

2019



Yadkin County
come for a visit, stay for a lifetime

Community Health Assessment

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Acknowledgments

The Yadkin County Human Services Agency would like to thank all those parties who were beneficial to completing the 2019 Community Health Assessment process, including the individual members of the Yadkin Coalition, who served as the 2019 Community Health Assessment Team. Those members include:

Amber Jackson	Elisa Bryant	Lindsay Jordan
Amber Waddell	Jeff Eads	Mavis Moore
Amie Rose	Jesse Stroud	Natalie Williams
Beth Brooks	Jessica Wall	Regina Propst
Bobby Todd	Max Evington	Rochelle Mason
Carolyn Choplin	Kelly Teague	Tina Love
Chris Wittlinger	Kristin Slate	Mike Wall
Dane Mastin	Lindsay Huttar	Wanda Burger

Through CHA team involvement or other support in disseminating the survey and eliciting involvement and input, we would like to acknowledge the following agencies:

A Still Water Counseling & Training	Partners Behavioral Health
Alpha Acres	Smart Start of Yadkin County
Branon Friends Meeting	Southern Family Medicine
Daymark Recovery Services	Swan Creek Baptist Church
NC DHHS - Vocational Rehabilitation	The Yadkin Ripple
East Bend Friends	Yadkin County Chamber of Commerce
Yadkin Medical Clinic	Yadkin County Libraries
Impact Carolina	Yadkin County Schools
Insight Human Services	Yadkin County Senior Centers
Jodi Province Counseling Services	Yadkin Family YMCA
Jonesville Police Department	YVEDDI - Head Start
Migrant Head Start	YVEDDI - Transportation

Executive Summary

Every local health department in agreement with the NC Division of Public Health through the annual Consolidated Agreement must complete a county-wide Community Health Assessment (CHA) every four years. In the years between Community Health Assessments, each county must complete a smaller State of the County Health (SOTCH) report, reviewing and updating progress made on top priority issues from the most recently completed CHA. The CHA and the State of the County Health report are both part of a county's accreditation requirements and are also important in a department's annual program planning efforts. These reports and the research and work that goes into each, allows the department to closely look at those health issues that are affecting the lives of their residents and also allows the department to lead efforts on tackling these issues.

The 2019 report includes the process in which we collected and analyzed data, as well as how we chose our priority areas. The report includes data from both the survey results themselves, along with data on Yadkin County health statistics from secondary sources. Also found within this report is an overview of the prevention and health promotion needs and resources within our community. Lastly, this report will demonstrate what the agency feels the top concerns or priorities are and the plan for intervention over the next four years. According to the County Health Rankings and Roadmaps, in 2019, Yadkin County was ranked 48th out of North Carolina's 100 counties in terms of health outcomes. Of the areas that are measured by the Rankings, the factors that had the biggest impact on the County's overall score were physical environment, quality of life and clinical care. The community was most concerned about drug use and low income and poverty, with 46% and 28% of residents listing this as an issue, respectively. Other areas of concern included: pollution/environmental concerns, depression/helplessness, lack of community support and child abuse/neglect.

Yadkin County does not have a hospital, as this closed in 2015 and has not re-opened. There are not any specialty providers located within the boundaries of the County. The County does still have two urgent care facilities. The County's health care market focuses on short term and acute care, with long term, chronic and specialized care being found in the surrounding counties.

The primary data, secondary data, and characteristics of health care in Yadkin County point to the main concerns of residents. These, in turn, provide us with a direction to head when planning for improvements in the future including the implementation of evidence based programs. Topics of the highest concern were: substance abuse, mental health/stress management, physical health/chronic disease. After the review of the data and selection of the priority areas, the Yadkin Coalition reviewed and listed many potential evidence based interventions that could be utilized to address these community concerns. The interventions include one-on-one counseling such as KidPower or Prime for Life and group interventions such as Second Step, Too Good for Drugs, of Tai Chi for Diabetes. There were also evidence based trainings discussed such as QPR or Mental Health First Aid.

Community Collaboration

The 2019 Yadkin County Community Health Assessment process included 25 CHA team members, 24 community agencies and a gathering of 265 completed community health surveys. These people, agencies, and survey responses, along with secondary data research, provide the information included in this report.

A major component of the CHA process is the CHA team. This year's team consisted of over two dozen members, representing multiple community agencies from a variety of agency types. The process of building the CHA team began with the work of building a local Coalition to address issues that affect health and wellness, namely the substance abuse issue the community was seeing. Insight Human Services approached the Yadkin County Human Services Agency about assisting with the establishment of this group. In the early planning meetings, the Human Services Agency pledged their support and requested that one of the first activities of the Coalition be work on the CHA as the CHA team.

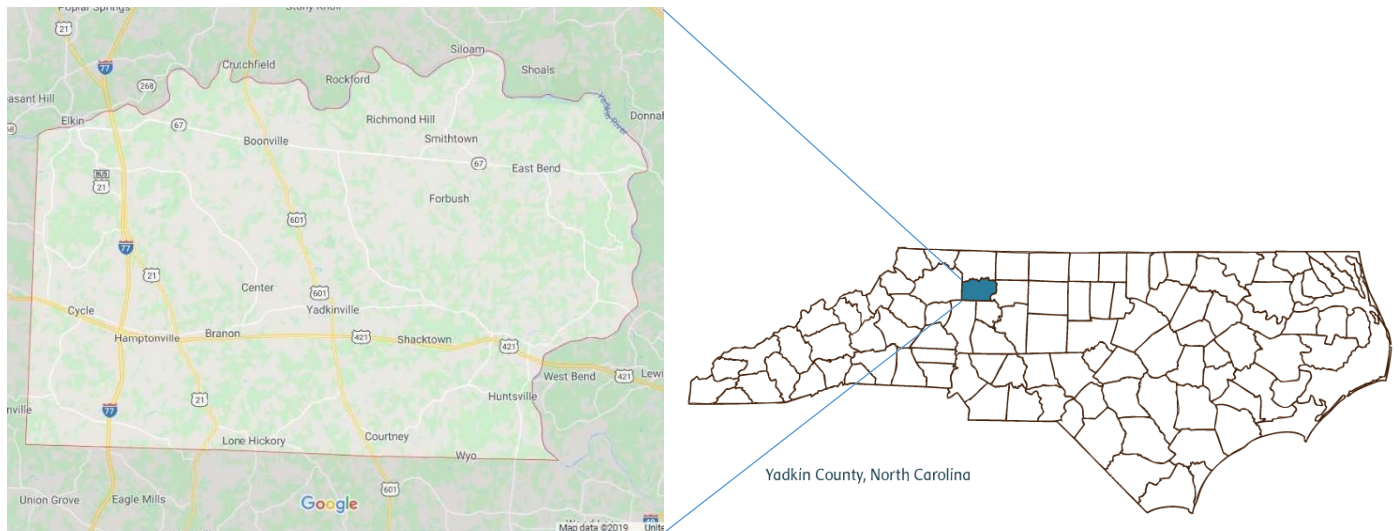
The first meeting was February 12th, where the concept of the CHA was introduced. At the second meeting on March 12th, the team was given information about what the CHA was, the process, and their involvement. They were given a timeline of their involvement throughout the process. During this meeting, the gathered members agreed to serve as the CHA team and assist with the process throughout the year. The coalition agreed to use the data from the CHA report, and the corresponding top priorities as their guide throughout their first efforts. The first business regarding the CHA by the Coalition members was at the April 9th meeting. During this meeting, Coalition members reviewed the provided sample CHA survey and made any changes they felt would be best for our community. These included adding vaping to the tobacco questions, changing "sexual education" to "pregnancy prevention", and adding an additional question asking if respondents were familiar with the Good Samaritan law. The team also provided feedback for the survey collection process including who to target, where and when. They all agreed to complete both paper and electronic surveys. The final draft was brought to the second meeting on May 14th. During this meeting the Coalition agreed on the final version of the survey tool. The Coalition also formalized the plan for collecting surveys. Survey collection began on June 12th. At the August 13th meeting, the team was given a presentation on where we were with data collection, specifically covering the demographics and what we still needed. The team assisted in determining ways to target missing demographic groups. They also provided feedback on ways to collect primary data.

Primary data was collected through a variety of means. The survey was available in both hard copy and electronically via a SurveyMonkey link. The survey was available in both English and Spanish. The link was distributed to Yadkin County employees, Yadkin County schools, the Yadkin County Chamber of Commerce and many community partner agencies through the sharing of the link to members of the Early Education Advocacy Group. Hard copies and table tents were put out at all four public libraries within the County. Hard copies were also distributed to all medical facilities, the local free clinic, and the local branch of the YMCA. Unlike other CHA survey collection efforts, the agency did not set up at community events. The agency has learned over time that this is not an efficient or effective way to collect survey responses. The agency was also supported by three local churches who agreed to collect hard copies of surveys or include the link in their weekly bulletin.

At the October meeting, the team was given the final primary and secondary data. From this, they were also given the areas that Yadkin County consistently did not compare to our peer counties or the state. The team had a discussion about which of these areas they felt could be successfully targeted over the next four years through the work of the Coalition. The group discussed that not all interventions need to be led by the Human Services Agency or the Coalition. The Coalition discussed determining agencies and groups that were already doing some work and assisting and supporting them in their efforts. The targeted areas were decided to be: substance abuse, mental health/stress management, physical health/chronic disease. In January 2020, the team reviewed the final CHA report and made a recommendation to present to the Board of County Commissioners for final approval.

