45	51.2	2.4X
Suicide	15	22.0	80.3%
Nephritis, Nephrotic Syndrome, Nephrosis	18	20.8	18.2%
Septicemia	13	14.3	3.6%
Chronic liver disease and cirrhosis	16	19.3	2X
Unintentional motor vehicle injuries	13	21.5	56.9%
Homicide*	7	11.1	91.4%
AIDS*	0	0.0	n/a
Source: NC State Center for Health Statistics			
* Rate unstable due to small numbers			

(Age-adjusted death rates per 100,000 population (5-year aggregate, 2009-2013))

The leading causes of death for the CHSDA five-counties of the THA were: heart disease (97.15 per 100,000 population), cancer (97.01), unintentional injury (56.01), diabetes (44.49) and chronic liver disease and cirrhosis (26.65). (Indian Health Service, 2006-2010)

Health Status and Behaviors

Overall Health Status

Swain County Health Rankings

In the 2015 County Health Rankings, Swain County ranked 94th in health outcomes out of 100 NC counties. In terms of health outcomes, Swain County ranked:

- 100th in length of life (Includes premature death)
- 46th in quality of life (Includes poor or fair health, poor physical health days, poor mental health days, low birthweight)

Swain County ranked 94th in Health Factors. In the health factor category, Swain County ranked:

- 90th in health behaviors (Includes adult smoking, adult obesity, physical inactivity, access to exercise opportunities, alcohol-impaired driving deaths, and more)
- 97th in clinical care (Includes uninsured, primary care physicians, dentists, mental health providers, mammography screenings, and more)
- 86th in social and economic factors (Includes high school graduation, unemployment, children in poverty, social associations, violent crime, and more)
- 79th in physical environment (Includes air pollution-particulate matter, drinking water)

Summary of Tribal Health Assessment

The EBCI community and partners were invested in the assessment process, which was highly informative, and showed that the community's expressed issues are congruent with secondary data. Different readers will come away with different impressions of the data. Here are some general highlights from the THA chosen by the authors:

- THA data and community input reinforce existing concerns about the looming burden of the economic, personal, family, and social aspects of diabetes and its complications.
- The same is true of obesity and its repercussions through the life cycle, including:
 - The top negative effects on community members' lives are personal health problems and family/ home life stress/ problems with relationships.
 - A theme from the community is the general awareness of obesity's relationship to chronic disease, and the importance of accountability for and access to ways to make lifestyle changes.
- The community has expressed concerns about food access and affordability.
- The community has expressed continuing concerns about receiving respectful clinical care with cultural competence.
- There is a community desire for improved health facilities.

- There are continuing concerns about substance use, including alcohol and drugs, and their effects on families, e.g. mental-behavioral health issues and the protection of children and elders.
- EBCI elders are generally satisfied with quality of life and are appreciative of services available to them.

Swain County Community Survey

Based on the 200-person community survey, approximately 63% of respondents felt that existing community resources or services for chronic diseases such as diabetes, heart disease or COPD were sufficient, 7% were more than sufficient, 20% were insufficient and 10% answered services and resources were not available.

52% responded their life had “not at all” been negatively affected by substance abuse issues (respondent’s or another person). 17% responded, “a little”, 16% “somewhat”, and 15% responded “a great deal”.

34% responded it was “not at all difficult” accessing fresh produce at an affordable price. 25% responded it was “not too difficult”, 28% responded it was “somewhat difficult” and 13% responded it was “very difficult”.

Eastern Band of Cherokee Indians Tribal Survey

A total of 795 paper and electronic surveys were completed and included in the analysis.

- When asked, “was there a time in the past 12 months when you or a family member needed medical care, but could not get it?”, 22% responded yes, unable to receive care when needed and 78% responded no, able to get care. The primary reason they could not receive care was “too long of a wait for an appointment”, “it costs too much”, and Inconvenient office hours”.
- When asked, “how would you rate your own quality of life over the past month?”, 59% responded good, 25% very good, 12% neither good nor poor, 4% responded poor.
- When asked about positive impacts on quality of live, 27% responded “love, support, and spending time with friends/family”, 13% responded “satisfying job/school and financial stability”, 9% responded “receiving care (surgery and/or medication) and 8% responded “getting exercise” (walking and going to the gym).

