



Hugh Chatham Memorial Hospital



Hugh Chatham Memorial Hospital 2019 Community Health Needs Assessment

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*"Imagine a place where Communication is clear, everyone Cares, and patients are always Safe.
We are Hugh Chatham, and this is our journey!"*

Hugh Chatham Memorial Hospital

Hugh Chatham Memorial Hospital (HCMH), a private, not for profit hospital, has been providing medical care for the residents of Surry, Wilkes, and Yadkin Counties for over 85 years. As one of the largest employers in the area, HCMH employs over 800 and is served by more than 70 physicians representing 26 specialties or subspecialties, including Behavioral Health, Cardiology, Dermatology, Emergency Medicine, Endocrinology, Ears, Nose and Throat, Family Medicine, Gastroenterology, General Surgery, Geriatrics, Hematology/Oncology, Internal Medicine, Neurology, OB/GYN, Ophthalmology, Orthopedic and Sports Medicine, Palliative Care, Pediatrics, Plastic Surgery, Podiatry, Pulmonology, Radiation Oncology, Radiology, Sleep Medicine, Urology, and Wound Care.

In the 1920s, the Western NC Methodist Conference began looking for a site for a hospital that would serve ministers and their families in the area. As the search began, Mr. Hugh Chatham of Chatham Manufacturing Company promised to provide the land and money. Unfortunately, Mr. Chatham passed away before the hospital was completed. However, with the help of his family and the Duke Endowment, Mr. Chatham's vision of high quality, local healthcare became a reality in Elkin when the hospital officially opened in April of 1930. In 1967, ownership of the hospital passed from the Methodist Conference to a not-for-profit corporation, under the direction of a local board of community leaders.

Due to advances in healthcare and an increased demand from the local community, a new hospital building was constructed in 1973 on Parkwood Drive. In 2010, the organization completed construction on a new ED, patient bed tower, and heart and lung center. Today, HCMH encompasses not only the hospital, but also multiple physician offices, a retirement community; wellness and education programs; cancer services; home health and hospice care; a Wound Care Center as well as Urgent Care centers that are conveniently located throughout our service area.

Vision Statement

To be the best community hospital in the nation, with service as our guiding principle

Mission Statement

To consistently deliver exceptional healthcare by demonstrating the values of service, teamwork, accountability, respect, and safe care

Awards and Honors

- 1) Hugh Chatham received a Women's Choice Awards for the third consecutive year for Patient Safety and Stroke Care. The Patient Safety award evaluates 11 Centers for Medicare and Medicaid Services' (CMS) measures of infections and complications, Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey results along with primary research about women's healthcare preferences. The Stroke Award is the only award recognizing excellence in stroke care based on robust criteria that consider patient satisfaction and clinical excellence.
- 2) Attained elite national recognition by achieving the American Heart Association/American Stroke Association's Get With The Guidelines®-Stroke Gold Plus Quality Achievement Award with Target: Stroke Honor Roll Elite. Our stroke team did this by meeting specific quality achievement measures for the diagnosis and treatment of stroke patients at a set level for a designated period of 12 months or more.
- 3) Recognized as a one of the "Best Places to Work" in the extra-large business category by the Triad Business Journal. Hugh Chatham was identified from among 50 competitors as one of the region's best employers, based on more than 300 employee responses to the survey.
- 4) Yadkin Valley Home Health was awarded the 2017 Premier Performer for Home Health Patient Satisfaction in August of 2018, by the nationally acclaimed SHP (Strategic Healthcare Programs) Group. The award recognized Yadkin Valley Home Health for achieving an overall score that ranked in the top 5% out of 4,500 agencies in the SHP national HCAHPS benchmark as measured from the patient's point of view.

Executive Summary

Introduction

The IRS requires each non-profit (Section 501 (c)(3)) hospital to conduct a community health needs assessment (CHNA) every three years as part of the federal Patient Protection and Affordable Care Act. A Community Health Needs Assessment (CHNA) was conducted by Hugh Chatham Memorial Hospital (HCMH) in the spring of 2019 to explore the health status of people living within the communities we serve. The objective of the assessment was to pinpoint the most pressing health issues in our communities and determine three things: 1) who is affected by them; 2) who is already working on these issues and what progress is being made; and 3) what more can be done to improve the health of the people we serve?