Demographic Profile

Yadkin County is located in the northwest Piedmont region of central North Carolina. The region consists of rolling farmlands which are frequently broken by hills or valleys formed by streams. Yadkin County marks the eastern end of the Brushy Mountains range; and, the Yadkin River forms the county's northern and eastern borders. The nearest metropolitan area is Winston-Salem, NC which is located 20 miles to the east. The county is 75 miles north of Charlotte, NC and 134 miles west of Raleigh, NC. Yadkin County is bordered on the north by Surry County, east by Forsyth County, west by Wilkes County, and on the south by both Davie and Iredell counties. There are four municipalities in Yadkin which include: East Bend, Jonesville, Boonville, and Yadkinville, which serves as the county seat. There are two major highways and one major interstate which run through Yadkin County. Interstate 77 runs north-south in the western region of the county. Highways 421 and 67 run east-west through Yadkin County. Highway 421 runs through Yadkinville, NC from Winston-Salem to Boone, NC. Highway 67 runs through East Bend and Boonville, NC from Winston-Salem to Jonesville, NC (Google, 2019).



Yadkin County does not have an organized mass transit system that may be found in larger metropolitan areas. The county is closely located to two passenger service airports which are Piedmont Triad International Airport in Greensboro, NC and Charlotte-Douglas International Airport in Charlotte, NC. There is also a publicly owned general airport in Winston-Salem, NC, Smith-Reynolds Airport. The closest bus and train stops are located approximately 25 miles away in Winston-Salem, NC. Medicaid patients may apply for non-emergency Medicaid transportation, though not every type of Medicaid has coverage. If a client has a personal vehicle or a relative or friend can assist, Medicaid can provide a gas voucher or mileage reimbursement. If a client has no means of transportation or requires a lift, the client can be scheduled transportation for Medicaid covered services. There are three companies providing van transportation. One of which is phasing into ambulance transports only. It's important to note that this is an additional service over and beyond Medicaid and not everyone is eligible. This is based on the type of Medicaid the client has.

The physical area of Yadkin County is approximately 334.83 square miles (Bayley, 2006). The elevation of the county is 875 feet above sea level. The climate in Yadkin County is relatively mild, with an average

monthly maximum temperature around 68.5 degrees. The average monthly minimum temperature is 44.4 degrees. The average monthly precipitation is 4.1 inches (State Climate Office of NC, 2019).

From the official Yadkin County Chamber of Commerce website (Yadkin County Chamber of Commerce, n.d.):

“Named for the river that marks its northern and eastern boundaries, Yadkin County was formed in 1850 from parts of adjacent Surry County. The current population stands at 36,348 and continues to grow. Yadkinville, the County Seat, was formed in 1857 and has a current population of around 2,800.

Originally a farming community, flue cured tobacco was the major cash crop grown in Yadkin County. As tobacco use declines, production of other crops continues to increase. Vineyards are now producing grapes to be used in winemaking. The first winery opened in 2000, and currently Yadkin County is home to 14 producing wineries, the largest concentration in the state of North Carolina. The Yadkin Valley Wine Region was the first and remains the largest federally designated wine producing region, or appellation, in North Carolina. Wines such as Chardonnay, Cabernet Sauvignon, Merlot, Viognier, and Chambourcin are winning medals in competitions throughout the nation.”

“While it began as an agricultural center and remains primarily rural in character, today the county combines a farming economy with growing industrial development. Industrial growth was slow in coming to Yadkin due to the decision in 1871, 1885, and again in 1908 to not allow the railroad into the County. Highway infrastructure later allowed growth to take place, and now Yadkin County has a healthy mix of manufacturing operations. Unifi Inc., is the county's largest firm, with over 1,000 manufacturing employees. Unifi also manufactures Repreve®, a 100% recycled fabric made from discarded water bottles. Also, Lydall Thermal Acoustical supplies metal and fiber problem solving solutions to the automotive market and Phillips-Van Heusen Apparel Group operates a huge "state of the art" distribution facility in Yadkin County. Additionally, resources such as plastics, metalworking, automotive components, food production, and textile companies add to the manufacturing base.”

Socioeconomic, Educational, and Environmental Factors

From the 2019 US Census QuickFacts data, we find that Yadkin County has 37,543 residents. This is just over a 2.5% decrease since the population was reported in the 2015 Community Health Assessment. Some notable population data points are that 20.8% of the population is under the age of 19 (5% decrease) and 20.2% are over the age of 65 (4% increase). The two largest race groups in the county are White at 93.9% and Black/African American at 3.5%. The County has a population of 11.2% Persons of Hispanic or Latino origin. These differ from state data which are 70.6%, 22.2%, and 9.6% respectively (United States Census Bureau, 2019). Further investigation of US Census data from 2019 finds that 8.9% of the county's population speaks a language other than English in the home. The high school graduation rate is 81%, however, only 11.3% of the population has gone on to achieve a bachelor's degree or higher. Both of these areas have seen a 2% increase since these numbers were last reported in the Community Health Assessment. According to data from the NC Child 2018 Yadkin County Data Card, 60% of third graders are reading at grade level (NC Child, 2019).

The NC Child Data Card goes on to provide other economic factors including that 59.7% of children are living in poor or low income homes and 25% live in households that are food insecure. The NC Department of Commerce also has educational and economic information regarding Yadkin County, which they share in their ACCESS NC reports. The most recent report from December 2019 shows that the average SAT scores, out of a 1600 new scale, to be 1069, with 25% of graduates taking the SAT. This report also shows the median household income in Yadkin County is \$46,885, which is a \$5,000 increase since the last Community Health Assessment. Most of the employers in Yadkin County are in the private sector, with manufacturing being the largest employer in the county. For 2018, the annual unemployment rate was 3.4%, a 2% decrease, and the year-to-date unemployment rate at time of submission was 3.2%. In 2017, they list the estimated population with income below poverty at 13.4% (NC Department of Commerce, 2019).

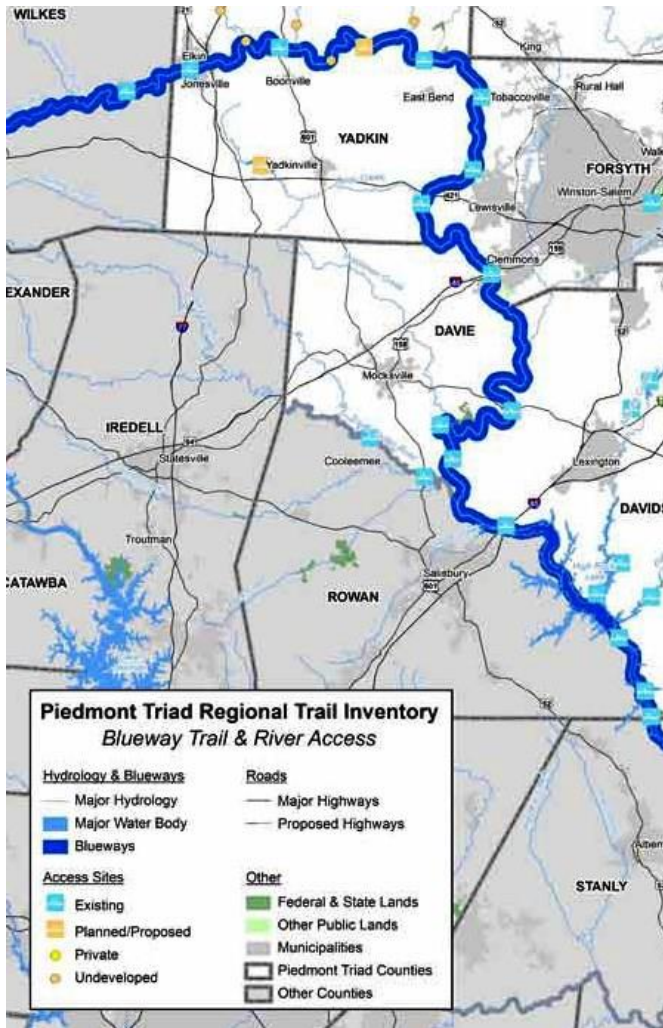
Health facilities and Other Key Structures

According to the Yadkin County Parks and Recreation website, the Yadkin County Parks and Recreation Department was established in 1972 with the goal of providing activities, events, and facilities to meet the needs of the people of Yadkin County. Today the Parks and Recreation Department has grown to include four unique parks and a blueway with three river access points. Future planning for parks and trails continues to be a priority (Yadkin County Government, n.d.).

The Yadkin County Park facility offers: walking/jogging trail, nature trail, outdoor volleyball, fishing, playground, ball fields (baseball/softball/soccer), swimming (seasonal), and disc golf. Amenities include an outdoor pool, large shelter, walking/jogging trail, nature trail, amphitheater, fishing pier, large playground, ample parking, two baseball/softball fields, six soccer fields, disc golf course, dog park for large and small dogs, and bathrooms.

The new Yadkin Memorial Park facility includes a walking/jogging trail, a playground, boating access (non-gas powered), fishing, and waterfowl hunting. The park provides kayaks and john boats for rent during the spring and summer months. The park amenities include two shelters (one large, one small, available for rent), boat ramp, two fishing piers, six duck blinds, playground, picnic tables/charcoal grills, ample parking, restrooms, and paved trail. In addition, since the 2015 CHA report, the Parks and

Recreation department has added a little over two miles of walking trails through the woods at Lake Hampton. All trails there are on the All Trails and Piedmont Legacy Trails app. The facility includes a universally accessible kayak/canoe launch, which is only two years old. The county will soon begin phase two of Memorial Park. This includes a primitive campground with a bath house, new small shelter to rent for parties, a dog park, a new entrance on the north side of the lake that will have a small bathroom and a disc golf course. A trail extension to continue around the lake will add a little over a mile of trail there as well. The department is also adding onto the playground with a wheelchair accessible merry go round, panels, and pour in place surfacing. At the county park, in Yadkinville, the department just finished adding a new soccer field and baseball field. The department also extended the disc golf course to a 24-hole course. The playground there will also be getting some much needed sun shade.



