STONY CREEK MOUNTAIN
HEALTH ASSESSMENT 2021
Occoneechee-
Saponi Indian Villa
Ossipee
H A W R I V E R
Green Level
Burlington
Mebane
Whitsett
85
Graham
85
Alamance
Swepsonville
CANE CREEK MOUNTAIN
BASS MOUNTAIN
ALAMANCE COUNTY
Liberty
21

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ACKNOWLEDGEMENTS

This assessment would not be possible without the assistance and support of many individuals and groups who live and work in Alamance County.

The strategies developed from this assessment will be a direct response to the needs identified by the residents of Alamance County

– A sincere thank you to all residents for your willingness to share your opinions and experiences related to living in Alamance County.

DATA CONTRIBUTORS

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Links are found within the Tables and contents of this document for ease in accessing information.

Please see **APPENDIX A** for the glossary.

Please see **APPENDIX B** for acknowledgments.

Please see **APPENDIX C** for additional data information.

The Community Health Improvement Plans developed from this assessment will be in partnership with community residents and in direct response to the needs identified by the residents of Alamance County.

Disclaimer: At the time this report was compiled, all data cited was current. Please note some sources may have published new data; please check the data source for the most up-to-date information.

EXECUTIVE SUMMARY

Vision Statement and Purpose

This document serves as an ongoing commitment to addressing access to resources and health care, the education level achieved, and economic opportunity for residents in Alamance County which were identified by the community in 2015. All three priorities require systemic change to address. Systemic change is guided by an institution's willingness to rigorous periodic review of policies, procedures, and institutional culture that creates barriers to the priorities a community seeks to address. This 2021 assessment reflects upon both the creation of processes to aid this review and challenges encountered during the last three years that illustrates the development of, and growing shared lens for, the role equity plays in determining the health of an individual and their community.

Leadership

The theme of leadership for this assessment is the redefining of stakeholders and how residents and institutions work together to assess and address health. The partnerships below reflect an interactive process grounded in values and accountability.

Partnerships

Partnerships	Number of Partners
Public Health Agency	**1**
Hospital/Health Care System	**1**
Hospital/Public Health Nonprofit Agency	**1**
Healthcare Provider – other than behavioral health	
Local Health Foundation	**1**
Dental Health Provider	**1**
EMS Provider	
Pharmacy	
Community Organizations	**1**
Businesses	**3**
Educational Institutions	**1**
Public School System	**1**
Media/Communication Outlet	**1**
Public Members	**70**

Regional/contracted services - Piedmont Triad Regional Council, Community Food Lab	2

Theoretical Framework/Model

The incorporation of a Community Based Participatory Research (CBPR) approach into the Community Health Assessment process allows partners to engage the community in meaningful conversations about health and better positions partners to address priorities.

Collaborative Process Summary

Alamance County has a long history of collaboration between the health department and the hospital in developing a community assessment. Over the years, agencies and groups have joined the team, allowing for a cross-sectoral approach. The 2021 assessment process is Alamance County's most collaborative process to date, building off the focus group findings from community residents in 2018 by conducting charrettes across four locations in Alamance County.

Methodology

A charrette is a tool as part of a community based participatory approach (CBPR) for aiding in the collection of primary data while creating space for mitigating conflict, resolution, and solution generation. To learn more about the charrette process, explore NCTracs.

Key findings

The following themes emerged from the charrettes:

Theme #1: Disconnection from resources
Theme #2: Disconnection among neighbors/Divided communities
Theme #3: Concern for young people
Theme #4: Safety
Theme #5: Infrastructure
Theme #6: Health

Health Priorities

The 2021 priorities are access to care, education, economic issues

Next steps

The Health Equity Collective will conduct a series of forums to bring participants together to explore these themes further and begin the process of creating solutions. These forums will focus on identifying who needs to hear this information and be a part of the planning to inform the Community Health Improvement Plan (CHIP).

Reading Guide

This assessment is made up of eight chapters with relevant county information. Each chapter begins with a title page that contains an image of an Alamance County mural, key questions, and key words. Our goal as a CHA team is to make the reading experience for the reader as easy and as informative as possible. The murals resemble a small tour through the county, and we encourage you to visit the murals in person (addresses will be below each image). The key questions can help prime the reader to interpret key themes and topics before diving into the details. And the key words offer an insight into the specific content of the chapter. Each key word and definition can be found in the glossary.

CHAPTER 1 BACKGROUND AND INTRODUCTION

Artie Barksdale, 415 N. Church St., Burlington

KEY QUESTIONS:

- What is a community health assessment?
- Who is involved in the making of this assessment?

KEY WORDS: Community Health Assessment (CHA), Health Equity Collective (HEC)

CHAPTER 1 BACKGROUND AND INTRODUCTION

The Community Health Assessment (CHA) in Alamance County is a collaborative process that is well-utilized across the following sectors: education, health, human services, philanthropic, faith community leaders and a growing number of businesses as well as elected officials across our county. A commitment was established in 2018 to incorporate a racial equity lens as a commitment to maintain integrity of the process along with a better understanding of the root causes of health issues. County residents have been active participants in the polling and charrettes that form the foundational basis and primary data collection of this assessment and have participated in the 2021 process to refine our current priorities. The random selection methodology employed by the Elon University Poll allows this assessment to reflect a cross-section of resident's opinions about issues that impact health in Alamance. Previous assessments have been instrumental in helping local agencies and businesses to plan strategically, to understand the complexity of health issues, and to bring additional resources to our community through grants and programs. With each additional assessment, Alamance broadens its partnerships and challenges those partnerships to use this document to guide strategic planning, challenge policies and processes, and prioritization of funding.

A partnership with experience in, and a passion for health equity, data collection, and analysis, reflects the unique relationship between the CHA team and the Alamance County Health Equity Collective (HEC). The HEC is a group of residents and institutions committed to health equity with a statement of purpose that includes:

The Health Equity Collective is a community-based partnership of residents and institutions engaged in the shared work of identifying and addressing the racial disparities most impacting the health of the Alamance County community. Our commitment is to shared and transparent institutional analysis and to strategic and community-informed efforts to eliminate policies, practices, and procedures contributing to disparities.

Institutional partners include Healthy Alamance, Alamance County Health Department, Cone Health-Alamance Regional, Elon University, Impact Alamance, and the United Way of Alamance County.

Together, this partnership achieved the following towards the completion of the 2021 assessment: 1) Editing of a survey tool to assess community opinions on health and social issues - Completion of a randomized telephone survey and online survey of 528 residents, a representative sample of Alamance County residents; 2) Completion of four charrettes with 70 total participants, focused on expanding the collection of narratives of those not typically well-represented in previous assessments; 3) Collection of secondary data at the county-level, including sources from publicly-available state databases as well as local agency-specific data; and 4) Creation of this written assessment documenting these processes and the data collection.

A clear consensus emerged that the focus of our planning and implementation for the next three years continues to lie in three key areas: access to care, education, and economic issues. It is important to note our community remains committed to a generational approach to these priorities, understanding that systemic change is required to remove the policies and practices that create barriers to accessing resources, achieving a high-quality education, and amassing wealth.

The next phase of this collaboration is dissemination of the major findings of this assessment. That process will include the printing and posting of the assessment on key agency websites and at local libraries, along with presentations to civic organizations, elected officials, and other community groups.

A Community Health Improvement Plan will be revised for the next three years, a process led by Healthy Alamance, which will involve partnering with the community in setting strategic plans to address priorities.

Consider joining Health Equity Collective; meetings are held every month on the fourth Wednesday from 4-5:30 pm. Contact halamance@gmail.com to learn more about how to get involved.

CHAPTER 2 BRIEF COUNTY DESCRIPTION

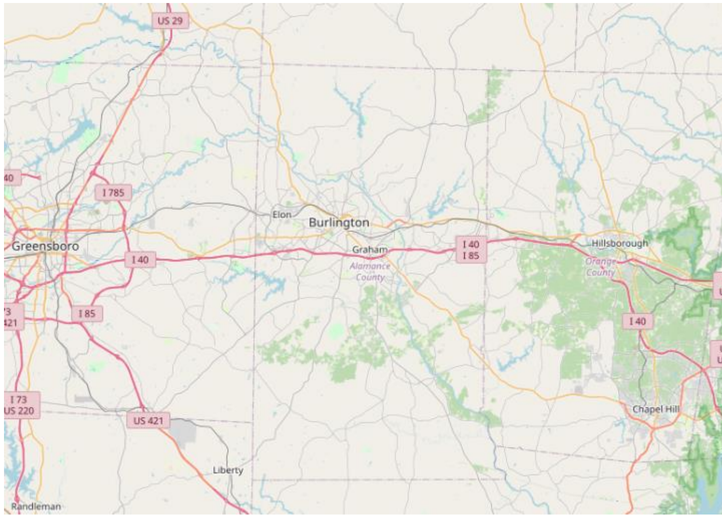
Top: Gina Elizabeth Franco, 263 E. Front St., Burlington
Bottom: Mauricio Ramirez, 236 E. Front St., Burlington

Key Questions:

- Who lives in Alamance County?
- How did the county get to where it is now?

Key words: Race, Ethnicity, Textile, Tobacco

Chapter 2 Brief County Description



Alamance County is in central North Carolina (referred to as the Triad region) with a population of 174,055, as certified by the NC Census 2020 count. The county consists of nine municipalities, three of them are the cities of Burlington, Mebane, and Graham, and the other six are townships. The county is located between two metropolitan areas, the Research Triangle to the east and the Piedmont Triad to the west. It is 150 miles east of the Appalachian Mountains, 200 miles west of the Atlantic Ocean, 30 miles south of the Virginia border, and 130 miles north of the South Carolina border.

Formed in 1849 from Orange County to the east, Alamance County has developed out of historically significant battles, a once thriving textile industry, and tobacco farming community. Alamance County was named after Great Alamance Creek, which was the site of the Battle of Alamance in 1771. By the 1840s, several mills were set up along the Haw River and near Great Alamance Creek and other major tributaries of the Haw. Between 1832 and 1880, there were at least 14 major mills powered by these rivers and streams. By the late 20th century, most of the plants and mills had closed, including Burlington Industries, a company once considered the world's largest textile manufacturer. Today, the leading industries in Alamance County continue to be manufacturing, professional and technical services and retail trade. Large areas to the north and south of the three largest cities are significantly rural. With the tobacco buyout, many small to mid-size farms are making the transition to vegetable farming. Alamance is classified as tourism by the NCDOT and this classification impacts funding allocations and opportunities, particularly for the rural areas of the county.

Accurate census data impacts a community's health as it is used to plan future investments and services. Data from sources such as the US Census and the Bureau of Labor Statistics help determine who gets federal aid, where assistance programs are targeted, what businesses might move to the community, and how votes count in the Electoral College. In fact, demographic data impacts everything residents do including how far the travel is to a grocery store, how much is paid in property taxes, and how much support a child's school receives from local, state, and federal sources.

2020 Census Information for Alamance County and North Carolina		
	Alamance	NC
Population	174,055	10,389,148
White	73.6%	70.6%
Black/African American	20.9%	22.2%
Hispanic/Latino	13.1%	9.8%
Asian	1.7%	3.2%
American Indian	1.5%	1.6%
Median Household Income	$49,688	$54,602
Households	64,439	3,965,482
Families Below Poverty (2019)	12.3%	9.6%
Children Living in Poverty (2019)	21.8%	19.3%
Households with Children Receiving Food Stamps (2019)	32.9%	29.9%
Unemployed (2019)	7.2%	7.3%
Students Eligible for Free & Reduced School Lunch (2019-2020)	58.8%	57.7%

The census information above from 2020 represents the population of Alamance County as either White, Black, or Hispanic. This is an incomplete picture, as these numbers alone do not accurately reflect the diversity of Alamance County nor the need to better illustrate this diversity in relation to health.

Globally, children and minorities are most impacted by poor health outcomes. In Alamance County, 12.3 percent of the total population is in poverty and 21.8% of all children in Alamance are in poverty. Black people have a much higher rate of cancer, heart disease, and stroke, and die at an earlier age compared to their white counterparts.

While it is widely recognized that place matters and the zip code in which an individual resides within may determine how long they will live, the complexity of mitigating factors to longevity and quality are more nuanced and require local data and further research. In Alamance County, the life expectancy difference between the eastern parts of the county versus the western portion is a difference of 11 years.

Race

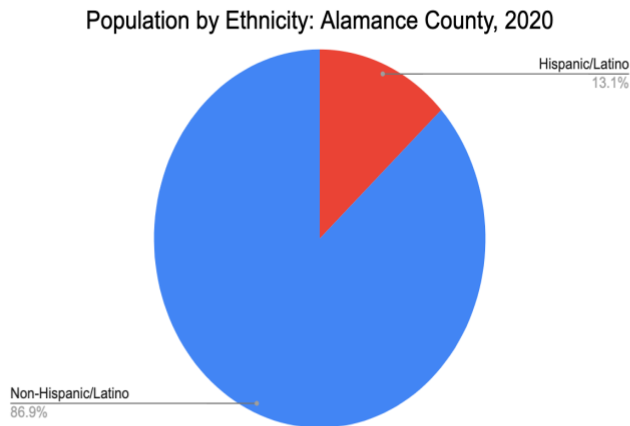
Alamance County is a predominantly white community, with 73.6% of residents identifying as White. About 20.9% of the population identifies as Black/African American; 1.5% as Native American; and 1.7% as Asian. Lastly, about 2.7% of individuals identify with two or more races (while the census information uses the term "American Indian," this document will use the term "Native American").

Ethnicity

About 13.1% of the population identify as Hispanic or Latino, which is higher than the state average of 9.8%. In the last thirty years, the state's Latinx population has increased dramatically and is expected to see 1.7 million residents by 2035 (Martin, 2020). Additionally, it is projected that by 2025 North Carolina will see counties with majority non-Hispanic Whites declining, primarily due to the natural increase of minority populations. This simply means these communities, especially the Hispanic and Latinx populations, have more births than deaths while the White population is aging out (deBruyn, 2018). *Chapter 2*

In North Carolina, two-thirds of the Latinx population are of Mexican descent followed by Central American migrants from El Salvador, Honduras, Guatemala, and Costa Rica. As a response to this population increase, many local government leaders in North Carolina cities, including Burlington, have "initiated programs, including library and literacy services, to improve communication, services, and civic engagement and leadership opportunities for immigrant and refugee residents" (Jones, 2019). *Chapter 2*

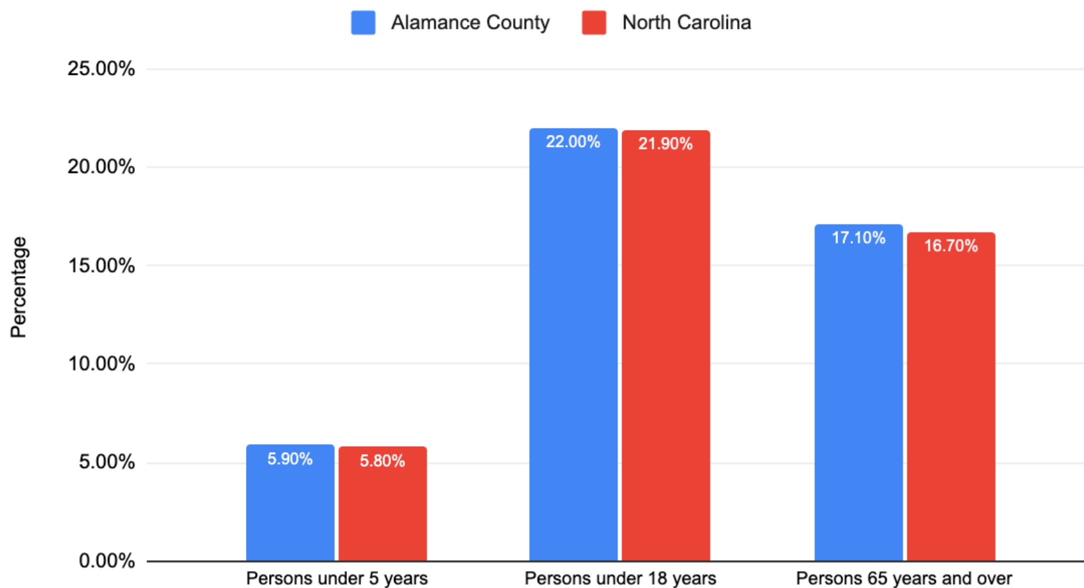
With immigration at the forefront of many controversial congressional conversations over the last few years, community resources along with public schools became places of opportunity for Latinx communities in North Carolina. Researcher Hannah E. Gill reports an example of this occurring at the Southern Alamance Elementary (SAE) School, now the South Graham Elementary School, in Graham, NC. Her study found that "the SAE community viewed Latino children and their families as people with new ideas, new talents, and new skills. Putting their more integrative, diverse philosophy into action, the SAE school administrators created a dual-language Splash program, which provided more than three hundred kindergartens through fifth-grade students with instruction and immersion in English and Spanish (Jones, 2019). At this school, half of the students are native English speakers, and the other half are native-Spanish speakers, showing their commitment to include and support this growing community. Additionally, SAE has used the J-1 visa program to create job opportunities in accredited U.S. schools for teachers from Latin America which may have influenced the Latinx community's desire to relocate or remain in Alamance County. Furthermore, the Latinx community has new businesses launched in the last four years were Hispanic, and they employ 34,000 people with $4.2 billion in annual receipts" (Martin, 2020). With opportunity, a strong economy, and quality of



life, it is no surprise that Hispanic families and workers, from blue-collar labor to the highest executive positions, are finding their way to North Carolina.

Age

Alamance County's population by age group is like the state's average population by age group. Persons under 18 years of age make up the highest percent of the population in Alamance County 22.00%, followed by persons 65 years and older 17.10%. The age group with the smallest population percent in the county is individuals under the age of 5 years old 5.30%.



Sex

The population by sex of Alamance County is like that of the State of North Carolina with males representing 47.66% of the county and 48.60% of the state. The female counterpart represents 52.34% of the county and 51.30% of the state.

Chapter 3 Community Health Assessment Process

Molly Feudale, Audrey Garton, Davis, Melody Bodkin, Lauri Daughtry
101 N. Main St., Graham

Key Questions:

- How is this assessment conducted?
- Where does this assessment get its validity?

Key words: Community Based Participatory Research, Social Determinants of Health, charrettes, mixed method approach, early findings

Chapter 3 Community Assessment Process

In 2021, the collaborative process for collecting both primary and secondary data to write the assessment encompassed many new partners. Recognizing the need to build out a collective approach to improve the community's health, an increasing number of partners are sharing a population lens to focus on social drivers of health. It is through the development of this process and a commitment to creating healthier environments that Alamance County will tackle some of the community's most daunting challenges.

Methodology

Elon University Poll

Survey Overview

The Elon University Poll conducted a survey of Alamance County, North Carolina residents. The goal of this survey is to provide information relevant to the Alamance County Community Health Assessment.

Elon University fully funds the Elon University Poll. The poll operates under the auspices of the College of Arts and Sciences at Elon University, led by Dean Gabie Smith. The Elon University administration, led by Dr. Connie Ledoux Book, university president, fully supports the Elon University Poll as part of its service to the community. Because of this generous support, the Elon University poll does not engage in any contract work. This permits the Elon University Poll to operate as a neutral, unbiased, non-partisan resource.

The Elon University Poll conducted a representative survey of 529 Alamance County, North Carolina residents, from September 20th to November 18th, 2020. With 89% of the interviews conducted by live telephone interviewers, an additional 11% were conducted with a supplemental opt-in online survey, distributed by the Alamance County Health Department.

Unless otherwise noted, results reported below are percentages (%) and cell sample sizes (n). The margin of error is +/- 4.3 percentage points. To read more, see the full report. *Additional Data & Information*

Mode: mixed- live interviewer telephone and online
Population: Alamance County participants
Margin of Error: +/- 4.3
Dates in the field: September 20th - November 18th
Sample Size: 472 telephone interviews, 56 supplemental online surveys
Weighting Variables (NC): age, gender, race, education, and income

Procedure

For this survey, the Elon University Poll used a mixed mode design of phone calls using live interviewers, and supplemental online surveys. Random telephone numbers were purchased from Survey Sampling International (SSI). The online surveys were completed on an opt-in basis by those visiting the Alamance County Health Department for appointments or for the fall rabies vaccination clinic. Survey takers were provided with the survey URL to complete the online questions.

Survey responses were collected from September 20th, 2021 through November 18th, 2021. A survey was considered complete only if a respondent progressed through the entire survey.

Support for Transparency

The Elon University Poll supports transparency in survey research and is a charter member of the American Association for Public Opinion Research Transparency Initiative, which is a program promoting openness and transparency about survey research methods and operations among survey research professionals and the industry. All information about the Elon University Poll that we release to the public conforms to reporting conventions recommended by the American Association for Public Opinion Research and the National Council on Public Polls.

Weighting

Weights were generated using a technique known as iterative proportional fitting, also known as ranking. Elon typically weighs results from the Elon University Poll on multiple demographic characteristics. In the case of this survey, the target population consisted of adult residents of Alamance County, North Carolina. The weight variables were race, gender, age, education, and location inside or outside of Burlington, NC city limits. Each variable was weighted to match relative proportions according to most recent estimates from the U.S. Census Bureau American Community Survey.

Weights were generated in Stata using a technique known as iterative proportional fitting, also known as ranking. The weight variable was calculated based on all the variables in the table below, using U.S. Census 2020 parameters.

Question Construction and Question Order

In releasing survey results, the Elon University Poll provides the questions as worded and the order in which respondents receive these questions. In some cases, question ordering rotates to avoid biases.

To provide neutral, non-biased questions, we observe conventional question wording and question order protocols in all our polls. To avoid recency or primacy effects, candidate’s names are randomized within the text of each question. Every questionnaire is pretested multiple times before entering the field.

Branching Questions

For questions with multiple response options, the polling center often programs surveys to branch into a secondary probing question

“Don’t Know” & “Refused” Response Options

Where appropriate, all opinion questions include an option for respondents to select “Don’t Know” or to refuse to answer. Respondents were permitted to exit the survey at any time.

Considerations

Traditional telephone surveys have a clear advantage over online surveys since online surveys do not capture opinions of respondents who lack internet access. However, declining telephone response rates and the growth in online sample pool sizes have narrowed quality differences between the two modes.

Collecting Rich Primary Data for Community Health Assessment and COVID Relief - Using Charrettes to Identify Conflicts and Create Solutions with the Community

Project Overview

As part of the Community Health Assessment (CHA) 2021 process, Healthy Alamance sponsored community-based participatory research (CBPR) charrettes, a structured and facilitated community engagement process, to gain perspective on health needs and priorities from residents of communities across Alamance County and gather community-driven ideas for how to address them. As described by the National Charrette Institute, a “charrette” is a collaborative planning process most often used in design and architecture that harnesses the talents and energies of all interested parties to create and support a feasible plan to bring about community development and transformation. Healthy Alamance used an adapted charrette process developed by community and academic partners affiliated with the Center for Health Promotion and Disease Prevention and the North Carolina Translational and Clinical Sciences Institute at the University of North Carolina at Chapel Hill (UNC) to incorporate principles of community-based participatory research. The CBPR Charrette process is designed to address issues about health concerns within their neighborhoods, identify concerns they wish to prioritize, and generate ideas/solutions from their perspective to address the concerns. This full summary reports on the methods used to implement the Alamance County charrettes, synthesizes the data across charrettes, and highlights the themes that resulted from the charrette process. These findings have been vetted by participants and members of the planning committee. The full report will be shared with elected officials and other decision-makers to inform COVID relief funding priority setting and offer direction for county-based organizations in their strategic planning. Funds for the project were provided by Impact Alamance.

The Framework: Community-Based Participatory Research and Health Equity

Community Based Participatory Research is a research approach that prioritizes all partners in the process and builds off each other's strengths and skills using collective decision-making. CBPR begins with a research topic of importance to the community and has the aim of combining knowledge with action and achieving social change to improve health outcomes and eliminate health disparities.

Methods: CBPR Charrette Structure and Process

Planning

The CBPR charrette process was designed collaboratively by a partnership between Healthy Alamance, the charrette planning committee, and the UNC team facilitating sessions. As a first step, Healthy Alamance supported the development of a charrette planning team, in partnership with the Health Equity Collective (HEC), to encourage communities to engage and draft relevant questions for the charrette discussion. The Health Equity Collective is a community-based partnership of residents and institutions engaged in the shared work of identifying and addressing the racial disparities most impacting the health of the Alamance County community. Their commitment is to a shared and transparent institutional analysis and strategic and community-informed efforts to eliminate policies, practices, and procedures contributing to disparities. The goal was to identify and involve historically marginalized and excluded communities in the county. Four locations were identified and included: Morrowtown, the Dream Center in Burlington, Pleasant Grove, in the rural Northern part of the county, and the Crump Village Community Center which is part of the Burlington Housing Authority communities. Plans to conduct two additional charrettes in January, one sponsored by Southern Alamance Family Empowerment (SAFE) and the second with youth at the Positive Youth center, had to be cancelled due to the Omicron surge.

The HEC planning team worked with the charrette team to draft key questions to prompt discussion during the charrettes. The charrette process is structured to facilitate trust and relationship-building. By creating a safe space for open discussion among participants with different perspectives, community strengths and assets as well as needs and priorities are identified and generate ideas collectively for addressing challenges. The process involves multiple ways of engaging participants, through small group activities, large group discussions, individual and collective idea generation, and written and oral communication.

The planning team reached out to community leaders/champions in each of these communities to identify a community-friendly location and spread the word about the charrette opportunity using flyers and word-of-mouth. Each charrette, except for Pleasant Grove, was hosted by a community champion. Each charrette provided a meal for participants at the outset of the meeting with food catered by small local businesses. Each participant was offered an incentive of $40 for participation, which was distributed at the end of the 2 ½ - 3-hour session. Healthy Alamance secured interpreter

services for each charrette. To learn more about the process for the charrettes, see the full report. *Additional Data & Information*

Key Questions for Consideration

Question Series 1: How do you define your community? Who is a part of your community? What does your community have?
Question Series 2: How do you define health in your community? What challenges to health does your community face?
Question Series 3: Who has the power to make decisions about what happens in your community? Who makes the decisions about what happens in your community and who should? Are there unique considerations we need to identify about your community?

Provide information about ARPA: Approximately $64 million dollars

- Interactive Activity - What are the top three issues that need funding in your community to address health concerns?

Question Series 4: Who needs to hear what we have talked about today?

Theme 1: Disconnection from resources

The charrette discussions made it clear that participants feel disconnected from resources, whether they feel like there are not enough resources to meet their needs, they do not know about potential resources, or that the resources that exist do not serve their community (either by race/ethnicity, location, neighborhood, etc.). While noting the lack of resources, participants also acknowledged that there are many organizational resources in the county that provide support in different and important ways to them and their families (i.e., Dream Center, RHA- therapy, Salvation Army, Catholic church, Big Brother Big Sisters, Elon University, and community colleges).

Theme 2: Disconnection among neighbors/Divided communities

Participants in all charrettes made it clear they feel disconnected from their neighbors and from the larger community in Alamance County. In the Pleasant Grove charrette, residents attributed this sentiment to the rural nature of their community, with homes being more spread out and neighbors further away. One group there also mentioned racism as a divisive factor in the community. The disconnection noted by community residents was brought to life during our Pleasant Grove charrette with participants quite divided in opinion and suspicious of our motives. There was no community champion at this charrette and the absence of a trusted community voice affected the tone and involvement of community members in the process. In the Morrowtown charrette, Black participants mentioned a lack of connection with their Caucasian and LatinX neighbors and described feeling at a loss as to how to bridge the language and cultural gaps. Participants at the Dream Center (all Latinx/Hispanic) described the city of Burlington as highly divided. Crump Village participants noted the lack of unity, particularly among adults, within Burlington Housing Authority communities and expressed concern about outsiders moving in. Across the board, many charrette participants perceived a lack of unity in their community and its effects on the health of the community.

Theme 3: Concern for young people

The third theme intersects with most other themes, as residents' concern for their community's young people encompassed deep apprehension for their safety, education, and future outcomes. From more playgrounds to better education, to addressing bullying in schools and drugs in the community, to building sidewalks and speed bumps to slow cars down, these intersecting concerns were all framed as a concern for the wellbeing, physical, mental, and social health and positive development of children and teens.

Theme 4: Safety

Safety as a theme emerged from this focus on the concerns for children, which broadened to overall concerns for community well-being. References were made across multiple charrettes to recent deaths of young people in the community at the hands of gun violence. In Morrowtown, participants spoke about community mobilization around violence in the absence of elected officials listening to their concerns. At the Crump Village Community Center, participants spoke about a recent shooting that had intensified their worries for their children. The Dream Center charrette participants expressed safety concerns regarding unexpected license checkpoints that feel outside of sobriety checkpoints.

Theme 5: Infrastructure

Infrastructure challenges were identified in all charrettes, though the focus of concern varied from one community to the next. Housing issues were a major concern across charrettes, whether due to lack of affordability, as expressed in Pleasant Grove and Morrowtown, or to the state of building structures, as described by Burlington Housing Authority residents participating in the Crump Village charrette. Crump Village participants spoke specifically about concerns in their communities' buildings, while joining others describing lack of streetlights, speed bumps, crosswalks, and broken security cameras. Concerns about infrastructure focused on general community safety (many highlighting older adults and children as their main cause for concern here). Ideas for increasing housing affordability and access also came up and Morrowtown participants advocated for establishing a land trust to facilitate this process in communities such as theirs.

Theme 6: Health

Due to the focus on health in each charrette, a significant theme expressed was concern over community health. Particularly the concerns were lack of accessible, comprehensive healthcare services due to cost, a limited number of services available at the neighborhood level, and lack of cultural competence among providers and staff. The need for mental health care services was mentioned by participants at all locations.

Discussion and Implications

Charrette participants recognized both strengths and needs within their communities. In all four, participants conveyed a strong sense of being excluded. Additionally, all participants expressed feelings that no one cares enough to listen to their concerns, nor did they feel that decision-makers represent their concerns. When one city council member attended one of the charrettes, participants appreciated

his show of interest. Yet, some communities let us know they no longer even try to make their voices heard since they have been ignored repeatedly. Even those who do attend city council or county commissioner meetings to advocate for community needs expressed doubt that what they said would make a difference. Yet community residents also recognized the power of bringing their voices together towards collective action. Despite the skepticism, participants felt excited by the opportunity afforded by the charrettes to voice their opinions, generate ideas about how to improve their communities, and to learn more from one another and about resources and initiatives they may not already know about.

CHAPTER 4 COMMUNITY PRIORITIES AND ACCOMPLISHMENTS

Brian Collins, NE Court Square, Graham

Key Questions:

- Who is focused on addressing priorities of health?
- What are success and challenges to these efforts?

Key words: Built Environment, Equity

Chapter 4 Community Priorities and Accomplishments

The focus for planning and implementation for the next three years continues to lie in three key areas: access to care, education, and economic issues. Much has been accomplished in these areas; however, to truly make a difference, our community needs more time to implement existing and new strategies and evaluate progress.

Access to Care

Defining access to care goes far beyond access to medical resources in a community. Access to physical activity, fresh food, public transportation, and opportunities to socialize have been shown to be equally important to individual and community health.

Physical Activity Opportunities

Increased physical activity is associated with lower risks of type 2 diabetes, cancer, stroke, hypertension, cardiovascular disease, and premature mortality, independent of obesity. The role of the built environment is important for encouraging physical activity. Individuals who live closer to sidewalks, parks, and gyms are more likely to exercise (Access to exercise opportunities, 2021). *Chapter 4*

Elon to Downtown Burlington Greenway Opened in 2020

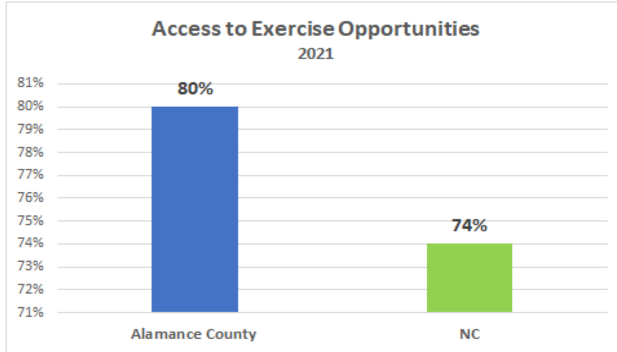
Access to Exercise Opportunities measures the percentage of individuals in a county who live close to a location for physical activity. Locations for physical activity are defined as parks or recreational facilities (Access to exercise opportunities, 2021). *Chapter 4*

Individuals are considered to have access to exercise opportunities if they:

• reside in a census block that is within a half mile of a park, or

• reside in an urban census block that is within one mile of a recreational facility, or

• reside in a rural census block that is within three miles of a recreational facility.



As seen in the graph to the left, Alamance County's access to physical activity is greater than the state average (Access to exercise opportunities, 2021). *Chapter 4*

Numerous policy changes and built environment improvements have occurred over the past three years in Alamance County because of a commitment by leaders in the county to address population health through policy change and increased access to resources (Access to exercise opportunities, 2021). *Chapter 4*

The Alamance Wellness Collaborative (AWC) convenes multidisciplinary partners to implement active living and healthy eating strategies throughout the county. Members include key leaders from planning, public health, business, parks and recreation, education, and nonprofit organizations. By adopting a countywide approach, representatives from different municipalities and agencies can work collectively and more efficiently on shared goals. The AWC recognizes the importance of creating environments where current and future residents have access to opportunities to improve their health—including facilities that encourage physical activity, healthy food outlets, healthy school environments, as well as policies and the economic base to support them. The collaborative completed a three-year Strategic Plan, identifying the following strategies to guide its work in Alamance County:

- Increase access to active transportation and trails
- Improve and support healthy school environments
- Identify and apply for funding for built environment initiatives
- Increase advocacy for policy change at the local level

VALUES

Equity	Ensuring discussions, actions, and policies prioritize increasing access for communities of color and disempowered populations
Policy	Prioritizing policy levers with the greatest opportunity for needed change and identifying who we need to engage
Action	Learning together; making democratic decisions; moving towards healthy(ier) policy development
Reflection	Taking the time and space as needed for discussions, deepening our own awareness, and considering how to operationalize what we learn

During 2020 and 2021, the AWC met each month virtually and focused on learning about equity and how it is connected to the structure of our communities. Through this process, the collaborative studied the history of Alamance County and reflected on how those in power in the past had a direct influence on how our county is structured today. The location of health resources, recreation opportunities and access to public transportation are directly tied to health equity. Based on this learning, the AWC adopted four new values that will continue to guide their work. These include equity, policy, action, and reflection.

The collaborative set a goal to advocate for the inclusion of health equity in municipally built environment plans. It is the AWC's intention to support public consultation and community engagement opportunities for all future infrastructure and policy initiatives.

Accomplishments of the Alamance Wellness Collaborative

A greenway that connects the Town of Elon (home to Elon University) to downtown Burlington was funded through collaborative action and planning of members. The connectivity allows Elon students and residents to walk, run, or bike to downtown Burlington. This not only creates another resource for physical activity, but also reduces air pollution by reducing cars on the road and provides a benefit to downtown businesses seeking new patrons. The greenway opened in the spring of 2020 and has been a vital resource to residents during the pandemic to safely walk, run or bike outside. The City of Mebane approved a $2 million dollar investment to create a greenway that will connect popular destinations within the city. Construction of the greenway will begin in 2022.

In October 2021, the City of Mebane adopted a Health in All Policies (HiAP) resolution, which is a commitment to use a lens of health for all internal and external decisions, including policies, design, and investments. The state of North Carolina has five counties that have adopted a Health in All Policies resolution, three of which are found in Alamance County.

Investments to Increase Access to Healthy Spaces

The local health foundation, Impact Alamance, offers yearly grant opportunities for organizations and municipalities, who are active members of the AWC and align their funding requests with the Wellness Collaborative Strategic Plan. Since 2018, $1.8 million dollars has been invested within Alamance County to enhance or begin projects and infrastructure to increase access in communities throughout the county. Some of the projects funded that improve access to healthy places include:

- New playground equipment for 12 elementary schools. These school playgrounds are open to the community to use after school hours.

- In 2019, over $100,000 was funded to Alamance Partnership for Children to create Outdoor Learning Environments (OLE) for licensed, regulated childcare centers. It is expected that at least five OLEs will be created by 2023.

- In 2020, a musical playground opened at Slade Park in Elon. This equipment is all inclusive and offers a unique attraction that cannot be found anywhere else in the Alamance County area.

A new playground at Mayco Bigelow Center was designed through community input in 2020. This partnership between Impact Alamance and the City of Burlington funded the playground and a crosswalk with an island to allow residents from the Burlington Housing Authority to safely cross the road to the park.

Food Security

The pandemic highlighted the need for food security in the East Burlington area, as well as the lack of opportunities and assistance available for marginalized communities to pursue their own business. On October 30, 2021, the CityGate Dream Center community kitchen opened in partnership with The Dream Center, Impact Alamance, and Healthy Alamance. The kitchen will be used to provide free, hot meals to the community once a week, and it will serve as a training model and entrepreneurship incubator for students who may be interested in pursuing culinary passions. This facility provides commercial kitchen access for local caterers and bakers to rent space to produce their products. The community kitchen is located at 1003 W. Main St., Burlington, NC and is open Thursday through Sunday, 10am-2pm.

What's impeding process?

Transportation has proved to be a barrier to accessing free meals provided by ABSS. Meals are provided at different campsites during the summer. Campsites are open sites, therefore students can give a 24-hour notice that they will be coming to the site to receive a meal, and the site will include them in their meal count. The student would need to remain on-site to eat the meal, but the adult in charge of the site would not be accountable for that individual student. Not all students have transportation to the site, or adult supervision to receive the meal.

Meals for Alamance County Students-MAC's Diner

There are approximately 12,000 students in the Alamance-Burlington School System who qualify for free or reduced meals during the school year, which is 52% of the student population. During summer recess, these students do not have access to healthy food for two and a half months. The ABSS Nutrition Services offers meals at various sites throughout the county during the summer. In the summer of 2019, 1,900 children received lunch and 650 children received breakfast at these sites.

Meals for Alamance County Students (MAC's Diner) was established to bring hot, nutritious meals to children in areas of high concentration of need. The summer feeding program at both sites and food trucks permits the distribution of meals for ANY children 18 and under without the need to provide parental documentation as is required during the school year. Any child who is hungry can get a meal. Due to COVID-19 restrictions, the number of children needing food was more than 12,000 children served during the 2019-20 school year alone. The food truck was made possible through concerned community members raising funding and from an Impact Alamance grant.

Food Sovereignty

The above examples represent two different responses to addressing issues of access. The first strategy attempts to remove barriers to participating in and financially benefiting from the creation and selling of a good/service while the other strategy addresses immediate need but does not address the root cause. The focus on food insecurity has a finite and limited capacity to address the issue while the concept of food sovereignty recognizes that food systems have been built to support mass production of certain foods. The current commercial distribution system focused on handling large quantities of produce, meat, and grain products while leaving out local food producers. Commercialized processes restrict the roles local producers and consumers play within food systems, limiting food choices and exacerbating issues of access locally to globally. The USDA defines food sovereignty as "the right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture system" (Tribal food sovereignty and climate change preparedness of tribal agriculture). *Chapter 4*

Tackling the challenges presented by the current commercial control of food systems requires a closer examination of poverty, its root causes, and the economic engines that not only take away from local food production opportunities but are not sustainable themselves. During COVID, many who had never been impacted by these issues had a chance to experience lack of access and began to ask why the local food system cannot meet the needs of its surrounding community. It is this realization that a focus on

food insecurity falls short of understanding the complexity of the issue. Resulting disparities are systemic in nature and require a systemic response.

The topic of food insecurity is still considered an economic and social indicator of the health of a community. The USDA defines food insecurity as limited or uncertain availability of nutritionally adequate foods or uncertain ability to acquire these foods in socially acceptable ways (USDA ERS). *Chapter 4* Poverty and unemployment are frequently predictors of food insecurity in the United States. A survey commissioned by the Food Research and Action Center (FRAC) found that one in four Americans worry about having enough money to put food on the table in the next year (Hunger and Poverty in America, 2021). *Chapter 4* Food insecurity is associated with chronic health problems in adults including diabetes, heart disease, high blood pressure, hyperlipidemia, obesity, and mental health issues including major depression.

Alamance Food Collaborative

The Alamance Food Collaborative (AFC) represents entrepreneurs from the local restaurant industry, academics from Elon University, health care system partners, non-profit leaders, farmers, and local government. This group is focused on creating infrastructure for Alamance County's food system that will have a lasting impact and influence the health of the community and economic viability. The last three years have been devoted to developing a better understanding of food insecurity in Alamance County, a shared equity lens and language, and the development of a hybrid model for grassroots efforts and nonprofits to work together. Most recent activities include conducting listening sessions with farmers to learn more about what farmers need to be successful in Alamance County.

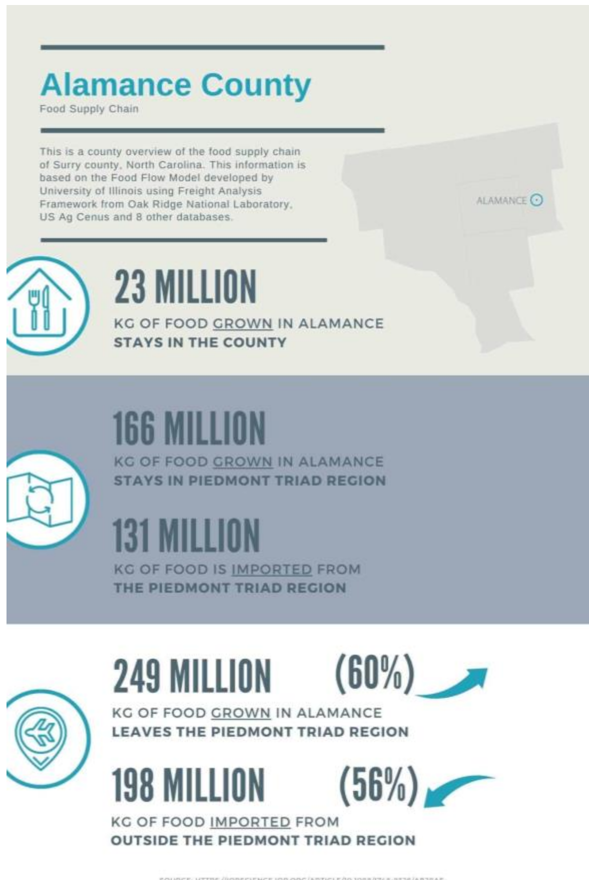
The AFC supports strategies to increase diverse membership by:

- Seeking connections
- Building power among community groups
- Thinking and acting collectively and collaboratively
- Paying members for their time representing the AFC

Authentically Alamance Farmers' Market Network

This initiative creates meaningful and long-term relationships between rural white and Black farmers and community consumers (both individuals and businesses). By focusing on supporting the local economy, we are developing an infrastructure that provides an increased number of small retail exchange opportunities in Alamance County and highlighting neighborhoods stripped of resources and lacking access to fresh food. With the award of the three-year USDA grant of $250,000 in 2018, Healthy Alamance has provided oversight and management, generating $114,468 in sales for local farms over the last three years and the expansion of the network from one location to three (Burlington, Elon, and Mebane). In 2015, Alamance County had no markets being professionally run or accepting EBT cards. In 2022, the final extension year of its USDA funding, the AAFMN, in partnership with Piedmont Conservation Council, is working with Community Food Lab to create a sustainability plan and explore new ways to offer opportunities for communities to come together around food. To learn more, contact aafm@piedmontconservation.org.

