Albemarle Regional Health Services
Partners in Public Health

ECU HEALTH
Bertie Hospital

BERTIE COUNTY

COMMUNITY HEALTH NEEDS ASSESSMENT

2024 CHNA REPORT

ACKNOWLEDGEMENTS

This Community Health Needs Assessment (CHNA) represents the culmination of work completed by multiple individuals and groups. Health ENC – a group of stakeholders who help find ways to collaborate and share resources to improve the health of the population in eastern North Carolina – served an integral role in making this comprehensive assessment possible. To provide focused guidance throughout the assessment process, Health ENC convened a smaller decision-making group, which will be referred to as the Steering Committee throughout this CHNA. The Steering Committee would like to extend its gratitude to all the focus groups participants, health leaders, and community members who provided information used in the development of this assessment.

The Health ENC CHNA Steering Committee

Name	Title	Organization
Lorrie Basnight	Executive Director	Eastern Area Health Education Center (AHEC)
Amanda Betts	Public Health Education Supervisor	Albemarle Regional Health Services (ARHS)
April Culver	Vice President, External Affairs	UNC Health Johnston
Caroline Doherty	Community Health Consultant	Roanoke Chowan Community Health Center (RCCHC)
Laura Ellis	Health Education	Halifax County Health Department
Sandra McMasters	Community Benefit Project Manager	Sentara Health
Claire Mills	Director	Eastern AHEC
Emmanuelle Quenum	Health Education Director	Greene County Department of Public Health (DPH)
Rose Ann Simmons	Administrator, Community Health Improvement	ECU Health
Michelle Wagner	Public Health Educator	Dare County Department of Health & Human Services (DCDHHS)

Bertie County CHNA Leadership

In addition to the Steering Committee, the Bertie County 2024 CHNA was developed in partnership with representatives from the following organizations.

- ARHS
- Sentara Albemarle Medical Center
- ECU Health Chowan Hospital
- ECU Health Bertie Hospital
- ECU Health Roanoke Chowan Hospital
- Healthy Carolinians of the Albemarle
- Gates Partners for Health
- Three Rivers Healthy Carolinians

Bertie County CHNA Stakeholders

In addition to the organizations listed above, the Bertie 2024 CHNA was developed with input from additional representatives from local health providers, government officials, non-profit organizations, social service providers and community members.

Name	Organization
Kellen Long	ARHS
Andrea Porter	ARHS
Wanda Stallings	ARHS
Gabi Corprew	ARHS
Amy Underhill	ARHS
Sylvia Outlaw	ARHS
Deneen Robbins	ARHS
Teresa Beardsley	ARHS
Dee Spruce	ARHS
Liz Baker	Bertie Cooperative Extension
Montez Bishop	Bertie County Schools
Mary Morris	Chowan County Cooperative Extension
Susan Nixon	Chowan/Perquimans Smart Start
Jennifer Harris	ECU Health
Emily Bryant	ECU Health
Kelly Herr	ECU Health
Tyeshia Phelps	DSS
Brian Harvill	ECU Health
Kelly Cross	ECU Health
Christy Dozier	ECU Health
Sonya Williams	ECU Health Roanoke Chowan Hospital
Susan Creed	Edenton Chowan Chamber
Shannon Ray	Edenton Chowan Recreation Department
Julie Tunney	Northeastern NC Partnership for Public Health
Mandy Hall	Roanoke Chowan CHC

In addition, the Steering Committee would like to thank Ascendient Healthcare Advisors for directing the CHNA process and developing the content of this report.

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EXECUTIVE SUMMARY

A Community Health Needs Assessment (CHNA) helps health leaders evaluate the health and wellness of the community they serve and identify gaps and challenges that should be addressed through new programs, services and policy changes. This report was created in compliance with North Carolina Local Health Department Accreditation standards, as well as Internal Revenue Service requirements for not-for-profit hospitals.

Several local health organizations came together to help develop this CHNA, including Albemarle Regional Health Services and ECU Health Bertie Hospital.

Secondary (existing) data is an important piece of the CHNA process. Key sources for secondary data included information provided by the Steering Committee and a variety of public data sources related to demographics, social and economic determinants of health, environmental health, health status and disease trends, mental/behavioral health trends, and individual health behaviors. Each data measure was also compared to state or national benchmarks to identify areas of specific concern for Bertie County. Top community needs identified through secondary data analysis included health concerns related to physical and sexual health, and social or environmental concerns such as food access and security, housing and homelessness, and family, community, and social support, among others.

Primary (new) data were collected through focus groups and a web-based survey for community members, and included feedback from 313 people who live, work or receive healthcare in Bertie County. A total of five in-person focus groups were conducted, with a variety of community members from different backgrounds, age groups and life experiences. Primary data identified employment and income, food access and security, healthcare access and quality, physical health (chronic diseases, cancer, obesity), and transportation and transit as top needs that impact the health and well-being of people living in Bertie County.

Representatives from Bertie County worked together to identify the priorities the county should focus on over the following three-year period. Leaders evaluated the primary and secondary data collected throughout the process to identify needs based on the size and scope, severity, the ability for hospitals or health departments to make an impact, associated health disparities, and importance to the community. Although it was not possible for every single area of potential need to be identified as a priority, Bertie County selected four top priority health needs (Access to Healthcare, Behavioral Health, Healthy Living, and Sexual Health), which are shown here in alphabetical order:

Bertie County also compiled a Health Resources Inventory, which describes a variety of resources available to help Bertie County residents meet their health and social needs.

Following completion of this report, health leaders throughout Bertie County will use its findings to collaborate with community organizations and local residents to develop effective health strategies, new implementation plans and interventions, and action plans to improve the communities they serve.

INTRODUCTION

Background

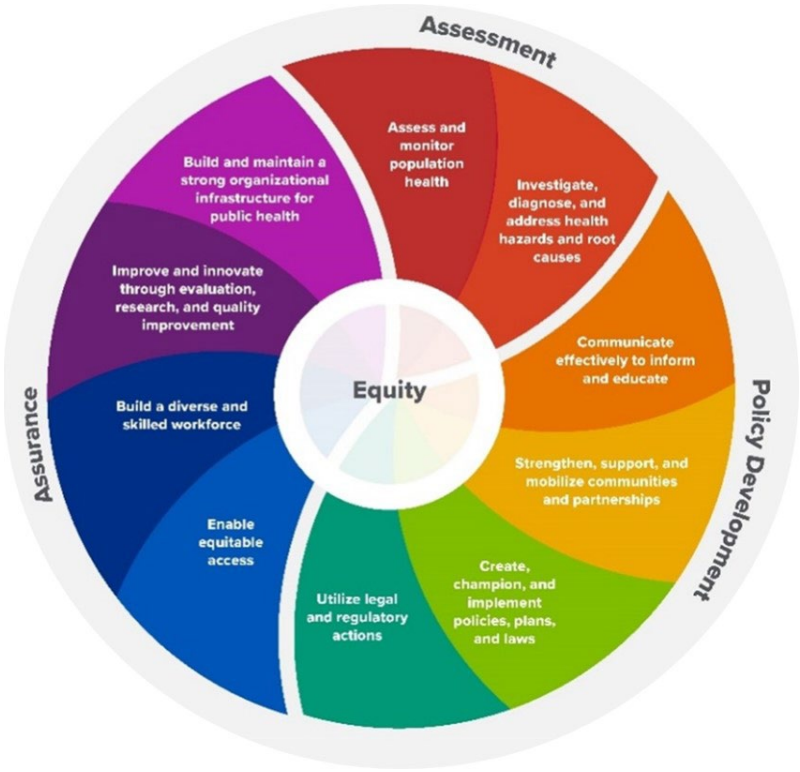
To illustrate its commitment to the health and well-being of the community, the Health ENC CHNA Steering Committee has completed this assessment to understand and document the greatest health needs currently faced by local residents. Guidance was also provided by local representatives from Albemarle Regional Health Services and ECU Health Bertie Hospital. These organizations helped gather the focus group and survey data that are detailed in this report. The CHNA process helps local leaders continuously evaluate how best to improve and promote the health of the community. It builds upon formal collaborations between the Steering Committee and other community partners to proactively identify and respond to the needs of Bertie County residents.

This report was created in compliance with the State of North Carolina's Local Health Department Accreditation (NCLHDA) Board's accreditation standards.[1] The accreditation process allows local health departments to assess how they are meeting national and state-specific standards for public health practice and provides opportunities to address any identified gaps. It also ensures that local health departments have the ability to deliver the 10 essential public health services, as described in **Figure I.1** below. In its demonstration of data and prioritization of Bertie County's community needs, this report aligns with all NCLHDA standards for accreditation, including the need to:

- Provide evidence of community collaboration in planning and conducting the assessment;
- Reflect the demographic profile of the population and describe socioeconomic, educational and environmental factors that affect health;
- Assemble and analyze secondary data to describe the health status of the community;
- Collect and analyze primary data to describe the health status of the community;
- Use scientific methods for collecting and analyzing data, including trend data to describe changes in community health status and in factors affecting health;
- Identify population groups at risk for health problems;
- Identify existing and needed health resources;
- Compare selected local data with data from other jurisdictions; and
- Identify leading community health problems.

[1] Source: NCLHDA Health Department Self-Assessment Instrument Interpretation Document 2024.

Figure I.1: The 10 Essential Public Health Services



Further, this process complies with Internal Revenue Service (IRS) requirements for not-for-profit hospitals to complete a CHNA every three years to maintain their tax exemption.[2] Specifically, the IRS requires that hospital facilities do the following:

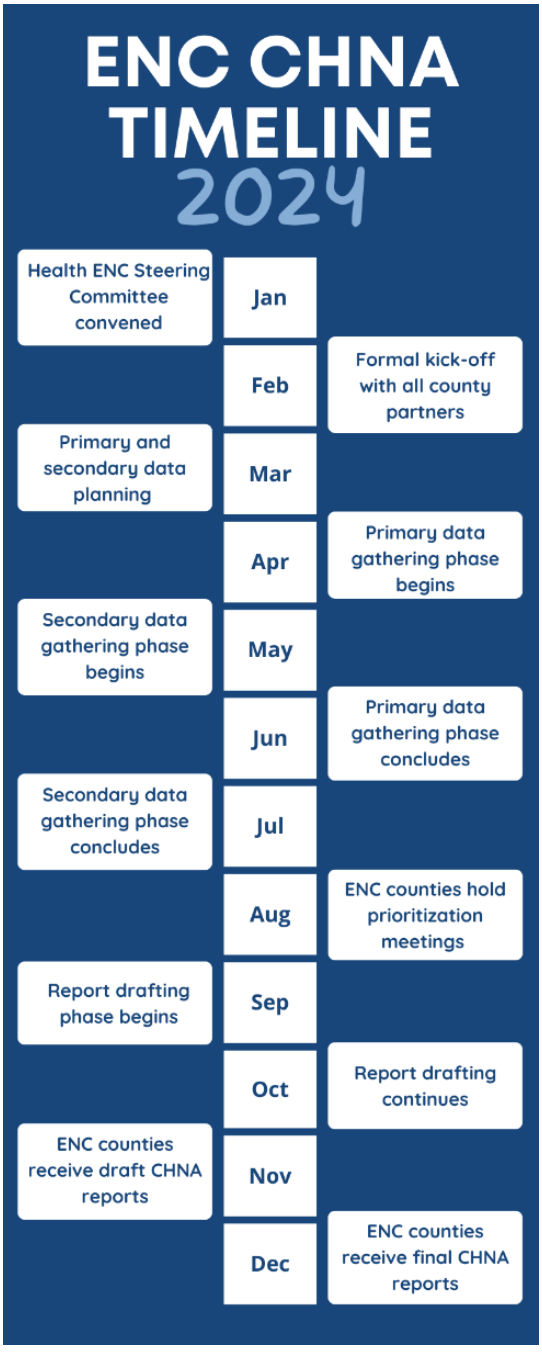
- Define the community it serves;
- Assess the health needs of that community;
- Through the assessment process, take into account input received from people who represent the community's broad interests, including those with special knowledge of or expertise in public health;
- Document the CHNA in a written report that is reviewed and adopted by the hospital facility's authorizing body; and
- Make the CHNA widely available to the public.

[2] Source: *Community Health Needs Assessment for Charitable Hospital Organizations – Section 501®(3)* (2023). Internal Revenue Service. Retrieved February 13th, 2024 from https://www.irs.gov/charities-non-profits/community-health-needs-assessment-for-charitable-hospital-organizations-section-501r3.

Timeline

The Health ENC 2024 CHNA process for all participating counties, including Bertie County, began in January 2024 with the convening of the Steering Committee and continued throughout the year. The process concluded in December 2024 with the delivery of final CHNA reports. A high-level summary of activities conducted throughout the year can be found in **Figure I.2** below.

Figure I.2: Health ENC 2024 CHNA Milestones



Process Overview

A significant amount of information has been reviewed during this planning process, and the Steering Committee has been careful to ensure that a variety of sources were used to deliver a truly comprehensive report. Both existing (secondary) data and new (primary) data were collected directly from the community throughout this process. It is also important to note that, although unique to Bertie County, the sources and methodologies used to develop this report comply with the current NCLHDA and IRS requirements for health departments and not-for-profit hospital organizations.

The purpose of this study is to better understand, quantify, and articulate the health needs of Bertie County residents. Key objectives of this CHNA include:

- Identify the health needs of Bertie County residents;
- Identify disparities in health status and health behaviors, as well as inequities in the factors that contribute to health challenges;
- Understand the challenges residents face when trying to maintain and/or improve their health;
- Understand where underserved populations turn for services needed to maintain and/or improve their health;
- Understand what is needed to help residents maintain and/or improve their health; and
- Prioritize the needs of the community and clarify/focus on the highest priorities.

