

2018

Gaston County Community Health Assessment

March 2019



Prepared By:
The Gaston County Department of Health & Human Services
in Collaboration with CaroMont Regional Medical Center

Dear Gaston County Residents,

The Community Health Assessment Advisory Committee is pleased to share with you our *2018 Community Health Assessment*. The purpose of this assessment is to lay the foundation for continued community health improvements that will benefit all residents. Every three years we conduct an assessment to identify strengths and areas of need within our county. The assessment includes the collection and analysis of existing statistical data, Quality of Life survey data collected directly from residents, and input from community focus groups. This data allows the community to identify priority areas of need and determine where additional resources are required.

We learned from residents that the health issues they are most concerned about are: mental health, illegal drug abuse, prescription drug abuse, homelessness and safe housing, and lack of health care for the uninsured. This information, along with the other health data found in the report, will guide our priorities and work over the coming years. While the data collection and creation of the report itself is an undertaking, the real work begins when health and human services agencies and leaders begin studying and using this information to make critical decisions about programs and resources.

I'd like to personally thank the entire Community Health Assessment Advisory Committee, the volunteers who went door-to-door collecting responses for the Quality of Life survey, our citizens who took the time to tell us what they think about these critical issues, and the many others who have supported this project.

Thank you for taking the time to understand the health status of our community and for helping make Gaston County a healthier community.

A handwritten signature in black ink, appearing to read 'Steve Eaton', with a stylized, flowing script.

Steve Eaton, MPH
Public Health Director, Gaston County Department of Health & Human Services

Acknowledgement

The Gaston County Team would like to thank Gaston County residents for providing input on their health and community by participating in surveys and focus group meetings. We would like to thank community agencies and organizations who provided meeting space, volunteers and who encouraged the community to participate in the assessment process. We thank DHHS staff and volunteers who participated in the data collection process.

At three meetings from August 2017 to October 2018, Gaston County Department of Health Human Services, CaroMont Health, Gaston Together, the Unity Way of Gaston County and representatives of stakeholder organizations reviewed the 2018 Community Health Assessment process and updated the survey instruments for 2018. The revised survey ensured that we gathered community opinions on health and quality of life issues in Gaston County.

The members of this Quality of Life/Community Health Assessment Survey Committee were:

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Tony Sigmon

****Project Staff** – Yvonne Bofo & Abby Newton

The following Gaston County DHHS staff participated in a sub-committee that met three times from August 2017 to October 2018 to provide feedback on the 2018 CHA process and survey tools.

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Alyssa Mouton – Health Education Supervisor

These committees reviewed the 2015 Quality of Life Survey and process and develop a survey of essential and understandable question in an easy-to-follow format for 2018.

The committees made the greatest change to the survey format and process. This made the questions easier to follow and answer, and made it possible to obtain larger responses from diverse groups of residents. The 2018 survey was short but contained most of the questions in the 2015 survey, in a different format which enabled us to compare trend data over time. The 2018 Gaston County Quality of Life Survey begins on page 53.

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Chapter 1: Background and Introduction

Community Health Assessment (CHA) is a community diagnostic process which reviews health factors in the community and identifies the health needs and resources available. The Gaston County Department of Health and Human Services (DHHS) prepared this 2018-2019 Gaston County Community Health Assessment Report to meet accreditation requirements set for local health departments by the North Carolina Division of Public Health. The Gaston County Board of Health & Human Services used this report to set priorities that will be further developed through ongoing strategic planning efforts.

DHHS prepared the report in collaboration with CaroMont Regional Medical Center which provided financial and technical support, and through this collaboration meets the Internal Revenue Requirement established by the Patient Protection and Affordable Care Act to conduct a community health needs assessment every three years.

DHHS and members of the advisory committees from the community including CaroMont Regional Medical Center, Gaston Together which houses the Gaston Together Healthcare Commission, United Way of Gaston County, Partners Behavioral Health, Gaston Family Health Services other non-profit agencies, businesses residents and community leaders come together every three years to lead this process.

Process Summary

The CHA process is centered on the take action model by the Community Health Rankings and Roadmaps. A substantial portion of data from this report is from the Gaston County Quality of Life survey (QOL) 2018 which asked close to 1,500 residents to give their opinions on their quality of life, community improvement, medical and health issues in the community.

DHHS and CaroMont Health together intend for public, private, and non-profit organizations to use data from this report for strategic planning, program planning and to prepare grants applications. These agencies will present this report at workshops, meetings and on agency websites to encourage community stakeholders to use the data to enhance the wellbeing of Gaston County and its residents

Chapter 2: Brief Description of Gaston County

Geographic

Gaston County is located in the south – central piedmont of North Carolina. It is bounded in the east by Mecklenburg County (Charlotte), west by Cleveland County and north by Lincoln County. The southern boundary of Gaston County partially borders the state of South Carolina. The census describes Gaston County as the 73rd largest county in size among the 100 counties in North Carolina, covering a land area of 355.09 square miles. The county includes fourteen incorporated municipalities: Belmont, Bessemer City, Cherryville, Cramerton, Dallas, Dellview, Gastonia, High Shoals, Kings Mountain, Lowell, McAdenville, Mount Holly, Ranlo and Stanley. The NC Office of Budget and State Management 2017 population estimates show Spencer Mountain is no longer an incorporated municipality in Gaston County.



History

In the mid-to-late 1800s, the textile industry dominated Gaston County and many families lived and worked in the mill villages. Over the past three decades, tens of thousands of textile workers lost their jobs to automation, mills closures and relocations outside the United States. There has been a continuous effort to improve literacy, graduations rates and workforce opportunities.

Demographics

The US Census shows Gaston County population rose from 206,086 in 2010 to an estimated 220,182 in 2017, a 6.8% increase. This is slightly lower than North Carolina population growth estimates showing a rise in population of 7.7% over the same time period. The population is expected to grow by 9 % between 2010 and 2020. In 2010, Gaston County was the seventh most populated county of the 100 North Carolina counties. In 2017, the North Carolina Office of Budget and Management ranked Gaston County as the 10th most populated county.



Approximately 67% of the population lived in the municipalities and 33% lived in unincorporated areas outside these municipalities during 2017. There was considerable growth (19.6%) in Belmont City and 14.5% in Mount Holly. The city of Gastonia, the county seat, had an estimated growth of 6.8% from 2010 to 2017. Population estimates for Dellview are unavailable, though US Census results in 2010 found a population of 13.

Estimated Population Growth of Gaston County Municipalities in 2017 Compared to 2010 Census Data

Municipality	Percent Change	Population Change	2017 Population Estimates
City of Belmont	19.6%	1,970	12,046
City of Bessemer	2.5%	132	5,472
City of Cherryville	3.8%	218	5,978
Town of Cramerton	5.1%	211	4,376
Town of Dallas	4.7%	210	4,698
City of Gastonia	6.8%	4,852	76,593
City of High Shoals	5.9%	41	737
City of Kings Mountain	4.8%	495	10,791
City of Lowell	3.6%	128	3,654
Town of McAdenville	1.4%	9	660
City of Mount Holly	14.5%	1,979	15,635
Town of Ranlo	4.8%	165	3,599
Town of Stanley	4.1%	147	3,703
Gaston County	6.8%	14,096	220,182

Data Source: Census Bureau, Annual Estimates of the Resident Population: 2010 and 2017

6.8%



Estimated
population increase
in **Gaston County**
between 2010 and
2017

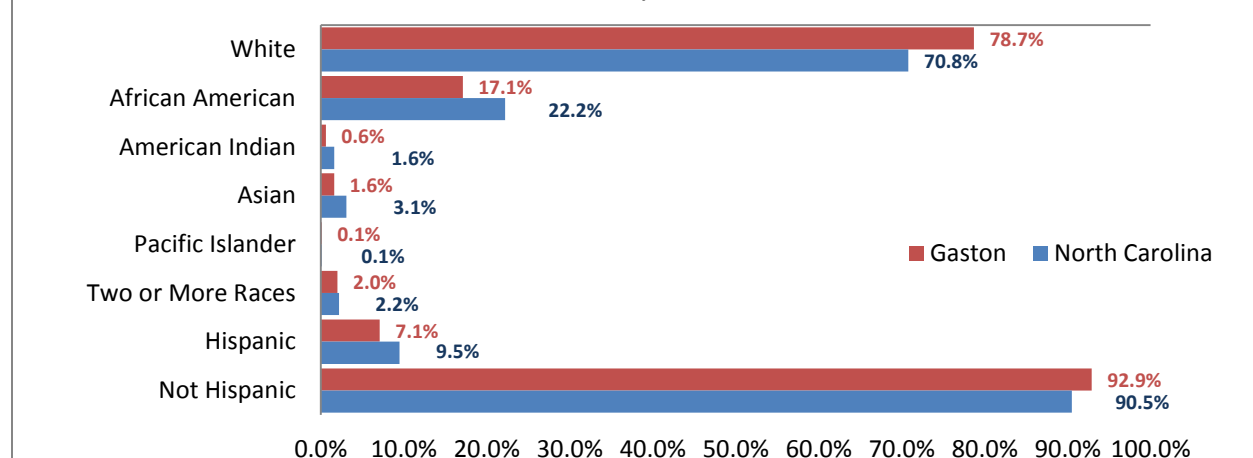
7.7%



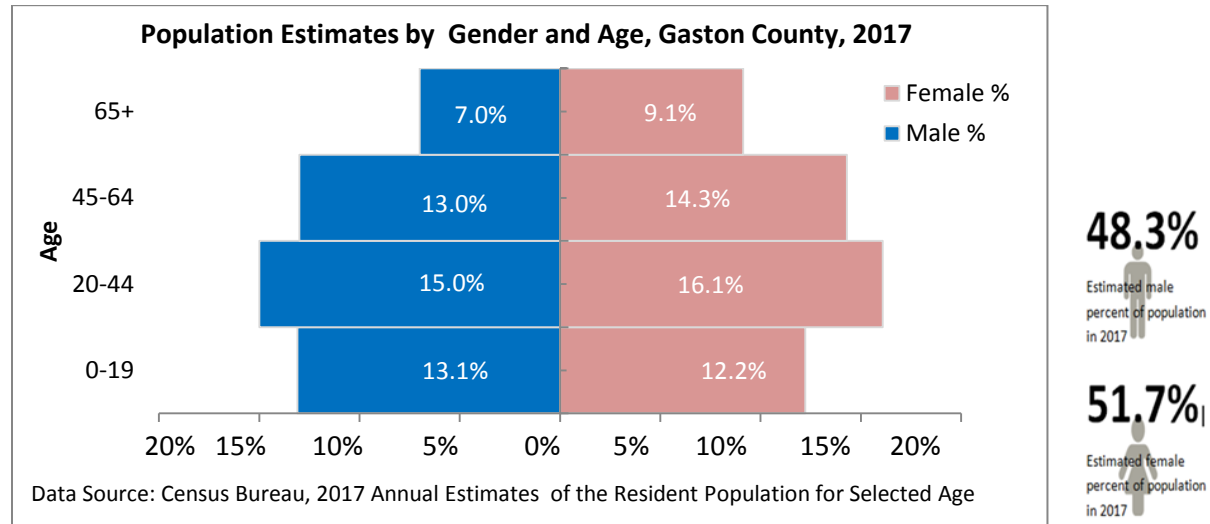
Estimated
population increase
in **North Carolina**
between 2010 and
2017

The 2017 population estimates shows 78.7% of the population were White, 17.1% were Black or African American, 1.6% were Asian, and less than one percent American Indian, Alaskan Native, Native Hawaiian, or other Pacific Islander. An estimated 2% of the population consists of two or more races. The population estimated to be of Hispanic ethnicity rose from 12,201 in 2010 to 15,633 in 2017. This is a percentage rise from 5.9% to 7.1%. The Black or African American population also rose in the estimate, increasing from a previous estimate of 15.3% in 2010

Estimated Percentage of Population by Race / Ethnicity, Gaston County and NC, 2017



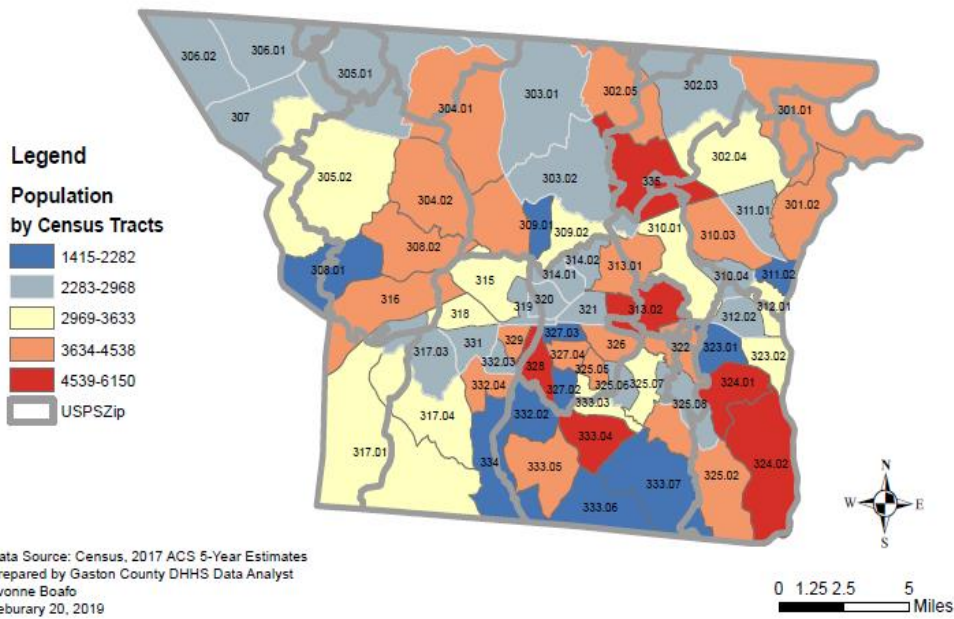
Female to male ratios were not estimated to have changed greatly between 2010 and 2017, with males decreasing from 48.4% to 48.3% and females increasing from 51.6% to 51.7%. These are within half a percent of North Carolina's 2017 gender percentage estimates. The largest age group remains 20-44 year old residents. However, the percentage of residents 44 and under decreased between 2010 and 2017 estimates, with the greatest increase seen in residents age 65 or older. The median age was 40 for Gaston County, higher than the 38.7 noted for the state.



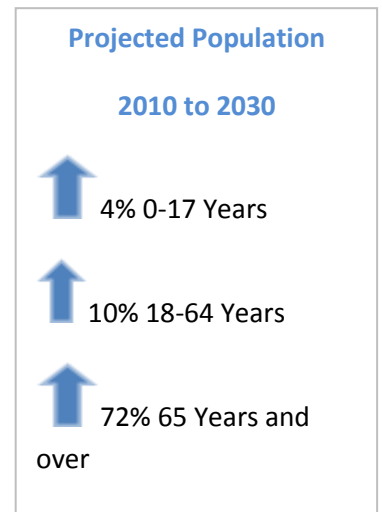
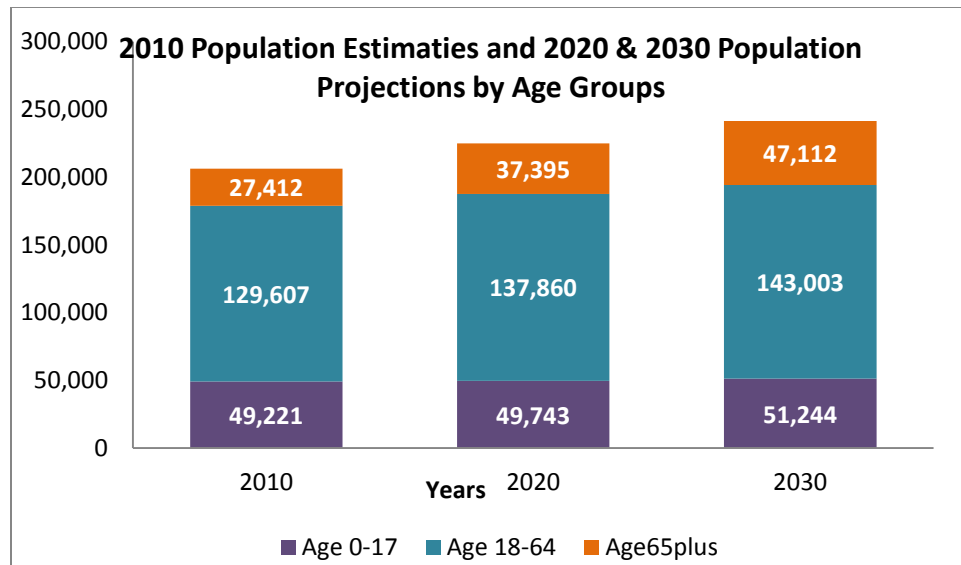
Population by Gender and Age, Gaston County and North Carolina, 2010 and 2017 Counts and Percent							
2017 Population Estimates							
North Carolina	Total	Males	Females	Ages 0-19	Ages 20-44	Ages 45-64	Ages 65+
	10,273,419	5,001,438	5,271,981	2,577,869	3,35,918	2,707,187	1,630,445
Gaston	220,182	106,249	113,933	55093	69177	61081	34,831
		48.7%	51.3%	25.1%	32.7%	26.4%	15.9%
Gaston		48.3%	51.7%	25.0%	31.4%	27.7%	15.8%
2010 Population							
North Carolina	Total	Males	Females	Ages 0-19	Ages 20-44	Ages 45-64	Ages 65+
	9,535,483	4,645,492	4,889,991	2,558,680	3,235,317	2,507,407	1,234,079
Gaston	206,086	99,718	106,368	54,715	67375	56702	27,294
		48.4%	51.6%	26.8%	33.9%	26.3%	12.9%
Gaston		48.4%	51.6%	26.5%	32.7%	27.5%	13.2%
Source: US Census Bureau, 2010 Census and 2017 Year Estimates (Annual Estimates of Resident Population for Selected Age Groups by Sex							

The map and chart on the following page shows population distribution by census tracts and the population's estimates for 2020 and 2030 in Gaston County.

Gaston County Population Estimates by Census Tract, 2013 - 2017



Population Growth



Source: North Carolina OSBM, Standard Population Estimates, Vintage 2017 (Estimated 2010 & 2017 Populations)

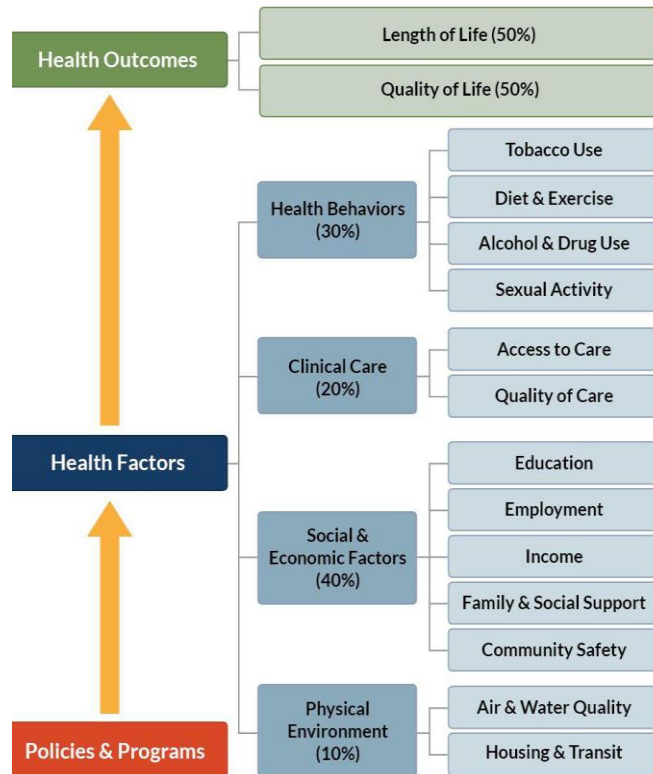
Chapter 3: Health Data Collection Process

Theoretical Framework

The Robert Wood Johnson County Health Rankings population model was adopted to guide the data collection process. This model illustrates factors affecting population health outcome and can provide guidance for organizations and agencies to collaborate to improve the health of county residents.

The data is organized to understand the health of Gaston County, identify health problems and health disparities to enable policies makers address the health concerns and improve the overall health of the community. Gaston County data is compared to the state, peer and surrounding counties. Data used in this report include both primary and secondary data.

The population model



County Health Rankings model © 2016 UWPHI

Primary Data Collection Process: Quality of Life Survey

Survey Implementation

The 2018 Gaston County Community Health Assessment survey was conducted to assess Gaston County residents' opinions on seven quality of life statements about living in Gaston County, and to assess residents' opinions about major concerns in Gaston County about the community resources, youth issues, health issues and access to healthcare they would like the community, stakeholder and policy makers to improve upon to enhance the overall health of Gaston County residents.

The primary data collection methods were an online survey for the whole community, a face-to-face survey for low income residents and focus groups for selected vulnerable populations that would otherwise be missed. While an online survey is less costly and easier to implement, a face-to-face survey for low income residents was conducted to enable residents who missed the online survey to participate. Focus group discussions were conducted for groups that were least represented in the online and face-to-face surveys.