Piedmont Triad Regional Food Assessment

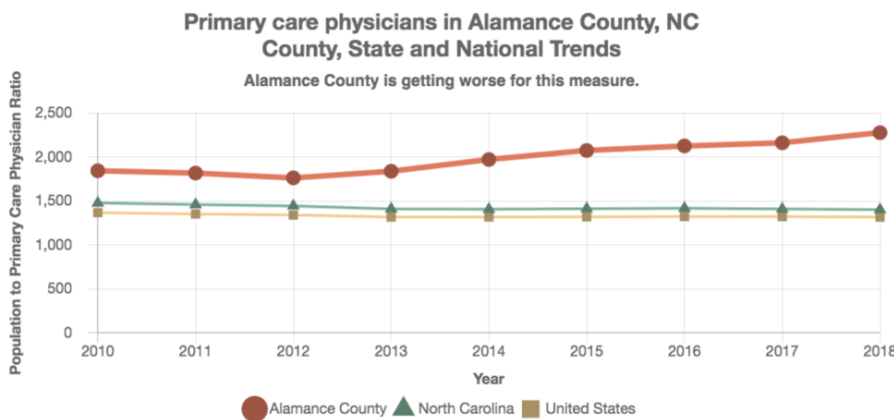


The Alamance Food Collaborative has served as a founding member of the Piedmont Triad Regional Food Council and supported the development of a regional food assessment conducted by Carolina Creative Works from 2019 and 2020. The purpose of the assessment is to better understand the resources and challenges to our food system by gathering baseline data to apply a regional and equity lens to how to support infrastructure development.

Access to Health Care

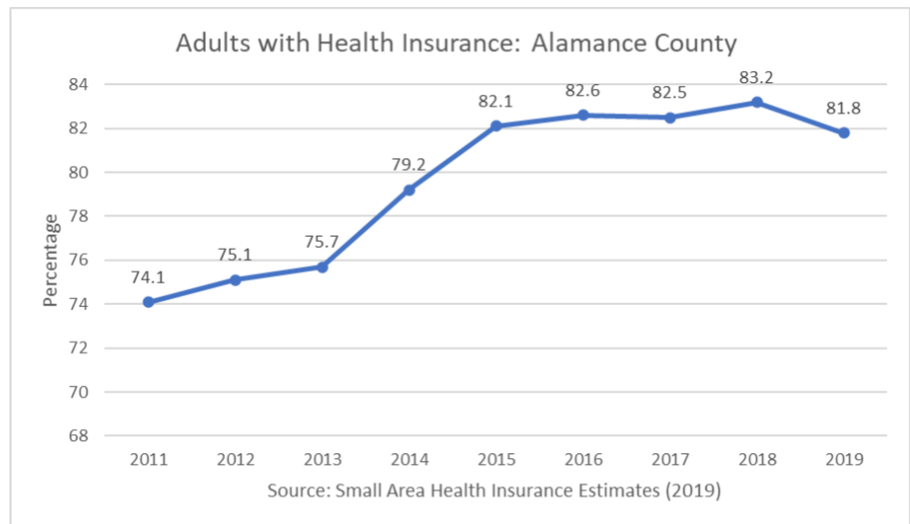
Access to care is an ongoing concern in Alamance County. Regular contact with a trusted medical provider allows individuals to receive preventive health care, such as vaccinations and mammograms. Many Alamance County residents struggle to find primary care, mental health care and dental care that they can afford.

Two important measures of access include the number of providers available to serve a community's residents, and the health insurance coverage that helps residents to afford their services. The recruitment, development, and retention of primary care and specialist healthcare providers are critical factors in a community's ability to assure access to healthcare.



The clinical care graph indicates the quality and accessibility of clinical care which heavily impacts the health of a community. Without enough providers or adequate insurance coverage, people often do not seek care services and are thus at higher risk of developing preventable illnesses or chronic conditions. People with access to high-quality care are more likely to receive effective treatment for their conditions and enjoy better health. This data does not reflect access to primary care providers, which increases the likelihood that community members will have routine checkups and screenings. Moreover, those with access to primary care are more likely to know where to go for treatment in acute situations.

Communities that lack enough primary care providers typically have members who delay necessary care when sick and conditions can become more severe and complicated (Clinical care, 2019). *Chapter 4*

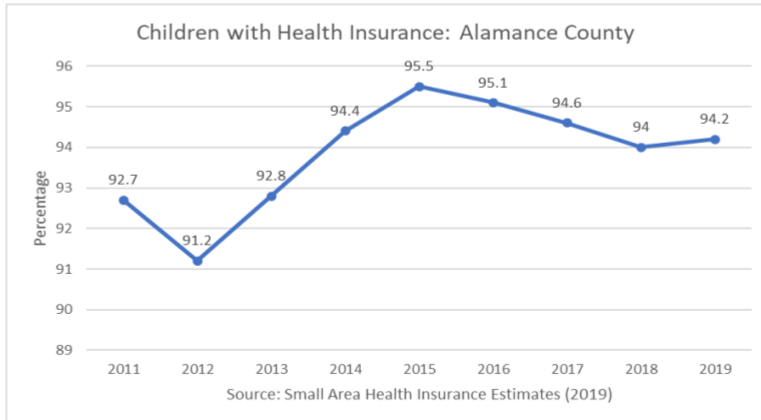


Adults with Health Insurance

Medical costs in the United States are extremely high, so people without health insurance may not be able to afford medical treatment or prescription drugs. They are also less likely to get routine checkups and screenings, so if they do become ill, they will not seek treatment until the condition is more advanced and therefore more difficult and costlier to treat (Public health insurance only, 2019). *Chapter 4* Many small businesses are unable to offer health insurance to employees due to rising health insurance premiums. Some Alamance County residents report difficulty accessing health care due to cost and/or lack of health insurance. Of adults between the ages of 18-64 years, 18.2% percent were uninsured as of 2019 (Small area health insurance estimates, 2019). *Chapter 4*

Child Health Insurance

Health insurance for children is particularly important. To stay healthy, children require regular checkups, dental and vision care, and medical attention for illness and injury. Children with health insurance are more likely to have better health throughout their childhood and adolescence. They are more likely to receive required immunizations, fall ill less frequently, obtain necessary treatment when they do get sick, and perform better at school. Having health insurance lowers barriers to accessing care, which is likely to prevent the development of more serious illnesses. This is not only of benefit to the child but also helps lower overall family health costs (Children with health insurance, 2016). ***Chapter 4***

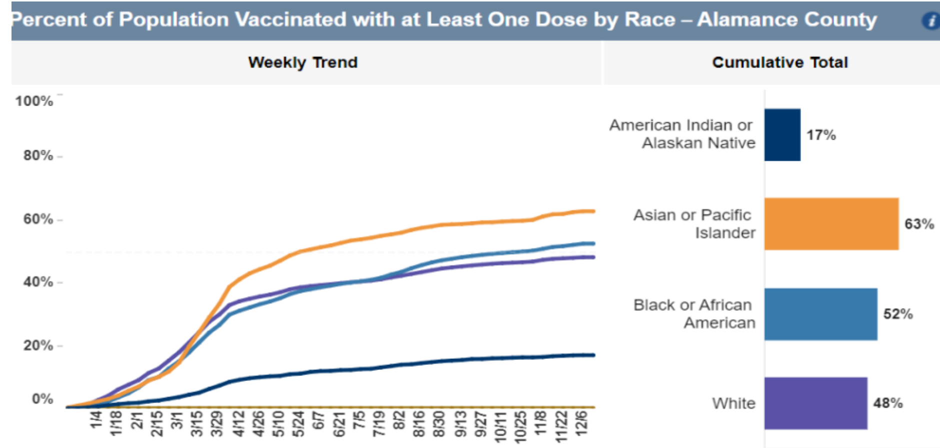


The graph above shows an increase in the number of Alamance children with health insurance. Alamance has a value of 94.2% due to the implementation of the Affordable Care Act (Small area health insurance estimates, 2019). *Chapter 4* Under ACA, a qualifying child is under age 19 at the close of the calendar year. Therefore, age categories used to measure health insurance now define those aged 18 as children.

Family Planning: One Key Question

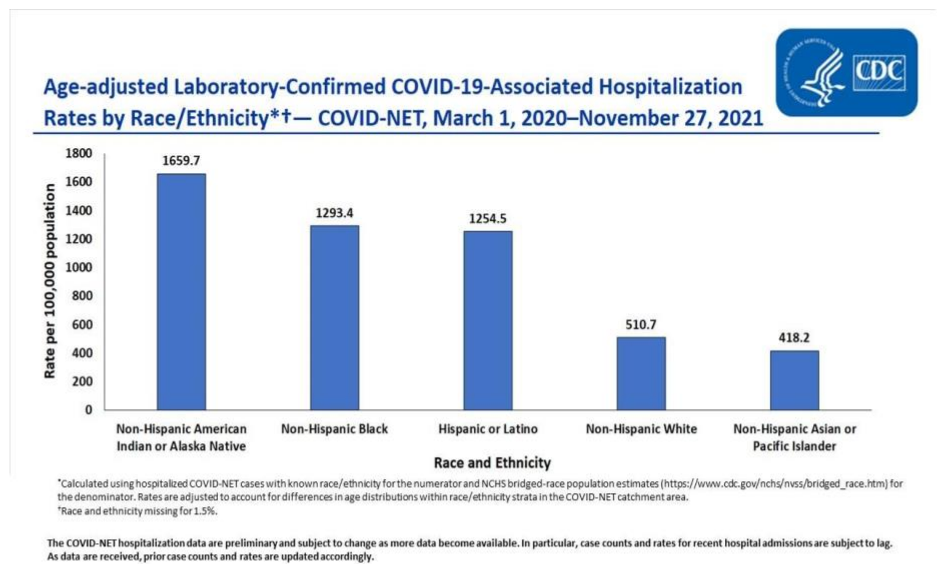
From a completed chart review on all women who started maternity care at the ACHD in 2018, it was found that 65% of ACHD's maternity patients reported that their pregnancy was unintended. This is significantly higher than the national average of 45%. As a result, ACHD incorporated the evidence-based intervention, One Key Question, into its electronic medical records in April, 2019. One Key Question is a simple algorithm that can be applied to help patients think through their personal goals about becoming pregnant. Each patient of reproductive age at ACHD is asked "Do you want to become pregnant in the next year?" even if their appointment is not for family planning. Each patient is given the chance to respond yes, no, maybe or okay either way. Patients then receive high quality information and counseling based on their response. If the patient answers yes, the patient could receive information about preconception counseling, including the need for the mother to take folic acid, maintain a healthy diet and weight, and to stop using alcohol, tobacco, and other substances before getting pregnant. If the patient answers no, the patient could receive information on contraceptive counseling, that could even lead to a contraceptive method starting that same day (Alamance County Health Department, n.d.) *Chapter 4*

Alamance County COVID-19 Response



On March 29, 2020, North Carolina Governor Roy Cooper issued a stay-at-home order to slow the spread of COVID-19. All nonessential businesses were forced to close their doors, including schools/universities, sports and entertainment, and other nonessential personnel. More than ever, we relied on healthcare workers, service industry professionals, emergency response personnel, and many others. The COVID-19 pandemic has highlighted the ever-present barriers to healthcare and the disparities that exist within Alamance County.

Racial and ethnic minority groups were disproportionately affected by COVID-19. Across the U.S., racial and ethnic minority groups have disproportionately higher hospitalization rates among every age group, including children aged younger than 18 years. There are many reasons for this disparity, with the main reasons being lack of access to care, pre-existing conditions, and limited prevention efforts (Disparities in hospitalizations, 2022). *Chapter 4*



Alamance County Health Department and Cone health provided free testing, vaccines, and information sharing at convenient locations across the county. As of December 14, 2021, 56% of the Alamance County population is fully vaccinated and 60% of the population has had at least the first dose since December of 2020. In an effort to address health disparities that disproportionately impact communities of color, community health organizations have placed a high focus on vaccine efforts in racial/ethnic communities and low-socioeconomic areas. The graphic above shows the percent of the Alamance County population vaccinated with at least one dose by race (Vaccinations, 2020). *Chapter 4*

With COVID-19 revealing disparities within education, healthcare, access to technology, the Alamance County community banded together to ensure that everyone was properly cared for. Here are a few initiatives and ways residents, organizations, and community leaders combatted the challenges and disparities presented by COVID-19:

- ***Community Health Fair*** In the summer of 2021, multiple organizations were able to host community health fairs, such as CityGate Dream Center and North Park Recreation Center. Community health fairs served members of the Alamance community who did not have a family doctor and needed health assessments. Health services were offered at no cost and insurance was not required.

- ***Outreach Workers Initiative*** Cone Health Mobile Clinic partnered with Healthy Alamance and the City of Burlington to pilot an unconventional way of advertising a COVID-19 vaccine clinic in a community of color for those age 65 and older. The program also assisted Lay health advisors, who are trained peers or community members who deliver health education and support to enhance access to care and improve health outcomes. These individuals were trained on vaccine safety, need for vaccines, and where and how their neighbors can make appointments for vaccines.

  Organizers were able to successfully serve hundreds of people, with more than 95% of participants being from Black or brown communities. Essentially, using a texting platform, messages were sent to well-known, trusted individuals and community organizations who then forwarded (phone tree, group text, email, word of mouth, etc.) the information to residents and appointments were scheduled. Receiving texts from a trusted source that went directly to an individual's mobile phones proved to be highly effective and cost efficient.

- ***Diaper Bank of NC*** Alamance County is experiencing tremendous hygiene needs due to the COVID-19 pandemic as jobs are lost, hours are cut, and benefits dwindle. Since March 2021, there has been a 400% increase in requests for diapers, a 2000% increase in requests for adult incontinence supplies, and an 800% increase in requests for period products. Public safety net programs like WIC and SNAP (Food Stamps) do not cover these items, and so low-income residents are forced to choose between purchasing these basic hygiene products or paying for other critical expenses, like rent or utilities or medical bills, with their limited funds. In partnership with the CityGate Dream Center, the Diaper Bank of NC was able to supply diapers and period products to people in the Alamance community. From June to October 2021, they were able to distribute about 82,000 diapers in Alamance County. This is the equivalent of $35,000, serving 1,800 babies. Additionally, they distributed 65,000 period products to menstruating people.

- ***Alamance Digital Inclusion Alliance*** The COVID-19 pandemic made clear what those in the world of government, non-profits, and businesses already knew; access to the Internet is critical to modern life, and many of our residents do not have reliable and affordable access. The ongoing pandemic highlighted needs for digital literacy to access work, healthcare, and education. Through a BAND-NC grant, the Piedmont Triad Regional Council (PTRC) partnered with Impact Alamance and many stakeholders in Alamance County to develop a plan to evaluate

and satisfy the broadband needs of the community as the Alamance Digital Inclusion Alliance (ADIA). The overarching goal is to create a plan that will inform decision makers when dedicating funds intended to extend broadband access to the community.

The mission of ADIA is to guide and promote the effort to provide the people of Alamance County, especially those in underserved communities, with equitable, affordable, reliable, and sustainable home access to online digital resources with the knowledge and ability to use that access beneficially for learning, business, entertainment, healthcare, and civic engagement.

ADIA has three priority areas: access, availability, and adoption. The availability group identified three priority areas.

- Improve Maps indicating broadband connectivity.
- Increase connectivity where no broadband exists.
- Improve connectivity in homes and businesses with low connection speeds.

Priorities Areas to increase access are as follows:

- Provide public access to wireless networks.
- Providing digital devices and computer hardware to the wider Alamance community.
- Focus efforts on reduction of cost and affordability of home internet access.

Priority Areas of the adoption group include:

- Provide resources for telehealth connection
- Local business and workforce development
- Digital literacy and general education

- ***Alamance Burlington School System (ABSS)*** Amidst the global pandemic, the Alamance Burlington School System continued its 2020 spring semester virtually. Due to lack of access, many students were unable to attend virtual classes because they did not have access to wireless internet, laptop/mobile devices, or digital literacy skills in the home. To alleviate these barriers to access for the 2021 school year, ABSS allocated funding to obtain connectivity for students and teachers who do not have access to the internet, Chromebooks and laptop devices for students, literacy software programs to assist children with reading and translation, and resources for students with special needs.
- ***Digital Literacy Classes*** In response to the COVID-19 pandemic, businesses, schools, and organizations began to close their doors to in-person meetings and welcomed a new age of digital meetings to limit exposure of COVID-19. This exposed gaps in digital skills that had not existed before because people now had to rely on platforms such as Zoom, Webex, MyChart, and many other platforms. To prepare Alamance County residents for this change, Impact Alamance partnered with NC100, Right Here Right Now, and the Reidsville Area Foundation to offer digital literacy classes. The classes are hosted at various community centers across the county, including SAFE, Burlington Housing Authority, CityGate Dream Center, and Beth Schmidt Park. The classes are free and open to the public.

Education

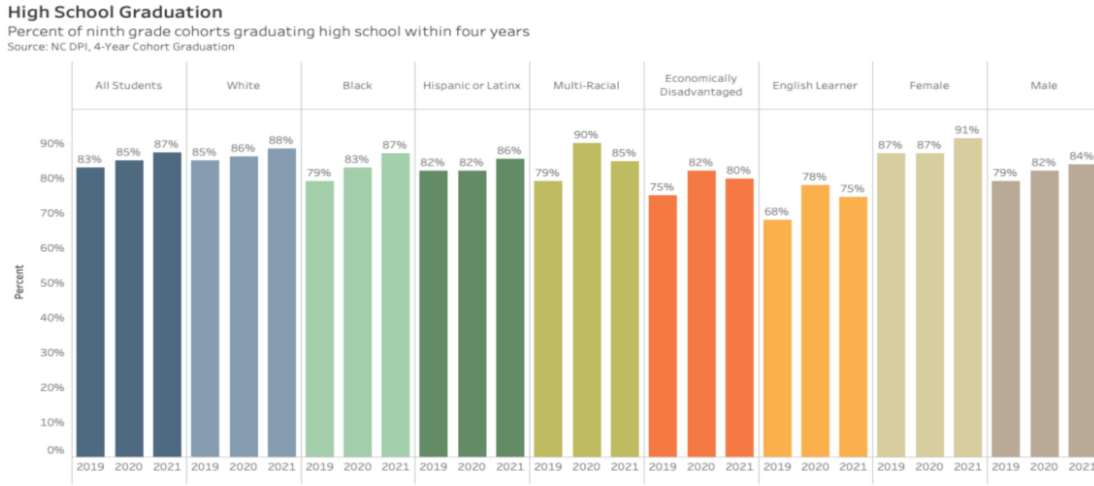
Individuals who do not finish high school are more likely than people who finish high school to lack the basic skills required to function in an increasingly complicated job market and society. Adults with limited education levels are more likely to be unemployed, on government assistance, or involved in crime. Individuals with more education are more likely to have jobs with higher earnings; live in communities with more resources like better schools and access to nutritious food, health services, and transportation; and acquire knowledge and skills to support healthier behaviors (High school graduation, 2020). *Chapter 4*

Alamance County's high school graduation rate of 87% is equal to the state's rate. Graduation rates have improved over all subgroups since 2018-19, although there are still inequities in graduation rates for English Learners, male students, and students from economically disadvantaged backgrounds. This may indicate the need for more resources to assure that every student has access to resources needed to achieve their educational goals (Data & reports, n.d.). *Chapter 4*

In 2011, the Board of Education, in partnership with the Alamance Chamber of Commerce, convened 50 community stakeholders who met regularly during the 2012-2013 school year to envision the future of ABSS. "A Vision for Public Education in Alamance County," the vision statement guides the ABSS strategic plan and all ABSS advocacy efforts. ABSS encompasses 20 elementary schools, seven middle schools, six high schools, and three specialty schools serving ABSS students from the middle and high schools. These specialty schools include Ray Street Academy, which takes both middle and high school students who have been recommended for long-term suspension from their home schools, as well as the Career and Technical Education Center (CTEC) and the Alamance-Burlington Middle College. CTEC students split their time between their home high schools and CTEC, where they take specialty classes in either health science, culinary arts, computer science, engineering, and networking, scientific visualization, digital media, or automotive technology. The Alamance-Burlington Middle College is located on the campus of Alamance Community College and aims to graduate students with definite academic post-secondary plans.

Over the last three years, the cohort graduation gap between subgroups has decreased -- although there is still a 10-point gap between students from economically disadvantaged backgrounds and students from higher wealth backgrounds. In addition to Alamance-Burlington Middle College, Alamance Community College also offers qualified junior and senior high school students the opportunity to pursue college courses tuition-free while in high school. College courses are offered through Alamance Community College at Eastern Alamance High School, Williams High School, and Rivermill Academy (Data & reports, n.d.). *Chapter 4*

Four-Year ABSS Cohort Graduation Rate



Source: North Carolina Department of Public Instruction, Cohort Graduation Rates, Accessed January 2021

Alamance Community College also has unique programs to provide adult education and job training services to local businesses and industry. Alamance Community College has many programs, such as childcare and a stop on the PART bus route, to make continuing education opportunities accessible. The workforce development courses are a significant part of local economic development efforts. To increase accessibility and offer flexibility, Alamance Community College has special transfer agreements with East Carolina University, Guilford College, NC A&T State University, UNC Chapel Hill, and UNC Wilmington. Additionally, Articulation Agreements are in place between all the state's community college systems and the 16 UNC institutions in North Carolina.

Finally, Alamance County is home to Elon University. Founded in 1889, Elon University is a mid-sized private liberal arts university composed of 6,302 undergraduate and 825 graduate students from 46 states and the District of Columbia and 49 nations. Elon University is grounded in engaged and experiential learning and has been recognized nationally for its commitment to undergraduate research, internships, service, leadership, and study abroad. Elon's Kernodle Center for Service-Learning and Community Engagement plays a vital role in Alamance County, serving as a liaison between the greater community and the university. As much as 89% of all students engage in volunteer opportunities throughout the community, and many academic service-learning programs collaborate with local businesses and agencies to expose students to in-the-field experiences.

In addition to the undergraduate colleges of arts and sciences, business, communications, and education, Elon also offers two graduate colleges: the School of Health Sciences and the School of Law.

Current Initiatives & Activities

- ***Alamance Partnership for Children*** the Alamance Partnership for Children is a non-profit organization serving children and families in Alamance County. The Partnership administers Smart Start and NC Pre-Kindergarten funds, an early childhood initiative designed to ensure that young children enter school healthy and ready to succeed. Alamance Partnership for Children

- ***Elon Academy*** the Elon Academy is a non-profit college access and success program for academically promising high school students in Alamance County with a financial need and/or no family history of college. Elon Academy

- ***Boys & Girls Club of Alamance County*** the Salvation Army Boys and Girls Club is dedicated to inspiring youths to meet their true potential through our Afterschool Program and Summer Camp. Boys & Girls Club of Alamance County

- ***It Takes a Village Project*** the It Takes a Village Project is a program that uses a collaborative approach to help children in the community who are struggling to read. Children, Elon students, and trained community volunteers are paired together for weekly tutoring sessions on campus. "It Takes a Village" Project

- ***Positive Attitude Youth Center*** the Positive Attitude Youth Center is a non-profit organization in the Burlington, North Carolina community that works to reach out to children and young adults to help them mature physically, spiritually, and emotionally by providing a positive learning and social environment through after school programs, day schools, and recreational opportunities. Positive Attitude Youth Center

Accomplishments: Collective Impact to Improve Educational Outcomes

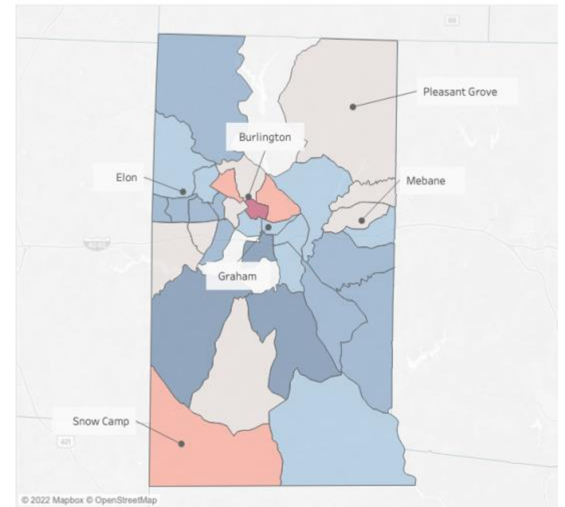
Alamance Achieves is a collective impact partnership aimed at improving educational outcomes for all children in Alamance County. The partnership is fueled by a broad coalition of stakeholders. These include caregivers, grassroots leaders, teachers, field experts and systems leaders, who work together to analyze data, develop shared goals, and identify opportunities for improvement. These stakeholders prioritize the alignment of resources to improve outcomes along four key cradle-to-career indicators: kindergarten readiness, academic progress, high school graduation and career success.

A 2013 partnership between the Alamance-Burlington School System and the Chamber of Commerce produced a Vision Plan for Public Education and resulted in a diverse group of community members who were engaged and committed to making that plan a reality. The partnership consists of a Steering Committee whose members include the: Superintendent of the Alamance-Burlington School System, Directors of the local Health Department and Social Services, a county commissioner, the Executive Director of Impact Alamance, President of our local United Way, President of the Chamber of Commerce, Executive Director of the Partnership for Children, Elon University, Alamance Community College, corporate executives and several providers from community-based organizations – all who have been committed for several years to building the vision, foundation and framework of Alamance

Achieves. Key to the partnership is Impact Alamance, the primary local foundation, which serves as the anchor organization that provides management oversight and financial support; the United Way of Alamance County which provides financial and leadership support; Elon University which provides a full-time Elon Year of Service Graduate Fellow; and the Community Transformation Council, a diverse group that helps connect Alamance Achieves to key leaders and organizations in the private sector, health care, education, philanthropy, government and the faith community.

Alamance Achieves is focusing on four key goals to put children on track for success. Key indicators are used to track progress toward meeting these goals.

- Every child is well, healthy, and ready for school.
- Every child succeeds in school.
- Every student graduates, prepared for post-secondary learning.
- Every learner is on track to achieve career goals.

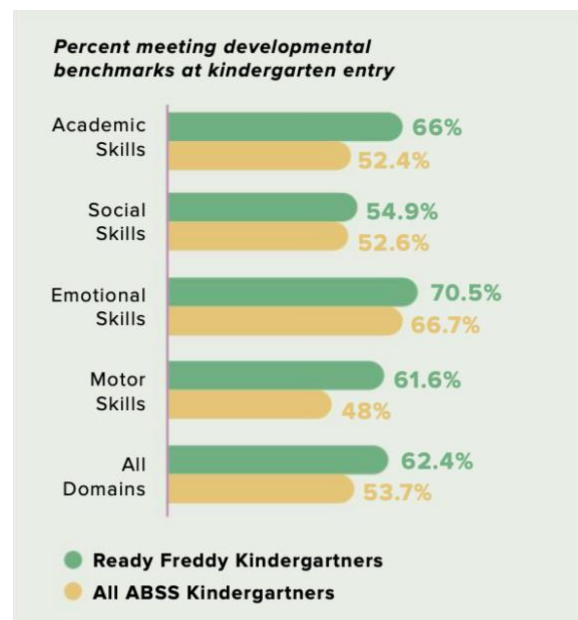


In 2020 and 2021, the partnership shifted to a model of community co-design, which centers the voices of those most affected by systemic inequities in decision-making processes. This shift is anchored by the Community Voice Project, a multi-year project to envision education equity with listening sessions, while also centering healing and restorative practices. The project builds on years of work that has come before it, leveraging a community-based participatory research approach that has been championed by community partners such as the Health Equity Collective, Healthy Alamance, and Elon University.

Measuring Kindergarten Readiness

Partners across the community have been working together to strengthen the data available around kindergarten readiness. As a result of partnership between Alamance-Burlington School System, the Alamance County Health Department, Elon University and Impact Alamance, a new measurement of kindergarten readiness was launched across all kindergarten classrooms in the ABSS system. The Early Development Instrument (EDI) provides, for the first time, a snapshot of the specific skills that kindergartners from each neighborhood are starting school with, and where there are opportunities to strengthen skills. This data enables community partners to make strategic, aligned decisions about policies and programs that support the specific needs in each neighborhood.

Source: Early Development Instrument, Winter 2019



Kindergarten Transition

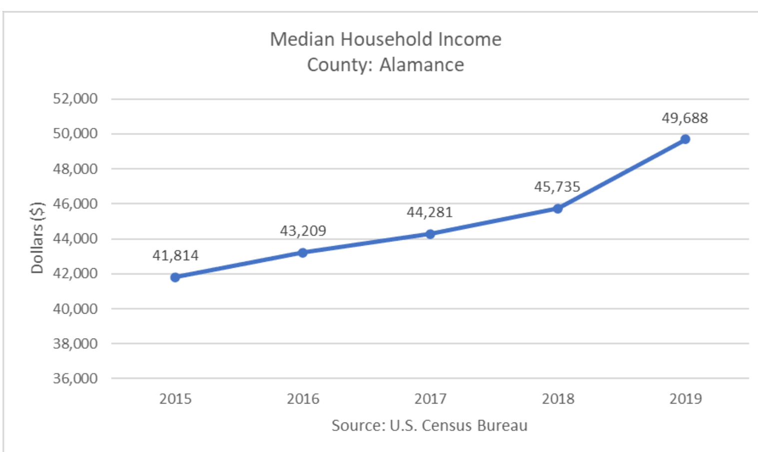
In 2019, an ABSS kindergarten teacher worked alongside community partners to scale Ready Freddy, an evidence-based program that aims to improve the transition into kindergarten. Children who participated in Ready Freddy scored higher, on average, on the ABSS Kindergarten Screener's measurements of academic, social, emotional, and motor skill readiness than their peers who did not attend the program. In addition, parents reported feeling more confident about supporting their child's transition into kindergarten and incorporated additional early learning activities at home.

Early Literacy

Community partners serving on the Beyond the Classroom Team aligned efforts to address reading proficiency, which dropped during the pandemic, disproportionately impacting children of color. They decided to infuse literacy enrichment into their daily programming, choosing to pilot BookNook, an evidence-based early literacy intervention that meets students where they are to provide targeted reading support. Since its launch in fall 2021, 121 students have been enrolled in BookNook across four after-school sites, and 14 reading levels have been gained (Alamance achieves: Our children, our future, n.d). *Chapter 4* Sites include Positive Day School, the Dream Center, Burlington Housing Authority, Allied Churches, and the Boys & Girls Club of Alamance County.

Economy

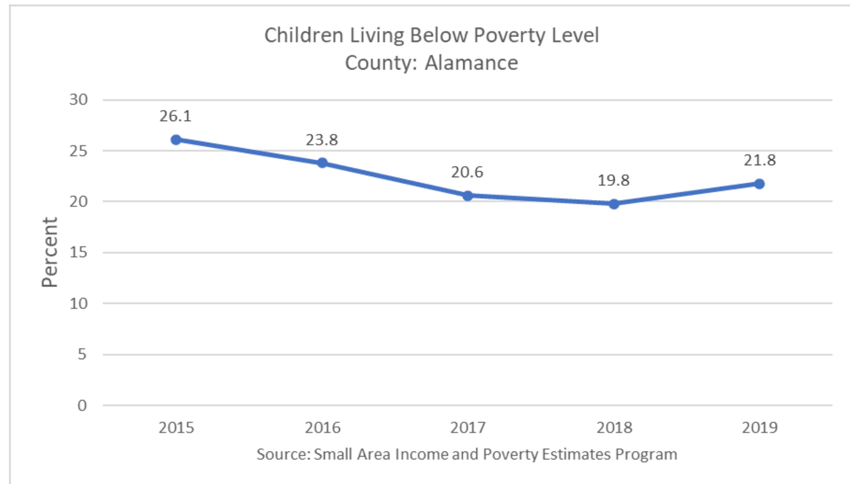
Economic inequality influences many aspects of health and well-being, and low socio-economic status puts people at risk for heart disease, mental health problems, chronic disease, and shorter life expectancy. Higher income, in turn, creates more opportunities for a healthy lifestyle, such as being able to afford to live in a safe neighborhood with parks, sidewalks, good services and strong schools.



Many low-income families struggle to provide the basics and must make difficult choices, such as sacrificing healthy food or medical care to pay other urgent bills. This can lead to severe health problems and greater financial costs down the road. The cost of housing can also push families into low quality housing conditions involving overcrowding, mold, and pests.

Despite a low unemployment rate of 3.8%, many Alamance County residents are living with low incomes Unemployment, 2021). *Chapter 4* The median household income in Alamance County, $49,688, is $4,914 lower than the North Carolina median and more than $13,155 below the U.S. median (Census, 2020). *Chapter 4*

The Self-Sufficiency Standard for North Carolina defines the minimum income needed to realistically support a family, without public or private assistance, on a "bare bones" budget, with just enough allotted to meet basic needs, but no extras (Self-sufficiency standard: North Carolina, 2020). *Chapter 4* A family of four (two adults and two children) needs to earn $57,969 annually to meet this standard in Alamance County.



Median household income reflects the relative affluence and prosperity of an area. Areas with higher median household incomes are likely to have more educated residents and lower unemployment rates. Higher employment rates lead to better access to healthcare and better health outcomes, since many families get their health insurance through their employer. Areas with higher median household incomes also have higher home values and their residents enjoy more disposable income (Median household income, n.d.). *Chapter 4*

Equitable and stable communities provide individuals and families with safe and affordable housing, access to quality education, and the support needed to lead a healthy life. Many Alamance County residents are living with low incomes.

According to 2020 Census data, 15.1% of Alamance County residents live below the poverty line. Families and children in Alamance County living in poverty are more likely to suffer poor nutrition, lower quality educational opportunities, and chronic stress, which are especially harmful at the earliest stages of life (QuickFacts: Alamance County, North Carolina, 2020). *Chapter 4*

Family income has been shown to affect a child's well-being in numerous studies. Compared to their peers, children in poverty are more likely to have physical health problems like low birth weight or lead poisoning and are also more likely to have behavioral and emotional problems. Children in poverty also tend to exhibit cognitive difficulties, as shown in achievement test scores, and are less likely to complete basic education (Children living below poverty levels, n.d.). *Chapter 4*

Accomplishments

In 2020, the UPS was slated to build a $262 million sorting hub eventually creating 450 jobs, and Chick-Fil-A will build a $52 million distribution center employing 160 individuals. Both projects will be in Mebane.

Alamance Chamber of Commerce in partnership with the Alamance Community Foundation and The Self-Help Credit Union started the Community Recovery Loan Program in 2020 to provide financial

assistance to those businesses that did not qualify or were not able to apply for other programs such as the Economic Injury Disaster Loan or Paycheck Protection Program, as well as those in geographically distressed areas or women or minority owned. As of August 2021, 18 local businesses were approved for the loan and funding totaled $325,600.

Alamance Strong, a group of economic developers, organizations, and local governments, provided business services as a unified approach to COVID-19 business support. The #AlamanceStrong website was developed by a consortium of community economic developers, business organizations and local governments.

The Burlington Downtown Corporation (BDC) distributed over $400K of grants in the last 3 years. Additionally, the BDC facilitated the creation of three new murals to intensify the beautification of downtown Burlington.

In 2021, over 30 businesses opened in Alamance County including, but not limited to: Burlington Food Hall, Haw River Fruit Co., Planet Fitness (Burlington), Publix, Nothing Bundt Cakes, and more.

CHAPTER 5 *Racial and Ethnic Disparities*

Top: Davis, 105 E Center St., Mebane
Bottom: N.A., 109 W Clay St., Mebane

Key Questions:

- How has racism affected Alamance County
- Who is fighting against racism?
- How has COVID affected Alamance County?

Key words: Race, Ethnicity

Chapter 5 Racial and Ethnic Disparities

Case Study - Latinx Reproductive Health: Dimensions of Diversity and its Impact on Healthcare Engagement, Deena Elrefai

Over the last several decades, the racial and ethnic composition of the U.S. population has changed markedly. The Latinx population is, in part, driving these transformations. While today one of every eight residents of the United States is Latinx, it is projected that Latinx people could account for one of every five residents by 2035, one of every four by 2055, and one of every three by 2100.

The Alamance County Latinx population is higher (13.1%) than the state average (9%). The Latinx community in Alamance County, North Carolina is diverse yet most programs assume homogeneity. The term "Latinx" encompasses people from 21 countries of origin who speak more than 50 languages, yet they are all grouped together in the United States. As practitioners create strategies to address reproductive health disparities, it is important to recognize the diversity between the many Latinx communities in order to create culturally responsive standards of care. This research aims to understand how racism associated with immigration and ethnicity negatively impacts reproductive health experiences of diverse Latinx communities.

We held focus groups with Latinx women from Alamance County focused on contraceptive use, family support, and knowledge and perceptions of health services, to learn more about the experience of navigating the healthcare system.
Nearly all participants, regardless of background, shared negative experiences with healthcare providers including assumptions about language, socioeconomic status, and immigration status...

cont.

Other results focused on racism as it relates to different factors associated with being Latinx: racism in the United States shows up structurally, geographically, and interpersonally, and there are specific stressors associated with the negative localized social and political landscape related to immigration and customs enforcement.

One participant shared a negative experience with healthcare:
"My experience... I don't know if I would say racist, but it definitely had like micro aggression undertones from the start. They just assumed I couldn't speak English, even when I had been two, three times"

Other participants indicated that negative health experiences with providers were not just associated with one person or situation, but rather, were intergenerational:
"My mom went to the [local healthcare clinic] for postpartum check ups. I'm not sure who was taking care of her... but they blew it out of proportion. She mentioned "oh, I'm feeling a little down", and they said "oh, we're sending a social worker to your house".

Identities and demographic indicators including country of origin and socioeconomic status also have an impact on engagement with healthcare systems. Participants from wealthier backgrounds, such as the Cuban American participants, shared a greater sense of self efficacy when navigating health systems, while participants from less affluent backgrounds and different immigration statuses shared about using community resources and expertise instead of formal medical systems.

Treatment of Latinx communities based on assumptions that everyone has the same experience are harmful and negatively impact reproductive health experiences. It is critical to understand diversity within the Latinx community so that stakeholders and healthcare providers can create more culturally responsive standards of care that consider the differences within the many Latinx communities.

As defined by Physician-scientist Camara Jones, “race is the social interpretation of how one looks” (Connect with Us How racism makes people sick, 2016), which determines the opportunities and value they receive in society. Racism and discrimination are constant reminders of the significant role race and ethnicity have played in shaping the social structure of society. Today, racial relations continue to be perpetuated by prejudice and stereotypes that play a significant role in determining the quality of life for people of color. Racism impacts the health and well-being of humans and while we can measure a few implications of this reality, there are many factors and stressors that we cannot measure as racism is a chronic form of stress that cannot be treated medically. For example, the effects of systemic racism in areas such as poverty, transportation, politics, and health care, causes increased chronic stress, depression, trauma, anxiety, and disease in Black and Brown communities.

Moreover, understanding intersectionality is crucial to social equity work and is essential to combating the interwoven prejudices people face in their daily lives. Intersectionality, as defined by Kimberlé Crenshaw, is a “lens through which you can see where power comes and collides, where it interlocks and intersects” (More than Two Decades Later, 2017). *Chapter 5* Intersectionality recognizes that identity markers do not exist independently, but each informs the others, often creating a complex convergence of oppression. For example, a White woman and a Black man make $0.78 and $0.74 to a White man’s dollar, respectively. Yet, Black women, faced with multiple forms of oppression, only make $0.64. Individually, we can be privileged by multiple identities (e.g., White, male, middle class), as well as oppressed by multiple identities (e.g., Latinx, trans, disabled). Additionally, an individual can simultaneously experience privilege and oppression through the various intersections of the multiple areas of their identity. For instance, a person is who historically marginalized (Black and Brown people) may also hold an identity; meanwhile, other markers of their identity hold privilege over others (male, heterosexual, nondisabled, middle/upper class, cisgender, etc.).

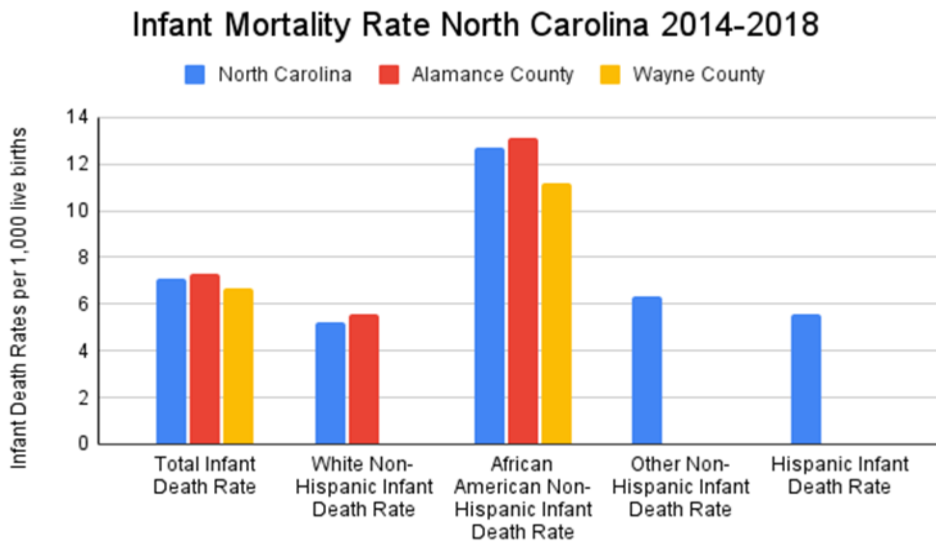
Health equity is reflective of the quality and availability of healthcare and health opportunities across various groups. The 2018 North Carolina Health Equity Report defines health equity as “the absence of avoidable or remediable differences, allowing for the attainment of optimal health for all people... [It] is achieved when everyone can attain their full health potential, and no one is disadvantaged because of socially determined circumstances” (Disparities, 2022). *Chapter 5*

Health inequity is illustrated through health disparities which are measurable differences in health status and are often influenced by structural and social inequalities. Whether it is intentional or unintentional, racism is a systematic and environmental stressor that may influence health outcomes. Racism impacts the social determinants of health, which are social conditions that may influence an individual’s well-being, such as: socioeconomic status, housing, education, and nutrition. Consequently, the quality of these conditions may create barriers to opportunities for health equity for people of color (Social Determinants of Health: Know What Affects Health, 2021). *Chapter 5* Consider, in the report *Unequal Treatment: Confronting racial and Ethnic disparities in Healthcare*, the Institute of Medicine concluded that “minority patients are less likely than whites to receive the same quality of healthcare, even when they have similar insurance or the ability to pay for care” (What Healthcare Consumers Need to Know About Racial and Ethnic Disparities in Healthcare, 2002). *Chapter 5*

A health disparity is a "difference in which disadvantaged social groups—such as the poor, racial/ethnic minorities, women, or other groups who have persistently experienced social disadvantage or discrimination—systematically experience worse health or greater health risks than more advantaged social groups" (Baveman, 2006). *Chapter 5* Today, one can see how racial health disparities are impacting other aspects of society, such as education. Individuals who experience disparities in access to healthcare may find that it impacts their access to education or success within school. This can later impact one's eligibility for employment, mental health, and overall well-being while simultaneously impacting community health. Communities with lower education attainment also see lower incomes and fewer resources which impact a community's access to green space, school systems, crime rates, and more. While racial health disparities exist within education, racism far outweighs the impacts of education when you disaggregate the data. For example, Black women with graduate degrees have birth outcomes most like white women who have only graduated high school.