There are ten phases in the CHNA process, as described in **Figure I.3** below. Results of the first seven phases are discussed throughout this assessment and the development of community health action plans and subsequent phases will take place after the completion of the CHNA report.

Figure I.3: The CHNA Process

Report Structure

The outline below provides detailed information about each section of the report.

1) *Methodology* – The methodology chapter provides an overall summary of how the priority health need areas were selected as well as how information was collected and incorporated into the development of this CHNA, including study limitations.

2) *County Profile* – This chapter details the demographic (such as age, gender, and race) and socioeconomic data of Bertie County residents.

3) *Priority Health Need Areas* – This chapter describes each identified priority health need area for Bertie County and summarizes the new and existing data that support these prioritizations. This chapter also describes the impact of health disparities among various sub-groups in Bertie County.

4) *Health Resource Inventory* – This chapter documents existing health resources currently available to the Bertie County community.

5) *Next Steps* – This chapter briefly summarizes the next steps that will occur to address the priority health need areas discussed throughout this document.

In addition, the appendices discuss all of the data used during the development of this report in detail, including:

1) *State of the County Health Report* – Detailed information about actions taken to address the priority health needs identified in previous CHNAs are presented in **Appendix 1.**

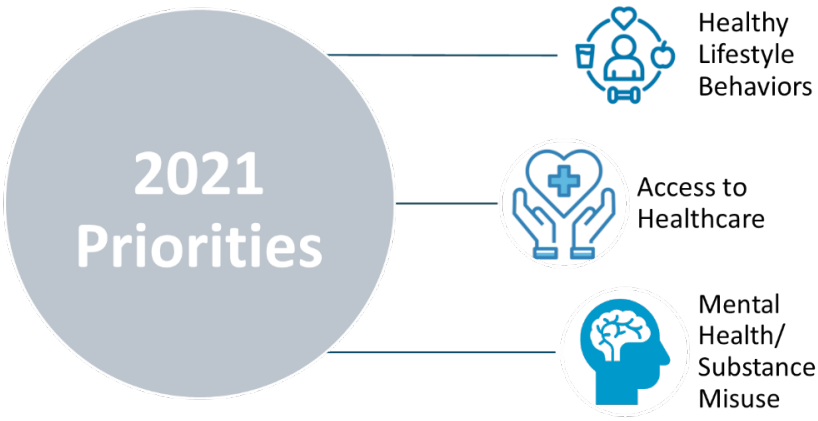
2) *Detailed Summary of Secondary Data Measures and Findings* – Existing data measures and findings used in the prioritization process are presented in **Appendices 2-3.**

3) *Detailed Summary of Primary Findings* – Summaries of new data findings from community member surveys as well as focus groups are presented in **Appendices 4-5.**

Evaluation of Prior CHNA Implementation Strategies

A CHNA is an ongoing process that begins with an evaluation of the previous CHNA. In 2021, Bertie County completed its previous assessment. Associated implementation strategies focused on three priority areas, as listed below:

Figure I.4: Bertie County 2021 Priority Need Areas



Local organizations developed goals and implementation plans to address these priority health needs. Below are brief summaries of each organization's most recent CHNA implementation plans.

Albemarle Regional Health Services

Albemarle Regional Health Services (ARHS) is a district health department serving northern North Carolina. The ARHS district model serves as a shining example of regionalization and what true public health champions can accomplish when they work together. This district model would not be possible if

it were not for its eight member counties: Bertie, Camden, Chowan, Currituck, Gates, Hertford, Pasquotank, and Perquimans. The mission & vision of ARHS serves to inspire people to lead healthy lives. The public health professionals and programs of ARHS are dedicated to disease prevention and the promotion of a healthy environment to reduce morbidity, mortality, and disability through quality service, education, and advocacy. ARHS partnerships stretch far and wide, and many agencies serve as public health champions throughout its communities. These agencies range from school systems to cooperative extension, colleges and universities, other county agencies, and many more.

ECU Health Bertie Hospital

ECU Health Bertie Hospital is a critical-access facility located in Windsor, and its dedicated team of health career professionals provides quality, compassionate care and personal attention to the people of Bertie County and the surrounding area. Staffed by primary care physicians, internists, and surgeons, ECU Health Bertie Hospital offers specialty and primary care clinics, along with surgical, emergency, and diagnostic services. Patient units at the facility also include medical/surgical and 24-hour emergency departments. Through a telemedicine link with the Brody School of Medicine at East Carolina University, ECU Health Bertie Hospital is able to connect patients with providers and resources to meet a full range of health care needs. ECU Health Bertie Hospital is part of the ECU Health system which serves more than 1.4 million people in 29 counties. ECU Health's system of care includes 1,708 beds across an academic medical center with two campuses and is a teaching hospital for the Brody School of Medicine at East Carolina University; eight community hospitals; and numerous outpatient facilities, home health, hospice and wellness centers. The system has more than 1,100 academic and community providers practicing in over 185 primary and specialty clinics located in more than 110 locations.

Previous CHNA Priority: Health Lifestyle Behaviors

- Goal: To improve the health status of the community by promoting healthy lifestyle behaviors and treating whole self with "lifestyle medicine".
- Promote the use of Telehealth/ECU Health Now to provide services to community members. Information is advertised and promoted at events.
- Continue existing partnership with Bertie County Schools to provide a certified athletic training program (ongoing).
- Partner with community organizations and agencies to implement NCCARE 360 in Bertie County to connect patients to local services to meet identified care needs/whole well-being. This is managed by social workers.
- Promote preventative immunizations to community members. This is accomplished by annual flu shots during the fall season.
- Continue to partner with the Good Shepherd Food Pantry to address food insecurity in Bertie County (ongoing).
- Continue to educate elementary school students about Healthy Lifestyles and the importance of positive health behaviors through the Teddy Bear Fair program (ongoing).
- Have "Teddy", the hospital mascot continue to make appearences at young kid's events/activities to promote healthy habits in the community (ongoing).
- Co-lead the Safe Kids Chowan County partnership focused on educating the public on child safety and prevention activities – reaches Bertie County. This partnership also provides car seats and car seat safety checks for community members (ongoing).

Previous CHNA Priority: Access to Healthcare

- Goal: To reduce the rate of chronic disease in Bertie County through education and prevention efforts and early detection, along with improving the health and well-being of people living with chronic disease.
- Promote preventative health screenings and health coaching.
    - Total Screenings:
        - FY 2022: 6
        - FY 2023: 7
        - FY 2024: 11
- Offer transitional care services to connect patients with chronic conditions to community services. Wendy Crumpler connects with patients to prevent Hospital re-admission by using SMART goals.
- Inform providers, churches, schools, and community partners about local services and maintaining overall health through education and awareness activities (ongoing).
- Offer stroke education/screenings to different businesses and community partners to raise awareness and prevention. Kaili Nixon (Stroke Prevention Coordinator) provides this education.
- Continue to provide specialty health care services in the ECU Bertie Hospital Outpatient Services Center, reducing the need for community members to travel outside the community for these services (ongoing; managed by Kelli Joco, Specialty Clinic Manager).
- Provide advance care planning and psychiatric advanced directives education and outreach in local community to assist community members with proactive planning around end-of-Life care. Ginger Griffin provides this education and outreach.
- Partner with the American Cancer Society to support the Bertie Relay for Life. Anita Hoggard plans and organizes this effort.

Previous CHNA Priority: Mental Health/Substance Misuse

- Goal: To educate Bertie County community of the dangers of substance abuse and connect those in need with the appropriate health resources
- Participate in the Tobacco Free Living Coalition and Trillium Community Collaborative program advisory committee (ongoing).
- Educate patients and community members on the appropriate ways to dispose of medication, as well as how to access drug disposal drop boxes at the Bertie County Sheriff's Department (ongoing).

Additional detail about previous implementation plans, as captured in the NCLHDA State of the County Health (SOTCH) report, can be found in **Appendix 1**.

Summary Findings: Bertie County 2024 Priority Health Need Areas

To achieve the study objectives in the 2024 assessment, both new and existing data were collected and reviewed. New data included information from web-based surveys of adults (18+ years) and focus groups; various local organizations, community members, and health service providers within Bertie County participated. Existing data included information regarding the demographics, health and healthcare

resources, behavioral health, disease trends, and county rankings. The data collection and analysis process began in January 2024 and continued through July 2024.

Throughout Bertie County, significant variations in demographics and health needs exist within the county. At the same time, consistent needs are present across the whole county and serve as the basis for determining priority health needs at the county level. This document will discuss the priority health need areas for Bertie County, as well as how the severity of those needs might vary across subpopulations based on the information obtained and analyzed during this process.

Through the prioritization process, the CHNA Steering Committee identified Bertie County's priority health need areas from a list of over 100 health indicators. Please note that the final priority needs were not ranked in any order of importance and county health leaders will engage in each of the four priority need areas. After looking at all relevant data and feedback from the CHNA Steering Committee, the Bertie focus areas identified as countywide priorities for the 2024 CHNA are Access to Healthcare, Behavioral Health, Healthy Living, and Sexual Health, as seen in **Figure I.5**.

Figure I.5: Bertie County 2024 Priority Health Needs

Health, healthcare and associated community needs are very much interrelated, and often impact each other. Although this CHNA process considered these areas separately, their impact on each other should be considered when planning for programs or services to address community needs.

Many health needs are also related to underlying societal and socioeconomic factors. Research has consistently shown that income, education, physical environment, and other such demographic and socioeconomic factors affect the health status of individuals and communities. This CHNA acknowledges that link and focuses on identifying and documenting the greatest health needs as they present themselves today. As plans are developed to address these needs, the Committee's goal is to work with other community organizations to address underlying factors that could drive long-term improvements to the county population's health.

For additional discussion of current priority needs and the data that supports those priorities, please see **Chapter 3**.

CHAPTER 1 | METHODOLOGY

Study Design

The process used to assess Bertie County's community needs, challenges, and opportunities included multiple steps. Both new and existing data were used throughout the study to paint a more complete picture of Bertie County's health needs. While the CHNA Steering Committee largely viewed the new and existing data equally, there were situations where one provided clearer evidence of community health need than the other. In these instances, the health needs identified were discussed based on the most appropriate data gathered. Data analysis, community feedback review, and stakeholder engagement were all used to identify key areas of need.

Specifically, the following data types were collected and analyzed:

New (Primary) Data

Public engagement and feedback were received through a web-based community member survey along with community focus groups and significant input and direction from the CHNA Steering Committee. The Steering Committee worked together to develop the survey questions for the web-based survey, and county leaders were provided with a set of target numbers based on their county population's race, ethnicity and age distribution to encourage recruitment of a representative sample of the community. Community members were asked to identify the most significant health and social needs in their community, as well as asked questions about topics specific to Bertie County, including access to care, healthy lifestyle, housing and homelessness, mental health, physical health, substance use disorders, and transportation and transit. Focus group participants were asked a standard set of questions about health and social needs, in order to identify trends across various groups and to highlight areas of concern for specific populations. Through this process, input was gathered from numerous Bertie County residents and other stakeholders. This included web survey responses from over 300 community members and five focus groups that included local community members and other people who live, work or receive healthcare in Bertie County.

For more information regarding specific questions asked as part of the focus groups and surveys, please refer to **Appendix 4.**

Existing (Secondary) Data

Key sources for existing data on Bertie County included information provided by the Steering Committee and a variety of public data sources related to demographics, social and economic determinants of health, environmental health, health status and disease trends, mental/behavioral health trends, and individual health behaviors. Key information sources leveraged during this process included:

- *North Carolina Data Portal*, a joint effort by the North Carolina Department of Health and Human Services and the University of Missouri Center for Applied Research and Engagement Systems
- *County Health Rankings*, developed in partnership by Robert Wood Johnson Foundation (RWJF) and University of Wisconsin Population Health Institute

- *The Opportunity Atlas*, developed in partnership by the U.S. Census Bureau, Harvard University, and Brown University
- *Food Access Research Atlas*, published by the U.S. Food and Drug Administration
- *Social Vulnerability Index*, developed by the CDC and the Agency for Toxic Substances and Disease Registry (ATSDR)
- *Environmental Justice Index*, developed by the CDC and the ATSDR
- *American Community Survey*, as collected and published by the U.S. Census Bureau
- Data provided by CHNA Steering Committee members and other affiliated organizations, including Community Health Assessments for Bertie County from 2018 and 2021.

For more information regarding data sources and data time periods, please refer to **Appendix 2**.

Comparisons

To understand the relevance of existing data collected throughout the process, each measure must be compared to a benchmark, goal, or similar geographic area. In other words, without being able to compare Bertie County to an outside measure, it would be impossible to determine how the county is performing. For this process, each data measure was compared to outside data as available, including the following:

- *County Health Rankings* Top Performers: This is a collaboration between the RWJF and the University of Wisconsin Population Health Institute that ranks counties across the nation by various health factors.
- State of North Carolina: The Steering Committee determined that comparisons with the state of North Carolina were appropriate.

For all available data sources, state and national averages were compared. The following methodology was used to assign a priority level to each individual secondary data measure:

- If the data were more than 5 percent worse = High need
- If the data were within or equal to 5 percent (better or worse) = Medium need
- If the data were more than 5 percent better = Low need

When viewing the secondary data summary tables in this report, please note that the following color shadings have been included to identify how Bertie County compares to North Carolina and the national benchmark. If both statewide North Carolina and national data was available, North Carolina data was preferentially used as the target/benchmark value.

Secondary Data Summary Table Color Comparisons

Color Shading	Priority Level	Bertie County Description
	Low	Represents measures in which Bertie County scores are **more than five percent better** than the most applicable target/benchmark and for which a low priority level was assigned.
	Medium	Represents measures in which Bertie County scores are comparable to the most applicable target/benchmark scoring **within or equal to five percent**, and for which a medium priority level was assigned.
	High	Represents measures in which Bertie County scores are **more than five percent worse** than the most applicable target/benchmark and for which a high priority level was assigned.