The Yadkin River Trail is a Blueway Trail. A blueway or water trail is a water path or trail that is developed with launch points, camping locations and points of interest for canoeists, paddle boarders and kayakers. Blueways are typically developed by state, county or local municipalities to encourage recreation, ecological education and preservation of wildlife resources. The Yadkin River is designated as a State Blueway Trail and includes High Rock Lake, Tuckertown Reservoir and Lake Tillery, with a connected series of river access points from Wilkes County to Montgomery County, including four in Yadkin County (Shoals, Donaha, Huntsville, and Shore). Yadkin County maintains three river access sites on the Yadkin River: Donaha Yadkin River Access, Shores Yadkin River Access, Huntsville Yadkin River Access.

The Parks and Recreation department also host special yearly events such as baseball tournaments, and occasional disc-golf tournaments. The department also sponsors some league athletics such as youth soccer and youth self-defense classes.

The County also has a local branch of the YMCA. According to their website, "The Yadkin

Family YMCA has served the local community since 2001 and offers a wide range of programs for the whole family including swim lessons and camps, as well as a comprehensive Wellness Center with on-duty staff, group exercise programs, and SilverSneakers® classes." Their facilities include a gym with multiple courts, racquetball court, cross training space, and both an indoor and outdoor pool.

Primary and Secondary Data Collection

Primary data regarding the health status of residents of Yadkin County comes from the 2019 Yadkin County Health Assessment, which was implemented from June 2019 to November 2019. There were 265 surveys completed. In order to obtain an overall synopsis of major health and community issues present in Yadkin County, survey questions aimed to capture a variety of aspects that affects one's health and quality of life. Areas of focus included residents' opinions on community improvement, personal health, both physical and mental, as well as access to care and emergency preparedness.

To best assess our county, our data collection process also included secondary data research. This included researching data from various agencies and websites. Agencies accessed in researching the secondary data include: Center for Disease Control and Prevention, March of Dimes, US Department of Health and Human Services, and the National Cancer Institute. Other sources of information include the NC State Center for Health Statistics and the County Health Rankings database. Topics searched in the secondary data research related to the topics in which questions were asked of the survey respondents. This allowed for a comparison of the local data and perspectives to our peer counties and the state. For purposes of this report and to allow for a comparable comparison, we selected Davie and Stokes County as our peers. We chose these counties because they are within our Local Health Directors region and are geographically similar to Yadkin County, as well as have a comparable demographic makeup.

Community Concerns

The County Health Rankings and Roadmaps is an annual report produced by the collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute. This program utilizes county-level data to rank each county within the state based on health outcomes and factors that affects the overall health status of county residents. In 2019, Yadkin County was ranked 48th out of North Carolina's 100 counties for its overall ranking in health outcomes; with quality of life primarily influencing this poor ranking.

When determining a county's health outcome ranking, length of life and quality of life (poor or fair health, poor physical health days, poor mental health days, and low birthweight) are taken into consideration. Yadkin County is fairing much worse when it comes to quality of life (ranked 64) in comparison to our peer counties, Davie (ranked 16) and Stokes (ranked 18).

The 2019 Community Health Assessment survey sought feedback on the quality of life in Yadkin County. When residents were asked about their quality of life in the past 30 days, 21% or one in five reported they experienced days of feeling sad or worried that kept them from going about their normal business. When surveyed about any physical pain or health problems, 32% of respondents stated they had experienced poor physical health days that made it difficult to participate in usual activities in the past 30 days.

Community members were also asked to weigh in on the following six statements concerning the quality of life in Yadkin County. Respondents were invited to circle the number that best represented their opinion for each statement, with one being strongly disagree and five being strongly agree. For purposes of this report, those that selected disagree or strongly disagree have been combined together as a percentage and those that agreed or strongly agreed have been consolidated as one percentage.

	Disagree / Strongly Disagree	Neutral	Agree / Strongly Agree
There is good healthcare in Yadkin County.	51.3%	25.2%	23.5%
Yadkin County is a good place to raise children.	11.3%	18.1%	70.6%
Yadkin County is a good place to grow old.	21.4%	20.2%	58.4%
There is plenty of economic opportunity in Yadkin County.	65.6%	15.6%	18.9%
Yadkin County is a safe place to live.	5.9%	21.0%	73.1%
There is plenty of help for people during times of need in Yadkin County.	20.6%	21.0%	58.4%

While a majority of community members feel that Yadkin County is a safe place to live, and a good place to raise children and grow old, many citizens disagree or strongly disagree that there is plenty of economic opportunity in Yadkin County. Survey respondents also did not feel there is good health care in the county. When asked where they go most often when sick, 38% of respondents reported they go outside of the county for medical care.

When surveyed about their access to health care in the past 12 months, 10.2% of respondents reported having issues getting the health care either they or a family member needed. The most commonly selected facilities or providers where they had issues were dentist (39%), general practitioner (35%), and eye care/optometrist (19%); with pharmacy (12%) and OB/GYN (12%) tied in fourth. No health insurance (31%), deductible or co-pay was too high (23%), and doctor would not take their insurance (19%) were the most commonly cited problems that prevented individuals from accessing the health care they needed.

Residents were solicited for feedback on problems, issues, and services that they felt needed the most community improvement. Respondents were asked to select the three community issues from a list of 15 that most affect the quality of life in Yadkin County. Top three responses included drug use (illicit and prescription), low income/poverty, and lack of or inadequate health insurance, with child abuse and neglect a close fourth.

Respondents were asked to identify which services need the most improvement in their neighborhood or community. The most frequent concerns were higher paying employment, availability of employment and employment resources, and positive teen activities.

From a list of 22 health behaviors, survey respondents were asked about which health behaviors they themselves or they felt people in the community need more information about. Substance abuse prevention for alcohol, drugs, and prescription medications was the most frequently cited behavior; followed by eating well and stress management.

Mortality

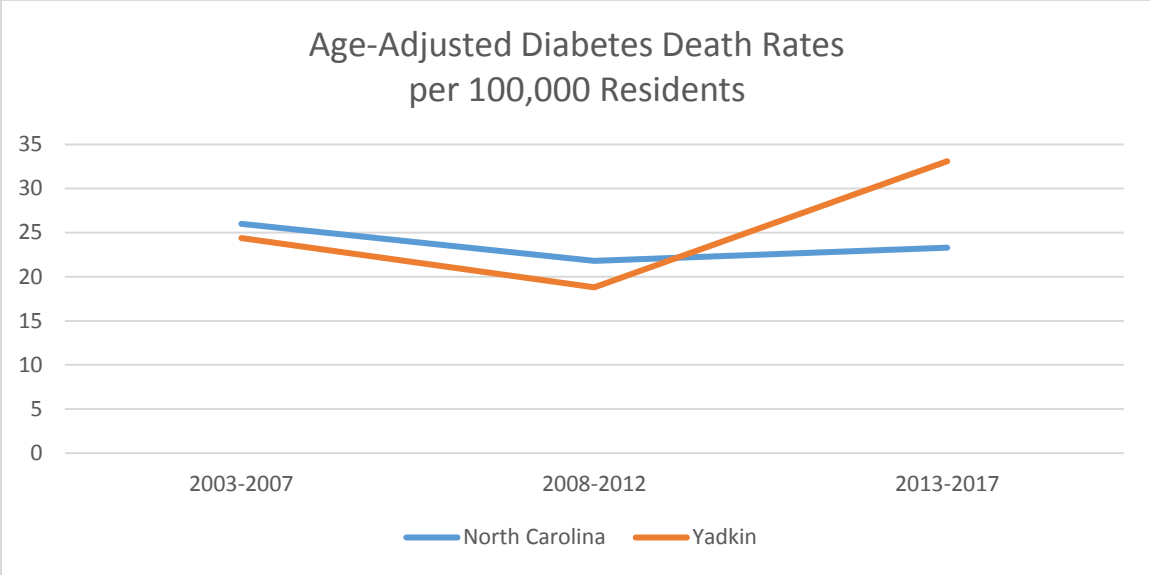
The State Center for Health Statistics of North Carolina assembles the top 10 causes of death for various age groups. Yadkin County's top 10 causes of death for all age groups show that cancer and heart disease continues to reside at the top of the list. This has been consistent for a number of years.