The 2019 CHNA primarily focused on Surry, Wilkes, Yadkin, and Alleghany counties. These counties are considered our “community” as greater than eighty seven (87) percent of the HCMH inpatient population resides within these four counties. Primary data for the assessment was gathered through a survey tool with more than two hundred and thirty (230) submissions, through focus groups, and through individual interviews. Participants represented multiple organizations and included individuals who have a broad knowledge of the community and/or had specific expertise or knowledge. Secondary data was obtained from local and national data published in government and private sources. A comprehensive list of identified health issues was compiled and recommendations were made to HCMH’s executive leadership for further review and prioritization. Priorities were assessed and ranked based on issue prevalence, issue severity, and ability to impact. Final prioritization as determined by the executive leadership was approved by the HCMH Board of Trustees.

Key Findings: Where We Will Focus Our Efforts

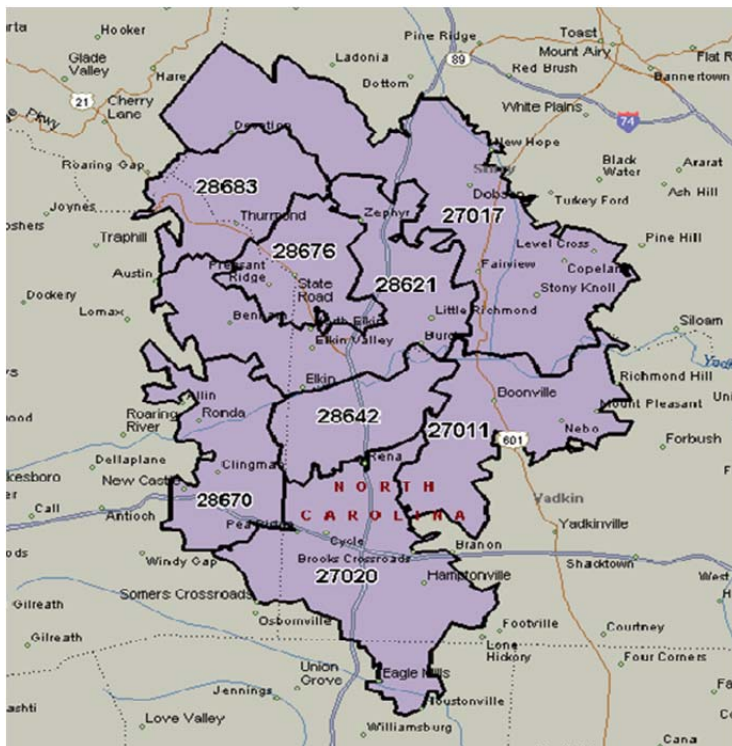
Based on CHNA findings, HCMH has developed and will implement a community-wide health improvement plan to address the following health issues listed in alphabetical order:

- Access to care for medical and behavioral health needs
- Prescription drug abuse: HCMH has supported and will continue to support a regional response to the prescription drug/opioid crisis in our community.
- Promotion of Healthy Living and Preventive Care models

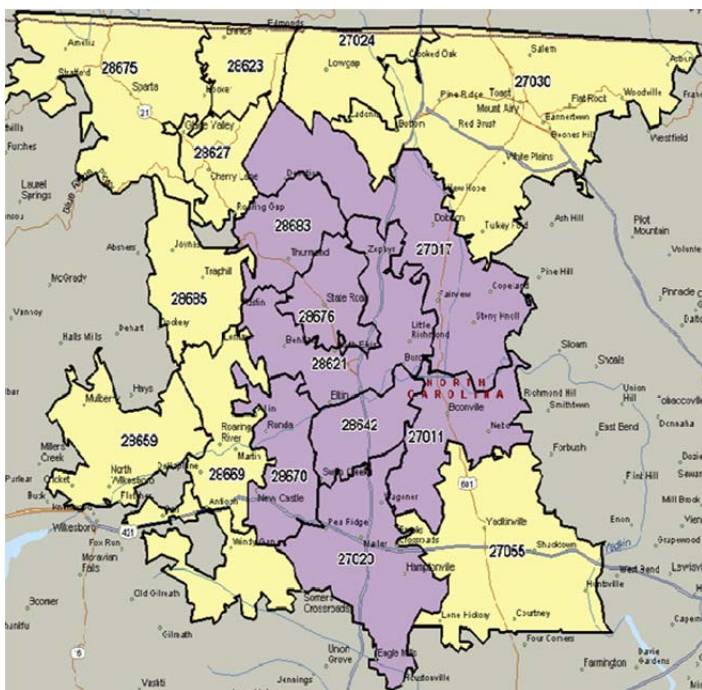
Documentation

A final report of the CHNA was made public on **September 29, 2016** and can be found on HCMH’s website. The Board of Trustees for HCMH endorsed the Executive Summary Report and Implementation Plan for community health improvement activities on **September 27, 2016**.