The survey tool was reviewed by the DHHS Steering Committee and the Community Health Assessment Advisory committee. The two committees reviewed the previous survey document and agreed to shorten the questions and at the same time maintain the contents of the previous survey document. The final survey tool includes seven quality of life statements and an additional twenty-seven questions grouped into five subgroups – community improvement, youth issues, health issues, access to health care and demographic. The questions were designed to allow participants to either rank or select the top five most important issues for the community. This information will then be used by stakeholders to work on programs and policies to improve the overall health of Gaston County residents. As recommended by the North Carolina Division of Public Health, we used convenience sample. This method does not rise to the rigor of electoral polling but has generated consistent results over four iterations.

DHHS adopted a convenience sampling approach using the online survey method. Convenience sampling is less expensive and less time-consuming than other sampling methods. Online surveys are quick, anonymous and prevent interviewer bias. The survey was posted on the DHHS website and on the Facebook page.

The approach used differed slightly from 2015 in that community residents participated through an online survey compared to the paper survey used previously. Also, a youth group participated through a focus group discussion, whereas in 2015 they completed a paper survey.

Overall, three major groups of residents who participated in the survey were community leaders, community residents, and low income residents. Their opinions were compared to the overall responses to help the county obtain a comprehensive picture of the various topics discussed and also identify the diversities that exist between the various groups. Qualitative data from the focus

group is used to provide additional information to the quantitative. Analysis was also done by high school district. Overall, the grouping and the analysis provide both social and geographic views of the survey results.

Community Leaders

Community leaders and community residents were asked to complete a brief online survey. Community leaders were defined as members of local boards, executives in companies or even as self-identified leaders. DHHS utilized surveymonkey.com, an online survey to administer the survey to both community leaders and the general population. Staff emailed the survey to eligible individuals and respondents completed the survey from their own computers or mobile device. DHHS-staff emailed the link to the survey to CHA advisory committee members to share with the board members and senior staff. The health director shared the link with community leaders including elected officials, governing board members and leaders of organizations. Participants were asked in the survey to answer “yes” if they have any leadership role in Gaston County. The survey was designed for Gaston County residents. Participants who responded they do not live in Gaston County were automatically redirected to a page where they were informed that they cannot take the survey since they are not residents and are provided with an email address to send any information they wish to share. However, community leaders were able to participate in the survey if they did not live in Gaston County but have leadership roles in the county. There was a follow up question that asked community leaders to identify the category of leadership group are in. The options were business or organization leader, department head, elected official, faith community leader, member of directors for an agency or organization. One hundred eighty participants identified as community leaders. Eighty one percent (81%) live in Gaston County 19% do not live in Gaston County but have leadership role in Gaston County.

Community Leaders who participated in the survey by Category		
	Percent	Number
Business or Organization leader	28.22%	46
Department Head	19.63%	32
Elected Official	2.45%	4
Faith Community Leader	14.72%	24
Member of Board of directors for an agency or an organization	34.36%	56
Other	9.9%	18

Community Residents

The survey was posted on DHHS’ website and on Facebook page. DHHS staff emailed the link to all members of the CHA advisory committee to share with their staff and the community. The health director sent the link to community leaders to share with their staff. Unlike previous years,

DHHS had a goal to secure 400 responses to yield a response rate of 9.8% with a confidence interval of $\pm 1.2\%$ at the 95% confidence level. In 2018, since our survey was online, our goal was to secure a minimum of 500 Gaston community residents to participate in the survey. The North Carolina Division of public Health recommends a minimum of 500 participants to provide their opinion in convenience sampling. This wide number reduces the potential for bias and provides the opportunity to obtain opinions of diverse individuals. The online survey opened for three months from May to July 2018. DHHS received 1,250 responses of which 947 were complete responses. Eighty-five percent (1,065) or participants where Gaston County residents, 8.6% (107) were not Gaston County residents and were not able to complete the survey and 78 (6%) were leaders who don't live in the county. The survey was further stratified to identify community leaders and compare their response to participants with no leadership role and also to the entire survey. Twenty-one percent (181) identified as community leaders in Gaston County. Six percent (78) participants who do not live in Gaston County but have leadership roles in Gaston County participated in the survey. Overall, 1% (10) of participants indicated they have already participated in the survey and was unable to participate for the second time.

Focus Groups

DHHS conducted three focus groups for the youth, English as a second Language (ESL) class at Gaston Literacy Center and male inmates at the Gaston County jail. The focus groups provided qualitative data from diverse groups in the community that were least represented in the online and face-to-face surveys. The combined approach helped to survey diverse groups of residents with different racial, age, income and educational background from across Gaston County.

Fifty- three participants participated in the focus group discussions. The youth group was multiracial. Thirteen youth and two youth program coordinators participated in the focus group. Participants in the jail included 11 Whites and 6 African Americans and were between 21 to 59 years. Participants in the classes included 19 Spanish speaking, and 1 French speaking participant.

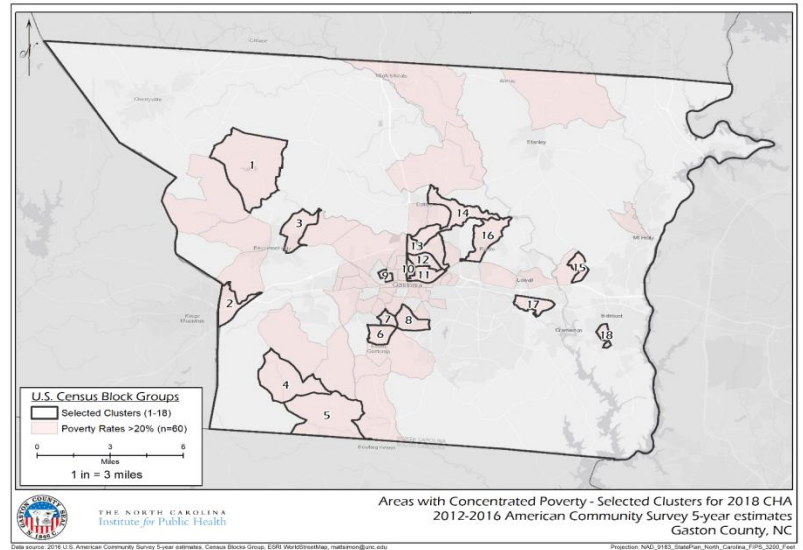
Persons Living in Low- Income Neighborhoods

DHHS used a similar approach from the 2015 CHA. DHHS contracted with the North Carolina Institute for Public Health for technical assistance and equipment to conduct a Rapid Needs Assessment in communities with large numbers of low-income residents. The goal was to provide a face-to-face survey for residents who live in areas of concentrated poverty who may not get opportunity to participate in the online survey just because they didn't know about it and also didn't have access to the internet even if they know about the survey. DHHS sees the opinion of this group of residents as very important since most of these residents are likely to be uninsured, underinsured, or unable to obtain health services which puts them at increased risk

of poor health. Hence, capturing the opinion of these groups of people was necessary to help DHHS address the health concerns of the group to improve the overall health of all residents.

DHHS used Census data to select block groups with areas of concentrated poverty. The Census Bureau defines areas of concentrated poverty as census tracts with individual poverty rate of 20% or more. Two person teams administered the survey in Belmont, Bessemer City, Cramerton, Dallas, Gastonia, High Shoals, Kings Mountain and Ranlo.

Each team was assigned a tablet computer, on which satellite maps directed them to randomly selected houses where they described the survey to residents, administered the survey to interested persons, and recorded the responses on the computers. Each team used tracking forms to report the outcome of each door that was knocked on.



At DHHS, the Institute specialist downloaded and tabulated all survey responses on a laptop computer. DHHS staff administered 183 of 200 targeted surveys yielding a success rate of 91.5% which, because it was greater than 80%, is statistically valid. Surveyors attributed not reaching their goal because many individuals were not home and access to anticipated homes was restricted after attempting replacement addresses.

The cooperation rate – which is generally what people consider when they think about “response rates” – is the proportion of households where contact is made with eligible participants and an interview is conducted. Our cooperation rate was 60% (183/305). Rates above 60% indicate statistically significant results with little to no potential for bias. The contact rate which is the measure of effort is the total number of completed interviews divided by the total number of homes where contact was attempted. Typical rate for this type of survey is 20-40%; our contact rate was 26%.

Through the Rapid Needs Assessment, DHHS (1) identified neighborhoods where low-income residents reside; (2) surveyed individuals who are likely to need health services; (3) administered the Quality of Life Survey to a statistically valid sample of individuals; (4) secured completed

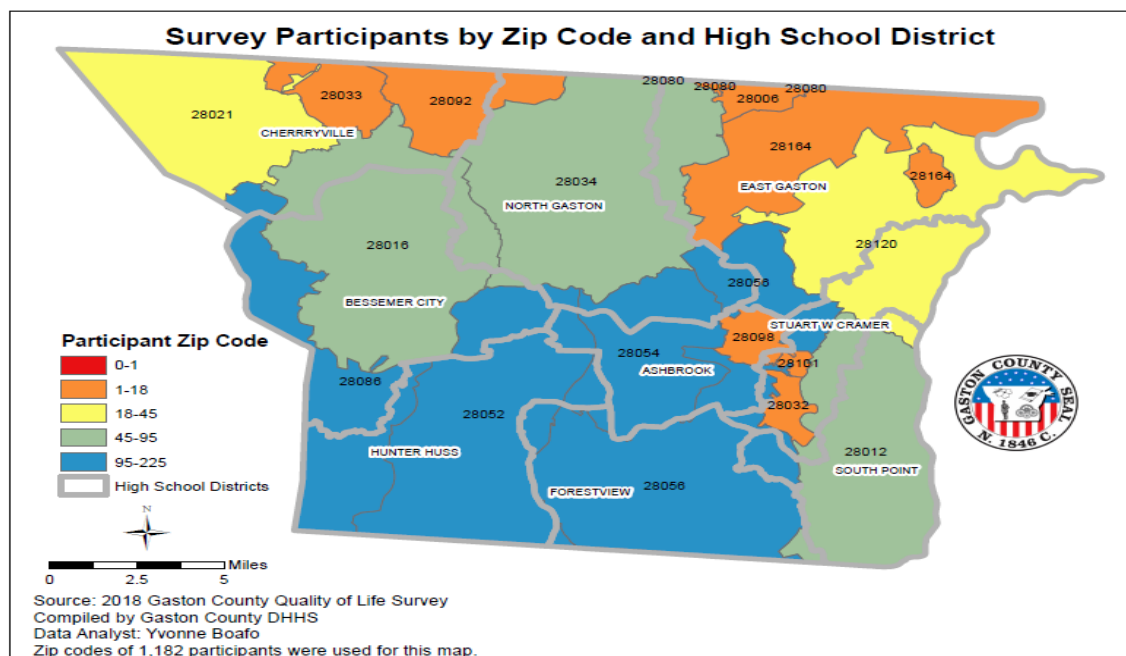
surveys from persons who may have limited literacy skills; and, (5) quickly gathered and processed survey findings.

2017 Population Estimates and 2018 Quality of Life Survey Participation

The table below provides the population estimates for Gaston County and number of participants from Gaston who participated in the survey by municipality.

Geographic Area	2017 Population Estimates**	Percent of Population	Survey Participants	Percent of Survey Participants
Belmont	11,403	5.21%	95	9.15%
Bessemer City	5,476	2.50%	61	5.88%
Cherryville	5,971	2.73%	29	2.79%
Cramerton	5,016	2.29%	33	3.18%
Dallas	4,850	2.22%	62	5.97%
Gastonia	75,919	34.71%	542	52.22%
High Shoals	714	0.33%	3	0.29%
Kings Mountain(Part)	1,086	0.50%	38	3.66%
Lowell	3,775	1.73%	7	0.67%
McAdenville	689	0.31%	4	0.39%
Mount Holly	15,358	7.02%	43	4.14%
Ranlo	3,582	1.64%	34	3.28%
Spencer Mountain*	0	0.00%	1	0.10%
Stanley	3,758	1.72%	20	1.93%
Unincorporated Areas	81,157	37.10%	50	4.82%
Gaston (Totals)	218,754	100.00%	1022	98.46%
**2017 population estimates data from North Carolina Office of State Budget and Management (OSBM)				

The map shows the location of survey participants by zip code and high school districts.



Secondary Data Collection

Secondary data was collecting using resources found on the NC State Center for Health Statistic website over the year preceding the submission of this report. Other data sources include: Behavioral Risk Factor Surveillance System (BRFSS), Youth Risk Behavioral Surveillance Survey (YRBSS), Detailed Mortality Statistics Query Tool, County Databook, NC-Nutrition for Pediatric Assessment Surveillance System (NC-NPASS) and County Health Rankings.. When available, the most current data was presented along with trend data.

Priorities Selection Process

At its meeting of August 8, 2015, the Gaston County Department of Health & Human Services Strategic Planning Committee developed the health priorities for 2015-2020.

Following its review of the leading causes of mortality, morbidity, risk factors, and Quality of Life Survey results for Gaston County, the board engaged in an extensive conversation regarding the meaning of this data. On August 28, 2015, the DHHS Strategic Planning Committee selected priorities for this plan. This was the culmination of sixteen meetings where committee members: developed Values, Mission, and Vision statements; discussed local health, social service, and transportation problems and solutions with community leaders; analyzed DHHS Strengths / Weaknesses / Opportunities / Threats; set DHHS priorities through 2020; and, read articles on emerging human services issues and needs.

The committee presented principles and priorities to the DHHS Board and refined them to meet the Board's expectations and vision.

1. The Board DHHS will advocate for additional mental health resources and their integration with public health services.
2. DHHS will reduce the incidence of childhood obesity.

3. DHHS will enhance Children & Family Services to provide children and families with access to prevention, treatment, support, health, and education services to improve family functioning.
4. DHHS will enhance its programs so the elderly have adequate access to medical care and support service

Chapter 4: Health Data Result

Overview:

Overall Health Status

The Life Expectancy (LE) of Gaston County was slightly lower than North Carolina in 2015-2017 (75.6 vs. 78.0). LE in Gaston has increased by 1.4 since 1992. There are disparities by gender and race. LE is 73.1 for men and 77.9 for females and increase of 3 years for men since 1992. LE is 74.6 for African Americans and 75.8 for Whites, an increase of 5.6 for African Americans since 1992.

In the 2018 Quality of Life Survey, over 80% of Gaston County respondents at least agree to the statement “In general my health is good.” This response was similar for community leaders, residents from low income areas and the general community. It is also similar to the 2015 Quality of Life Survey results. Eighty-three percent of residents who completed the Behavioral Risk Factor Surveillance System (BRFSS) in our region (Region 4) reported at least “good” overall health.

Health Resources:

Gaston County has numerous health resources serving the county. The three main ones are Gaston County Department of Health Services (DHHS), CaroMont Regional Medical Center and Gaston Family Health Services (GFHS), a Federally Qualified Community Health Center.

DHHS is a North Carolina Accredited Health Department. It offers disease prevention, disease treatment, health promotion and environmental services. Its’ clinics provide family planning, prenatal care, limited gynecology, immunizations, and diagnoses and treatment for sexually transmitted diseases. It provides nutrition including WIC at two locations. DHHS provides the community with health education programs to prevent teen pregnancy, drug overdoses and improve health resources in childcare centers. DHHS provides education on physical activity, good nutrition and promotes smoking cessation. Its environmental health programs include food and lodging inspections and it manages the well water and septic system installation and repairs. DHHS has several clinical satellites offices including the Summit Midwifery and High-Risk Obstetrics and the Highland Health Center.

CaroMont Regional Medical Center is the county’s sole hospital, a not-for-profit general and acute care facility with 435 licensed beds. Its’ hospital and ancillary service include the Birthplace, CaroMont Cancer Center, CaroMont Heart Center, Emergency Services, Imaging Services, Neurosciences, Advanced Spine Care, Psychiatric Services, Rehabilitation and Sports Medicine, Sleep Center, Special Care Units, Surgical Services, the CaroMont Wound and Diabetes Center, and the Robin Johnson Hospice House.

Gaston Family Health Services is the county’s sole Federally Qualified Community Health Center. With the exception of prenatal care, provides a full range of primary care services,

behavioral health services, two pharmacies, the Gaston Diabetes Center and dental clinics. It also has two pharmacies, the Gaston Diabetes Center, and dental clinics.

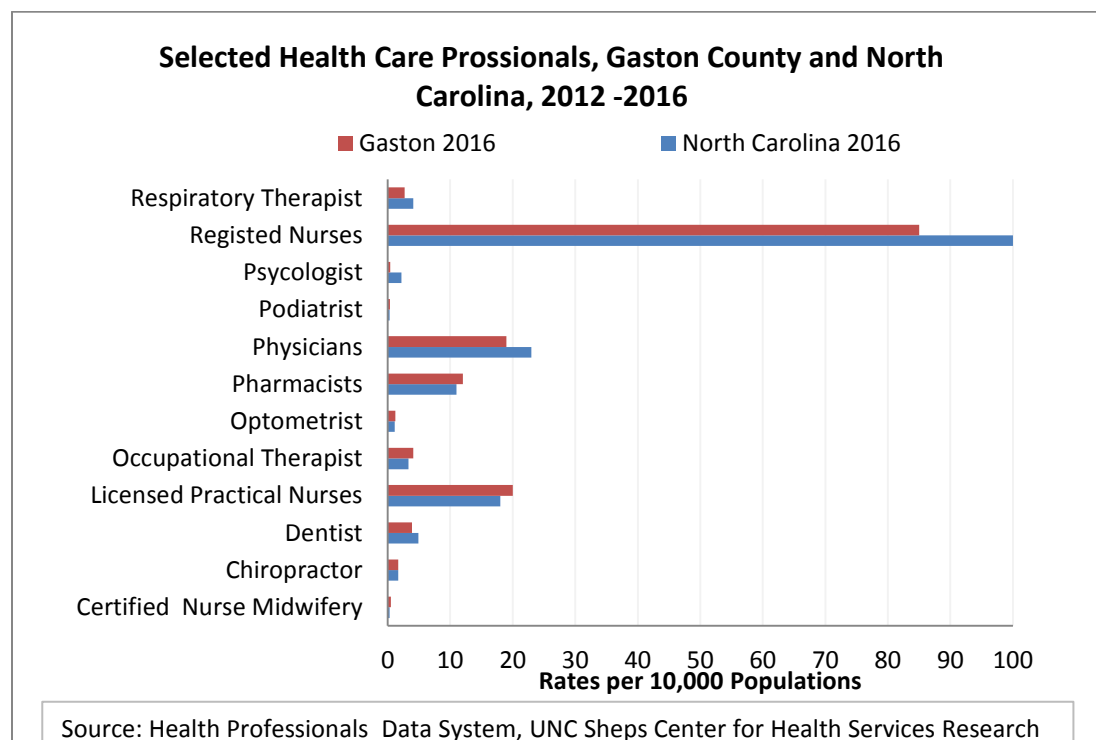
DHHS and GFHS jointly operate a primary health center in the Highland Community. It also operates Community Health Partners, Gaston County's Medicaid Care agency and Health Net Gaston, a system that secures local physician to provide complementary medical care to uninsured adults.

The Gaston Community Healthcare Commission is a leader in the area of health promotion and disease prevention. This community-led coalition currently focuses opioid prevention and health in all policies work.

Health Professionals

In 2017, there were 394 physicians or 18.0 physicians per 10,000 residents. There were 84.3 registered nurses per 10,000 residents, 11 pharmacists per 10,000 residents, and 3.9 dentists per 10,000 residents (North Carolina Economic Data and Site Information, ACCESSNC)

The figure below provides the rate of selected health professions in Gaston County compared to North Carolina.



Educational and Socio-Economic Factors

In 2013-2017, 84.1% of Gaston County adults 25 years and older had high school graduate or higher and 20.4% of those had earned a bachelor's degree or higher. It is estimated that 15.9% of residents have not completed high school compared to 19% reported for 2009-2013. This is an indication that more residents are getting higher education.

In 2013-2017, 56.4% of the legal working age population were employed, 5.6% were unemployed and 38.4% were not in the labor force. Over four of five (84.1%) of the civilian employed population were private wage and salary workers, 10.8% were government workers and 4.9% were self-employed. The median household income was \$46,626. Median earnings for full time male workers were nearly \$10,000 higher than females (\$44,744 vs. \$35,331).

Nearly, one in six residents (16.5%) live below the poverty level and 24.3% of children less than 18 years live in poverty. About 32.9% of those who live below the poverty level are single mother households. There are 4,040 employment establishment and 15,375 firms (Census: 2016 Business patterns and 2012 business owner survey).

Health Problems and Disabilities

The top chronic health conditions for residents are related to heart, autoimmune and mental health conditions. According to the 2017 Behavioral Risk Factor Surveillance Survey (BRFSS) data, 21.9% of respondents in our region have arthritis and lupus and 19% have depressive disorder. About 26.8% of respondents in the 2018 Quality of Life survey have anxiety or depression disorder. In addition 16.0% of residents have some form of disability. Thirty-nine percent of adults 65 years or older are disabled compared to 14.3% of residents 18-64 years old and 5.3% of children under 18 years (2017 American Community Survey, 5-Year estimate).