**2014-2018 Death Rates for the Leading Causes of Death
Yadkin County vs. North Carolina
Age Group: Total for All Ages**

Cause of Death	Deaths (Yadkin)	Yadkin Co. Death Rate	NC Death Rate
Cancer – all sites	469	249.0	191.6
Diseases of the heart	456	242.1	181.9
Chronic Lower Respiratory Diseases	163	86.6	52.1
Cerebrovascular Disease	131	69.6	48.9
Alzheimer's Disease	99	52.6	39.4
Other Unintentional Injuries	96	51.0	38.6
Diabetes Mellitus	91	48.3	27.9
Pneumonia & Influenza	70	37.2	19.7
Septicemia	49	26.0	*
Nephritis, nephrotic syndrome, & nephrosis	44	23.4	18.9

(NC Department of Health and Human Services, 2019)

The top eight leading causes of death in Yadkin County mimic those of the state. Septicemia and Nephritis finish out the top ten leading causes of death for Yadkin County residents among all ages. Note that Septicemia has an asterisk listed for NC death rate, as this condition is not listed as a leading cause of death among North Carolinians. During the 2015 Community Health Assessment, it was reported that Yadkin County's death rate was better than the state for Alzheimer's disease and diabetes. During review of the secondary data for the 2019 CHA, statistics show that Yadkin has a higher death rate in all leading causes of death as compared to the state rate. It is important to note that since the 2015 CHA, the death rate for Alzheimer's disease and diabetes has doubled in Yadkin County. In 2015, the Alzheimer's death rate was 24.9 and the diabetes death rate was 21.1 per 100,000 Yadkin County residents. This increase may be attributed to our aging population; with 20% of Yadkin County's population being 65 years or older (United States Census Bureau, 2019).



(NC Department of Health and Human Services, 2019)

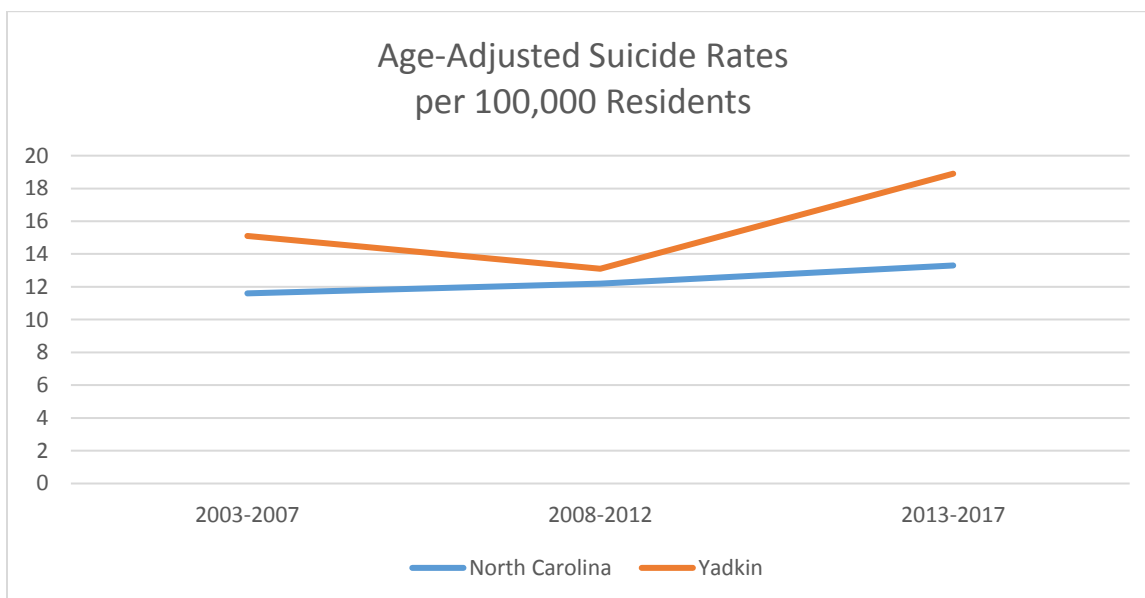
When reviewing the secondary data around death rates for the different age groups, it is easy to note some discrepancies between Yadkin County and North Carolina’s rates. There are instances where our top five causes of death in the various age groups do not align with the state and one can see that Yadkin is experiencing certain causes of death at a greater rate in comparison to the state.

Top 5 Leading Causes of Death per Age Group, 2014-2018			
Cause of Death	Deaths (Yadkin)	Yadkin Death Rate	NC Death Rate
0-19 years			
Conditions originating in the perinatal period	3	6.8	17.8
Motor Vehicle Injuries	3	6.8	6.0
Suicide	3	6.8	3.0
Cancer – all sites	2	4.5	2.1
Congenital Anomalies (birth defects)	2	4.5	6.9
Other Unintentional Injuries	2	4.5	4.4
20-39 years			
Other Unintentional Injuries	22	54.5	36.6
Suicide	12	29.7	15.8
Motor Vehicle Injuries	11	27.2	19.2
Cancer – all sites	5	12.4	10.1
Diabetes Mellitus	5	12.4	2.7
40-64 years			
Cancer – all sites	128	190.5	167.5
Diseases of the heart	94	139.9	116.3
Other Unintentional Injuries	30	44.6	38.0
Diabetes Mellitus	29	43.1	25.7
Cerebrovascular Disease	22	32.7	21.4
Chronic Lower Respiratory Diseases	22	32.7	26.3

65-84 years			
Cancer – all sites	260	808.4	768.8
Diseases of the heart	194	603.2	582.3
Chronic Lower Respiratory Diseases	97	301.6	226.4
Cerebrovascular Disease	67	208.3	160.1
Alzheimer’s Disease	48	149.2	105.9
85+ years			
Diseases of the heart	166	3933.6	3491.4
Cancer – all sites	74	1753.6	1602.6
Alzheimer’s Disease	51	1208.5	1395.2
Chronic Lower Respiratory Diseases	44	1042.7	691.6
Cerebrovascular Disease	42	995.3	1108.0

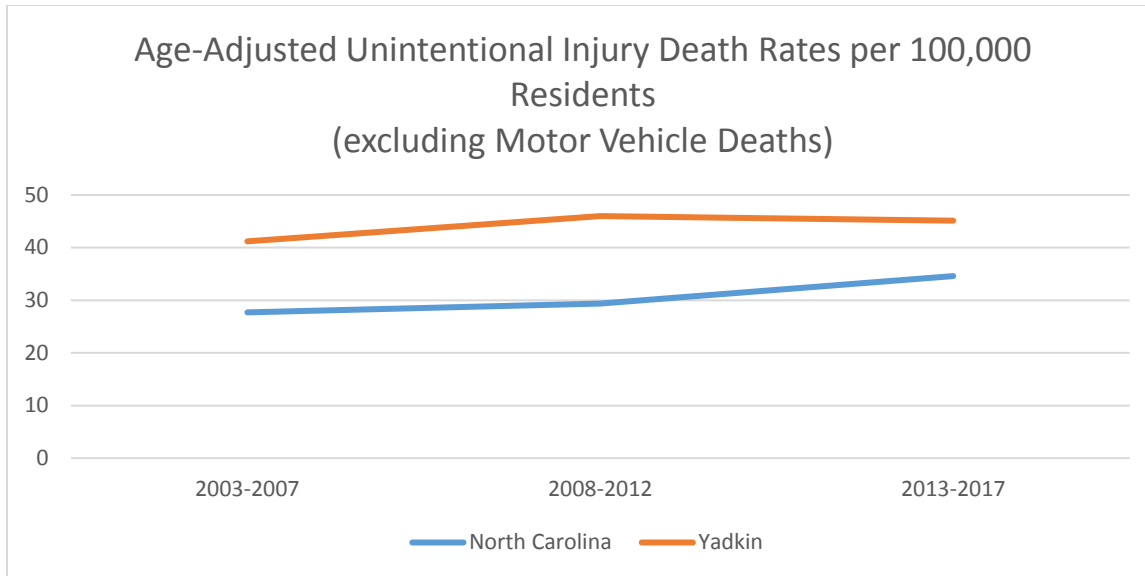
(NC Department of Health and Human Services, 2019)

The suicide rate for Yadkin County is at an all-time high. This is especially a grave concern among those aged 20-39, as presented in the chart above. Individuals between the ages of 20-39 are committing suicide at a rate of 29.7 per 100,000 residents; nearly twice that of the state at 15.8 and more than three times that of the Healthy NC 2020 goal of 8.3 (North Carolina Institute of Medicine, 2011). Suicide is also an issue among some of our youngest residents. Those aged 0-19 years are committing suicide at a rate of 6.8 per 100,000 residents; which is also twice the state rate of 3.0 for this age group.



(NC Department of Health and Human Services, 2019)

Deaths caused by unintentional injuries continues to be an issue in Yadkin County. It is listed as one of top five leading causes of death among the following age groups: 0-19, 20-39, and 40-64. The graph below demonstrates just how much of a disparity this has been for Yadkin County as compared to the state over the last 16 years.



(NC Department of Health and Human Services, 2019)

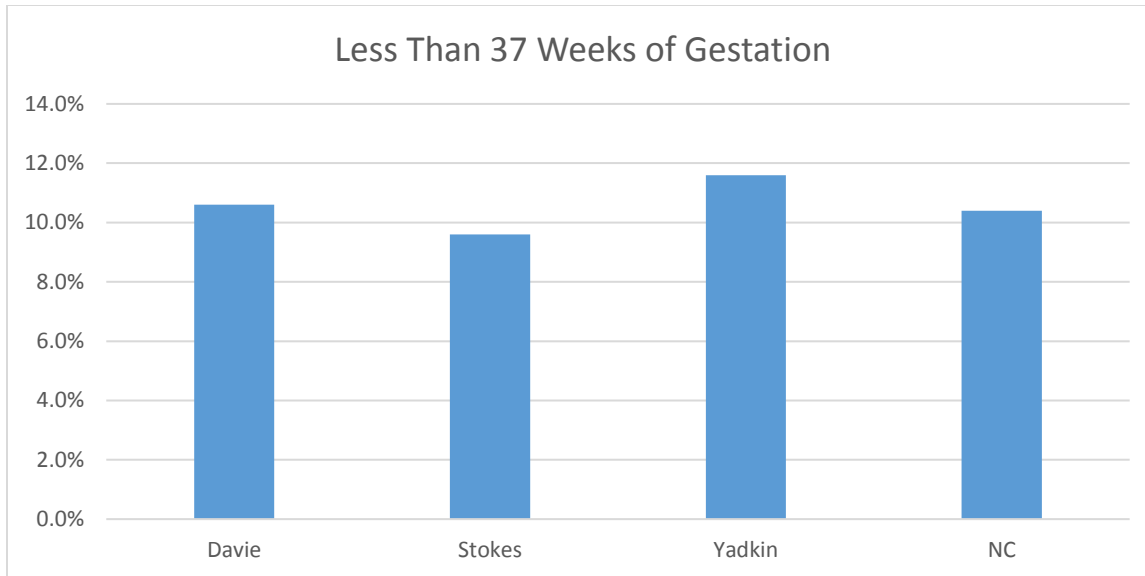
Maternal and Child Health

In 2018, there was a total of 363 births to Yadkin County residents. Of those births, 67.5% of the women sought prenatal care during their first trimester (NC Department of Health and Human Services, 2019). It is beneficial for expecting mothers to seek prenatal care early, as early care is linked to positive birth outcomes.