Please note that to categorize each metric in this manner and identify the priority level, the Bertie County value was compared to the benchmark by calculating the percentage difference between the values, relative to the benchmark value:

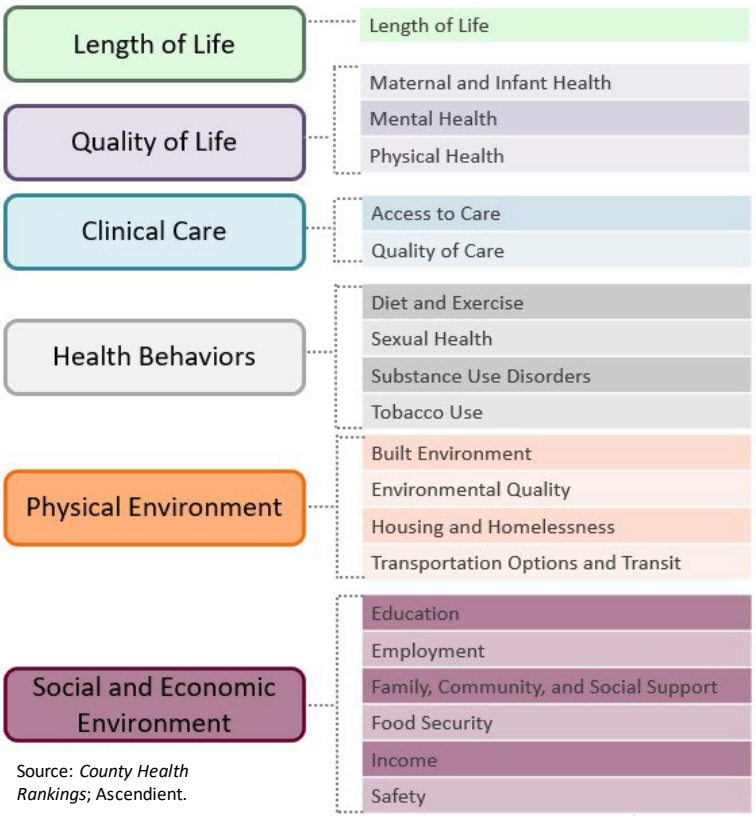
(Bertie Co Value – Benchmark Value)/(Benchmark) x 100 = % Difference Used to Identify Priority Level.

Population Health Framework

This assessment was developed in alignment with the RWJF population health framework, originally developed by the University of Wisconsin's Population Health Institute. Population health focuses on health status and outcomes among a specific group of people, and can be based on geographic location, health diagnoses or common health providers. The population health framework recognizes that the issues that affect health in a community are complex; there are many factors that have the potential to impact health outcomes, including both length and quality of life, within a population. Broadly, these factors include the clinical care available to community members, individual health behaviors, the physical environment, and the social and economic conditions in the community.

Using the population health framework as a guide for the CHNA process helps categorize many individual pieces of data in a way that connects the dots between health status and social drivers of health, in a way that helps local leaders better understand and address the health and well-being of the communities they serve. This understanding is critical in identifying potential interventions to address priority needs in the community, and to helping develop partnerships across sectors that can help drive these interventions forward. **Figure 1.1** below illustrates the broad categories and sub-categories within the population health framework.

Figure 1.1: Population Health Framework



Source: *County Health Rankings*; Ascendient.

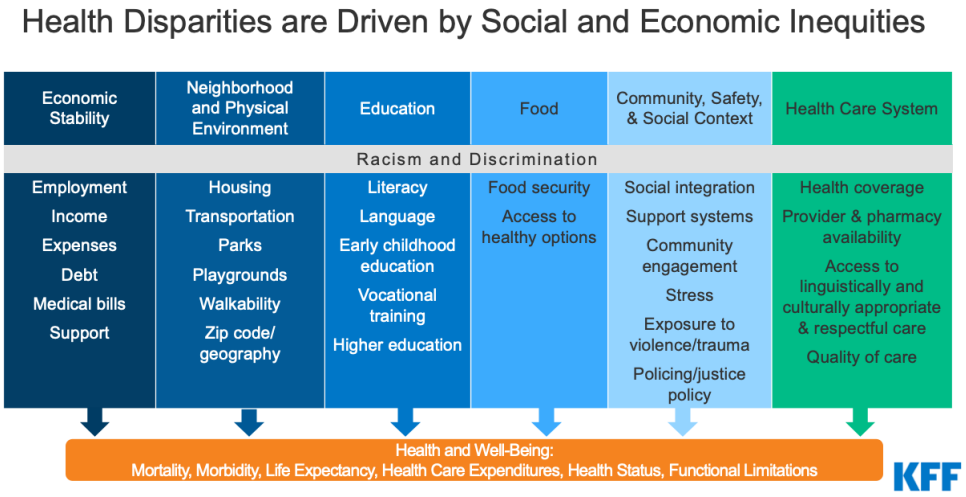
Figure 1.2: Social Determinants of Health

Throughout the process, the Steering Committee also considered *Healthy People 2030*'s "Social Determinants of Health and Health Equity." The CDC defines social determinants of health (SDoH) as the conditions in the environments where people are born, live, learn, work, play, worship and age that affect a wide range of health, functioning and quality of life outcomes and risks. These factors can include healthcare access and quality, neighborhood and built environment, social and community context, economic stability, and education access and quality, as outlined in **Figure 1.2**.[3]

Recognizing that SDoH have an impact on health disparities and inequities in the community was a key point the Steering Committee considered throughout the CHNA process. **Figure 1.3** describes the way various social and economic conditions may affect health and well-being.

[3] Source: CDC (2022). Social Determinants of Health at CDC. Accessed March 7th, 2024 via https://www.cdc.gov/about/sdoh/index.html

Figure 1.3: SDoH and Health Disparities



Prioritization Process Overview and Results

The process of identifying the priority health needs for the 2024 CHNA began with the collection and analysis of hundreds of new and existing data measures. In order to create more easily discussable categories, all individual data measures were then grouped into six categories and 20 corresponding focus areas based on "common themes" that correspond to the Population Health Model, as seen in **Figure 1.1**. These focus areas are detailed further in **Appendix 2.**

Since a large number of individual data measures were collected and analyzed to develop these 20 focus areas, it was not reasonable to make each of them a priority. The Steering Committee considered which focus areas had data measures of high need or worsening performance, priorities from the primary data, and how possible it is for health departments or hospitals to impact the given need to help determine which health needs should be prioritized.

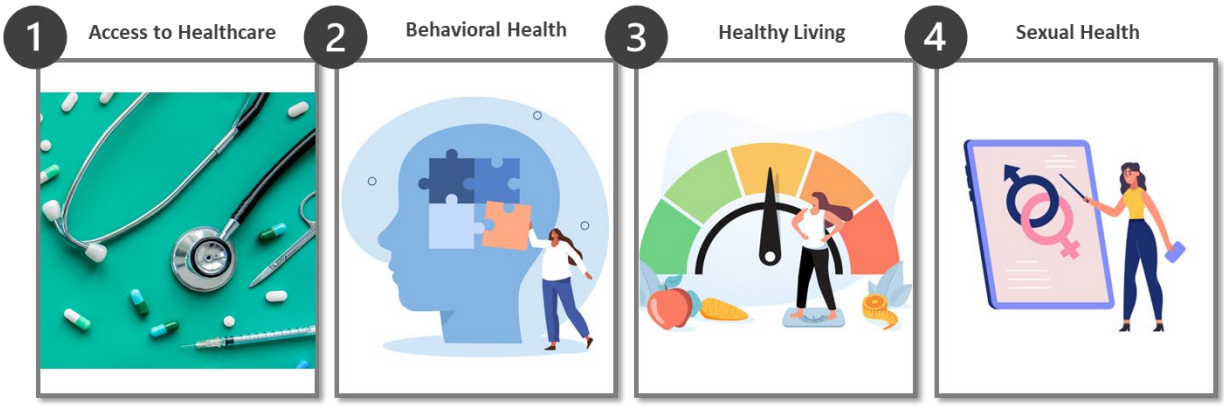
The Steering Committee utilized the multi-voting technique to determine Bertie County's priority need areas, while considering the following factors:

- Size and scope of the health need;
- Severity and intensity of the health need;
- Whether possible interventions would be possible and effective;
- Health disparities associated with the need; and
- Importance the community places on addressing the need.

Group discussion was held to create the list of priority areas for consideration. After the discussion, Steering Committee participants voted to identify the top three priority areas. Once the votes were tallied, another discussion was held to finalize the priority need areas.

The final priority need areas were not ranked in any particular order of importance, and each will be addressed by the Steering Committee. The following four focus areas (Access to Healthcare, Behavioral Health: Mental Health/Substance Misuse, Healthy Living, and Sexual Health) were identified as Bertie County's top priority health needs to be addressed over the next three years, as seen in **Figure 1.4** below:

Figure 1.4: Bertie County 2024 Priority Health Needs



The following organizations participated in the prioritization voting process:

- Bertie County Schools
- Albemarle Pregnancy Resource Center
- Albemarle Regional Health Services
- Bertie Cooperative Extension
- Chowan County Cooperative Extension
- Chowan/Perquimans Smart Start
- DSS
- ECU Health
- ECU Health Roanoke Chowan
- Edenton Chowan Chamber
- Edenton Chowan Recreation Department
- Northeastern NC Partnership for Public Health
- Roanoke Chowan CHC

Study Limitations

Developing a CHNA is a long and time-consuming process. Because of this, more recent data may have been made available after the collection and analysis timeframe. Existing data typically become available between one and three years after the data is collected. This is a limitation, because the "staleness" of certain data may not depict current trends. For example, the U.S. Census Bureau's American Community Survey is a valuable source of demographic information, however data for a particular year is not published until late the following year. This means 2022 data on community characteristics, such as languages spoken at home, did not become available until late fall 2023. The Steering Committee tried to account for these limitations by collecting new data, including focus groups and web-based community

member surveys. Another limitation of existing data is that, depending on the source, it may have limited demographic information, such as gender, age, race, and ethnicity.

Given the size of Bertie County in both population and geography, this study was limited in its ability to fully capture health disparities and health needs across racial and ethnic groups. Efforts were made to include diverse community members in survey efforts, and overall, the composition of survey respondents in terms of race and ethnicity were similar to that of the county as a whole. Roughly 66% of all respondents identified as Black or African American compared to 60% of Bertie County as a whole. Roughly 2% of respondents identified as Hispanic, which mirrored the percentage of the overall county population. Although survey respondents could choose from multiple race or ethnicity categories, the limited responses received from these groups, which were similar to that of the community as a whole, still made it difficult for the Steering Committee to assess health needs and disparities for other racial/ethnic minority groups in the community.

In addition, there are existing gaps in information for some population groups. Many available datasets are not able to isolate historically underserved populations, including the uninsured, low-income persons, and/or certain minority groups. Despite the lack of available data, attempts were made to include underserved sub-segments of the greater population through the new data gathered throughout the CHNA process. For example, the Steering Committee chose to focus on Spanish-speaking members of the community by providing a Spanish language version of the web-based community survey. Paper surveys were also distributed in an effort to reach as much of the community as possible. To increase future survey responses, members of the Steering Committee should consider working directly with partner organizations in the community who can connect directly with populations who are hard to access through traditional outreach methods, including people with disabilities, the uninsured and people who are disengaged.

In the future, assessments should make efforts to include other underserved communities whose needs are not specifically discussed here because of data and input limitations during this CHNA cycle. Of note, residents in the disabled, blind, deaf, and hard-of-hearing communities can be a focus of future new data collection methods. Using a primarily web-based survey collection method might have also impacted response rates of community members with no internet access or low technological literacy. Additionally, more input from both patients and providers of SUD services would also be helpful in future assessments.

Finally, parts of this assessment have relied on input from community members and key community health leaders through web-based surveys and focus groups. Since it would be unrealistic to gather input from every single member of the community, the community members that participated have offered their best expertise and understanding on behalf of the entire community. As such, the CHNA Steering Committee has assumed that participating community members accurately and completely represented their fellow residents.

CHAPTER 2 | COUNTY PROFILE

Geography

Bertie County is located in the Inner Coastal Plain region of North Carolina, characterized by the presence of low-lying areas, winding rivers, and rolling hills. It covers a total of 741 square miles, including 699 square miles of land and 42 square miles of water. Bertie County is comprised of nine townships: Colerain, Indian Woods, Merry Hill, Mitchells, Roxobel, Snakebite, Whites, Windsor, and Woodville. More than three-quarters (83%) of Bertie County's population resides in rural areas.

Population

Population figures discussed throughout this chapter were obtained from Esri, a leading GIS provider that utilizes U.S. Census data projected forward using proprietary methodologies.

Despite being one of the largest counties in the state geographically, Bertie County has a small but mighty population, making up less than 1% of North Carolina's total population.

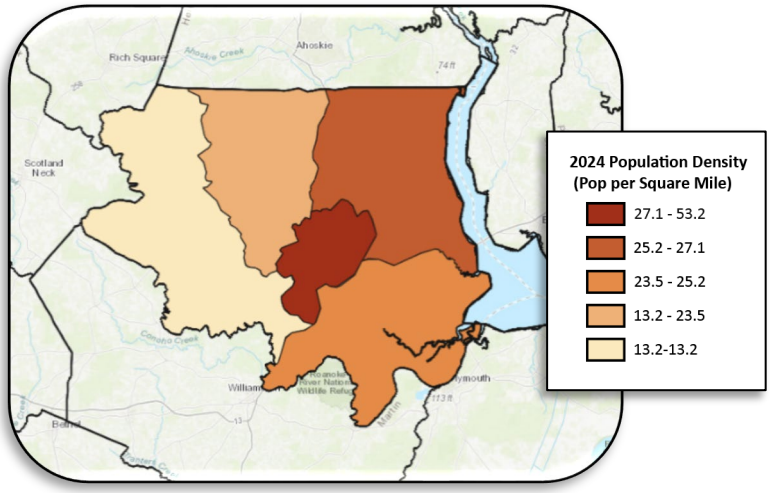
Table 2.1: Total Population, 2023[4]

	Bertie County	North Carolina	United States
Population	17,165	10,765,678	337,470,185

Source: Esri 2023

Bertie County has a population density of 24.5 persons per square mile – lower than the population density for North Carolina (214.7 persons per square mile). Windsor is the most densely populated area in the county.