Barriers to Healthcare and Assistance with Prescription/ medication needs

According to the 2013-2017 census data, 12.3% of the residents are uninsured. However, this number differs among different age groups. Nearly 1 in 5 (19.7%) 19 to 64 years olds are uninsured and 6.6% of those under 19 years old are uninsured. Survey participants indicated inability of insurance coverage to cover certain medical expenses as a barrier to receiving care. Issues related to cost, access, availability and family obligations prevent them from seeking care.

According to 2016 BRFSS data 13.6% of respondent from our region couldn't see a doctor because of cost and 10% did not take or fill a prescribed medication because of cost.

Mortality

The table below shows the five leading causes of death for 2013-2017 compared to data from 2015 CHA. Notably, even though more residents died from stroke in 2013-2017 compared to 2009-2013 data, death from Alzheimer's outnumbered stroke. Alzheimer's is currently the fourth leading cause of death

Gaston County leading causes of death, reporting periods 2009-2013 and 2013-2017

2009-2013 Leading Causes of Death	2013-2017 Leading Causes of Death
Heart disease: 2,296 deaths	Cancer: 2,335 deaths
Cancer: 2,253 deaths	Heart disease: 2,257 deaths
Chronic lower respiratory disease: 836	Chronic lower respiratory diseases, 872
Stroke: 491 deaths	Alzheimer's: 596 deaths
Alzheimer's disease: 478 deaths	Stroke: 564 deaths
Source: NC State Center for Health Statistics (NC SCHS)	

Note: See appendix for rates

Age-adjusted rates of death were higher in males than females. The leading causes of death for each gender are presented below. These are similar to those reported in 2015 with a notable addition of Alzheimer's disease in females.

Gaston County leading causes of death, by sex. 2013-2017 Age-Adjusted Rates per 100,000

Men	Female
Heart Disease: 246.9	Cancer: 150.3
Cancer: 230.9	Heart Disease: 137.8
Chronic Lower Respiration Diseases: 77.0	Chronic Lower Respiratory Diseases: 66.4
Non-motor vehicle unintentional injuries: 57.0	Alzheimer's: 55.5
Stroke: 48.1	Stroke: 44.0
Source: NC State Center for Health Statistics (NC SCHS)	

Breaking cause of death down by age group, it can be seen that perinatal that perinatal conditions and birth defects are the largest concern for children age 0-19. Unintentional injuries, through motor vehicles or otherwise, topped the list for the 20-39 year old cohort. The top causes of death for the 40-64 year olds and those 65 years or older are cancer and heart disease. Unhealthy behaviors such as smoking, poor nutrition, and lack of exercise can contribute to these conditions. Smoking is also a major contributor to chronic lower respiratory diseases, a leading cause of death in the county. Stroke and Alzheimer's disease are major concerns for residents 65 and over due to combination of aging, biology and unhealthy lifestyles. Rankings are similar for most ages compared to the 2015 CHA with rates generally declining.

Top Leading causes of death, by Age, Gaston County, 2013-2017, Rates per 100,000

All Ages	Rates	0-19 Years	Rates
Cancer	218.2	Perinatal Condition	17.4
Heart Diseases	210.9	Birth Defects	7.4
Chronic lower respiratory diseases	81.5	Other Unintentional injuries	5.9
Alzheimer's	55.7	Suicide/ Motor vehicle injuries	4.1
Stroke	52.7	Homicide	3.3
20-39 Years	Rates	40-64 Years	Rates
Other Unintentional injuries	43.3	Cancer	199.4
Motor vehicle injuries	25.0	Heart Diseases	144.6
Cancer - All Sites	14.4	Other Unintentional injuries	48.8
Suicide	15.2	Chronic lower respiratory diseases	47.2
Heart Diseases	14.0	Diabetes	34.4
65-84 Year	Rates	85+ Years	Rate
Cancer	866.8	Heart Diseases	3725.2
Heart Diseases	691.5	Alzheimer's disease	2075.7
Chronic lower respiratory diseases	378.1	Cancer	1583.1
Stroke	197.3	Stroke	902.2
Alzheimer's disease	144.4	Chronic lower respiratory diseases	769.9

Source: NC State Center for Health Statistics (NC SCHS)

The table below provides data by race and illustrates African Americans disproportionately die of diabetes. The causes of death have not changed among whites compared to data from the 2015 CHA. However, the top five causes of death among African Americans currently include diabetes and stroke.

Gaston County leading causes of death, by race. 2013-2017 Age-Adjusted Rates per 100,000

White, Non-Hispanic	African American
Heart Disease: 188.0	Cancer: 202.2
Cancer: 184.7	Heart Disease: 187.3
Chronic Lower Respiratory Diseases: 75.8	Stroke: 62.4
Alzheimer's disease: 53.9	Diabetes Mellitus: 53.7
Non-motor vehicle unintentional injuries: 49.6	Alzheimer's disease: 37.4
Source: NC State Center for Health Statistics (NC SCHS)	

Infant Mortality

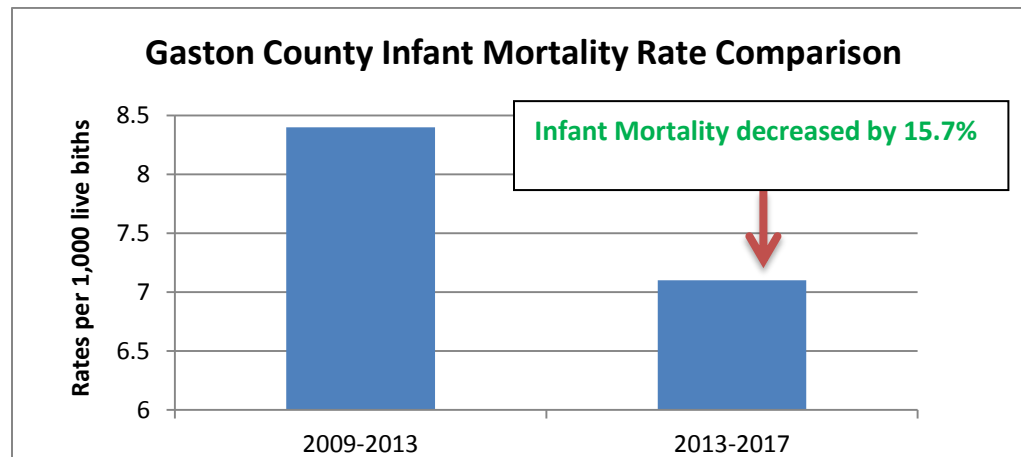
In 2013-2017 infant death rate was 7.1 infant deaths per 1,000 live births similar to that of North Carolina (Table 5). Overall infant death decreased by 15.7% from 2009-2013 rates (8.4 versus

7.1 per 1,000 live births). Infant death decreased by 39.9% among African Americans and 17.2% among Whites from 2015 to 2017. The leading causes of infant mortality in 2017 were: (1) Congenital malformations, deformations and chromosomal abnormalities, (2) Premature and low birth weights, (3) Respiratory distress and other respiratory conditions. Premature death rate was high among African Americans (25.5) compared to whites (12.3) and congenital malformations, deformations and chromosomal abnormalities rate was higher among whites (19.3) compared to among African Americans (13.0).

Age-Adjusted Infant Mortality Death for, Gaston County North Carolina, 2013 – 2017, Rates per 1,000 live births

Race / Ethnicity	Gaston County	North Carolina
White, Non – Hispanic	5.4	5.3
African American	14.5	12.7
All Residents	7.1	7.1

Source: NC State Center for Health Statistics (NC SCHS)



Source: NC SCHS

Morbidity / Diseases

Chronic Disease Rates

Cancer

According to the North Carolina Central Cancer Registry, the 2013-2017 age-adjusted, cancer incidence rates decreased from 514.6 cases /100,000 in 2009-2013 to 495.2 cases / 100,000 for Gaston. The highest incidence rates were for breast cancer, followed by prostate, lungs, and colon cancers. Compared to previous CHA data, the incidence rate decreased for all cancer types though the decrease in breast cancer was negligible. Colon or rectum decreased by 7.7%, prostate decreased 11.8% and lung cancer decreased by 2%. The incidence rate for breast cancer decreased slightly (1.3%) from 156.5 cases /100,000 to 154.5 per 100, 0000 (Table 6). Gaston continues to have higher cancer rates than peer counties and NC as a whole, even with lower breast and prostate cancers. Lung cancer is a notable contributor to this, with the Gaston rate (58.1) significantly above the NC rate (45.9)

Age Adjusted Cancer Incidence for Gaston County, 2009-2013 and 2013-2017 Rates Per 100,000		
Disease	2009-2013	2013-2017
Cancer Incidence	514.6	448.7
Breast	156.5	156.1
Colon / Rectum	47.0	42.6
Lung / Bronchus	87.1	67.6
Prostate	119.7	102.0
Source: NC State Center for Health Statistics (NC SCHS)		

The North Carolina Central cancer Registry projected 1,316 total cases of cancer in 2018 with 449 cancer related deaths for the county.

Whilst the 2018 County Health Ranking (CHR) data shows the percent of adult smoking in 2016 was similar in Gaston County and NC (18% vs 18%), the 2019 NC Health profile from North Carolina Institute of Medicine (NCIOM) shows adult smoking in Gaston as higher than the state in 2016 (18% versus 15.9%). This as an indication tobacco use is a health issue in the county. In the 2018 Quality of Life survey, 11% of respondents cited tobacco products as a serious community health concern.

Additional data from 2017 BRFSS shows nearly 14% of respondents from our region are current smokers compared to 17.2% for the State, and 25% of the current smokers' smoke every day compared to 27.7% of respondents at the State. The North Carolina State Center of Health Statistics describes tobacco use as the number one preventable cause of death in North Carolina.

These numbers may explain why cancer disease and death continue to remain a health concern in Gaston. Compared to 2015 CHA data, there is a decrease in age-adjusted cancer disease incidence rate from 2009 -2013 to 2013-2017 (514.0 vs 495.2 cases /100,000) and cancer deaths

rates (192.7 versus 183.6 deaths /100,000) in Gaston County. Cancer death rate in Gaston County is higher than the State (183.6 versus. 164.1 deaths per 100,000) and cancer disease incidence rate is higher than the State (495.2 versus 470.0 cases per 100,000).

Cardiovascular disease

Cardiovascular diseases affect the heart or blood vessels and include coronary heart disease, stroke, congenital heart defects and peripheral artery disease. Similar to cancer, untreated cardiovascular conditions can lead to serious illnesses and death.

Heart disease is the second leading cause of death and stroke is fifth leading cause of death in Gaston County. Notably, the 2013-2017 the crude death rate from heart disease decreased when compared to the 2009-2013 rate (210.9 versus 221.6 / 100,000). The crude death rate for stroke increased during this same period (52.7 versus 47.4 /1,000). In 2014, the hospitalization rate for cardiovascular and circulatory disease was 17.4 cases per 1,000 and 11.6 cases per 1,000 for heart disease alone, similar to the previous year (Table 9).

Of residents who responded to the 2018 Quality of Life Survey, 34.8% have high blood pressure, 26.4% have high cholesterol and 4.6% have had at least one heart attack. The 2017 BRFSS data shows 32.5% of respondents in our region have high blood pressure, 33.3% have high cholesterol and 4.4% have ever had stroke. These numbers are similar to the 2015 CHA data and illustrate cardiovascular disease as health concerns to county residents. High cholesterol, high blood pressure, unhealthy diet and physical inactivity are key causes of cardiovascular diseases. The National Heart, Lungs and Blood Institute (NHBLI) recommends individuals to be physically active, avoid smoking and unhealthy diets, manage stress and get routine medical care.

Diabetes

Diabetes is a chronic disease that affects the amount of insulin the body needs to convert food into energy. In 2013-2017, diabetes was the 7th leading cause of death in Gaston County. It was fifth among the 40-64 years cohort and fourth among African Americans. In 2014, there were 424 inpatient hospitalizations related to Diabetes and the discharge rate was 2.0 per 1,000. The 2018 Quality of life survey shows 14% of respondents have diabetes similar to 13.5% reported in 2015 CHA (Table 8). 2017 BRFSS data shows 10.6% from respondents from our region have diabetes. Diabetes continues to be a major health concern for Gaston County.

Gaston county Cardiovascular and Diabetes Data, 2013 and 2018			
Conditions	2013	2018	Region 4 *** 2017 BRFSS
Heart Disease	3.8%	4.6%	3.2%
High Blood Pressure	31.3%	34.8%	32.5%
High cholesterol	47.6%	26.4	33.3%
Diabetes	13.5%	13.8%	10.6%

Source: 2013 & 2017 Behavioral risk Factor Surveillance System (BRFSS) and 2018 Gaston County Quality of Life Survey; *** 2017 BRFSS data is based on respondents from our region, region 4

Infectious and Respiratory Diseases

Pneumonia and influenza are the 8th leading causes of death in Gaston County. In 2015, the discharge rate of respiratory diseases alone in Gaston County was higher than the state (13.1 vs. 10.3 cases per 1,000). Compared to 2013, discharge rate from respiration disease has not changed. Inpatient hospital discharges of pneumonia and influenza cases combined decreased from 975 cases to 805 cases in 2014.

In 2017, the influenza death rate was 1.1 cases per 100,000 (2 deaths) compared to 0 deaths in 2013. Influenza visits were high in Emergency Department (ED) (718 versus 364 visits) within this period.

Tuberculosis rate decreased from 1.9 cases per 100,000 in 2013 to 0 in 2017. In 2014, it was 2.8. Current data shows continuous screening and surveillance has been effective in helping identify and treat people and protect residents at risk of disease.

The rate of pertussis increased from 2013 to 2017 (1.91 versus 5.99 cases per 100,000).

The rise in influenza deaths, pertussis and ED visits indicates that public health officials should continue to monitor trends and develop programs to educate the public about vaccine preventable diseases.

Inpatient Hospital Utilization, Discharge Rate (Per 1,000 Pop)		
Diagnostic Category	2013	2014
Cardiovascular & Circulatory Diseases	17.7	17.4
-- Heart Disease	11.5	11.6
-- Cerebrovascular Disease	3.8	3.5
Endocrine, Metabolic & Nutrit. Disease	4.7	4.4
-- Diabetes	2.3	2
Respiratory Diseases	13.1	11.7
-- Pneumonia/Influenza	4.6	3.8
-- Chronic Obstructive Pulmonary Disease (excl. Asthma)	2.2	2.2
-- Asthma	0.7	0.6
Source: NC SCHS		

Gaston County Infectious and Respiratory Disease Rate, 2013 and 2017 Rates per 100,000

Infectious Disease	2013	2017
Influenza cases (NC DETECT)	364 cases	718 cases
Influenza deaths Rates	0	1.18 per 100,000 (2 cases)
Respiratory Disease		
Tuberculosis Rates	1.9	0
Pertussis Rates per 100,000	1.91 per	3.18

Source: NC SCHS Communicable Disease Dashboard

Injuries

Injury is a major cause of death in Gaston County. In 2013- 2017, other unintentional injuries excluding those from motor vehicles were the 6th leading cause of death in the county. Deaths from motor vehicle injury were the 10th. Compared to data from the 2015 CHA, discharge rates

from these non-fatal injuries increased by 12.5% between 2013 and 2015 (201.3 versus 226.5 injuries per 100,000). The average cost of stay decreased by \$225 and inpatient cost per capita was high (\$17.7 versus \$19.4). The fluctuation in cost may result from changes in procedure and technology as well as severity of injury.

Injuries, Poisonings & Toxic Effects Of Drugs					
	2011	2012	2013	2014	2015
Number of Discharges	508	467	424	463	*
Rate of discharges per 100,000 population	237.0	220.9	201.3	218.1	226.5
Average Length of stay days	4.1	4.4	4.3	4.7	4.4
Average Cost per stay	\$7,837	\$9,995	\$8,809	\$9,969	\$8,584
Inpatient costs per capita, \$	\$18.6	\$22.1	\$17.7	\$21.7	\$19.4

Source: Healthcare Cost and Utilization Projects

Most injury hospitalization results from unintentional falls, self-inflicted and unintentional poisoning, and unintentional motor vehicle accident. In addition to death and high medical cost, injury can lead to years of potential life lost, disability, poor mental health and lost productivity (Office of Disease Prevention and Health Promotion, Healthy 2020).

Injuries, Poisoning & Toxic Effects OF Drugs				
	Rate of Discharges per 100,000 population		Inpatient Costs per capita, \$	
	Gaston County	North Carolina	Gaston County	North Carolina
2015	226.5	155.0	19.4	15.1
2014	218.1	151.5	21.7	14.3
2013	201.3	159.6	17.7	14.2
2012	220.9	165.7	22.1	14.6
2011	237.0	167.1	18.6	14.1

Source: Healthcare Cost and Utilization Projects <http://www.shepscenter.unc.edu/data/nc-hospital-discharge-data/> Retrieved on 10/21/18

Obesity

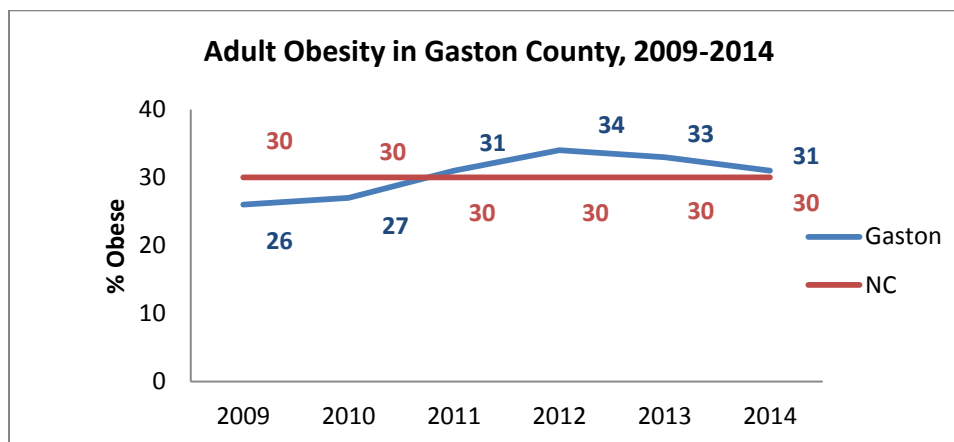
Obesity can be caused by behavior and genetic factors. According to the CDC, obesity directly impacts heart diseases, stroke, cancer and Type 2 diabetes, the leading causes of preventable death. It may cause poor mental health, low quality of life, high blood pressure and high LDL cholesterol and low HDL cholesterol. Nearly 1 in three Gastonia residents 18 years or older is obese (CDC, 500 Cities Project). Thirty-five percent (35%) of 2018 QOL Survey participants were either overweight or obese. Two out of three (68.6%) 2017 BRFSS survey respondents from our region are either overweight or obese of which 33.1 are obese (Defined as an individual with a body mass index greater than 30). In contrast, 67% of NC respondents are overweight or

obese. In 2017, 55.4% of women were overweight or obese upon pregnancy and the highest incidence of obesity and overweight statuses were among African American women (63.1%) and Latina women (60.4%) compared to white women (52.9%).

In addition 17.3% of high school students are obese and 17.6% are overweight (2017 YRBSS). One in two (47.4%) of adults in our region participated in 150 minutes of physical activity per week and only 17.2% of adult from our region consume fruits, vegetables or beans five or more times per week. Similar to the 2015 CHA, obesity remains a health concern in Gaston County. There is high prevalence of obesity in Gaston County compared to the NC.

According to the 2015 NC-PedNESS data, 27.0% of Gaston County children 2-18 years are obese or overweight, and 26.8% of children 2-4 years are obese. Fewer children are overweight or obese combined compared to 2010 (26.8% vs 28.8%). 2017 NC YRBSS data shows, obesity rate for high school students increased from 15.8% to 17.3% from 2015 to 2017.

People who adopt healthy eating habit and meet the recommended physical activity can reduce their risk of obesity. Environmental factors that promote access to healthy food, walking and healthy lifestyle can reduce the prevalence of obesity. The chart below provides adult obesity trends in Gaston County.



Source: 2018 County Health Rankings

Oral Health

Oral health diseases are preventable and they can affect or be affected by cardiovascular diseases, premature birth, diabetes, HIV/AIDS, osteoporosis and Alzheimer's disease. The most common dental health problem is tooth decay. When untreated, tooth decay may result in: difficulty eating, swallowing, and talking, toothaches, gum disease, tooth loss and headaches. Oral health disease can be prevented by regular dental visits, eating healthy foods and flossing every day. The NC Office of Minority Healthcare recommends that oral health programs should be incorporated into chronic disease prevention programs and primary care offices. Other preventive recommendations include: community education, community water fluoridation and school dental sealant programs to improve dental health and quality of life.