When care begins later during pregnancy, the infant is more susceptible to negative or unfavorable birth outcomes. Negative health implications of newborns are also associated with the mother's habits during pregnancy. Smoking during pregnancy can have harmful effects on both the mother and fetus. The North Carolina State Center for Health Statistics reported that 16.8% of Yadkin County women smoked during pregnancy in 2018. Smoking during pregnancy may contribute to low or very low birth weight, as well as preterm delivery.

When an infant is born at a low or very low birthweight, this can result in serious health concerns (March of Dimes, 2018). Such implications include bleeding in the brain, heart complications, respiratory distress, as well as intestinal and eye problems. Babies born with a low or very low birthweight are also more susceptible to disabilities like mental retardation, cerebral palsy, vision and hearing loss, or even death (March of Dimes, 2018). This can even have health implications that appear later in life; such as diabetes, heart disease, high blood pressure, obesity and metabolic syndrome. Of the 363 births to Yadkin County residents in 2018, 0.8% of infants were born at a very low birthweight (≤ 3.3 lbs.) and 9.6% of infants were born at a low birthweight (≤ 5.5 lbs.) (NC Department of Health and Human Services, 2019).

A premature birth is defined as a birth that takes place before the start of the 37th week of gestation (March of Dimes, 2018). In 2018, the North Carolina State Center for Health Statistics indicated that 11.6% of births were preterm.



(NC Department of Health and Human Services, 2019)

In comparison to Davie, Stokes, and the state, Yadkin County has a slightly higher percentage of women not carrying to a full term of 37+ weeks of gestation.

Teen Pregnancy Rates

The 2018 pregnancy rate among teens aged 15-19 in Yadkin County fell 23% from 2017. This is a vast improvement from the prior year. In 2017, the teen pregnancy rate in Yadkin County was 46 pregnancies per 1,000 teen females. The chart below shows the breakdown of teen pregnancy statistics. There were too few pregnancies among racially diverse teens in Yadkin County (<20 pregnancies), so those rates are not reported here.

2018 Teen Pregnancy Rates

	Yadkin County	North Carolina
Number of pregnancies among 15-19-year-old girls:	38	
Teen pregnancy rate per 1,000 15-19-year-old girls:	35.2	24.6
Teen pregnancy rates by race/ethnicity: white	34.7	16.1
Teen pregnancy rates by age: 18-19 year olds	74.5	44.0
Number of pregnancies among 15-17-year-old girls:	10	
Number of pregnancies among 18-19-year-old girls:	28	
Percent of Repeat Pregnancies:	26.3%	21.8%
Teen birth rate per 1,000 15-19-year-old girls:	28.7	
NC County Ranking (out of 100 counties):	19	
Change since 2017:	-23%	-8%

(Sexual Health Initiatives For Teens (SHIFT), n.d.)

While the 2018 teen pregnancy rates are an improvement from the previous year, the chart illustrates that Yadkin County still has a higher rate as compared to the state.

Youth

The adolescent years are critical for the current and future health of teens. Having good health facilitates youth to learn and grow. While teenagers are typically healthy, mental health, substance use, obesity, and risky sexual behaviors are common challenges for youth (Office of Population Affairs, 2019).

The aforementioned health concerns can have long-term effects. Fortunately, they can often be prevented through supportive relationships and healthy communities. Positive teen activities was a service that residents felt needed improvement in our community.

According to the County Health Rankings and Roadmaps, 19% of Yadkin County teens and young adults aged 16-19 are neither working nor in school. This group is known as disconnected youth. This vulnerable population is at an increased risk of violent behavior, smoking, alcohol consumption and marijuana use. They may also have emotional deficits and less cognitive and academic abilities than their peers who are working and/or in school (Robert Wood Johnson Foundation, & University of Wisconsin Population Health Institute, 2019). This is quite worrisome, as Yadkin County has the second highest percentage in the state. The overall percentage of disconnected youth in the state of North Carolina is 7%.

Yadkin County residents were surveyed on which health topics they feel that youth in the County need more information about. Top three responses for this question were drug abuse, tobacco/vaping/e-cigarettes, and mental health; with bullying and pregnancy prevention being a relatively close fourth and fifth.

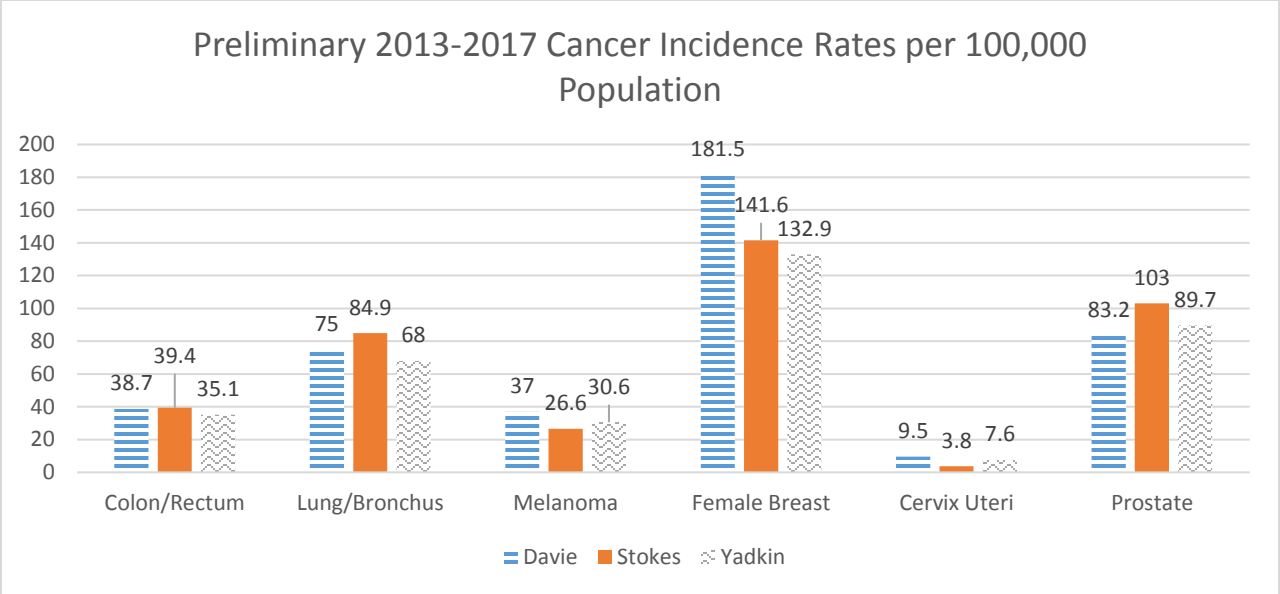
Morbidity and Chronic Disease

The term morbidity, as defined by Merriam-Webster dictionary, refers to having a disease or a symptom of disease; that is often reflected as a rate of illness within a population. Morbidity also refers to the complications or undesirable side effects following surgery or medical treatment.

Chronic diseases are long-lasting health implications that can be controlled but not cured. Many chronic conditions are also the leading causes of death and disability in the United States. Some common chronic conditions include Alzheimer's disease, arthritis, cancer, diabetes, heart disease, obesity, respiratory disease, and stroke.

Cancer

"Cancer is the name given to a collection of related diseases. In all types of cancer, some of the body's cells begin to divide without stopping and spread into surrounding tissues" (National Cancer Institute, 2015). There are more than 100 types of cancer. The different types of cancer are typically named for the site where the cancers form. The table below shows the preliminary cancer incidence rates for specified sites. Yadkin County tends to have a slightly lower incidence rate of cancer, as compared to Davie and Stokes County.