Community served by HCMH



HCMH's primary service area (in purple on the map) is identified using the zip codes of discharged patients. The majority of HCMH patient origin is encompassed within eight zip codes which are all located in the geographical area of Surry, Wilkes and Yadkin Counties. Using a county definition as the service area is crucial for our analysis as many of our secondary data sources are county specific and serve as a comparison tool to other counties, the state of North Carolina, and the United States.



HCMH's secondary service area (shown in yellow) also is primarily located within Surry, Wilkes and Yadkin counties with less than 6% of the inpatient population originating from Alleghany County. The secondary service area is a challenging market environment as there is a community hospital located in northern Surry County, in Wilkes County, and in Alleghany County. Bordering Yadkin County to the east is the Piedmont Triad area which is the home to several tertiary care facilities.

Community Service Programs Sponsored by Hugh Chatham Memorial Hospital

- Patient Education Programs
 - * Stroke Education
 - * Diabetic and Nutrition counseling
 - * Newborn Care
 - * Breastfeeding
 - * Cardiac Rehabilitation
 - * Pulmonary Rehabilitation
 - * Medication Management
 - * Women's Health Education Seminars

- Community Health Screenings and Immunizations
 - * Cancer Screenings (Prostate, Breast, Skin, Colon)
 - * Cholesterol/Glucose
 - * Blood Pressure/Heart Rate/Oxygen Saturation
 - * Weight/Body Mass Index
 - * Concussion Screening
 - * Falls Assessment
 - * Bone Density
 - * Musculoskeletal Fitness screening
 - * Vascular Disease Screening
 - * Hearing/Speech
 - * Upper Extremity
 - * Stroke Screenings
 - * Tetanus/Flu

- Health Promotion, Outreach, and Support Groups
 - * Leadership Hugh Chatham
 - * Cancer Support Group
 - * Shawl Ministry / Books for Babies / Bears for Pediatric Patients
 - * Bereavement and the Grief Process
 - * Stroke Support
 - * Alzheimer's Support
 - * CPR for Industry, Day Care Workers, and Lifeguards
 - * Safe Kids Program
 - * Parental programs for childhood safety
 - * Senior Fitness Classes
 - * Heart Health Seminars
 - * Aquatic and Wellness Center

2019 Community Health Needs Assessment

Introduction

The Yadkin Valley is known for its natural beauty and other amenities that make this a great place to visit, live, and retire. Those of us fortunate enough to call this beautiful area “home” also know that one of its strongest assets is the high quality healthcare available throughout our region.

Healthcare in the United States is currently undergoing an enormous transformation. As a nation, we’ve come to realize that healthcare will cost a lot less if we can keep people out of the hospital, especially those with chronic but manageable diseases. We are, therefore, shifting away from a system that pays for services to treat illness to one that focuses on optimizing health and wellness for individuals and communities. Soon our success will be measured by the overall health of the people living in our communities. This requires a strong partnership between all healthcare providers and the people they serve. HCMH is responding to this fundamental shift by redesigning care to be as efficient, effective, and convenient as possible.

Our 2019 CHNA represents a collaborative, community-based approach to identify, assess, and prioritize the most important health issues affecting our community. The process is also the foundation that HCMH as a healthcare system and the community as a whole can utilize to collaboratively plan, develop, and foster programs to effectively address those needs in our community.

The CHNA looked at health status, barriers to care, and other demographic and social issues affecting people and organizations in the community. The completion of the CHNA enabled HCMH to take an in-depth look at its greater community. The findings from the assessment were utilized to prioritize population health issues and develop a community health implementation plan focused on meeting community needs. HCMH is committed to the people it serves and the communities they live in. Healthy communities lead to lower healthcare costs, robust community partnerships, and an overall enhanced quality of life. The CHNA process consists of 5 steps pictured below:



Process and Methodology

Data Collection Methods

HCMH identified community health needs by undergoing an assessment process. This process incorporated a comprehensive review of both primary and secondary source data by the hospital's Community Needs Assessment Team. Primary data was collected through the surveying of community members living in Yadkin, Wilkes, Surry, and Alleghany counties. The team also conducted a series of key informant interviews with healthcare, education, and social services leaders in the community. Secondary source data included a wide range of measures related to health and health related factors including morbidity and mortality, health behaviors, clinical care, social and economic factors, and environmental factors. The team used several sources of qualitative and quantitative health, social, and demographic data specific to Yadkin, Surry, Wilkes, and Alleghany Counties provided by local public health agencies, healthcare associations and other data sources.