Furthermore, people of color suffer more preventable illnesses and die sooner in the healthcare systems compared to White Americans. The average life expectancy for North Carolina is 78.1 years at birth. Currently, in Alamance County, the average life expectancy is 77.3 years at birth, with the average life expectancy for Black, non-Hispanic population being 74.7 years compared to 78.2 years for the White population. These statistics clearly illustrate that Black individuals in Alamance County are not only likely to die sooner than the white individuals in the same county, but North Carolina as a whole. This suggests that many of the racial inequity gaps we have historically and currently see contribute to one's well-being and life expectancy, reflects who has access to adequate medical care, insurance, safe environments, employment – and who does not. Therefore, the differences in health across racial and ethnic groups should be a public health concern but is also a system and structural concern.

In Alamance County, White people make up approximately two thirds of the population while those of other races comprise just one third of the population. Alamance County has seen the Hispanic community grow in recent years. However, it is important to note that while the term Hispanic is used by the state and census, it is a misguided blanket term when considering the complex identities within the Latinx community. The umbrella term of Hispanic leaves out Indigenous peoples from Latin America and individuals from Brazil and other Caribbean areas yet includes people from or descended from Spain - but Spain is part of Europe. "Hispanic" refers to Spanish-speaking people and has the power to whiten people by pushing individuals to choose categories they may not identify with, leading to erroneous grouping and erasing of mixed heritages, families, and stories. Thus, it is important for us to consider the limitations of the term "Hispanic" and work towards embracing a term such as Latinx is an inclusive way of pushing back on the default masculine/gendered language of Spain.

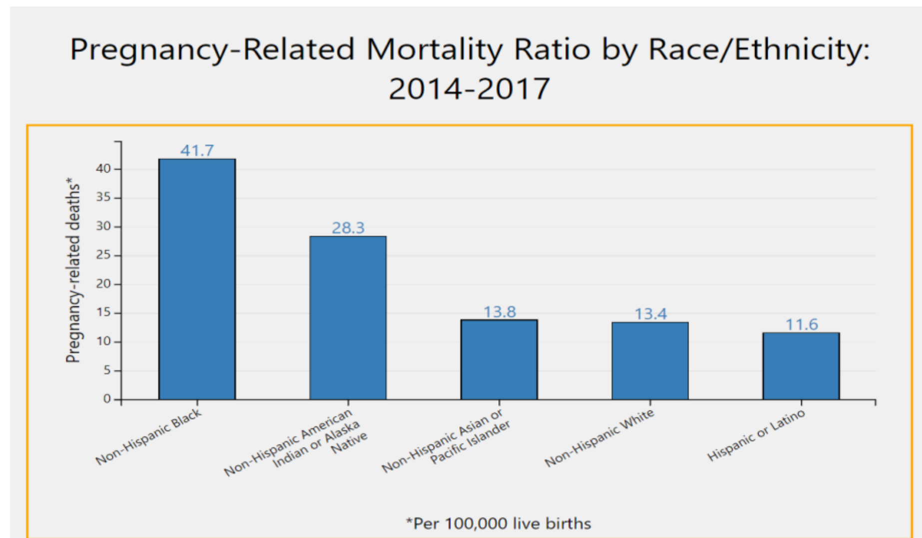


Maternal and infant mortality rates offer an example of this as they are consistently used to illustrate the overall health status of a community. The Healthy People 2030 national health target is to reduce infant mortality rate to 6 deaths per 1,000 live births. From 2014 to 2018, the infant mortality rate in Alamance County was 6.1 deaths per 1,000 live births. The infant mortality rate for the African American, non-Hispanic population was 12.8 deaths per 1,000 births, Hispanic population was 5.8 deaths per 1,000 births, Native American, non-Hispanic population was 3.3 deaths per 1,000 births, and white, non-Hispanic populations was 4.8 deaths per 1,000 births. Wayne County (a peer county) had slightly lower rates for both.

Furthermore, we see the presence and impact of racism on maternal health and vulnerability and despite the level of maternal vulnerability differing from region to region, large inequalities continue to exist and negatively impact women of color. This is documented across the country where, “In any region of the US, white women are consistently more likely than Black or American Indian/Alaska Native women to live in areas that are conducive to good maternal health, and Black and American Indian/Alaska Native women are 2-4 times more likely to die from pregnancy-related causes'' (Promoting Maternal & Child Health, 2022).

By positively changing a racial health disparity such as infant and pregnancy mortality rate, Alamance County can move towards being a more equitable place for all to live. Historically, people of color tend to face more challenges in their environment that limit their opportunities for health. The NC Health Equity 2018 report suggests that by 2050, racial minorities will become the majority of the population. Therefore, social services must understand the impact of systemic racism on health equity to better serve the community. To combat systemic racism, we must pursue systemic equality, and this starts

with addressing the active roles racism has played in every facet of life and taking crucial steps to advance this systemic solution.



Current Initiatives & Activities

- ***Alamance County Health Equity Collective (HEC) the*** Health Equity Collective, a community-based participatory research partnership, was initiated between Healthy Alamance and Elon University in early 2018 with the charge of holding Alamance County accountable for health equity and creating space for community voices to engage in productive dialogue around issues of race, place, and space. The Collective's commitment is to shared and transparent institutional analysis and to strategic and community-informed efforts to eliminate policies, practices, and procedures contributing to racial disparities. Health Equity Collective

- ***Alamance Racial Equity Alliance (AREA)*** The Alamance Racial Equity Alliance is a community organization that intends to unite all people through collective learning, meaningful relationships, and community events. They organize racial equity trainings in Alamance County. AREA

- ***Alamance County Racial Equity Collaborative (ACRE Co-lab)*** This program aims to develop Alamance County nonprofit and government professionals into inclusive leaders skilled with the knowledge and tools necessary to create inclusive and equitable workplaces and communities. It is an 8-month experience that will bring together a diverse array of local nonprofit leaders, government directors and board members for an equity cohort program. Each session is designed to help participants explore concepts through a head, heart, and hand approach while also analyzing personal, organizational and community impact. ACRE Co-lab

- ***Racial Equity Institute (REI)*** the Racial Equity Institute is a group of trainers, organizers, and institutional leaders who help individuals and organizations develop tools to challenge patterns of power and grow equity. Racial Equity Institute

- ***Black Entrepreneur Collaborative (BEC)*** a network of Black entrepreneurs in Alamance County, a group that seeks to extinguish the hurdles blocking Black people from entrepreneurship. The group's vision and goal are to elevate, inspire and bond Black people so we can excel in leadership and entrepreneurship. We are committed to enriching lives, families, and communities by providing tools for personal growth, productivity, and profit.

  The Black Entrepreneur Collaborative is a movement dedicated to a journey of self-confidence, Black unity, and success. Black Entrepreneur Collective

- ***Health, Equity and Racism (H.E.R) Lab*** The H.E.R Lab aims to advance the body of knowledge that illustrates racism as the root cause of health inequities and cultivate the action taken towards undoing racism and improving population health. The lab focuses on three areas: Research, Capacity Building and Advocacy/Action, and is composed of community partners and members, students conducting independent research, and intergenerational mentorship. H.E.R Lab

- ***African American Cultural Arts and History Center (AACAHC)*** The AACAHC is a cultural site and museum focused on displaying the research and work of Jane Sellars and the personal, familial, generational, and industrial and commercial history of the community. It is a public institution devoted to education and preservation through actively collecting and preserving Alamance County's African American history and unearthing the stories of the many individuals who have made a lasting impact on the African American community**.** AACAHC

CHAPTER 6 ENVIRONMENTAL HEALTH AND JUSTICE

Kathryn Mathias, Robin Freebird
102 E Ruffin St., Mebane

Key Questions:

- What is the status of environmental health in the community?
- What environmental health concerns are impacting Alamance County?
- What is the environmental justice movement?

Key words: Environmental Justice, Pollution

Chapter 6 Environmental Health and Justice

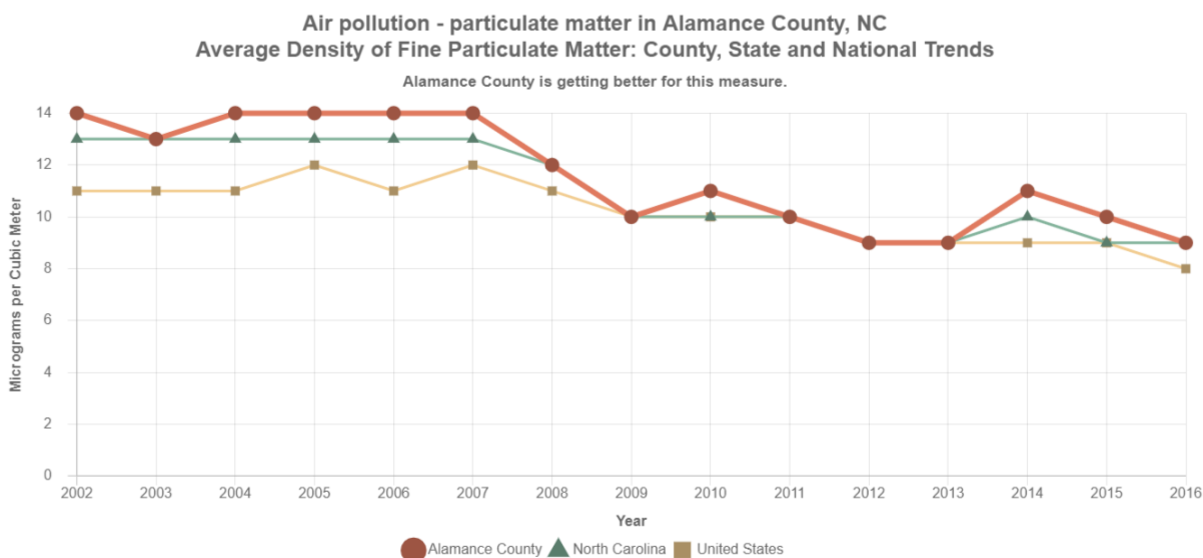
Environmental Health

Environmental health is a branch of public health that aims to promote good health and well-being, by cultivating safe, and healthy communities (Environmental Health, n.d.). *Chapter 6* The World Health Organization states, "[c]lean air, stable climate, adequate water, sanitation and hygiene, safe use of chemicals, protection from radiation, healthy and safe workplaces, sound agricultural practices, health-supportive cities and built environments, and a preserved nature are all prerequisites for good health" (Environmental Health, n.d.). *Chapter 6*

Pollution and Air Quality

Recognized carcinogens are compounds with strong scientific evidence that they can induce cancer. In industry, there are many potential exposures to carcinogens. Workplace exposures are at higher levels than public exposures. This data reflects releases of chemicals, not whether (or to what degree) workers or the public have been exposed to those chemicals.

As recently as 2020, the Clean Air Act Amendments were recognized for its 50th anniversary as, "a landmark piece of legislation that has led to significant environmental and public health benefits across the United States (Overview of the Clean Air Act and Air Pollution, 2021). *Chapter 6* In spite of the progress made through the Clean Air Act Amendments, challenges persist. Almost 65,000 premature US deaths were related to adverse effects of outdoor fine particulate matter, and minority populations and those living in poverty are more likely to be exposed (Watts, et al., 2019).*Chapter 6*



Notes:
Data in this trend graph are taken from the Environmental Public Health Tracking Network, and will not match data used in the 2014-2016 Rankings.

Air quality has improved nationally, statewide, and locally: "In the past, extensive portions of North Carolina had tropospheric ozone levels exceeding the health-based standard. The areas previously designated by EPA as not meeting air quality standards included more than 30 counties in Charlotte, Fayetteville, Rocky Mount, Triad, and Triangle metropolitan areas, and the Great Smoky Mountains National Park. Today all areas of the state qualify as attaining the National Ambient Air Quality Standards (NAAQS) established by EPA for the protection of public health and the environment" (Air Quality Trends in North Carolina, 2020). *Chapter 6*

Water Quality

Public drinking water systems are required to monitor approximately 90 contaminants and indicators regulated by the Environmental Protection Agency. A health-based violation occurs when a contaminant exceeds its Maximum Contamination Limit (MCL)—the highest amount allowed in drinking water—or when water is not treated properly. Limiting the levels of microorganisms, chemicals, and other contaminants in a community's public water supply reduces residents' risk of waterborne diseases, cancer, and other adverse outcomes.

Onsite Water Protection Program

The onsite water protection program through Alamance County Health Department's Environmental Health Division identifies and makes recommendations for failing septic systems to prevent contamination of both surface water bodies and protect drinking water supplies. The table below indicates that between 2018 and 2021, 1,268 new wells were permitted, 1,025 new wells were completed, 3,711 water samples were collected and analyzed, and 239 failing septic systems were permitted and repaired.

	2018	2019	2020	2021
New Wells Permitted	148	356	451	313
New Wells Completed	219	255	270	281
Water samples collected and analyzed	928	1080	920	783
Failing Septic system permitted and repaired	79	66	54	40

Food, Lodging, and Institutional Sanitation

The Food, Lodging, and Institutional Sanitation section of the Alamance County Health Department's Environmental Health Division is responsible for plan review, permitting, and sanitation inspections of food handling establishments; temporary food stands associated with fairs, carnivals, or festivals; meat markets; child daycare facilities; residential care facilities; rest/nursing home; hospitals; confinement/correctional facilities; schools; school lunchrooms; educational institutions; hotels and motels; bed and breakfast; summer camps; summer feeding sites; and, mobile food units and pushcarts. The Food and Lodging section also investigates sanitation complaints and complaints of food-borne disease outbreaks and product recalls and assists in teaching foodservice education classes.

Between 2018 and 2021, 7,301 inspections and 4,025 activities of investigating complaints and product recall and teaching foodservice education classes were completed. It is worth noting, Alamance County is one of only a few counties in the State that consistently completes 100% of its restaurant inspections. This was done even through the stressors of COVID-19 pandemic response activities.

	2018	2019	2020	2021
Inspections	1851	2176	1500	1774
Activities (investigations or education)	945	962	1262	856

In 2021, the division met the FDA's (Food and Drug Administration) National Retail Food Regulatory Program Standard #6: Compliance and Enforcement. Alamance County was the first county in the entire state of NC to meet this standard. These standards emphasize compliance with risk factors most often contributing to foodborne illness and the timely correction of those Food Code violations.

Boil water event

On July 15, 2021, The City of Burlington implemented a boil water notice due to E. Coli/fecal coliform bacteria found at a specific location in the City of Burlington water system. The City of Burlington and Alamance County Health Department worked in conjunction with one another under a unified command system. The health department was tasked with identifying and notifying all its regulated food establishments, summer camps, and tattoo establishments. Additionally, the health department notified the Alamance County Department of Social Services, so they could alert facilities such as child daycares, nursing homes, mental health, and residential care facilities under their authority. Alamance County Health Department staff and staff from other county departments contacted over 800 impacted establishments in less than 24 hours to ensure they were aware of the boil water notice, to notify them to remain closed until the boil water notice was lifted, and to notify the establishments on the steps to safely reopen when the notice was lifted. Permits for food establishments were suspended. Throughout the boil water notice, the health department and other county staff also responded to complaints that led them to visit permitted establishments and ensure compliance. Once the boil water notice was lifted, the environmental health division worked with facilities to follow proper start-up protocols to open safely.

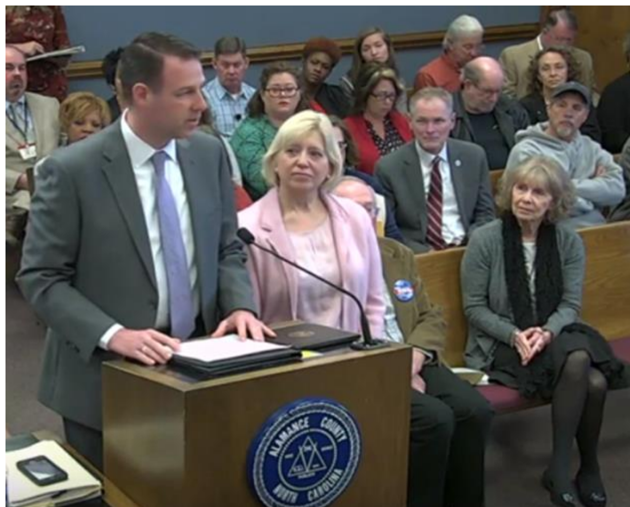
Rabies

Rabies poses a serious threat to human and animal health. If untreated, rabies is almost always fatal. In fact, every year in the U.S., measures are taken to prevent approximately 40,000 potential exposures to rabies. While humans do not get rabies from another human, animals can transmit the virus to people. Wild animals that typically carry the virus, such as raccoons, foxes, skunks, and bats, can spread rabies to humans through a bite or scratch. In the U.S., more than 90% of all rabies cases occur in wild animals. Even though rabies is most found in wild animals, most human cases of rabies are caused by exposure to domestic animals, such as dogs and cats. Rabies has an undeniable presence in every community. No matter where we live, work, or play, this deadly virus can threaten the lives of those we hold dearest to our hearts. Parents, pet owners, and all members of the community must take action to help prevent rabies from burdening our families.

Between 2018 and 2021, Alamance County Health Department's environmental health and communicable disease staff, as well as Alamance County Sheriff's Office Animal Control and Burlington Animal Control, collaborated to identify and address 1,075 animal bite reports and 198 possible rabies exposures. Of that, 19 specimens were confirmed to have rabies.

	2018	2019	2020	2021
Animal bite reports	255	263	299	258
Specimens tested for rabies	58	42	49	49
Specimens positive for rabies	5	7	3	4

Public Health Preparedness & Response



Alamance County Health Department demonstrated the components of effective partnerships, communicable disease mitigation and prevention, and public health preparedness and response during a mumps outbreak at Elon University, which began in September 2019 and ended January 2020.

•Six MMR mass vaccination clinics were conducted at various locations on campus

•12 half-day MMR vaccine clinics were conducted at Elon Student Health Center

•2,273 MMR vaccines were administered to Elon students, faculty, and staff

•As a result of the quick response and continuing collaboration by Elon University leadership, the total number of mumps cases were limited to 15

•Elon University leadership showed their appreciation by presenting the health department with an award during a meeting of the Alamance County Board of Commissioners.

Alamance County Health Department routinely and continually prepares and practices for emerging infections, such as mumps. This is an essential and primary function of public health. The health department staff and their partners throughout the year meet to discuss plans, prepare for potential events, and conduct the local public health response exercises.

Environmental Justice

Environmental justice is defined by the U.S. Environmental Protection Agency as "the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation and enforcement of environmental laws, regulations and policies" (United States Environmental Protection Agency, 2021). *Chapter 6* Environmental policies, such as land use, zoning, construction permits, and enforcing regulations are often influenced by the amount of wealth a community has. As a result, many practices and policies place low-income families and communities of color closer to polluting facilities, which leads to greater risks of health complications in these communities.

In 1982, the environmental justice movement sparked in a Black, lower-income, rural town in Warren County, North Carolina. Many residents and Black activists around the country protested and took legal action against the state government, as a decision was made to unload 6,000 truckloads of soil laced with toxins into the county. The protests in North Carolina energized the beginning of a multi-racial and intergenerational movement around the country that advocates racial, economic, and social justice by demanding a safe and clean environment for all.

Many residents in North Carolina face environmental pollution in their own communities. Concerns of pollution, exposure to toxic waste, and degradation of land have emerged as coal ash waste, fracking, pipelines, and landfills across the state contribute to environmental issues.

An example of local efforts to bring awareness to and resolution for communities impacted by environmental conditions, Alamance County residents, Omega and Brenda Wilson, share their engagement in both civil and women's rights in the mid-1970's and the journey to co-founding the West End Revitalization Association (WERA) in 1994 to bring awareness to the need for basic amenities. WERA prioritizes five African American communities in Alamance and Orange counties, where the Wilsons cultivate accountable partnerships at the local, state, and federal level to effect change and improve conditions for these communities (weranc.org). *Chapter 6*

West End Revitalization Association Report

This section is submitted by the West End Revitalization Association (WERA), Mebane, NC. It provides a background and historical summary of the Environmental Justice Movement from the national level to local streets in Mebane, Alamance County, and Orange County.

The term environmental justice was coined during protests in Warren County, North Carolina. In 1982, this African American community became the location of a hazardous waste landfill. This landfill included PCB-contaminated soil that had been illegally dumped along roadways, then removed for transport to this poor county of predominantly people of color.

Nine years later, hundreds of racially, geographically, gender, and economically diverse people drafted seventeen Environmental Justice Principles: Principles of Environmental Justice / Environmental Justice Principles (ejnet.org)

Local Background

Omega and Brenda Wilson, and a small group of West End community residents, co-founded the West End Revitalization Association in 1994 to address the highway corridor impacts, closed planning meetings without impacted residents' input, and historic denial of access to Mebane drinking water and sewer services. WERA was formed in response to decades of being denied access to basic public health infrastructure including but not limited to paved roads and sidewalks, sewage treatment, safe drinking water, and up-to-code electric power lines. Mebane's sewer treatment plant was built in 1920 two blocks from West End residents' homes without sewer line tap-on access until 2000.

The NCDOT planned the 119-bypass/overpass through low-income and people of color areas in Alamance County that would have destroyed over 70 homes, the community cemetery dating back into slavery, and historic African American churches dating back as early as 1865.

Mebane First Presbyterian Church *(cornerstone 1865) founded by just freed slaves from the Scott Plantation, Haw River, NC. Family property of two North Carolina governors (W. Kerr Scott and Robert Scott) and Senator Ralph Scott. The church and 200-year-old cemetery were also targeted for destruction by NCDOT and the City of Mebane. Elder Donald Tate shares history with Bennett College Professor Valerie Johnson (now Dean at Shaw University, Raleigh, NC).*

Alamance County and City of Mebane officials had secretly planned a new 119-bypass and overpass that would destroy much of the White Level and West End communities, which were over 85 percent people of color. The North Carolina Department of Transportation (NCDOT) would seek federal funds from the U.S Department of Transportation for the eight-lane corridor construction from Mebane to Danville, VA.

In February 1999, WERA filed a Title VI of the Civil Rights Act of 1964 complaint that referenced the Environmental Justice Executive Order-12898 of 1994 at US Department of Justice (DOJ) in Washington, DC. Within a few days, DOJ placed a moratorium on the 119-bypass construction that was being planned and zoned with over $25 million in tax dollars.

US DOJ 1999 mitigations included: a) postponed highway construction and modifying the NCDOT path to reduce displacement to four homes and St. Luke Christian Church (circa 1893), b) installing first-time sewer lines tap-on for 100 houses in West End Community with over a $2 plus million block grant (CDBG) and City of Mebane matching share, c) paved some residential dirt streets (in city limits and ETJ), d) some stormwater infrastructure, and e) appointment of some African American residents to NCDOT advisory board and City of Mebane advisory boards. NCDOT 119-bypass/overpass construction did not commence until 2016.

St. Luke Christian Church (cornerstone 1893) was demolished by NCDOT in 2016 for the 119-bypass/overpass and access ramp in the West End Community, on US 70-Highway.

Mile long 119-Bypass/Overpass crosses West Holt Street, railroad, industrial land, and 70-HWY in West End Community of Mebane, NC. In the left backyard, see the water tower and contaminated abandoned Craftique Furniture Plant site.

Federal Background

In 2000, WERA received a $15 thousand small grant from the Environmental Protection Agency (EPA) to verify long-term failure of backyard septic systems in West End and White Level (Alamance County) and Buckhorn, Cheeks Cross, and Perry Hill communities (Orange County). Water samples, tested at the UNC-Chapel Hill Virology Lab in the School of Public Health, revealed E Coli and Fecal Coliforms in some drinking well water and several community streams not in compliance with EPA Safe Drinking Water Act and Clean Water Act guidelines. In 2004, the federal EPA Office of Environmental Justice (OEJ), awarded WERA a $100 thousand Collaborative Problem Solving (CPS) grant to support replication of the EPA OEJ Regional Small grant during different seasons of the year from 2004 to 2007. UNC-Chapel Hill's Virology Lab results detected E Coli and Fecal Coliforms: a) in the Mebane city water lines in a section of West End, b) residential drinking well water, and c) in ditches and streams in all the people of color communities identified above.

In 2007, EPA Office of Environmental Justice selected Omega Wilson to serve as community perspective member EPA's National Environmental Justice Advisory Council (NEJAC). For over three years, Wilson's input at NEJAC meetings from coast to coast highlighted not only the public health infrastructure issues and disparities in Mebane but also in other regions of the South. EPA presented WERA a 2008 Environmental Justice Achievement Award for its leadership in addressing environmental hazards affecting low-income and minority communities in Mebane, NC.

In 2014, WERA filed another USDOJ complaint to get the EPA and the North Carolina Department of Environmental Quality (NCDEQ) to clean up over 5000 pounds of liquid and solid waste from the 30-acres Craftique Furniture site in the West End community on US 70-Highway. The unsecured site had been closed for years. NCDEQ (NCDENR) groundwater test wells detected cancer-causing benzene and xylenes over 45-feets down to the water table. Mitigations included not residential housing or drinking wells on the large site.

Since 2017, WERA has given input on environmental justice bills written by former presidential candidates Bernie Sanders (I/VT) and Cory Booker (D/NJ), as well as how COVID-19 hazardous and medical waste is not fully regulated by the federal government. So much medical, healthcare, and testing waste is landfilled or incinerated in people of color communities with little public health oversight or regulations.

Since November 2020, The West End Revitalization Association (WERA) has been involved with the WERA/Mebane Taskforce: Black, Indigenous, and Latinx Communities Matter! To identify and digitally map these Mebane area communities in Alamance County and Orange County, in the city limits and ETJ (extraterritorial jurisdiction), WERA is collaborating with impacted community residents, Mebane city officials (mayor, city manager, planners), Indigenous Occaneechi Tribal leaders (Crystal and Jason Keck), and religious leaders. To aid the process, Mebane planning officials requested the use of two-dimensional Microsoft maps that WERA produced in 2000 and posted on its website at www.wera-nc.org. These WERA maps were relocated to WERA's new digital web archive in July, 2021.

WERA's original mapping supported unidentified racial health disparities and barriers in the NCDOT planning and siting of the 119-bypass and overpass corridor through the West End and White Level communities (over 350 homes) with the endorsement and approval of Mebane and Alamance County officials. Most of these African American and Native American residents that would have been impacted by the bypass traced their heritage to the end of slavery in 1865 and earlier.

In 2022, WERA continued to work to support City of Mebane officials to access an over $2 plus million FY-2000 block grant for first-time city drinking water and sewer line tap-on for over 80 homes in the White Level Community. The City of Mebane did not use this block grant for White Level, which is across the street from the Mill Creek Country Club subdivision and golf course. Mebane provided all basic public health amenities and infrastructure to this country club starting two decades ago.

WERA encouraged Mebane's Planning Office to use the EPA EJSCREEN tool that supports digital layers that identify hazardous sites, lack of safe drinking water and sewer infrastructure, sub-standard residential streets, and stormwater management. Ground level data in impacted communities can be added to fill in EJSCREEN information gaps. As digital mapping develops, corrective actions and mitigations can be added to show a before/after timeline.

The EPA EJSCREEN mapping *tool* EJ SCREEN *can also be used to avoid new adverse planning and zoning in communities that are already burdened with legacy polluting industry, landfills, incinerators, and human exposures that contribute to increased risks for asthma, cancer, diabetes, and respiratory diseases.*

Chemical silos - $100 million Cambro Plastics plant, at Latham Lake Road and West Holt Street, in West End Community. Mebane's police chief and fire marshal objected to site plan in proximity to railroad, 119-bypass/overpass, and residential streets, as risks to emergency response with minimal training or hazmat equipment.

Another environmental concern is the Western Electric Telephone Industrial Site, which was previously used as an Army chemical production plant during World War II. The plant was closed in 1992. The blighted site continues to stand, abandoned and encompassing 22-acres of the eastern section of Burlington, an area with an increasing population of people of color and low-income families. The abandoned Western Electric Telephone and Army missile site is within one block of the Alamance County Health Department, Department of Social Services, medical clinics, a school, churches, apartments, homes, and restaurants. On November 12, 2021, WERA shared residences' public health and safety concerns for the unresolved 22-acre Western Electric with its virtual dinner speaker Cecilia Martinez, the Senior Director for Environmental Justice at the White House Council for Environmental Quality.

On January 14, 2022, WERA requested U.S. Department of Justice investigations of environmental justice impacts under Federal Housing Administration guidelines in Alamance County and Orange County. For an in-depth look at the content of this formal request, see *In-Depth Formal Request* in Appendix C.

CHAPTER 7 HEALTH AND WELL-BEING

Artie Barksdale, 109 N 4th St, Mebane

Key Questions:

- What determines the health of Alamance County residents?
- What does a healthy community look like?
- What makes our data 'meaningful'?
- What can we learn from this data?

Key words: Determinants of Health, Disease

Chapter 7 Health and Well-being

Cancer and Heart Disease

Heart disease, respiratory disease, and type-2 diabetes account for almost 40% of all deaths in Alamance County, and the age-adjusted death rates from these diseases in Alamance County supersede when compared to Chatham, Orange, and Guilford counties (NC Vital Statistics n.d.). *Chapter 7* Therefore, particular emphasis has been given to chronic diseases for this year's Community Health Assessment. This is the first time the assessment process has included ZIP-code level primary data collection to assess disparities among rates of heart disease, respiratory disease, and type-2 diabetes within Alamance County, tackling the dire need to connect to the localized neighborhood communities, identifying explicit disparities and addressing them through an equity lens. Using a mixed method approach of capturing local data, communicating our results to the relevant shareholders, and addressing the structural issues in specific Alamance County ZIP codes, we aim to assess and improve the systems that perpetuate chronic disease rates and outcomes, rather than behavioral risk factors.

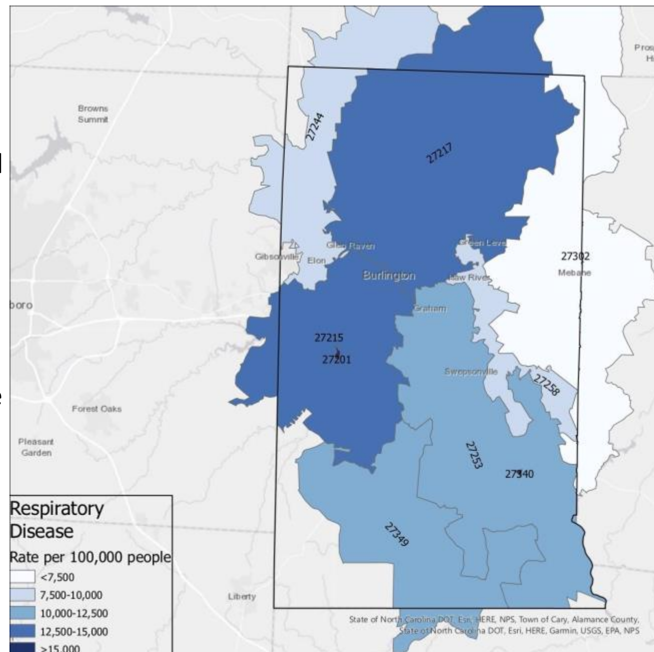
Heart disease includes several more specific heart conditions. Heart Disease can cause heart attacks, stroke, heart failure, and an irregular heartbeat. Heart disease and stroke are among the leading causes of death in North Carolina, killing 25,000 people in the state annually, and almost 2,000 people annually in Alamance County (NC Vital Statistics, n.d.). *Chapter 7* Individual risk factors for heart disease and stroke include high blood pressure (hypertension), unhealthy blood cholesterol levels, type-2 diabetes, obesity, smoking, physical inactivity, and race/ethnicity (CDC, 2017). *Chapter 7* Respiratory disease, which can include chronic obstructive pulmonary disease, viral and bacterial pneumonia, asthma, and pulmonary hypertension kills more than 10,000 people statewide, and almost 200 people in Alamance County annually. Though many congenital and hereditary risk factors exist, many causes of respiratory disease are through environmental pollution, occupational exposure, and smoking related (CDC, 2017). *Chapter 7* Type-2 diabetes occurs when people's bodies become insulin resistant, resulting in the inefficient processes of glucose, a common blood sugar. Type-2 diabetes, while not as overtly fatal as other diseases, is a comorbidity of many diseases, increasing the risk and severity of those primary diseases, leading to poorer outcomes (Mayo Clinic, 2020). *Chapter 7*

Previous individual and behavioral risk factors have been examined, local ZIP-code level data has been lacking in Alamance County. While previous investigations and assessments have examined access to care and race as primary health outcome factors, this data examines specific discharge diagnoses, yielding results that indicate the issue of chronic disease in Alamance County is far more complex than previously thought. Given the sparsity of county health care options, and geographical and socioeconomic diversity of Alamance County, these data are incredibly relevant and important in assessing the specific needs of the county for this common health issue.

Primary data was extracted from the entire Cone Health System, which comprises five hospitals, three medical centers, six urgent care clinics, 100 physician practice sites, at 150 locations in Guilford, Alamance, Forsyth, and Rockingham Counties. Using Epic electronic medical records, specific ICD-10-CM discharge diagnosis criteria from "all time" was extracted and limited to the most recent patient encounter to ensure each patient is counted once. Data was collected and aggregated solely by ZIP code tabulation area (ZCTA); no personal patient information was collected either individually or in aggregate. Covariate data (total population, median age, median income, race, and ethnicity) was obtained from

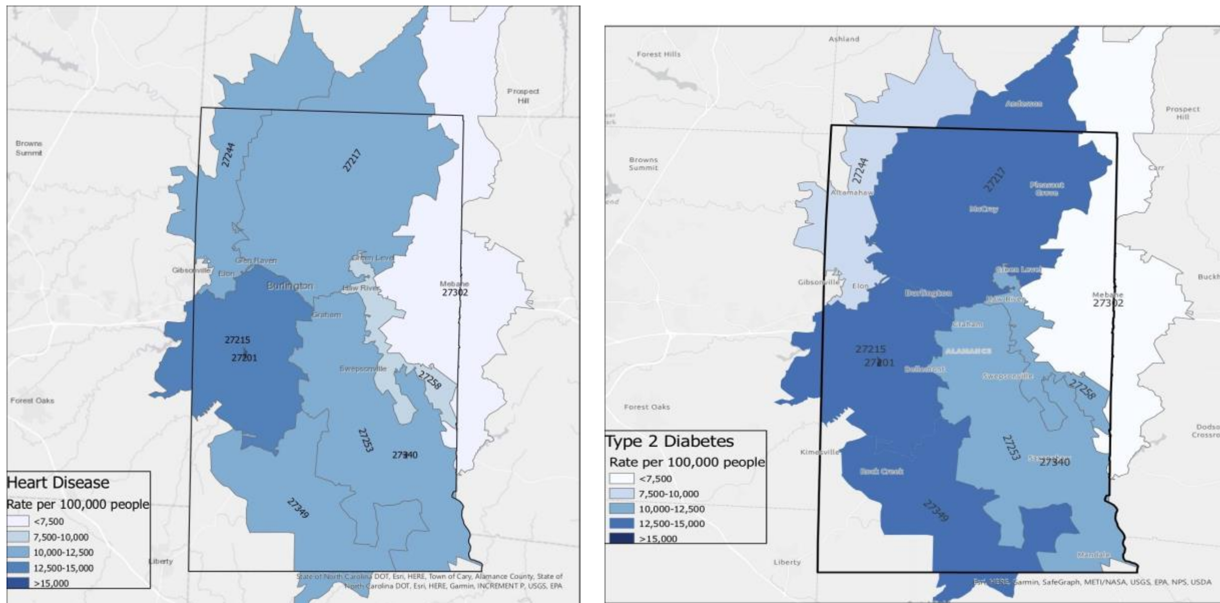
the US Census 2019: ACS (American Community Survey) 5-Year Estimates Data to calculate Pearson's correlation coefficient by disease rate per 100,000 people. Maps were generated using ArcGIS Pro software using data from the NC OneMap geospatial database, with the generous help from the University of North Carolina Health Science Library digital research support specialist Tia Francis.

Data from nine Alamance County ZCTAs were extracted and examined: 27201, 27215, 27217, 27244, 27253, 27258, 27302, 27340, and 27349. Two ZCTAs, 27201 (population 66, 0.13 square miles in size) and 27340 (population 43, 0.06 square miles) were excluded from most analyses, except for "disease rates by median age", due to unavailable data. While 27201 and 27340 had two- to four- times the rates of chronic disease compared to the rest of Alamance County, the small population and area size, together with respective 20- and 10 year- higher median ages than the average median age for Alamance County was thought to contribute significantly to these outlier data.



To identify possible correlative risk factors for chronic disease, we examined the well-described covariates of race, ethnicity, age, and household income. As seen in the full report, both race and ethnicity correlated poorly with chronic disease rates, contrary to both state and national chronic disease data (CDC, NCDHHS, 2017). *Chapter 7* However, there was a strong correlation for median age and disease rate, though this correlation dropped from strong to almost nonexistent if ZCTAs 27201 and 27340 were excluded from the data, indicating they had a disproportionate effect on the analysis. The strongest correlation was between median household income and disease rates, with ZCTAs with the highest median incomes having the lowest disease rates on average.

The data indicated that ZCTA 27215 (southwest Burlington, Alamance village, and Bellemont) had 25-35% higher rates than the County average of all three chronic diseases, despite having similar demographics as other comparable ZCTAs. On the other hand, ZCTA 27302 (Mebane and eastern Alamance County), despite having similar demographics, had half the chronic disease rates as the county average, and an astonishing 70% less than ZCTA 27215. Although the mean income for 27215 and 27302 are almost identical at approximately $75,000 per household, the median income for 27302 is $62,500 versus $52,500 for 27215, explaining most of the chronic disease rate difference observed in our given data set.



The most surprising observation, one that is more difficult to explain using the available data set, was the difference between ZCTAs 27215 and the neighboring 27217 (northeast Burlington, Green Level, Pleasant Grove, and Anderson). The data, national data, and long-studied socioeconomic investigations indicates that 27217, with a greater Hispanic and Black population, along with a lower median income should have a greater risk of chronic disease. Taken with previous Community Health Assessment data addressing transportation infrastructure, proximity to hospitals, and overall life-expectancy, this data is even more puzzling. That is, Cone Health Alamance Regional Medical Center, the largest care center in Alamance County by patient beds, trauma care, and specialty is in 27215, and this is the Alamance County ZCTA closest to one of the largest Hospitals in the Triad: less than 20 miles to the west is Moses Cone Hospital. Further, there is an 11-year life expectancy decrease in northeastern Burlington (27217) as compared to western Burlington (27215). Though these differences were attributed to racial and ethnic makeup of the region, our data cannot fully explain the inequities in disease rates. Transportation and infrastructure limitations, often identified as barriers to care, also cannot explain why residents in 27215 experience higher than expected chronic disease rates, as this ZCTA is more proximal to Interstate 40/85 than 27217.

It is important to note the limitations of this research, as the data is only a surface-level observation of health outcomes. Specifically, interpretation cannot address causation using the observational study design; that is, while location of instances and disparities of chronic disease rates in Alamance County can be identified, the “why” these ZCTAs have the chronic disease rates that they do cannot be determined and one can only assess how well they correlate with other risk factors and exposures. Further, this study cannot account for other risk factors contributing to chronic disease such as obesity, food security, pollution exposure, smoking status, physical and mental health parameters, family history, or myriad other qualitative health metrics.

From an equity perspective, the data is limited to race and ethnicity as supplied by the hospital (when present), using self-reporting data from the patients using US Census parameters. Though the data is contradictive of state and national data, showing negligible correlation between chronic disease rates and race or ethnicity, ***this work nevertheless highlights the need for the most recent, localized data in making health-equity decisions. That is, while large data sets may indicate and even implicate certain health-equity issues, more localized data may serve as a better determinant for policy action, strategies, and specific quality improvement and investments to serve a specific community.*** For example, state level data cannot ascertain where to place hospitals for maximal reach, impact, or equity while ZCTA-level data addresses clinical access needs more precisely, irrespective of external factors.

We also sought out, and are incredibly grateful for, the input from the Alamance County Health Equity Collective in the initial phase of our study through their annual celebration and discussion forum. Prior to the collection of the ICD-10-CM diagnostic data, we presented the collective with overarching themes and areas of focus for our research. We then posed broad, dialog provoking questions to the collective: "**What makes our data 'meaningful'," "What can we learn from this data? ``** and **''Given infinite resources, how would you like to see this data/results utilized in the community?"** Common topics broached during the narrative were identifying causality; minimizing redundancy in data collection (i.e., do we already have this data?); obtaining and measuring qualitative covariates such as cultural differences, stress, the response to stress, and community leadership; defining "care access" and access barriers; and addressing issues specific to individual racial and ethnic groups (i.e. not addressing issues to a specific demographic group as a monolith) (see appendices for full narrative themes). *Additional Data & Information* Using this information together with our preliminary data on chronic health, we can begin to address these overarching, systemic root cause topics.

While not integral to this Health Assessment, this investigation can serve as the genesis of local action by identifying potential barriers to chronic disease-specific care. Specifically, this study identified several facets that were contrary to conventional dogma, requiring deeper reflection and analysis into the factors that contribute to chronic disease in Alamance County. Cultural or historical differences may contribute to patient-provider inaccessibility. Specific socioeconomic data stratified by race, ethnicity, and age may also factor into diagnostic differences. The abundance of specialty care from university-affiliated hospitals in neighboring counties may also be diluting or skewing our data. Wake Forest Baptist Medical Center (885 beds), UNC Hospitals (950 beds), and Duke University Hospital (957 beds) are all vastly larger and offer more specialized care than the two largest Cone Health Hospitals, Moses Cone Hospital (515 beds) or Alamance Regional Medical Center (238 beds).

Our data suggests that reducing chronic disease risk to a one-dimensional factor is myopic and erroneous. Especially with hyper-localized data, the built environment, cultural biases, and systems-level issues are omnipresent. To delineate specific impacts, we propose to next examine educational attainment, neighborhood land use, nutritionally adequate food access, Medicaid and uninsured rates, and employment rates to assess other secondary issues that may be pertinent to chronic disease rates.