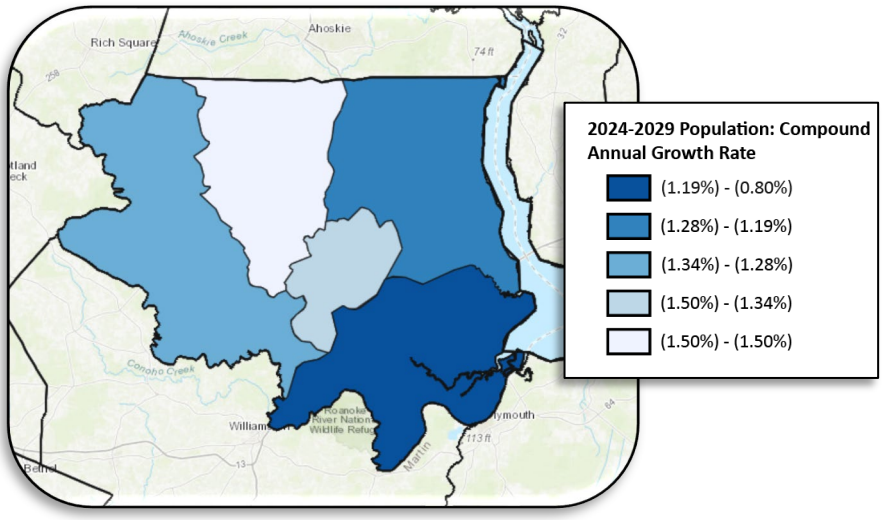
Figure 2.1: Bertie County Map: Population Density



[4] Source: Esri 2023

In total, the population of Bertie County is projected to decline 1.19% annually between 2024 and 2029. Areas in the northern parts of the county are experiencing greater declines.

Figure 2.2: Bertie County Map: Population Growth



Age and Sex Distribution

Data on age and sex helps health providers understand who lives in the community and informs planning for needed health services. The age distribution of Bertie County skews slightly older than North Carolina and the U.S with nearly a quarter (22%) of the population over 65 years old. The largest age group in Bertie County is between the ages of 15 and 44 (35.7%). This suggests an older population overall, which may have implications for healthcare needs and services in the county.

Table 2.2: Age Distribution, 2023[4]

	Bertie County	North Carolina	United States
Percentage below 15	14.6%	17.9%	18.1%
Percentage between 15 and 44	35.7%	39.3%	39.5%
Percentage between 45 and 64	27.7%	25.1%	24.6%
Percentage 65 and older	22.0%	17.7%	17.8%

The sex distribution in Bertie County is comparable to the rest of the state, with a slightly higher proportion of females than males.

Table 2.3: Sex Distribution, 2023[4]						
	Bertie County		North Carolina		United States	
	Count	Pct. of Total	Count	Pct. of Total	Count	Pct. of Total
Female	8,891	51.8%	5,489,419	51.0%	170,118,720	50.4%
Male	8,274	48.2%	5,276,259	49.0%	167,351,465	49.6%

Race and Ethnicity

Data on race and ethnicity help us understand the need for healthcare services as well as cultural factors that can impact how care is delivered. More than half (60%) of Bertie County residents identify as Black (Non-Hispanic). Asian, American Indian and Alaska Native (AIAN), and Native Hawaiian and Pacific Islander (NHPI) are the least represented racial groups in Bertie County, together making up 1% of the population. This data indicates that Bertie County has a distinctly different racial composition compared to North Carolina overall, with a predominantly Black population.

Table 2.4: Racial Distribution, 2023[4]						
	Bertie County		North Carolina		United States	
	Count	Pct. of Total	Count	Pct. of Total	Count	Pct. of Total
Black (Non-Hispanic)	10,299	60.0%	2,199,488	20.4%	42,132,758	12.5%
White (Non-Hispanic)	5,979	34.8%	6,590,161	61.2%	204,562,590	60.6%
Asian	67	0.4%	379,374	3.5%	21,088,177	6.2%
AIAN	63	0.4%	133,820	1.2%	3,831,126	1.1%
NHPI	6	0.2%	9,214	0.1%	712,229	0.2%
Some Other Race Alone	210	1.2%	677, 338	6.3%	29,432,586	8.7%
Two or More Races	541	3.2%	776,283	7.2%	35,710,719	10.6%

By ethnicity, less than 2% of Bertie County's population is Hispanic, significantly lower compared to both state and national figures.

Table 2.5: Ethnic Distribution, 2023[4]						
	Bertie County		North Carolina		United States	
	Count	Pct. of Total	Count	Pct. of Total	Count	Pct. of Total
Non-Hispanic	16,770	98.1%	9,465,874	88.6%	271,934,049	80.6%
Hispanic	334	1.9%	1,299,804	11.4%	65,536,136	19.4%

The proportion of foreign-born individuals residing in Bertie County is less than 1%. This is significantly less than state and U.S averages.

Table 2.6: Foreign Born Population, 2022[5,6]			
	Bertie County	North Carolina	United States
Foreign Born	0.7%	9.0%	13.9%

The diversity of Bertie County is reflected in the languages that residents speak at home. According to the most recent American Community Survey, approximately 2% of Bertie County residents speak a language other than English at home, compared to around 13% of North Carolina and 22% U.S. residents. Only 1% of county residents speak Spanish at home, indicating a lower level of linguistic diversity and a strong predominance of English speakers.

Table 2.7: Language Spoken at Home, 2022[5]			
	Bertie County	North Carolina	United States
English Only	97.7%	87.3%	78%
Spanish	1.0%	7.9%	13.3%
Indo-European Languages	0.4%	2.1%	3.8%
Asian and Pacific Islander Languages	0.8%	1.9%	3.6%
Other Languages	0.1%	0.8%	1.2%

Disability Status[7]

Data on disabilities helps us understand how to create fair and equal opportunities for everyone in the county. In addition, individuals with disabilities may require targeted services and outreach by health and other service providers. The rate of the population with a disability in Bertie County (23.5%) is almost double the percentage of the state (13.3%) and the country (12.9%). This higher prevalence of disability in the county suggests a greater need for accessible healthcare services and support programs compared to North Carolina overall.

Table 2.8: Disability Status, 2022[5,6]			
	Bertie County	North Carolina	United States
Population with a Disability	23.5%	13.3%	12.9%

[5] Source: US Census Bureau (2022)

[6] Source: American Community Survey (ACS) 2018-2022 5-Year Estimates

[7] Disability status is classified in the ACS according to yes/no responses to questions about six types of disability concepts. For children under 5 years old, hearing and vision difficulty are used to determine disability status. For children between the ages of 5 and 14, disability status is determined from hearing, vision, cognitive, ambulatory, and self-care difficulties. For people aged 15 years and older, they are considered to have a disability if they have difficulty with any one of the six difficulty types.

Veteran Status

Military veterans often need special services and support, so it is important to collect data about them to be better able to meet their specific needs. The percentage of veterans in Bertie County is similar to the nationwide figure and slightly lower than North Carolina.

Table 2.9: Veteran Status, 2022[5,6]			
	Bertie County	North Carolina	United States
Veterans	6.6%	7.8%	6.2%

Economic Indicators

In addition to demographic data, socioeconomic factors in the community such as income, poverty, and food scarcity play a significant role in identifying health-related needs. The median household income in Bertie County is $38,343, significantly lower than the state and the country.

Table 2.10: Median Household Income, 2023[4]			
	Bertie County	North Carolina	United States
Median Household Income	$38,343	$64,316	$72,603

In 2023, nearly one in five Bertie County households were below the federal poverty level (FPL). Poverty has a significant impact on health. Across the lifespan, people who live in impoverished communities have a higher risk of poor health outcomes, including mental illness, chronic diseases, higher mortality and lower life expectancy. Poverty is a concern across the lifespan; children who live in poverty are at risk for developmental delays, toxic stress and poor nutrition, and are likely to live in poverty as adults as well. Unmet social needs, including having low or no income, can also limit people's ability to access healthcare when they need it, or to provide for basic necessities needed to live healthy lives, such as safe housing or healthy food.

Table 2.11: Percent of Households Below the Federal Poverty Level, 2023[4]			
	Bertie County	North Carolina	United States
Percent Below FPL	19.1%	10.1%	9.5%

Similar to the percentage of households below the FPL, approximately 35% of Bertie County households received Food Stamps/SNAP (Supplemental Nutrition Assistance Program) in 2022. This is almost three times the percentage of households receiving Food Stamps/SNAP in the state (13.4%) and nationwide (12.4%), indicating a significantly higher level of food insecurity among county households.

Table 2.12: Households Receiving Food Stamps/SNAP, 2022[6,8]			
	Bertie County	North Carolina	United States
Number of Households Receiving Food Stamps/SNAP	2,433	575,860	16,072,733
Total Number of Households	7,070	4,299,266	129,870,928
Percentage of Households receiving Food Stamps/SNAP	34.4%	13.4%	12.4%

In Bertie County, 28.6% of the population has completed high school, which is close to the national average of 28.5%. Bertie has a higher proportion of residents without a high school education and a lower proportion of residents with a college degree or higher compared to the state and the US. This data indicates that while Bertie County exceeds state averages in high school graduation, it lags significantly in bachelor's and graduate degree completion, suggesting potential barriers to accessing or completing higher education.

Table 2.13: Educational Attainment, 2020[9,10]			
	Bertie County	North Carolina	United States
Less than 9th Grade	6.2%	6.0%	3.5%
Some High School/No Diploma	15.0%	5.5%	5.3%
High School Diploma	28.6%	21.2%	28.5%
GED/Alternative Credential	8.1%	4.3%	*
Some College/No Diploma	20.7%	21.1%	14.6%
Associate's Degree	6.9%	9.9%	10.5%
Bachelor's Degree	8.8%	20.4%	23.4%
Graduate/ Professional Degree	5.7%	11.6%	14.2%

The unemployment rate in Bertie County is 6.4%, slightly higher than the state average of 5.1%. Like the rest of the state and the country, the age group with the highest unemployment rate in Bertie County is young people between the ages of 16 and 24. This data suggests that while Bertie County performs slightly better than the state in terms of employment among those 16 to 24, there are still significant employment challenges across all other age groups.

[8] Source: North Carolina Department of Health and Human Services
[9] Source: North Carolina Office of State Budget and Management
[10] US Totals combine GED with High School Diploma

Table 2.14: Unemployment, 2022[6,11]			
	Bertie County	North Carolina	United States
Percentage unemployed ages 16 to 24	12.2%	12.4%	11.0%
Percentage unemployed ages 25 to 54	9.1%	4.7%	3.4%
Percentage unemployed ages 55 to 64	5.5%	3.3%	2.7%
Percentage unemployed ages 65 or more	3.9%	3.0%	2.9%
Total unemployment	6.4%	5.1%	3.9%

Similarly to the state and country, the group with the highest rate of uninsurance in Bertie County is those aged 19 to 34. However, the rate of uninsurance in this age group in Bertie (23.7%) is significantly higher than both the state (15.5%) and the country (13.6%). The data indicates that while Bertie County performs slightly better overall in terms of insurance coverage, young adults face particular challenges in accessing health insurance.

Table 2.15: Health Insurance Status, 2022[6]			
	Bertie County	North Carolina	United States
Percentage uninsured ages 18 or below	6.9%	5.2%	5.4%
Percentage uninsured ages 19 to 34	23.7%	15.5%	13.6%
Percentage uninsured ages 35 to 64	17.4%	12.5%	9.9%
Total Uninsured	14.0%	15.0%	12.0%

[11] Source: Federal Reserve Economic Data

Social Determinants of Health

In addition to the considerations noted above, there are many other factors that can positively or negatively influence a person's health. The Steering Committee recognizes this and believes that, to portray a complete picture of the county's health status, it first must address the factors that impact community health. The Centers for Disease Control and Prevention (CDC) defines social determinants of health (SDoH) as the conditions in the environments where people are born, live, learn, work, play, worship and age that affect a wide range of health, functioning and quality of life outcomes and risks. According to the CDC's "Social Determinants of Health" from its *Healthy People 2030* public health priorities initiative, factors contributing to an individual's health status can include the following: healthcare access and quality, neighborhood and built environment, social and community context, economic stability, and education access and quality.

Figure 2.3: Social Determinants of Health

As seen in **Figure 2.3**, many of the factors that contribute to health are hard to control or societal in nature. As such, health and healthcare organizations need to consider many underlying factors that may impact an individual's health and not simply their current health conditions.

It is widely acknowledged that people with lower income, social status and levels of education find it harder to access healthcare services compared to people in the community with more resources. This lack of access is a factor that contributes to poor health status. Further, people in communities with fewer resources may also experience high levels of stress, which also contributes to worse health outcomes, particularly related to mental or behavioral health.

An analysis of the racial and geographic disparities that emerged in the information obtained and analyzed during this process is detailed below. The CHNA Steering Committee also collected new data via focus groups and surveys to ensure that residents and key community health leaders could provide input regarding the needs of their specific communities. This information will be presented in detail later in this report.