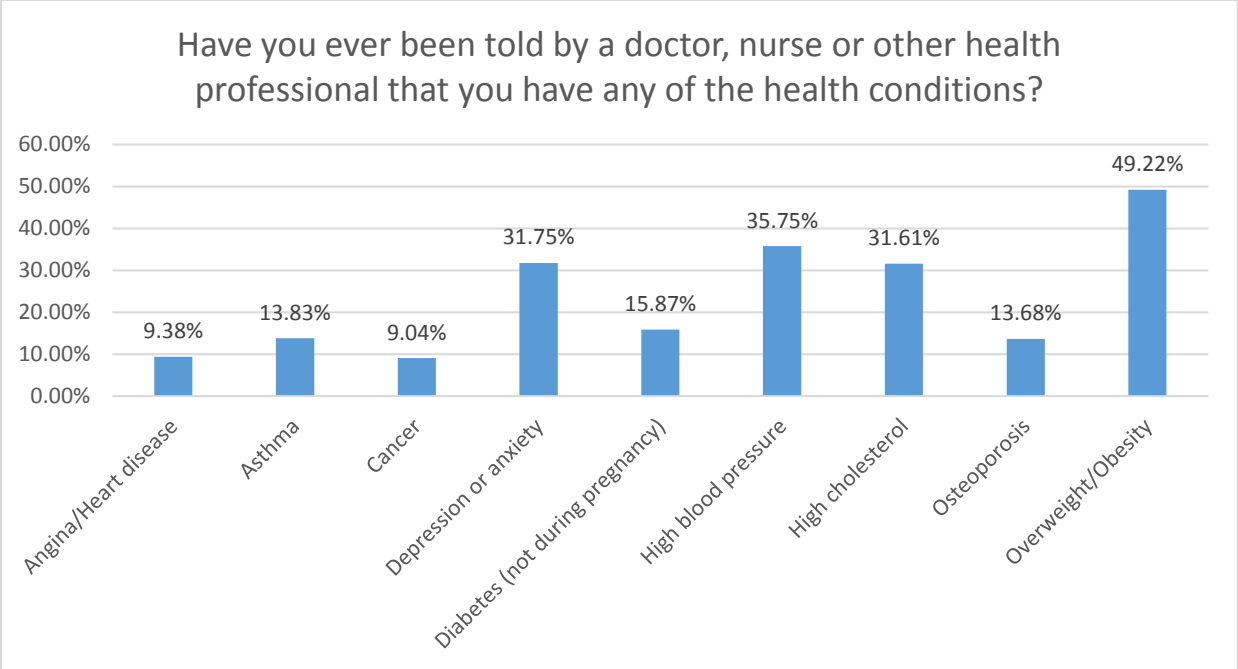


(NC Department of Health and Human Services, 2019)

According to the National Cancer Institute, cancer is a genetic disease, in which it is caused by changes to the genes that control the way cells grow and divide. It is difficult to know why one person may develop cancer and another does not. Research shows that certain risk factors and behaviors may increase a person’s chances of developing cancer. Such risk factors include aging, exposure to sunlight, alcohol consumption, and tobacco use. While advancing age is unavoidable, many of the other factors that increase a person’s chance of developing cancer are modifiable behaviors that individuals can avoid or limit their exposure to in order to reduce that risk. Through collection of the Community Health Assessment survey, 15% of respondents self-reported that they currently smoke and 38% reported they have been exposed to secondhand smoke in the past year. Most common places of reported exposure were at home and the workplace.

Cardiovascular Disease

Cardiovascular disease is a term that refers to a number of conditions; such as heart disease, heart attack, stroke and other conditions that affect the heart and blood vessels (American Heart Association, 2017). While 9% of residents self-reported they currently have angina or heart disease, many more reported having risk factors that may place them at greater risk for developing the chronic condition. Risk factors are traits and habits that could increase the chances of having a disease. Modifiable risk factors are things that individuals can control and change. For heart disease, these include high blood pressure, high cholesterol, diabetes, smoking, and lack of physical activity. Residents can reduce their risk of cardiovascular disease, and many other chronic conditions, by modifying their behaviors by limiting alcohol intake, maintaining a healthy weight, limiting fat intake, eating more fruits and vegetables, staying physically active, and not smoking. The chart below shows the percentage of Yadkin County residents with the following health conditions, as reported on the 2019 Community Health Assessment survey.



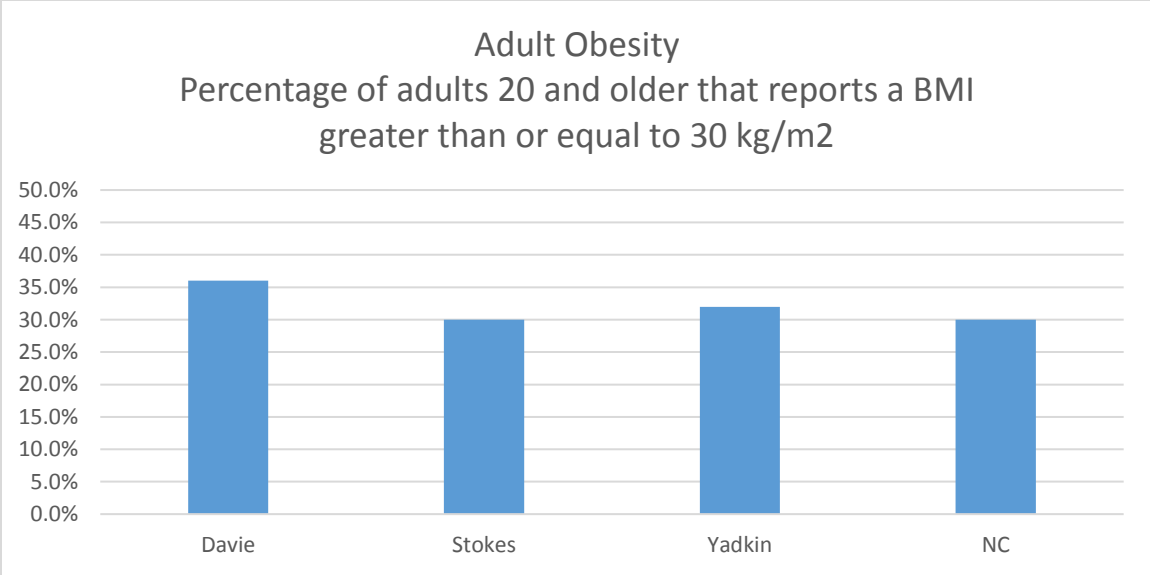
(Community Health Assessment Survey, 2019)

Diabetes

Diabetes is a disease in which an individual’s blood glucose, or blood sugar, is above normal. This chronic condition can lead to other serious health complications such as heart disease, blindness, kidney failure, and amputation of lower extremities (National Institute of Diabetes and Digestive and Kidney Diseases, 2017). There are two types of diabetes—type 1 and type 2. Type 2 is the most common form of diabetes and is caused by several factors including lifestyle factors and genetics. Individuals are more susceptible to developing type 2 diabetes if they are not physically active and are overweight or obese. While 16% stated they had been told by a health professional that they have diabetes, 50% stated they had been told they were overweight or obese; which is a known risk factor for diabetes and other chronic conditions. Physical inactivity also poses as a risk for developing type 2 diabetes. One-third of survey respondents said they did not engage in any physical activity or exercise that lasts at least a half an hour.

Overweight and Obesity

The World Health Organization defines overweight and obesity as “abnormal or excessive fat accumulation that presents a risk to health” (World Health Organization, 2019). An approximate measure of overweight and obesity is the body mass index (BMI); which takes a person’s weight in kilograms divided by the square of his or her height in meters. An individual with a BMI equal to or greater than 25 is considered overweight. A person with a BMI of 30 or more is classified as obese. Overweight and obesity are known risk factors for a number of chronic diseases, many of which are listed earlier in the report.



(Robert Wood Johnson Foundation, & University of Wisconsin Population Health Institute, 2019)

Diet and exercise can play a major part in determining a person’s health. Residents were surveyed about their regular physical activity, as well as, their consumption of fruits and vegetables. While 60% of residents stated they did meet the recommended amount of physical activity during a normal week, two out of every five community members reported they did not engage in any physical activity lasting at least half an hour. Primary reasons for not meeting the physical activity recommendations include too tired, not having enough time, not liking to exercise, and access to exercise opportunities. The County Health Rankings measures access to exercise opportunities as the percentage of individuals in a county who live reasonably close to a location for physical activity. Locations for physical activity are defined as parks or recreational facilities. Yadkin County is a rural community. Individuals are considered to have access to exercise opportunities if they reside in a census block that is within a half mile of a park or in a rural census block that is within three miles of a recreational facility.

The chart below shows the percent of the population that have adequate access to locations for physical activity; noting that Yadkin has the biggest gap compared to peer counties and North Carolina as a whole.

	Davie	Stokes	Yadkin	NC
% with access to exercise	51%	58%	33%	73%

(Robert Wood Johnson Foundation, & University of Wisconsin Population Health Institute, 2019)

Mental Health and Substance Abuse

Mental health is a combination of our emotional, psychological, and social well-being. It affects how we think, feel, and act (U.S. Department of Health and Human Services, 2019). The state of a person’s mental health affects how one handles stress, interacts with others, and makes choices. Early warning signs of mental health concerns can affect one’s social well-being like pulling away from people and usual activities, yelling or fighting with family and friends, experiencing severe mood swings that cause

problems in relationships, thinking of harming yourself or others, and inability to perform daily tasks like taking care of your kids or getting to work or school.

Yadkin County residents were asked about their quality of life in the past 30 days. About 21% or one in five reported they experienced days of feeling sad or worried that kept them from going about their normal business. On the 2019 Yadkin County Community Health Assessment, about 32% of respondents self-reported a diagnosis of depression or anxiety.