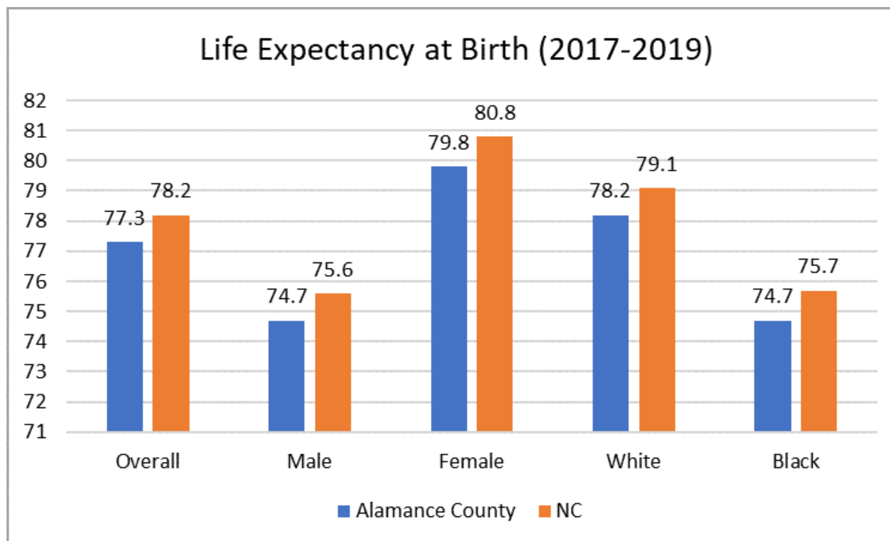
However, to glean the best available information, we must always explore the community's wants and needs first though a Community Based Participatory Research approach. Examining cultural and community factors of how healthcare is approached, what people do outside of the provider's office, how stress and allostasis affects people in different Alamance County ZIP codes, and how best to disseminate data and results to the most people, equitably and efficiently, so that people can make best-informed decisions for their own health will not only yield actionable specifics, but also allows the community to be served justly and correctly.

Mortality

The overall life expectancy of Alamance County residents is 77.3 according to 2019 data, which is slightly less than the North Carolina life expectancy of 78.2.

Life Expectancy of Persons Born 2017-2019

Life expectancy is defined as the average number of additional years that someone at a given age would be expected to live if current mortality conditions remained constant throughout their lifetime. The life expectancy of persons born in Alamance County between 2017 and 2019 is lower than the life expectancy of North Carolina-born residents across all categories- male, female, White, and Black. Because life expectancy calculations are limited to singular categories and do not account for all races, ethnicity, and gender, it does not provide a true and full picture of overall life expectancy of persons born in the county (NC State Center for Health Statistics, 2020). *Chapter 7*



Source: NC State Center for Health Statistics, 2020

Leading Causes of Death

The table below depicts the leading causes of death in Alamance County. According to the data, the residents of Alamance County have a higher mortality rate than the state average overall and for eight of the top ten leading causes of death. In 2019, the highest percentages of deaths were due to two primary causes: heart disease and cancer (Avery et al., 2021). *Chapter 7*

Alamance County Leading Causes of Death, 2019	**Deaths**	**% Of deaths**	**Rate** (Per 100,000)
1. Cancer	421	22.9	248.4
2. Diseases of the heart	411	22.3	242.5
3. Chronic lower respiratory diseases	114	6.2	67.3
4. Cerebrovascular diseases	105	5.7	61.9
5. Other unintentional injuries	88	4.8	51.9
6. Alzheimer’s disease	85	4.6	50.1
7. Diabetes mellitus	46	2.5	27.1
8. Septicemia	31	1.7	18.3
9. Pneumonia and influenza	31	1.7	18.3
10. Nephritis, nephrotic syndrome, and nephrosis	30	1.6	17.1
All other causes (residual)	475	25.9	51.9
Total Deaths (All Causes)	1837	100%	854.8

Source: NC State Center for Health Statistics, 2021

NC Leading Causes of Death, 2019	**Deaths**	**Rate** (per 100,000)
1. Cancer	19,693	187.8
2. Diseases of the heart	19,661	187.5
3. Chronic lower respiratory diseases	5,411	51.6
4. Cerebrovascular diseases	5,203	49.6
5. Other unintentional injuries	4,683	44.7
6. Alzheimer's disease	4,508	43.0
7. Diabetes mellitus	3,127	29.8
8. Nephritis, nephrotic syndrome, and nephrosis	2,121	20.2
9. Pneumonia and influenza	1,733	16.5
10. Motor vehicle injuries	1,608	15.3
All other Causes (residual)	27,933	266.3
Total	95,951	914.9

Source: NC State Center for Health Statistics, 2021

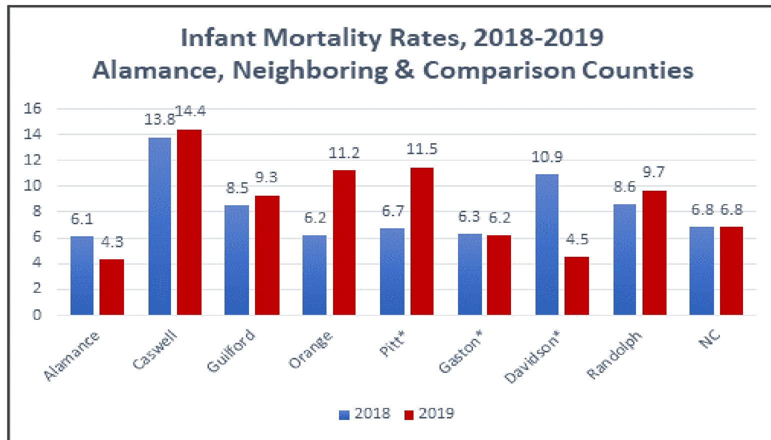
Some disparities exist in mortality data. Specifically, male residents are disproportionately represented within mortality data compared to female residents. The overall population of Alamance County includes 88,976 female residents and 80,533 male residents. Males were overrepresented in mortality data with more deaths occurring among males than females, as well as males having a higher overall mortality rate compared to females (Avery et al., 2021). *Chapter 7*

Infant Mortality and Maternal Health

Maternal health and infant mortality are often cited as the foremost indicators for the general state of health of a country or community. The health of mothers and their children often serves as a reflection of the present health of a total population, as well as a predictor of health in the next generation. Infant and maternal mortality are often considered indicators of the strength of a community's health care and support systems.

Several maternal factors and behaviors have been linked to preterm birth and low birth weight, which are strongly correlated with infant mortality. These factors include but are not limited to failure to begin prenatal care in the first trimester, mothers having less than a 12th grade education, and births to adolescent women (under age 20). Babies born too early and/or too small are at a greater risk for health conditions, developmental problems, neurological impairments, development of heart and respiratory problems later in life, as well as educational and social impairments. Babies that are born too small are

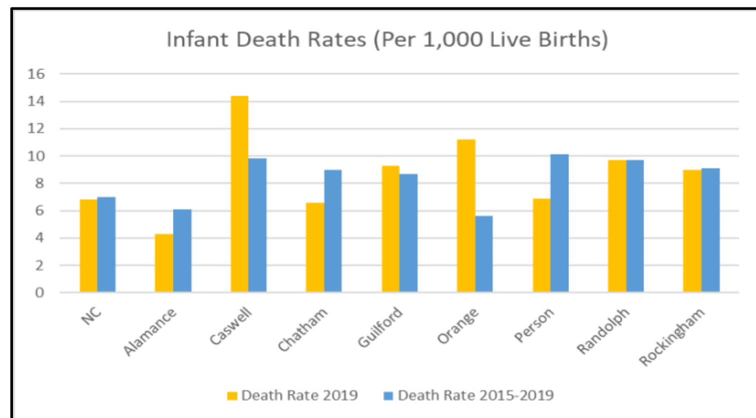
considered low birth weight (LBW). Low birth weight is defined, without regard to the duration of the pregnancy, as a baby is born weighing less than 5 pounds, 8 ounces (March of Dimes, 2021). *Chapter 7*



Source: NCDHHS, 2021

Infant mortality rates in Alamance County were 4.3 deaths per 1,000 live births in 2019. The state mortality rate for 2019 was 6.8 deaths per 1,000 live births. Alamance County infant mortality was less than that of surrounding counties (Infant Mortality Statistics, 2020). *Chapter 7*

Disparities exist among racial and ethnic groups within the infant mortality rate. The White non-Hispanic infant mortality rate was 4.8 births per 1,000 live births compared to the African American non-Hispanic infant mortality rate of 10.8 deaths per 1,000 live births. The Hispanic infant mortality rate was 5.0 deaths per 100,000 live births (Infant Mortality Statistics, 2020). *Chapter 7*



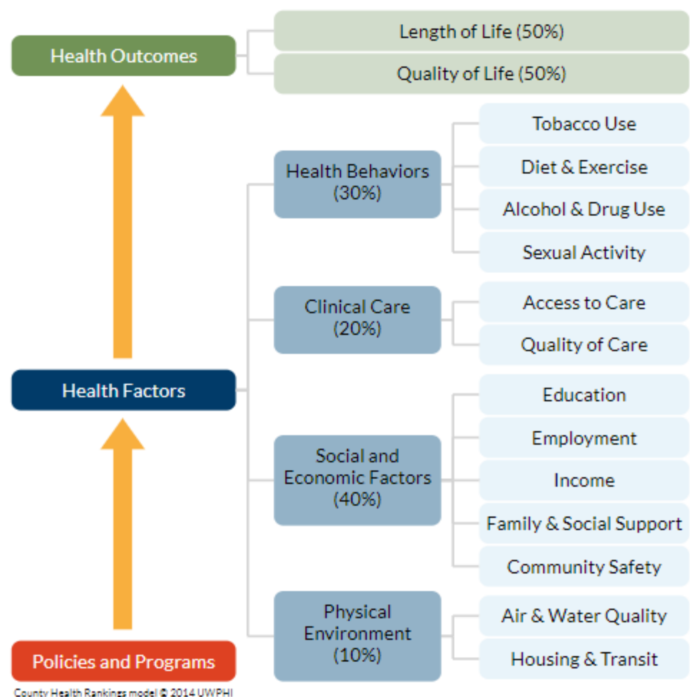
Infant mortality trend data is a better indicator of disparities due to the small sample size of single-year data.

Morbidity

An important factor in measuring the health of Alamance County residents is morbidity, or the health-related quality of life in the context of overall, physical, and mental health. The County Health Rankings, a collaboration between Robert Wood Johnson and the University of Wisconsin, is one tool that is used to assess health-related quality of life. “The Rankings use more than 30 measures that help communities understand how healthy their residents are today (health outcomes) and what will impact their health in the future (health factors)” (North Carolina Overall Rank, 2021). *Chapter 7*

At the time of the previous Community Health Assessment in 2018, the rankings indicated Alamance County ranked 63 out of 100 counties for morbidity. As of 2021, we rank 38 out of 100 counties. Since 2018, there has been an improvement in the overall quality of life of Alamance County residents,

however the county continues to rank within the middle-range of counties in North Carolina. In 2021, the average Alamance County resident experienced 4.1 days of poor physical health during a one-month period, which is higher than the North Carolina average of 3.6 days of poor physical health for one month. The number of poor mental health days experienced by both Alamance County and North Carolina residents were comparable, 4.7 and 4.1, respectively. Another important indicator of how diseases can negatively impact quality of life is hospital utilization data surrounding time spent under care, the number of cases that are admitted under emergency situations and the medical costs incurred from treatment (North Carolina Overall Rank, 2021). *Chapter 7*



Additional Alamance County rankings, out of the 100 North Carolina counties:

- 46th for Clinical Care
- 34th for Length of Life
- 44th for Quality of Life
- 45th for Social and Economic Factors
- 46th for Health Behaviors
- 76th for Physical Environment

Diabetes

Diabetes is a group of diseases marked by elevated levels of blood glucose, resulting from defects in insulin production or action in the body. In 2019, approximately 11.9% of the state's population had Type 1 or Type 2 Diabetes (United Health Foundation, 2021). *Chapter 7*

In 2017, diabetes mellitus became the 7th leading cause of death in Alamance County, and in 2019 remained the 7th leading cause of death in the state of North Carolina.

There are three types of diabetes as defined by the Center for Disease Control: Type 1, Type 2, and gestational. Type 1 diabetes or juvenile-onset diabetes may account for 5 percent to 10 percent of all diagnosed cases of diabetes. Risk factors are less well defined for Type 1 diabetes than for Type 2 diabetes, but autoimmune, genetic, and environmental factors are involved in the development of this type of diabetes. Type 2 diabetes or adult-onset diabetes may account for about 90 percent to 95 percent of all diagnosed cases of diabetes. Risk factors for Type 2 diabetes include older age, obesity, and family history of diabetes, prior history of gestational diabetes, impaired glucose tolerance, physical inactivity, and race/ethnicity. Gestational diabetes develops in 2 percent to 10 percent of all pregnancies but usually abates when a pregnancy is over. Gestational diabetes occurs more frequently in minorities,

people with a family history of diabetes, or obese women. Women who have had gestational diabetes are at increased risk for later developing Type 2 diabetes (Diabetes Basics, 2021). *Chapter 7*

Within the past decade, there has been an increase of more than 33% of individuals being diagnosed with Diabetes in North Carolina. Within the state, Diabetes, specifically Type 2, disproportionately affects racial and ethnic minority groups. In 2018, the prevalence of diagnosed Type 2 Diabetes was about 31% higher for African Americans compared to Non-Hispanic Whites (NC State Center for Health Statistics, 2021). *Chapter 7*

Alamance County has served as the lead county for the Local Health Department Region 5 NC Minority Diabetes Prevention Program initiative since 2016 and continues to hold classes, screen individuals for diabetes, and train Lifestyle Coaches within its 9-county service area. Recommendations from the American Diabetes Association to prevent or delay Type 2 diabetes are maintaining a healthy weight, eating well and being active. With these steps, you can stay healthier longer and lower your risk of diabetes.

Infectious Disease

Influenza

Influenza, which is most referred to as the flu, is a viral illness that affects the respiratory system and can be very contagious. There are two main strains of the virus, Types A and B, which differ in their molecular structure, and are spread through the inhalation of droplets spread by those infected with the flu from coughing, sneezing, or talking. Symptoms can include fever, cough, sore throat, runny or stuffy nose, fatigue, or headaches. The severity of the illness can range from mild to life-threatening, and certain groups are at a higher risk of complications than others. These groups include populations aged 65 years and over, those with chronic conditions such as asthma or diabetes, pregnant women, and children. The CDC estimates that during a regular flu season up to 90 percent of deaths occur in those who are 65 years of age or older. Pneumonia can be a potential side effect of the influenza virus, as the infection causes inflammation of vessels and worsening of cough or fever and poses a particular risk for older adults and children (Key Facts About Influenza (Flu), 2021). *Chapter 7*

Flu viruses can be detected year-round in the United States but are most common during the fall and winter. The exact timing and duration of flu seasons varies, but influenza activity often begins to increase in October. Flu activity tends to peak between December and February, although significant activity can last as late as May (Key Facts About Influenza (Flu), 2021). *Chapter 7*

The 2019-2020 flu season (September to May) in North Carolina yielded 12,421 positive cases, confirmed through the State Laboratory for Public Health and Public Health Epidemiologists, for influenza strains in hospitals. Cases peaked in early to mid-February. There was a total of 186 influenza-associated deaths; 105 of those cases were in populations over the age of 65. The 2019-2020 flu season (August to June) in Alamance County yielded 1,016 cases of flu, and the 2020-2021 flu season (August to June) yielded 1,313 cases of flu (*NORTH CAROLINA WEEKLY INFLUENZA SURVEILLANCE SUMMARY 2019-2020 INFLUENZA SEASON*, 2020). *Chapter 7*

Administering vaccines is one strategy for preventing and reducing the impact of influenza, as they allow for people to develop antibodies to protect against infection. Flu vaccines protect against the most common strains of the virus and should be administered before the flu season, which can begin as early as October and end as late as May, but usually peaks in December. Although it is recommended for everyone over the age of 6 months to receive a flu vaccine, there are certain groups that have coexisting medical conditions that make it unsafe *NORTH CAROLINA WEEKLY INFLUENZA SURVEILLANCE SUMMARY 2019-2020 INFLUENZA SEASON*, 2020). *Chapter 7*

Tuberculosis

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Alamance County Active TB Cases	5	2	0	4	0	0	4	4	2	4	1

Tuberculosis (TB) is caused by a bacterium called *Mycobacterium tuberculosis*. TB bacteria usually attack the lungs, but it can attack any part of the body such as the kidney, spine, and brain. TB is spread through the air from one person to another when the person with TB coughs, sneezes, speaks, or sings and others breathe in bacteria expelled into the air. Two TB-related conditions exist: latent TB infection (LTBI) and TB disease. People with latent TB infection do not have symptoms and cannot spread TB bacteria to others. However, if TB bacteria become active in the body and multiply, the person will go from having latent TB infection to being sick with active TB disease. Symptoms of active TB may include a cough that lasts more than three weeks, pain in the chest, coughing up blood or sputum, weakness, weight loss, loss of appetite, chills, fever, or night sweats. Active TB is treated through a 6–9-month regimen of medication. If not treated properly, TB disease can be fatal (Basic TB Facts, 2016). *Chapter 7*

By law, physicians must report TB cases to the local health department. Both LTBI and TB disease require medical attention. In North Carolina, treatment of both conditions is provided free through the local health department (Tuberculosis, 2019). *Chapter 7*

In NC, between 2018 and 2020, there were only 540 cases of TB in the state. As referenced in the above chart, the number of active TB cases in Alamance County continues to remain low (Tuberculosis, 2019). *Chapter 7*

COVID-19

COVID-19 (coronavirus disease 2019) is a disease caused by SARS-CoV-2, a respiratory virus, that was discovered in December 2019 in Wuhan, China. The virus has been found to be very contagious, and has had a profound effect on the world, the State of North Carolina, and Alamance County locally. As of December 31, 2021, there have been over 300,000,000 confirmed cases and over 5,000,000 deaths globally, approximately 70,000,000 cases and 800,000 deaths in the U.S., and nearly 2,000,000 cases and 20,000 deaths in North Carolina (Coronavirus Resource Center, 2022). ***Chapter 7***

COVID-19 Response in Alamance County

Alamance County experienced its first case of COVID-19 on March 20, 2020, and its first death due to COVID-19-related complications in May 2020. Over the course of 2020 and 2021, Alamance County experienced 31,666 total cases and 382 total deaths due to COVID-19-related complications (Coronavirus Updates, n.d.). *Chapter 7*

The county's coordinated response to COVID-19 included the health department working with Alamance County Emergency Management, Cone Health, community partners, and volunteers to meet the basic needs of the community. Community partner meetings were held weekly to ensure that all entities (business, medical, law enforcement, education, human services) received the same updated information. A separate business collaborative was formed to address the needs of manufacturers, a high-risk population that employed many workers gathered in a central location for an extended period (Coronavirus Updates, n.d.). *Chapter 7*

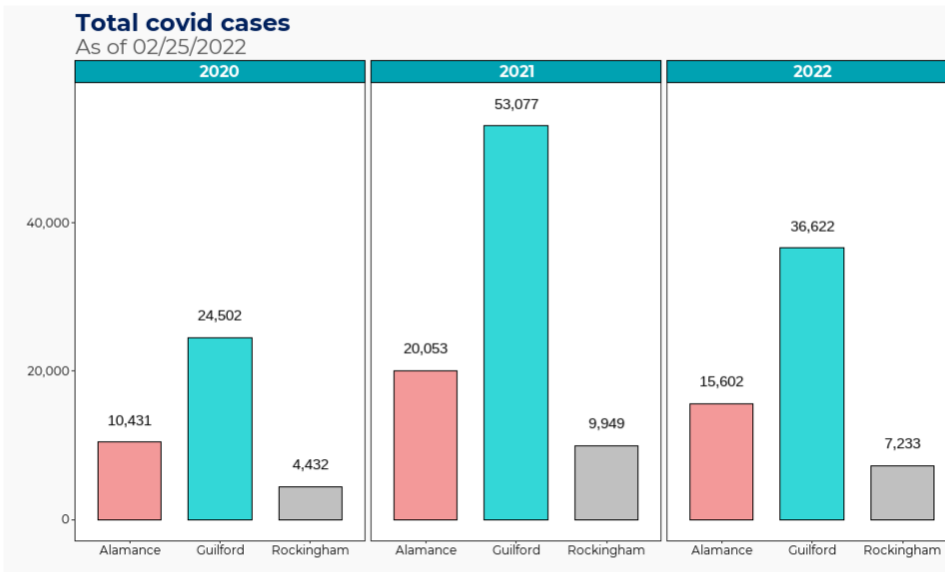
In addition to conducting COVID-19 testing, case investigations, and contact tracing, health department staff and volunteers delivered masks, thermometers, and educational information to each infected person and their household contact(s). For those persons that self-identified being food-insecure while in isolation or quarantine, the health department staff delivered meals or groceries for each person in the household (Coronavirus Updates, n.d.). *Chapter 7*

In January 2021, a limited number of vaccinations were made available to the health department. Health department staff, with the assistance of Alamance County Government, Alamance County Emergency Management, the City of Burlington, ABSS, the NC National Guard, and other local volunteers set up a drive-through vaccination site at the Career and Technical Education Center. By the end of February 2021, through a collaborative effort between the health department and Cone Health, an large indoor vaccination site was set up at the JR Outlet area of Burlington. The site was operational until May 2021 (Coronavirus Updates, n.d.). *Chapter 7*

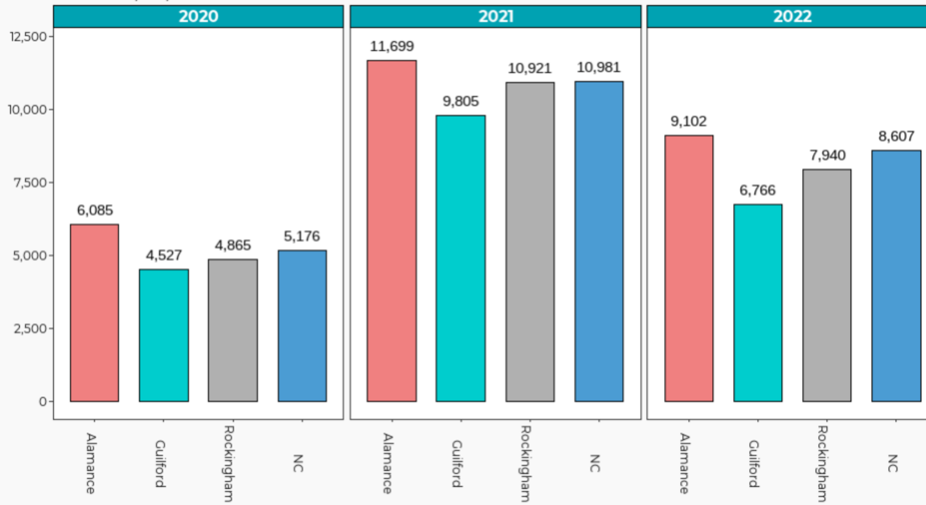
Health Department and Cone Health staff continued to collaborate to address the issue of access for historically and currently marginalized populations. Vaccinations were provided at various locations throughout the county, such as parks, low-income housing neighborhoods, Latinx-serving organizations, churches, and schools. Cone Health was designated as a federal site to provide mass COVID-19 vaccinations for the central Triad region. Vaccinations were available at the Dream Center in Burlington and at the Coliseum in Greensboro (Coronavirus Updates, n.d.). *Chapter 7*

Covid Population data for Alamance County and the Cone Health Region

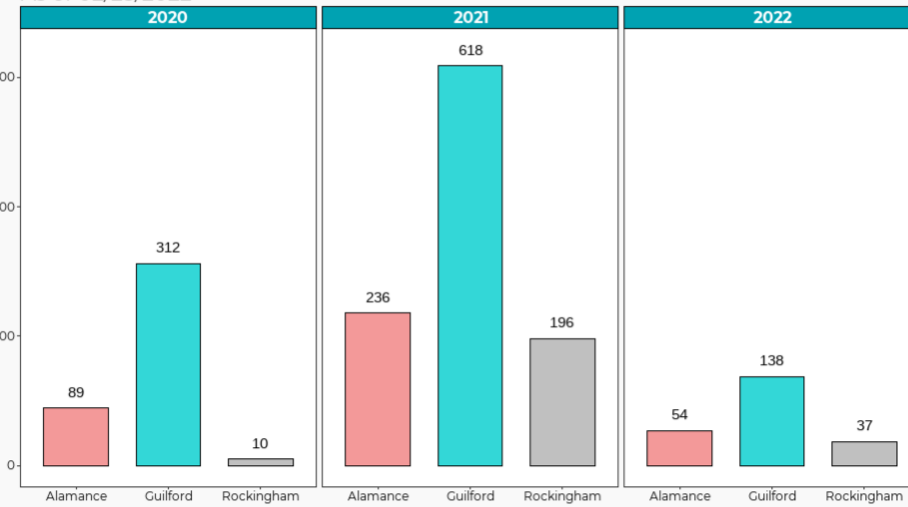
Covid cases by location (as reported by North Carolina Department of Health and Human Services)



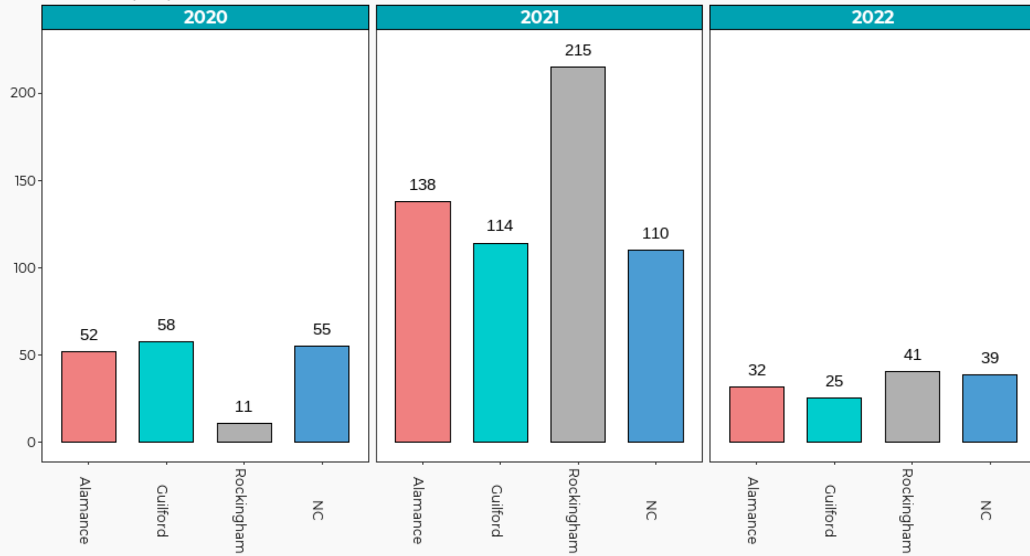
In the years 2020, 2021, and thus far in 2022, Alamance County has had more cases of COVID per 100k residents than Guilford and Rockingham counties, and the state of North Carolina as a whole. Guilford county has had the fewest cases per 100k of the same areas.



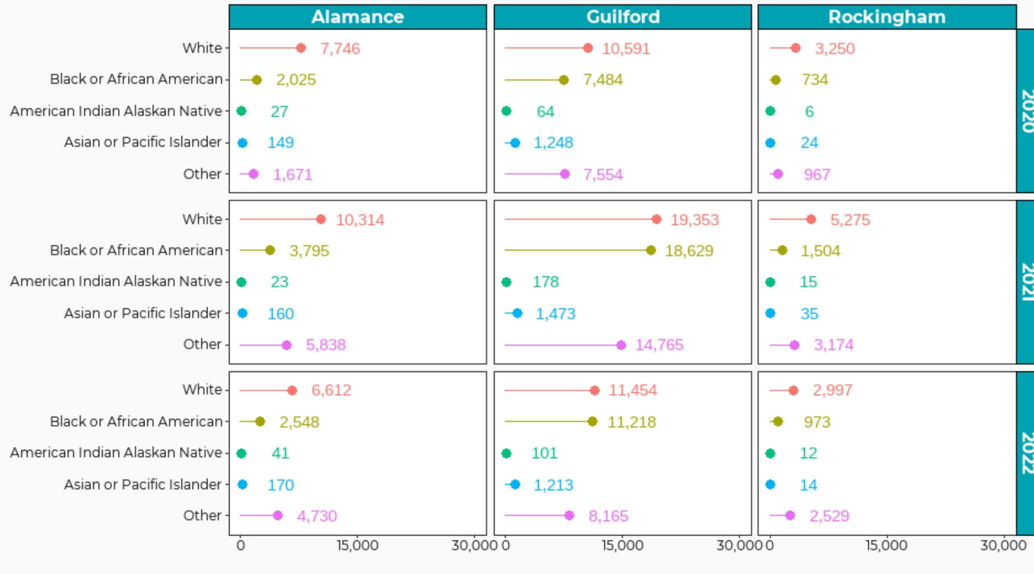
Deaths by Location



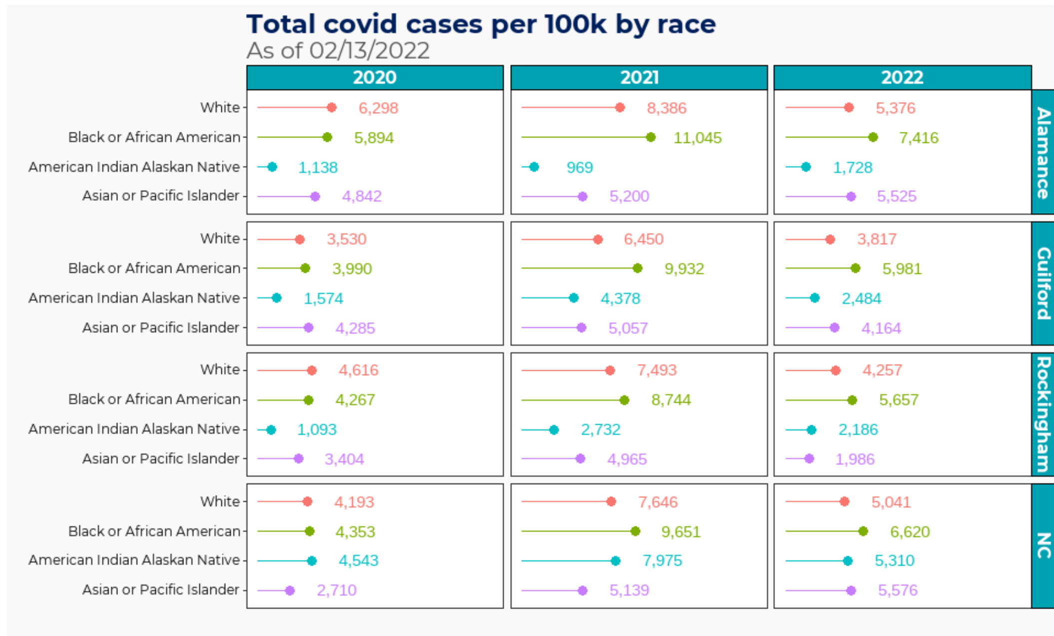
When comparing NC and the counties of Alamance, Guilford, and Rockingham; since 2021, Rockingham County has had the most deaths per 100k residents followed by Alamance.



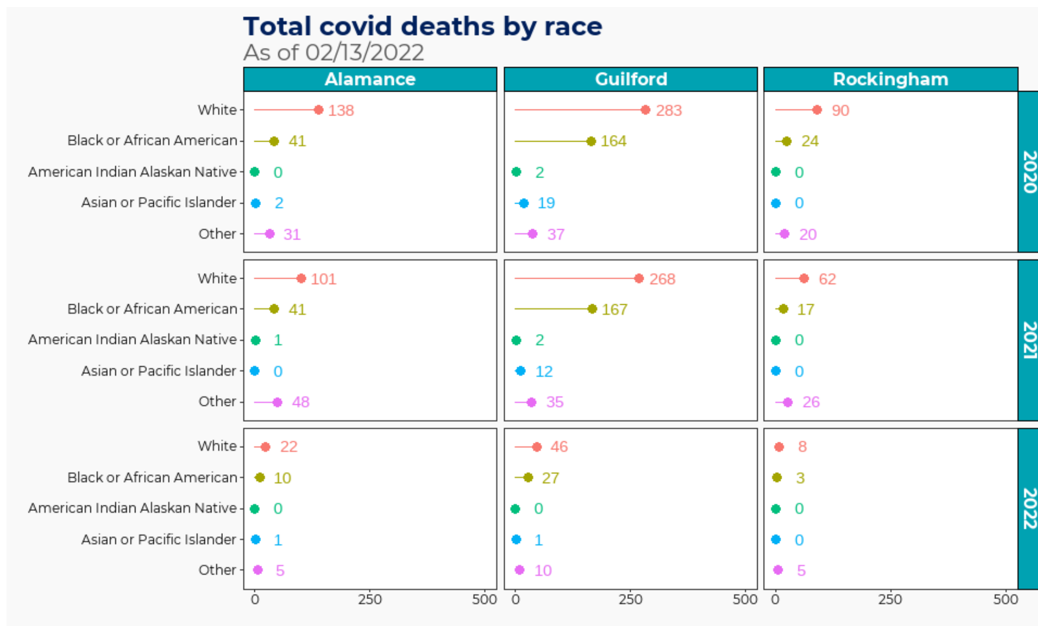
Cases



Those cases whose race identified as Black or African American have had the most cases of COVID per 100k residents when comparing NC and the counties of Alamance, Guilford, and Rockingham.

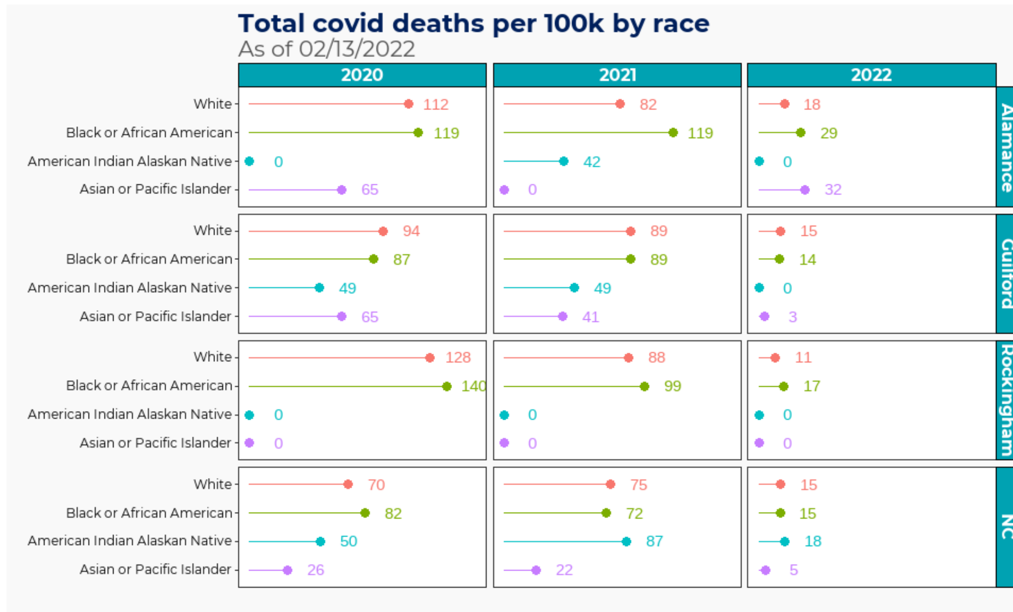


Deaths



In Alamance and Rockingham counties, those whose race identified as Black or African American have had more deaths per 100k residents compared to other races.

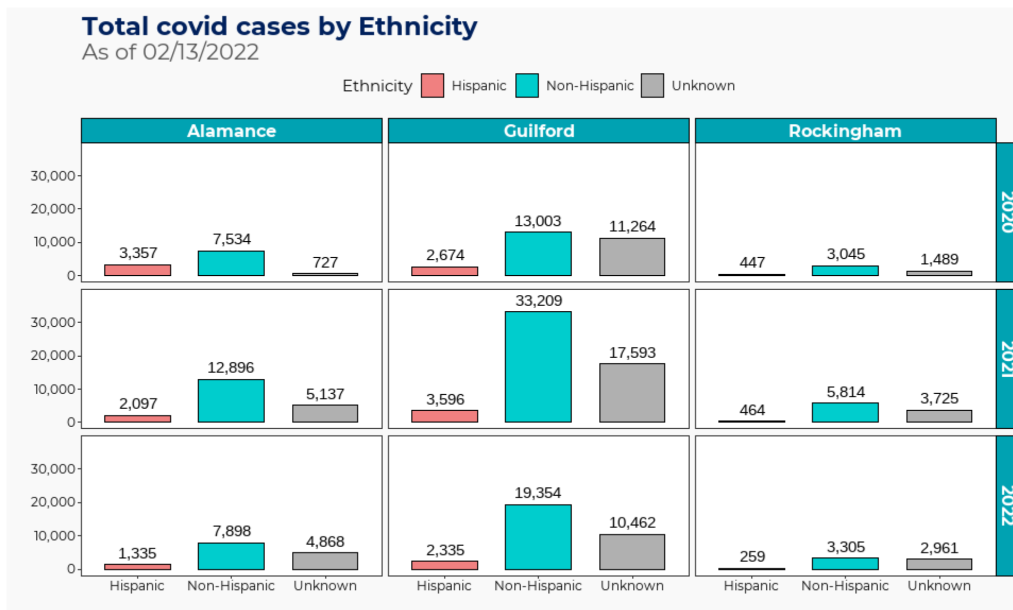
Deaths per 100k are similar between the races of Black and white both statewide and in Guilford County.



Ethnicity

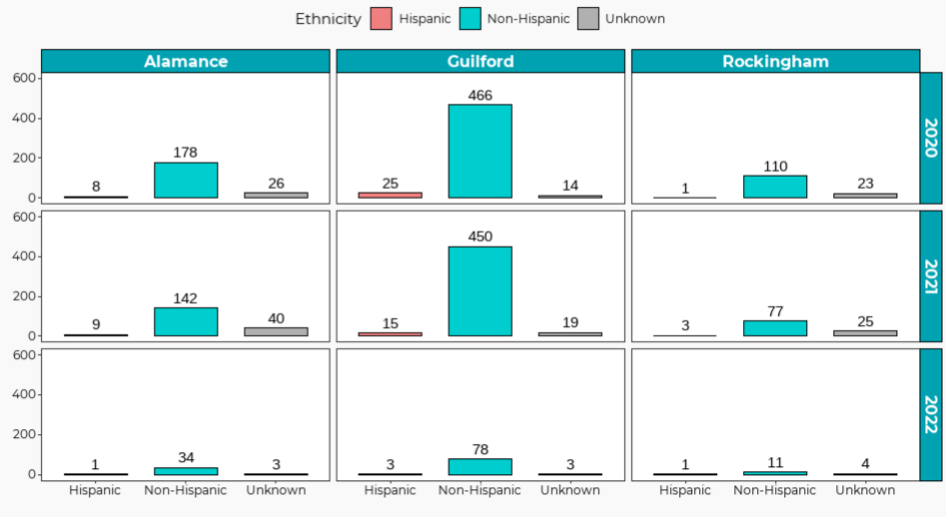
Cases

Hispanics are more likely to have contracted COVID compared to non-Hispanics across all three counties.

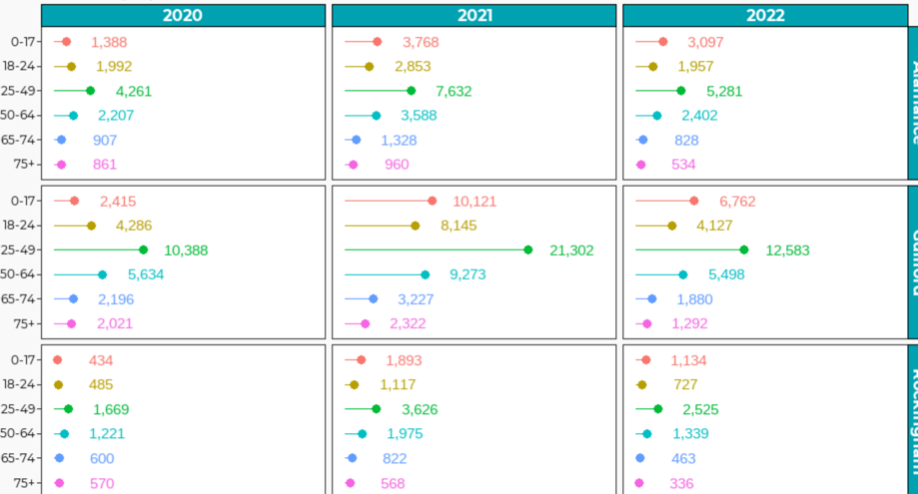


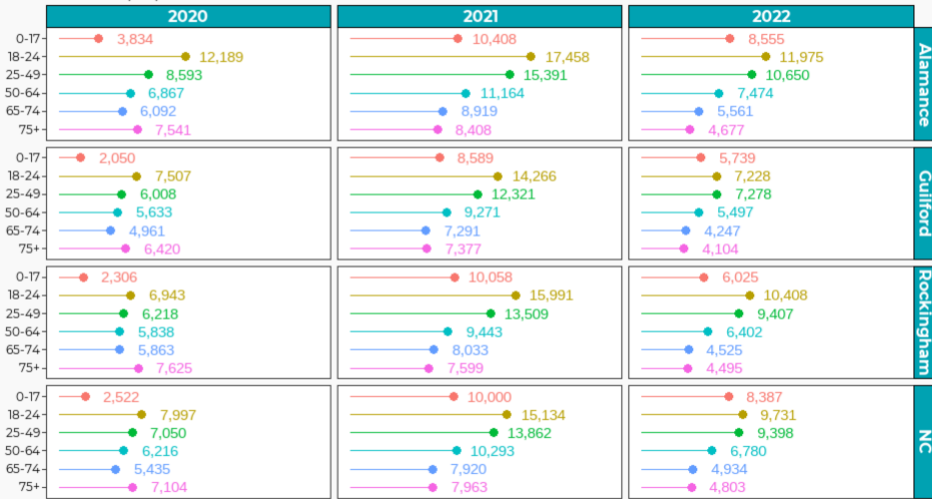
Deaths

Although Hispanics are more likely to have contracted COIVD, they have been less likely to die from COVID compared to non-Hispanics.