- When asked about negative impacts on quality of life over the past month, 16% responded “personal health problems”, 10% “family/home life stress/problems with personal relationships (family/spousal) and there was a three-way tie with 8%, “work stress/employment struggles”, “finances”, and “stress” (in general).
- When asked, “over the past month, how satisfied are you with your health?” 49% responded “satisfied”, 21% responded “neutral”, 16% responded “very satisfied”, 13% responded “dissatisfied” and 1% responded “very dissatisfied.”
- When asked what the biggest concerns related to own health and wellbeing in the past year, 27% responded “weight”, 15% responded “Diabetes/kidneys”, and three responses tied for third, “heart disease/high blood pressure/stroke/cholesterol”, “mobility/pain issues (fear of falling, arthritis, knee, shoulder, neck, back problems)” and “other chronic disease and infections.”
- When asked about their biggest concerns related to family’s health and wellbeing, 20% responded “Diabetes concerns (kidney, dialysis, amputation and eyesight loss)”, 11% responded “quality of healthcare and access to insurance”, 10% responded “eating well as a family”, and 10% “maintaining a healthy weight (obesity concerns).”
- When asked about their biggest health related concerns related to EBCI Tribal community, 33% responded “diabetes concerns (kidney, dialysis, amputation and eyesight loss)”, 30% “addiction (drugs/alcohol/smoking)” and 21% “maintaining a healthy weight (obesity concerns).”
- When asked, “what ideas do you have to improve the health of the EBCI tribal community?” responses were: more community exercise/recreation activities and incentives at 20% followed by health education, awareness and outreach with 14%, then healthier and more affordable foods in school, eateries and grocery stores.

Maternal and Infant Health

Swain County

- Swain County’s pregnancy rate in 2013 was higher than NC and the WNC region, rising from 80.4% in 2010 to 87.1% in 2013.
- 27.5% of Swain County mothers reported smoking while pregnant in 2013, significantly higher than WNC (20%) and NC (10%).
- Infant mortality increased from 2007-2011 to 2008-2012 equal to NC and higher than the WNC region at approximately 7.9 deaths per 1,000 live births.

Tribal Health Assessment

- 39.9% of EBCI mothers reported smoking while pregnant in 2010, significantly higher than Swain County, WNC (20%) and NC (10%).
- Maternal obesity in the EBCI was 45.1% compared to NC at 25.9% (2010).
- 11.7% of babies in EBCI were premature compared to 13.1% for NC (2012).
- Only 5.7% of American Indians in the CHSDA were low birth weight (less than 2500 grams). This is less than NC at 9.1% and less than the Healthy People 2020 Objective of 7.8%.
- Infant mortality for the CHSDA was 7.9 per 1,000 live births the same as NC.

Chronic Diseases

Seven out of ten deaths each year are due to chronic disease. Chronic disease accounts for 86% of our nation's health care costs (CDC, 2016).

Swain County

- Swain County's percentage of self-reported diabetes in adults was 11.4% in 2011, and WNC's was 9%. The percentage of diabetes increased from 2008 to 2011 significantly in Swain County.
- Cancer was the second leading cause of death. Swain County's cancer mortality rate was significantly higher than WNC and NC at approximately 220 deaths per 100,000 population. Lung cancer had the highest mortality rate by site at 67.9 followed by prostate at 38, then colorectal, then female breast.
- Heart disease was the leading cause of death in Swain County. 14% of Swain County residents surveyed reported being diagnosed with heart disease compared to 6.5% for WNC and 6.1% for the U.S. (PRC, 2015)

EBCI

- The American Indian population in Jackson and Swain reported significantly higher rates of diabetes than in the state overall at 26.3%.
- AI/AN adults have a higher percentage of cardiovascular disease 10.8% than NC (2012).

Injury and Violence

Swain County

- For the age group 20-39 years, unintentional injuries and motor vehicle injuries were the leading causes of death in Swain County.