Data Collected

Input from the community, which is inclusive of providers, patients, and community members, was gathered in a number of ways to use in the analysis process. Surveys were designed to elicit information related to community member's perception of their own health, the health of the community, and factors related to both. Surveys were conducted in both paper and online format. Surveys were provided to several key community groups: Yadkin Valley Rotary, the Hugh Chatham Memorial Hospital Foundation, Elkin Public School staff, and Wilkes County School System. Surveys were placed in each of the Hugh Chatham Primary Care offices and in public libraries within each county to capture the broad interests of the communities we serve. Additionally, team members distributed surveys at local festivals, Dirty Joe's Coffee Shop, Wilkes Community College, Cristo Vive Wesleyan Church of Elkin, Wilkesboro Baptist Church, and Vision Baptist Church of Wilkesboro. The survey was also shared on the Hugh Chatham Memorial Hospital Facebook page.

A second primary data collection method utilized was key informant interviews. These were conducted with identified subject matter experts. These ranged from county health department personnel, physicians, and the hospital CEO. Stakeholder surveys were taken to solicit input on critical issues that influence the health of citizens and decisions to be made by providers and institutions.

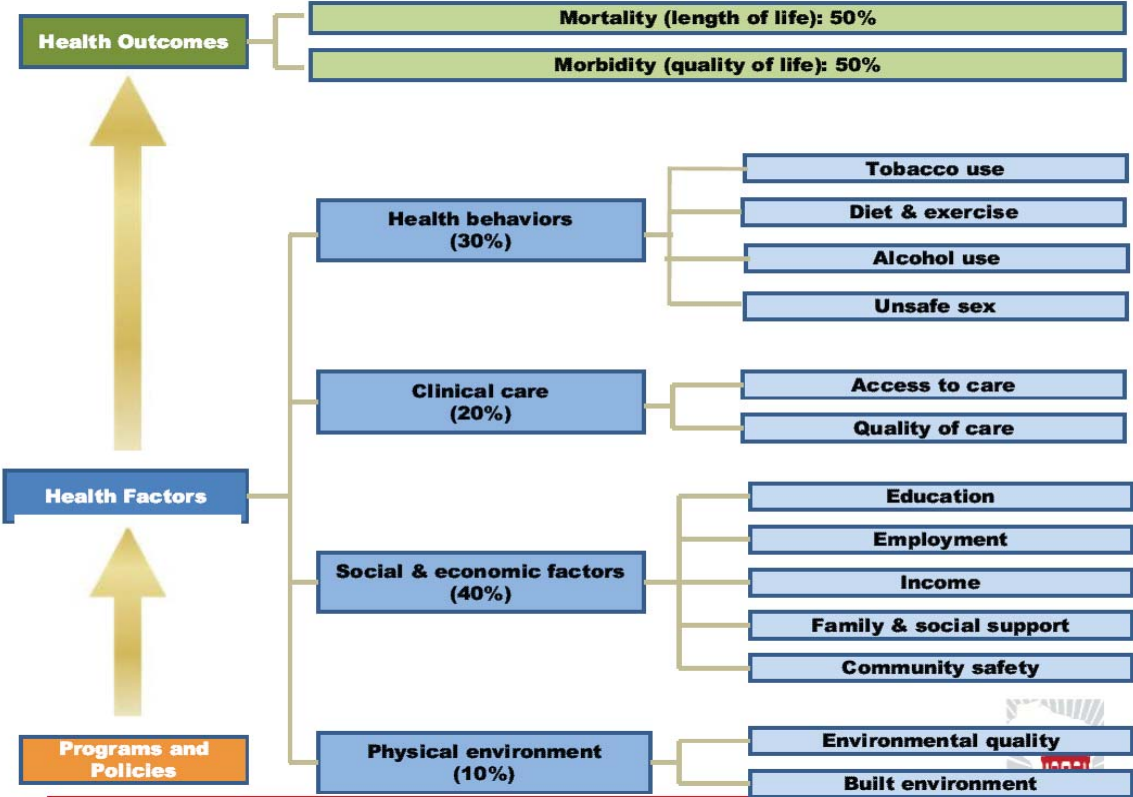
Data Collection Limitations

The demographics of those who returned the surveys was noted to be closely aligned with the

geographic locations of the patients served by the hospital as determined through market share data. However, there were several key deviations from the three counties’ demographics, that may have an impact on the subsequent analyses. Specifically, the respondents were more likely to be insured, to have a college education, to be Caucasian, and to be female than the general demographics of the counties served. These important demographic differences may have had a secondary effect of skewing other data such as access to care . Additionally, the surveys are based on self-reported data. It is generally expected that respondents tend to under-report health risk behaviors and to have a sense that their own health is better than that of the general population.