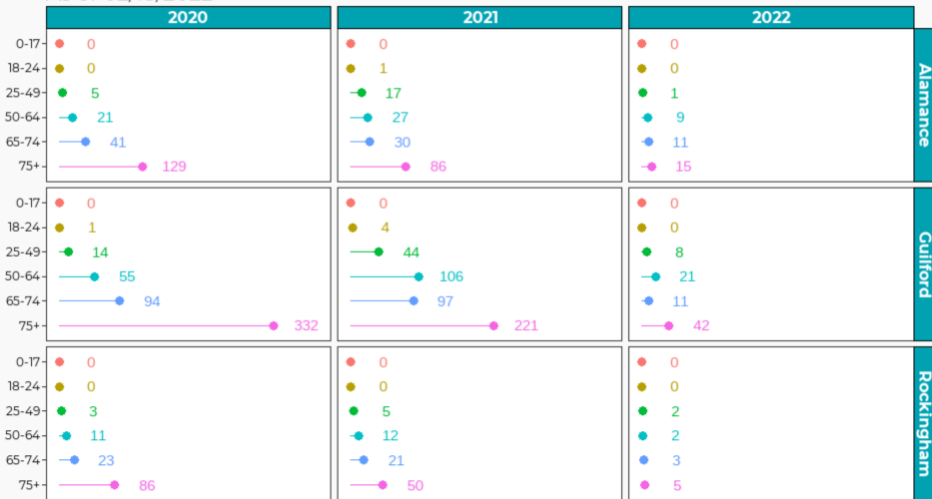


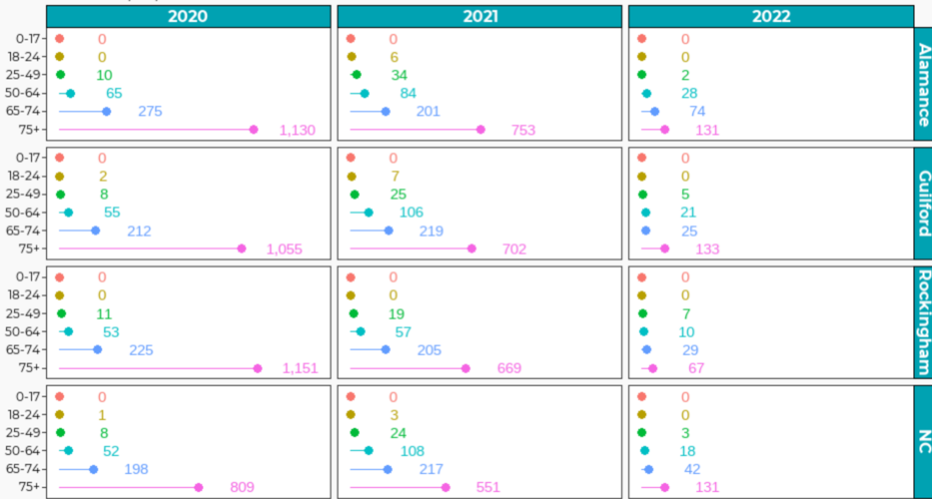
Cases





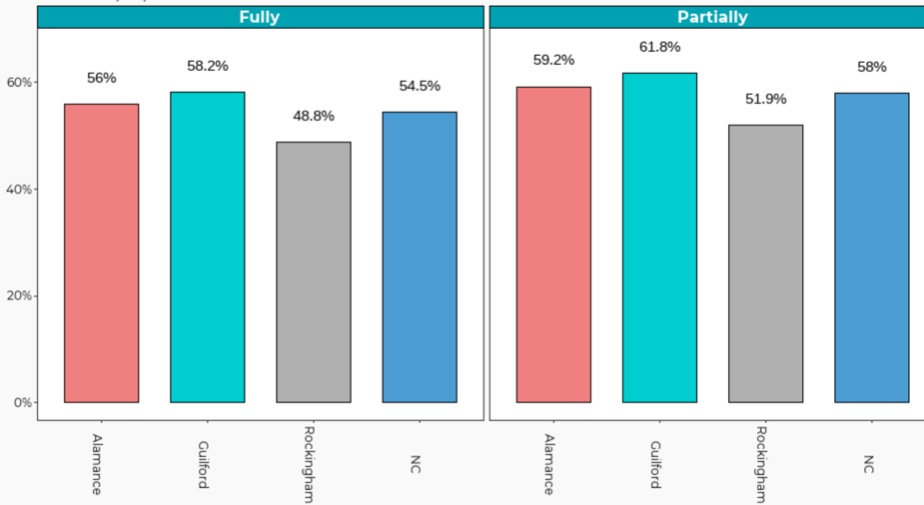
Deaths



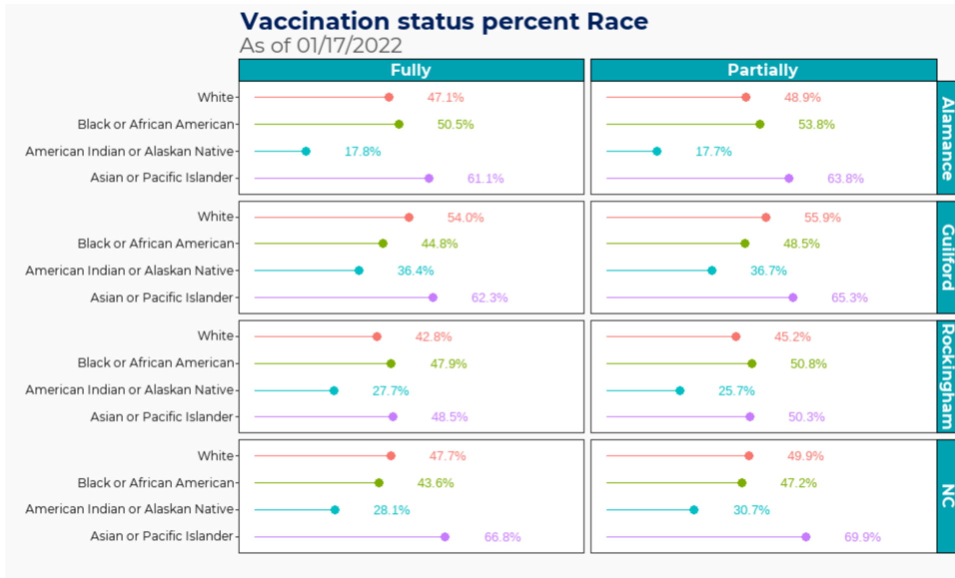


Vaccinations

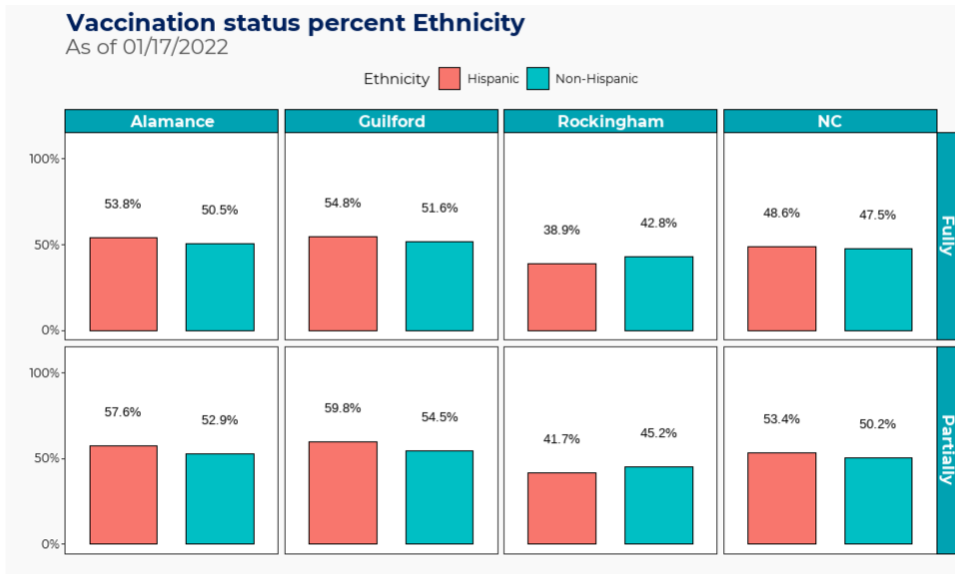
Overall population



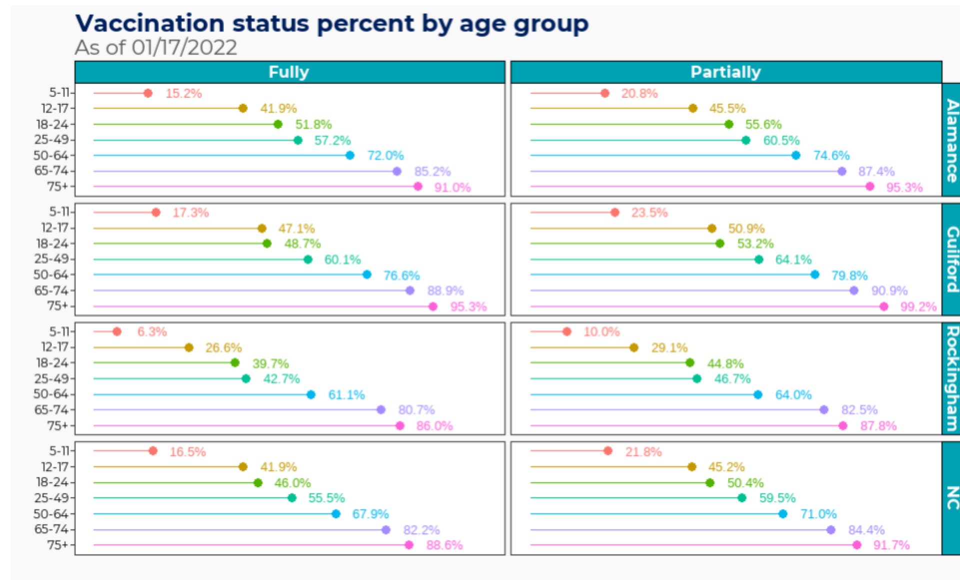
Race



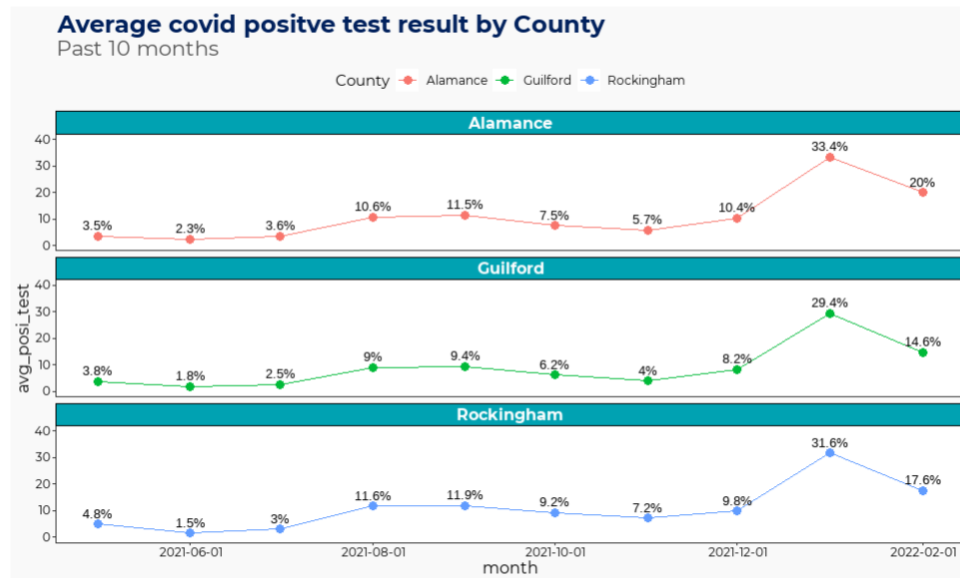
Ethnicity



Age Group



Testing

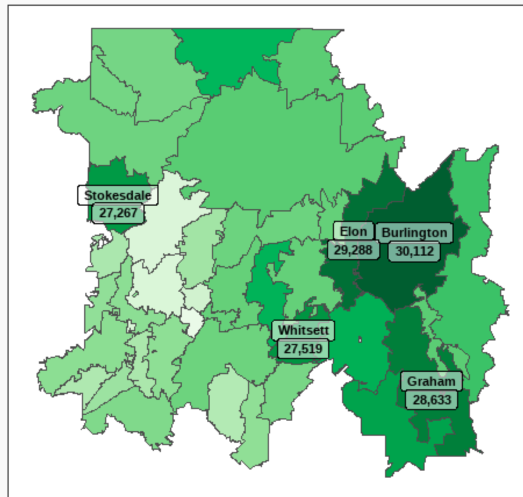


7.2 Cases per 100k

Top 5 labeled

Cases per 100k Residents

Alamance, Guilford, and Rockingham Counties



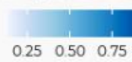
7 Zip Code Map

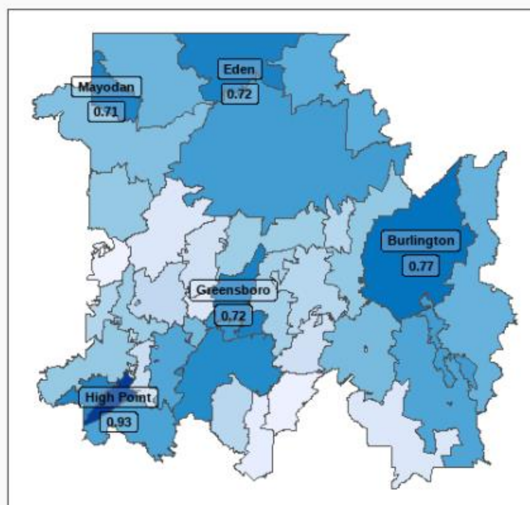
7.1 SVI by Zip Code

Top 5 most vulnerable labeled

Social Vulnerability Index by Zip Code

Alamance, Guilford, and Rockingham Counties



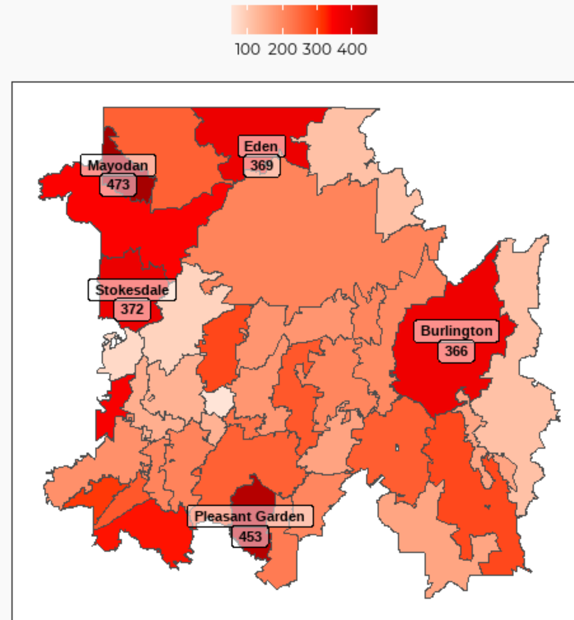


7.3 Deaths per 100k

Top 5 labeled

Deaths per 100k Residents

Alamance, Guilford, and Rockingham Counties



Communicable Diseases

Sexually Transmitted Infections

Sexually Transmitted Infections (STIs) are passed from one person to another through intimate physical contact and from sexual activity including vaginal, oral, and anal sex. These infections can be caused by bacteria, parasites, or viruses. The most common STIs are gonorrhea, chlamydia, the human papillomavirus infection (HPV), syphilis, genital herpes, and HIV/AIDs. While STIs affect individuals of all ages, they take a very heavy toll on young people. The CDC estimates that adolescents and young adults between the ages of 15-24 make up just over one quarter of the sexually active population, but account for almost half of the 26 million new sexually transmitted diseases that occur in the United States in 2018. STIs are not only costly, accounting for $16 billion in medical costs in the United States, annually, they are also of notable concern and of public health significance impacting morbidity and mortality in communities. They can cause infertility of women, sterility in men, ectopic pregnancies, cancer, cirrhosis or liver failure, and early death. Individuals who contract STIs tend to not know that they have one because most STIs are asymptomatic (showing no symptoms), therefore prevention, testing, and treatment are critical elements in controlling outbreaks. To prevent the spread of STIs entirely, abstain from sex or if you choose to have sex, always use an external barrier method such as a condom and get tested often at your local health department or clinic. If you are diagnosed with a STI, know that all can be treated with medicine, and some can be cured entirely (Facts & Figures, 2021). *Chapter 7*

Data on the Burden of STIs and HIV

Human Immunodeficiency Virus (HIV) is a virus that affects specific cells of the immune system, called CD4 cells, or T cells. Over time, HIV can destroy so many of these cells that the body cannot fight off infections and disease, which may result in acquired immunodeficiency syndrome, or AIDS, in which immune systems are severely weakened. Currently, there is no effective cure for HIV or AIDS. With proper medical care, HIV can be controlled with treatment called antiretroviral therapy or ART. It can dramatically prolong the lives of many people infected with HIV and lower their chance of infecting others. Today, someone diagnosed with HIV and treated before the disease is far advanced can have a normal life expectancy. As of December 31, 2020, the number of people living with HIV who reside in North Carolina (including those initially diagnosed in another state) was 34,963 (2019 North Carolina HIV Surveillance Report, 2020). In 2020, 1,079 new HIV diagnoses were reported among adults and adolescents. Adolescents (aged 13-24) had a total of 277 new cases, a rate of 16.6 persons per 100,000. In the same year, 14 new HIV diagnoses were reported among the adult and adolescent population in Alamance County, a rate of 9.7 persons per 100,000 population. This rate is a slight decrease from 2018 (20 cases, rate= 14.3 per 100,000). Alamance County ranks 27th in the state for the rate of new HIV cases (2019 North Carolina HIV Surveillance Report, 2020). *Chapter 7*

HIV in North Carolina

	Cases
People Living with HIV	34,963
New HIV Diagnoses Among Adults and Adolescents	1,079

Source: “2019 North Carolina HIV Surveillance Report,” 2020

HIV in North Carolina Among Adolescents (aged 13-24)

	Cases	Rate per 100,000 population
New HIV Diagnoses Among Adolescents	277	16.6

Source: “2019 North Carolina HIV Surveillance Report,” 2020

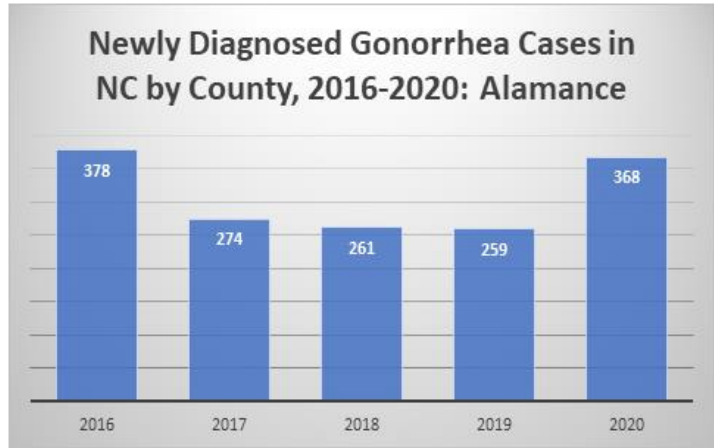
HIV in Alamance County

	Cases	Rate per 100,000 population
New HIV Diagnoses Among Adults and Adolescents, 2018	20	14.3
New HIV Diagnoses Among Adults and Adolescents, 2020	14	9.7

Source: “2019 North Carolina HIV Surveillance Report,” 2020

Gonorrhea

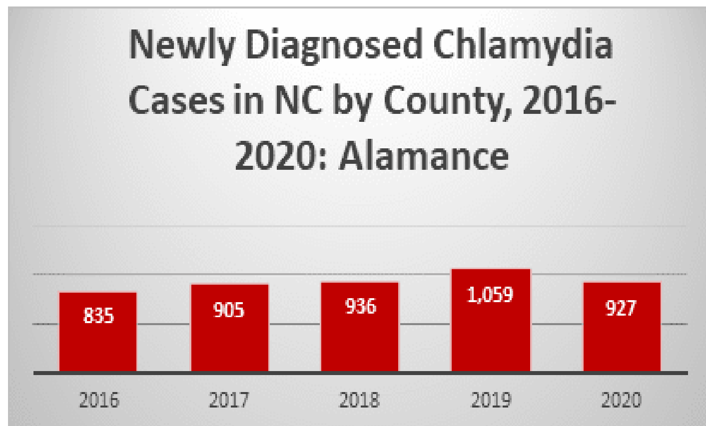
Gonorrhea is a sexually transmitted disease that can affect anyone who is sexually active. It can cause infections in the genitals, rectum, and throat. This disease is quite common among young people between the ages of 15-24. Gonorrhea can be contracted by having vaginal, anal, or oral sex with someone who has gonorrhea. Gonorrhea can also be spread from a mother to her baby during delivery. In North Carolina, pregnant women are screened for gonorrhea at intervals during pregnancy and if they are infected, newborns receive an antibiotic prophylactic eye ointment as a preventive measure against gonorrheal conjunctivitis. In men, symptoms of Gonorrhea are more profound compared to women, who experience no symptoms. Immediate testing and treatment are critical if you or your partner are experiencing symptoms. Gonorrhea can be cured with the right treatment (Facts & Figures, 2021). *Chapter 7*



In North Carolina, in 2020, the reported number of gonorrhea cases was 28,014, a rate of 264.3 persons per 100,000 population, an increase from 26, 795 cases in 2019 (rate of 254.3 persons per 100,000 population). In the same year (2020), Alamance County reported 368 gonorrhea cases, a rate of 214.8 persons per 100,000 population. The gonorrhea rates for the county had declined since 2016 (381 cases), however the current rates are an increase from the past few years. As with all STIs, the best way to prevent infection before it occurs is using external barrier methods (i.e., condoms) to not spread the infection rather than rely on secondary treatments (Facts & Figures, 2021). *Chapter 7*

Chlamydia

Chlamydia is a common STI that can infect both men and women. Individuals who have unprotected sex (oral, anal, or vaginal) with someone who has chlamydia are at a high risk of contracting chlamydia. Most people with chlamydia show no symptoms. If you do have symptoms, they may not appear until several weeks after you have sex with an infected partner. Even when chlamydia causes no symptoms, it can eventually cause damage to other parts of your body. Chlamydia is like gonorrhea in that, it can be cured with the right treatment. However, if chlamydia goes untreated in women, the infection can cause pelvic inflammatory disease and indefinitely cause permanent damage to the woman's reproductive system. To prevent such an infection, abstaining from



sex is always an option and using external barrier methods is another. Repeat infections with chlamydia are common (Facts & Figures, 2021). *Chapter 7*

In North Carolina, in 2020, the reported number of chlamydia cases was 64,342, a rate of 607 persons per 100,000 population, a decrease from 71,391 cases in 2019 (rate of 679.8 persons per 100,000 population). In the same year (2020), Alamance County reported 927 chlamydia cases, a rate of 541 persons per 100,000 population. The chlamydia rates for the county have steadily increased since 2013 (646 cases) overall but a decrease from 2019 which was 1,059 new cases at a rate of 626 persons per 100,000 population (Facts & Figures, 2021). *Chapter 7*

Syphilis

Syphilis is an STI that can cause long-term complications if not treated correctly. Symptoms in individuals are divided into primary, secondary, latent, and late syphilis. The infection can be acquired through direct contact with a syphilis sore during vaginal, anal, or oral sex. Syphilis can also be spread from an infected mother to her unborn baby. Syphilis can have very mild symptoms or none. The symptoms of syphilis can resemble those of many other diseases. These can include a painless syphilis sore that appears after initial exposure, or a non-itchy body rash that develops during the second stage on the palms of your hands and soles of your feet. Syphilis can be cured with the right antibiotics from a health care provider. However, treatment might not undo any damage that the infection has already done. It is important to get tested often especially if you have had sex with anyone who has been tested positive for syphilis. In North Carolina, in 2020, the number of early syphilis (primary, secondary, and latent) cases diagnosed was 2,342, an incidence rate of 22.1 persons per 100,000 population. This number is an increase from the 2,113 cases diagnosed in 2019 (rate of 20.1 per 100,000). In the same year (2020), Alamance County reported 48 cases (primary, secondary, and early), a rate of 28 persons per 100,000 population and 12 cases of unknown duration and late, a rate of 7 per 100,000 (2019 North Carolina HIV Surveillance Report, 2020) (Facts & Figures, 2021). *Chapter 7*

Newly Diagnosed Syphilis Annual Cases by Stage of Infection in NC by County, 2020

	Primary, Secondary, and Early	Unknown Duration and Late	Total
County	Cases	Cases	Cases
Alamance	48	12	60

Source: ("Facts & Figures," 2021)

Interpretations: Disparities and Emerging Issues

There are distinct health disparities among certain populations regarding risk factors and sexual health. Young adolescents and adults, ages 20-29, have the highest incidence rates for HIV, Syphilis, Gonorrhea, and Chlamydia. Among gender groups, men are more likely than women to be infected with all STIs and HIV. Further, when examined by race/ethnicity, Black people/African Americans have the highest incidence rates for all STIs and HIV. In 2020, in North Carolina, Black/African American men had the highest rates of early syphilis (47.5 persons per 100,000 population) and primary and secondary syphilis cases (55.9 persons per 100,000). Lastly, for adults and adolescents newly diagnosed with HIV in 2019, men who report sex with men (MSM) accounted for 55.7% of all cases. Several STIs, such as syphilis are risk factors for HIV, communication with partners and health care providers, testing, and treatment are critical in preventing HIV infection among marginalized groups at a high risk. (North Carolina Public

Health, 2019) Circumstantial factors such as poverty and income influence sexual behavior and sexual networks. In Alamance County, 21.8 % of children (those under 18 years of age) are living in poverty which is higher than the state rate of 19.3% (in 2019). These factors contribute tremendously to the persistent, marked racial disparities in STI rates. North Carolina surveillance data shows higher STI rates in some racial and ethnic groups and factors such as poverty and gaps in wealth distribution drive these differences. For families who cannot afford basic needs such as food and transportation, they may have trouble accessing quality sexual health services, and may have had experiences with the health system that discourage the accessing of testing and care (Facts & Figures, 2021). *Chapter 7*

2020 STI rates may not be accurate due to the COVID pandemic and lack of access to testing.

Recommendations

The following are suggestions for reducing the risk of contracting all STIs:

- Talk openly with all partners about STIs and HIV
- Use external barrier methods (i.e., condoms) during all sexual acts to prevent transmission of bacteria and viruses and limit contact with sores from diseases such as syphilis.
- Maintain a mutually monogamous relationship with a partner who has been tested and has negative STI test results. Continue to get tested with your partner. It is the only way to know if you have an STI.
- Normalize seeking reproductive health services
- Continue to undergo regular and frequent STI testing and screenings.
- If you have a STI, work with your provider to get the right medicine.
- Seek pre-exposure prophylaxis, PrEP, an HIV prevention tool that prevents HIV from establishing in the body by stopping the virus from entering your cells or replicating even if you have been exposed.
- Abstain from sex (vaginal, oral, or anal) or reduce the number of partners to prevent exposure to infections.

Current Initiatives and Resources

- The Alamance County Health Department 319 N Graham Hopedale Rd B, Burlington, NC 27217
    - Alamance County Health Department continues to offer free STI screening and treatment for individuals. In addition, Alamance County Health Department offers several internal contraceptive barrier methods for women and provides educational opportunities for young and older women regarding their reproductive health. Teen-Friendly Clinic at the Health Department for adolescents and young adults under the age of 20 seeking free or low-cost care in a confidential setting.
- Open Door Clinic- Alamance County 319 N. Graham Hopedale Road, Suite E, Burlington, NC 27217 Open Door Clinic
    - The Open Door Clinic is located behind the Alamance County Health Department, they offer free healthcare services to uninsured residents of Alamance County

Reproductive Health and Life

Reproductive health refers to the diseases, disorders and conditions that affect the functioning of the male and female reproductive systems during all stages of life. It is important for both men and women to take steps to protect their bodies from infection and injury and prevent problems-including some long-term health problems (CDC, 2017). *Chapter 7*

Reproductive life planning is the process where men and women set goals such as deciding to have a child, and how to achieve those goals. A woman's reproductive system is a delicate and complex system in the body therefore, individuals should choose a reproductive life plan that works best for them. Reproductive life plans also depend on the individual's personal goals regarding education, employment, housing, social support, and personal health behaviors such as diet, tobacco use, and exercise. Reproductive life planning can include planning for pregnancies or not becoming pregnant, considering access to health services for preconception/wellness services including family planning, and having dialogue between with a health care provider. Reproductive life planning is intended to help individuals prevent unintended pregnancies (a pregnancy that is mistimed, unwanted, or unplanned at the time of conception) and STIs/HIV, recognize what steps are needed for having children or not having children and ensure healthy outcomes for women, children, and families (National Institute of Environmental Health Sciences, 2018). *Chapter 7*

An essential part of a reproductive life plan includes the dialogue between the individual and their health care provider. If there is a lack of communication and individuals do not seek healthcare services, problems can arise over the years in relation to the individual's reproductive system and their potential to have children. Disorders of reproduction can include birth defects, developmental disorders, low birth weight, preterm birth, reduced fertility, impotence, and menstrual disorders. The health of women, mothers, and children often serves as a reflection of the present health of a total population, as well as a predictor of health in the next generation. Infant and maternal mortality are often considered indicators of the strength of a community's health care and support systems. Over the years, infant mortality steadily increases in Alamance County, the disparities contributing to the rate are highlighted below.

Disparities and Interpretations

Several maternal factors and behaviors have been linked to preterm birth and low birth weight, which are strongly correlated with infant mortality. These factors include but are not limited to failure to begin prenatal care in the first trimester, mothers having less than a 12th grade education, and births to adolescent women (under age 20). All these factors are affected by a woman's individual health knowledge and behaviors, access to appropriate care, and socioeconomic factors (i.e., education, employment, income). In Alamance County, the infant mortality rate is 4.3 (2019), this rate is lower than the State (6.8) and an overall decrease from the last assessment in 2018. As stated above, education of the mother is a contributing factor to the health of an unborn baby (Demographics Indicator, 2020). *Chapter 7* In Alamance County, there is an unemployment rate of 7.2%. which has increased since 2019 (3.8%). The rate of children (individuals under 18) living in poverty in Alamance County is 21.8% which is slightly higher than the 2019 rate of 19.8% (Demographics Indicator, 2020). *Chapter 7* Family income has been shown to affect a child's well-being and children in poverty are more likely to have physical health problems like low birth weight. To assist women with their health before conception and during pregnancy, birth, and the postpartum period, Alamance County Health Department offers Women's Health Services, Prenatal Care, and Centering Pregnancy. Addressing health conditions among infants early can prevent death, disability, and enable children to live prosperous, healthy lives.

Recommendations

The following are suggestions in preventing unintended pregnancies, STIs/HIV, and other disorders/infections of your reproductive system: (NCDHHS, 2009) *Chapter 7*

- Create a reproductive life plan
- Talk openly with partner and healthcare provider about plan
- Choose external and internal contraceptive methods that are affordable and meet health needs

- Normalize seeking reproductive health and family planning services
- Ask questions ALWAYS if unsure and need clarification

Pregnancy, Prenatal Care, and Adolescent Pregnancy

While Alamance County's low birth weight percentage has been consistent with our region and the state of North Carolina, there has been a notable trend of the current rate being over 2% lower than the state's rate. It is also worth noting that our state's percentage is higher than the national average and our region. Orange and Pitt County have seen a significant increase from 2018 to 2019 and are much higher than the state average. As noted above, this factor is a prime indicator of our community's overall health.

Babies born with low birth weight are more likely than babies of normal weight to have health problems and require specialized medical care in the neonatal intensive care unit. Low birth weight is typically caused by premature birth and fetal growth restriction, both of which are influenced by a mother's health and genetics. The most important things an expectant mother can do to prevent low birth weight are to seek prenatal care, take prenatal vitamins, stop smoking, and stop drinking alcohol and using drugs. It is important to note that in 2019, 1 in 11 babies (9.3% of live births) was low birthweight in North Carolina. The low birthweight rate in North Carolina (9.3%) had not met the Healthy People 2020 objective of no more than 7.8% of live births, set by the U.S. Department of Health and Human Services. Black infants (14.5%) were about 2 times as likely as Hispanic infants (7.4%) to be born low birthweight during 2017-2019 (average). Alamance County's low birthweight average is 10.8 which is higher than the state's and nation's average.

After infants are born, breastfeeding remains an important predictor for health outcomes of both the mother and child. The health benefits of breastfeeding include less risk diarrhea, ear infections, and lower respiratory tract infections, sudden infant death syndrome, diabetes, and obesity. Breastfeeding also helps protect mothers from breast and ovarian cancer. Women's, Infants, and Children (WIC) Food and Nutrition Service remains committed to the nutrition of both mothers and their children, and recipients of these services in Alamance County have remained consistently around or above the North Carolina state average for infant's breastfeeding during their first months of life. Guilford County has higher rates of participation than Alamance County, but Alamance is comparable to state rates.

Prenatal care involves physical exams, weight checks, and various diagnostic tests to monitor the health of the mother and the developing child. In addition, it provides opportunities for physicians to discuss the mother's and infant's health and answer any questions the mother may have regarding the pregnancy. Babies born too early, also known as preterm birth, are most likely to have low birth weight.

It is important to note that Alamance County has a higher teen pregnancy rate relative to Guilford County. Teen pregnancy is highly correlated to low birthweight births. Therefore, it is not only important to provide education to reduce the percentage of teen pregnancies, but it is equally important to ensure that teen mothers have access to prenatal care so that they can have the healthiest possible pregnancy. Although there have been slight reductions in the pregnancy rate per 1,000 for 15-19-year-old women, Alamance County's average rate in 2018 was still higher at 21.1 compared to Guilford County's rate of 20.6 (ALAMANCE COUNTY, NC, 2019). *Chapter 7*

2018 Teen Pregnancies

Number of pregnancies among 15-19-year-old girls:	141
Teen pregnancy rate per 1,000 15-19-year-old girls:	21.1
Teen pregnancy rates by race/ethnicity	
African American:	35.0
Hispanic:	38.6
White:	12.8
Teen pregnancy rates by age	
15-17-year-olds:	11.3
18-19-year-olds:	30.2
Number of pregnancies among 15-17-year-old girls:	36
Number of pregnancies among 18-19-year-old girls:	105
Percent of Repeat Pregnancies:	22%
Teen birth rate per 1,000 15-19-year-old girls:	17.5
NC County Ranking (out of 100 counties):	59
Change since 2017:	-19%

Source: "ALAMANCE COUNTY, NC," 2019

Substance Abuse and Prevention Programs

Tobacco, Alcohol, and Substance Abuse

Most medication/drug overdoses in the U.S., as well as North Carolina, are unintentional. The types of drugs that are included in the following statistics are: commonly prescribed opioids, cocaine, alcohol, heroin, benzodiazepines, psychostimulants and antiepileptics. In 2019, there were 38 all intents poisoning deaths in Alamance County which is a decrease from the two previous years. Alamance County has a slightly lower rate of unintentional overdose deaths compared to the state, 17.3 per 100,000 to 18.5 per 100,000, respectively. Most of these unintentional deaths were between the ages of 25-54 years old (IVP Branch: Poisoning Data, 2022). *Chapter 7*

Unintentional Overdose Deaths, 2019

	Deaths per 100,000 population
Alamance	17.3
North Carolina	18.5

Source: NCDHHS, 2020

North Carolina's law to prohibit smoking in certain public places went into effect January 2, 2010. Burlington Housing Authority (BHA) properties went smoke-free within 25 feet of their entrances on June 1, 2017. In addition, the City of Graham adopted a new policy on October 3rd, 2017, that prohibits smoking on all city property and grounds. Unless businesses, schools, restaurants, and other facilities

prohibiting tobacco smoke have recently replaced the existing tobacco-free signs, the existing signs are outdated and do not clearly communicate that all e-cigarettes are also prohibited.

Since August 2008, G.S. 115C-407 has required that every North Carolina school district have a written 100% tobacco-free school policy that prohibits the use of any tobacco products on campus and at school-related events for students, staff, and visitors. Under S.L. 2013-165, e-cigarettes are defined as "tobacco products." A popular e-cigarette among high school students is shaped like a USB flash drive. JUUL is a popular brand of e-cigarette that has as much nicotine as a pack of 20 regular cigarettes. The North Carolina Youth Tobacco Survey (NC YTS) revealed that 20.9% of North Carolina high school students currently use e-cigarettes (NC YTS, 2019). *Chapter 7* Nationally, in 2021, the rate was 11.3 percent of high schoolers had used e-cigarettes in the past 30 days (North Carolina Youth Tobacco Survey Middle & High School Fact Sheet, 2021). *Chapter 7*

(CDC, 2021; Google Images)

According to the CDC e-cigarettes are unsafe for kids, teens, and young adults because:

- Most e-cigarettes contain nicotine—the addictive drug in regular cigarettes, cigars, and other tobacco products.
- Nicotine can harm the developing adolescent brain. The brain keeps developing until about age 25.
- Using nicotine in adolescence can harm the parts of the brain that control attention, learning, mood, and impulse control.
- Each time a new memory is created, or a new skill is learned, stronger connections – or synapses – are built between brain cells. Young people's brains build synapses faster than adult brains. Nicotine changes the way these synapses are formed.
- Using nicotine in adolescence may also increase risk for future addiction to other drugs.

(About Electronic Cigarettes (E-Cigarettes), 2021) *Chapter 7*

Combating Opioid Abuse

Alamance County, like many counties, has seen increased effects of opioid abuse in recent years. In years past, prescribed pain medication such as oxycodone and hydrocodone, were the leading cause of opioid-related deaths but more recently, heroin, fentanyl, and chemically modified fentanyl (fentanyl analogues) are the majority (IVP Branch: Poisoning Data, 2022). *Chapter 7* From 2015 to 2019, there was a rate of 13.5 opioid related deaths per 100,000 people in Alamance County (NCDHHS, 2020). North Carolina had an increase in illicit opioid overdose deaths by 5% in 2019 compared to 2018 (NCDHHS, 2021). *Chapter 7* To expand the capacity of first responders to reduce the number of opioid deaths, the police departments of Burlington, Elon University, Town of Elon, Gibsonville, Graham, and Mebane, as well as the Alamance County Sheriff's Office, now carry naloxone. In 2017, Alamance County EMS administered 369 doses of naloxone. (Emergency Medical Services of Alamance County).

All Intents Opioid Poisoning Deaths in North Carolina

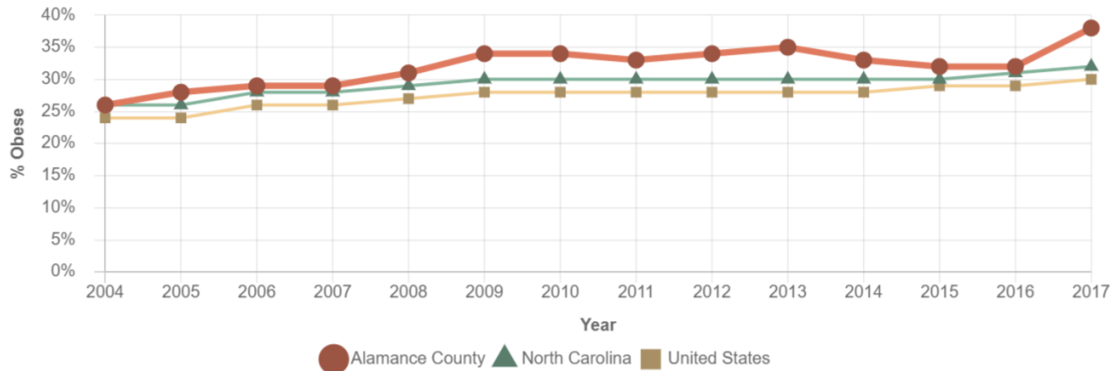
	Deaths per 100,000 population
2018	17.3
2019	18.1

Source: NCDHHS, 2021

The Prescription Drug Abuse Prevention Task Force, a subcommittee of Alamance Citizens for a Drug Free Community, works to promote the four medicine drop boxes available in Alamance County at the Alamance County Sheriff's Office, Elon University, Burlington, and Mebane Police Departments. Additionally, Safe Kids Alamance County collaborates with local law enforcement twice a year to hold Operation Medicine Drops at local pharmacies throughout the county. These services allow residents to drop off unused prescription medications, preventing them from being abused or contaminating the water supply (Safe Kids Worldwide, 2018). *Chapter 7*

Obesity

The percentage of obese adults is an indicator of the overall health and lifestyle of a community. Obesity increases the risk of many diseases and health conditions, including heart disease, type 2 diabetes, cancer, hypertension, stroke, liver and gallbladder disease, respiratory problems, and osteoarthritis. Losing weight and maintaining a healthy weight help to prevent and control these diseases. Being obese also carries significant economic costs due to increased healthcare spending and lost earnings.



Notes:
Each year represents a 3-year average around the middle year (e.g. 2015 is the middle year of 2014-2016).
Starting with the 2011 data, a new BRFSS methodology was introduced that included cell phone users. Data from prior years should only be compared with caution.

The above graph illustrates the percentage of adults with a body mass index of 30.0 or greater as reported by weight and height for the US, NC, and Alamance County. This measure is compounded by food insecurity, the percentage of a population who lack access to food, and/or lack of access to healthy food, the percentage of population who are low-income and do not live close to a grocery store. These individuals tend to consume too many non-nutrient dense calories. According to the 2021 County Health Rankings, which uses 2018 data, in Alamance County, 14% (22,470) of the population experiences food insecurity and 10% (15,144) of the population lack access to healthy food. In NC, 14% of the population

is food insecure and 7% of the population lacks access to healthy food (County Health Rankings Model, n.d.). *Chapter 7*

Oral Health

Oral health refers to the complete state of the teeth and bone, gums, tongue, lips, and cheeks as well as other supporting tissues in the mouth in the absence of disease. Common oral health problems include cavities, gum disease, and oral cancer. Both cavities, meaning holes in the teeth, and gum infections expose the body to further bacteria. These diseases may contribute to heart and lung disease, stroke, premature births, low birth weight deliveries, and diabetes (Basics of Oral Health, 2021). *Chapter 7*

The Surgeon General's Report found that those who suffer the worst oral health are among the poor of all ages; poor children and adults over the age of 65 particularly vulnerable. Members of racial and ethnic minority groups also experience a disproportionate level of oral health problems. According to the most recent report, there has been a decline in Edentulism, but disparities remain among lower income adults. This disproportionately affects some adults based on where they live (Albino et al., 2019). *Chapter 7*

Oral health has been shown to impact overall health and well-being. According to the Centers for Disease Control and Prevention, nearly one-third of all adults in the United States have untreated tooth decay, or tooth caries. Additionally, among adults aged 20 and older, about 90% have had at least one cavity and 1 in 4 adults aged 20 to 64 currently has at least one cavity. Periodontal disease and tooth decay are the most frequent causes of tooth loss. Untreated cavities can lead to abscess (severe infection) underneath the gums causing it to spread to other parts of the body and have serious, and/or fatal results in rare cases. Given these serious health consequences, it is important to maintain good oral health.