The 2015-2016 School Oral Health Report states that 17% of Gaston County kindergarteners had some form of tooth decay compared to 10% in 2012-2013, reported in the 2015 CHA. Additionally, 64% of kindergarteners had filled, missing and decayed teeth within the 2015-2016 period compared to 67% in 2012-2013. The increase in the number with decayed teeth is public health concern and it is important to encourage proper dental care to the younger

STDs, HIV

In 2017, Gaston County recorded its highest rate of newly diagnosed syphilis, chlamydia and gonorrhea. Compared to 2015 CHA data, in 2017, there were 1,382 cases of chlamydia and the incidence increased by 21.6% from 2013 - 2017. Incidence rates for syphilis increased by 560% and incidence rates increased by 66.2% during this period. In December 2017, 697 Gaston County residents had HIV and the county ranks 27th in NC for HIV.

Compared to North Carolina, the incidence rate of chlamydia was higher (627.7 versus 612.2 cases per 100,000).

According to the CDC, STDs that are curable with antibiotics are mostly undiagnosed and untreated. There is a growing concern that gonorrhea is resistant to antibiotics like azithromycin, needing more effective antibiotics. Untreated STDs increase the risk of transmission and increase a person's risk of infertility, stillbirth and chronic pain.

Annual Incidence Rate of Sexually Transmitted Disease (STDs) in North Carolina, Gaston County and neighboring counties, 2013-2017 per 100,000						
		2013	2014	2015	2016	2017
Syphilis	NC	7.0	11.2	18.7	18.7	27.8
	Gaston	3.3	4.3	10.8	18.4	21.8
Chlamydia	NC	500.1	502.9	541.9	572.4	612.2
	Gaston	516.3	553.3	540.9	589.5	627.7
Gonorrhea	NC	143.4	150.7	169.9	194.4	220.9
	Gaston	145.7	133.7	140.1	219.4	242.1
HIV Disease (Adult and adolescent)	NC	16.0	15.8	15.9	16.4	15.2
	Gaston	15.4	10.8	16.2	10.4	14.1
AIDS (Stage 3) among Adults and Adolescents	NC	10.4	8.4	8.7	7.0	6.9
	Gaston	9.2	7.9	9.5	6.6	9.2

Source: NC DHHS-Communicable Disease Branch

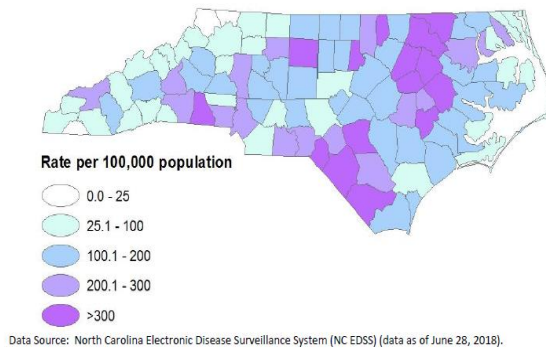
The maps below show the spatial distribution of newly diagnosed STDs in North Carolina by county.

generation as proper dental care practices and healthy eating lifestyles can improve their health now and in their adulthood.

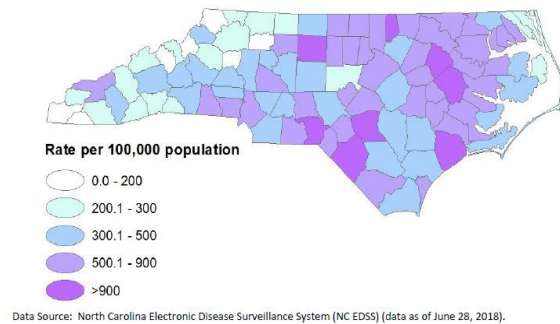
Gaston County Oral Health Factors		
Child Oral Health	2012-2013	2015-2016
Decayed Teeth (%)	10%	17%
Filled, Missing and Decayed Teeth	67%	64%

Source: 2012-2013 & 2015 – 2016 School Oral Health Report

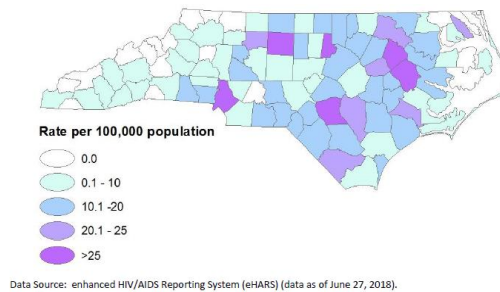
Newly Diagnosed Gonorrhea Rates in North Carolina by County of Residence at Diagnosis, 2017



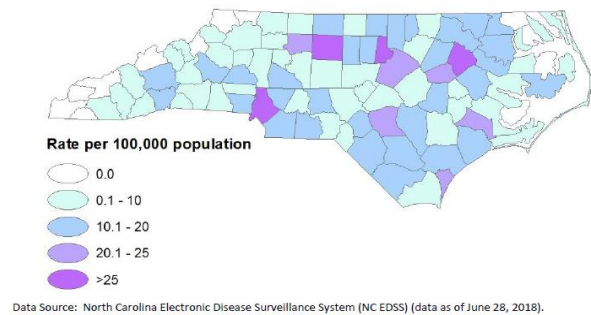
Newly Diagnosed Chlamydia Rates in North Carolina by County of Residence at Diagnosis, 2017



Newly Diagnosed HIV Rates in North Carolina by County of Residence at Diagnosis, 2017



Newly Diagnosed Early Syphilis (Primary, Secondary, and Early Latent) rates in North Carolina by County of Residence at Diagnosis, 2017

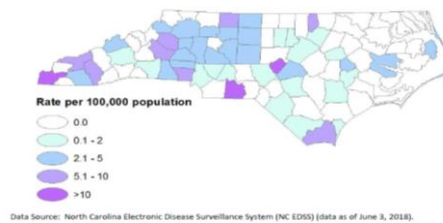


Source: Maps courtesy of NC DHHS: NC Electronic Disease Surveillance (NC EDSS) data as of June 3, 2018

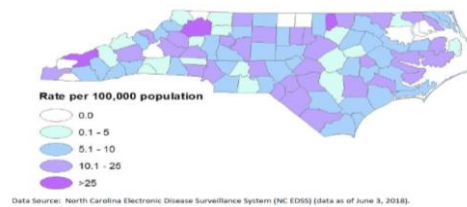
Other Communicable Diseases – Hepatitis

An increasing number of Gaston county residents were diagnosed of Hepatitis B and Hepatics C in 2017. The maps below shows the spatial distribution of newly diagnosed hepatitis B rates by counties in NC.

Newly Acute Hepatitis B Rates in North Carolina by County of Residence at Diagnosis, 2017



Newly Chronic Hepatitis B Rates in North Carolina by County of Residence at Diagnosis, 2017



Source: Maps courtesy of NC DHHS: NC Electronic Disease Surveillance (NC EDSS) data as of June 3, 2018

The table below provides incidence rates of Hepatitis C in Gaston County for 2016 and 2017

Reportable communicable disease - Reported cases and annual incidence rate per 100,000 populations for 2016 and 2017				
	2016		2017	
	Cases	Rates per 100,000	Cases	Rates per 100,000
Acute Hepatitis C	1	0.63	3	1.85
Chronic Hepatitis C	96	60.12	299	184.12

Data Source: NC Disease Data Dashboard

Note: The high spike in the number of cases in 2016 and 2017 is due to a change in reporting system.

Maternal and child Health

The health of the mother during pregnancy directly affects the unborn baby and their health. Poor maternal health status can cause poor health outcomes in the community. DHHS provides care to pregnant mothers through the Women, Infant and Child (WIC) program, the Substance Treatment and Rehabilitation program (STAR), teen wellness programs and maternity programs.

Compared to 2015 CHA data, in 2017 67% of pregnant mothers started prenatal care in the first trimester compared to 72.2% in 2013. Women who started prenatal care in their second trimester increased in 2017 compared to 2013 (29.1% versus 22.6%) and in 2013 3.6% started care in their third trimester compared to 4.6 % in 2017. The number of pregnant who never received is around 1.4% for both years. In 2017, 2.6% of pregnant mother received no prenatal care compared to 1.3% in 2013 and mothers who received inadequate care increased from

Access to prenatal care improves health outcomes. The number of mothers smoking during pregnancy decreased from 20.4% to 15.6% from 2013 to 2017. Breastfeeding mothers increased from 68.5% to 72.5% and the number of preterm babies decreased from 11.7% to 9.7% within this period. These numbers illuminate the importance of early access to prenatal care and continuous education about the risk of smoking.

17.7% to 19.9%. Pregnant women may do have insurance at the beginning of their pregnancy due to poverty.

Gaston County Resident Births Risk Factors and Characteristics – Prenatal Care, 2013 & 2017

Factors	2013	2017	Trends
Prenatal Care Patterns			
Trimester Care Began			
<i>First</i>	72.2%	67.0%	↓
<i>Second</i>	22.6%	25.0%	↑
<i>Third</i>	3.6%	4.6%	↑
<i>No Care</i>	1.3%	2.6%	↑
Level of Prenatal Care			
<i>Inadequate</i>	17.7%	19.9%	↑
<i>Intermediate</i>	8.6%	6.5%	↓
<i>Adequate</i>	34.1%	29.6%	↓
<i>Adequate Plus</i>	37.7%	42.8%	↑

NC State Center for Health Statistics, County Health Databook, 2019

Gaston County Resident Births Risk Factors and Characteristics – Other Factors, 2013 & 2017			
Factors	2013	2016	Trends
Maternal Smoking	20.4%	15.6	↓
Preterm Birth Rate	11.7%	9.7%	↓
Low-Weight Birth Rate	9.4%	9.6%	↔
Infant Care Practices			
Breastfed at Discharge			
Yes	68.5%	72.5%	↑
No	31.3%	27.1%	↓
NC State Center for Health Statistics, County Health Databook, 2019			

Mental Health and Substance Use

Mental health is an important part of individual and the communities' well-being. According to the CDC, it includes emotional, psychological, and social well-being and affects a person's thoughts, feelings and behaviors. Healthy People 2020 describes mental health as a state of positive mental function that results in productive activities, fulfilling relationships with other people and the ability to adapt to change and cope with problems.

Poor mental health can result from poor health, loneliness, genes, drugs and alcohol and early adverse experiences. Poor mental health can lead to chronic diseases like diabetes, stroke and heart disease and mental health related diseases including depression, anxiety, bipolar disorder or schizophrenia. There was an increase in the number of clients who were served in state mental health centers in 2017. Comparatively, the number doubled from 5,910 in 2013 to 13,173 in 2017.

Number of Mental Health Clients served in State Mental Health, Mental Retardation and Substance Abuse Centers, 2013 - 2017					
	2013	2014	2015	2016	2017
Area mental health programs	5,804	7,771	10,320	11,817	13,137
NC Alcohol and Drug Treatment Centers	64	41	27	29	No Data
State Mental Health Development Centers	37	35	35	33	No Data
State Psychiatric Hospitals	5	19	25	33	36
Totals	5,910	7,866	10,407	11,912	13,173
Data Source: Log Into NC Note: Data include clients at the beginning of the fiscal year and all admission within the year. Multiple admissions are counted multiple times.					

In 2017, 2,289 uninsured individuals and Medicaid beneficiaries were treated with an opioid use disorder (NC Opioid Dashboard, 2018). In addition mental health was a major concern for residents completing the QOL survey in 2-18. Seventy-one percent of participants cited it as a major health concern. Sixty- percent cited illegal drug abuse as a problem and 61% thought prescription drug abuse was a problem. Seventy-five percent cited mental health as an issue

among youth and 73% responded that drug use was a major health concern among Youth. Compared to 2015 QOL data, these responses are more than half of participants and show mental health remains a problem in Gaston County.

Health Care

Access to health care is the ability to gain access to health services in a timely manner to improve a person's health and overall health outcomes (Healthy People 2020). Healthy people 2020 identifies access to insurance, healthcare service location and a trustworthy healthcare provider as important to improve quality of life of a person and the community.

The 2017 census data shows that the percentage of Gaston County residents without insurance between 2013-2017 and 2008-2012 decreased by 5% (12.3% vs. 17.5). The decrease may be the ability of adults to buy private health plans through the Health Insurance Marketplace as part of the Affordable Care Act (ACA) in 2014.

The type of insurance that residents have provides some light on the disparities in health and access to health that still exists in North Carolina. In 2016 1,318 (65%) of patients seen in CaroMont Regional Medical Center were uninsured, 10,375 (33.1%) had Medicare and 5,303 (23.9%) had Medicaid. Only 4,378 (19.8%) had commercial insurance (Table 21).

Compared to 2015 CHA data, the lack of insurance was the number one cited barrier to health care and the inability to pay for healthcare was number one in 2018. This was followed by lack of insurance, availability of care and difficulty finding care. Residents are unable to find specialty care, are unable to pay for certain specialized care and sometimes do not know where to find the specialized care they need. As a result, they are not able to get immediate care and sometimes have to travel to nearby counties.

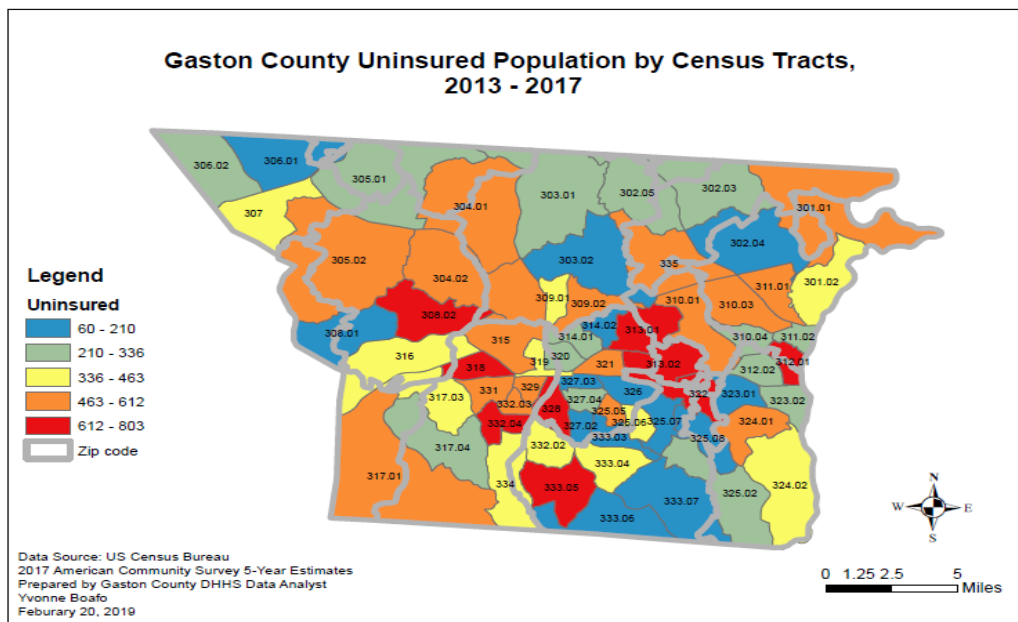
Gaston County Barriers to Access, 2015 and 2018 Quality of Life Survey	
2015	2018
Lack of Health Insurance	Not able to pay for care
Too Far from Home	Lack of Health Insurance
Lack of Childcare	Services are not available
Not Able to Make an Appointment	Difficult finding Services
Work Obligations	Difficult making appointment

According to the UNC Sheps Center of Health Research, the leading cause of emergency department visits in 2016 was chest pain with 2,728 patients seen followed by acute upper respiratory with 1,622 patients seen and low back pain with 1,277 patients seen in the emergency department. Low back pain, head injury and encounter for administra topped primary diagnosis in 2016 compared to abdominal pain and vomiting in 2013.

Causes of Emergency Department Visits, CaroMont Regional Center, 2013 & 2016

2013	2016
Chest Pain (other): 2,401 cases	Chest Paint (Other) : 2,728
Acute Upper Respiratory Infection: 2,321 cases	Acute Upper Respiratory Infection: 1,622 cases
Abdominal Pan (unspecified): 1,954 cases	Low back pain: 1,277
Chest Pain (Unspecified): 1,954 cases	Injury head (Other): 1,209
Nausea with Vomiting: 1,612 cases	Encounter for administra: 1,163
Data Source: UNC Shep Center for Health Services Research	

The map below shows the spatial location of uninsured Gaston County residents by census tracts.



The peer county table in the appendix compares Gaston County to peer counties in North Carolina, and North Carolina with selected key health indicators. There is another table in the appendix under social determinants of health that shows the disparities that exist in the county using the same health indicators.

Determinant of Health

According to the Healthy People 2020, healthy behaviors like making healthy nutritional choices, exercising, and avoiding smoking, taking preventive measures and seeking care when sick impact health. But, environmental conditions where people are born, live, learn, work, play and grow affect their quality of health and health outcomes. This section reviews these factors in the county.

Social Environment

Education

In 2017 Gaston County continues to lag behind North Carolina in certain key measures.

- 85.2% of Gaston County residents over age 25 were high school graduate or higher compared to 87.8% for North Carolina.
- 14.3% had bachelor's degree compared to 20.1% for North Carolina.

At the same time:

- 10.4% attained associate degree compared to 9.4% for North Carolina.
- 31.4% attained High School Graduate vs. 25.8%
- Percentage attaining a bachelor's degree or higher increased by 3.7% from 2010 to 2017 (16.9% versus 20.6%)

Gaston County Schools is one of the ten largest school districts in North Carolina with about 31,500 students from kindergarten to high school. It's currently the second largest employer in Gaston County with around 3,700 employees.

The school system includes:

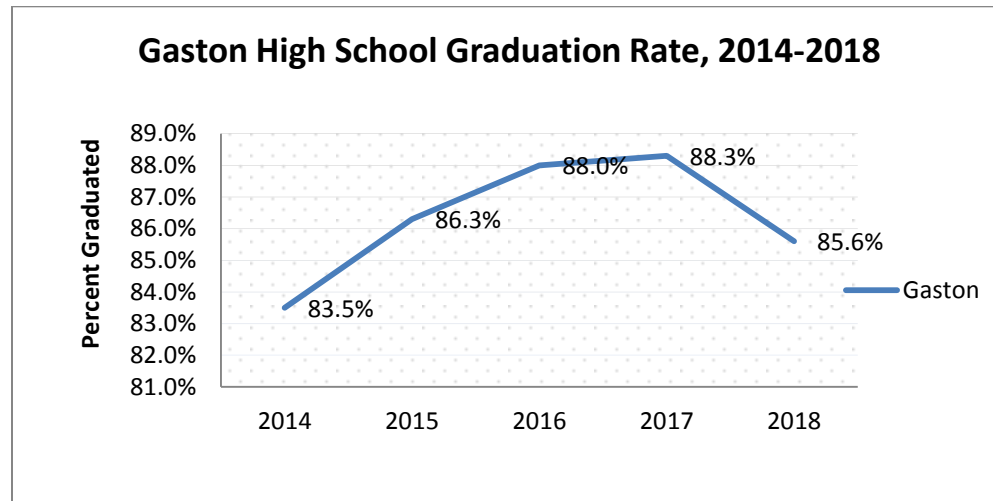
- 29 Elementary/Primary Schools
- 1 Intermediate School
- 11 Middle Schools
- 11 High Schools
- 1 Special Needs School
- 1 Alternative School
- 1 Virtual School (Grades 4-9)
- Education

Educational Attainment in Persons Over 25, Gaston and North Carolina 2017

Grad Level	Gaston County	North Carolina
Less than 9 th grade	4.7%	4.5%
9 th to 12 th grade	10.1%	7.7%
High school graduate (or equivalent)	31.4%	25.8%
Some college, no degree	22.7%	21.3%
Associate degree	10.4%	9.4%
Bachelor's degree	14.3%	20.1%
Graduate or professional degree	6.3%	11.2%
High school graduate or higher	85.2%	87.9%
Bachelor' degree or higher	20.6%	31.3%
Source: US Census Bureau 2017 American Community Survey 1-Year Estimate		

Overall, graduation rate in Gaston County increased by 4.8% between 2014 and 2017 (83.5% vs. 88.3%) and in 2018 there was a slight decline from 88.3% to 85.6%. Equal access to quality

education for all residents increases the opportunity for higher education which ultimately improves health and promotes health equity (Henry J Kaiser Family Foundation, 2018).



Data Source: Gaston County Schools

Families

The home environment is essential to societal well-being and according to the World Health Organization support from families and good social network improves Health. Families without a strong network are likely to have poorer health outcome that result from increased risk of unhealthy behaviors, cardiovascular diseases and mental health issues (University of Wisconsin Population Health, Robert Johnson Woods Foundation, 2018). In 2013-2017, 70.5% of Gaston county families were married couples and 22.8% were female headed.