EBCI

- Domestic violence data is generally underreported, however according to data by the Council for Women, NC Department of Administration, the overall DV rates in the CHSDA are 16.3 per 1000, which is more than twice the state DV rate of 6.4 per 1000. (Council for Women, NC Dept of Administration)
- Unintentional injury is the third leading cause of death in CHSDA User Population (Indian health Service, 2006-2010). Motor vehicle accidents is the third leading cause of death among AI/Ans in the CHSDA. (NCHS)

Mental Health and Substance Abuse

Swain County

- In the key informant surveys, 66.7% determined mental healthcare the as the most difficult to access.
- Over half the key informants characterized mental health as a “major problem” (PRC, 2015)
- In the listening sessions, substance abuse was described as a great concern.

EBCI

- WNC Healthy Impact data (2012) shows the percent of illicit drug use in the past month in Western North Carolina was .3% for AI/AN compared to 1.7% for the U.S. and 1.8% for Western North Carolina.
- WNC Healthy Impact data shows that AI/AN had a lower rate of current and binge drinking (29% and 5%) than WNC, NC and the U.S.
- WNC Healthy Impact data shows that AI/AN had a higher rate of smoking (41%) compared to blacks at 27% and whites at 20%.
- 13.4% of the EBCI were diagnosed with mood disorder (2011) compared to 20% of the U.S. (2010)
- EBCI also had lower average number of poor mental health days in the past 30 days at .3 compared to WNC at 3.6 (WNC Healthy Impact, 2012).

Clinical Care and Access

Swain County

- 27.4% of Swain County age 18-64 was uninsured in 2013 down from a high of 29% in 2012. 10% under age 18 were uninsured down from a high of 12% in 2012. These percentages were higher than WNC and NC. (U.S. Census Bureau)
- Swain County had the lowest ratio among comparators in all categories of active health professionals (physicians, primary care physicians, dentists and pharmacists) except RNs.
- In 2015, 7.7% of respondents to the community survey indicated they were unable to get needed medical care at some point in the past year. This was down from 13% in 2012. (PRC, 2015)
- Over half of the key informants characterized access to health care services as a moderate problem and 16.7% rated access to health care as a major problem.

EBCI

- Health care coverage can have multiple meanings and interpretations, especially in the Cherokee area. All those eligible to receive health care through the Cherokee Health System can do so at no charge, regardless of whether or not they have the above types of coverage. This is possible through coverage by IHS, though IHS is not considered an insurer. WNC Healthy Impact data (2012) reports that 73.3% of AI/AN have healthcare insurance coverage compared to 76.3% for WNC, 82.3% for NC and 85.1% for the U.S.
- In 2012, 16% of AI/AN respondents to the community survey indicated they were unable to get needed medical care at some point in the past year. This percentage is higher than WNC at 10.8%.
- There is a ratio of one primary care provider to 739 population patients. 9% of user population patients are not empaneled to a PCP.

At Risk Populations

At-risk populations in Swain County include:

- The growing over 65 population
- The homeless population
- The uninsured

Physical Environment

The physical environment, including air, water and access to healthy food has the ability to protect or harm our health. Air pollution causes problems such as “decreased lung function, chronic bronchitis, asthma, and other adverse pulmonary effects.” Unhealthy drinking water can also lead to countless problems, “including nausea, lung and skin irritation, cancer,

kidney, liver, and nervous system damage.” Those with limited access to healthy foods are more likely to experience overweight, obesity and premature death (County Health Rankings, 2015).

Air Quality

Swain County’s air quality was higher (worse) than NC and the U.S.

- Swain County’s average density of fine particulate matter was 13.3 in 2011 with NC at 12.3 and the U.S. with 12.3. During this timeframe, Swain County had 188 days with “good” air quality and 50 days with “moderate” air quality.
- The average indoor radon level in Swain County was 4.7 pCi/L, 15% higher than the regional mean and 3.6 times the average national level. The 5-county regional mean was 4.6 pCi/L. (Jackson, Swain, Haywood, Graham and Cherokee Counties)
- Over 30% of residents in Swain County indicated they have breathed someone else’s cigarette smoke at work in the past week. (PRC, 2015)

EBCI

The EBCI share the same air as Swain and Jackson Counties.