Oral Cavity and Pharynx Cancer

Incidence Rate

Oral cancer forms in tissues of the mouth or the oropharynx (the part of the throat at the back of the mouth). According to the American Cancer Society, tobacco is the leading cause for head and neck cancers, including oral cavity and oropharyngeal cancer. The known risk factors for developing oral cancer are tobacco use and heavy alcohol consumption. Individuals who both smoke and drink excessively risk significantly more than those who do not smoke or drink (Risk Factors for Oral Cavity and Oropharyngeal Cancers, 2021). *Chapter 7*

Tooth Decay

Tooth decay is the destruction of your tooth enamel, the hard, outer layer of your teeth. Tooth decay can be a problem for children, teens, and adults. When you eat or drink foods containing sugars, the bacteria in plaque produce acids that attack tooth enamel. The stickiness of the plaque keeps these acids in contact with your teeth and over time the enamel can break down, which creates the formation of cavities. Over the years, bacteria can accumulate in these tiny crevices causing acid to build up which leads to decay (Tooth Decay, n.d.). *Chapter 7*

Dentist Rate

Oral health has been shown to impact overall health and well-being. According to the Centers for Disease Control and Prevention, nearly one-third of all adults in the United States have untreated tooth decay, or tooth caries, and one in seven adults ages 35 to 44 years old has periodontal (gum) disease (Basics of Oral Health, 2021). *Chapter 7* Tooth decay is the most prevalent chronic infectious disease affecting children in the U.S. and impacts more than a quarter of children ages 2 to 5 and more than half of children ages 12 to 15. According to the North Carolina Oral Health Regional Snapshot, approximately 15% of kindergarten children have untreated tooth decay and over 50% of Medicaid eligible children ages 1-20 years received preventative dental services. The Alamance County Children's Dental Health Center offers cleaning, fluoride treatment, infant oral care, tooth brushing/flossing instruction, nutrition counseling, sealants, fillings, crowns, extractions, and emergency treatment for children 0-21 years of age. Charges are based on family income. Medicaid and some insurance plans are accepted. Professional dental care helps to maintain the overall health of the teeth and mouth and provides for early detection of precancerous or cancerous lesions (References and Statistics, 2021). *Chapter 7*

Lead Poisoning

Lead poisoning occurs over time as a person inhales small amounts of the toxic compound, usually from lead-based paints or contaminated dust that lingers in old buildings from before regulations existed. Children under the age of six years are particularly vulnerable to damage from lead, which can severely impair mental and physical development and be fatal at high levels. Other sources of lead include contaminated air, water, and soil (Lead poisoning, 2022). *Chapter 7*

In 2019, 50.1 percent of all children between the ages of one and two years in Alamance County were screened for elevated lead levels in their blood, and 1.8 percent of those children screened were found to have elevated blood lead levels, which is a decrease from 2014 when percentages were higher than two percent. Although Alamance County's rates are steadily decreasing, they are still higher than surrounding counties and the North Carolina state average of 0.9. It should also be noted that the data represent a very small incidence of children and numbers should be interpreted with caution (North Carolina Childhood Blood Lead Surveillance Data, 2021). *Chapter 7*

Lead: percent of children (ages 1-2) found to have elevated blood levels

County	Percent
Alamance	1.8
Caswell	0.9
Chatham	0.5
Guilford	0.8
Orange	0.5
Randolph	1.1
Rockingham	1.6

Rowan	1.2
NC	0.9

Source: “North Carolina Childhood Blood Lead Surveillance Data,” 2021

Mental Health

Mental health is just as important as physical health to our overall health and well-being. It includes our emotional, psychological, and social well-being. Our mental health affects how we think, feel, and act, as well as how we handle stress, relate to others, and make healthy choices. Mental health is important at every stage of life, from childhood to adulthood (Mental Health, 2021). *Chapter 7*

The topic of mental health gained increased attention since the presence of the opioid epidemic in 2016 and has continued through the COVID-19 pandemic that began in 2019. It was commonly known among health professionals and the public that the U.S. mental health system needed repair; there were not enough providers and access to services was limited. This was prior to the COVID-19 pandemic. Now, during the pandemic, we are facing what the National Alliance on Mental Health calls a “loneliness epidemic exaggerated by the isolation required by COVID-19 pandemic” (View the Latest, n.d.). *Chapter 7* While the restrictions imposed by leaders due to the COVID-19 pandemic were preventative and necessary, social distancing created many subsequent stressors that disproportionately impacted underrepresented groups within the U.S.

It is estimated that one in five American adults experience some form of mental illness in any given year. Across the population, one in every 20 adults is living with a serious mental health condition such as schizophrenia, bipolar disorder or long-term recurring major depression (View the Latest, n.d.). *Chapter 7*

The table below provides a snapshot of the number of persons served by the Local Management Entity-Managed Care Organizations in NC during fiscal year 2019-20.

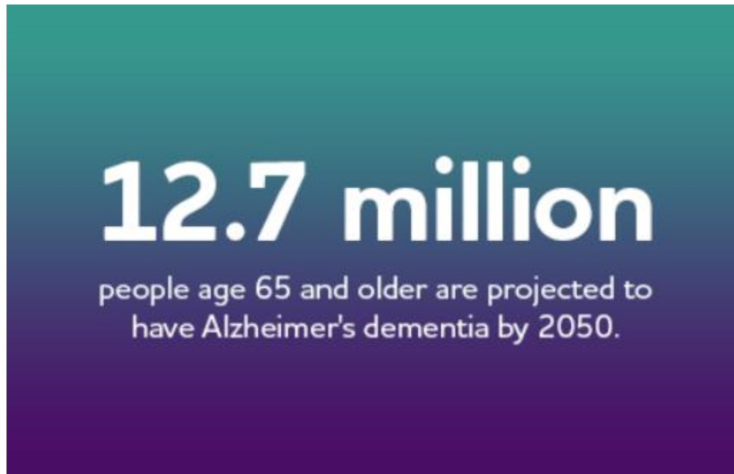
NUMBER OF DUPLICATED PERSONS SERVED BY AGE DISABILITY
NORTH CAROLINA'S LME-MCOs AND TASC REGIONS
BY NAME, FY2019-2020

LME	PERSONS	MENTALLY ILL			DEVELOPMENTAL DISABILITIES			SUBSTANCE ABUSE		
	SERVED	TOTAL	ADULT	CHILD	TOTAL	ADULT	CHILD	TOTAL	ADULT	CHILD
Alliance	77,028	58,581	54,454	4,127	3,813	2,973	840	14,634	14,625	9
Cardinal Innovations	52,505	34,573	28,811	5,762	2,996	2,685	311	14,936	14,882	54
Eastpointe	38,789	29,218	26,356	2,862	2,253	1,886	367	7,318	7,302	16
Partners Behavioral	48,582	36,735	34,954	1,781	1,911	1,632	279	9,936	9,927	9
Sandhills	50,147	38,974	28,589	10,385	3,309	2,233	1,076	7,864	7,785	79
Trillium	39,426	25,095	19,478	5,617	1,928	1,300	628	12,403	12,329	74
Vaya	38,261	26,607	24,998	1,609	1,560	1,351	209	10,094	10,067	27
TASC Region 1	8,665	2,313	2,306	7	0	0	0	6,352	6,337	15
TASC Region 2	8,580	2,307	2,298	9	0	0	0	6,273	6,260	13
TASC Region 3	8,661	3,416	3,388	28	0	0	0	5,245	5,226	19
TASC Region 4	4,930	488	486	2	0	0	0	4,442	4,433	9
STATE TOTAL	375,574	258,307	226,118	32,189	17,770	14,060	3,710	99,497	99,173	324

Alamance County was served by Cardinal Innovations until 2021; it is now served by Vaya.

Dementia and Alzheimer’s Disease

Dementia is an overall term for a group of disorders that severely affects memory, language, complex motor skills, and other intellectual abilities seriously enough to interfere with daily life. Dementia is much more common in the geriatric population, with more than 6 million adults 65 and older currently living with it, and 12.7 million projected to have Alzheimer’s dementia by 2050 (Alzheimer’s Disease Facts and Figures,2021). *Chapter 7*



Alzheimer's disease is the most common form of dementia among the geriatric population, accounting for 60 to 80 percent of dementia cases. It is a progressive and irreversible disease where memory and cognitive abilities are slowly destroyed making it impossible to carry out even simple, daily tasks. Alzheimer's disease typically manifests after the age of 60 (Alzheimer’s Disease Facts and Figures, 2021). *Chapter 7*

According to the Centers for Disease Control and Prevention, Alzheimer's disease is the sixth leading cause of death among adults aged 65 and older. Similarly, it is the sixth leading cause of death in NC and Alamance County. Alzheimer's and other dementias are estimated to cost $355 billion dollars by 2050 (Alzheimer’s Disease, 2021). *Chapter 7*

CHAPTER 8 DETERMINANTS OF HEALTH

Nonperishable, SE Court Square, Graham

Key Questions:

- What are the social determinants of health?
- How do the social determinants of health affect show up in Alamance County

Key Words: Social Determinants of Health

Chapter 8 Determinants of Health

According to Healthy People 2030, Social Determinants of Health are conditions (social, economic, and physical) within the environment in which people are born, live, learn, work, play, worship, and age that affect a wide range of health outcomes, risk factors, basic functioning, and overall quality of life. Health starts in homes, schools, workplaces, neighborhoods, and communities; health outcomes are determined in part by access to social and economic opportunities (Social Determinants of Health, n.d). *Chapter 8* "The quality of a person's housing and their access to healthy food, green spaces, health insurance and health care, and an equal education are based on structural determinants of health" (Patel et al., 2021). *Chapter 8*

These above-named conditions are a direct result of a system of oppression that has led to disparities and inequities in these determinants (Social Determinants of Health, n.d.). *Chapter 8* Social and economic factors make up 40% of one's health outcomes (County Health Rankings Model, n.d.). These determinants are not always choices (some are) but a result of the environment that has been created for some people (Social Determinants of Health, n.d.). *Chapter 8*

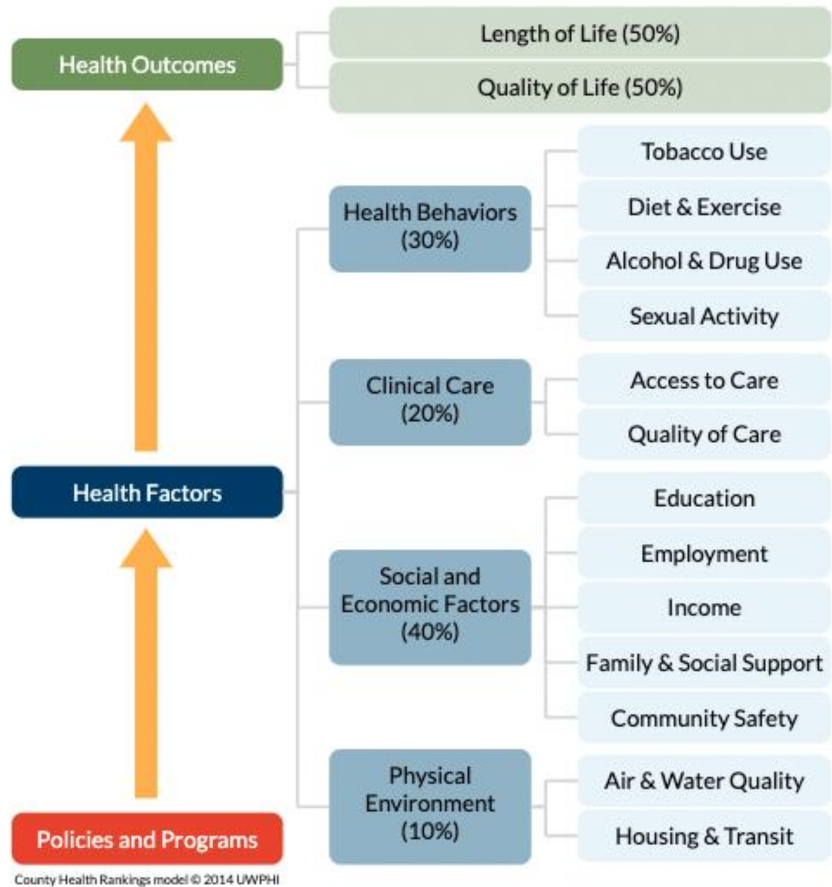
Determinants of Health cover a broad range of factors in determining the health of the individual as well as the community. The act of building community power, including base building and community organizing, however, remains untapped and represents an area of opportunity for advancing racial and health equity (Social Determinants of Health,"n.d.). *Chapter 8*

These factors include:
Policymaking
Social factors
Health services
Individual behavior
Biology and genetics

Choices are made based upon:

Individual Behavior

Human behavior contributes strongly to health outcomes. Most preventable deaths and illnesses in the United States are directly caused by human behaviors such as smoking, risky sexual behaviors, and unhealthful diets. Behavior modification depends on many structural and environmental factors as well as individual motivation and education. Unfortunately, the options that many individuals have or choices they are forced to make are not always the healthy option. For example, affordability of food and safe housing (County Health Rankings Model, n.d.). *Chapter 8*



Income

Median household income reflects the relative affluence and prosperity of an area. Areas with higher median household incomes are likely to have more educated residents and lower unemployment rates. Higher employment rates lead to better access to healthcare and better health outcomes, since many families get their health insurance through their employer. Areas with higher median household incomes also have higher home values and their residents enjoy more disposable income (Social Determinants of Health, n.d.). *Chapter 8*

Table 1: Poverty and Economic Hardship

	County	State
Living in poverty, 2015-2019		
Percentage of people living in poverty	16%	15%
Black	26	22
White	11	10
Latinx	28	26
Asian	11	11
American Indian	17	25
Child poverty rate	25	21

Table 2: Employment

	County	State
Employment, June 2021		
Unemployment rate	5.0%	4.9%
Number of unemployed people actively seeking work	4,070	247,430
Number of employed people	77,790	4,790,630
Percent change in employment, June 2019 - June 2021		
Change in unemployed people actively seeking work	18%	18%
Change in people employed	-2%	-2%

Table 3: Educational Attainment

	County	State
High school graduation, 2020		
High school graduation rate	84%	88%
Black	83	85
White	86	91
Latinx	82	82
Asian	94	94
American Indian	NA	85
College degrees, 2015-2019		
Percentage of adults with a bachelor's degree or higher	25%	31%
Men	24	30
Women	26	32
Median earnings for men with a bachelor's degree†	$57,700	$63,300
Median earnings for women with a bachelor's degree†	$43,800	$42,700

Table 4: Income and Ability to Afford the Basics

	County	State
Living Income Standard, 2019		
Living Income Standard* annual income (1 adult, 2 kids)	$44,000	$47,700
Median earnings and income, 2015-2019		
Median worker earnings	$35,900	$37,400
Median worker earnings as a percentage of Living Income Standard*	82%	78%
Median household income	$49,700	$54,600

Table 5: Access to Affordable Housing

	County	State
Rent burden, 2015-2019		
Percentage of renter households paying more than 30% of income on rent	49%	47%
Percentage of renter households paying more than 50% of income on rent	25%	23%
Fair market rent, 2021		
Fair market monthly rent for a two-bedroom home	$885	$960
Number of work hours at minimum wage it takes to afford a two-bedroom home at fair market rent	94 hours per week	102 hours per week

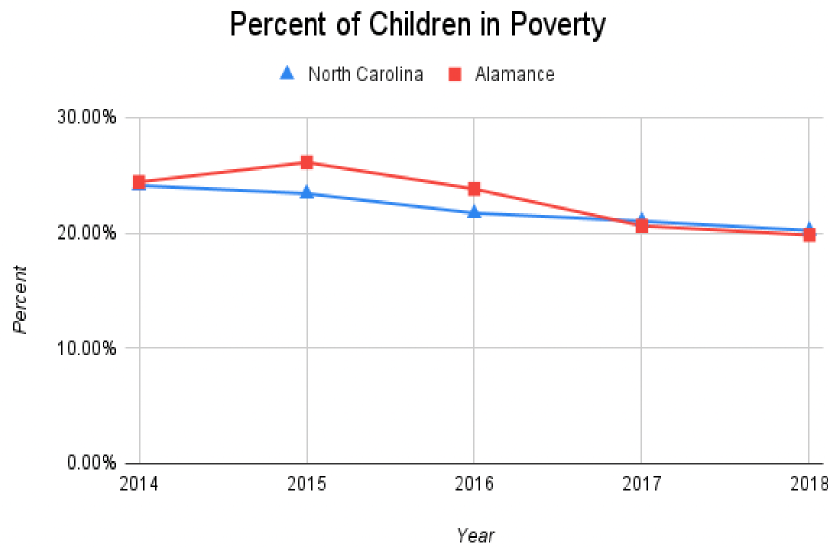
Table 6: Healthy Lives and Communities

	County	State
Health insurance, 2015-2019		
Percentage of residents without health insurance	11%	11%
Life expectancy, 2016-2018		
Life expectancy in years	77	78
Black	75	76
White	78	79
Mental health providers, 2020		
Residents per mental health provider	680	390
Food assistance, June 2021		
Percentage of residents receiving SNAP	16%	15%

* The Living Income Standard is a measure of what a family needs in order to cover the basic expenses. See more at NCJustice.org/LIS.
** A family of four is considered low-income if they make below 200% of the federal poverty line, or $51,500 in 2019.
† Does not include people who also have a graduate degree
†† Candidates include all people willing to work in the county, regardless of county of residence.
NA values indicate insufficient data for this county.

Note: Many of the data points in this County Snapshot reflect pre-COVID-19 conditions.

There is considerable evidence that one's income significantly impacts their health and other social determinants of health. Individuals and families that have lower incomes also experience higher amounts of stress, which can have negative effects on the body. As seen in the poverty graphs, 16% of individuals and families are living in poverty in Alamance County. 26% of African Americans live in poverty. These numbers are based upon the Federal Poverty Level as established by the federal government (Social Determinants of Health, n.d.). *Chapter 8*



Federal poverty thresholds are set every year by the Census Bureau and vary by size of family and ages of family members. A high poverty rate is both a cause and a consequence of poor economic conditions. A high poverty rate indicates that local employment opportunities are not enough to provide for the local community. Through decreased buying power and decreased taxes, poverty is associated with lower quality schools and decreased business survival (SELF-SUFFICIENCY STANDARD, 2022). *Chapter 8*

The Self-Sufficiency Standard for North Carolina 2019 defines the amount of income necessary to meet the basic needs of North Carolina families, differentiated by family type and where they live. The Standard calculates the costs of six basic needs plus taxes and tax credits. It assumes the full cost of each need, without help from public subsidies (public housing, Medicaid, or childcare assistance) or private/informal assistance (unpaid babysitting by a relative or friend, food from food banks, or shared housing). More than 700 family compositions for each of NC's 100 counties are calculated. This research was conducted by the University of Washington School of Social Work. Currently, 36 states across the country have a Self-Sufficiency Standard.

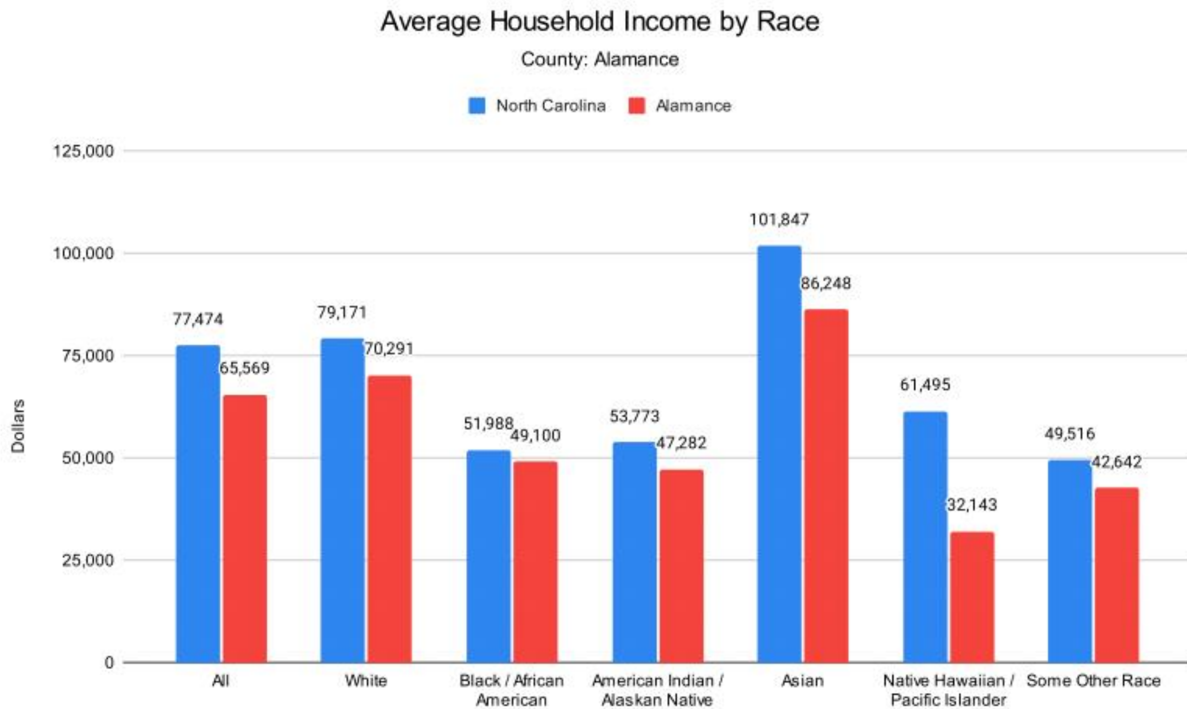
The Self Sufficiency Standard pioneers a new measurement of wage adequacy (SELF-SUFFICIENCY STANDARD, 2022). *Chapter 8*

The Self Sufficiency Standard is a basic needs budget

Federal Poverty Level   Self-Sufficiency Standard

The Self-Sufficiency Standard is calculated through a "Market Basket of Good" approach. The Federal Poverty Level is only based on the cost of food. Other flaws of the Federal Poverty Measure include: the measure is more than 50 years old, has been adjusted for inflation, yet inflation does not represent the real acceleration of costs; only considers total number

in household with no adjustment for age of person, does not account for specific geographic location of family (SELF-SUFFICIENCY STANDARD, 2022). *Chapter 8*
Beyond the self-sufficiency standard, there are also large gaps in income between races in Alamance County. The average household income of a white individual in Alamance County at the age of 35 is $47,000. The average household income of a Black individual in Alamance County at the age of 35 is $25,000, almost half their white counterpart (The Opportunity Atlas, n.d.). *Chapter 8*

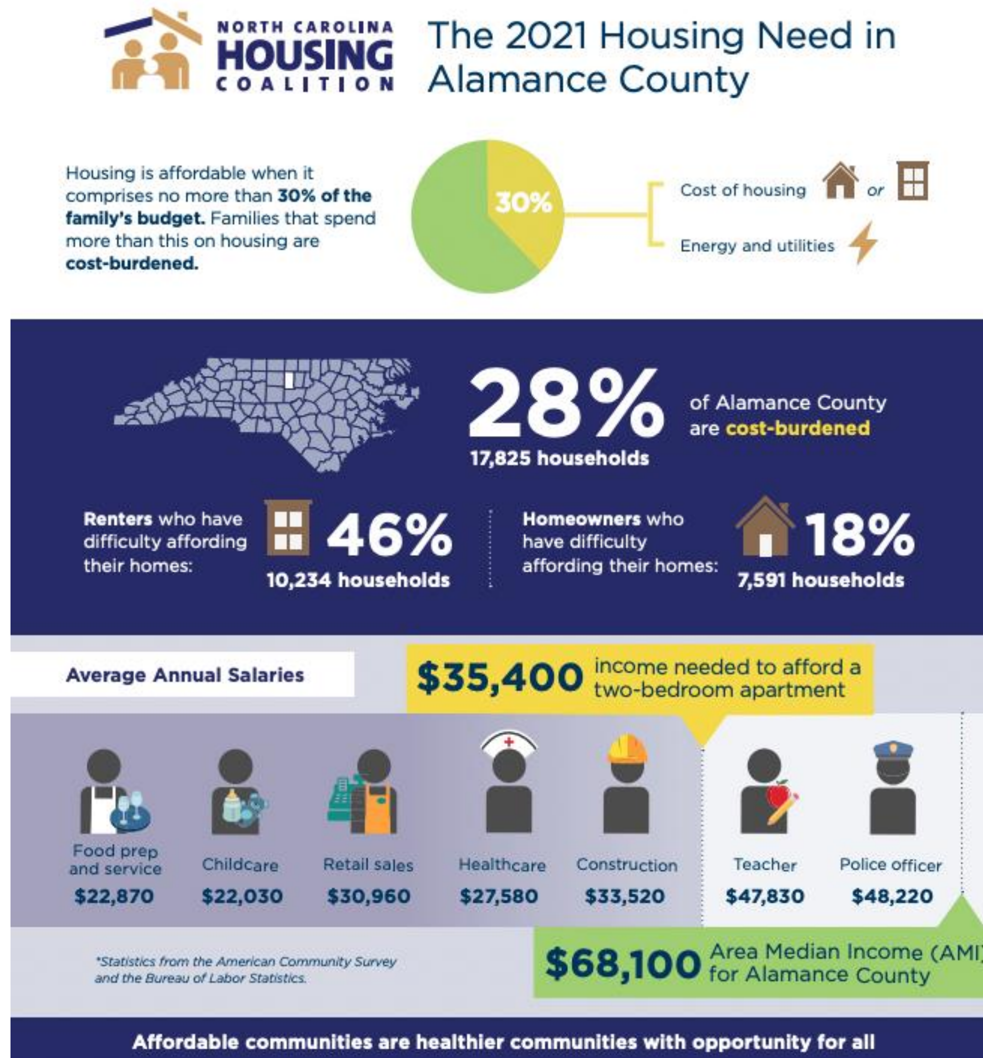


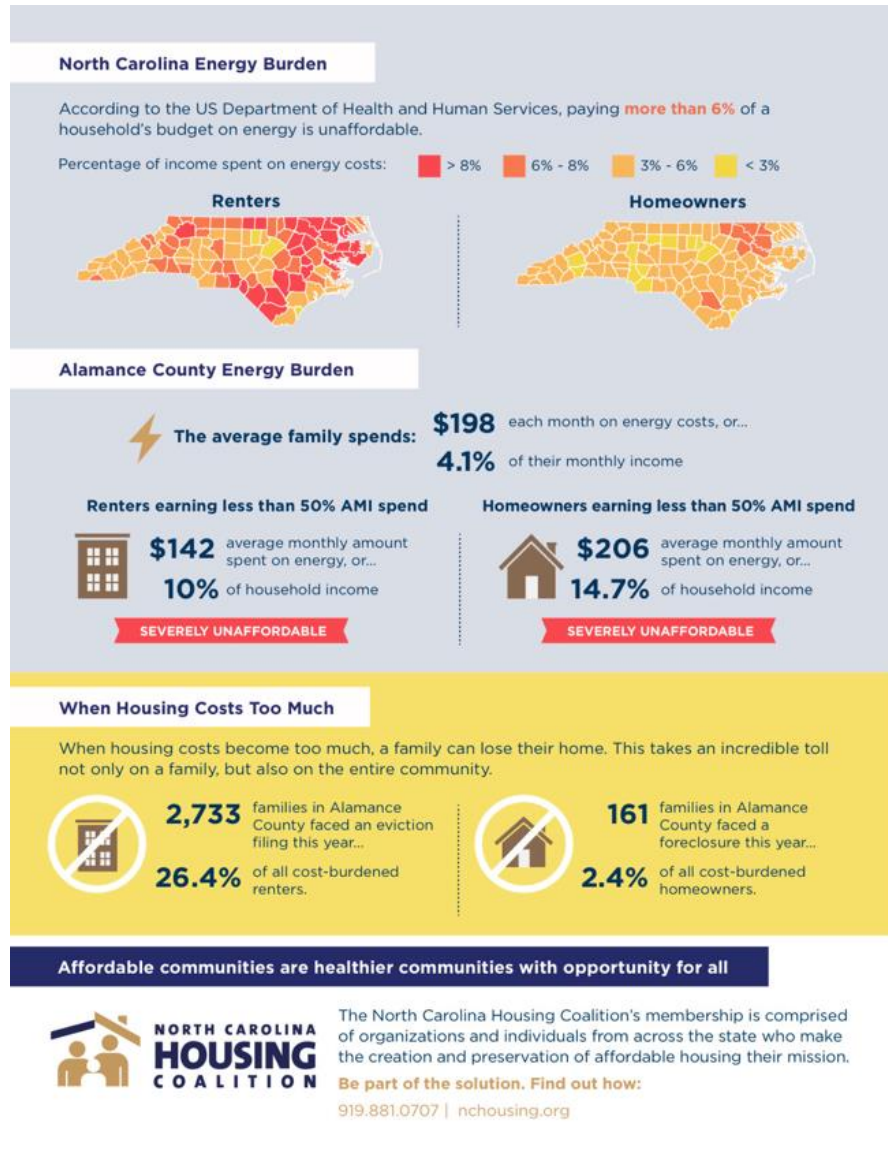
Housing

Housing is defined as having a consistent place to reside. Unstable or lack of quality housing can lead to physical and mental illness as well as increased mortality. This is also true for those who are transient and move from location to location. “Poor quality housing can lead to chronic illness, injuries, and affect childhood development and potentially birth outcomes” (Social Determinants of Health, n.d.). *Chapter 8*

Access to stable housing is often the foundation for an individual’s success and is a critical component for family stability; without safe, affordable, and permanent housing in place it is often challenging to make ends meet or thrive. Stable housing provides the basis for obtaining job training and keeping food on the table while also reducing the stress that often leads to substance abuse. In Alamance County there is not a lack of housing, but there is a lack of affordable housing. The minimum wage falls far short of what is needed to afford the fair market rent for a 2- bedroom housing in Alamance County; the housing wage needed for a two-bedroom house is 2.48 times higher than the minimum wage (National Low-Income Housing Coalition, 2022). *Chapter 8*

In 2019, 27% of households in Alamance County were cost-burdened and struggled with affordability. That equates to 17,118 households, which is a sizable number of the total population of the county. Just 11% of Alamance County employees are paid enough to afford the rising cost of living as a sole provider. The Fair Market Rent for a two-bedroom residence is $891.00 per month. The average two-bedroom apartment in Burlington costs $1,069.00 per month (Burlington, NC Rental Market Trends, n.d.). *Chapter 8*





("The 2021 Housing Need in Alamance County," 2021).

Food Security (Food Sovereignty)

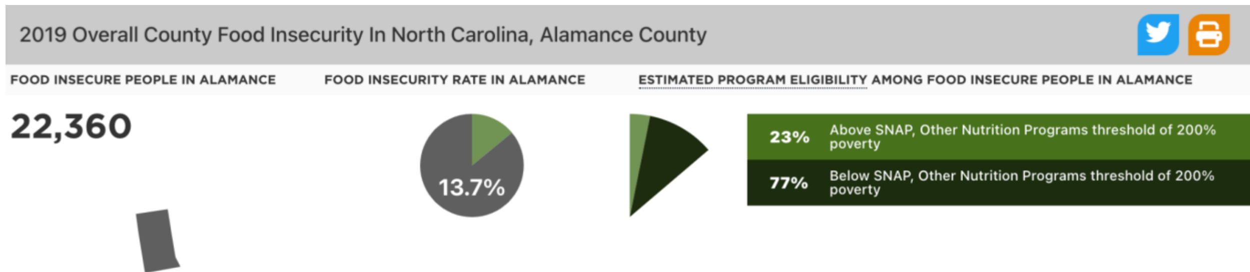
Food access is another basic need and social determinant that directly affects someone's health (Staren, 2020). *Chapter 8* Food security means access for all people, all the time, to enough food for an active, healthy life. Both nationally and statewide, one in six people face hunger. According to the USDA, a "food desert" is defined as an urban neighborhood or a rural town without ready access to fresh, healthy, and affordable food. Instead of supermarkets or grocery stores, these communities may have no food access, or are served only by fast food restaurants or convenience stores that offer few healthy options. Low-access communities are defined as at least 33 percent of the population living more than one mile from a supermarket or large grocery store, ten miles in a non-metropolitan census. This forces people to make choices for an often less-healthy option given proximity (Staren, 2020). *Chapter 8*

Ranges of Food Security

	Level of Security	Definition
Food Secure	High Food Security	Households had no problems, or anxiety about, consistently accessing adequate food
	Marginal Food Security	Households had problems or anxiety at times about accessing adequate food, but the quality, variety and quantity of food were not substantially reduced
Food Insecure	Low Food Security	Households reduced the quality, variety and desireability of their diets, but the quantity of food intake and normal eating patterns were not substantially disrupted
	Very Low Food Security	At times during the year, eating patterns of one or more household members were disrupted and food intake reduced because the household lacked money or other resources for food

Food insecurity can occur because of a few different issues. Poverty is a strong driver of food insecurity but also those living in rural areas. Individuals and families that classify as living over the Federal Poverty Line may still suffer from food insecurity. “Individuals who are food insecure are disproportionately affected by chronic diseases, including diabetes, high blood pressure and obesity, which exacerbates adverse effects on overall health and wellbeing” (Staren, 2020). *Chapter 8*

Food Insecurity Data by Feeding America (2019)
As many as 22,360 people are food insecure in Alamance County, which equates to a 13.7% food insecurity rate. According to Feeding America, food insecurity is “defined as a lack of consistent access to enough food for every person in a household to live an active, healthy life” (Food Insecurity in The United States Before COVID-19, n.d.). This can be a temporary situation for a household or can last a long time” (Food Insecurity in The United States Before COVID-19, n.d.). *Chapter 8*

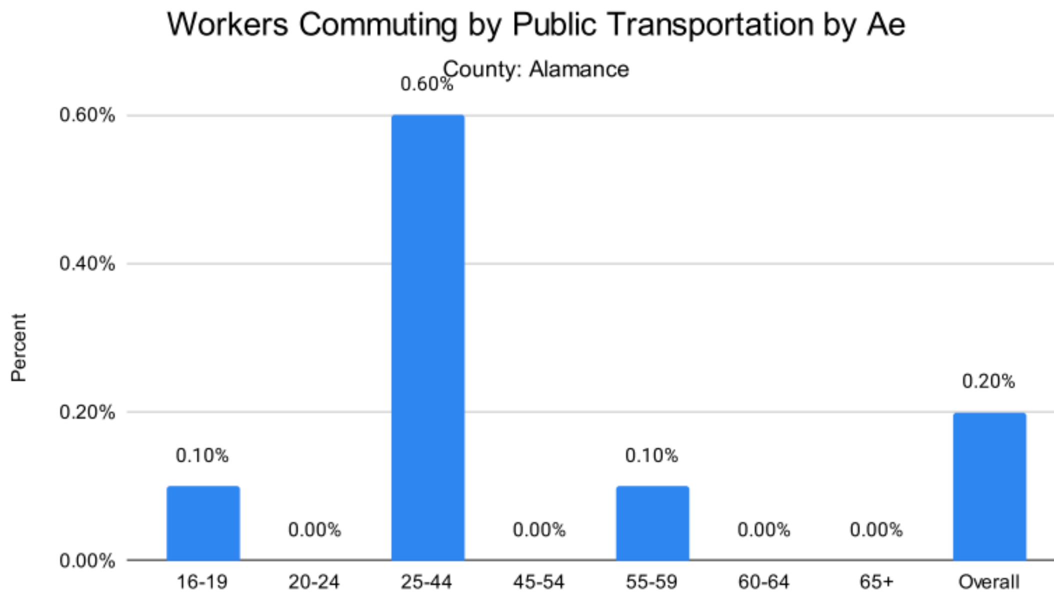


Transportation

Public transportation offers mobility to U.S. residents, particularly people without cars. Transit can help bridge the spatial divide between people and jobs, services, and training opportunities. Public transportation is also beneficial because it reduces fuel consumption, minimizes air pollution, and relieves traffic congestion.

The following variables used for transportation planning help us understand how proposed projects impact the human environment:

- Population trends
- Age
- Racial composition
- Limited English Proficiency
- Educational Attainment
- Housing Trends
- Age of Housing
- Median House Values
- Home Ownership
- Vehicle Ownership/Availability
- Median Household Income
- Unemployment
- Water and Sewer Quality
- Major Employers
- Commuting Patterns
- Community Resources
- Community Services



Land Use

Parks and Recreation

Ample availability and access to safe, clean, and green open parks and recreational spaces that appeal to interests and activities across generations have been found to significantly improve health and wellbeing. Cities with ample green space have been found to have happier and more productive citizens, with less community demand for health services. There are four pathways in which green space can improve community health and well-being: (1) reduces exposure to air pollutants; (2) encourages physical activity (3) stress compensation (4) and fosters greater social cohesion (ALAMANCE PARKS 2020-21 ANNUAL REPORT, 2021). *Chapter 8*

Through outdoor spaces, trails, athletic programs, community centers, and special events, Alamance Parks provides Alamance County with access to healthy and fun activities that encourage healthy lifestyles. Last year, the parks and community centers enjoyed 716,885 visitors, and the athletics programs enrolled 198 children. Special Olympics continues to serve 400 special needs children and adults in the Alamance community and engage thousands of volunteers each year. The community centers were utilized by 90,192 members of the community last year. Despite in-person gathering limitations due to the COVID-19 pandemic, the staff continued to provide the community with creative program opportunities both in-person and virtually. Staff logged a total of 3,915 program contact hours, conducted 84 total programs, and served 1,438 total participants during the 2020-21 fiscal year. Alamance Parks strives each year to expand and improve upon the opportunities and services it provides to the community (ALAMANCE PARKS 2020-21 ANNUAL REPORT, 2021). *Chapter 8*

There are six park facilities owned and operated by the Alamance County Recreation and Parks Department. Park facilities are located at: The Recreation and Parks Office in Graham, Cedarock Park in Burlington, Morgan Place Park in Elon, Pleasant Grove Recreation Center in northeast Alamance County, the Eli Whitney Recreation Center on Greensboro-Chapel Hill Road, and the Ray Street Creation Center in Graham.

Alamance County Recreation and parks offers basketball, little league baseball, softball, tee-ball, and football for children ages 4 to 14. Four athletic complexes located at elementary schools are utilized for youth sports as well as 15 local sports fields and eight gyms throughout the county.

Acreage & Share Totals for Existing Land Use Categories

Alamance County recently adopted a land use plan in 2020. From the 2007 adoption of the original Land Development Plan (LDP) to the beginning of this update in 2019, Alamance County has experienced notable change. Since 2010, builders have added 7,771 new homes to the county's housing stock. Employers added nearly 9,000 jobs during this period. Environmental concerns have accompanied new development pressures. Even during the preparation of this plan, the community experienced social change in response to the COVID-19 pandemic and civil unrest due to systemic inequities. Alamance County faces new issues and challenges each day. In times of rapid change, it is important to acknowledge the past and look to the future. This plan is a product of many community conversations, which should help Alamance County address pressing issues and shape its future (ALAMANCE COUNTY LAND DEVELOPMENT PLAN AND SNOW CAMP SMALL AREA PLAN, 2020). *Chapter 8*

Land Development Plan Recommendations

Economic Development
- Revitalization and reuse of existing structures and sites

Transportation
- Thoroughfare safety
- Street interconnectivity

Industrial Development
- Suitable locations
- Natural features to buffer heavy industrial sites
- Light industry in urbanized areas
- Access to thoroughfares

Commercial Development
- Lack of dimensional standards
- Office and Institutional Development
- Parking
- Building Placement
- Buffers

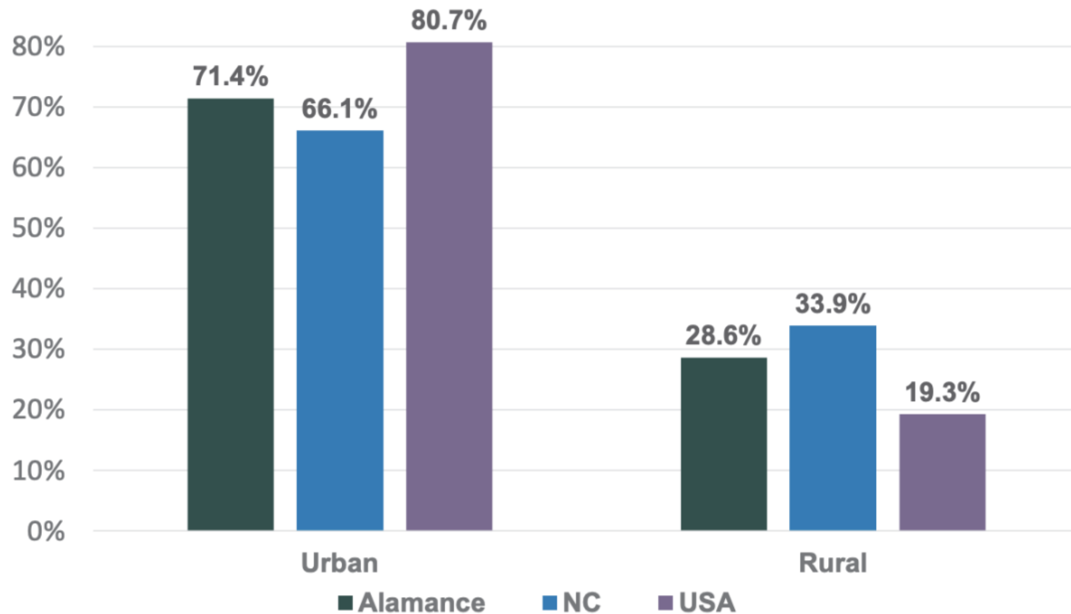
Residential Development
- Single-family homes
- Cluster developments and Planned Unit Developments (PUDs)
- Floodplain avoidance
- Transportation network
- Density incentives

Agricultural and Rural Preservation
- Low-density
- Conservation of productive lands

Historic and Cultural Preservation
- Site designation and registration
- Adaptive reuse
- Tourism opportunity
- Structure protection

Community Appearance
- Community gateways
- Sign control
- Landscaping
- Infill development
- Street trees
- Natural feature preservation

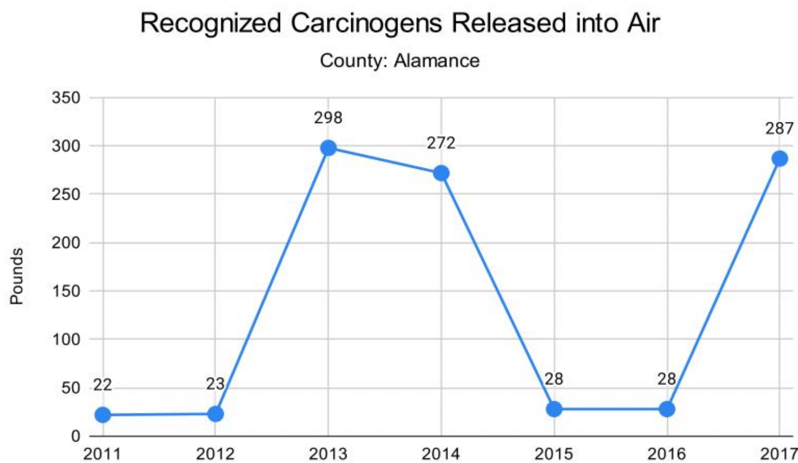
Environmental Quality
- Floodplain avoidance
- High-density in water supply watershed avoidance
- Noise, odor, air, and water pollution mitigation
- Land conservation efforts



Social and economic factors strongly influence the health of the individual and community. Studies repeatedly show a strong correlation between socioeconomic status and health outcomes. Internationally, public health practitioners are implementing health impact assessment (HIA) to account for the direct and indirect health impacts of public policy. Since 2003 the San Francisco Department of Public Health has been developing a practice of Health Impact Assessment in the context of land use development. The Department uses several complimentary tactics, including: 1) analysis of health impacts of development projects and land use plans; 2) integration of health impact analysis in environmental impact assessment; and 3) facilitation of community dialogue on the relationships among land use and public health.

Understanding how a community compares to surrounding areas in terms of key social indicators such as educational attainment and crime rates as well as understanding the comparative economic status of a community is necessary to determine the types of community health programs needed.

Pollution and Air Quality



The WHO (World Health Organization) has identified air pollution as a global health threat given the harm it can have on human health. In the United States, an African American child is eight times more likely to die from asthma than their white counterpart. The quality of the air that we breathe is directly affecting health outcomes and the variations of exposure across different races and ethnicities (Patel et al., 2021). *Chapter 8*

Water Quality

Safe and non-toxic water, indoor and outdoor air, and soil are imperative to ensuring community health and protecting residents. Pollution and toxic exposures impose devastating health risks on residents, which often require complex and expensive treatment and care. From 2007 to 2017, over 63 million Americans have been exposed to unclean/unsafe drinking water. This exposure may originate from raw sewage, chemical dumps, agricultural runoff, urbanization, the use of synthetic substances, oil spills, or human litter. Children are often the most vulnerable when looking at the health effects of unclean drinking water: 6,000 children globally die of water related diseases every day (Social Determinants of Health, n.d.). *Chapter 8*

Healthy Days and Disability

People's assessment of their physical health, which includes physical illness and injury, is a good measure of recent health. When people feel healthy, they are more likely to feel happy and to participate in their community socially and economically. Areas with unhealthy populations lose productivity due to lost work time. Healthy residents are essential for creating a vibrant and successful community.