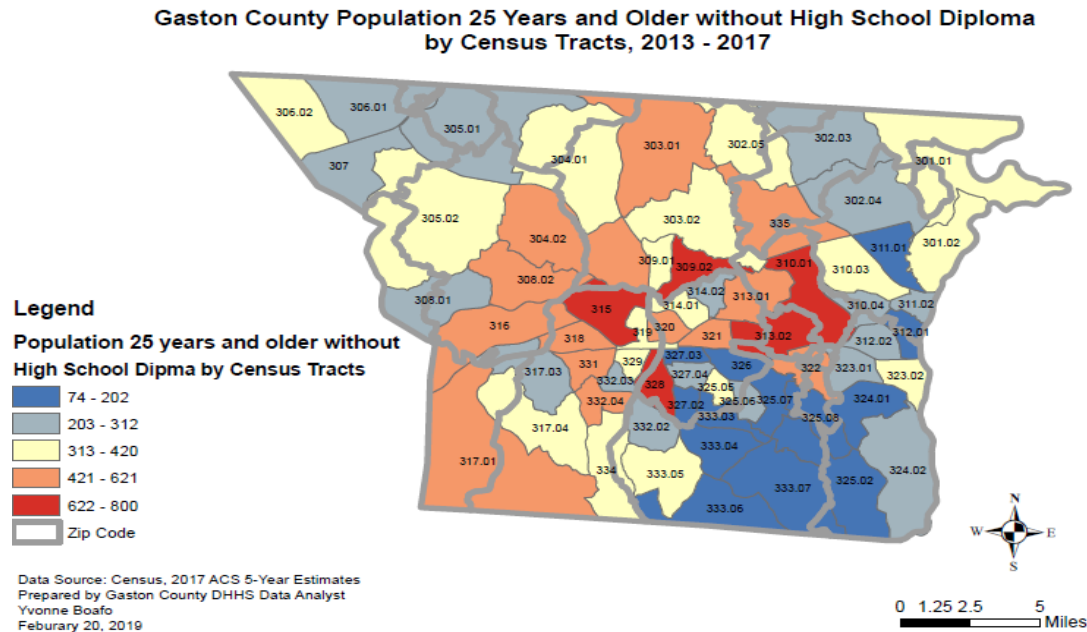
The Child maltreatment rate including children either abused or neglected dropped by 5.8% from 2013 to 2016. In 2017-2018, the number of domestic violence clients decreased by 22.9% (222 versus 171 cases) and number of clients sexually assaulted decreased by 72.5% (502 versus 138 cases)

Gaston County Family Data, 2009 – 2013 Rates per 100,000

Families	2013	2016
Child Maltreatment Rate per 1,000	89.7	84.5
Domestic Violence Rate	2013-2014	2017-2018
Number of domestic violence clients	222	171
Number of sexual assault client	502	138
Family Composition	2009-2013	2013-2017
Single Mother	21.7%	21.8%
Single Father	8.1%	7.7%
Married Couples	70.2%	70.5%

Data Source: American Community Survey; NC Child, NC Department of Administration; Department of Public Safety; Management Assistance for Child Welfare, Work First, and Food & Nutrition Services in North Carolina (v3.2) , University of North Carolina at Chapel Hill Jordan Institute for Families; NC Department of Justice

The map below shows the spatial locations of residents 25 years and older without high school diploma and can be compared with other maps showing the spatial location of residents by median income and poverty in subsequent sessions.



Religion

According to the Association of Religious Data Archives there were about 393 congregational sites in Gaston County in 2010. These congregational sites include and are not limited to non-denominational, Baptist, Methodist, Presbyterian, Lutheran and Catholic faiths. About 51% were affiliated to protestant faith, 2.9% affiliated to the black protestants, 2% Catholic, 0.1% affiliated to other groups and 42.9% affiliations were unclaimed. Data from 2000 to 2010 shows the adherence rate for all congregations decreased by 7% (Source: The ARDA, Association of Religion Data Achieve, 2010).

Neighborhoods

Gaston County is endowed with beautiful natural resources like the Catawba River, South Fork River, Lake Wylie, Mountain Island Lake, Rankin Lake, Spencer Mountain, Robinwood Lake and Crowder Mountain State Park notable for hiking.

The numerous recreation facilities include the Schiele Museum of Natural History, Historic Mills sites, an expansive faith community, more than 20 parks and recreation facilities, the Gaston County Senior Center, the Hoyle House, Daniel Stowe Botanical Garden, and the U.S. National Whitewater Center. Participants of both 2015 and 2018 Quality of life survey cited they enjoyed the downtown life, close proximity to the Charlotte areas and other states in both the Northern and the Southern part due to the proximity to major Highways. They also enjoy the small size of the community.

Non-profit organizations in Gaston county include but are not limited to United Way of Gaston County, YMCA of Greater Gaston, Gaston Together, Partnership for Children of Lincoln & Gaston Counties, Girls on the Run of the Foothills, Community Foundation of Gaston County, Boys & Girls Clubs of Greater Gaston, and Gaston Family Health Services, just to name a few.

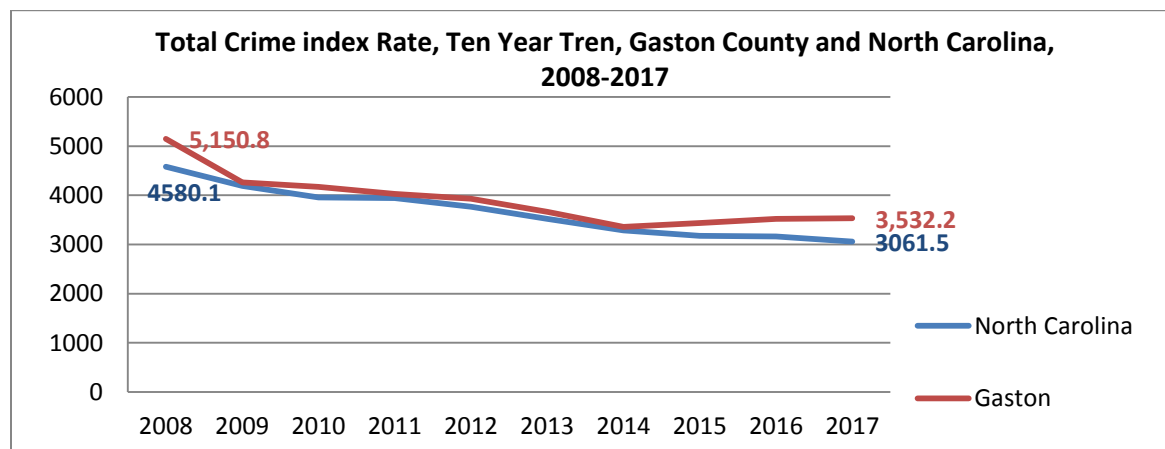
Crime / Intentional Injuries

The North Carolina Uniform Crime Reporting (UCR) Program is administered by the Federal Bureau of Investigation to provide crime statistics using crime index indicators for communities to measure trends in specific and the overall crime rates. The crime index provides the overall crime rates for eight offenses which are grouped into violent crimes and property crimes. Violent crimes include murder, rape, robbery and aggravated assault. Property crimes included burglary, larceny, motor vehicle theft and arson.

The overall crime index for Gaston County decreased by 31.4% from 2008 to 2017 compared to 33.1% for the state. Violent crime rates decreased by 20.3% (576.6 violent crimes /100,000 to 459.5 violent crimes /100,000) and property crimes decreased 32.8% (4,574.2 property crimes /100,000 to 3,072.7 property crimes) within same period

The crime index is high in the City of Gastonia compared to unincorporated areas of the county. Data reported by the Gastonia Police Department shows crime index decreased by 29.2% from 2008 to 2017 (8,197.9 versus 5,800.5 cases per 100,000). Violent crimes decreased by 9.5% whereas property crimes decreased by 31.6% during this period.

The crime index reported by the Gaston County Police for the unincorporated areas of the county shows a 37.1% increase for (2,455.4 crimes / 100,000 versus 1545.7 crimes per 100,000) 2008-2017. Violent crimes decreased by 26.8% and property crimes decreased by 38.6% during this period.



Source: Crime reporting, <http://crimereporting.ncsbi.gov/Reports.aspx> retrieved on 1-9-19

Social Support and Civic Engagement

There is a rich network of organizations in the county that provide opportunities for residents to volunteer their time and resources to support diverse causes within the community.

In 2018, Gaston Together, a local non-profit worked to bring people and resources together through collaboration and diverse initiatives. They recognized the Rotary Community Garden and Backpack Weekend Food Program, Inc. with the Community Leadership Award and the Circle of Excellence Award.

The City of Gastonia has two community gardens. There is a garden for community residents, operated by Keep Gastonia Beautiful, which is located in the Highland Neighborhood. This neighborhood is a food desert and has no grocery store. Residents and local youth cultivate a variety of fruits and vegetables and share their produce with the community. The Rotary garden brought different groups of churches, businesses and organizations together to grow and distribute the produce from the garden through the Crisis Assistance Ministry and residential facilities.

The United Way of Gaston County continues to create opportunities to support families and children in county. The organization partners with agencies to promote healthy life styles, successful education outcomes and financial stability.

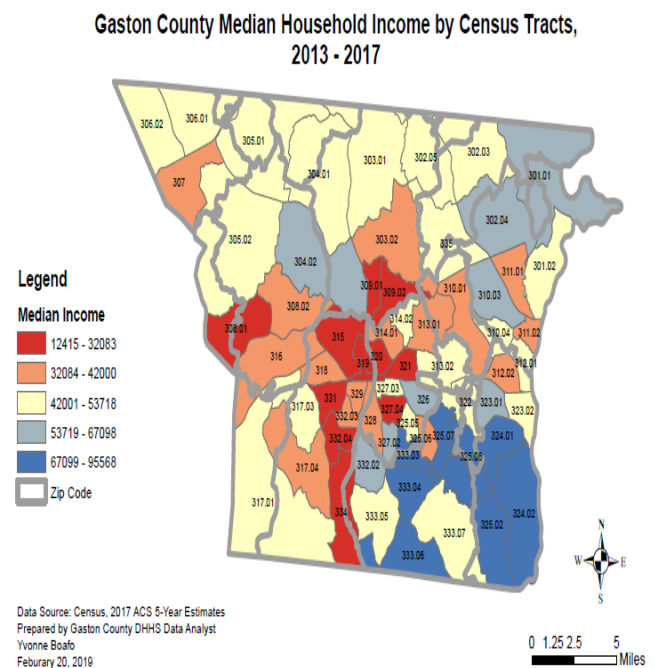
Financial / Economic Factors

Income

In 2017, poverty rate for the county was 15%, disproportionately high African Americans at 22% compared to 13.5% for Whites. Overall poverty rates among families, families with children and single mothers are relatively low compared to 2010.

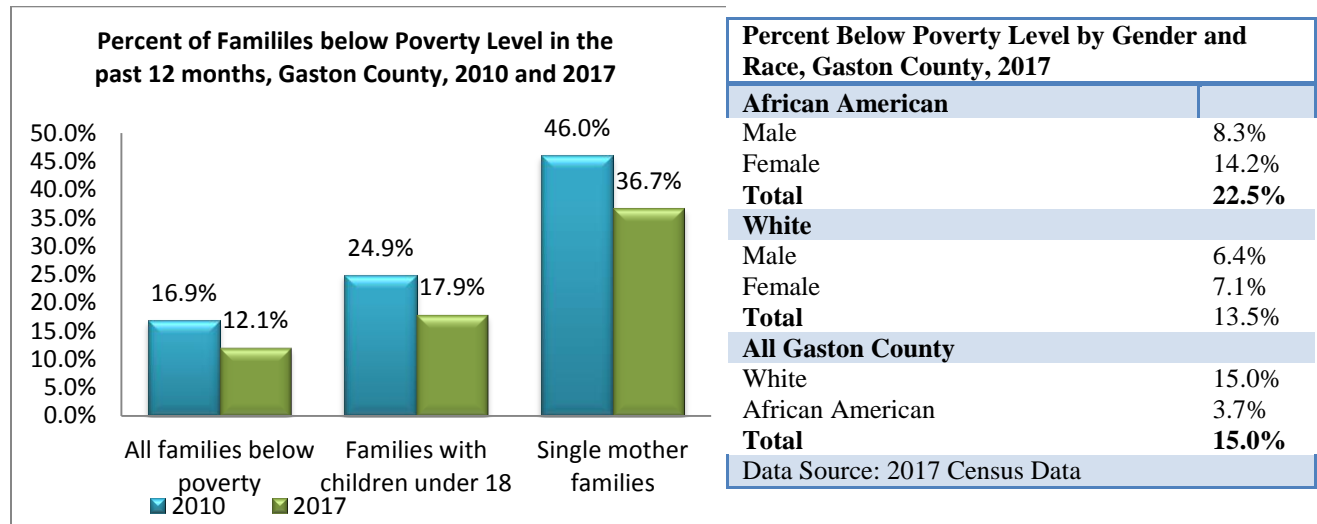
Percentage of Families below Poverty Level, Gaston County, 2010 and 2017		
	2010	2017
All families below poverty	16.9%	12.1%
Families with children under 18	24.5%	17.9%
Single mother families	46.0%	36.7%

Source: US Census Bureau 2017 American Community Survey 1-Year Estimate



Poverty rates among African Americans females is higher at 14.2% compared to 8.3% for African American males. The poverty rate for white females is 7.1% slightly higher than white

males. African American females are disproportionately poor compared to White females and African American males.



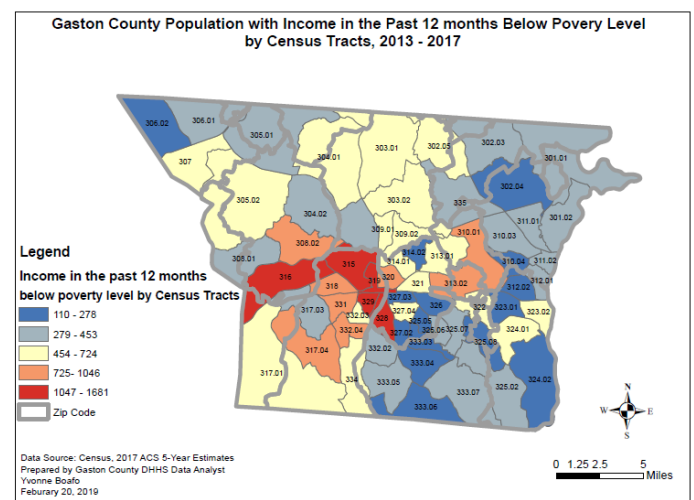
Source: Census Data, 2017 American community Survey, 1 Year Estimates

Employment

In 2013-2017, Gaston County unemployment rate was 8.3% for residents 16 years and older compared to 13.0% in 2008-2012. This current rate is 4.7% percentage point lower than the previous 5-year period rates. Unemployment rates differ among race. Unemployment rate was 11.9% among African Americans, 11.1% among Hispanic and 7.3% among Whites.

In 2016, the five leading industries of employment were: (1) Manufacturing; (2) Health care and social assistance; (3) Retail trade; (4) Accommodation and food services and (5) Administrative and support and waste management and remediation services. Compared to the 2015 CHA data, manufacturing, and Health care and social

assistance and retail were consistent. Nearly, 1 in 5 Gaston County residents work in educational services, and healthcare and social services in 2013-2017.



Homeownership

In 2017, sixty –three percent of housing units were owner-occupied. This is a slight drop from 64.35% in 2013. The percentage of residents living in rental housing units increases from 35.7% in 2013 to 37.1% in 2017.

Food Insecurity / Access to Healthy Foods

Food insecurity is the inability to have access to adequate nutritious food at all times. Residents can have inadequate supply of healthy food due to poverty, lack of transportation and proximity to a grocery store. According to the U.S. Department of Agriculture, 16.6% of households were food unsecured in 2010-2012 and in 2013-2015 14.2% of household in the county had food insecurity, down by 2.4 %.Households with very low food insecurity were down by 1.1 percent points (6.7% in 2010-2012 and 5.6% in 2013-2015). In 2015 28.9% of residents had low access to grocery store and 11.3% of low income residents had low access to grocery store (Source: USDA Food Environment Atlas, 2015). Improvement in transportation, increase access to farmers market and the number of stores that accept Women, Infant and Children (WIC) check and Food stamp will increase access to healthy food for low income residents.

Financial Assistance

Assistance for residents includes Medicare, Medicaid, social security benefits, food stamps and supplementary income. The US census data shows in 2013-2017, 35.1% of Gaston County residents received social security benefits and 16.8% received retirement income. Six percent received supplementary income due to disability, 2% received cash public assistance income, and 16.4% received food stamp or SNAP benefits. In 2013-2017, census data shows the number of residents receiving social security benefits increased by 5% compared to the previous 5 years (30% in 2008 -2012 to 35% in 2013-2017). In 2013-2017, 13.5% of residents had Medicare. In 2017, 26.4% of residents were enrolled in Medicaid compared to 23% for the State (Source: NC Medicaid Dashboard, Division of Health Benefits, <https://medicaid.ncdhhs.gov/reports/dashboards> ; retrieved on 2/14/19). An increased number of residents are receiving social security or retirement income.

Transportation

The 2013-2017 census data shows that 52.6% of residents work in the county with 41.8% working outside the county. An additional 5.6% work outside North Carolina. Many residents, 85.2% use personal vehicles and 9.3% carpool. Census data shows homebased work trip were the longest with an average trip of 25 minutes similar to the previous 5 years (2008-2012). According to the 2045 Metropolitan Transportation Plan, Gaston County saw an average 6,554,906 daily vehicle traveled (MVT) in 2015 and this number is expected to increase to over 7.2 million in 2025 and 8.6 million in 2045. The daily Vehicles miles are projected to increase by 32% in the county between 2015 and 2045. The data shows about 1/3 of Gaston County traveling occurred on I-85. Gaston County is the home to 5% of daily commuters who drive to Mecklenburg County to work. (Source: Gaston-Cleveland-Lincoln Metropolitan Planning Organization; 2045 Metropolitan Transportation Plan).

Individual

Individuals who make healthy decisions to avoid smoking, excessive drinking and drug use as well as get recommended immunizations and screening improve their health outcomes. The table below provides an overview of selected health behaviors for the county.

Gaston County Individual Behaviors, 2013 and 2017				
	2013-2015		2014-2017	
Indicators				
Substance Use				
Adult smoking	19%	2015	18% *	2016
ED Opioid Poisoning Visits	173	2013	174	2017
Poisoning Deaths	48	2013	64	2017
Excessive Drinking	15%	2015	16% *	2016
Weight				
Adult Obesity	33%	2013	31%	2014
Physical / Activity Nutrition				
Food environment Index	6.4	2014	6.8	2015
Physical Inactivity	30%	2013	31%	2014
Access to exercise opportunity	78%	2014	78%	2016
Health Screening				
Diabetes Monitoring	90%	2013	89%	2014
Mammography screening	65%	2013	65%	2014
Motor Vehicle Injuries ***				
Alcohol Impaired Driving Deaths	39%	2013	Deaths: 31%	2016
Data Source: 2015, 2017 and 2018 County Health Rankings, North Carolina Injury and Violence Prevention – Injury and Epidemiology Unit				
*** Data collection method differed for the reported years				

Substance Use

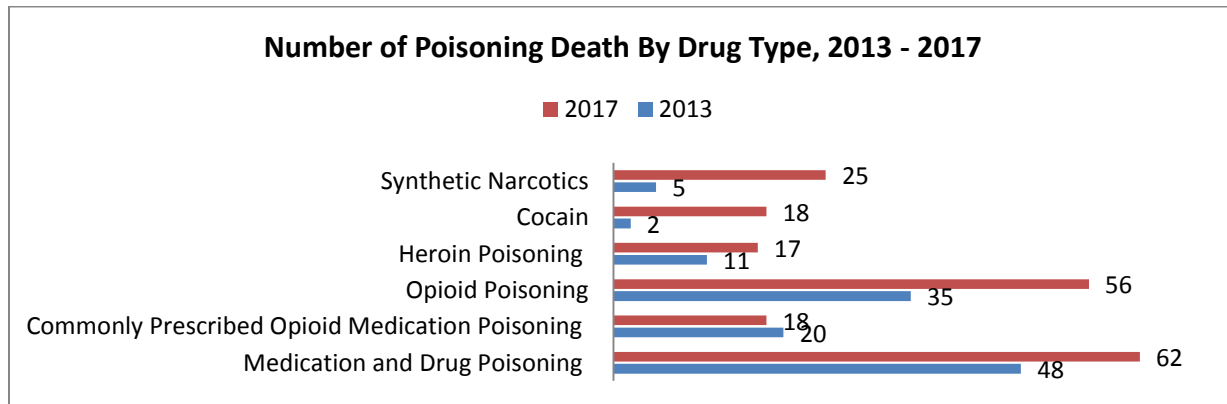
The Diagnostic and Statistical Manual of Mental Disorders describes substance use disorder as a situation when the continuous use of alcohol and or drugs results to health problems and disability that prevent an individual from doing their responsibilities at work, school and home (Substance Abuse and Mental Health Administration, SAMSHA, 2019).

People who use substances have a higher risk for HIV, STDS, teen pregnancy, domestic violence, child abuse crime and suicide.