- 16.7% of AI/AN had breathed someone else’s cigarette smoke at work in the past week (among employed respondents) (WNC Healthy Impact, 2012) compared to 14.2% in WNC.

Water Quality

Clean water is also a prerequisite for health.

- In Swain County, the community water system served an estimated 5,065 people, or 36% of the 2010 county population, 35% lower than the average for the WNC region and NC.
- There were 6 national pollutant discharge elimination permits (1 small, municipal wastewater treatment facility and 5 are domestic wastewater producers) issues in Swain County that allow municipal, domestic or commercial facilities to discharge products of water/wastewater treatment and manufacturing into waterways.

Access to Healthy Food and Places

Access to healthy foods and places to recreate are both indicators of health.

Additionally, if residents do you have access to a safe place to recreate – whether a park, greenway, walking trail, playground, etc., they are less likely to live an active lifestyle.

In Swain County:

- Three supermarkets, one farmer's market and various fruit stands serve Swain County.
- Over 40% of Swain County residents surveyed responded they found it very or somewhat difficult to access fresh produce at an affordable price.
- There was one private gym and one recreation department in Swain County. There was also whitewater rafting and multiple walking trails throughout the county. Residents can also access an indoor pool, gym, track and basketball court located within the EBCI boundary within Swain County, however this is a 30-minute drive.

Identification of Health Issues and Priorities

Prioritization Criteria

To identify the significant health issues in our community, key partners reviewed data and discussed the facts and circumstances of our community.

Swain County used the following criteria to identify significant health issues:

- County data deviates notably from the region, state and benchmark
- The number of people affected
- The degree to which the issue leads to death
- The effectiveness and the feasibility of intervention
- The importance of the issue to the community

On January 2, 2016, the Swain County CHA Team identified the following health issues:

- ***Chronic Disease Control and Prevention:*** Heart disease, chronic lung disease and diabetes continue to have mortality rates in Swain County.
- ***Substance Abuse:*** This was rated as a major problem by 66.7% of respondent on the key informant survey. Substance abuse has been the source of rising rates of hepatitis in Swain County.
- ***Diabetes:*** Over two-thirds of key informants characterized Diabetes as a major problem in Swain County.
- ***Prevalence of Cancer:*** Ranks #2 for mortality in Swain County.
- ***Maternal Health:*** Risky behavior of pregnant mothers include tobacco use, poor nutrition and high risk sexual activity is great amongst teens leading to high teenage pregnancy rates.

At a Swain County community meeting on January 26, 2016, the attendees were asked to select health priorities using the following criteria:

1. The number of people affected
2. The effectiveness and the feasibility of intervention
3. The importance of the problem to the community
4. The degree to which the issue leads to death

Community members reviewed data from the previously mentioned identified health issues during a community meeting. A summarized list of common themes identified through the key stakeholder interviews and listening session process was also made available for those in attendance at the meeting. After a question and answer session on the data provided, community members ranked the identified issues using the criteria (relevancy, impact, and feasibility) explained above and a tool developed by WNC Healthy Impact, adapted from *Rating/Ranking Key Health Issues* (Health Resources in Action) and the *Hanlon Method for Prioritizing Health Problems* (NACCHO). Community members then voted on the issues that scored the highest leading to the following identified priorities.

Identified Priorities

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

- **Chronic Disease (Heart Disease and Diabetes)** – This was chosen due to the number of affected individuals in our community. The SCHD has worked and will continue to work on reducing the number of individuals with Type II Diabetes. We will focus on nutrition, obesity and physical activity.
- **Reduce Substance Abuse in our community** (mental health, infectious disease, sexually transmitted diseases)
- **Promote a healthy environment** – focus on tobacco cessation in pregnant moms and youth

The Eastern Band of Cherokee Indians finished a Tribal Health Improvement Plan (THIP) 2015-2017 in March 2015.

The three priority areas that the THIP points to are diabetes, substance abuse and depression.

1. Diabetes is now considered one of the most important health threats within Indian Country. Being overweight or obese can lead to diabetes, and we have a high number of people who are overweight or obese. And in EBCI, six out of ten people aged 65 and over had diabetes.