Secondary Data

One of the primary sources of secondary data utilized in this assessment comes from the County Health Rankings, which are published in collaboration by the University of Wisconsin Population Health Institute and the Robert Wood Johnson Foundation. These rankings are based on a model of health that represents health outcomes, morbidity and mortality, as functions of a set of health factors.



County Health Rankings model © 2010 UWPHI

The first health factor utilized in the County Health Rankings model, health behaviors, consists of indicators of tobacco use, diet and exercise, alcohol use, and sexual activity. Health behaviors comprise 30% of variation in health outcomes.

The second health factor, clinical care, includes indicators for access to care and quality of care. Clinical care makes up 20% of variation in health outcomes.

The third health factor, social and economic factors, includes measures of education, employment, income, family and social support, and community safety. Social and economic factors make up 40% of variation in health outcomes.

The last factor, physical environment, includes measures of environmental quality and the built environment. This factor, therefore, includes items such as air quality, access to exercise facilities, and access to healthy food. Physical environment makes up 10% of variability in health outcomes.

Community Demographic Profile and Socioeconomic Factors Affecting Health



Demographic Profile and Socioeconomic Factors

	SURRY COUNTY	WILKES COUNTY	YADKIN COUNTY	ALLEGHANY COUNTY	NORTH CAROLINA
POPULATION	72,224	68,576	37,774	11,031	10,273,419
<ul style="list-style-type: none"> • Under 18 • Over 65 • Female 	21.4%	20.8%	21.1%	17.4%	22.4%
	20.0%	21%	19.7%	26.8%	15.9%
	51.4%	50.7%	50.6%	50.2%	51.3%
RACE					
<ul style="list-style-type: none"> • White • Hispanic • African American 	83.9%	87.3%	84%	86.8%	63.1%
	10.6%	6.5%	11.4%	9.6%	9.5%
	4.1%	4.6%	3.4%	1.9%	22.2%
EDUCATION					
<ul style="list-style-type: none"> • 25+ Years with HS Diploma 	78.3%	78.3%	79.3%	78.9%	86.9%
<ul style="list-style-type: none"> • 25+ Years with Bachelor's Degree 	16.5%	15.4%	12%	18.7%	29.9%
INCOME (Median household)	\$39,071	\$37,173	\$41,126	\$38,994	\$50,320
UNEMPLOYMENT (2017)	4.3%	4.3%	4%	5.2%	4.6%
POVERTY	16.1%	18.5%	13.4%	20.9%	14.7%
PEOPLE WITHOUT HEALTH INSURANCE UNDER 65	18.7%	18.5%	17.5%	19.7%	15.1%

Information taken from US Census Bureau: Quick Facts and NCIOM North Carolina Health Profile

Population has declined by 1% to 2% since 2010 across Surry, Wilkes, Yadkin, and Alleghany counties. The four counties of interest had 25% fewer residents with high school diplomas, and 50% fewer residents with college degrees than the state average. Surry and Wilkes counties are at or below the state unemployment rate, yet are at or above the state poverty rate, correlating with the fact that the median household income is also significantly below the state average. Alleghany County's unemployment rate, percentage of people in poverty, and median household income are all below the state average. Yadkin County, which has the closest proximity to an urban area, also has the lowest unemployment rate and highest median income of the four counties, correlating with them having a poverty rate lower than the state average. Each county has shown a decline in population under 18 and growth in population over 65. These four counties, therefore, have a less educated, older, poorer, and less well insured population than the state as a whole. These factors individually and in combination have a significant impact on the health and well-being of the population.

COMMUNITY HEALTH STATUS



Framework for Community Health Status

In order to present the data in a way that would tell a story of the community and also identify needs, the framework of Healthy People 2020 was selected to guide the assessment and evaluation of the secondary data and community input. This framework was selected based on its national recognition and mission listed below:

- Identify nationwide health improvement priorities.
- Increase public awareness and understanding of the determinants of health, disease, and disability and the opportunities for progress.
- Provide measurable objectives and goals that are applicable at the national, state, and local levels.
- Engage multiple sectors to take actions to strengthen policies and improve practices that are driven by the best available evidence and knowledge.
- Identify critical research, evaluation, and data collection needs.

Healthy People 2020 provides a comprehensive set of 10-year, national goals and objectives for improving the health of all Americans. Great strides have been made nationally during the past decade: life expectancy at birth increased; rates of death from coronary heart disease and stroke decreased. Nonetheless, public health challenges remain, and significant health disparities persist. Healthy People 2020 places renewed emphasis on overcoming these challenges as we track progress over the course of the decade. The indicators will be used to assess and compare the health of the communities we serve and to motivate action at the community level to improve the health of those communities.