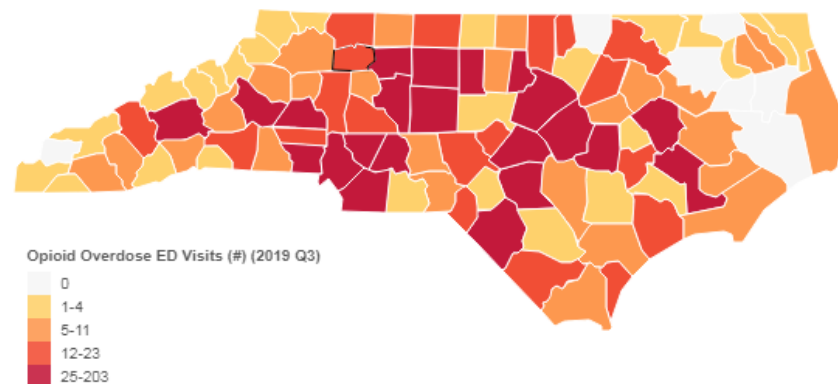
The organizations that manage the care of recipients who receive services for mental health, developmental disabilities or substance use disorders are known as Local Management Entities/Managed Care Organizations (LME/MCO). The local LME/MCO for Yadkin County is Partner's Behavioral Health. During fiscal year 2016-17, Partner's Behavioral Health served 1,647 residents (Satterfield & Boone, 2018).

Mental health troubles can also affect a variety of physical behaviors such as eating or sleeping too much or too little, having unexplained aches and pains, having low or no energy, and smoking, drinking, or using drugs more than usual.

Drug use and substance abuse continues to be a dilemma in Yadkin County. Prescription medications have been a key culprit of the opioid epidemic, but illicit drugs, like heroin and synthetic fentanyl, are also contributing to this increasing problem.

The map from the NC Opioid Dashboard shows the number opioid overdose visits to Emergency Departments (EDs) in North Carolina. These include visits of all intents: unintentional, intentional, and visits of unknown intent. During the third quarter (July-September) of 2019, 13 Yadkin County residents sought medical treatment at emergency departments for an opioid overdose.

Most Recent Quarter's Opioid Overdose ED Visits by County



The Good Samaritan Law provides limited immunity from prosecution if a person seeks medical assistance for an individual experiencing an alcohol or drug related emergency by contacting 911, law enforcement or emergency medical personnel. When surveyed, 37% of respondents said they were not familiar with the Good Samaritan Law.

At-Risk Populations

Women, Infants, and Children

There are a combination of factors that affect women's health; such as individual health behaviors, access to appropriate care, and socioeconomic factors. Focusing on the health of a woman before and during pregnancy is fundamental in reducing poor birth outcomes such as low birthweight, pre-term birth, and infant death.

Nearly 33% women sought prenatal care after their first trimester or did not receive any at all (NC Department of Health and Human Services, 2019). Prenatal care is essential as it provides an opportunity to identify existing health risks in women. Early detection of health risks such as diabetes, depression, hypertension, Sexually Transmitted Diseases, use of tobacco, alcohol, and other harmful substances, as well as unhealthy diet and weight can prevent future health problems for both the woman and child.

Infants and children under age nine comprise 11% of Yadkin County's population (United States Census Bureau, 2018). This population is particularly at risk as infants and children are continuing to undergo physiological and developmental changes. Children more vulnerable than adults to certain environmental risks. They are continually growing which means they are breathing more air, consuming more food, and drinking more water in comparison to their weight. Also, children have little to no control over their environment so they may be unaware of certain risks and unable to make choices pertaining to their health (World Health Organization, 2016).

Older Adults

About one-fifth of Yadkin County's population is 65 years or older (United States Census Bureau, 2019). Aging adults experience chronic conditions and diseases at a higher rate. Adults 65 and older are more susceptible to Alzheimer's disease, cancer, diabetes, heart disease, and stroke. Older adults are also more prone to falls, which is the leading cause of injury among the elder population.

Individuals with Low Income and No Health Insurance

The US Census Bureau estimates about 5,700 people in Yadkin County live in poverty, with 1,440 of those individuals being children under the age of 18 (United States Census Bureau, 2018). People living in poverty are more likely to not have health insurance nor be able to access the health care they need.

Approximately 4,500 people in Yadkin County under the age of 65 is living without health insurance (United States Census Bureau, 2018). When individuals are uninsured, they are less likely to access to care, including clinical preventive services. The uninsured population are also more prone to becoming hospitalized for conditions that could have been prevented.

Individuals with Limited English-speaking Proficiency

Many individuals with limited English-speaking proficiency perceive language as a major obstacle to managing their health. Language limitations is one of the biggest barriers to accessing health care. The United States Census reports that 8.9% of Yadkin County residents speak a language other than English at home (United States Census Bureau, 2019). Language barriers can result in several complications,

such as individuals not seeking medical care or misunderstanding and communication between provider and patient.

Existing and Needed Health Resources

The NC Department of Commerce's ACCESSNC December 2019 report gives information on the number of health care providers available to residents of the County. In the most recent count, in 2018, Yadkin County had 15 physicians available or roughly 4 per 10,000 residents. This is a drop in four providers, and lowered the ratio by one. Other health care provider ratios, which are also data from 2018, show 33.2 RNs per 10,000 residents, 2.1 dentists per 10,000 residents. Both of these ratios saw an increase since the most recent Community Health Assessment. The most recent report on the ratio of pharmacists was from 2017, and it is 3.7 per 10,000 residents (NC Department of Commerce, 2019).

Yadkin County does not have a hospital within its boundaries. The private hospital closed in May 2015. Despite efforts on behalf of the Board of County Commissioners and the County, the facility has not been re-opened as a hospital. The facility and grounds are owned by the County. The administration has since renamed the property Yadkin Medical Campus. The Yadkin Medical Campus hosts a variety of health professionals including Emergency Management/Emergency Services, a private medical doctor, an employee wellness clinic for County employees, and three behavioral health providers.

The clinical services unit of the Yadkin County Human Services Agency, also known as Yadkin County Medical Clinic, was housed in the Yadkin Medical Campus as recently as January 2020. The Yadkin County Medical Clinic moved facilities to share a physical location with the local free clinic, Hands of Hope. In addition to a new and shared facility, the agencies also plan to share a newly hired practitioner. These changes coincide with the expansion of the County's Adult Health program policy. The new policy will allow non-established patients to enroll and to allow the care and management of some basic chronic conditions. Both agencies are very hopeful that the shared space, shared provider and expansion of services will allow them to better serve the residents of Yadkin County and help limit the gaps in care that some people may experience in the community. Hands of Hope Medical Clinic sees patients on a walk-in basis each Tuesday evening and chronic care patients by appointment only during the day each Tuesday. The Yadkin County Medical Clinic is also utilized for its clinic services such as the child health, family planning, immunization and maternity care programs. The Medical Clinic also has a partnership with Surry Health & Nutrition Center to provide Care Coordination for Children and Pregnancy Care Management to children and pregnant women who are on Medicaid. The Medical Clinic will see provider based appointments Mondays, Wednesdays, and Thursdays and nurse based appointments throughout the week. The Human Services Agency also added a car seat check and replacement program since the previous Community Health Assessment. These car seat checks are done through a collaboration with Yadkinville Fire Department. Seats are given to families that meet income requirements and are referred to the program through partnering human services agencies.

Also in Yadkinville are Yadkin Medical Associates, Yadkin Family Medicine and Blue Ridge Cardiology. Wake Forest Baptist Health operates a primary care facility in Jonesville, Jonesville Family Medical Center. Hugh Chatham Hospital operates a primary care practice inside the Hugh Chatham Urgent Care facility. Dr. James McGrath and Dr. Roque Arias both operate private practices in Yadkinville and East Bend respectively. There are four pharmacies located in two of the five municipalities. Yadkin County

has three traditional nursing home facilities and five assisted living facilities. Other health resource additions include urgent care facilities in Yadkinville and Jonesville. The urgent care in Jonesville is owned and operated by Hugh Chatham Memorial Hospital out of Elkin. Triple P (Positive Parenting Program) was able to expand some services within the County by sending a community partner to regional training.

Yadkin County does not have some health resources that the community needs. There is no hospital providing OB/GYN services, surgical/outpatient services, or emergency department services. The urgent care facilities allow people an opportunity to seek care during the evenings and on the weekends, but since the hospital is closed, there is no true emergency medicine. There are no practicing OB/GYN physicians in the county. Women can only receive maternity care services in the county at the local health department, and must deliver in the new Labor & Delivery unit of Wake Forest Baptist Health in the neighboring county. Most residents deliver in either Surry County or Forsyth County. Both of these delivery locations are approximately a 30 minute drive from the county seat of Yadkinville. Most Yadkin County residents utilize medical practices and services outside of the County due to the smaller number of practices and the complete lack of specialized care such as OB/GYN, cardiology, pulmonology, etc.

Other health and developmental services that are available in Yadkin County include mental health and substance abuse resources, although those are limited and often taxed. These include Daymark Recovery Services, Blue Ridge Counseling, PQA Healthcare, Fostering Minds, and A Still Waters Counseling Services & Training. The latter three are located in the Yadkin Medical Campus. Southern Family Medicine and Jodi Province both opened a Yadkinville location. Yadkin County also has two residential facilities for men and women dealing with substance abuse issues. The male facility is located in Yadkinville and is called Alpha Acres and the female facility is located in the East Bend area and is called Solus Christus. At the time of the preparation of this report, Alpha Acres was temporarily closed. Yadkin County also has an active substance abuse coalition, which served as the team in support of the Community Health Assessment.

There are many churches and other organizations that provide services, assistance and food to local families in need. These include Union Baptist Church, Union Grove Baptist Church, Courtney Baptist Church, Yadkin Christian Ministries, and Tri-County Christian Ministry. Yadkin County also has an organization called Compassion Care. It is a faith based, private, non-profit organization that has a medical clinic offering limited ultrasounds, pregnancy tests, prenatal/parenting classes, STD testing/treatment and post abortion support groups.