Persons with a disability are more likely to live in poverty as compared to the rest of the population. The poverty rate is especially high among people with long-term disabilities. Without adequate income, individuals with disabilities may not be able to afford necessary expenses, such as rent or mortgage,

utility bills, medical and dental care, and food. People with disabilities living below the poverty level are more likely to experience material hardship in comparison to others living in poverty.

Alamance County Department of Social Services

Alamance County Department of Social Services provides a variety of support services for individuals and families in need.

Medicaid

Medicaid is a health insurance program for low-income individuals and families who cannot afford health care costs. Medicaid serves low-income parents, children, seniors, and people with disabilities. Alamance County Department of Social Services reports for FY'17-18':

- 7,691 applications were taken for medical assistance, including Family & Children's programs as
  well as adult programs providing essential coverage for medical coverage for doctor visits, prescription drugs, hospitalization, and preventative care
- 13,443 Family & Children's Medicaid—Medicaid for Pregnant Women
- 730 applications received through the Affordable Care Act
- 1,597 elderly or disabled adults living in Long Term facilities or assisted living facilities within the county and cannot afford cost of care. The State Special Assistance program provides funds to ensure they can stay in the facility with the daily care and services they require
- 1,295 financially needy elderly and disabled adults receive help in paying Medicare premiums

  To make Medicaid expansions more affordable for states, the federal government is covering 100 percent of the costs of Medicaid eligibility expansions between the years 2014 and 2016. ***Since Medicaid was not expanded in 2014, North Carolina is already experiencing economic repercussions.***

  Work First - Alamance County Department of Social Services administers Work First Employment Services, where clients receive job skills training and job search or work experience to assist in becoming employed and self-sufficient. For FY'17-'18:

- Monthly average of Work First cases receiving employment services= 133
- Of the total number of program participants, 41% of program participants successfully completed program compliance
- Total child only cases = 295. ***In most child only cases, the child receiving the benefit is in the custody of an individual other than the birth parent—such as is the case with grandparents raising grandchildren—an ever-increasing demographic within our community***
- The average monthly payment amount for Work First was $203.00

  Child Care Subsidies -Alamance County Department of Social Services receives Child Day Care Subsidy

Funds and Smart Start Funds to assist working families and teen parents with the cost of child day care to support employment and education—both essential for maintaining self-sufficiency. The total Budget of State Subsidy and Smart Start for FY (Fiscal Year) ‘17-’18 is $7,208,984:

- Average monthly payment per child provided = $509
- Average # of children served monthly to support employment = 865
- Average number of families with employment and education = 37
- Average # of Special Needs children served monthly = 14
- Average # of Teen Parents served to support education = 11

Food and Nutritional Services (SNAP (Supplemental Nutrition Assistance Program): Supplemental Nutrition Assistance Program/Food Stamps)

12,007 families or 25,055 individuals who are food insecure in our county received assistance in FY ’17- ‘18 through Food & Nutrition Services:

- An increase of 65 % over the last five years
- Of total number of participants, 24 % of Food and Nutrition participants are working
- The average monthly payment is $243.32
- 2,133 individuals aged 60 and over receive Food & Nutrition benefits

The National School Lunch program, an affiliation of federal and state level government, provides free and reduced lunch in schools to children in low-income families. Children with families whose incomes fall below 130 percent of the poverty level, or below $33,615 (2013-2014) qualify for free lunch, and children below 185 percent, or below $43,568 (2013-2014) of the poverty level are eligible for reduced price lunch, which can cost no more than $0.40.

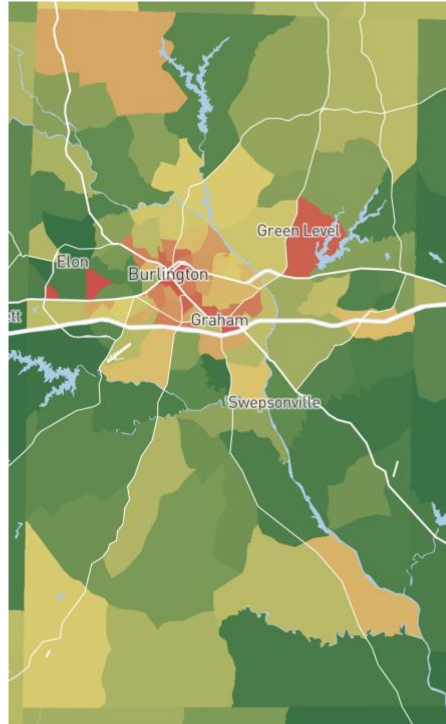
- Alamance-Burlington School System has 57.4 children eligible for this program.

Crime/Intentional Injuries

A violent crime is a crime in which the offender uses or threatens to use violent force upon the victim. According to the FBI'S Uniform Crime Reporting Program, violent crime includes four offenses: murder and nonnegligent manslaughter, rape, robbery, and aggravated assault. Violence negatively impacts communities by reducing productivity, decreasing property values, and disrupting social services.

Social and economic factors strongly influence the health of the individual and community. Studies repeatedly show a strong correlation between socioeconomic status and health outcomes. Understanding how a community compares to surrounding areas in terms of key social indicators such as educational attainment and crime rates as well as understanding the comparative economic status of a community is necessary to determine the types of community health programs needed.

Another concern is incarceration rates in Alamance County and how those differ by race. The incarceration rate for white individuals at the age of 35 in Alamance County is .74% while their black counterpart incarceration rate is 3.5%, more than four times as likely to be incarcerated.



("The Safest and Most Dangerous Places in Alamance County, NC," n.d.) *Chapter 8*
Red- F High rates of crime
Yellow- C
Green- A+ Very safe
https://crimegrade.org/safest-places-in-alamance-county-nc/

Social Support/Civic Engagement

Social association and community engagement, along with relationships with family and friends, represent an individual's social support network. Research suggests that belonging to voluntary groups and membership organizations enhances perceptions of social trust, and that individuals with strong networks are more likely to perform healthy behaviors. Furthermore, studies have shown that individuals living in areas with high levels of social trust and with strong social networks experience better health outcomes compared to individuals who lack such support.

Religion

While many social factors are obvious social determinants of health, religion is a part of the culture. As such, religion can contribute to a sense of connectedness or to a sense of isolation depending on the person's beliefs and where they live. Many of Alamance County's settlements were originally defined by religious affiliation. While local data is difficult to obtain, national trends are available at The Pew Forum which outlines the percentage of residents per denomination statewide (Pew Forum: Religious Landscape Study, 2014). *Chapter 8*

It is important to note that many health care organizations focusing on care coordination utilize community churches to offer screenings and education opportunities. This strategy connects members to services with the intent to reduce chronic health conditions in underserved areas.

Reverend Donna Van Hook, resident of Alamance County, spoke with the United Way of Alamance County about the connections between spirituality and health. “Connectedness is a good outcome from religious participation and here are a few things to consider:

- Black community members' religious participation/practice, or spirituality, may be linked to their survival
- Religion is both a culture and a way of being in the world, a worldview
- Places of worship, at times, serve meals that may contribute to obesity in communities of color; however, nutritious meals and exercise may also be encouraged by/through places of worship.
- Worship/prayer can be beneficial to mental health.
- Places of worship can help persons experiencing racial trauma by offering services or referrals significant to racial justice or healing.”

COUNTY DATA BOOK

APPENDIX A

Glossary

Ableism: A set of beliefs or practices that devalue or discriminate against people with physical, intellectual, or psychiatric disabilities

Accessibility: An umbrella term for all aspects which influence a person's ability to function within an environment

AAPI: AAPI is an acronym that stands for Asian Americans & Pacific Islanders. Other similar acronyms are APA which means Asian-Pacific American and API which means Asian-Pacific Islander

AIAN: Acronym that stands for **A**merican **I**ndian or **A**laska **N**ative. A person having origins in any of the original people of North and South America (including Central America) and who maintains tribal affiliations or community attachment

BIPOC: BIPOC is an acronym that stands for Black, Indigenous, and people of color. The term has become more popular as a way to highlight the divergent or shared needs and concerns of these distinct communities

Built Environment: All the human-made physical spaces where we live, recreate and work. These include our buildings, furnishings, open and public spaces, roads, utilities, and other infrastructure

Charrettes: An intensive, multidisciplinary workshop with the aim of developing a design or vision for a project or planning activity

Cisgender: A term for when someone's gender identity matches the sex they were assigned at birth

- o Example: If a person assigned female at birth identifies as a woman, they are cisgender

Community: Both a feeling and set of relationships among people. A fluid and evolving grouping of people bonded by geographical proximity (or closeness), shared interests, and/or social identity/identities. Communities can influence how people choose to live, their interests and values, their goals, and institutions

- o This document pays careful attention to the fluidity of 'community' while working to ground itself for clarity and accountability. For the purposes of this CHIP document, the CHIP Team sees Alamance County as a broader community with innumerable, overlapping professional, personal, and familial communities within its current charted boundaries. The Team understands that the term 'community' can, and should not be

used as a sweeping generalization, and that not all communities within Alamance County have been reached. The Team is committed to collaborating for the creation of space for those who are also interested in bolstering the health equity across the County. The CHIP Team is also committed to 'naming' and lifting specific communities for clarity

Community Based Participatory Research (CBPR): Community Based Participatory Research (CBPR) is an approach to research that equitably involves community members, practitioners, and academic researchers in all aspects of the process, enabling all partners to contribute their expertise and share responsibility and ownership (Israel, et al., 2010). CBPR is used to improve systems and practices, educate & understand needs, and create social change.

Culture: Languages, customs, beliefs, rules, arts, knowledge, and collective identities and memories developed by members of all social groups that make their social environments meaningful

Cultural Humility: Cultural humility is a process of self-reflection and discovery to build honest and trustworthy relationships. It offers promise for researchers to understand and eliminate health disparities, a continual and disturbing problem necessitating attention and action on many levels.

Disability: A physical or mental characteristic labeled or perceived as an impairment or dysfunction and some personal or social limitation associated with that impairment

Discrimination: Occurs when a person, or a group of people, is treated less favorably than another person or group because of their background or certain personal characteristics

- There are different types of discrimination, more direct forms, indirect forms, etc.
- To learn more about the different types of discrimination, click here: https://www.eoc.org.uk/what-is-discrimination/

Diversity: Encompasses the range of similarities and differences everyone brings to a space, including but not limited to national origin, language, race, color, disability, ethnicity, gender, age, religion, sexual orientation, gender identity, socioeconomic status, veterans' status, and family structures. It means respect for and appreciation of differences

Ethnicity: Ethnicity denotes groups, such as Irish, Fijian, Sioux, etc., that share a common identity-based ancestry, language, or culture

Equity: The absence of socially, economically, and/or demographically determined differences among groups. To achieve equity, people would be given what they need to have equal opportunities. Equity differs from equality (see definition below) because equity does not necessarily mean everyone is receiving the same number of resources. It could differ depending on what the individual or group needs. Equity is a solution to address imbalances in social systems.

- Equity can be achieved in relation to any number of things. The CHIP team has shifted its focus to illuminate racial inequities and health inequities across the County.

Equality: All groups of people are given the same civil rights, freedoms, property rights and equal access to resources. Equality differs from equity because *each person receives the same resources, regardless of their needs and circumstances*

Gender: Social or cultural distinctions associated with a given sex. The gender category someone identifies with may not match the sex they were assigned at birth. One's internal and personal perception of oneself that falls within a spectrum of identifying as having more masculine qualities, feminine qualities, and/or having qualities that are not associated to the male or female gender

Health Disparities: Preventable differences in the burden of disease, injury, violence, or opportunities to achieve optimal health that are experienced by socially disadvantaged populations

Health Equity Collective (HEC): a community-academic partnership between Healthy Alamance and Elon University, established in early 2018. The purpose of the collective is to identify and address the racial disparities most impacting the health of the Alamance County community

Goal: A goal is a more concrete way to work towards impacting a priority

- Goals are mid-level approaches to contributing to a priority. They can still be rooted in systems change and create a more solid infrastructure for strategic action. Systems, such as the S.M.A.R.T. goal setting approach, create accountability measures that clearly lay out expectations.
  - S. M. A. R. T. Goal = Specific, Measurable, Attainable, Realistic, and Time-bound

Inclusion: State of being valued, respected, and supported. Focusing on the needs of every individual and ensuring the right conditions are in place for each person to achieve his or her full potential

Indicator: A way to measure, or assess, change

Indigenous People: Indigenous Peoples are the descendants of the peoples who inhabited the Americas, the Pacific, and parts of Asia, and Africa prior to European colonization

Infant Mortality: The number of infants who pass away before their first birthday

- Infant mortality rate (IMR) → the number of deaths under one year of age per 1,000 live births

Intersectionality: Coined by Black feminist, Kimberlé Crenshaw, intersectionality is the lens through which you can see where power comes and collides, where it interlocks and intersects. The interconnected nature of social categorizations such as race, class, and gender, regarded as creating overlapping and interdependent systems of discrimination or disadvantage

Latinx: A gender-neutral term to refer to a Latino or Latina person. The *x* replaces the male and female endings *o* and *a* that are a part of the Spanish grammar conventions

LGBTQ+: An acronym for lesbian, gay, bisexual, transgender, and queer. The term LGBTQ+ is used "to represent a diverse range of sexualities and gender identifies, referring to anyone who is transgender and/or same/similar gender attracted. The + represents all other the gender identities and sexual orientation not covered by the five letters (LGBTQ)

- o If you would like to learn more about what each letter in the LGBTQ+ acronym stands for, click the link here: https://www.verywellmind.com/what-does-lgbtq-mean-5069804

Marginalized populations: Groups and communities that experience discrimination and exclusion (social, political, and economic) because of unequal power relationships across economic, political, social, and cultural dimensions

Maternal Mortality: The death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes

Medicaid: A federally supported program that helps those with lower incomes receive health care: the program also supports those who are pregnant, the elderly, young children, and those with disabilities

- o for more information on Medicaid, such as how to apply for coverage, click the link here: https://www.medicaid.gov/medicaid/index.html

Mixed-income housing: The composition, or make up, of a housing area or neighborhood based on income; a percentage of a development which would be affordable; with this model, some high, some middle, and some low-income families would live in the same neighborhood

Mixed-use housing: Housing and commercial properties in proximity (e.g., apartments over a retail location)

Native American: A term used to refer to peoples living within what is now the United States prior to European colonization

Oppression: A system that maintains advantages and disadvantages based on social group memberships and operates intentionally and unintentionally, on individual, institutional and cultural levels

Population Health: The condition(s) of an overarching, or broader, community or population. Usually on a larger/national scale; does not typically account for unique conditions present in smaller groups

Prejudice: A judgment or belief that is formed on insufficient ground before facts are known or in disregard of facts that contradict it. Prejudices are learned and can be unlearned

Priority: A higher-level area of focus with the capacity to be further grounded in concrete

goals and strategies

- o The CHIP team has selected three broad areas of focus as it relates to health equity. Ideally, these priorities are rooted in systems-level change with ample opportunity for targeted action

Privilege: Certain social advantages, benefits or degrees of prestige and respect that an individual has by virtue of belonging to certain social identity groups.

- o Privilege is often invisible to people who have it

Public will-building: A communication approach that builds public support for social change by integrating grassroots outreach methods with traditional mass media tools in a process that connects an issue to the existing, closely held values of individuals and groups

Social Justice: Analysis of how power, privilege, and oppression impact our experience of our social identities. A vision of society in which the distribution of resources is equitable and all members of a space, community, or institution, or society are physically and psychologically safe and secure

Stereotype: A set of cognitive generalizations (e.g., beliefs, expectations) about the qualities and characteristics of the members of a group or social category

Race: The term was documented as a concept in the 18th century to divide humans into groups often based on physical appearance, social and cultural backgrounds. Race has been used historically to establish a social hierarchy and to enslave humans. Race refers to physical differences that groups and cultures consider socially significant

Racism: The combination of individual prejudice and individual discrimination, on one hand, and institutional policies and practices, on the other, that result in the unjustified negative treatment and subordination of members of racial or ethnic groups that have experienced a history of discrimination. Prejudice, discrimination, and racism do not require intention

Sex: The biological aspects of an individual as determined by their anatomy, which is produced by their chromosomes, hormones and their interactions

- o Sex is generally male or female
- o Sex is assigned at birth

Sexual Orientation: An individual's romantic, emotional or sexual attractions toward other people

- o Today, many consider sexual orientation to be on a spectrum
- o Heterosexual (attraction to the opposite sex) and homosexual (attraction to the same sex) are examples of sexual orientation

Social Determinants of Health: Systems-level, structural and environmental factors that impact the health of individuals and communities at different levels of a social hierarchy

o This term is a shift from the more commonly used term "social determinants of health." The CHIP team understands that though factors like individual health behavior and clinical care access impact the health of a community, there are larger, socially constructed forces that create and perpetuate the disproportionate gaps in the health outcomes of those who have been, and are currently, marginalized. For example, built, or the physical environment impacts the health of a community. Attitudes and policies impact the ways in which different communities are positioned to work, play, learn, and live

Stakeholders: Individuals, agencies, governmental entities, and or communities with an interest in a project or goal

o an equity lens guides us towards an understanding that everyone is an expert in their own way and contribute what they can and are willing to. The CHIP Team understands that all involved in the evolving process of this document and its works are experts in their own rights

Strategy: A proactive action, or series of actions, intended to make the goal, and therefore priority, a reality. Strategies can range from building and maintaining relationships, to creating equitable systems, to refining programs that address specific health issues

Tobacco: Made from the leaves of tobacco plants. Tobacco contains nicotine, which is an addictive drug. Tobacco also contains toxic chemicals that can affect your health.

Textile: The creation of fabric or cloth out of original fibers, using mechanical or chemical processes

Transgender: An umbrella term for people whose gender identity differs from the sex they were assigned at birth

o Example: If a person assigned female at birth *does not* identify as a woman, *and does identify as a man*, they are transgender

Unconscious bias: Social stereotypes about certain groups of people that individuals form outside their own conscious awareness. Everyone holds unconscious beliefs about various social and identity groups, and these biases stem from one's tendency to organize social worlds by categorizing

APPENDIX B

Acknowledgements

Data Contributors

Residents of Morrowtown, LatinX community, Pleasant Grove, and Burlington Housing Development	**Primary data collection, data summary review**
Poll participants	**Primary data collection**
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APPENDIX C

Additional Data & Information

Chapter 3 - Elon Poll

The Elon University Poll conducted a representative survey of 529 Alamance County, North Carolina residents, from September 20th – November 18th, 2020. 89% of the interviews were conducted by live telephone interviewers. 11% were conducted with a supplemental opt-in online survey, distributed by the Alamance County Health Department.
Unless otherwise noted, results reported below are percentages (%) and cell sample sizes (n). The margin of error is +/- 4.3 percentage points

Covid-19 and Health Equity

"When you go out into the community, how much do you worry about catching COVID-19—not at all, a little, a moderate amount, or a great deal?"

	%	N
Not at all	28.9	153
A little	29.3	155
A moderate amount	27.4	145
A great deal	13.9	74
No opinion	0.3	1
Don't know or refused	0.1	1
Total	100.0	529

"Have you personally contracted coronavirus?"

	%	N
Yes	22.3	118
No	76.0	402

Don't know	1.7	9
Total	100.0	529

"Have you personally known anyone who has contracted coronavirus?"

	%	N
Yes	90.9	481
No	9.1	48
Total	100.0	529

"Have you taken a COVID-19 vaccine?

	%	N
Yes	70.4	372
No	28.0	148
Don't know	0.9	5
Refused	0.8	4
Total	100.0	529

[if Yes]
"Overall, are you glad you took the vaccine or do you wish you hadn't taken it?"

	%	N	April 2021 NC residents
I am glad I took it.	85.7	328	92.5

I wish I had not taken it.	7.8	30	2.6
Not sure	6.5	25	4.9
Total	100.0	383	

[if No]
"What is the most important reason why you haven't taken a COVID-19 vaccine?"
[open-ended responses available upon request]

"In the past year, have you delayed, declined, or decided not to seek medical care because of the costs?"

	%	N
Yes	23.4	124
No	76.0	402
Don't know or refused	0.6	3
Total	100.0	529

"Do you agree or disagree with the following statement: People of my race are treated fairly in a healthcare setting."

	%	N
Agree	69.7	369
Disagree	23.4	124
No opinion	3.4	18
Don't know or refused	3.5	18

Total	100.0	529

"I'm going to read you a list of sources of news and information about COVID-19. I'd like you to tell me if you have received news and information from that source in the past 7 days, or not."

	% got info	N
The Centers for Disease Control (CDC)	37.5	198
Government health authorities or officials	34.8	184
Scientists and other health experts	40.0	212
Doctors and other health professionals you go to for medical care	41.7	220
Friends and family	53.9	285
Religious leaders	12.7	67
Journalists	30.7	162
Social media	52.6	278

"I'm going to read you the same list of sources again. I'd like you to tell me whether you trust that source for news and information about COVID-19, or not."

	% trust	N
The Centers for Disease Control (CDC)	64.2	340
Government health authorities or officials	47.4	251
Scientists and other health experts	72.4	382

Doctors and other health professionals you go to for medical care	84.0	445
Friends and family	41.2	218
Religious leaders	25.3	134
Journalists	18.8	100
Social media	7.2	38

Monuments

"Recently there has been some controversy about what to do with Confederate monuments on public, government-owned property (e.g. parks, city squares, court houses). Which of the following statements comes closest to your view?"

			April 2021 NC residents
	%	N	%
Should be removed from public spaces.	39.3	207	41.6
Should remain in public spaces.	47.9	252	58.4
Don't know	10.6	56	
Refused	2.3	12	
Total	100.0	527	100.0

Housing and Employment

"Do you currently own a home, or, have a mortgage on a home in Alamance County?"

	%	N

Yes	65.8	348
No	31.2	165
Something else	3.1	16
Total	100.0	529

[If does not own or have a mortgage]

"How likely do you think it is that you will ever purchase a home in Alamance County—very likely, somewhat likely, not very likely, or not at all likely?"

	%	N
Very likely	26.3	39
Somewhat likely	31.2	46
Not very likely	16.8	25
Not at all likely	24.4	36
No opinion	0.5	1
Don't know or refused	0.8	1
Total	100.0	147

"What is the most important reason why you do not currently own a home in Alamance County?"

[open-ended responses available on request]

"Are you currently employed, either full-time or part-time?"

	%	N
Yes, employed	65.7	347
No, not employed	33.5	177

Don’t know or refused	0.8	4
Total	100.0	529

[If employed]
“In general, how difficult is it to find affordable housing close to where you work—very difficult, somewhat difficult, or not at all difficult?”

	%	N
Very difficult	25.7	94
Somewhat difficult	30.0	109
Not at all difficult	35.3	129
Don’t know or refused	9.0	33
Total	100.0	365

“How long does it take you to get to your job from where you live?”

	%	N
<15 minutes	47.9	175
15-29 minutes	24.0	88
30-44 minutes	14.3	52
45-59 minutes	4.3	16
60 minutes or more	4.9	18
Don’t know or refused	4.6	17
Total	100.0	365

"How often do you use Link Transit, the bus system in Alamance County, to get around—every day, a few times a week, a few times a month, a few times a year, almost never, or never?"

	%	N
Every day	1.6	8
A few times a week	0.7	4
A few times a month	1.8	9
A few times a year	0.4	2
Almost never	3.8	20
Never	91.5	483
Don't know or refused	0.3	2
Total	100.0	528

"What is the most important reason why you don't regularly ride Link Transit—is it that you do not need to, the routes are not convenient for you, the fare is not affordable, or, is it something else?"

	%	N
Don't need to	84.0	432
Routes are not convenient	8.6	44
Something else	7.5	38
Total	100.0	514

Mental Health

"In the last month how often have you felt nervous, anxious, or on edge?"

	%	N

None of the time	25.6	135
Rarely	25.0	132
Some of the time	32.1	170
Most of the time	16.5	87
Don't know	0.6	3
Refused	0.3	2
Total	100.0	529

“In the last month, how often have you felt depressed?”

	%	N
None of the time	41.9	222
Rarely	22.3	118
Some of the time	26.2	138
Most of the time	9.0	47
Don't know	0.3	2
Refused	0.3	2
Total	41.9	222

“In the last month, how often have you felt lonely or isolated?”

	%	N
None of the time	51.1	270

Rarely	18.7	99
Some of the time	19.4	102
Most of the time	9.7	51
Don't know	0.9	5
Refused	0.3	2
Total	100.0	529

"In the last month, how often have you felt hopeful about the future?"

	%	N
None of the time	7.7	41
Rarely	13.4	71
Some of the time	31.1	165
Most of the time	46.1	244
Don't know	1.6	8
Refused	0.1	1
Total	100.0	529

Demographics

Lived in Alamance County…

	%	N
Less than one year	2.1	11

Less than five years but more than one year	10.6	55
Less than ten years but more than five years	9.6	49
Ten years or more	76.5	393
Don't Know	0.7	4
Refused	0.3	1
Total	100.0	513

Live in a….

	%	N
Small City	22.5	96
Large Town	10.0	43
Small Town or Village	37.4	160
Rural or Country	26.5	113
Other	2.4	10
Don't Know	1.1	5
Total	100.0	427

High-Speed Internet Access

	%	N
Yes	93.0	492
No	6.2	33

Don't know	0.8	4
Total	100.0	529

Age

	%	N
18 to 24	12.0	63
25 to 44	34.1	180
45 to 64	32.0	169
65+	21.9	116
Total	100.0	529

Gender

Men	47.5	251
Women	52.5	278
Total	100.0	529

Race

White	73.6	389
Black	20.9	111
Other Race	5.5	29
Total	100.0	529

Income

$50k or less	50.0	265

>50k	50.0	264
Total	100.0	529
Education		
<HS	13.7	72
HS	49.8	263
BA or more	36.4	192
Total	100.0	527
Party ID (self-identified, including learners		
Republican	46.3	240
Neither	15.3	80
Democrat	38.3	199
Total	100.0	519

Question Order

1. Worries about COVID when in community

- When you go out into the community, how much do you worry about catching COVID-19?

2. Information about COVID Battery
    - CDC, Government, Scientists, Doctors, Friends and family, religious leaders, Journalists, social media
3. Trust in sources of information about COVID Battery
    - CDC, Government, Scientists, Doctors, Friends and family, religious leaders, Journalists, social media
4. Health Equity
    - In the past year, have you delayed, declined, or decided not to seek medical care because of the costs?
    - People of my race are treated fairly in a healthcare setting.
5. Housing, Employment, and Transit
    - Do you currently own a home, or, have a mortgage on a home in Alamance County?
    - How likely do you think it is that you will ever purchase a home in Alamance County?
    - Are you currently employed, either full-time or part-time?
    - How difficult is it to find affordable housing close to where you work?
    - How long does it take you to get to your job from where you live?
    - How often do you use Link Transit, the bus system in Alamance County?
    - What is the most important reason why you don't regularly ride Link Transit?
6. Mental Health Battery

Anxious, Depressed, Isolated, Hopeful

7. Monuments

8. COVID Experience and Vaccine Uptake

    - Have you personally contracted coronavirus?

    - Have you personally known anyone who has contracted coronavirus?

    - Have you taken a COVID-19 vaccine?

    - Did you receive one dose of vaccine or two?

    - What is the most important reason why you haven't taken a COVID-19 vaccine?

    - Overall, are you glad you took the vaccine, or do you wish you hadn't taken it?

9. Demographics

Methodological Information

Mode:	Mixed- Live Interviewer Telephone and Online
Population:	Alamance County Residents
Margin of Error:	+/- 4.3
Dates in the field:	September 20th - November 18th
Sample Size:	472 telephone interviews, 56 supplemental online surveys
Weighting Variables (NC):	Age, Gender, Race, Education, and Income

Procedure

For this survey, the Elon University Poll used a mixed mode design of phone calls using live interviewers, and supplemental online surveys. Random telephone numbers were purchased from Survey Sampling International (SSI). The optional online surveys were completed by visitors to the Alamance County Health Department who were provided with the survey URL at their appointment.

Survey responses were collected from September 20th, 2021 through November 18th, 2021. A survey was considered complete only if a respondent progressed through the entire survey.

Support for Transparency

The Elon University Poll supports transparency in survey research and is a charter member of the American Association for Public Opinion Research Transparency Initiative, which is a program promoting openness and transparency about survey research methods and operations among survey research professionals and the industry. All information about the Elon University Poll that we release to the public conforms to reporting conventions recommended by the American Association for Public Opinion Research and the National Council on Public Polls.

Weighting Information

Weights were generated in Stata using a technique known as iterative proportional fitting, also known as raking. The weight variable was calculated based on all the variables in the table below, using U.S. Census 2020 parameters.

	Population %	Unweighted %	Weighted %

18-65	78.1	77.6	78.1
65+	21.9	22.4	21.9
Male	47.5	50.1	47.5
Female	52.5	49.9	52.5
White	73.6	75.9	73.6
Black	20.9	15.2	20.9
Other	5.5	8.9	5.5
< HS	13.7	4.6	13.7
HS grad	86.3	95.4	86.3
< $50k	50.0	33.7	50.0
$50k or more	50.0	66.3	50.0

Frequently Asked Questions

1. **Who pays for the Elon University Poll?**

Elon University fully funds the Elon University Poll. The poll operates under the auspices of the College of Arts and Sciences at Elon University, led by Dean Gabie Smith. The Elon University administration, led by Dr. Connie Ledoux Book, president of the university, fully supports the Elon University Poll as part of its service to the community. Because of this generous support, the Elon University Poll does not engage in any contract work. This permits the Elon University Poll to operate as a neutral, unbiased, non-partisan resource.

2. Does the Elon University Poll favor a certain party?

The Elon University Poll is an academic, non-partisan survey research organization. We do not engage or work with any political candidates or parties. We employ best practices to ensure the results are not biased.

3. Did you weigh the data?

Yes. We apply weights to the data. For this survey, we generated results using ranking based on the U.S. Census data. For more details, see the Weighting Information above.

4. What are the advantages and disadvantages of online surveys over traditional random-digital dial surveys?

Traditional telephone surveys have a clear advantage over online surveys such as this in those assumptions of equal probability of selection are more appropriate. Furthermore, online surveys do not capture opinions of respondents who lack internet access.

However, our opinion is that declining telephone response rates and the growth in online sample pool sizes have narrowed quality differences between the two modes. In the case of this survey, we hoped to capture opinions related to a breaking news item. An online survey enabled us to quickly gather a large enough sample size to make inferences about the U.S. population. Additionally, like many college students, our student survey interviewers are not on campus currently.

Additional information about opt-in surveys in general is available from AAPOR and the Pew Research Center.

About the Elon University Poll

The Elon University Poll conducts statewide, regional, and national surveys on issues of importance to North Carolinians as well as other states. Information from these polls is shared with media, citizens, and public officials to facilitate informed public policy making through a better understanding of citizens' opinions and attitudes.

Jason Husser is Director of the Elon University Poll and Associate Professor of Political Science & Policy Studies at Elon University. Dr. Husser holds a Ph.D. in Political Science from Vanderbilt University. He researches American political behavior and survey methodology.

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Owen Covington is Director of the Elon University News Bureau. A native North Carolinian, Owen Covington joined the staff of Elon University in 2016 after spending 17 years in the field of journalism as a reporter and editor for daily and weekly news outlets in North Carolina and Kentucky. As director of the Elon University News Bureau, Covington oversees the promotion of Elon and its students, faculty, and staff both through stories told across Elon's media channels as well as through interactions with state, national and international media. He is involved in media relations, including responding to requests from print, digital and broadcast media outlets, and works to promote content generated by a variety of Elon news sources.

Collecting Rich Primary Data for Community Health Assessment and COVID Relief – Using Charrettes to Identify Conflicts and Create Solutions with Community

Healthy Alamance Summary Report

February 7, 2022

Submitted by: Alexandra Lightfoot, Daniela Sostaita, Melvin Jackson

Project Overview

As part of its Community Health Assessment (CHA) 2021 process, Healthy Alamance[1] sponsored CBPR Charrettes, a structured and facilitated community engagement and activation process, to gain perspective on health needs and priorities from residents of communities across Alamance County and gather community-driven ideas for how to address them. As described by the National Charrette Institute, a "charrette" is a collaborative planning process most often used in design and architecture that harnesses the talents and energies of all interested parties to create and support a feasible plan to bring about community development and transformation.[2] Healthy Alamance used an adapted charrette process developed by community and academic partners affiliated with the Center for Health Promotion and Disease Prevention and the North Carolina Translational and Clinical Sciences Institute at the University of North Carolina at Chapel Hill (UNC) to incorporate principles of community-based participatory research (CBPR). The CBPR Charrette process is designed to address issues or questions identified by the partnership (Healthy Alamance) to facilitate collaborative discussion among community participants about health concerns within their neighborhoods, identify concerns they wish to prioritize, and generate ideas/solutions from their perspective to address the concerns. This summary reports on the methods used to implement the Alamance County charrettes, synthesizes the data across charrettes, and highlights the themes that resulted from the charrette process. These findings will be brought back to the participating communities for additional feedback, as well as integrated into the 2021 Community Health Assessment. The final report will be shared with elected officials and other decision-makers to inform COVID relief funding priority setting and offer direction for county-based organizations in their strategic planning. Funds for the project were provided by Impact Alamance.

The Framework: Community-Based Participatory Research and Health Equity

Community-based participatory research (CBPR) is a "collaborative approach to research that equitably involves all partners in the research process and recognizes the unique strengths that each brings. CBPR begins with a research topic of importance to the community and has the aim of combining knowledge with action and achieving social change to improve health outcomes and eliminate health disparities."[3]

Healthy Alamance has been using a CBPR approach in its efforts to improve community health and advance health equity in the county since 2018. This approach recognizes the range of factors or determinants that affect health, per the Path to Achieving Health Equity figure undergirding Healthy Alamance's work. The goals of Healthy Alamance include: 1) Build a better community by addressing health issues at the root cause; 2) Understand the community's context, goals and power structure and partner with those most impacted to make change; 3) Collaborate with those best positioned to make change and measure impact by quality of outcomes as well as quantity. With these values at its core, Healthy Alamance sought out a process to use for its 2021 Community Health Assessment that aligned with its mission and commitment to ensuring that community voices are at the center of the process. They identified the CBPR Charrette process as a tested and effective mechanism to bring together diverse perspectives, identify strengths and concerns, and brainstorm solutions from the community perspective.[4,5,6] They reached out with their academic partner from Elon University, Stephanie Baker, PhD, to the CBPR Charrette team at UNC, including Program Director, Alexandra Lightfoot, and Community Expert, Melvin Jackson, with their extensive experience using CBPR and conducting charrettes, as well as other community engagement/needs assessments processes,[7] to collaboratively organize and implement a series of charrettes for Alamance County. To support the charrette planning and implementing process, the UNC team brought in Daniela Sostaita, an MPH student at the UNC Gillings School of Global Public Health, as Research Assistant.

Methods: CBPR Charrette Structure and Process

Planning

The CBPR Charrette process is designed collaboratively by the partnership requesting the charrette (Healthy Alamance) and the charrette team carrying out the sessions (Jackson, Lightfoot, Sostaita). As a first step, Healthy Alamance supported the development of a planning team in partnership with the Health Equity Collective (HEC) to determine communities to engage and draft relevant questions for the charrette discussion. The Health Equity Collective is a community-based partnership of residents and institutions engaged in the shared work of identifying and addressing the racial disparities most impacting the health of the Alamance County community. Their commitment is to shared and transparent institutional analysis and to strategic and community-informed efforts to eliminate policies, practices, and procedures contributing to disparities. The goal was to identify and involve historically marginalized and excluded communities in the county. Charrettes were implemented in four locations to reach communities "left out" of planning across the county. Locations included: Morrowtown, the Dream Center in downtown Burlington, Pleasant Grove, in the rural Northern part of the county, and the Crump Village Community Center, to include participants from various Burlington Housing Authority communities. Plans to conduct two additional charrettes in January, one sponsored by Southern Alamance Family Empowerment (SAFE) and the second with youth at the Positive Youth center, had to be postponed/canceled due to the Omicron surge.

The HEC planning team worked with the charrette team to draft key questions to prompt discussion during the charrettes. The charrette process is structured to facilitate trust and relationship-building, create a safe/brave space to open discussion among participants with different perspectives/backgrounds/identities/experiences, pinpoint community strengths and assets as well as needs and priorities, and spur ideas collectively for addressing challenges. The process involves multiple ways of engaging participants, through small group activities, large group discussions, individual and collective idea generation, and written and oral communication.

The planning team reached out to community leaders/champions in each of these communities to identify a community-friendly location and spread the word about the charrette opportunity using flyers, word of mouth,

etc. Each charrette, except for Pleasant Grove, was hosted by a community champion. The planning team decided that its members would not attend the charrettes to facilitate open discussion among community resident participants. Each charrette provided a meal for participants at the outset of the meeting with food catered by small local businesses. Each participant was offered an incentive of $40 for participation which was distributed at the end of the 2 ½ - 3-hour session. Healthy Alamance secured interpreter services for each charrette and the UNC charrette team included a native, fluent Spanish speaker, Daniela Sostaita, as well. Her language abilities were crucial at several charrettes, particularly at the Dream Center where the entire charrette was conducted in Spanish.

<u>Charrette Process/Structure</u>

Each charrette followed the structure and process outlined below. The charrettes were facilitated by the UNC charrette team who alternated roles throughout each session to model partnership and collaboration. We took intensive notes at each session, recording participant comments as they were said, to complement the activities completed with flip charts and post-it notes (described below). At all four charrettes, participants sat in a semi-circle or U shape with facilitators in the middle to facilitate a sense of community and collectivism among community residents. Participants were asked to move around at varied points during the session to facilitate interaction and insight sharing with different people.

<u>Host Welcome</u>

Each charrette started with a welcome by the community host in all but one of the charrettes (Pleasant Grove). In their welcome, hosts described the purpose of the meeting, our goals to protect confidentiality by not recording names or attributing comments to any individual, and the plans to share the aggregate findings back with the communities, per the statement below.

> Good evening and welcome to the [sponsor location] Charrette. Healthy Alamance chose the charrette concept because it allows a group of people to identify issues, realize resources, and develop solutions together. During the next three hours, we will do just that, focusing on health in your community. We will record your charrette and take notes. Names of individuals will not be included in the notes or the summary of the process. The summary will be shared back with you and incorporated into the Community Health Assessment. Additionally, we will discuss the American Rescue Plan Act (ARPA) and the potential for impact on your community's health. This will be shared with our elected officials. You will receive a handout that provides you with additional information on charrettes, ARPA funds, and how to stay involved.

<u>Introductions of Facilitators and Participants and Ice Breaker</u>

The host then turned it over to the facilitators and we introduced ourselves. Following our introduction, we asked the participants to share their names, though, as described in the host introduction, we did not record them in the notes. We used a relevant and engaging ice breaker, asking each participant to describe to us as outsiders: Where would you take us in your community? Participants shared places they like to go, and it gave key insight to us as facilitators into what is important to residents of a community. We facilitators learned a lot about wonderful places (parks, restaurants, farmers markets, community gardens, churches, etc.) in Alamance Country through what was shared.

<u>Community Agreements</u>

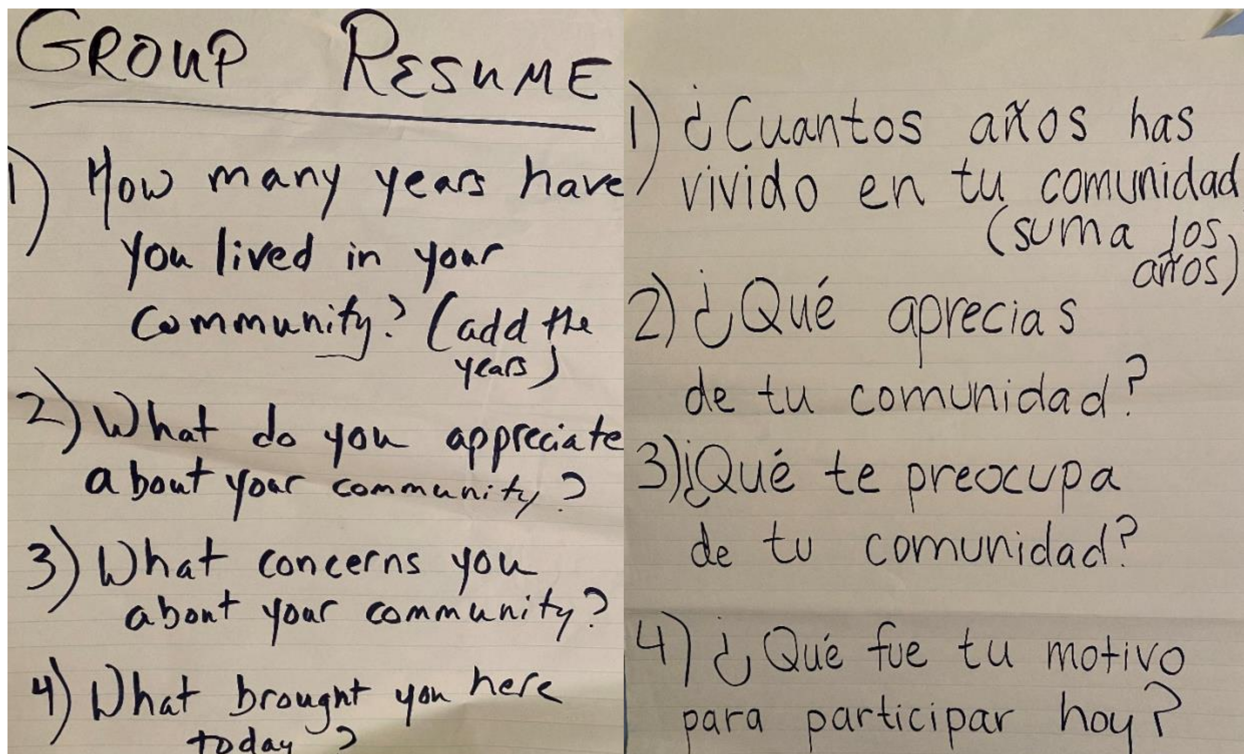
To set the stage for productive communication, active listening, and true engagement among participants with different (and sometimes conflicting) perspectives, we discussed Community Agreements. We offered a list (developed by community partners) at each charrette and invited participants to add any other strategy important to them. These four were the starting points:

- Everyone should feel heard, valued, and appreciated.
- Let's make sure everyone has an opportunity to speak.
- Share what you're comfortable sharing.
- What's said here stays. What's learned here leaves.

Group Resume

We used a Group Resume process to build rapport among participants and help them learn about each other's experiences, as a foundation for a deeper whole group conversation later. To do so, we had participants count off to divide the larger group into small groups of four to five participants each. Our goal was to put people in groups with people they did not know. Each small group selected a notetaker to record responses to the following questions (offered in both English and Spanish) on flip chart paper (per the list and images below):

- How many years have you lived in your community? (Cumulative across the group)
- What do you appreciate about your community?
- What concerns you about your community?
- What brought you here to the charrette today?