Healthy People 2020 utilizes the concept of Determinants of Health, the range of personal, social, economic, and environmental factors that influence health status, to examine:

- What makes some people healthy and others unhealthy?
- How can we create a society in which everyone has a chance to live a long, healthy life?

Healthy People 2020 then provides a guideline for developing objectives that address the relationship between health status and biology, individual behavior, health services, social factors, and policies. Emphasizing an ecological approach to disease prevention and health promotion focuses on both individual-level and population-level determinants of health and interventions. The recognition that determinants of health reach beyond the boundaries of traditional healthcare and public health sectors; sectors such as education, housing, transportation, agriculture, and environment can be important allies in improving population health.

County Health Data

	SURRY COUNTY	WILKES COUNTY	YADKIN COUNTY	ALLEGHANY COUNTY	NORTH CAROLINA
INFANT DEATHS per 1000 live births	5.4	3.1	5.1	2.1	7.1
PERCENTAGE OF LIVE BIRTHS:					
Low Birthweight	7.8	8.4	9.4%	9.3%	9.1%
Premature					
Delivered by Cesarean Section	29.5%*	36.2%	29.5%*	33.2%	29.6%
Age-adjusted CANCER DEATH RATES per 100,000 residents					
Colorectal	41	39.4	34.4	32.6	37.5
Trachea, Bronchus and Lung					
Breast	157.9	121.3	142.6	141.1	160.2
Prostate	112.6	116.7	105.2	100.3	120.9
Unintentional DEATH RATES per100,000 residents					
Motor Vehicle	17.7	20.4	19.5	19.9	14.2
Excluding Motor Vehicle	38.3	53.9	45.1	47.4	34.6
HOMICIDE RATES per 100,000	3.6^	6.3	2.6^	5.4^	6.4

SUICIDE RATES per 100,000	25.2	18.2	18.9	23.5 [^]	13.3
MENTAL HEALTH EMERGENCY VISITS per 100,000 residents	2081.8*	2033.2	2081.8*	2113.8	1697.8
NUMBER OF PRIMARY CARE PHYSICIANS per 10,000 residents	7	5	3.2	4.5	7
NUMBER OF DENTISTS per 10,000 Residents	3.6	2	2.4	2.7	5
NUMBER OF PSYCHIATRISTS AND PSYCHOLOGISTS per 10,000 Residents	0.6	0.4	1.1	0.9	3.5

Data points marked with an asterisk () denote where only multi-county data was available. Data points marked with a (^) are not statistically reliable. The data points highlighted in red indicate a negative variance from the North Carolina overall rate for that particular measure. Areas of concern include the consistently high rates of colorectal and pulmonary cancers. Additionally, all unintentional death and suicide rates exceed the state average. Additionally, the dearth of primary care physicians, dentists, psychiatrists and psychologists would seem to indicate that residents of these counties may have difficulty obtaining initial entry into the healthcare system. Another area of concern is mental health emergency visits, with rates across the three counties approximately 25 percent higher than the state average. Data was extracted from NCIOM North Carolina Health Profile and NCDHHS Databook.*

Additional County Health Data

	Surry County	Wilkes County	Yadkin County	Alleghany County	NC
Health Outcomes score (out of 100)	55	80	69	59	
Years lost due to premature death per 100,000 population	8,300	9,900	8,800	8,700	7300
Adult Smoking	19%	19%	18%	19%	18%
Adult Obesity	30%	30%	33%	28%	30%
Access to exercise opportunities	49%	74%	47%	67%	76%
Diabetic monitoring	90%	89%	90%	91%	89%
Mammography screening	64%	67%	72%	69%	68%
Preventable hospital stays	69	75	68	68	49
Injury deaths	83	103	87	83	68
Drug Overdose Deaths	20	44	21	N/A	16
Healthcare costs	\$10,451	\$10,107	\$11,120	\$9,732	\$9,285
% Rural	68.80%	72.80%	84.70%	100%	33.90%

As the data from the county health rankings clearly indicates, the vast majority of measures for Surry, Wilkes, Yadkin, and Alleghany County have a negative variance from the NC level. Compounding the impact of those statistics is the fact that NC itself is considered to be in the “stroke belt” of the U.S. and North Carolina’s averages in general are poor relative to top 10% national standards and relative to current Healthy People averages and the Healthy People 20/20 goals. The end result is a predominantly rural population that has unhealthy behaviors that lead to inordinate healthcare costs and poor outcomes. All four counties overall health outcome scores places them in the lower half of the state.