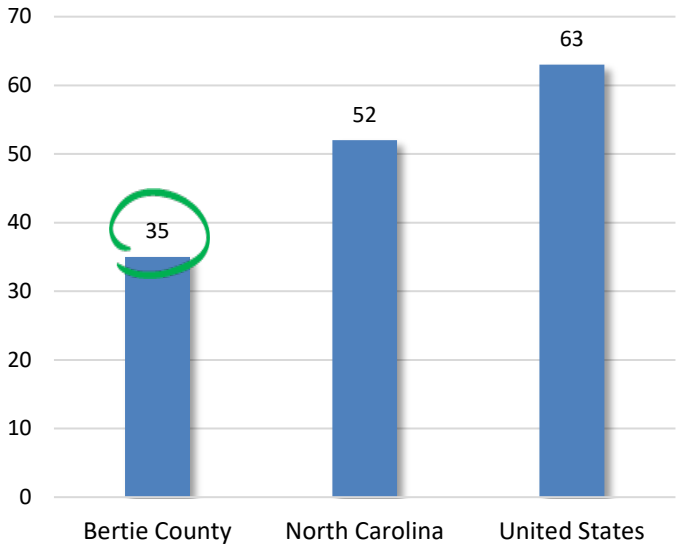
<u>Disparities</u>

Recognizing the diversity of Bertie County, as discussed above, the Steering Committee evaluated factors that may contribute to health disparities in its community. These included racial equity; racial segregation; financial barriers; nutrition; social, behavioral, and economic factors that influence health; and English language proficiency.

Residential segregation is measured by the index of dissimilarity, a demographic measure ranging from 0 to 100 that represents how evenly two demographic groups are distributed across a county's census

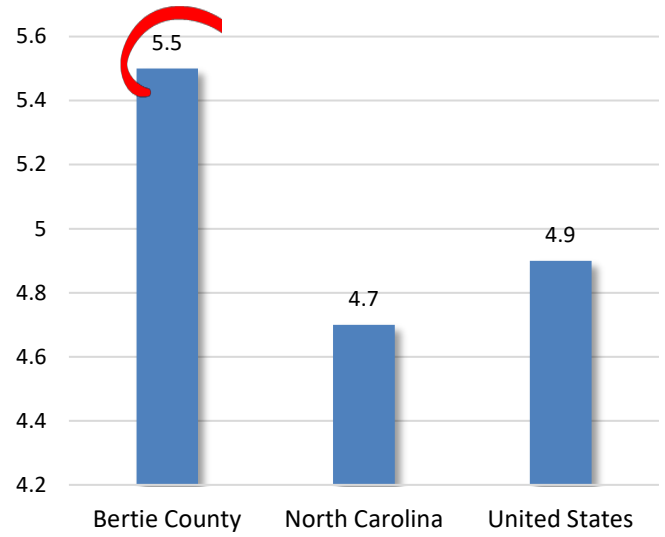
tracts. Lower scores represent a higher level of integration. There is significantly less residential segregation in Bertie County compared to the state and the country, as seen in Figure 2.4.

Figure 2.4: Residential Segregation[12]



Income inequality is measured as the ratio of household income at the 80th percentile to household income at the 20th percentile. Communities with greater income inequality may have worse outcomes on a variety of metrics, including mortality, poor health, sense of community, and social support. As seen in **Figure 2.5**, the income inequality ratio is notably higher in Bertie County than state and country figures.

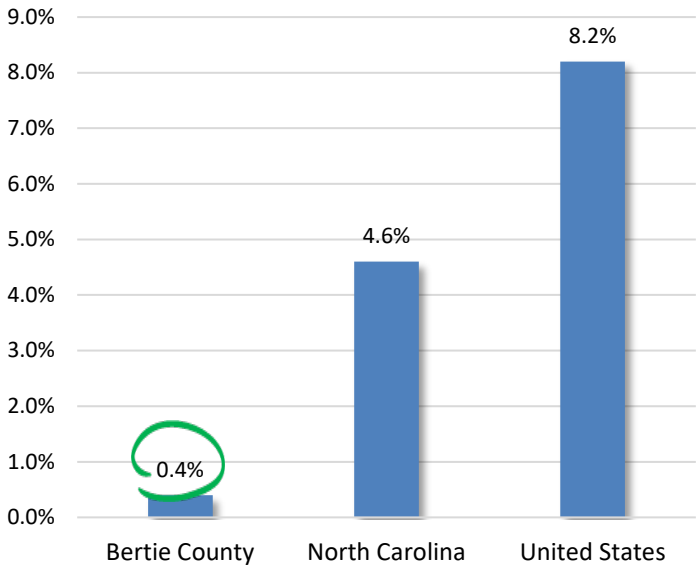
Figure 2.5: Income Inequality Ratio[12]



[12] Source: Robert Wood Johnson County Health Rankings 2024

People with limited English proficiency (LEP) may face challenges accessing care and resources that fluent English speakers do not. Language barriers may make it hard to access transportation, medical, and social services as well as limit opportunities for education and employment. Importantly, LEP community members may not understand critical public health and safety notifications, such as safety-focused communications during the COVID-19 pandemic. Less than 0.5% of people in Bertie County are not fluent in English, notably lower than state and country figures, as seen in **Figure 2.6**.

Figure 2.6: Percent of Population with Limited English Proficiency[6]



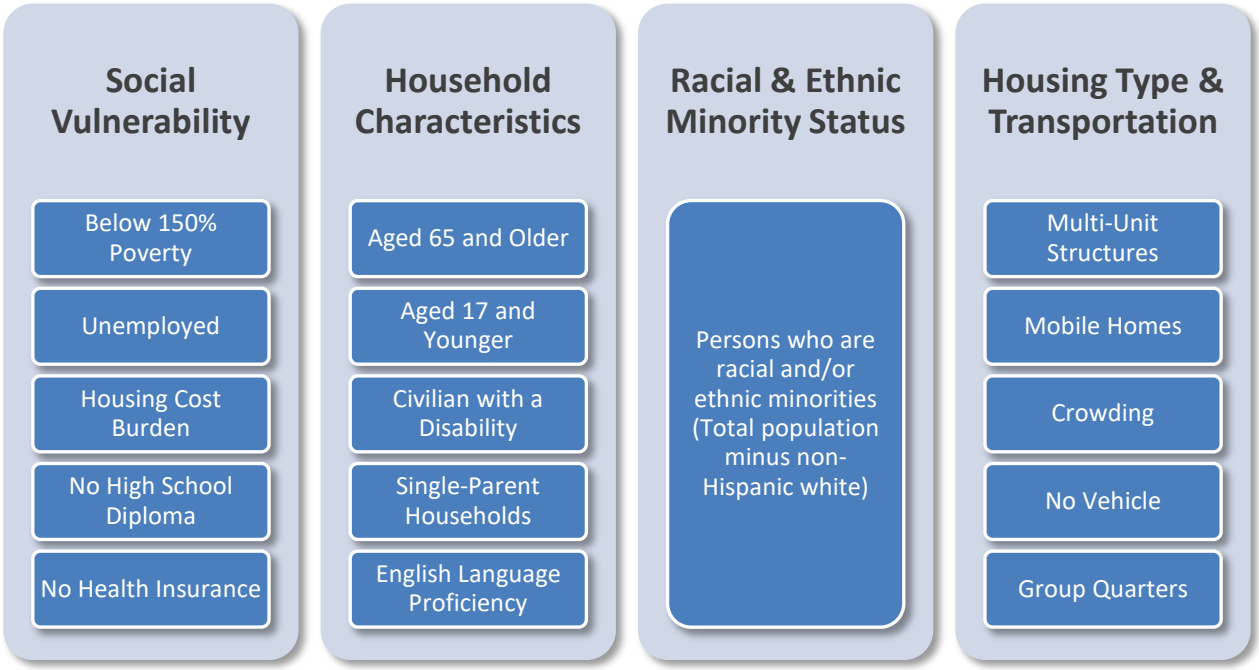
Social Vulnerability Index

One resource that can help show variation and disparities between geographic areas is the Social Vulnerability Index (SVI), which was developed by the CDC and the Agency for Toxic Substances and Disease Registry (ATSDR). Social vulnerability refers to negative effects communities may experience due to external stresses that impact human health, like natural or human-caused disasters, or disease outbreaks. Socially vulnerable populations are at especially high risk during public health emergencies.

The SVI uses 16 U.S. Census variables to help local officials identify communities that may need support before, during, or after a public health emergency.[13] Communities with a higher SVI score are generally at a higher risk for poor health outcomes. Instead of relying on public health data alone, the SVI accounts for underlying economic and structural conditions that affect overall health, including SDoH. SVI scores are calculated at the census tract level and based on U.S. Census variables across four related themes: socioeconomic status, household characteristics, racial and ethnic minority status, and housing type/transportation. **Figure 2.7** outlines the variables used to calculate SVI scores.

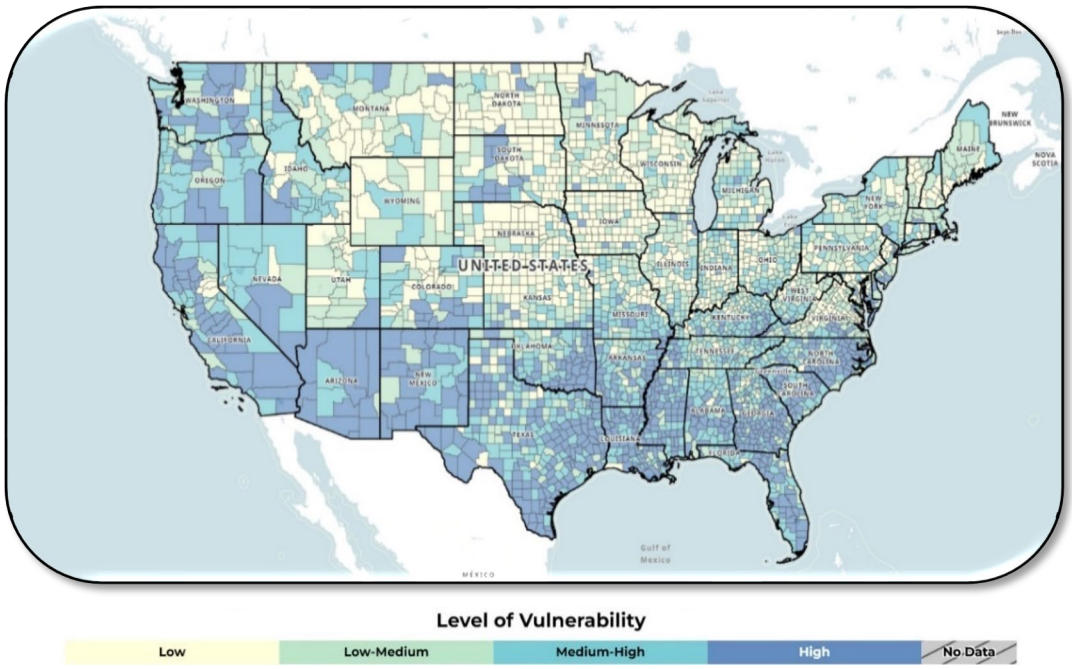
[13] CDC/ATSDR Social Vulnerability Index (SVI). Retrieved from https://www.atsdr.cdc.gov/placeandhealth/svi/index.html.

Figure 2.7: SVI Variables



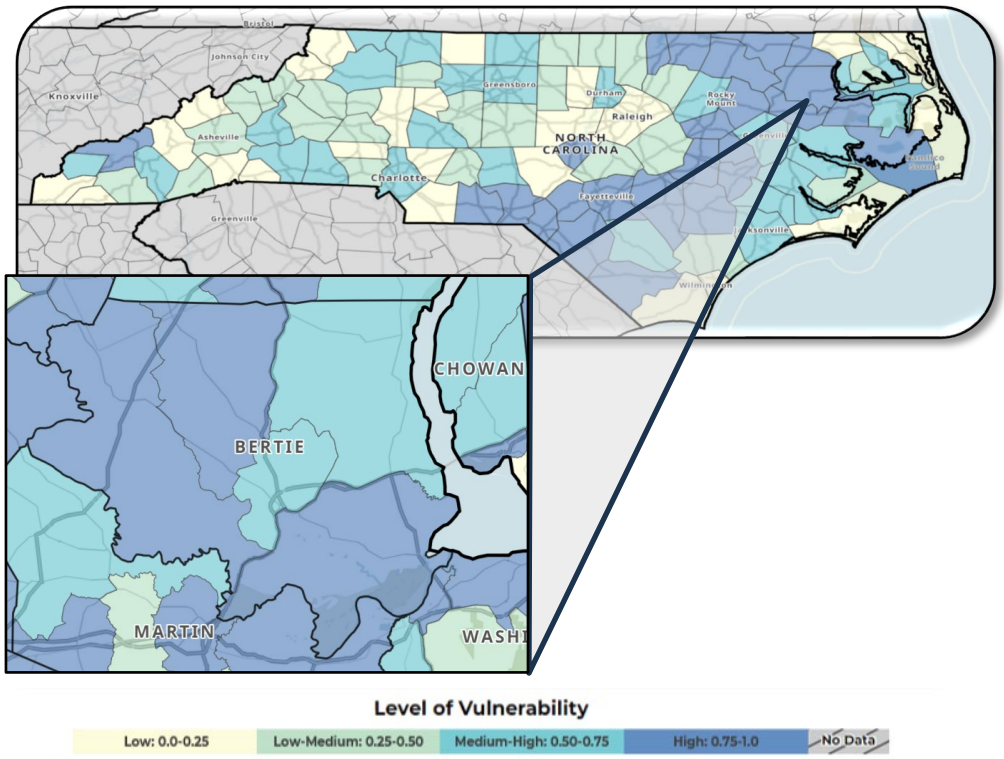
The United States SVI by county is shown in **Figure 2.8** below. As shown, a lot of variation exists across the country, and even within individual states.

Figure 2.8: United States SVI by County, 2022



The 2022 SVI scores for Bertie County are shown in **Figure 2.9** below. Possible scores range from 0 (lowest vulnerability) to 1 (highest vulnerability), and these scores show a relative comparison with other counties and census tracts in North Carolina. The vulnerability of Bertie County overall is higher than average compared to the state. Levels of vulnerability are variable across the county with the average being 0.92.