Yadkin County has access to and programs offered by a local community action agency. YVEDDI, Inc. receives federal, state and local funding to provide a variety of social, economic, and health programs including the domestic violence/sexual assault program, Head Start, Migrant Head Start, transportation, Community Services Block Grant, RSVP, three local senior centers, and weatherization. The community is also serviced by other human service agencies offering a variety of programming including Smart Start of Yadkin County, The Children's Center of Northwest North Carolina, Insight Human Services, New Horizons, and multiple home health agencies. Also providing programming and support are the four branches of libraries which are part of the Northwest Regional Library Organization.

Some of these local agencies will hold health fairs and will coordinate health screenings through local medical agencies such as Novant Health. Some churches and other organizations hold programs for their members to provide education and this may include inviting out the local public health educator to provide education and training.

Leading Community Health Problems

The primary data, secondary data, and characteristics of health care in Yadkin County point to the main concerns of residents. These, in turn, provide us with a direction to head when planning for improvements in the future. Substance abuse was a concern that comes from the survey results. This is one area the CHA team chose to focus over the next four years. Potential evidence based interventions include Second Step, provided to grades K-middle school; Halo, provided to 3-6 year olds; Too Good for Drugs, provided to grades K-12th, all of which are offered within the County by Insight Human Services. Also, Wanda Burger, with A Still Waters Counseling, provides Prime for Life, a youth education program.

Another area which drew attention both from survey respondents and secondary data collection were concerns around mental health and stress management. The data shows that Yadkin County has seen an increase in suicide rates, including unintentional injury death rates. Our suicide rate is twice of state rate and three times the Healthy NC 2020 goal. 32% self-reported a diagnosis of depression or anxiety. One in five self-reported, poor mental health days. Jodi Province, a local mental health provider, utilizes KidPower, which targets youth and has a prevention/skill building component. This is an evidence based intervention that could potentially be used to address mental health in youth. The agency also utilizes Trauma-Focused Cognitive Behavioral Therapy (TFCBT). This is another individual evidence based intervention the Coalition is considering supporting. The Human Services Agency state contract, Healthy Communities, has ASIST, QPR, and Mental Health First Aid as potential action plans for the upcoming fiscal year. These are evidence based as well.

Lastly, health issues that relate to physical health and chronic diseases such as heart disease and diabetes were seen from both primary and secondary data. The diabetes death rate has doubled since the previous Community Health Assessment. Information from secondary data shows that most of the top causes of health issues are related to chronic disease. The Human Services Agency is considering adding Tai Chi for Diabetes as a program, which is evidence based and could be done at the local senior centers. Another intervention option is supporting Smart Start of Yadkin County. This agency has partnered with the YMCA to provide Active Steps in Childcare which puts a YMCA instructor in licensed child care classrooms implementing the Be Active Kids program. Both of these programs are evidence based.

References

- American Heart Association. (2017, May 31). *What is Cardiovascular Disease?* Retrieved December 19, 2019, from American Heart Association: <https://www.heart.org/en/health-topics/consumer-healthcare/what-is-cardiovascular-disease>
- Bayley, E. (2006). *Yadkin County* . Retrieved December 23, 2019, from NCPedia: <https://www.ncpedia.org/geography/yadkin>
- Centers for Disease Control and Prevention, National Center for Immunization and Respiratory Diseases (NCIRD). (2019, September 5). *Influenza*. Retrieved January 2, 2020, from Centers for Disease Control and Prevention: <https://www.cdc.gov/flu/about/index.html>
- Google. (2019, December 10). *Google*. Retrieved from Maps: <https://www.google.com/webhp?sourceid=chrome-instant&ion=1&espv=2&ie=UTF-8#q=Yadkin+County+nc+map>
- March of Dimes. (2018, September). *Labor and Birth*. Retrieved November 26, 2019, from March of Dimes: <https://www.marchofdimes.org/pregnancy/what-is-full-term.aspx>
- Merriam-Webster. (n.d.). *Morbidity*. Retrieved January 2, 2020, from Merriam-Webster Dictionary: <https://www.merriam-webster.com/dictionary/morbidity>
- National Cancer Institute. (2015, February 9). *Understanding Cancer*. Retrieved December 11, 2019, from National Cancer Institute: <https://www.cancer.gov/about-cancer/understanding/what-is-cancer#related-diseases>
- National Institute of Diabetes and Digestive and Kidney Diseases. (2017, July 18). *What is Diabetes?* Retrieved December 18, 2019, from National Institute of Diabetes and Digestive and Kidney Diseases: <https://www.niddk.nih.gov/health-information/diabetes/overview/what-is-diabetes>
- NC Child. (2019). *2018 NC Data Card*. Raleigh, NC: NC Child. Retrieved January 5, 2020, from <https://www.ncchild.org/wp-content/uploads/2018/04/yadkin-1.pdf>
- NC Department of Commerce. (2019). *ACCESSNC County Profile*. Raleigh, NC: NC Department of Commerce. Retrieved January 5, 2020, from <https://accessnc.nccommerce.com/DemoGraphicsReports/pdfs/countyProfile/NC/37197.pdf>
- NC Department of Health and Human Services. (2019, March 18). *Cancer Incidence Rates*. Retrieved December 13, 2019, from North Carolina State Center for Health Statistics: https://schs.dph.ncdhhs.gov/data/cancer/incidence_rates.htm
- NC Department of Health and Human Services. (2019, October 18). *County Health Data Book*. Retrieved November 26, 2019, from North Carolina State Center for Health Statistics: <https://schs.dph.ncdhhs.gov/data/databook/>
- NC Department of Health and Human Services. (2019, February). *Trends in Key Health Indicators*. Retrieved August 20, 2019, from North Carolina State Center for Health Statistics: <https://schs.dph.ncdhhs.gov/data/keyindicators/>

- NC Department of Health and Human Services. (n.d.). *NC Opioid Action Plan Data Dashboard*. Retrieved December 30, 2019, from NC Opioid Dashboard: <https://injuryfreenc.shinyapps.io/OpioidActionPlan/>
- North Carolina Division of Public Health, & Carolina Center for Health Informatics. (n.d.). *County-level Custom Event Aggregate Report*. Retrieved January 2, 2020, from NC DETECT: <https://www.ncdetect.com/ncd/secure/customEventAgg.action>
- North Carolina Institute of Medicine. (2011). *Healthy North Carolina 2020: A Better State of Health*. Morrisville, NC: North Carolina Institute of Medicine. Retrieved December 18, 2019
- Office of Population Affairs. (2019, October 3). *A Picture of Adolescent Health*. Retrieved December 23, 2019, from U.S. Department of Health and Human Services: <https://www.hhs.gov/ash/oah/facts-and-stats/picture-of-adolescent-health/index.html>
- Robert Wood Johnson Foundation, & University of Wisconsin Population Health Institute. (2019). *North Carolina*. Retrieved November 13, 2019, from County Health Rankings and Roadmaps: <https://www.countyhealthrankings.org/app/north-carolina/2019/overview>
- Satterfield, B., & Boone, J. (2018). *North Carolina Local Management Entity-Managed Care Organization Annual Statistics and Admission Report Fiscal Year 2017*. Raleigh.
- Sexual Health Initiatives For Teens (SHIFT). (n.d.). *Yadkin County, NC - SHIFT NC*. Retrieved January 3, 2020, from SHIFT NC: www.shiftnc.org/data/map/yadkin
- State Climate Office of NC. (2019). *Weather and Climate Database*. Retrieved December 23, 2019, from <https://climate.ncsu.edu/cronos/?station=319675&temporal=monthly>
- U.S. Department of Health and Human Services. (2019, April 5). *What is Mental Health?* Retrieved December 30, 2019, from MentalHealth.gov: <https://www.mentalhealth.gov/basics/what-is-mental-health>
- United States Census Bureau. (2018). *ACS Demographic and Housing Estimates*. Retrieved December 30, 2019, from United States Census Bureau: <https://data.census.gov/cedsci/table?q=&d=ACS%205-Year%20Estimates%20Data%20Profiles&table=DP05&tid=ACSDP5Y2018.DP05&g=0500000US37197&lastDisplayedRow=25&hidePreview=true>
- United States Census Bureau. (2018). *Selected Economic Characteristics Table*. Retrieved December 30, 2019, from United States Census Bureau: <https://data.census.gov/cedsci/table?q=&d=ACS%205-Year%20Estimates%20Data%20Profiles&table=DP03&tid=ACSDP5Y2018.DP03&g=0500000US37197&lastDisplayedRow=25&hidePreview=true>
- United States Census Bureau. (2019, December 30). *Quickfacts*. Retrieved December 30, 2019, from United States Census Bureau: <https://www.census.gov/quickfacts/yadkincountynorthcarolina?>
- World Health Organization. (2016). *Children's Environmental Health*. Retrieved December 31, 2019, from World Health Organization: <https://www.who.int/ceh/risks/en/>

World Health Organization. (2019). *Obesity*. Retrieved December 23, 2019, from World Health Organization: <https://www.who.int/topics/obesity/en/>

Yadkin County Chamber of Commerce. (n.d.). *History of Yadkin County, North Carolina*. Retrieved December 23, 2019, from <https://www.yadkinchamber.org/history-of-yadkin-county/>

Yadkin County Government. (n.d.). Retrieved December 23, 2019, from Parks & Recreation: <https://www.yadkincountync.gov/129/Parks-Recreation>