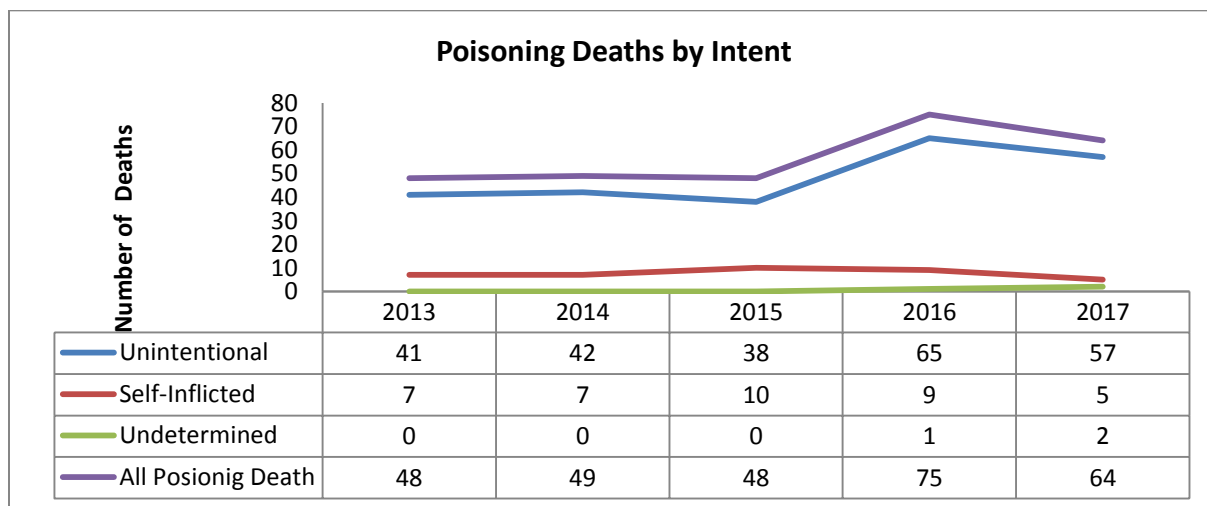
In 2016, eighteen percent of adults reported to be current smokers and 15% of adults drink excessively (County Health Ranking, 2017). 2017 YRBSS data shows, 14.2% of high school students currently smoke cigarettes with 3.8% smoking cigarettes frequently. Nearly 1 in 2

(48.5%) of high school students has ever used electronic vapor with 26.7% currently using electronic vapor.

Poisoning deaths increased by 33% (48 versus 64) between 2013 and 2017 and 89% of poisoning deaths in 2017 were unintentional. The charts below show the number of poisoning deaths by drug type and by intent. The QOL for both 2015 and 2018 identifies substance use as a top ranking health concern for both youth and the community. Specifically, mental health, illegal drug abuse and prescription drug abuse were the top three community health concerns in the 2018 QOL survey.



Data Source: North Carolina Injury and Violence Prevention – Injury and Epidemiology Unit



Data Source: North Carolina Injury and Violence Prevention – Injury and Epidemiology Unit

Physical Activity and Nutrition

Individuals who are physically active have lower risks of chronic diseases, premature death and poor mental health. Physical activity is good for all ages and can be as simple as walking, dancing, swimming and cleaning a house. An environment with walkable options promotes walking and makes residents physically active.

In 2014, 29% of adults had no leisure time of physical activity and in 2016, 78% percent of residents have access to exercise opportunities (2017 County Health Rankings). In addition, one in five (20.7%) high school students did not do any physical activity for at least 60 minute per day on 5 or more days (2017 Youth Risk Behavioral Survey). Overall, about 74.8% of adults from our region have intentionally participated in exercise or through daily activities in 2017 compared to 66.3% for Gaston County in 2013. Increasing access to physical activity opportunities can improve health of residents.

Good nutrition including eating the recommended amount of fruit and vegetables improves health, prevents diseases and saves money spent on disease. Increase access to healthy food options can improve the quality of life. According to 2017 YRBSS data, 16.9% of high school students do not eat fruits, 12.2% did not eat vegetables and 48.1% ate vegetables one or more times per day. Similarly, over 50% of residents from our region consume at least one fruit or vegetable a day compared to Gaston in 2013. In addition, the access rate to fast foods is 0.77 fasts foods restaurants /1000 population compared to 0.15grocery stores /1000 population (USDA Environment Atlas, 2014). This is an indication that more residents have access to fast food than grocery store.

Health Screenings

Screening helps to provide early treatment and research has shown health problems are better cured when detected early. Some recommended health screenings include blood glucose, high blood pressure, cholesterol, HIV, breast cancer and cervical cancer, colon cancer and viral Hepatitis.

The 2017 County Health Rankings data shows many residents 65-75 years enrolled in Medicare received diabetes monitoring in 2014 similar to 2013 data (90% versus 89%) and over 50% of females 67-69 years enrolled in Medicare had mammogram screenings during this time. Monitoring blood sugar level helps to identity factors including food and medication that trigger the number which helps delay and prevents additional health problems like heart attacks and stroke.

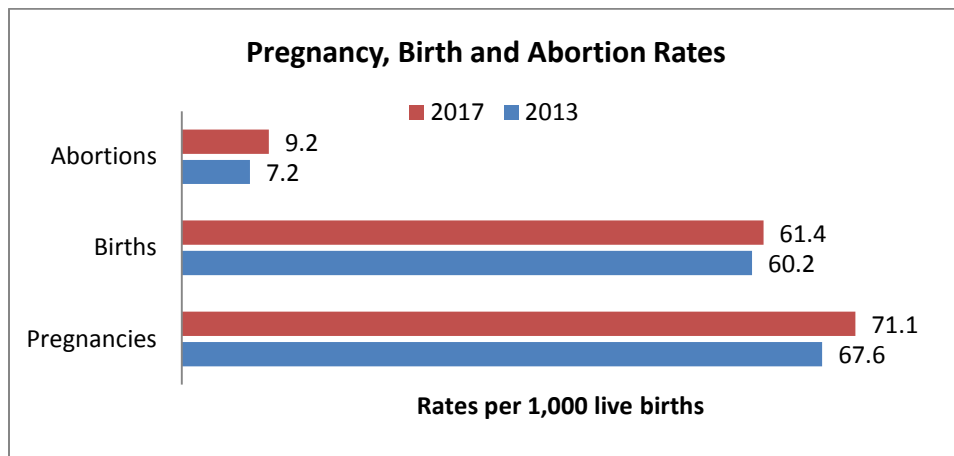
In the 2018 QOL survey data, 34.8% of respondents had high blood pressure, 26.45% had high cholesterol, 13.8% had diabetes and 5.7% were diagnosed with cancer. Compared to 2015 CHA similarly, 64.7% of BRFSS respondents from our region stated they had received a blood glucose screen for diabetes in the past three years compared to 65% for Gaston County in 2013. Fewer residents (71.7%) from our region tested for cholesterol in the past 12 months compared to 81.5% of Gaston County residents in 2013. Screening for these diseases can prevent the onset of additional health problems and improve the life expectancy if residents.

Family Planning

Family planning helps families plan pregnancy by deciding their family size and birth spacing. According to Healthy People 2020, family planning prevents unwanted pregnancies, improve the health of infant, children, and mother, and the health outcome of family and the community.

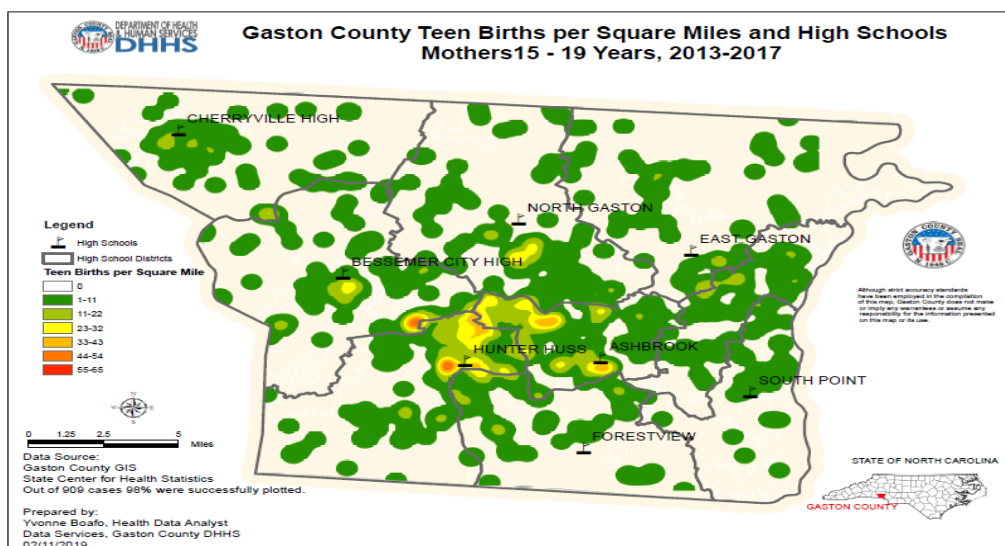
Data from the NC SCHS shows birth and pregnancy rates continue to decrease in Gaston County whereas abortion rates increased. The pregnancy rate decreased by 3.7% from 2013 to 2017 (71.1 versus 67.6 pregnancies per 1,000). This indicates residents are taking steps through birth control and engaging in behavior to delay or prevent pregnancy.

Notably, teen pregnancy decreased by 11.2% from 2013 to 2017 (37.5 versus 33.3 teen pregnancies per 1,000). Teen birth continues to decrease for the State during this period. However, it is higher for Gaston (33.5 versus 30.5 teen births per 1,000). DHHS and other community partners continuous to develop initiatives to support teen pregnancy prevention and these have contributed to the continuous decline in teen births.



Source: NC SCHS

The map below shows the spatial location of teen births over 2013 to 2017. Areas identified with red have a high concentration of teen births within square miles. Compared to the 2015 CHA the highest number of teen birth tend to occur with in the inner city of Gastonia near Hunter Huss and Ashbrook school districts.



Moto Vehicle injuries

Motor Vehicle Injuries (MVT) is the 10th leading cause of death in Gaston County. It is the 2nd cause of death among residents 20-39 years. Unintentional motor vehicles injuries deaths increased from 11.9 per 100,000 with 125 deaths in 2008-2012 to 16.6 per 100,000 with 178 deaths in 2013-2017. Data from the North Carolina Division of Motor Vehicles on traffic crashes shows 4.0% of crashes are alcohol related. Compared to the 2015 CHA data, 90% of 2017 BRFSS respondents from our region confirmed they always wore a seatbelt when driving or riding in a car. County Health Rankings data shows alcohol- impaired driving death decreased from 2013 to 2016 (39% vs 31%).

Physical Environment

Indoor and Outdoor Air Quality

Air quality is affected by vehicle traffic, industry, and geography both inside and outside the county. The Air Quality Index (AQI) is a measure of the quality of outdoor air, which measures concentrations of ozone, particulates, carbon monoxide, nitrogen dioxide, and sulfur dioxide. The AQI employs a scale that runs from 0 to 300, with higher AQI values corresponding to greater concentrations of air pollutants and greater threats to health. An AQI value of 100 is set to correspond to the national air quality standard for a pollutant. Typically, AQI values below 100 are satisfactory but measures above 100 will cause adverse health effects, initially for sensitive people, and then for larger numbers of people as AQI values increase. The air quality level is a daily report of air quality, often denoted by color, and any health problems that may be experienced a few hours or days after breathing polluted air (as seen in the Figure below).

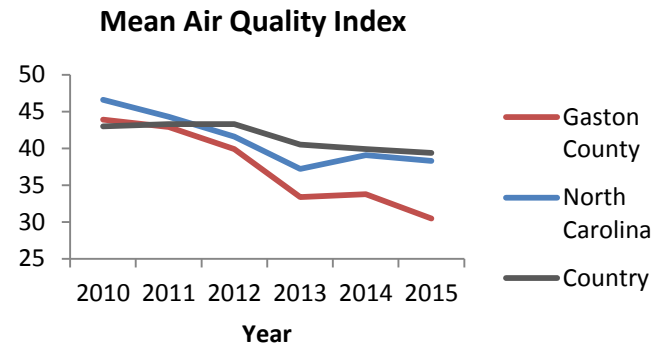
In Gaston County, this information is disseminated through radio, television, newspapers, over the Internet, through electronic and digital alerts, and via roadside signs. The graph below shows Gaston County's mean AQI by year as compared to North Carolina and the United States. All three have seen an improvement in air quality, denoted by a decline in average AQI. Improvement in the County has been greater than that seen in the State or Country, likely attributed to the reduction of the manufacturing sector. It should be noted that the 2015 data for Gaston County contains only 36 reported days, with other

years having >320 days reported. Measured AQI averages are below 50 for all years displayed, which is within the Environmental Protection Agency's (EPA) "good" limit.

Air Quality Index Levels of Health Concern <small>(Chart Area)</small>	Numerical Value	Meaning
Good	0 to 50	Air quality is considered satisfactory, and air pollution poses little or no risk.
Moderate	51 to 100	Air quality is acceptable; however, for some pollutants there may be a moderate health concern for a very small number of people who are unusually sensitive to air pollution.
Unhealthy for Sensitive Groups	101 to 150	Members of sensitive groups may experience health effects. The general public is not likely to be affected.
Unhealthy	151 to 200	Everyone may begin to experience health effects; members of sensitive groups may experience more serious health effects.
Very Unhealthy	201 to 300	Health alert: everyone may experience more serious

In 2010-2014 the air quality index was 47.0 in Gaston County and the county ranked 56th among North Carolina counties (Source: usa.com).

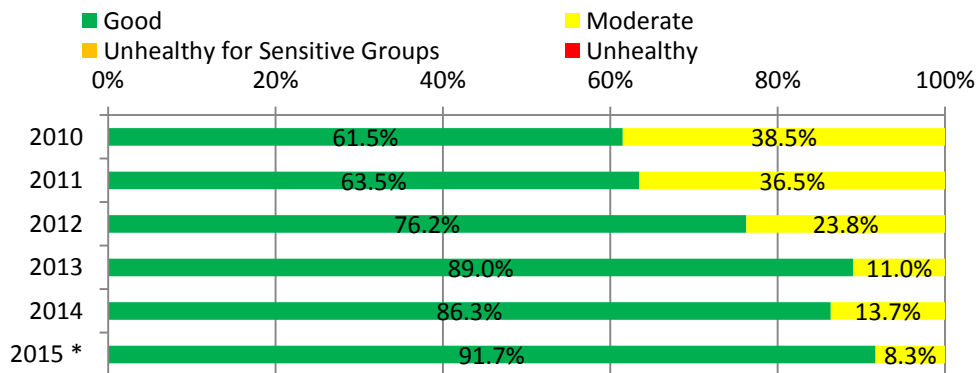
The graph shows Gaston County's Average AQI as compared to North Carolina and the U.S. Compared to data from the 2015 CHA, the AQI in Gaston County has declined steadily since 2010 and the AQI in Gaston County has been lower than the State and the Country compared to the previous 10 years.



Source: Data from www.epa.gov/airdata, EPA / Air Quality / Pre-generated Data, Retrieved on 1/31/19

In 2015, Gaston County recorded 36 AQI and 92% (33) of those days were good. The Charlotte-Concord-Gastonia area, recorded 365 AQI days together with 53% good and 3% unhealthy for sensitive group. Overall, Gaston County and the Charlotte region did not have unhealthy AQI days for everyone and hazardous AQI days.

Percent Days by Measured AQI Level of Concern (2010-2015)



* Only 36 daily measurements reported for 2015

Source: Environmental Protection Agency, Air Quality Index Report

<https://www.epa.gov/outdoor-air-quality-data/air-quality-index-report>

Ozone and Pollution

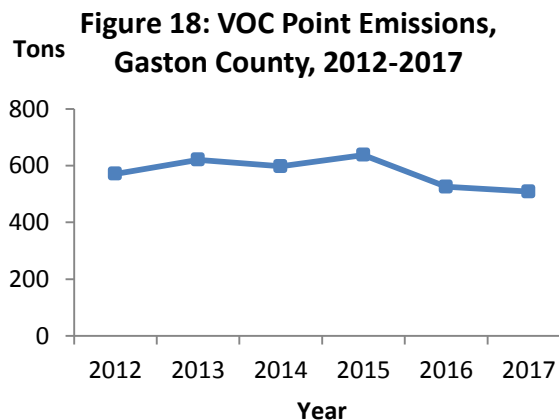
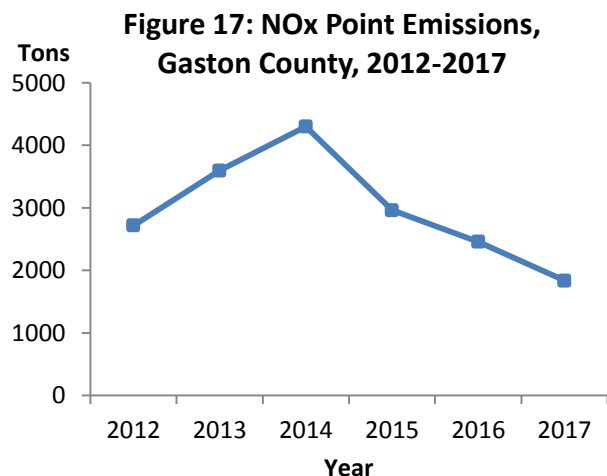
There are beneficial and harmful types of ozone. Good ozone occurs naturally in the earth's upper atmosphere, six to 30 miles above the earth's surface, where it forms a protective layer that shields us from the sun's harmful ultraviolet rays. Bad ozone is a harmful air pollutant and a major component of smog. It is found near the ground and is formed when chemicals emitted

from automobiles, refineries, power plants, industrial boilers, chemical plants, dry cleaners, solvents and paints react in the presence of sunlight. Typically, this formation occurs when ultraviolet radiation and high temperature cause chemical reactions among volatile organic compounds (VOCs) and nitrogen oxides (NO_xs) in the atmosphere. These bad ozone levels are typically highest during warmer times of the day and year. Emissions of VOCs and NO_xs come largely from vehicles on roadways or at construction sites. To a lesser extent, they are emitted from industrial point sources where emission tons are measured or estimated.

The bad form of ozone contributes to asthma, lung infections, cell inflammation, and shortness of breath. In Gaston County and our region, the growing population and the increasing number of vehicle miles traveled contribute to higher ozone levels. Ozone levels in the area around Mecklenburg County were previously 15% above federal compliance levels, causing the EPA to designate the region, including Gaston County, an ozone “non-attainment” area in February 2012. This designation indicated the air quality in our area did not meet national standards. However, the ozone levels of Gaston County have been below federal compliance levels since 2015, causing the EPA to change Gaston’s designation to an “attainment zone,” indicating that the air quality in our area meets national standards.

Both NO_x and VOC levels from point sources have been trending downward in recent years, as shown below. In 2017, Gaston County had annual point source emissions of 1,837.2 tons NO_xs and 508.7 tons VOCs. Both are still above calculated averages for North Carolina counties. The largest point emitter of NO_xs is Duke Energy’s Allen steam station, which is subject to nitrogen oxide regulations, the Clean Air Interstate Rule (CAIR), and the NC Clean Smokestacks Act. The largest point emitter of VOCs is the Mount Holly Daimler Truck plant. Gaston County has a vehicle emission inspection and maintenance program to combat non-point emissions, and low-sulfur gasoline is required statewide. There are federal and state control programs to help address these emissions.

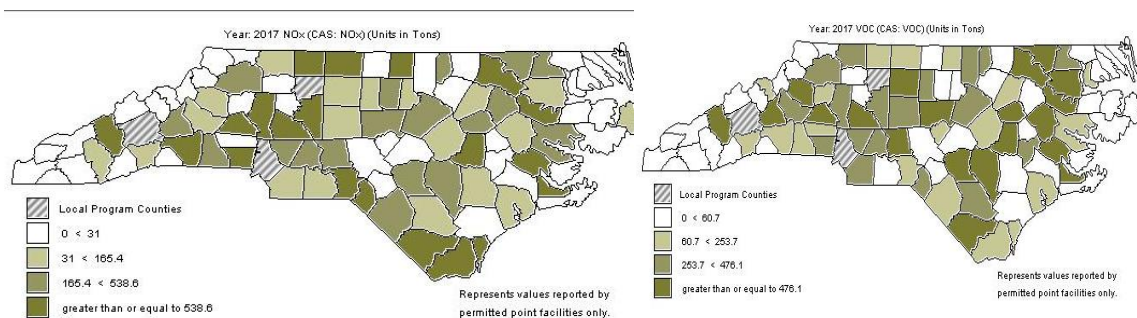
Total Point Emissions Data



Source: North Carolina Environmental Quality, Point Source Emissions Report

Reported Point Emissions by County

The maps below show both NO_x and VOC emissions in Gaston County are relatively high compared to neighboring counties.



Source: North Carolina Department of Environment and Natural Resources (DENR), Division of Air Quality (DAQ), Point Source Emissions Report. State totals were divided by 100 to achieve a county average.