Figure 2.9: Bertie County SVI by Census Tract, 2022



Environmental Justice Index

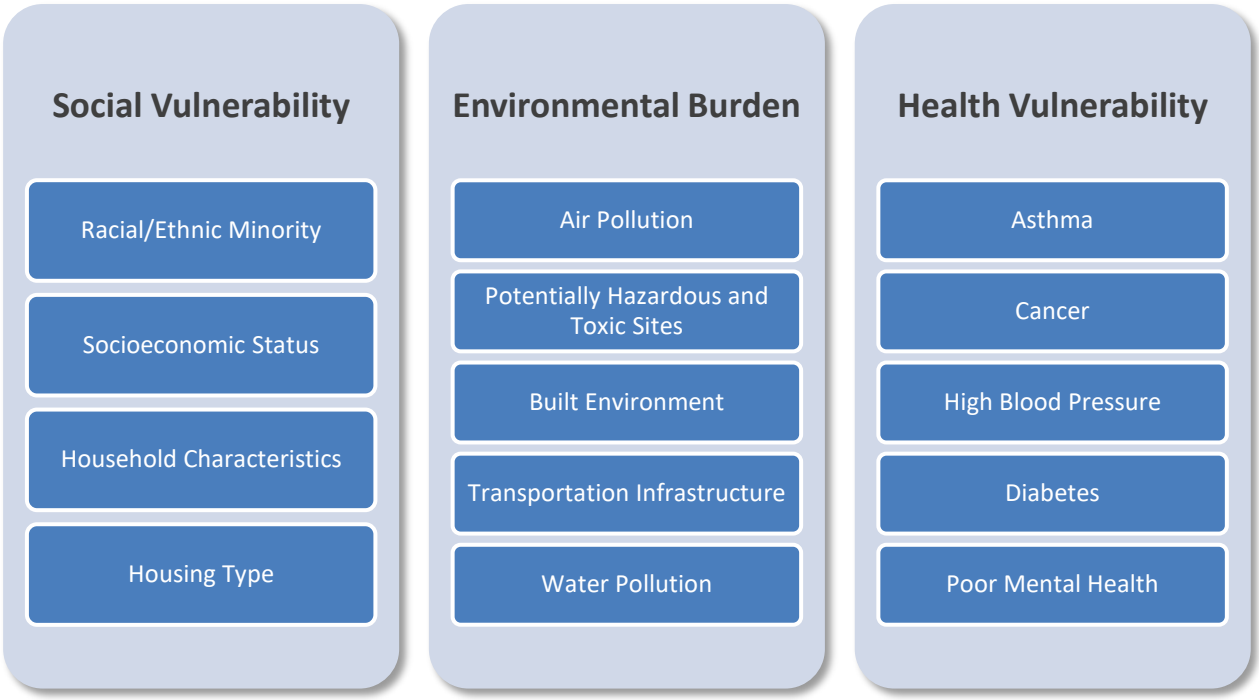
Environmental justice means the just treatment and meaningful involvement of all people, regardless of income, race, color, national origin, Tribal affiliation, or disability, in agency decision-making and other Federal activities that affect human health and the environment. It aims to protect everyone from disproportionate health and environmental risks, address cumulative impacts and systemic barriers, and provide equitable access to a healthy and sustainable environment for all activities and practices.[14]

The CDC/ATSDR EJI is a database that ranks the impact of environmental injustice on health. It uses data from the U.S. Census Bureau, the U.S. Environmental Protection Agency (EPA), the U.S. Mine Safety and Health Administration, and the U.S. Centers for Disease Control and Prevention. The Index scores environmental burden and injustice at the census tract level in the U.S. based on multiple social, environmental, and health factors.

[14] U.S. Environmental Protection Agency (2024). Retrieved from https://www.epa.gov/environmentaljustice

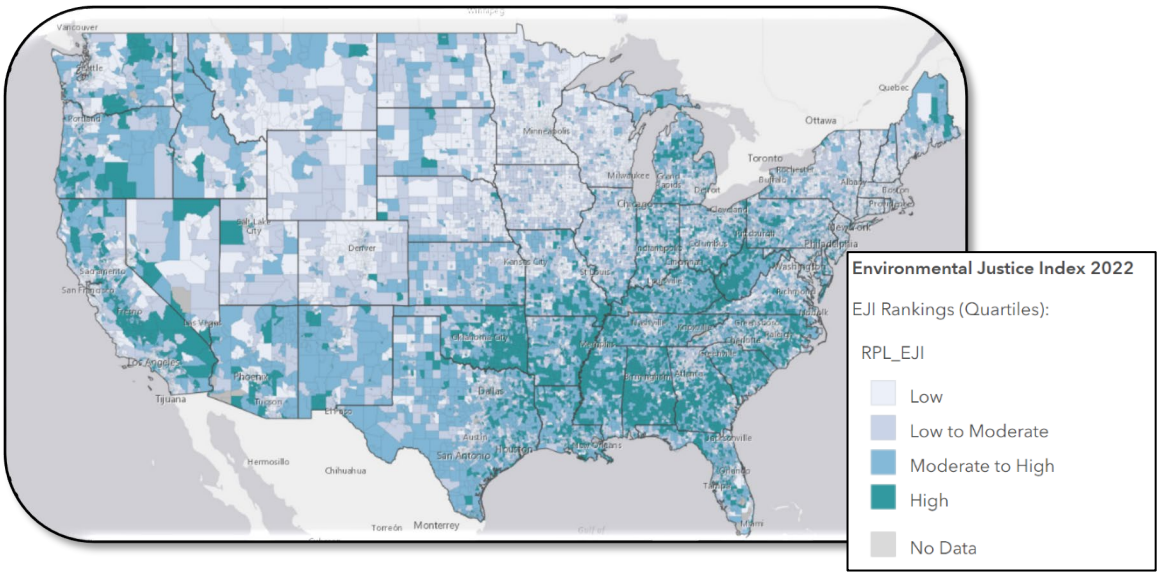
Over time, communities with a higher EJI score are generally shown to experience more severe impacts from environmental burden than communities in other census tracts. **Figure 2.10** outlines the variables used to calculate EJI scores.

Figure 2.10: EJI Variables



The United States EJI by census tract is shown in **Figure 2.11** below. As shown, a lot of variation exists across the country, and even within individual states.

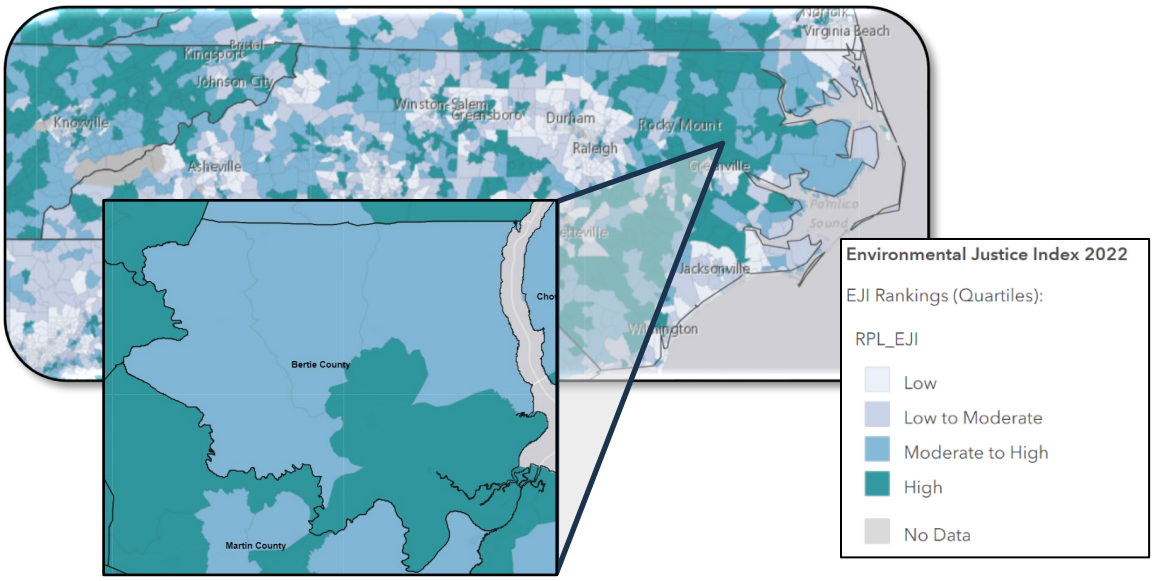
Figure 2.11: United States EJI by Census Tract, 2022



The 2022 EJI scores for Bertie County are shown in **Figure 2.12** below. EJI scores use percentile ranking which represents the proportion of census tracts that experience environmental burden relative to other census tracts in North Carolina.

The index ranges from 0-1 with higher scores indicating more environmental burden compared to other census tracts. Levels of environmental burden are variable across the county with the average being 0.73.

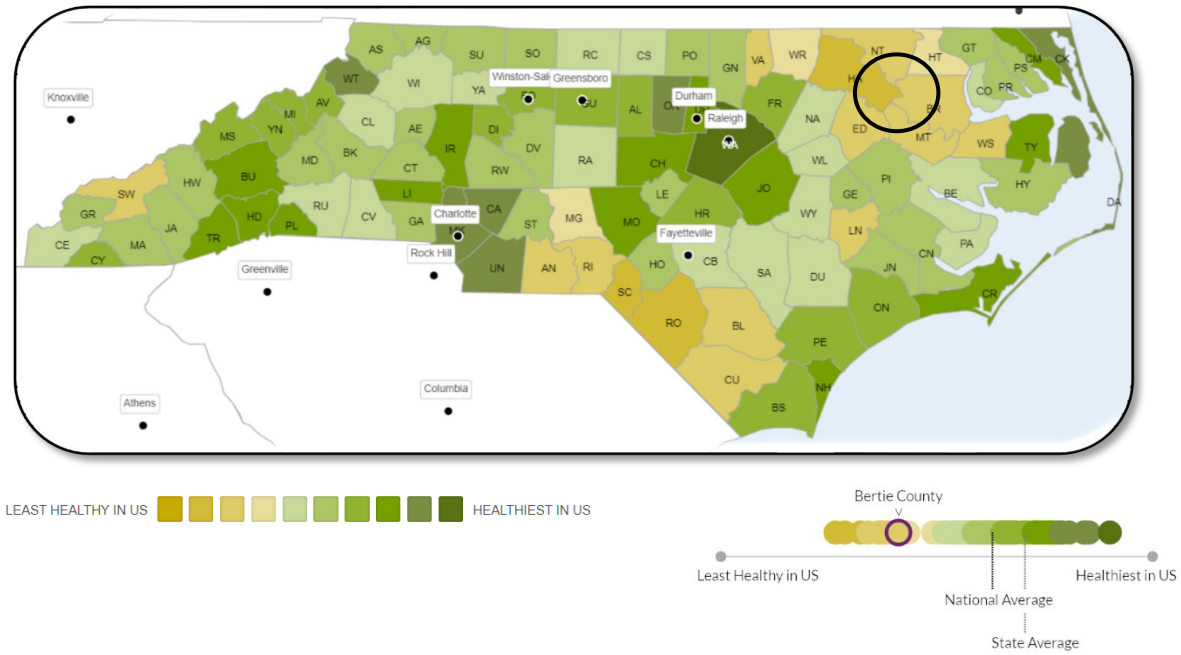
Figure 2.12: Bertie County Environmental Justice Index by Census Tract, 2022



Health Outcome and Health Factor Rankings

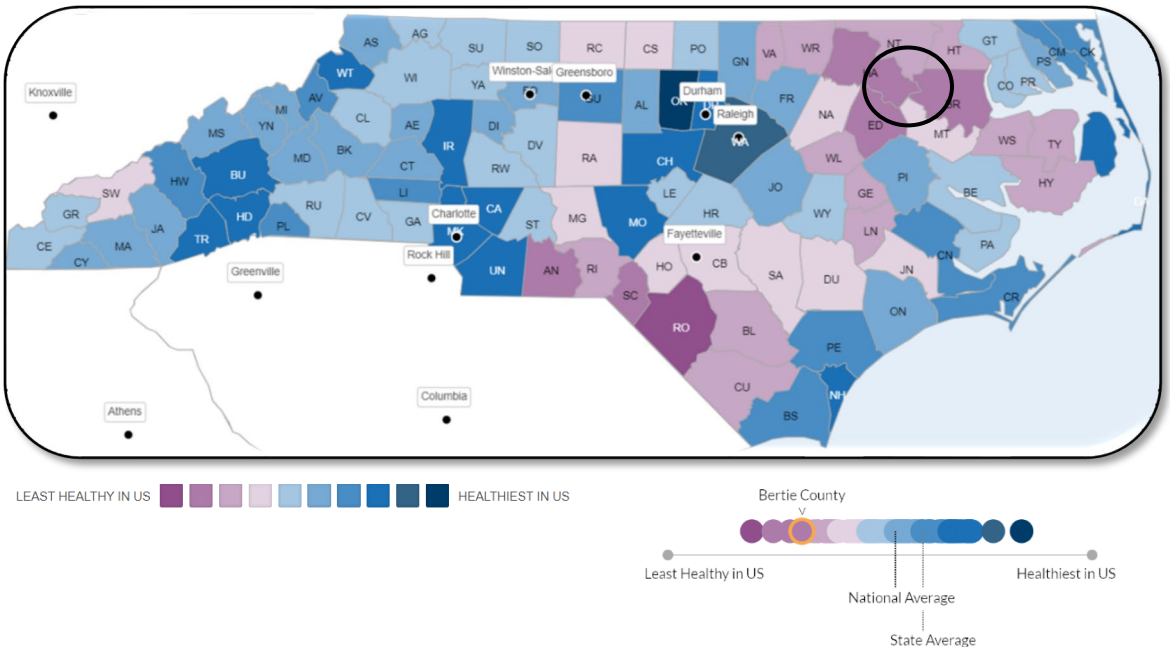
County leaders also reviewed and analyzed data from the Robert Wood Johnson Foundation and the University of Wisconsin County Health Rankings for the year 2024. The Health Outcomes measure looks at how long people in a community live and how physically and mentally healthy they are. These categories are discussed further in **Appendices 2** and **3**. Bertie County falls significantly below the national and state averages for health outcomes, which means people there may be less healthy on average.