The data is clear that the current model of individuals accessing care for primary treatment of acute medical problems is not adequately addressing the need for preventive healthcare such as screenings and development of healthy living behaviors nor is it managing chronic illnesses well enough to prevent unnecessary hospital stays or premature loss of life. This is consistent with the picture of the state of rural healthcare nationally.

Additionally, the suicide rate is well above the state average, and access to psychiatric care is limited (as evidenced by the ratio of psychiatrists and psychologists available). These statistics as well as the number of opioid overdoses and overdose deaths present an increasingly clear picture of a ballooning mental health crisis in these rural communities.

The unique challenges faced by healthcare providers and patients create difficult to address disparities in healthcare access and outcomes.

Factors Affecting Health



Economic Factors Affecting Health

Surry County is designated as a Tier 1 while Wilkes, Yadkin, and Alleghany County are each designated as a Tier 2 county in 2019 by the North Carolina Department of Commerce. Tier calculations are based on average unemployment rate, median household income, growth percentage in population, and adjusted property tax base per capita. 2019 is the first year in which these are the only four determining factors used. Additional ‘adjustment factors’ were used in previous years to determine the final calculations. The median household income in these counties is at least \$10,000 less than the North Carolina median, and has continued on a downward trend since the 2010 US Census. Nearly 20% of the total populations reported an income that was below the poverty level in 2014, with the largest age group living in poverty being those under the age of 18.

Surry County transitioned down from Tier 2 in 2018, with its Economic Distress Rank remaining at 34 for the second year in a row. This change in status is primarily caused by changes in the methodology used by NC General Assembly. Surry County is fortunate to have three school systems within its borders; Elkin City Schools, Mt. Airy City Schools, and Surry County Schools. Not only do the school systems provide employment for residents, but each of the school systems boasts about the quality of education it can provide. The percentage of students eligible in Surry County for free and reduced-cost lunch is below the state average, while the percentage eligible in Wilkes, Yadkin, and Alleghany counties is well above the state average. Even with this, each school system boasts graduation rates that exceed or are close to the state average.

School System	Percentage of Students Receiving Free and Reduced-cost Lunch for 2016-2017 School Year	Graduation Rates for 2016-2017 School Year
State Average	59.8%	86.5%
Elkin City Schools	43.5%	94.1%
Mount Airy City Schools	58.9%	88.4%
Surry County Schools	65.1%	90.6%
Wilkes County Schools	78.7%	88.9%
Yadkin County Schools	62.4%	88.6%
Alleghany County Schools	71.8%	86.3%

The Wilkes Journal Patriot reported on November 13, 2018 that the Wilkes Economic Development Committee cited increased job growth and inflation for the final quarter of 2018. About 3,100 jobs were filled in late 2018, primarily in front line supervision, truck driving, and nursing. Many of the trucking jobs filled were temporary jobs related to the Christmas tree industry, but there remains a shortage of truck drivers and surplus of jobs in the area. Tyson recently increased its starting pay from \$12 per hour to \$15 per hour in Davie County, and is expected to do the same in Wilkes. Wake Forest Baptist Medical Center is also raising its minimum wage from \$11.00 per hour to \$12.50 per hour. Wilkes County is also reporting its lowest unemployment rate since the recession in 2008 at 2.8% unemployed. Even with these positive developments, poverty, access to care, and large aging population contribute to severe disparities in key health indicators among Wilkes County residents. These factors combined with the degree of frequency of chronic illnesses in Wilkes County, along with a significant paucity of medical providers in conjunction with a growing population work together to present an increasingly discouraging picture of access to primary medical care in the future.

In Yadkin County, Manufacturing has taken over as the dominant industry, accounting for 19.2% of the employment sector in 2016. This is followed by Healthcare and Social Assistance (14.1%), Construction (10.3%), and Retail Trade (10.1%). Yadkin County continues to grow as a tourism destination. Domestic tourism in Yadkin County generated an economic impact of \$37.9 million in 2016, a 4.8 percent increase from 2015. Yadkin County's greatest healthcare challenge currently is that the county has no acute care hospital facility. In May of 2015, the operator of the critical access hospital abruptly ceased operations; county residents thus must travel out of the county for any necessary hospital or advanced imaging services.

Workforce development and infrastructure are two of the main issues for Alleghany county. The loss of manufacturing jobs in the early 2000's combined with a lack of access to an interstate has kept unemployment rates higher than the state average and made it difficult to attract new employers. Hugh Chatham Memorial Hospital and Wake Forest Baptist Medical Center recently joined forces to keep Alleghany Hospital open. This will help retain jobs and assure access to necessary emergency medical care.