<https://xapps.ncdenr.org/aq/ToxicsReportServlet?ibeam=true&year>

Water Quality

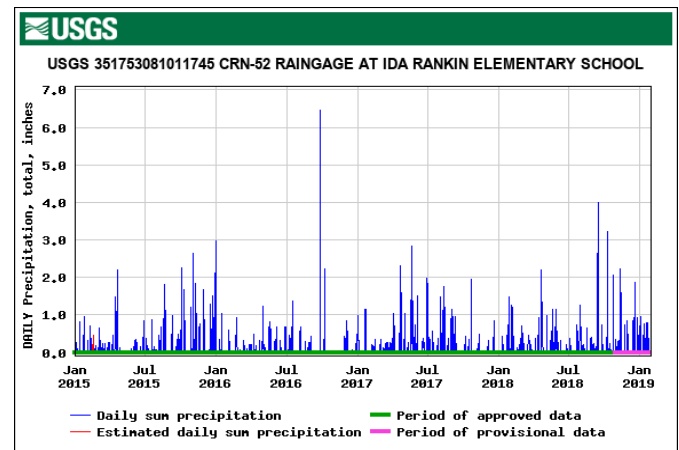
According to the EPA, water quality standard (WQS) provided by the State or a jurisdiction describes the preferred conditions of water bodies and how those conditions will be protected for the health of people and the aquatic life. Water surface include fresh flowing water like rivers, stream, and creeks and fresh standing water like lakes ponds and reservoirs. Flowing waters in Gaston County are part of the Catawba Watershed and include the Upper Catawba River and the South Fork of the Catawba River. These waters are consumed by humans, used in industry, as source of food, for recreation and transportation, and are sites for disposed manufacturing byproducts and treated sewage, agricultural runoff, and runoff from city streets that impairs the water bodies.

Compared to the 1998 data in the 2015 which shows only 4% of county's surface is impaired on threatened, an increase number of water surface have been polluted. EPA data shows the Catawba River around Mount Lake, Lake Norman and Lake Wylie are impaired. The EPA product [My Environment](#) provides a full list of water surfaces and their quality status. In addition, there were fish advisories in Lake Wylie and Mt Island Lake in 2011 and 2013 as a result of pollution from Mercury and Polychlorinated biphenyls (NC DHHS Epidemiology, Fish consumption Advisory, 2018)

The [map](#) below provides spatial distribution of Algal loom in North Carolina and it shows a concentration of algal loom in the Catawba basin which includes the Gaston County area. Alga can be toxic and the non-toxic algae can cause taste, odor and water discoloration (NC Department of Environmental Quality, Water Resources).

Data from the US Geological survey shows Gaston County rainfall in Gaston County between months and years. In 2016 – 2018, the month of May recorded the highest mean amount of rain and April recorded the highest mean in 2015. In July 2015 to June 2016, the precipitation and temperature in most NC counties were above average in the winter and fall and the summer of 2015 was hot and dry for the Piedmont area (Source: 2016 Annual NCDMAC Report <http://www.ncdrought.org>)

fluctuates



Source: US Geological Survey Cumulative Rainfall Data

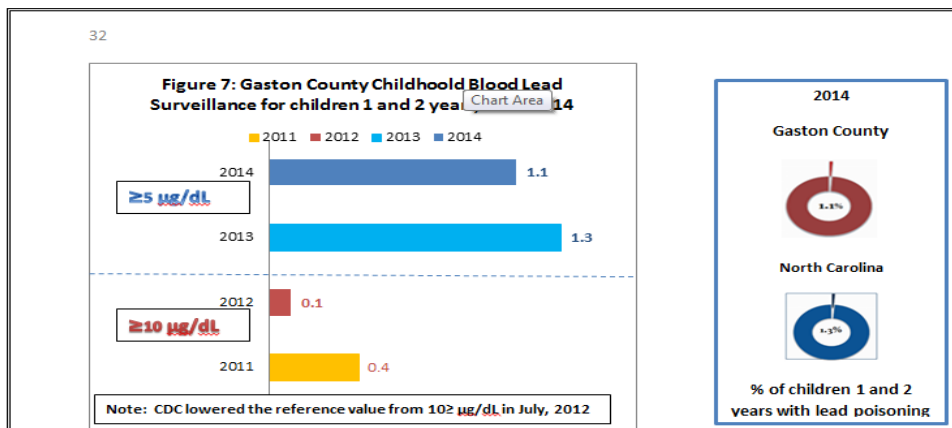
There are thousands of wells and septic tank systems in Gaston County. There are an estimated 42% of homes served by private drinking water wells. There are approximately 128 community well water systems serving 15 or more connections or 25 or more people. Since 1989, GC DHHS has issued over 8,000 private well permits. GC DHHS is creating a GIS database of the wells permitted and abandoned since 1989. This database will be used to help ensure safe drinking water.

The fluctuation in precipitation over the years results in changes in the level of ground water or water drawn by wells. The daily depth to water level was high at 51.20ft below surface level in 2018 and low at 37.5 feet below surface level in 2016 over the past 8 years (USGS, National Water Information System) . These fluctuations have not affected the water supply from wells since local wells are drilled to an average of 120 feet and are sufficient to supply water from the bedrock.

Lead

The CDC has lowered the childhood blood level to 5 µg/dL and recommends public health actions to begin when the lead blood level in a child between 1 – 5 years is at 5 µg/dL because no safe blood level has been identified in children. DHHS administers the Childhood Lead Poisoning Prevention Program which provide blood lead testing and medical case management to children six and under with elevated blood lead levels. The target population is children who reside in homes built before 1978, the last year lead-based paints were allowed in the United. In 2014, Gaston County confirmed 3 children with lead level between 5-9 µg/dL, 1 child with a lead level between 10-19 µg/dL and 1 child with a lead level ≥20 µg/dL.

Source: <https://ehs.ncpublichealth.com/hhccehb/cehu/lead/docs/BloodLeadTbIs2014.pdf> 12/15/2016



Source: Children's Environmental Health, NC Childhood Lead Poisoning Program (NCCLPP)

Recreation

Gaston County offers several greenways. In Gastonia, there are the Catawba-Avon Creek, the Highland Rail Trail Connector, and the Rankin Lake Circle greenways. There are additional greenways and trails in the county which include the Riverside Greenway in Cramerton, the Catawba River Greenway in Mount Holly, the Spencer Mountain Blueway. The municipalities of Gastonia, Belmont, Bessemer City, Cherryville, Cramerton, Dallas, High Shoals, Mt. Holly, Stanley, and Gaston County provide recreational facilities including parks, baseball and soccer fields, swimming pools, basketball courts, tennis courts, and greenways. In addition, the county is served by private fitness facilities and five branches of the YMCA.

For more information, please visit <https://www.carolinathreadtrailmap.org/trails>

Transportation Options

Gaston County offers various modes of transportation. Gaston County is conveniently located along Interstate 85 with close access to Interstates 40 and 77. In addition to these major US highways, there are at least 5 major state highways that run through the county. Charlotte Douglas International Airport is within minutes of east Gaston County, however, there is a local airport, Gastonia Municipal Airport that provides general flight service. It is one of the most active, minor airports in the state. The Piedmont & Northern Railway (PNRW) operates between Gastonia and Mount Holy and there is a public transit system with nine routes that services inner city Gastonia. (Source: Gaston Economic Development Commission)

Chapter 5: Prevention and Health Promotion

Screenings

DHHS, CaroMont Health, Gaston Family Health Services and voluntary health agencies provide a wide range of screening activities in the community. DHHS offers breast and cervical cancer screenings, communicable disease screenings and STD/STI screenings. Gaston Family Health Services offers diabetes screenings and comprehensive diabetes education in addition to cholesterol health screenings at various community events.

HIV

DHHS continues to be the primary HIV testing resource for the community. Since the 2015 CHA, the Gaston HIV Outreach Program (GHOP) has implemented the following changes: providing a linkage to care for clients who are positive for Hepatitis C, testing the clients for gonorrhea and chlamydia and providing rapid HIV testing for clients who request immediate results. DHHS provides education on PrEP as a preventive measure for high risk clients and provides a linkage to care with collaborative providers. GHOP staff continues to recruit clients for our Integrated Targeted Testing sites and Substance Abuse Centers by reaching out to clients in high risk areas, including the jail.

Oral Health

Gaston County has over 100 dental practices. Gaston Family Health Services has two dental practices that deliver care to the uninsured and under-insured children and families. Gaston Family Health Services recently added a mobile unit to increase dental services for the community.

Chronic Disease Education, Nutrition and Physical Activity

The Chronic Disease Self-Management Program is an educational workshop designed to build participants' confidence in managing their health and keep them active and engaged in their lives. Participants learn problem-solving, decision-making, and other techniques for managing problems common to people with chronic diseases. In 2018 DHHS staff facilitated two 6-week workshops for adult day centers in Gastonia and Mount Holly.

The Power of Produce (POP) Club is a farmers market-based children's program that teaches children about fruits and vegetables, local food systems, and healthy food preparation through fun activities. Since 2016, DHHS has partnered with the Gastonia Farmers Market to conduct POP Club sessions every Saturday, June through August. Activities included POP Club Bingo, a scavenger hunt, and blender bike smoothies. Children who complete the activity or taste testing receive \$2 in POP Club coins. Additional partners include the Gaston County Family YMCA, Discover YOU! , Cooperative Extension and Daniel Stowe Botanical Gardens. In 2018 145 children participated in POP Club.

Let Me Run of Gaston County (LMRGC) is an affiliate program of Let Me Run Inc. LMRGC is a structured 7 week program for boys in the 4th through 8th grades that promotes healthy

relationships and active living. The program is facilitated by trained volunteer coaches using a structured research-based curriculum. Coaches meet with participants twice a week for hour-long sessions, where they engage in activities that prepare them to be courageous, honest, express emotions, increase endurance, and adopt a healthy lifestyle. Participants run a practice 5K race mid-season and conclude the season by running a 5K that celebrates their personal, social, and physical accomplishments with family, friends, and members of their community. In 2018 DHHS supported 12 Let me Run teams in the community and conducted a child abuse prevention program, *Darkness to Light*, with volunteer Let me Run coaches.

In October 2017, the North Carolina WIC Program moved from a paper-based method of WIC benefit issuance to an electronic benefit transfer system known as eWIC. Gaston County began implementation of eWIC on April 18, 2018. Since that time, all participants seen in clinic have been issued program benefits on an eWIC card. As of January 9, 2019, Gaston County WIC has issued 3208 eWIC cards. From October 2018 – December 2018, WIC participants have redeemed over \$2 million in benefits on eWIC cards at WIC approved vendors in Gaston County.

The Gaston County Local Food Council project's work this year was focused on completing a "community food system baseline assessment" with technical support and funding from Community Food Strategies. Through a partnership between DHHS and the Gaston County Cooperative Extension, we created a data spreadsheet with relevant data organized into the categories of Healthy People, Justice and Fairness, Vibrant Farms & Gardens, Thriving Local Economies, Strong Communities, and Sustainable Ecosystems. DHHS will use this data to write a report summarizing our findings and providing a snapshot of our current, local food system, to be finished spring of 2019.

DHHS supports two childcare health consultants, funded by the Partnership for Children of Lincoln and Gaston Counties, who work closely with all 102 childcare centers in Gaston County. They provide education to providers and parents on various topics including SIDS, vaccination requirements, sanitation, licensing, gardening, physical activity and nutrition.

Substance Abuse, Tobacco, Pregnancy Prevention and Home Visiting Programs

DHHS staff provide a variety of education and home visiting programs in the community.

The Voluntary Long Acting Reversible Contraception (VLARC) program began in April of 2018. The goal of this program is to reduce the number of babies born with neonatal abstinence syndrome in Gaston County, and to improve reproductive life planning among the incarcerated women. Since its inception, the VLARC program has completed a reproductive life planning education class with 140 women housed within the Gaston County Jail. Once completing the class, women have the option to obtain one of the two birth control methods, Depo-Provera or Nexplanon, offered to women in the jail by DHHS clinical staff. Thirty-five women have

received Depo-Provera, a hormonal injection that prevents pregnancy for 3 months, and 77 women have received Nexplanon, a subdermal implant that prevents pregnancy for up to 3 years.

The program Draw the Line, Respect the Line is a program that focuses on teen pregnancy prevention. The goal of this program is to reduce teen pregnancy within the target population which is students' grade sixth through eighth by serving 120 youth from Gaston County Schools. The objective is to meet the goal by showing participants increased knowledge of prevention of pregnancy and sexually transmitted infections. Also, to improve participants' attitudes and beliefs supporting delay of sexual activity and participants will improve attitudes and beliefs supporting the use of condoms for the prevention of pregnancy and sexually transmitted infections. Students increased their knowledge of teen pregnancy prevention. Currently DHHS serves seven out of eleven middle schools in Gaston County, 181 total students are completing the program.

The Substance and Treatment Rehabilitation Program (STAR) continues to offer comprehensive care to women who have a substance use disorder during their pregnancy, to decrease the incidence of neonatal abstinence syndrome in our community. DHHS provides comprehensive services to them in one clinic location. DHHS will continue to work with the other obstetrical providers in the community so that all pregnant women have access to medication assisted treatment if indicated. Although the overall incidence of NAS in our community has not stabilized, the length of stay for the patients co-managed by us and GFHS is half the national average.

In April 2016 the Gaston Community Healthcare Commission convened local medical providers, CaroMont Regional Medical Center, law enforcement, Gaston Family Health Services, pharmacists and the Gaston County Department of Health and Human Services (DHHS) to discuss the growing opioid epidemic in our county. These individuals decided to address this issue given its impact on Gaston County residents. By July 2016 the Commission established the Gaston Controlled Substances Coalition (Coalition). The Coalition works to improve our county's quality of life by encouraging persons and families of all socioeconomic, ethnic, and racial groups to avoid opioids and seek treatment for Opioid Use Disorder (OUD). In addition to preventing deaths, this helps prevent crime caused by persons seeking funds for drugs. In 2018, the Coalition made 31 public presentations to over 1,600 persons, including middle and high school coaches; collected some 47 pounds of medications at six church and community events, so they wouldn't be diverted for illicit and illegal use; provides ongoing information to 370 Facebook followers; and, conducts Coalition meetings where stakeholders from more than 20 organizations collaborate on opioid prevention and treatment programming.

Since the 2015 CHA DHHS has been incredibly busy collaborating with the community on tobacco policies. DHHS with numerous partners founded Tobacco Free Gaston who is working to reduce the usage of, and exposure to, tobacco products through education, advocacy, and outreach. Bessemer City's ordinance was signed into effect Sept. 1, 2016, preventing the use of all forms of tobacco (including e-cigarettes and vaping) in or on: government buildings, grounds,

parks, recreation areas, government vehicles. Smoking and vaping was also prohibited in “indoor public places,” like laundromats, grocery stores, movie theaters, etc. With the support of Tobacco Free Gaston, in October 2017, Cherryville signed an identical ordinance into effect. Tobacco free policies are an evidence-based approach that have been proven to prevent people from starting to use the products, prevent exposure to secondhand smoke, and help people who want to quit take that step, and support their cessation. DHHS partnered with the Youth Advisory Group of a local non-profit, Cancer Services, to conduct a photo voice project in the 2017-2018 school year. Youth who participated took photos that addressed two prompts: How does tobacco affect you and your community? How does your community protect you from tobacco? The youth then had the opportunity to display their photos at the public library and present them to both the DHHS Board and our County Commissioners, educating them and the public about youth perspectives on tobacco in our community and sparking conversations about policies that can address the issue. This project is happening again during the 2018-2019 school year, reaching a new group of youth to empower them to be advocates for tobacco prevention. In Spring of 2018 members from the Youth Education Work group trained Gaston County Health and Physical Education teachers from eight high schools and five middle schools in tobacco curricula. The goal is to have teachers on the frontline educating students to combat the current e- cigarette and vaping epidemic.

DHHS supports three home visiting programs for mothers in the community. The Teen Parenting Program provides home visits, community and support for first time moms under 18 who are in school. The Healthy Beginnings Program supports Latina and African-American moms by providing education, resources and home visiting support. Nurse Family Partnership provides support to first time moms by providing a nurse home visitor who collaborates with the mom until her child turns 2. The nurses provide medical information, community resources and social support to the moms.

Environmental Health

The Healthy Wells program is funded by a direct federal grant from National Center for Environmental Health, Centers for Disease Control and Prevention. Environmental Health Services Support for Public Health Drinking Water Programs to Reduce Drinking Water Exposures. The goal is to digitize private drinking water well permits and geo-locate private wells. This information will be made available for the public on the county GIS website. Gaston County DHHS is collaborating with UNC-Charlotte and using students from the College of Public Health and College of Geography and Earth Sciences to visit private well owners. Students work in teams of 2 to obtain longitude and latitude for all private drinking water wells, provide private well owners educational material, offer to collect a well water sample and analyze for total coliform and E. coli. From October 2016 to December 2018, there have been 5,126 homes visited. From those homes, 881 private wells have been sampled for total coliform and E. coli and 742 wells have been geo-located.

Chapter 6: Community Concerns and Priorities

This chapter provides summary data and analysis for the survey and the focus group discussions. DHHS will provide additional data on any specific request from the public for specific topics. Survey responses can be aggregated by respondent group, high school district, or zip code and focus groups group discussions are summarized by respondents group.

The final CHA document is available on the internet at:

www.gastongov.com/government/departments/health_and_human_services/public_health/index.php

Please use the following citation when referencing this document. Available from website:

www.gastongov.com

Survey Findings

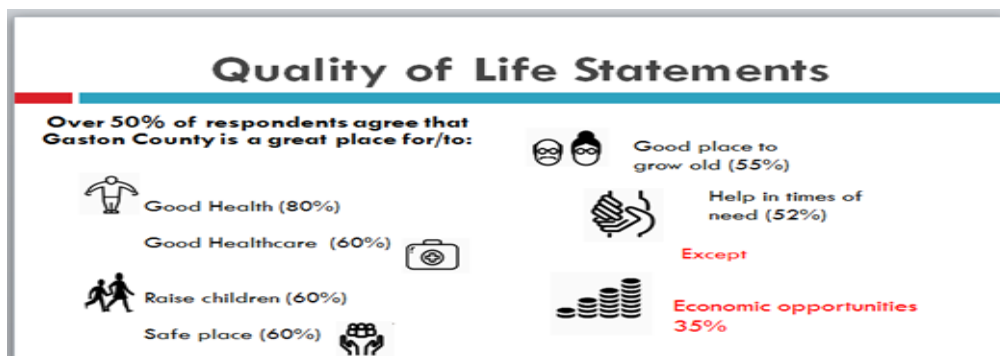
The survey was grouped as: (1) QOL statement, (2) Community Improvement, (3) Youth issues, (4) Health issues, (5) Access to health care and (6) Demographics. The QOL statements were rating scale questions and the affirmative responses were calculated using the percentage of Agree or Strongly Agree.

DHHS used percentage method to determine responses and rankings to the QOL Survey.

Affirmative responses were calculated by calculating the percentage of Agree or Strongly Agree responses for each question. The 2018 QOL survey was redesigned to reduce the 103 questions used in 2015 to 35 as a result, the responses are comparable but the structure of the 2018 survey is different from previous years.

Quality of Life statements

Respondents were asked to cite their agreement to statements on healthcare, safety, economic and other social factors. Most respondents: 91% strongly agreed or agreed with the Statement “In general my health is good” and 63% strongly agreed or agreed” There is good healthcare in Gaston County”. Over half of respondents strongly agreed or agreed” Gaston County is a good place to raise kids (67%)”, “A good place to grow old (56%)”, A safe place to live (61%)”. One in two respondents (52%) strong agreed or agreed.” There is plenty of help in times of need and 1 in 3 (36%) strong agreed or agreed “There are plenty of economy activities”.



Focus Groups

Participants from the focus groups described Gaston County as a safe place to raise kids and grow old. They love the small size, the mountains and the location of the county with close proximity to the highways. They believe there are affordable housing options for residents. Some believe there are good schools and a lot of opportunities for children and participants from as a English Second Language (ESL) class focus group, who were 90% Hispanic, mentioned there are lots of jobs for residents. Some comments from participants are below.

“For me you have more possibilities to buy a house, have a child that gets a good education, it’s safe and quiet. Good city.” - ESL class

“I think the best part about living in Gaston County is the size of it. I think it’s not too big and not too small. The medium size kind of allows for a variety of different things. We have a mall, we have a movie theater, everything like that. Again like, with the medium size, safety is pretty good. I at least feel pretty safe in my neighborhood.” – Youth

“Good location, close to the interstate, Crowder’s mountain.” – Jail

Community Improvement

Participants were asked to rank six areas they want to see improvement in the community by importance. The rankings were: (1) Education (2) Access to health care, (3) Community resources for the elderly (4) Access to physical activity and good nutrition (5) Environmental health and (6) public transportation. The rankings were very similar for all residents: community leaders, community residents and low income residents.

	All Respondents (N=1,099)	Community (N=735)	Leaders (N= 181)	Low Income (N=180)
Rank	Community Resource	Community Resource	Community Resource	Community Resource
1	Education	Education	Education	Education
2	Access to health	Access to health	Access to health	Access to health
3	Community resources for the elderly	Community resources for the elderly	Community resources for the elderly	Community resources for the elderly
4	Physical activity and good nutrition	Environmental health	Environmental health	Physical activity and good nutrition
5	Environmental health	Physical activity and good nutrition	Physical activity and good nutrition	Environmental health
6	Public Transportation	Public Transportation	Public Transportation	Public Transportation

Note: 1 is the most important health concern and 6 is the least ranked.