Figure 2.13: State Health Outcomes Rating Map[12]



The Health Factors measure looks at variables that affect people's health including health behaviors, clinical care, social & economic factors, and the physical environment they live in. More details about these indicators can be found in **Appendices 2** and **3**. Similarly to the Health Outcome measure, Bertie falls behind the average for the country and the state.

Figure 2.14: State Health Factors Rating Map[12]



CHAPTER 3 | PRIORITY NEED AREAS

This chapter describes each of the four priority areas in more detail and discusses the data that support each priority. The information in this section includes context and national perspective, secondary data findings, and primary data findings (including the community member survey and focus groups).

On August 28, 2024, stakeholders from across Bertie County gathered at the Chowan Cooperative Extension in Edenton, North Carolina to participate in the county's health needs prioritization meeting. The meeting brought together participants representing a diverse array of organizations, including Bertie County Schools, Albemarle Regional Health Services, ECU Health, Northeastern NC Partnership for Public Health, Bertie Cooperative Extension, Roanoke Chowan Community Health Center, Department of Social Services, and various other community organizations.

Using the multi-voting technique, participants engaged in group discussions to identify and prioritize key health needs facing the community. After assembling a comprehensive list of priority areas, each participant voted on their top priorities, followed by further discussion to ensure the selected priorities were feasible to address.

As mentioned previously, these priority needs areas are not listed in any hierarchical order of importance and all will be addressed by the Bertie County leaders in health improvement plans guided by this CHNA. As noted in Chapter 1, county health leadership considered the following factors when determining the priority needs reported in this assessment:

- Size and scope of the health need;
- Severity and intensity of the health need;
- Estimated feasability and effectiveness of possible interventions;
- Health disparities associated with the need; and
- Importance the community places on addressing the need.

PRIORITY NEED: ACCESS TO HEALTHCARE

Context and National Perspective

Access to care means patients are able to get high quality, affordable healthcare in a timely fashion to achieve the best possible health outcomes. It includes several components, including coverage (i.e. insurance), a physical location where care is provided, the ability to receive timely care, and enough providers in the workforce. The CHNA Steering Committee identified access to care as a high priority need for residents of Bertie County.

From a national perspective, according to Healthy People 2030, approximately one in ten people in the U.S. do not have health insurance, which means they are less likely to have a primary care provider or to

be able to afford the services or medications they need.[15] Access is a challenge even for those who are insured.[16]

The availability and distribution of health providers in the U.S. contributes to healthcare access challenges. According to the Association of American Medical Colleges (AAMC), there is estimated to be a shortage of 13,500 to 86,000 physicians in the U.S. by 2036, which will impact both primary and specialty care.[17] Access issues are anticipated to increase in coming years. Growing shortages of both nurses and doctors are being driven by several factors, including population growth, the aging U.S. population requiring higher levels of care, provider burnout (physical, mental and emotional exhaustion) made worse by the COVID-19 pandemic, and a lack of clinical training programs and faculty – particularly for nurses.[18] The aging of the current physician workforce is also driving anticipated personnel shortages. In North Carolina, 30.6% of actively practicing physicians were over the age of 60 in 2020.[19] Access is also impacted by the number of actively practicing physicians overall. In 2020, there were just 9,211 primary care physicians in North Carolina, with 27,650 physicians actively practicing overall.[20]

The ability to access healthcare is not evenly distributed across groups in the population. Groups who may have trouble accessing care include the chronically ill and disabled (particularly those with mental health or substance use disorders), low-income or homeless individuals, people located in certain geographical areas (rural areas; tribal communities), members of the LGBTQIA+ community, and certain age groups – particularly the very young or the very old.[21] In addition, individuals with limited English proficiency (LEP) face barriers to accessing care, experience lower quality care and have worse outcomes for health concerns. LEP is known to worsen health disparities and can make challenges related to other SDoH (access to housing, employment, etc.) worse.[22] Both primary and secondary data resources analyzed for this report highlight the need for greater access to health services within Bertie County.

Secondary Data Findings

Various factors contribute to healthcare access, not all of which were determined to be of high need for Bertie County, as detailed in **Appendix 3**. Relative to the state of North Carolina and the U.S., Bertie County

[15] Source: U.S. Department of Health and Human Services Office of Disease Prevention and Health Promotion (2023). *Healthy People 2030: Health Care Access and Quality*. Retrieved September 9th, 2024 from https://health.gov/healthypeople/objectives-and-data/browse-objectives/health-care-access-and-quality.

[16] Source: Phillips, K.A., Marshall, D.A., Adler, L., Figueroa, J., Haeder, S.F., Hamad, R., Hernandez, I., Moucheraud, C., Nikpay, S. (2023). Ten health policy challenges for the next ten years. *Health Affairs Scholar*. Retrieved from: https://academic.oup.com/healthaffairsscholar/article/1/1/qxad010/7203673.

[17] Source: Association of American Medical Colleges (AAMC) (2024). *The complexities of physician supply and demand: Projections from 2021 to 2036*. Retrieved from: https://www.aamc.org/media/75236/download?attachment .

[18] Source: Association of American Medical Colleges (AAMC) (2024). *State of US Nursing Report 2024*. Retrieved, from https://www.incrediblehealth.com/wp-content/uploads/2024/03/2024-Incredible-Health-State-of-US-Nursing-Report.pdf .

[19] Source: AAMC (2021). *North Carolina physician workforce profile*. Retrieved September 9, 2024, from: https://www.aamc.org/media/58286/download.

[20] Source: AAMC (2021). *North Carolina physician workforce profile*. Retrieved September 9, 2024, from: https://www.aamc.org/media/58286/download

[21] Source: Joszt, L. (2018). 5 Vulnerable Populations in Healthcare. *American Journal of Managed Care*. Retrieved September 9, 2024 from https://www.ajmc.com/view/5-vulnerable-populations-in-healthcare.

[22] Source: Espinoza, J. and Derrington, S. (2021). How Should Clinicians Respond to Language Barriers That Exacerbate Health Inequity? *AMA Journal of Ethics*. Retrieved from: https://journalofethics.ama-assn.org/article/how-should-clinicians-respond-language-barriers-exacerbate-health-inequity/2021-02.

demonstrated a high need on a number of access to care metrics, including the rates of dental care, primary care providers per 100,000 population, as displayed in the table below. These low rates, which were much lower than the state and nation, mean accessing care from these types of providers in the community may be more challenging.

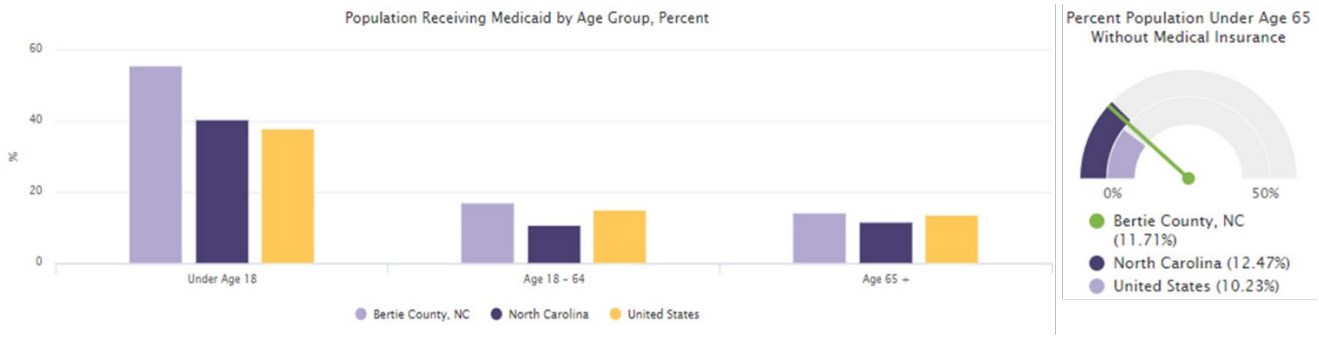
Further, more than half the population in Bertie County lives in an area that has been federally designated as a Dental Care Health Professional Shortage Area (HPSA). In contrast, Bertie County performs well on the rate of Federally Qualified Health Centers (FQHC) in the county per population, which is higher than the state or national rate.

Table 3.1: Access to Care Indicators

Indicator	Bertie County	North Carolina	United States
Dental Providers (Rate per 100,000 Population)	22.3	31.5	39.1
Primary Care Providers (Rate per 100,000 Population)	33.5	101.1	112.4
Percentage of Population Living in an Area Affected by a Dental Care HPSA	56%	34%	18%
Percent of Insured Population Receiving Medicaid	27%	20%	22%
Rate of Federally Qualified Health Centers (Rate per 100,000 Population)	16.7	4.0	3.5

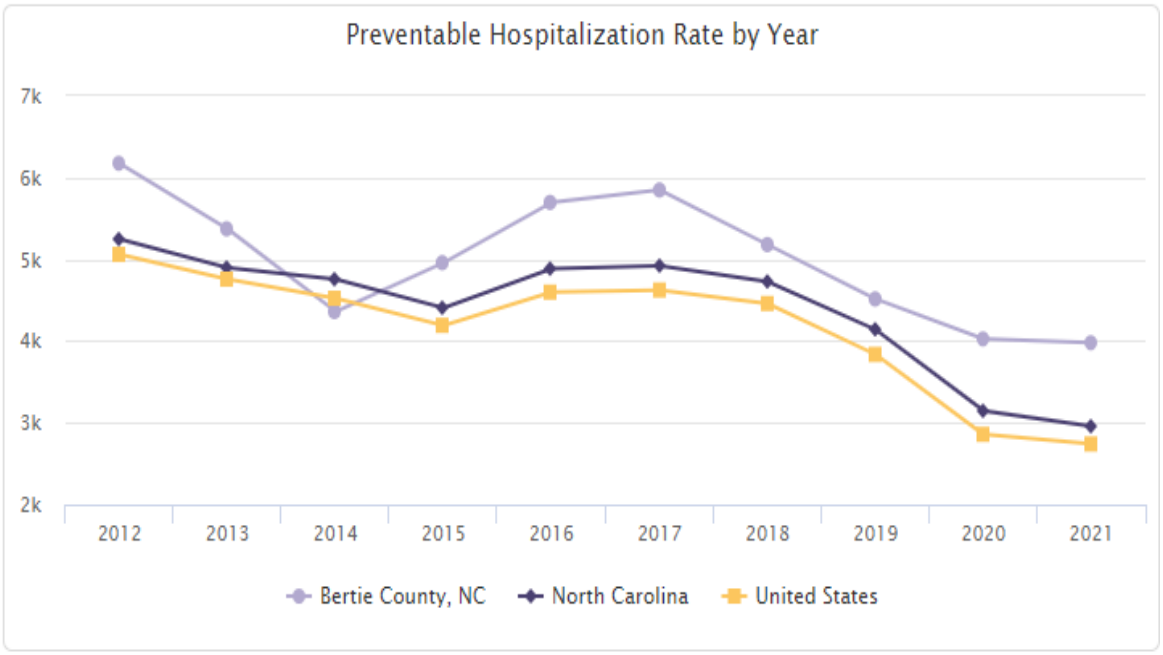
As identified in table above, a higher percentage of the insured population in Bertie County receives Medicaid compared to the state or nation. In fact, across age groups, Bertie County has a higher percentage of individuals receiving Medicaid compared to state and national averages, as demonstrated in the figure below. While this percentage is only slightly higher than the state and national average for individuals 65 and older, it is much higher for individuals under age 18. This suggests additional barriers to accessing care may exist in the community. While Medicaid coverage can support access to care, gaps in access can persist, particularly for specific provider types. Additionally, these residents may face greater difficulty finding a provider that accepts Medicaid compared to private insurance. Nearly 12% of the county's population under age 65 lacks medical insurance, which is slightly lower than the state average but slightly higher than the national average.

Figure 3.1: Population Receiving Medicaid by Age Group and Under Age 65 Uninsured



Another access-related indicator of concern for Bertie County was the number of preventable hospital stays for ambulatory care-sensitive conditions per 100,000 Medicare enrollees. While there has been a general downward trend in preventable hospital stays, the rate in Bertie County remains higher than state and national averages.

Figure 3.2: Preventable Hospital Stays



Even more concerning are the health disparities that exist for preventable hospital stays. The rates among Hispanic or Latino and Black or African American Medicare beneficiaries in Bertie County were higher compared to non-Hispanic White Medicare beneficiaries, as displayed in the figure and table below. Furthermore, these differences were much more pronounced in Bertie County than for the state or nation. Hospitalizations for diagnoses that are usually treatable in ambulatory or outpatient settings suggests that residents of Bertie County may experience difficulty accessing high-quality outpatient or primary care to prevent unneeded inpatient stays.

Figure 3.3: Preventable Stays by Race/Ethnicity

Table 3.2: Preventable Hospital Stays by Race/Ethnicity	
Preventable Hospital Stays (per 100,000 Medicare Beneficiaries)	**Bertie County Rate**
Preventable Hospital Stays	3,982
Black or African American Medicare Beneficiaries	6,584
Hispanic or Latino Medicare Beneficiaries	6,057
White Medicare Beneficiaries	2,846

Another access to and quality of care related indicator of high need in Bertie County is the percentage of adults with a recent influenza immunization. A significantly lower proportion of adults were immunized against influenza compared to that of the state and nation, including 18% fewer adults than the state.