2. Rates of substance abuse vary greatly among tribal nations. That's why EBCI PHHS, CIHA and the Nashville Area Tribal Epidemiology Center have been working hard over the past 10 years to collect and maintain data on substance abuse in our area.
3. Depression is one of the top diagnoses within Cherokee Indian Hospital. Depression often occurs with another health concern. Within Indian Country, people who have depression sometimes also have diabetes or substance abuse problems.

Data Highlights Priority Health Issues – Swain County

Priority Issue #1: Chronic Disease

Swain County has high rates of heart disease, diabetes and cancer. Heart Disease can increase your risk for a stroke. Chronic diseases have been a priority in past CHA's and progress has been made but more vigilance is needed, given our top 3 causes of death are chronic disease. Diabetes Self-Management Education and Diabetes Prevention Program have been started at the health department and we hope to see it them continue to grow in our community.

Coronary artery disease increases risk for stroke because plaque builds up in the arteries and blocks the flow of oxygen-rich blood to the brain. Other heart conditions, such as heart valve defects, irregular heartbeat (including atrial fibrillation), and enlarged heart chambers, can cause blood clots that may break loose and cause a stroke (CDC, Heart 2016).

Diabetes also increases the risk for stroke. Diabetes is a chronic, progressive disease impacting and influencing over 347 mill individuals throughout the world. Diabetes is a chronic, progressive disease impacting and influencing over 347 million individuals throughout the world. Your body needs glucose (sugar) for energy. Insulin is a hormone made in the pancreas that helps move glucose from the food you eat to your body's cells. If you have diabetes, your body doesn't make enough insulin, can't use its own insulin as well as it should, or both (Rise, 2013). These areas have been shown as preventive measures for heart disease, stroke, and diabetes prevention:

- Eating a healthy diet.
- Maintaining a healthy weight.
- Getting enough exercise.
- Not smoking.
- Limiting alcohol use.

Health Indicators

The top 3 leading causes of death in Swain County are chronic diseases; heart disease, cancer and stroke. Diabetes was 6th overall. The prevalence of diabetes in Swain County adults has continued to grow each year since 2005. The high incidence of obesity may relate to the high incidence of diabetes.

Cardiovascular disease is the leading cause of death in Swain County (217 deaths) as well as in the United States. High blood pressure and/or high cholesterol increases your chance of having a heart attack.

Understanding the Issue

A total of 66.7% of individuals thought that diabetes was a major problem in Swain County. Over 40% of Swain County residents reported heart disease and stroke were a major problem in our community. Almost 40% of individuals interviewed though cancer was a major problem in our community.

Populations At-Risk

All Swain County residents can benefit from strategies that focus on physical activity and nutrition. This would improve at-risk populations even more. Food insecurity and obesity often coexist. Both food insecurity and obesity can be consequences of poverty, resulting in the lack of access to enough nutritious food and from the stresses of poverty. (FRAC, 2015) Low income and food insecure residents often deal with a lack of full-service grocery stores, are less likely to have their own vehicle for regular food shopping, have greater availability of fast food restaurants, and cycle between deprivation and over-eating. Further, low income residents often live in neighborhoods with fewer physical activity resources, are less likely to participate in organized sports, and students of lower-income schools spend less time being active during physical education than students of higher-income schools. (FRAC, 2015)

Health Resource Available/Needed

Resources are needed to combat the early onset, and the severity of heart disease, stroke, and diabetes. While Swain County has a physical environment that is conducive to outdoor activities it lacks in facilities during winter months. Swain County has one Recreation Department, one private gym within Bryson City limits, whitewater rafting, multiple walking trails throughout the county and Blue Ridge Parkway and Great Smoky Mountains National Park which offer several outdoor opportunities. Residents can access an indoor pool, gym, track and basketball court which is located within EBCI boundary but within Swain County, however this is at the minimum a 30-minute drive. The health department offers a Lifestyle Change Program, has a certified Nutritionist on staff and offers a one-day adult health clinic.

There is a part-time operated food pantry in Bryson City at the Presbyterian Church. Swain County residents have access to healthy foods thru three supermarkets within the county throughout the year. Residents also have access to a farmers market in Bryson City during the summer, various fruit stands and farms within the county. Further, many health resources are still needed at Swain County Health Department. But due to budget constraints, services are or will be continued to be limited.