Focus Group:

Participants thought education was important and resources should be channeled into good and quality education for all. They cited: better access to affordable health insurance, health education, access to healthy food options and access to family-friendly activities to promote physical activities. Some comments from participants are below.

“And also on top of that, our transit system like, being with the Teen Action Council, I’ve learned that certain places-the transit system will not get you to, like will not get you to a place where you can find healthy options for food. Like people do not have access to that public transportation or they are having to walk so far just to get to the transportation, not their destination, but just the transportation to get to their destination that it deters people from wanting healthcare because of the strain and the harshness of having to get there to get it.” – Jail

“Public transportation is very poor.” – ESL class

Youth	ESL Class	Inmate Men
Lack of : <ul style="list-style-type: none">• Easy access to nutritious foods• Available extracurricular and physical activities for youth.• Health Education• Transportation to food deserts• Information on healthy living• Advertisement on health resources	<ul style="list-style-type: none">• Language barriers interfere with wellness. E.g. Medical providers and police officers especially for the elderly.• Poor public transportation• Lack of healthy foods as major issues.• Quality of Educations• Food deserts• Access to quality food options• Sidewalks	<ul style="list-style-type: none">• Sex education,• Better access to affordable health insurance• Transportation (Uber, ACCESS)• Lack of knowledge and access to family-friendly activities which promote physical exercise• Equal benchmark for free and affordable care

Health Issues

Community Health Problems

Participants were asked to select the five most important health issues they want the community to do more to address from 15 health issues. They also had the option to add other health issues not listed. The top five were: (1) Mental health (71%), (2) Illegal drug abuse (65%), (3) Prescription drug abuse (61%), (4) Homelessness and safe housing (58%) and 5) Lack of health care for the uninsured (41%).

Ranked Health Issues, 2018 and 2015 Comparison, All respondents		
Rank	2018	2015
1	Mental health (71%)	Obesity
2	Illegal drug abuse (65%)	Illegal drug use
3	Prescription drug abuse (61%)	Teen Pregnancy
4	Homelessness and Safe Housing (58%)	Alcohol Abuse
5	Lack of health care for the uninsured (41%)	Prescription

Focus Groups

Participants from the focus groups identified health education, the rise in sexually transmitted diseases and drug use as the most important health issues. Some believe most residents do not have the necessary education on the causes and impact of some health behaviors. Some comments are below:

“I think the biggest health concern is like, health education in of itself. And the fact that our schools don’t do a very good job of educating kids on health concerns like um I’m on the Teachers Action Council and I’ve learned more in the two years that I’ve been there or even one day that I’m there than I have in my whole health process.” – Youth

“Drugs lead to mental health problems, ...there should be more outreach around mental health and better education around mental health.” Jail

“I think that the problem is drugs in the schools. I hear in many schools there are many problems with drugs. I think the problem needs more attentions. Children are exposed to many things and it’s very scary for parent.” - ESL

Youth	ESL Class	Inmate Men
Lack of : • Mental Health • Substances Use • Health Education	• Drugs	• Intravenous drug use, • Needle exchange • Hepatitis C • Sex education,

Health Conditions

Participants were asked to select any health conditions they have been diagnosed with by a health professional. The responses were used to identify common health problems and supplement the responses identified by participants as health problems in the community. The top five among 17 health conditions were: Overweight or obesity (35.1%), (2) High Blood Pressure (34.8%), (3) had vision and sight problems (28.6%), (4) Depression or anxiety (26.8%) and (5) High Cholesterol (26.4%). One in five respondents (19.2%) did not have any of the 17 health conditions.

Rank	All Respondents (N=1,050)	Leaders (N=172)	Community (N=694)	Low Income (N=183)
1	Overweight/ Obesity (35.1%)	High blood pressure (36.0%)	Overweight/obesity (39.2%)	High blood pressure (37.0%)
2	High blood pressure (34.8%)	Overweight/ obesity (35.5%)	High blood pressure (33.7%)	Vision and sight problems (37.0%)
3	Vision and sight problems (28.6%)	Vision and sight problems (27.9%)	Depression or anxiety (29.8%)	High cholesterol (25.0%)
4	Depression or anxiety (26.8%)	High cholesterol (26.2%)	High cholesterol (26.8%)	Depression or anxiety (22.0%)
5	High cholesterol (26.4%)	None of the above (25.6%)	Vision and sight problems (26.2%)	Diabetes (not during pregnancy) 20.0%

Focus Groups

Participants mentioned lung cancer, mental health, diabetes, drug addiction, Asthma and Sexually Transmitted Diseases (STIs) and food allergies as some diseases they want the community to do more to prevent. The youth emphasized the need for more education on the causes of disease in the community and the ESL class suggested the need for more social interactive programs. Some comments from participants are seen below.

“I think if we have good mental health, I think then other problems will be better [such as] drugs and depression” – ESL class

“Lung cancer- I know a lot of people who smoke cigarettes and I know a lot of people who smoke them and are like, 16 years old. I don’t know what can be done about it, because I know where they’re getting these cigarettes from, but like, they chain smoke them and like they’re eating them. They’re like ‘yea I know about lung cancer, but it’s not going to happen to me.’ And that’s always a thing, they’re like ‘it’s not going to happen to me.’ So I think we should show them the statistics and everything. It’s very likely that, if you are eating a pack of cigarettes a day, this could happen to you.” - Youth

“Hep C”, “So many people get the disease.” “People get tattoos and it’s easily transmitted.”

“I like tattoos and don’t want to worry about getting Hep C from tattoos because of a drug user getting a tattoo before me.” - Jail

Specific diseases you want the community leaders to do more to prevent and why

Youth	ESL Class	Inmate Men
<ul style="list-style-type: none">•Lung cancer•Mental health,•Food allergies (Epi-pen)•Educate the community (People don't understand the consequences) Suggestions: <ul style="list-style-type: none">•Advocated for tobacco Free Gaston•Use of epi-pen in restaurants	<ul style="list-style-type: none">•Mental health•Diabetes•Depression Note: Suggested need for programs to encourage social interaction	<ul style="list-style-type: none">• Addiction of any form•Hepatitis C• Syphilis• Gonorrhea• Several mental diseases• Asthma (Environmental causes)

2018 Health Issues compared to 2015 and 2012 Health Problems Issues

The charts on the next page compare health issues identified in 2015 and 2012 with health issues and common health conditions identified in the 2018 QOL survey. The first chart lists the top five community health issues for the last three surveys in 2012, 2015 and 2018 grouped by community residents and community leaders.

Community Residents	2018	2015	2012
	Mental Health	Overweight and	Overweight and
	Illegal drug abuse	Illegal drug abuse	Illegal drug abuse
	Prescription drug abuse	Prescription Drug	Prescription Drug
	Homelessness and Safe Housing	Alcohol Abuse	Alcohol Abuse
Community Leaders	2018	2015	2012
	Mental health	Overweight and	Overweight and
	Prescription drug abuse	Illegal drug abuse	Illegal Drug Use
	Illegal drug abuse	High Blood Pressure	Teen Pregnancy
	Homelessness and Safe Housing	Prescription drug	Diabetes
Community Residents and leaders	2018	2015	2012
	Overweight / Obesity	Overweight and	Overweight and
	High Blood Pressure	Illegal drug abuse	Illegal drug abuse
	Vision and sight	Prescription Drug	Prescription Drug
	Depression or anxiety	Alcohol Abuse	Alcohol Abuse
	2018	2015	2012
	Depression or anxiety	Overweight and	Overweight and
	High Cholesterol	Illegal drug abuse	Illegal Drug Use
		High Blood Pressure	Teen Pregnancy
		Prescription drug	Diabetes
	2018	2015	2012
	Depression or anxiety	Overweight and	Overweight and
	High Cholesterol	Illegal drug abuse	Illegal Drug Use
		High Blood Pressure	Teen Pregnancy
		Prescription drug	Diabetes

Community respondents consistently cited illegal drug abuse and prescription drug abuse in the three survey cycles. Overweight and obesity was the most common health problem among respondents in the 2018 and identified as a health issue in 2015 and 2012. Mental health was the most identified health issue, and depression and anxiety was fourth in 2018. High blood pressure ranked as the fifth in 2018 health issues was the second most health conditions among respondents in 2018.

Community leaders ranked health issues as: (1) Mental health, (2) Illegal drug abuse, (3) Prescription drug abuse, (4) Homelessness and safe housing and (5) Lack of insurance for the uninsured. Community leaders have consistently cited illegal drugs abuse and prescription drug abuse as health issues in all three survey cycles over the past seven years. They cited overweight and obesity and high blood pressure as health concerns in 2012 and 2015. Overweight and obesity and high blood pressure ranked first and second among health problems respondents have been told by health professional they have in the 2018 survey.

These responses illustrate that there is consistent concern in overweight / obesity, alcohol, substance use, high blood pressure and mental health in the county. The responses show the county's growing concern of the relationship between obesity, high blood pressure, high cholesterol, mental health and their risk factors.

Youth Issues

The table below shows youth issues identified by participants by category.

Youth Issue			
All Respondents	Community (N=735)	Leaders (N=181)	Low Income (N=183)
Quality of education (78%)	Quality of education (79%)	Quality of education (81%)	Drug use 84%
Drug use (75%)	Mental health (75%)	Mental health (78%)	Parental involvement 77%
Parental involvement (73%)	Drug use (74%)	Parental involvement (76%)	Quality of education 73%
Mental health (73%)	Parental involvement (72%)	Drug use (72%)	Mental health 62%
Socio-economic factors (58%)	Socio-economic factors (61%)	Socio-economic factors (65%)	Sex education 52%
Physical activity and nutrition (53%)	Physical activity and nutrition (53%)	Physical activity and nutrition (59%)	Physical activity and nutrition 50%
Sex education (51%)	Sex education (53%)	Sex education (45%)	Socio-economic factors 39%
Lack of social activities (31%)	Lack of social activities (32%)	Lack of social activities (25%)	Lack of social activities 33%

Participants selected their top five most important youth issues among eight options: (1) Quality of education (78%), (2) Drug use (75%), (3) Parental involvement (73.1%), (4) Mental health tied with 72.9%, and (5) socio-economic factors (58%). Socio-economic factors include job trainings, job opportunities, and money management skills and youth self-image. Drug use was consistent over the seven years in all surveys and parental involvement and socio-economic

Focus Group

Participants from the focus groups identified vaping and smoking, drug use, mental health problems, poor parenting skills, drinking, lack of low cost recreational events and after school programs as of concern among the youth. Some comments are below.

“The problem is cigarettes and drugs and police. It’s a very big problem. Because, the people, when you go to the park, or anything fun, everybody is drinking and the children can see, and the youth imitate their Father.” ESL class

“Vaping”... “yea, what effects it has and like vaping and juuling and all that is kinda like new almost, in the sense that it only became like so popular last year, this year and stuff like that. So I guess, really leaders need to go in, find the statistics, but like once people start seeing the health effects of it, maybe we can see a decrease.” – Youth

“Parental Involvement, the parents are on drugs and most children have no guidance and better role models. “Children need better role models and more mentoring programs like “big brother.” – Jail

Serious health problems among youth under 24 years of age in your community

<i>Youth</i>	<i>Hispanic and other minority groups</i>	<i>Inmate Men</i>
High prevalence of vaping Requesting community leaders learn more about vaping and the risks associated with it. Substance abuse Lack of mental health resources Lack of low-cost recreational events (in order to give youth something to do other than drugs)	Lack of afterschool activities Substance abuse Cigarettes Drinking Lots of people texting and driving Poor parenting	Substance abuse among youth Stigmatization related to mental health Lack of resources for mental health. Lack of adequate after school programs to give youth more healthy activities options Increase support for those with mental health

2018 Youth Issues compared to 2015 and 2012 Quality of Life Survey Issues

The chart below compares 2015 and 2012 youth issues. Community’s concerns for the youth were (1) Quality education, (2) Drug use, (3) Parental involvement, (4) Mental health and (5) Socio-economic factors. Community respondents consistently cited concern for drug use among youth in all the three survey cycles. Tobacco use, continuous to be a major concern in the community with almost 1 in 2 high school student ever smoke e-cigarette in Gaston County (2017 YRBSS). Sex education was not among the top five but remains important as survey 51% of respondents identified sex education as a concern in 2018.

Community leaders have been consistent in the top five priorities over the five years. Leaders cited parental involvement and money management skills in all three surveys and cited drug use and obesity related factors like physical activities and nutrition in both 2018 and 2015. Most leaders (75%) cited mental health as a concern among the youth. The rise in mental health could

be explained by the increase in the number of youth using e-cigarette and the increase use of drug among the youth.

Community Residents	2018	2015	2012
	Quality of education	Use of drugs and alcohol by youth	Use of drugs and alcohol by youth
	Drug use	Use of tobacco products by youth	Use of tobacco products by youth
	Parental involvement	Sexual activity among youth	Physical, sexual, and emotional abuse of youth by
	Mental health	Teenage Pregnancy	Bullying and teasing among
	Socio-economic factors	Obesity among youth	Help depressed youth
Community Leaders	2018	2015	2012
	Mental health	Obesity among youth	Teen pregnancy
	Parental involvement	Money Management skills	Money management / Youth gangs & gang violence
	Drug use	Parental involvement in their education	Parental involvement in their education
	Socio-economic factors	Use of drugs and alcohol by youth	Physical, sexual, and emotional abuse of youth by
	Physical activity and nutrition	Sexual activity among youth	Encourage teen enrollment in college / Use of drugs & alcohol among youth

Responses to the YOUTH ISSUES section of the Survey by respondents groups 2012 to 2018

Overall, it should be noted that drug use, obesity, lack of parental involvement and other health issues among youth directly affect their mental health and their ability to do well in school.

Access to Healthcare

Survey participants were asked question about the places they receive health care, type of health insurance they have, health services they are unable to get from the county and reasons they are unable to get those health services. Many residents (83%) use the doctors' office, 30% use an urgent care center and 19% use the Emergency Department (ED) as shown by the table below. A greater percentage of low income residents' use the ED, the Health Department and Gaston Family Healthy Services which is a Federally Qualified Healthcare Center (FQHC) compared to other subgroups.

Twenty – eight percent (28%) of respondents are unable to get certain health services in the county. Some respondents are unable to get some specialist medical care, hospice care, dental care, mental health care, vision or eye care and behavioral healthcare.

Use of Healthcare Resources				
	All Respondents (N= 1,060)	Leader (N=180)	Community (N=697)	Low Income (N=183)
My doctor/medical provider	83%	88%	84%	71%
A hospital emergency department room	19%	14%	15%	38%
An urgent care center	30%	88%	32%	22%
The Gaston County DHHS (Health Department)	5%	1%	3%	13%
An Alternative – chiropractor or homeopathic	5%	6%	6%	3%
Gaston Family Health Services	8%	6%	8%	11%
I don't seek care when I am sick	3%	2%	2%	5%
Other - Veterans Health Administration	3%	4%	3%	5%
Not applicable	3%	6%	3%	2%

Focus Group

Participants in the focus groups were asked to discuss some of the issues in the community that prevent residents from staying healthy. The groups identified: lack of knowledge, lack of awareness of health resources, high cost of healthy living and high cost of healthy foods, access to transportation, self-treatment, and drug use as some of the things that keep the community from being healthy. Some comments from participants are seen below.

“There is a problem of self-treatment. It increases drug abuse problems in our society. Self-treatment often occurs because people can't afford actual medical treatment.” – Participant from the Jail

“I think it's hard to get transportation to health services, just generally.” - Youth

“A lot of people might not know about the health department, or the Teen Wellness Center, or I don't think they care enough to know, so if they haven't been told they aren't gonna look for it.” – Youth

“The reason [people are not healthy] is that it is expensive to get healthy food, so you cannot afford it, and about the insurance, people need insurance for all persons.” – Participants from the ESL class

<i>Youth</i>	<i>ESL Class</i>	<i>Inmate Men</i>
<ul style="list-style-type: none"> • Lack of knowledge to help people make healthy decisions • Lack of awareness of health resources like Teen Health Center and others at the Health Department • High cost of healthy living • Transportation to 	<ul style="list-style-type: none"> • Lack of education • Insurance • Access to affordable healthy foods (Cost of health food options and Information on resources) 	<ul style="list-style-type: none"> • Drug use • Lack of motivation • High cost of healthcare. • Self-Treatment

DHHS Board

The health concerns are identified are still relevant for the health priorities selected by the DHHS Strategic planning Committee for 2015-2020.

To this end, the Strategic Planning Committee selected the following priorities for Gaston County:

Integration of Mental Health Resources

Understanding that the health of our county is based on the physical-mental-social health of its residents, DHHS will work to integrate mental health services into its delivery of physical health services (Public Health Division) and social services (Social Services Division). Our goal is to use this whole person model to build and sustain community wellbeing.

Gaston County provides an average of nearly 26,000 clients with mental and substance abuse treatments and rehabilitation services. Based on our Quality of Life survey, there is a profound acknowledgement that there is a need to focus on the mental health of its residents.

Childhood Obesity

Understanding that the short- and long-term consequences of childhood obesity are premature and costly disease, disability, and death, DHHS will work with community partners to establish environments, policies, and programs that encourage good nutritional and fitness practices.

There is a linkage between childhood obesity and adult obesity. Nearly 16.1% of children ages 2-4 are considered overweight or obese. Furthermore, the Survey data suggests that the community feels that childhood obesity is an issue of greatest priority. Almost three out of four residents feel that overweight and obesity is a community health issue, while about two of three residents find that this is an issue that needs to be addressed among youth.

Improved Family Functioning

Understanding that healthy families are the foundation of our future, DHHS and its Children & Family Services Program and community partners will improve family wellbeing by increasing opportunities for families to secure needed prevention, diagnostic, and treatment services.

Child maltreatment rates are on the rise in our County. According to UNC Social Work data, nearly 90 children per 100,000 population will be the victim of child abuse or neglect.

Fortunately, there has been a decline in domestic violence rates. However, broken and battered homes remain around 300 cases per 100,000 for the past three years. Identifying the issues that affect family health and function, we can provide support to help the family sustain a safe and healthy home.

Senior Livability & Support

Understanding that a growing number of Gaston County residents are entering their senior years and that older age poses unique health challenges, DHHS will promote and conduct programs to assure this population has access to the clinical and related services they require. The Survey data shows that two out of three residents think that community resources for the elderly need improvement compared to 78% of residents over age 60. While access to care is important to address, nearly 4% of our aging Survey respondents declared they are uninsured.

GASTON COUNTY COMMUNITY CONCERNS

SURVEY RESPONDENTS

Almost half of respondents were **age 45-64** making them an over represented group. The 18-24 year old group and those 65 and older were under represented.



FACE TO FACE

Surveyed from low-income areas. Higher minority rates in group: **28.9% Black or African American**, **9.2% Hispanic**, and **6% multiracial or other groups**



ONLINE

Responses from all over county. Lower minority rates in group: **14.6% Black or African American**, **3.7% biracial or other**, and **2.9% Hispanic**

L.I. AREAS

Similar male to female ratio as county **~53% female**

LEADERS

Decreased male participation **~61% female**

RESIDENTS

Very low male participation **~85% female**

COMMUNITY IMPROVEMENT CONCERNS

LI Area		Leader		Resident	
Education	4.1	Education	4.7	Education	4.6
Access to Health	3.9	Access to Health	4.1	Access to Health	3.8
Community Resources for the Elderly	3.8	Community Resources for the Elderly	3.3	Community Resources for the Elderly	3.6
Physical Activity and Nutrition	3.6	Physical Activity and Nutrition	3.2	Physical Activity and Nutrition	3.3
Environmental Health	3.1	Environmental Health	3.3	Environmental Health	3.5
Public Transportation	2.5	Public Transportation	2.6	Public Transportation	2.6

COMMUNITY HEALTH CONCERNS

LI Area		Leader		Resident	
Mental health	58	Mental health	78	Mental health	72
Prescription Drug Abuse	53	Prescription Drug Abuse	68	Prescription Drug Abuse	61
Illegal Drug Abuse	71	Illegal Drug Abuse	66	Illegal Drug Abuse	64
Homelessness and Safe Housing	48	Homelessness and Safe Housing	54	Homelessness and Safe Housing	61
Lack of healthcare for the uninsured	44	Lack of healthcare for the uninsured	45	Lack of healthcare for the uninsured	39

YOUTH CONCERNS

LI Area		Leader		Resident	
Quality of Education	73	Quality of Education	81	Quality of Education	79
Drug Use	84	Drug Use	72	Drug Use	74
Parental Involvement	77	Parental Involvement	76	Parental Involvement	72
Mental Health	62	Mental Health	78	Mental Health	75
Socio-Economic Factors	39	Socio-Economic Factors	65	Socio-Economic Factors	61
Physical Activity and Nutrition	50	Physical Activity and Nutrition	59	Physical Activity and Nutrition	53
Sex Education	52	Sex Education	45	Sex Education	53
Lack of Social Activities	33	Lack of Social Activities	25	Lack of Social Activities	32

Appendix