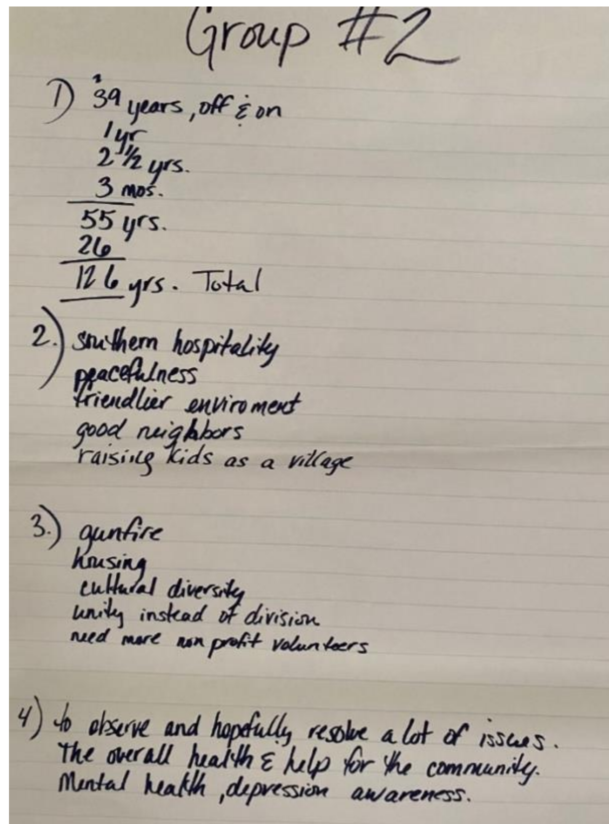
It was important to be able to open conversation among participants using this small group activity and focus the initial conversation on the strengths/assets of their communities (i.e., what they appreciate) as well as their concerns. In addition, it was helpful to us as facilitators to learn what brought them to the charrette. The list below provides insight into participants' reasons for coming, many of which highlight care and concern for their communities, as well as the hope their concerns will be listened to by decision-makers:

- To share my ideas
- Be informed about programs for community
- To contribute and listen to other people
- To inform the representatives about our concerns
- Concern for community growth + giving direction
- Because we were invited (this one came up a lot; shows how much the host has pulled in the community, maybe relevant to highlight)
- To learn and help make things better within the community
- Contribute to make our voices heard

- To voice our opinions
- We have a voice and want to make a change

After they had responded to all questions, we brought the small groups back together to share. Through the sharing process, charrette participants were able to see commonalities and differences within their small groups and across the group. Included below are an example of one small group's Group Resume from each of the four charrettes to demonstrate the type of information gathered through this part of the process and the way participants responded.

Morrowtown



Group #2

1) 39 years, off & on
1 yr
2 1/2 yrs.
3 mos.
55 yrs.
26
126 yrs. Total

2.) southern hospitality
peacefulness
friendlier enviroment
good neighbors
raising kids as a village

3.) gunfire
housing
cultural diversity
unity instead of division
need more non profit volunteers

4) to observe and hopefully resolve a lot of issues.
The overall health & help for the community.
Mental health, depression awareness.

Dream Center

DREAM CENTER

años en la Comunidad? 49

2). Que aprecias de tu Comunidad?

1: Dream Center
2: Tiendas Mexicanas
3: Todos esta cerca (comodidad)
4: Parks and recreaciones, Festivales
5: Comunidad Pequeña me siento Segura.
6: Aprecio la historia de la Comunidad de ...

3) Que te Preocupa de tu comunidad?

1: Perder el Dream center. / saber quien nos ...
2: falta de información de nuestros recursos en nuestra com...
3: falta de after school, tutoring in our c...
4: falta de clinicas gratis y Dental. terapia, N...
5: Consejeria Para las familias.
6: Mas información como Nuestros hijos Puedan ir a la U...

4) Que te motiva a venir a la reunión?

1. me motivo a venir a aportar ideas.
2: Estaba curiosa por la información.
3: aprender más de la comunidad.
4: A mi motivo venir a aprender de los demas.

Pleasant Grove

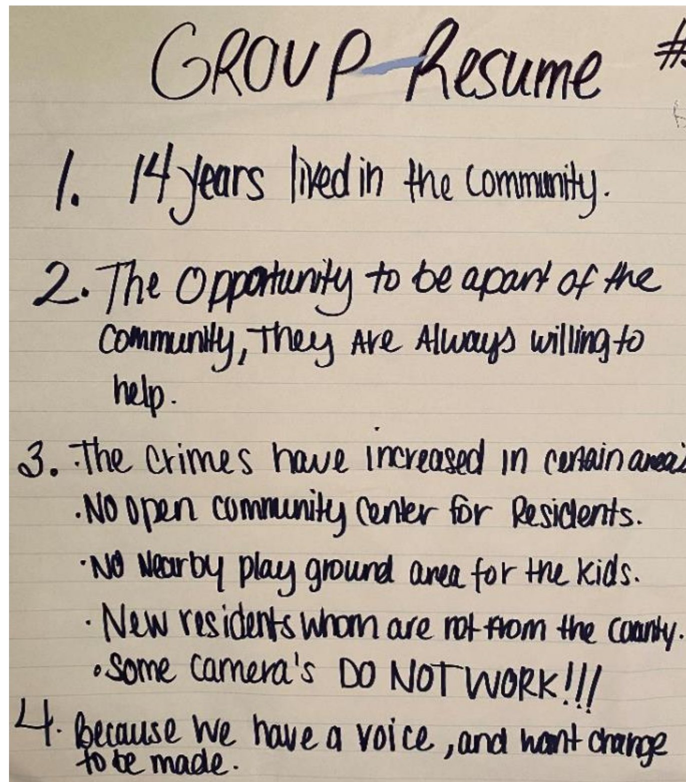
1. 6, 73, 27 = 100 yrs Collective

2. Fire dept, Att Safety, Church Community
Christian, Protestant, Islamic, standards,
Quality of Life, fresh air, respect of others and
agricllture.
Recreational facilities, Lakes, small/local community Stor
Community gatherings. freedom to do what you want
to with your own properties.
Slow pace of living. Welcoming neighbors & Community.

3. Loss of Farm Lands, Asphalt Plant & air/water quali
Safty, Drug trafficing/sales/route, Communications Broad
Distribution of Federal Funds to support Local Communities.
Lack of Satillight Community Health centers, Better Commui

4) Friends Notified us. Need better Notifications.
Intrested to find out what is or will impact our Community

Crump Village Community Center



Key Questions for Consideration

After this small group activity, the charrette shifted to the heart of the process: addressing the key questions identified by the HEC planning team. Facilitators posed these questions to the whole group of participants and captured comments as detailed in the notes for each charrette. Questions posed in the charrettes included:

- Question 1: How do you define your community?
    - Prompt: Who is a part of your community? What does your community have?
- Question 2: How do you define health in your community? What challenges to health does your community face?
- Question 3: Who has the power to make decisions about what happens in your community?
    - Prompt: Who makes the decisions about what happens in your community and who should? Are there unique considerations we need to identify about your community?
    - Provide information about ARPA: Approximately 64 million dollars
    - Interactive Activity with Post Its (Individual, Small Group, Large Group): What are the top three issues that need funding in your community to address health concerns?
- Question 4: Who needs to hear what we have talked about today?

Interactive Activity with Post-Its (Individual, Small Group, Large Group): What are the top three issues that need funding in your community to address health concerns?

To generate ideas from the community participants themselves on what they saw as the top issues (per the bullet point in Question 3 above), we used an interactive post-it notes brainstorming activity developed from human-centered design thinking strategies. Human-centered design is a creative, iterative approach to solving complex issues that puts those directly impacted at the center of the process.[8] Human-centered design typically involves three main phases: inspiration, ideation, and implementation. The post-it notes activity done in these charrettes comes from two ideation methods: Brainstorm and Find Themes.

Brainstorms allow us to be creative and tap into big ideas and outside-of-the-box thinking. Brainstorms can be done with the design team (in this case, the charrette facilitators and planning team) and with partners and the people you're designing for (Alamance residents). According to IDEO, "brainstorms work best when the group is positive, optimistic, and focused on generating as many ideas as possible."[9] This differed from one charrette to another, with some groups feeling very enthusiastic and empowered to share their ideas and think big, while other groups felt dismissed by their local government and were hopeless that their ideas would be listened to and/or that these funds would ever reach them.

In our charrette Brainstorm activity, participants were asked to generate three ideas each for how they would like to see the ARPA funds used in their community. Participants had some time to reflect individually and write three ideas on separate post-it notes. Once individuals had finished, they were asked to post their notes on a wall. As people finished their brainstorming and went up to the wall to post their notes, we moved into Find Themes. Participants looked across the post-it notes and grouped their sticky notes together based on theme or category, looking for patterns and relationships between the ideas. The goal here is to identify key themes that can be translated into opportunities for design, in this case, ways to meet the needs of the community with the ARPA funds (and beyond). After gathering notes and post-it notes from all the charrettes, the design team, in this case the facilitators, completed this same activity of finding themes that came up across the different charrettes to present design opportunities that incorporate the needs and wants of all residents.

Traditionally, the ideation phase is when the design team makes sense of what they have learned from their end users or stakeholders and identifies opportunities for design by generating ideas and building rough prototypes to share with users/stakeholders. However, these ideation methods were done *with* the end users (the Alamance residents) reflecting the CBPR approach used in the charrettes, rather than by the facilitators or planning team after the fact for several reasons.

- First, we wanted to hear residents' ideas, rather than draw our own conclusions about how they would want these funds used based on what they shared during the charrette.

- Second, it empowered residents to feel ownership over their ideas for these funds and brainstorm how they could be used from the very beginning.
- Third, we knew we would not be able to necessarily bring our ideation results back to as many residents to receive feedback and iterate the process, so we needed to be sure that our results were informed by residents directly in the moment.

Wrap Up – Final Words/Takeaways

At the end of each charrette, we did a quick wrap up, asking participants to share a one-word takeaway from their involvement in the charrette process. See linked notes for reactions, which ranged from appreciation for being heard, to feeling empowered, to renewed commitment to bringing concerns to decision-makers from participants across the four charrettes.

Synthesis of Findings

As the word cloud above, derived from the post-it note ideas from all four charrettes, depicts, there were design ideas generated by participants that addressed concerns across communities. The themes listed below represent key findings synthesized from the data collected at the four charrettes conducted in different Alamance County communities. Each of the major themes came up in each charrette in one way or another. Below we briefly describe the themes and list comments offered by charrette participants. Potential strategies/solutions to address concerns are noted with an asterisk. The full list is included in the spreadsheet, along with each charrette's notes in the notes page linked above.

Theme 1: Disconnection from resources

In general, the charrette discussions made it clear that Alamance residents from the communities engaged feel disconnected from resources, whether feeling like there are not enough resources to meet their needs, they do not know about potential resources, or that the resources that exist do not serve their community (either by race/ethnicity, location, neighborhood, etc.). Yet even while noting the lack of resources, participants also

acknowledged that there many organizational resources in the county that provide support in different and important ways to them and their families (i.e., Dream Center, RHA- therapy, Salvation Army, Catholic church, Big Brother Big Sisters, Elon, and community colleges).

- Participants are disconnected from resources and services in their community and from political leadership; many are doubtful that anyone cares or will listen to them
- Concern about lack of resources for Hispanic/Latinx residents, especially lack of healthcare options in terms of cultural competency of providers and cost
- Many groups mentioned lack of access to internet/broadband
- Lack of safe places for children and teens to gather

Theme 2: Disconnection among neighbors/Divided communities

Residents participating in all charrettes made it clear they feel disconnected from their neighbors and from the larger community in Alamance County. In the Pleasant Grove charrette residents attributed this sentiment to the rural nature of their community, with homes being more spread out and neighbors further away. One group there also mentioned racism as a divisive factor in the community. The disconnection noted by community residents was brought to life during our Pleasant Grove charrette with participants quite divided in opinion and suspicious of our motives. There was no community champion at this charrette and the absence of a trusted community voice affected the tone and involvement of community members in the process. In the Morrowtown charrette, residents mentioned disconnection along racial/ethnic lines, as Black participants described feeling a lack of unity between them and their Caucasian and Latinx neighbors (although others in attendance challenged this idea). Participants expressed interest in building ties with their Spanish speaking neighbors but felt at a loss at how to bridge the language and cultural gap. Participants at the Dream Center (all Latinx/Hispanic) described the city of Burlington as highly divided. One participant described the divide in this way: “If you are by your house in East town and West town, it is a different place, the area is completely different. The police or the city does not take care of the street, does not take care of this area, nobody takes care of this area. If you go to East town, it is clean and wonderful. That is what I do not understand.” At Crump Village participants noted the lack of unity, particularly among adults, within Burlington Housing Authority communities and expressed concern about outsiders moving in. As one described it, “It is weak. We cannot come together. My community is strong in terms of kids. Adults are not strong. As far as adults get together and plan things, we do not do it. I would like to see more of it.” Across the board, many charrette participants perceived a lack of unity in their community that affects the community’s health.

- New residents from other counties are perceived as bringing in issues
- Discrimination among Latinx community (based on nationality), small immigrant community but big concern
- Comments about Latinx community not interacting with other residents were voiced by a few Black attendees
- Lack of unity within communities
- Not enough community involvement
- *A day every month to come together and get to know your neighbors

Theme 3: Concern for young people

The third theme intersects with most other themes, as residents’ concern for their community’s young people encompassed deep apprehension for their safety, education, and future outcomes. From more playgrounds to better education, to addressing bullying in schools and drugs in the community, to building sidewalks and speedbumps to slow cars down, these intersecting concerns were all framed as a concern for the wellbeing, physical, mental, and social health and positive development of children and teens.

- Urban community with nothing for kids or teenagers to do, kids outside without guidance
- No nearby playground
- Concerns over kids’ physical safety due to crime and gun violence and speeding cars
- Bullying in schools
- Delinquency, weapons, and drugs in schools
- Lack of after school care/programming, lack of tutoring
- Need more information about how our children can go to college

- *Need more parks/places for children to go

Theme 4: Safety

Safety as a theme emerged from this focus on the concerns for children, which broadened to overall concerns for community wellbeing. References were made across multiple charrettes to recent deaths of young people in the community at the hands of gun violence. In Morrowtown, participants spoke about community mobilization around violence in the absence of elected officials listening to their concerns. At the Crump Village Community Center, participants spoke about a recent shooting that had intensified their worries for their children. The Dream Center charrette also mentioned unexpected license checkpoints, which may be a different kind of safety issue (i.e., immigration/documentation concerns) but remains important to mention and address.

- Increased crime rate
- Gun violence
- Gangs
- Drugs and alcohol in streets
- Unexpected license check points
- All mentioned drugs + gun violence

Theme 5: Infrastructure

Infrastructure challenges were identified in all charrettes, though the focus of concern varied from one community to the next. Housing issues were a major concern across charrettes, whether due to lack of affordability, as expressed in Pleasant Grove and Morrowtown, or to the state of building structures, as described by Burlington Housing Authority residents participating in the Crump Village charrette. Crump Village participants spoke specifically about concerns in their communities' buildings, while joining others describing lack of streetlights, speed bumps, crosswalks, and broken security cameras. Concerns about infrastructure focused on general community safety (many highlighting older adults and children as their main cause for concern here). Ideas for increasing housing affordability and access also came up and Morrowtown participants advocated establishing a Land Trust to facilitate this process in communities such as theirs.

- Bugs, roaches
- Need more parking spaces
- Heating and cooling issues
- Lots of trash on streets
- Security cameras don't work
- Bad sockets
- Paint peeling
- Mold
- Remodel homes
- *Stop lights, better lighting, streets paved, crosswalks, speed bumps
- *More affordable housing options and ways to increase homeownership

Theme 6: Health

Due to the focus on health in each charrette, a big theme expressed was concern over community health, particularly lack of accessible, comprehensive healthcare services due to cost, a dearth of services in communities, and lack of cultural competence among providers and staff. The need for mental health care services was mentioned by participants at all charrettes.

- Concern over children's health and safety leads to poor mental health among adults
- *Parents need counseling/therapy, but cannot afford health insurance
- Lack of free clinics and dental clinics, therapy, nutrition services, family counseling services
- *Sliding scale service clinics
- Mental health related to violence and guns
- Lack of satellite health centers/need to travel to Chapel Hill for healthcare
- Community health workers

- All mentioned mental health services

Other:

- Need for immigration services- lawyers, attorneys, ways to get permits and green cards and citizenship

Charrette participants were engaged and passionate about ways ARPA funds coming into the county could be used to address community challenges and improve the health of communities. Ideas offered ranged across the social ecological model from individual, to community, to policy. This spreadsheet includes all the ideas received: https://docs.google.com/spreadsheets/d/1I0mNsm4Kw7pua7ctln92j_l9a_AlXbMsRAuvRsi-8xY/edit?usp=sharing

Discussion and Implications

Residents of the communities involved in each of these charrettes recognized both strengths and needs within their communities. In all four, participants conveyed a strong sense of being excluded. Pervasive, too, across all charrettes was the sense among participants that no one cared or cared enough to listen to their concerns, nor did they feel that decision-makers represented their concerns. When one city council member did come to one of the charrettes, participants appreciated his show of interest. Yet some in communities let us know they no longer even try to make their voices heard since they have been ignored repeatedly. Even those who do attend city council or county commissioner meetings to advocate for community needs expressed doubt that what they said would make a difference. As one participant described it, "we have an opportunity to make change, but if you keep saying same thing over and over, . . . it feels like a waste of time. [It is important] to have a concern for everybody else in your community." Yet community residents also recognized the power of bringing their voices together to spur collective action. Despite the skepticism that many participants felt, many felt buoyed by the opportunity afforded by the charrettes "to voice their opinions," generate ideas about how "to improve their communities," and to "learn more from one another and about resources and initiatives they may not already know about." Engaging the community in a collective process like the charrettes has the potential to intensify awareness of community concerns in a different and potentially impactful way. As one participant described it, "If you are not in the situation, you do not know. If you do know, you cannot just brush [our concerns] off." As expressed in some one-word takeaways, many participants felt empowered, supported, and heard through participating in this process. They also were clear about holding Healthy Alamance and the charrette team accountable, asking questions about how we were going to use this information, whether they were going to have a chance to see the results, and how the findings could reach elected officials and decision-makers. Underlying these questions lies a fundamental concern about trust, or, more accurately, lack of it towards institutions and leaders that historically exclude and/or ignore their communities. We assured them that Healthy Alamance and the Health Equity Collective, through their shared commitment to health equity and deep connections to communities across the county, was poised to listen and ensure that community residents had the opportunity to review the findings and offer additional feedback before integrating the findings into the Community Health Assessment to inform the Community Health Improvement Process, as well as the ARPA funds designation.

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8. ideo.org/tools

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Chapter 5

Spanish Translation of Deena Elrefai's

Estudio de caso: salud reproductiva de latinos: dimensiones de la diversidad y su impacto en la atención médica

Durante las últimas décadas, la composición racial y étnica de la población estadounidense ha cambiado notablemente. La población Latino es una parte super importante en estas transformaciones. Si bien hoy en día uno de cada ocho residentes de los Estados Unidos es latino, se proyecta que las personas latinas podrían representar uno de cada cinco residentes para 2035, uno de cada cuatro para 2055 y uno de cada tres para 2100.

La población latino del condado de Alamance es más alta (13.1 %) que el promedio estatal (9 %). La comunidad Latino en el condado de Alamance, Carolina del Norte, es diversa, pero la mayoría de los programas asumen homogeneidad. El término “Latino” incluye a personas de 21 países de origen que hablan más de 50 idiomas, pero todos están agrupados en los Estados Unidos. A medida que los profesionales crean estrategias para abordar las disparidades en la salud reproductiva, es importante reconocer la diversidad entre las muchas comunidades latinas para crear estándares de atención culturalmente sensibles. Esta investigación tiene como objetivo comprender cómo el racismo asociado con la inmigración y el origen étnico afecta negativamente las experiencias de salud reproductiva de *diversas* comunidades latinas.

Hubo grupos de enfoque con mujeres latinas del condado de Alamance centrados en el uso de anticonceptivos, el apoyo familiar y el conocimiento y las percepciones de los servicios de salud, para aprender más sobre la experiencia de navegar el sistema de atención médica. Casi todos los participantes, independientemente de sus antecedentes, compartieron experiencias negativas con los proveedores de atención médica, incluidas suposiciones sobre el idioma, el estado socioeconómico y el estado migratorio. Otros resultados se centraron en el racismo en relación con diferentes factores asociados con ser Latino: el racismo en los Estados Unidos se muestra estructural, geográfica e interpersonalmente, y existen factores estresantes específicos asociados con el panorama social y político negativo localizado relacionado con la inmigración y el control de aduanas.

Un participante compartió una experiencia negativa con la atención médica:

> "Mi experiencia… No sé si diría racista, pero definitivamente tuvo matices de micro agresión desde el principio. Simplemente asumieron que no podía hablar inglés, incluso cuando había estado dos o tres veces."

Otros participantes indicaron que las experiencias de salud negativas con los proveedores no estaban asociadas solo con una persona o situación, sino que eran intergeneracionales:

> "Mi mamá fue a la [clínica de atención médica local] para los controles posparto. No estoy seguro de quién la estaba cuidando... pero lo exageraron. Ella mencionó "oh, me siento un poco deprimida", y dijeron "oh, enviaremos un trabajador social a tu casa."

Las identidades y los indicadores demográficos, incluidos el país de origen y el nivel socioeconómico, también tienen un impacto en el compromiso con los sistemas de atención médica. Los participantes de entornos más ricos, como los participantes cubanoamericanos, compartieron un mayor sentido de autoeficacia al navegar por los sistemas de salud, mientras que los participantes de entornos menos ricos y diferentes estados migratorios compartieron sobre el uso de los recursos y la experiencia de la comunidad en lugar de los sistemas médicos formales.

El tratamiento de las comunidades Latinos basado en suposiciones de que todos tienen la misma experiencia es dañino y tiene un impacto negativo en las experiencias de salud reproductiva. Es fundamental comprender la diversidad dentro de la comunidad Latino para que las partes interesadas y los proveedores de atención médica puedan crear estándares de atención más culturalmente sensibles que consideren las diferencias dentro de las muchas comunidades Latino.

Chapter 6

Preamble: *WE, THE PEOPLE OF COLOR, gathered together at this multinational People of Color Environmental Leadership Summit, to begin to build a national and international movement of all peoples of color to fight the destruction and taking of our lands and communities, do hereby re-establish our spiritual interdependence to the sacredness of our Mother Earth; to respect and celebrate each of our cultures, languages and beliefs about the natural world and our roles in healing ourselves; to ensure environmental justice; to promote economic alternatives which would contribute to the development of environmentally safe livelihoods; and, to secure our political, economic and cultural liberation that has been denied for over 500 years of colonization and oppression, resulting in the poisoning of our communities and land and the genocide of our peoples, do affirm and adopt these Principles of Environmental Justice:*

The United Church of Christ (UCC) and Environmental Justice:

The First National People of Color Environmental Leadership Summit has been described as one of the most important events in the history of the environmental justice movement. The four-day Summit sponsored by the United Church of Christ's Commission for Racial Justice began in Washington, D.C., on October 24th, 1991. With around 1,100 persons attending from all 50 states as well as Puerto Rico, Chile, Mexico, and the Marshall Islands, the inclusive breadth of participation allowed for the environmental justice movement to coalesce in re-defining the very meaning of "environment." No longer did the word connote remote wilderness areas and pristine natural landscapes as was often the case for white environmental organizations. The environment was now where one lived, worked, studied, played, and prayed. As such, it encompassed a range of issues from housing and transportation to worker safety and toxic pollution." 30th Anniversary: The First National People of Color Environmental Leadership Summit - United Church of Christ (ucc.org)

October 2021 marked the *"30 years since the historic and monumental 1991 First National People of Color Environmental Leadership Summit in Washington, D.C. where the 17 Principles of Environmental Justice were first established and forever changed how the language and framework used in the United States to address environmental injustices. While much about the current environmental justice movement remains the same today, people of color continue to "transition to the next generation" in so many places and in so many ways…"*

On October 28th, 2021, the American Public Health Association (APHA) along with the United Church of Christ (UCC) commemorated 30 years since the historic 1991 Summit took place with original Summit video clips and guest speakers who were participants 30 years. 30th Anniversary: The First National People of Color Environmental Leadership Summit - United Church of Christ (ucc.org)

Omega and Brenda Wilson, Co-Founders of the West End Revitalization Association (WERA) in Mebane, NC were invited to be a part of the group that planned, organized, and presented the 30th virtual anniversary of the 1991 Summit with hundreds of people participating from every state. **Omega Wilson, Brenda Wilson, and Brandon Hunter Archives - United Church of Christ (ucc.org)**

Definition of Environmental Justice on US Environmental Protection Agency's website: Environmental Justice | US EPA:

> *Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. This goal will be achieved when everyone enjoys:*
>
> - *The same degree of protection from environmental and health hazards, and*

· *Equal access to the decision-making process to have a healthy environment in which to live, learn, and work.*

[Read the Factsheet about the EPA's Office of Environmental Justice.]

EJ SCREEN

Purposes and uses of EJSCREEN with access links are outlined below from EPA's website:

EJSCREEN allows users to access high-resolution environmental and demographic information for locations in the United States and compare their selected locations to the rest of the state, EPA region, or the nation.

The tool may help users identify areas with:

- *Minority and/or low-income populations*
- *Potential environmental quality issues*
- *A combination of environmental and demographic indicators that is greater than usual*
- *Other factors that may be of interest*

EJSCREEN may also be used to support:

- *Educational programs*
- *Grant writing*
- *Community awareness efforts*
- *Other purposes*

This screening tool and data may be of interest to community residents or other stakeholders as they search for environmental or demographic information. It can also support a wide range of research and policy goals. The public has used EJSCREEN in many different locations and in many ways.

EPA is sharing EJSCREEN with the public:

- *to be more transparent about how we consider environmental justice in our work,*
- *to assist our stakeholders in making informed decisions about pursuing environmental justice and*
- *to create a common starting point between the agency and the public when looking at issues related to environmental justice.*

Screening tools should be used for a "screening-level" look. Screening is a useful first step in understanding or highlighting locations that may be candidates for further review. However, it is essential to remember that screening-level results:

- *do not, by themselves, determine the existence or absence of environmental justice concerns in each location*
- *they do not provide a risk assessment and*
- *have other significant limitations.*
- *EJSCREEN Home*
- ***What is EJSCREEN?***
  - *How was EJSCREEN Developed?*
  - *How Does EPA Use EJSCREEN?*
  - ***Purposes and Uses for EJSCREEN***
- *Learn to Use EJSCREEN*
- *Understanding EJSCREEN Results*
  - *EJ Indexes*
  - *Environmental Indicators*
  - *Demographic Indicators*
  - *How to Interpret a Standard Report*
- *Technical Information about EJSCREEN*

  - *Limitations and Caveats in Using EJSCREEN*
  - *Download EJSCREEN Data*
- *Additional Resources and Tools*

Contact Us to ask a question, provide feedback, or report a problem.

In-Depth Formal Request

On January 14, 2022, WERA requested U.S. Department of Justice investigations of environmental justice impacts under Federal Housing Administration guidelines in Alamance County and Orange County. The following is the content of the formal request:

January 14, 2022
TO: Max Lapertosa – Max.Lapertosa@usdoj.gov
Lauren Marks – Lauren.Marks@usdoj.gov
Debbie Chizewer – dchizewer@earthjustice.org
Anna Sewell - asewell@earthjustice.org
Mary Rock - mrock@earthjustice.org

The following briefly outlines BLUE links, **environmental justice issues that adversely impact housing in Mebane, NC, and Alamance County**. Per our discussion on December 2, 2021, these adverse housing impacts may not fit the existing US Department of Justice's Fair Housing Administration. However, environmental justice is of primary importance for all federal, state, and local government agencies to address.

As of January 10, 2022, WERA had participated in one of a series of virtual meetings with officials from the Alamance County Health Department. This series of meetings also included several concerned community leaders. WERA's Mebane, NC location is also in Alamance County. The City of Mebane in Alamance and Orange counties. Alamance County Health Assessment & Health Equity Collective team partnered with WERA regarding five major areas of concern:

1. First time health assessment to identify of people of color communities for cancers, asthma, and other respiratory illnesses, diabetes, lead exposures, etc.
2. Digitally map communities with predominate percentages of Black, Indigenous, and Latinx populations (using tools like the EPA's EJSCREEN).
3. Identify and map the location of legacy or new business/commercial/industrial or government sites producing contaminants and toxins that are known to be injurious to humans, animals, and ecosystem (air, soil, water, and human exposure), with disproportionate adverse impact on people of color. This includes new or unknown (newly identified) toxins.
4. Seek collaborative partnerships, technical resources, funding, and legal strategies for cleanup, mitigation, remediation, removal, and restoration for safety human access and improved quality of life use, and
5. Produce a comprehensive Alamance County Health Assessment Report with a first-time section on "Environmental Justice Impacts" for short-term actions and long-term monitoring and evaluation.

The following outlines some of the specific environmental justice, civil rights, and right to basic public health issues that are currently known to adversely impact housing standards and up-to-code standards necessary to improve and maintain a quality of life found in white communities.

<u>Prioritize Denial of Infrastructure Installation as a Title VI Violation</u>: Ensure installation of up-to-code safe drinking water and sewer service for Black, Indigenous, and Latinx communities that are necessary for protection

against COVID-19 and other environmental legacy diseases related to pollution and contamination. WERA included this priority in the Environmental Justice Bill S.2236 led by Senator Cory Booker (D/NJ). The City of Mebane has a long history of redlining and denial of access to municipal sewers in Black communities with failing backyard septic systems. In 1999, WERA filed a Title VI of the Civil Rights Act of 1964 and referenced the Environmental Justice Executive Order-12898 of 1994.

In 2000, over $2.5 million in CDBG funding and City of Mebane match funded first-time sewer and safe drinking water up-grades for about 100 houses in the West End Community. Over $2.3 million for another CDBG funding, and City of Mebane match, was not used by the City of Mebane for first-time sewer line installation for over 80 houses in the White Level community. Mebane is recognized as one of the top ten fasting growing municipalities in North Carolina due to new industrial and distribution centers like Walmart ($100 million), Lidl ($125 million), Cambro Plastics ($100 million), UPS ($262 million), Chick-fil-A ($56 million), Amazon, and many more. The City of Mebane gives millions of local taxpayers' money to each of these billion-dollar corporations along with the installation of new roads, safe drinking water, and sewer infrastructure. Over four hundred homes in historically African American and Indigenous communities continue to be denied access to first-time municipal sewer connection and up-to-code safe drinking water access. **See detailed study (EPA-EJ Study (wera-nc.org)**

The marginalized Black, Indigenous, and Latinx communities include sections of West End, White Level, Buckhorn, Perry Hill, and Cheeks Cross. Massive growth still redlines and denies up-to-code safe drinking water and sewer services to people of color today. See the news story: More development coming to Buckhorn Area | News | mebaneenterprise.com

"During the November meeting, the Mebane City Council approved the annexation and conditional rezoning of roughly 129 acres near the intersection of Buckhorn and West Ten Roads, allowing developer Al Neyer to, in three phases, construct six buildings to be known as the Buckhorn Business Centre, which will total nearly 1,000,000 square feet.

The future site of the Buckhorn Business Centre is made up of 14 individual parcels. One of those parcels was already within the Mebane city limits and zoned B-2 (general business).

The remaining 13 parcels were outside the Mebane extraterritorial jurisdiction (ETJ) in Orange County. Four of those were zoned R-1 by Orange County and the remaining nine were zoned O/RM by Orange County. ***All the parcels already have access to city water and sewer, however."***

In 2021, the City of Mebane approved a $15 million bond to install/upgrade new safe drinking water and sewer services for new mega industrial and commercial developments, and again redline people of color communities: See news article: City council approves revenue bond application request | News | mebaneenterprise.com

"Upgrades to the City of Mebane's water and sewer system are coming, and the city council recently approved a proposal to apply for revenue bonds to help fund those improvements.

Mebane's Water Resource Recovery Facility (WRRF) needs renovation, and the city said that it will cost $9 million. Construction of the GKN pump station is also planned and will cost $1.9 million. The city also needs to refund the 2014 Graham-Mebane Water Plant Upgrade and Sewer Line Extension debt totaling $2,769,000. These ventures, totaling $13,613,000, will be financed with the revenue bonds."

The only real progress on environmental justice in the City of Mebane and Alamance County involved federal USDOJ legal actions. See news story: Tate Avenue-Corregidor Street connector nears completion | News | mebaneenterprise.com

"Additionally, the West End was not connected to city water and sewer at the time but the sludge trucks leaving the water treatment facility would ride through the community spilling sludge everywhere, Wilson said.

All this, among other issues, was noted in WERA's environmental justice lawsuit against the City of Mebane.

In that lawsuit, the need for a connector of the West End and the rest of the city was raised, as well as a request to stop the 119 Bypass from cutting through the middle of the community.

22 years later, the bypass is being built to the west of the community and the connector is nearing completion. But Mayor Hooks acknowledged the lack of connectivity between the West End and the rest of the city has been an issue for a while.

"[Folks in West End] had to drive all the way around town to get to the arts center. So, the DOT designed a road and designed a connector as part of this project, which is fantastic," Hooks said.

The mayor also noted that moving the 119 Bypass west, out of the West End, was "the right thing to do."

Prior to the lawsuit, the push to connect Tate Avenue to the rest of the city was started in 1995 by residents Marilyn and Walter Snipes, both deceased."

Western Electric Telephone Industrial Site Also Doubles as Army Chemical Production Plant back to World War II in the 1940's. The plant was closed in 1992 and the blighted site stands as a 22-acre mega polluter in the increasing people of color eastern section of Burlington, NC. See this two-minute YouTube aerial fly-over**:** **Abandoned Western Electric Plant is Looking for Occupants - Burlington, NC - YouTube**

1) Burlington, NC (Alamance County) is just one the mega abandoned sites for Western Electric Plants in the USA. ARTICLE**:** **Clear and present danger: Former Army missile plant has polluted a Black, Latino neighborhood in Burlington for more than 30 years | NC Policy Watch** Sept 8, 2021.

2) Produced toxic metal and plastics for telephone cables and parts. During World War II, one of many sites that produced secret Army missile chemicals that put communities at risk today.

3) Closed in 1992. Will NIEHS (National Institute of Environmental Health Sciences), EPA, Army, NCDEQ, and USDOJ show up to help clean up in 2022?

4) The abandoned Western Electric Telephone & Army Missile site is within one block of the Alamance County Health Department, Social Services for low-income families, churches, apartments, homes, restaurants, and more.

Indigenous leaders of Seven Directions of Service with the Occaneechi Tribe of Alamance County and Caswell County have long raised major environmental and environmental injustices to "Mother Earth's Ecosystem"
Alamance County community outraged over quarry project | WGHP FOX8 (myfox8.com)

"The Snow Camp community in Alamance County is outraged after residents found out a possible quarry may be coming to their area. The county commission held an emergency meeting on Wednesday to discuss a way to address concerns of the people in that area.

People filled every seat at the meeting hoping to get their voices heard.

"As residents of Snow Camp, we're concerned that this project went through without any input from our community," Gary Ulicny said.

"I mean a gravel mine by definition is noisy, dusty, including carcinogens, known carcinogens when you ground rock and put into the air. Most importantly, the water. All of us depend on wells and the aquifer," Ulincy said.

Not only are residents worried about it being a health and environmental hazard, but many spoke out about a gas line in that area that could be affected."

Similar granite quarry issues and their adverse impacts on less urban residents who can maintain homes only on drinking well water. See this article about residents in the northern area of Alamance County which is the home of surviving members of the Occaneechi Tribe: Rock Quarry – Protect Caswell

Citizen concerns with the operation of the quarry:

- *Dewatering of deep pits (300 and 550 ft) will affect nearby wells that are much shallower:*
    - *Flow rate from wells will decrease and run dry*
    - *Wells will not recharge as quickly*
    - *Sediment will increase*
    - *Contamination will occur*
- *Both pit dewatering and the release of tremendous amounts of stormwater and process water will alter and damage the surrounding ecosystem.*
- *Changes to wetlands and streams will affect aquatic life*
- *Pit dewatering will affect the aquifer ability to recharge*
- *Pit dewatering and the release of water will have adverse effects on Roxboro Lake*

NIEHS actions requested after an all-day webinar on December 11, 2021: Addressing Racism As a Public Health Issue Through the Lens of Environmental Health Disparities and Environmental Justice - Friday, December 10, 2021
 Free Virtual Workshop (nih.gov) Many of the issues raised here were also raised with NIEHS administrators, leading scientists, and hundreds of grassroots community leaders across the nation. WERA affiliates who helped organize and plan this national environmental justice event were also key presenters (Ayo Wilson, Brenda Wilson, Omega Wilson, Crystal Cavalier-Keck, Jason Keck, and Naeema Muhammad). Access this link: Speakers - Addressing Racism As a Public Health Issue Through the Lens of Environmental Health Disparities and Environmental Justice: From Problems to Solutions (nih.gov)

On November 12, 2021, WERA's Virtual Dinner Speaker was Cecilia Martinez, PhD, Senior Director for Environmental Justice (EJ) at the White House Council for Environmental Quality (CEQ). WERA shared residences' public health and safety concerns related to the denial of basic public health infrastructure installation and the unresolved 22-acre Western Electric site and more environmental justice issues. **On January 7, 2022, Dr Martinez resigned from her White House position, leaving the prominent position that effective environmental justice corrective actions and mitigations at the ground level have better chances of success via complaints to the U.S. Department of Justice. See this article: Top White House environmental justice official to depart post - CNNPolitics**

"Communities of color in the US are more likely to breathe air pollution, despite contributing less to fouling the air. They are more likely to be exposed to contaminated water and to live near hazardous waste sites. And as the

climate crisis worsens, many groups -- including poor communities and communities of color -- are the [most vulnerable](#) to the dangers of a warming planet."

"Communities of color and environmental justice communities have been impacted by a number of systemic policy decisions that have been made, whether it be transportation, looking at roads and highways that cut through the heart of many of these communities, whether you look at failed drinking water systems ... or whether you look at facilities that spew pollution in closer proximity than other communities," EPA administrator Michael Regan told CNN in July."

The West End Revitalization Association (WERA) and collaborating partners request thorough U.S. Department of Justice investigations of the major and urgent environmental justice concerns brought to your attention here. We seek a timely notification.

Omega and Brenda Wilson, WERA Co-Founders (non-profit 501©-3 1995)

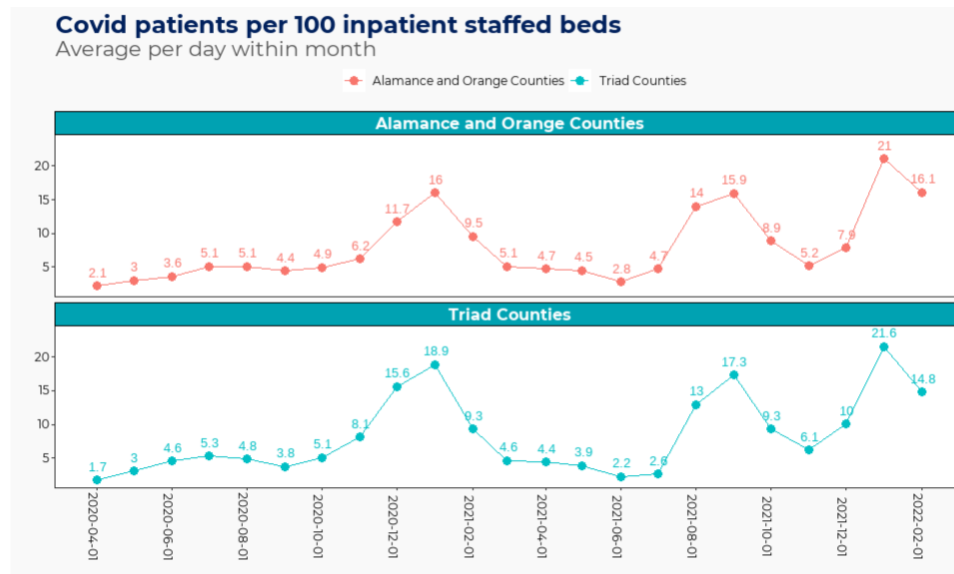
WERA co-founders receive American Public Health Association award | News | mebaneenterprise.com

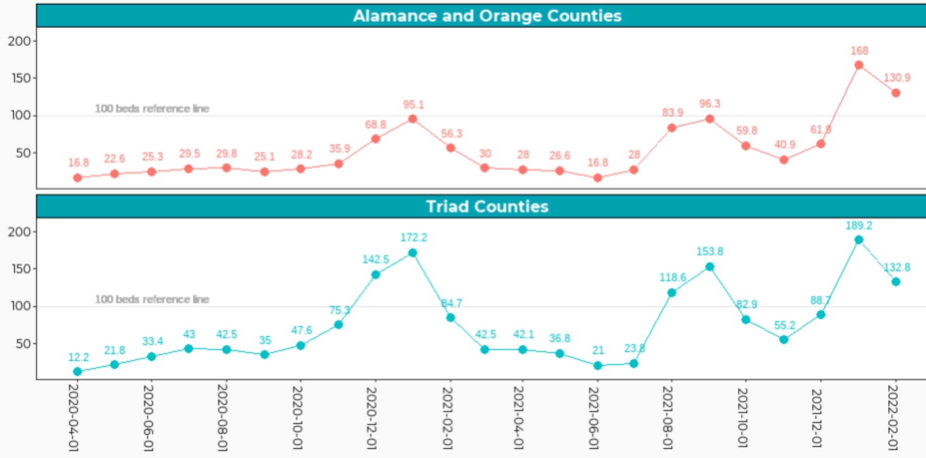
Ayo B Wilson, Director WERA Clean Energy & Climate Justice Initiative
Evon P Connally, WERA Board Chair & 30-years Healthcare Professional at
Alamance Regional Medical Center – Cone Health
CC: Barrett Brown, Executive Director of Alamance County NAACP Crystal and Jason Keck, 7 Directions of Service, Occaneechi Saponi Tribe, Emily Sutton and Elaine Chiosso, Haw River Assembly

Chapter 7

Hospitalizations

Total inpatients





Covid patients per 100 ICU staffed beds
Average per day within month
Alamance and Orange Counties
Triad Counties
Alamance and Orange Counties
100 beds reference line
16.8
22.6
25.3
29.5
29.8
25.1
28.2
35.9
68.8
95.1
56.3
30
28
26.6
16.8
28
83.9
96.3
59.8
40.9
61.9
168
130.9
Triad Counties
100 beds reference line
12.2
21.8
33.4
43
42.5
35
47.6
75.3
142.5
172.2
84.7
42.5
42.1
36.8
21
23.8
118.6
153.8
82.9
55.2
88.7
189.2
132.8
200
150
100
50
2020-04-01
2020-06-01
2020-08-01
2020-10-01
2020-12-01
2021-02-01
2021-04-01
2021-06-01
2021-08-01
2021-10-01
2021-12-01
2022-02-01

APPENDIX D

Citations & Resources

Chapter 1

Chapter 2

Brief County Description

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