Priority #2 Reduce Substance Abuse

The Coalition for a Drug Free Swain County is actively working to gather data and develop a strategic plan for the upcoming year. In the picture the Coalition provided a booth at the annual downtown Chili Cook-Off, giving out information on resources and guides for parents and youth about substance abuse.

The Coalition worked with Project Lazarus, giving out fifty lock boxes. A campaign blitz was held on prescription medications: Take Correctly, Store Securely, Dispose Properly, and Never Share. Poster contests were also held for all 5th grades promotion the effects of substance abuse.

The effect of substance abuse is long reaching. Risky behaviors lead to crime, infectious disease, unwanted teen pregnancy, traffic fatalities, child abuse, injuries, cancer, heart disease, and lost productivity. In the chart, 39% of survey respondents reported their life had been directly negatively affected by substance abuse issues.

Drug use affects every part of society, straining our economy, our health care and criminal justice systems. Prevention is the simplest and most cost effective way to keep America's youth drug-free. Ten percent of 8th graders admit to trying drugs. The United States loses an estimated cost of \$6,120 per second in lost productivity, health care costs, etc. due to drug use (Whitehouse, 2016).

Adolescents and impressionable youngsters are most susceptible to the allure of drugs and that is why preventing the first use of illegal drugs, alcohol, and tobacco is essential.

Adolescents who do not use illegal drugs, alcohol or tobacco are less likely to develop a chemical dependency. Successful substance-abuse prevention leads to reductions in traffic fatalities, violence, unwanted pregnancy, child abuse, sexually transmitted diseases, HIV/AIDS, injuries, cancer, heart disease, and lost productivity (Preventing 2016).

Health Indicators

A general characteristic of WNC is high mortality rates due to unintentional poisoning, especially by medication and drug overdose. Swain County is one of the WNC counties with higher than state average poisoning and drug overdose mortality rates. In the period 2009-2013, 22 Swain County residents died as a result of unintentional poisoning. Of the 22

unintentional poisoning deaths in the county in that period, 77.3% or 17 were due to medication or drug overdoses.

The following medications/drugs were used in drug overdose deaths in Swain County:

- Methadone
- Cocaine
- Heroin
- Alcohol
- Benzodiazepines
- Other Synthetic Narcotics
- Other Opioids

“Other Opioids” caused the highest proportion of drug overdose deaths (68.4%) in Swain County in the period 2009-2013. Methadone is a synthetic opioid usually associated with treatment for drug abuse. “Other opioids” could include: hydrocodone, oxycodone, morphine, codeine, and related drugs. Benzodiazepines could include anti-anxiety medications, sleeping pills, anti-seizure drugs, muscle relaxers. Other synthetic narcotics could include: bath salts, synthetic marijuana, incense, air fresheners, and things known as “designer drugs”.