Environmental Factors Affecting Health

Environmental Health is governed by the North Carolina Department of Environment and Natural Resources (DENR). DENR sets laws and rules concerning protection of the environment and the environment's impact on the public's health. Locally, Environmental Health enforces DENR's regulations by keeping the environment free from disease-causing germs. Each County has an Environmental Health Division of the Health Department, and their primary function is to safeguard lives by promoting health and protecting the environment with the use of rules, technology, public education, and dedication. Perhaps the most well-known of these responsibilities is the restaurant inspections; but Environmental Health also regularly inspects food stands, meat/ seafood markets, school / hospital and nursing home lunchrooms, residential care facilities, rest homes, nursing homes, hospitals, child care centers, hotels/ lodging facilities, summer camps, and public swimming pools. Water testing, lead poisoning, outbreak investigations and other complaint investigations are performed on an as-needed basis.

The overall water and air quality measurements are acquired through the North Carolina Department of Environment and Natural Resources and are monitored at the local division offices throughout the state. In NC the overall rate of drinking water violations is 2% in 2014, there were no violation noted in Surry or Wilkes Counties. Yadkin County recorded a 2% violation rate. Water testing occurs on both public, municipal systems as well as testing of private wells.

<u>Air Quality Index Range</u>	<u>Classification</u>	<u>Surry County</u>	<u>Wilkes County</u>	<u>Yadkin County</u>	<u>Alleghany County</u>
0-50	Good	98.86%	98.34%	96.91%	n/a
51-100	Moderate	1.14%	1.66%	3.01%	n/a
101-150	Unhealthy for Sensitive	0	0	.8	n/a
151-200	Unhealthy	0	0	0	n/a
201-300	Very Unhealthy	0	0	0	n/a
> 301	Hazardous	0	0	0	n/a

Lead Hazards

Prevent Childhood Lead Poisoning

Exposure to lead can seriously harm a child's health.

Damage to the brain and nervous system

Slowed growth and development

Learning and behavior problems

Hearing and speech problems

This can cause:

- Lower IQ
- Decreased ability to pay attention
- Underperformance at school

The infographic features a teal header with the title 'Prevent Childhood Lead Poisoning'. Below the header is a red banner with the text 'Exposure to lead can seriously harm a child's health.' The main content area has a light blue background with vertical stripes. It contains four circular icons: a brain, a child's silhouette with a growth chart, a child reading a book, and a child's head with sound waves. Below these icons are four text labels. To the left of the bottom section, there is a list of consequences under the heading 'This can cause:'. To the right, there is a silhouette of four children standing on a white oval.

Lead Poisoning Investigation

Environmental Health Specialists perform lead poisoning investigations when a child under six years of age has an elevated blood lead level. Healthcare providers are asked to test all children under six years of age for high blood lead levels for early detection. 2% of area homes have a high risk of lead hazards. The primary source is residual lead paint due to the age of the homes in this region. When a source of lead is found, Environmental Health Specialists work with the parents or guardians to remove the source of the lead poisoning.

Social and Physical Factors

Social determinants of health reflect the social factors and physical conditions of the environment in which people are born, live, learn, play, work, and age. Also known as *social and physical determinants* of health, they impact a wide range of health, functioning, and quality-of-life outcomes.

Examples of *social determinants* include:

- Availability of resources to meet daily needs, such as educational and job opportunities, living wages, or healthful foods
- Social norms and attitudes, such as discrimination
- Exposure to crime, violence, and social disorder, such as the presence of trash
- Social support and social interactions
- Exposure to mass media and emerging technologies, such as the Internet or cell phones
- Socioeconomic conditions, such as concentrated poverty
- Quality schools
- Transportation options
- Public safety
- Residential segregation

Examples of *physical determinants* include:

- Natural environment, such as plants, weather, or climate change
- Built environment, such as buildings or transportation
- Worksites, schools, and recreational settings
- Housing, homes, and neighborhoods
- Exposure to toxic substances and other physical hazards
- Physical barriers, especially for people with disabilities
- Aesthetic elements, such as good lighting, trees, or benches

Poor health outcomes are often made worse by the interaction between individuals and their social and physical environment. For example, millions of people in the United States live in places that have unhealthy levels of ozone or other air pollutants. In counties where ozone pollution is high, there is often a higher prevalence of asthma in both adults and children compared with state and national averages. A strategic focus on the environment is vital.