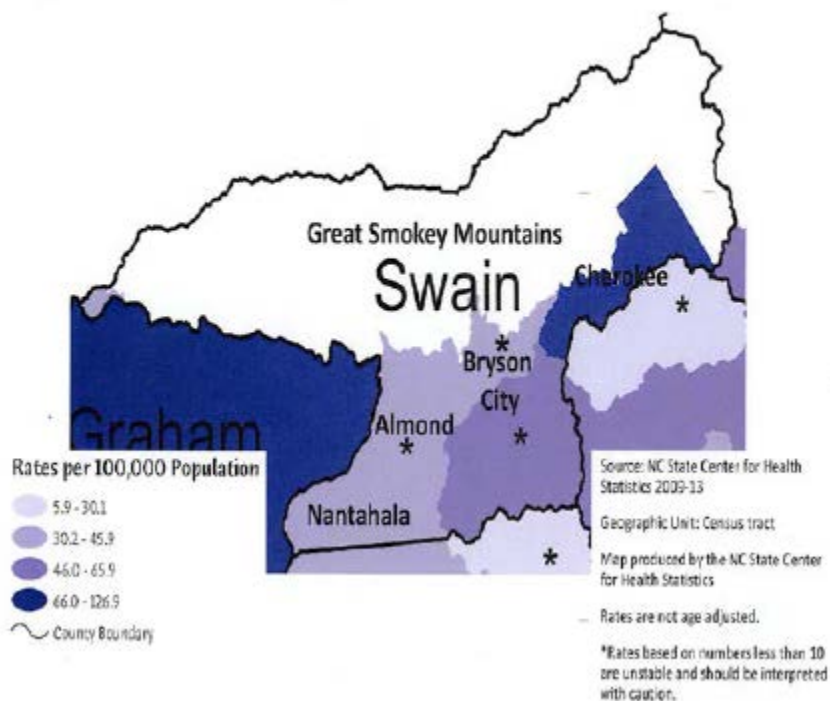
Understanding the Issue

While overdose and poisonings are significant in Swain County, other effects due to drug abuse are rising. Swain County had 2 reported Hepatitis B cases in 2014 and 21 reported cases in 2015. There is a strong correlation between the increase in Hepatitis cases and the drug problems plaguing Swain and other communities (Frost, A 2016). Sexually transmitted diseases are also a concern in our community. Over the past few years, chlamydia and gonorrhea have increased.

Populations At-Risk

The map below identifies residents on the Qualla Boundary as being an at-risk population for substance abuse.

Swain County Other Unintentional Injuries Mortality Rates 2009-2013



It is evident Swain County, in line with the rest of the United States, is dealing with a drug overdose and poisoning epidemic. Since 1999, the amount of prescription painkillers prescribed and sold in the U.S. has nearly quadrupled yet there has not been an overall change in the amount of pain that Americans report (CDC, Injury Prevention and Control: Prescription Drug Overdose, 2015). Greater community education, provider education, pain patient support and addiction treatment facilities are needed to address this epidemic. However, talking about drugs is still viewed as taboo in this community. Residents don't know who to turn to if their loved ones are battling addiction. Many do not believe their loved ones are at risk or do not understand the risk of overdose. To clarify, 97.5% of Swain County residents said that they had not taken a prescription drug that was not prescribed to them in the past month. Additionally, 97% of residents stated that they had never shared a prescription with someone else. (Professional Research Consultants, Inc., 2015) Finding an effective way to communicate the severity and change the "not in my backyard" mentality of this public health issue to our residents will prove effective at reducing drug/poisoning overdose and death.

Finally, all injury and substance abuse interventions should begin in the early years of life. Intervening early is not only a cost-effective way to address these issues but also works to vastly improve public health in the long run. Programs that prevent drug abuse and other

problem behaviors also produce benefits for the community that outweigh monetary costs; for every dollar spent, up to a \$10 ROI.

Health Resources Available/Needed

Some of the resources available in Swain County are: Prescription Take Back events, Swain Sheriff's Department, Permanent Drop Box, Swain Sheriff's Department, Naloxone distribution, Mountain Projects, Sylva, NC (referred to from Swain County), and Coalition for a Safe and Drug Free Swain County. Many resources were mentioned from prioritization events of resources needed, to name a few: Treatment centers, local in-patient treatment centers and substance abuse prevention programs for youth.

Priority Issue #3 Promote a Healthy Environment

The Swain County CHA team identified an assortment of environmental challenges which caused special consideration to be ranked as a priority health issue. Promoting a healthy environment is 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. A consensus for an environmental scan of the community could be advantageous in discovering what conditions of the environment could be rectified to establish a healthy environment conducive to developing social norms around healthy behaviors. So this assortment of issues has been gathered and grouped under healthy environment to provide an avenue to identify and address many issues as one large approach.

- 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)

Data Highlights

- Radon - Western North Carolina has the highest radon levels in the state. The arithmetic mean indoor radon level for the 16 counties of the WNC region is 4.1 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

- Teen Pregnancy - Among Swain County women aged 15-44 this new rate was 104.6, and although it is not plotted below, it 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).
- Smoking While Pregnant - The percentage of women who smoked during pregnancy within WNC did not improve significantly between 2008 and 2013. The occurrence of pregnant women in Swain County who smoked actually increased after 2009. Among comparators, in every year cited except 2009 Swain County had the highest percentage of pregnant women who smoked.

Understanding the Issue

Humans interact with the environment constantly. These interactions affect quality of life, years of healthy life lived, and health disparities. The World Health Organization (WHO) defines environment, as “all the physical, chemical, and biological factors external to a person, and all the related behaviors” (World Health Organization, 2006).

Environmental health consists of preventing or controlling disease, injury, and disability related to the interactions between people and their environment. Maintaining a healthy environment is central to increasing quality of life and years of healthy life. Globally, nearly 25% of all deaths and the total disease burden can be attributed to environmental factors (World Health Organization, 2006). Environmental factors are diverse and far reaching. They include:

- Exposure to hazardous substances in the air, water, soil, and food
- Natural and technological disasters
- Physical hazards
- Nutritional deficiencies
- The built environment

Poor environmental quality has its greatest impact on people whose health status is already at risk. Therefore, environmental health must address the societal and environmental factors that increase the likelihood of exposure and disease.

Populations At-Risk

The entire community.

Data Highlights Priority Health Issues - EBCI

Diabetes

Issue – High rate of Type 2 diabetes among Tribal members

Focus – Prevention

- Address obesity
- Decrease stress
- Increase physical activity
- Improve nutrition

Success - A decrease in incidence of Type 2 diabetes within the Tribe.

Substance Abuse

Issue: Overindulgence or dependence on an addictive substance that is harmful to individual, family and/or friends.

Focus – Prevention

Success – Lower incidence of addiction in community.

Depression

Issue – Lack of understanding of signs and symptoms associated with depression among children and adults.

Focus – Awareness

Success – People in the community able to identify when they are depressed and know where to go for help.

Community Assets and Resources

WNC Healthy Impact provided a 2-1-1 dataset for resources in Swain County. The list was reviewed by the accreditation team in 2015. Any outdated information was brought up to date. The areas reviewed were: health resources, supportive services and any gaps in services. The list was compared to information from the Family Resource Center and Department of Social Services. The list was made available to partners and health department visitors. The directory is available in print format when requested.

Swain County has supportive services in place. The Department on Aging works closely with older adults, identifying their needs; whether it be housing, insurance or medical needs. The senior center offers meals, recreation and some transportation for the elderly. Some of our community support services include; Alcoholics Anonymous, Appalachian Community Services and “Sweet Thoughts” Alzheimer’s group. Swain County offers many services such as; health department, recreation department, department of social services, emergency management

and more. The health department has a one-day adult health clinic that covers family planning services, breast and cervical cancer screenings, sexually transmitted diseases and adult health sick visits.

EBCI – Community Resources

The EBCI Tribal Health Improvement Plan 2015 includes a section for community resources for each of the top three priorities, pages 38-40.

Resource Gaps – Swain County

A major resource gap for Swain County residents is OB/GYN services and pediatric services. Currently, we do not have either type of office in our county. Smoky Mountain Urgent Care and Swain Community Hospital attempt to meet as many of these needs as possible but most individuals must travel at the minimum 30 minutes to receive these specialized services. Since the poverty rate in Swain County is high, the expense of traveling forces many to forgo services they truly need to lead a healthy lifestyle.

An enormous need within Swain County is an animal control department and/or ordinance. The issues this gap creates touches many within the County. The problems associated with the lack of animal control creates a hardship for several County departments which respond without training and resources to these issues.

Other gaps include indoor athletic options for seniors, indoor pool, lack of mental health services and limited employment opportunities.

There were four broad themes that emerged in this process:

- Swain County needs to create a “Culture of Health” which permeates throughout the cities, employers, churches, and community organizations to engender total commitment to health improvement.
- There is a direct relationship between health outcomes and affluence (income and education). Those with the lowest income and education generally had the poorest health outcomes.
- While any given measure may show an overall good picture of community health, there are significantly challenged subgroups.
- It will take a partnership with a wide range of organizations and citizens pooling resources to meaningfully impact the health of the community. Many assets exist in the counties to improve health.

2013 SCH CHNA and Implementation Plan Written Comments

No written comments were received on the previous plan. There is an opportunity to provide comments on the 2016 CHA and implementation plan on the SCH website.