Additionally, access to care may not be equitable across all county populations, particularly those with socioeconomic or transportation-related challenges. A lack of access to reliable transportation or transit is a key barrier that can prevent someone from being able to see their provider and can influence their ability to thrive in other areas of their life as well (such as getting to school or work). Households in Bertie County had a higher proportion with no motor vehicle present compared to state and national values, as displayed in the table below. In fact, this proportion was more than double the state average of households with no motor vehicle. This indicator, coupled with none of the population living in close proximity to public transit, suggests many residents may face transportation challenges.

Table 3.3: Transportation Indicators			
Indicator	**Bertie County**	**North Carolina**	**United States**
Households with No Motor Vehicle, Percent	11.3%	5.4%	8.3%
Percent Population Using Public Transit for Commute to Work	1.0%	0.8%	3.8%
Percentage of Population within Half Mile of Public Transit	0.0%	10.9%	34.8%

Several income indicators also exhibited high need in Bertie County, as displayed in the table below. The percentage of the population living below the federal poverty level (FPL) and the percentage of children below the FPL in Bertie County were higher than state and national averages. The median family income was lower in Bertie County compared to the state and national levels. Income enables individuals and families to obtain health insurance coverage and to access healthcare services. Income can also impact opportunities for healthy lifestyles.

Table 3.4: Income Indicators			
Indicator	**Bertie County**	**North Carolina**	**United States**
Population Under Age 18 Below 200% FPL, Percent	55%	41%	37%
Population in Poverty, Percent	21%	13%	13%
Population with Income Below 200% FPL, Percent	47%	32%	29%
Ratio of Female vs. Male Median Earnings	104%	83%	81%
Median Family Income	$59,840	$82,890	$92,646

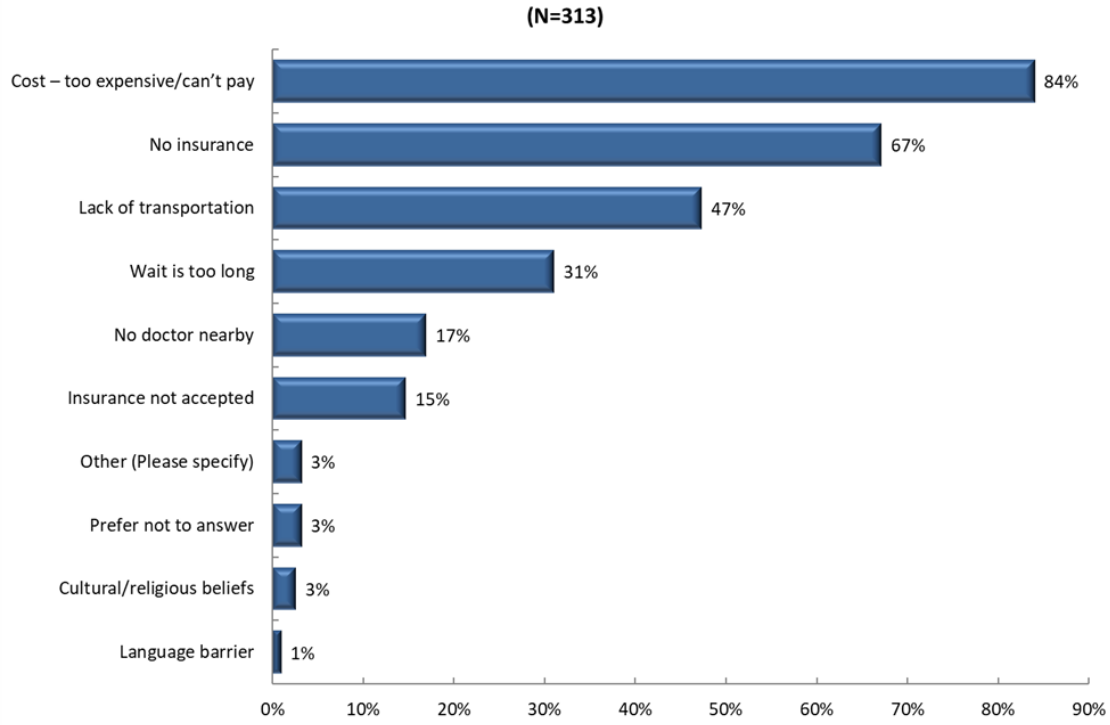
For additional detail on secondary data findings, see **Appendix 3.**

Primary Data Findings – Community Member Web Survey

More than 310 Bertie residents responded to the web-based survey. Respondents identified several access to care needs in Bertie County. In the survey, community members were asked to identify the top barriers to receiving healthcare. Cost (84%), no insurance (67%), and lack of transportation (47%) were the top three identified reasons why people in the community are not getting care when they need it.

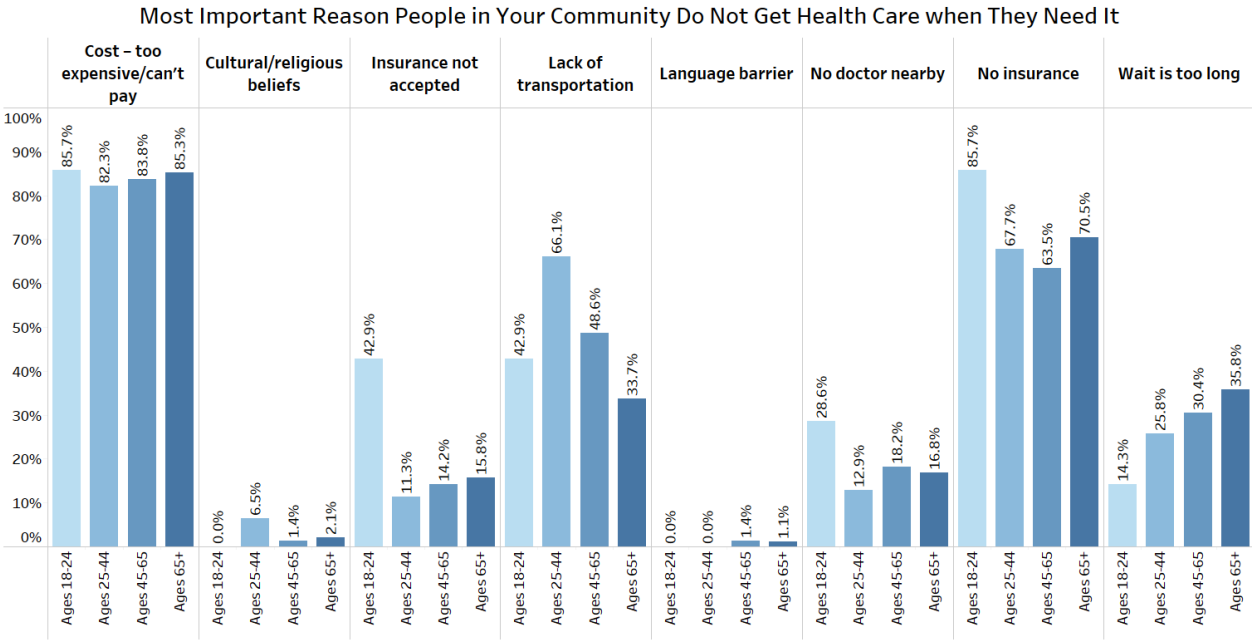
Another 31% of responses identified long wait times and 17% of responses indicated a lack of nearby doctors as the top barriers to care.

Figure 3.4: What are the three most important reasons people in your community do not get health care when they need it? Please select up to three.



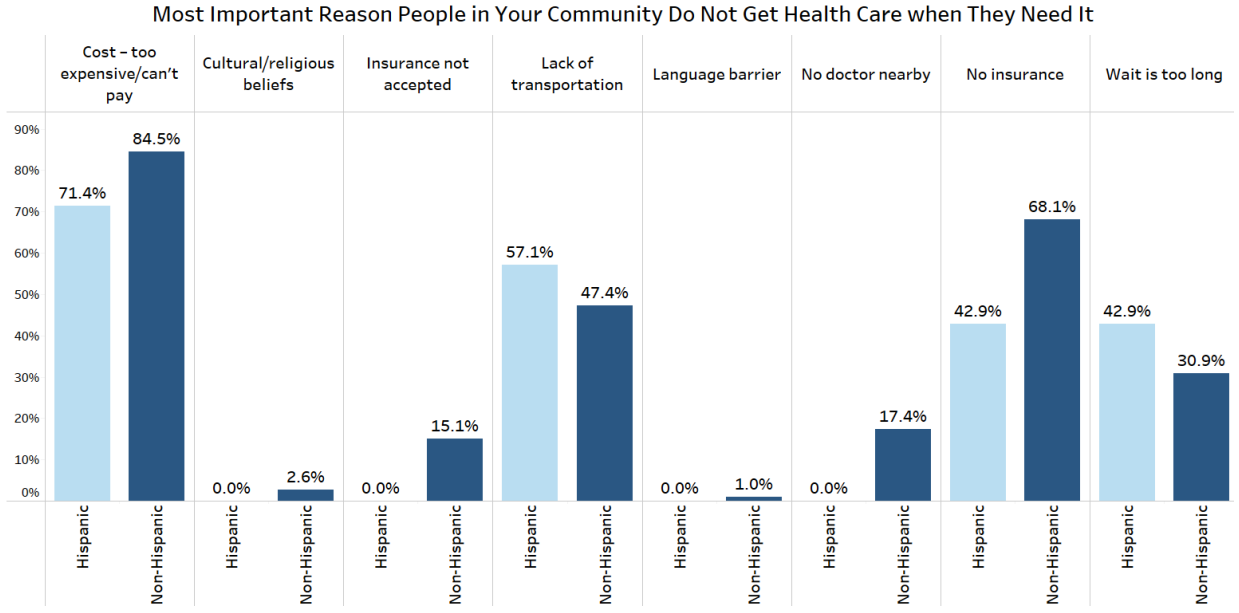
These data were examined by the demographic characteristics of Bertie County survey respondents. While cost was a top barrier identified across age groups, the lack of insurance was highest among participants in the 18 to 24 age group (86%) and lowest for the 45 to 65 age group (64%). The lack of transportation as a barrier to care was reported highest among the 25 to 44 age group (66%) and lowest among those aged 65+.

Figure 3.5: What are the three most important reasons people in your community do not get health care when they need it? Please select up to three. (by age group)



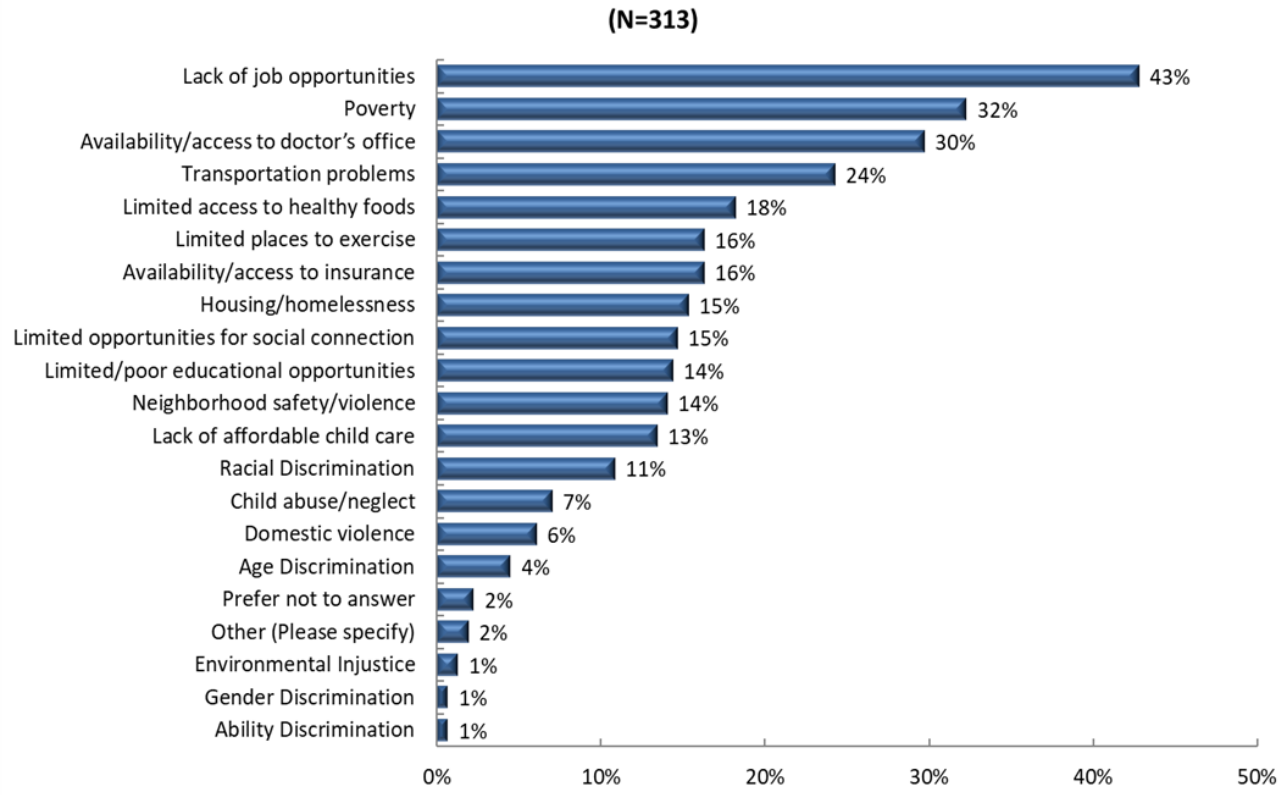
Responses also differed somewhat by ethnicity. Respondents who identified as Hispanic reported lack of transportation and wait times as barriers to accessing care more frequently than non-Hispanic respondents.

Figure 3.6: What are the three most important reasons people in your community do not get health care when they need it? Please select up to three. (by ethnicity)



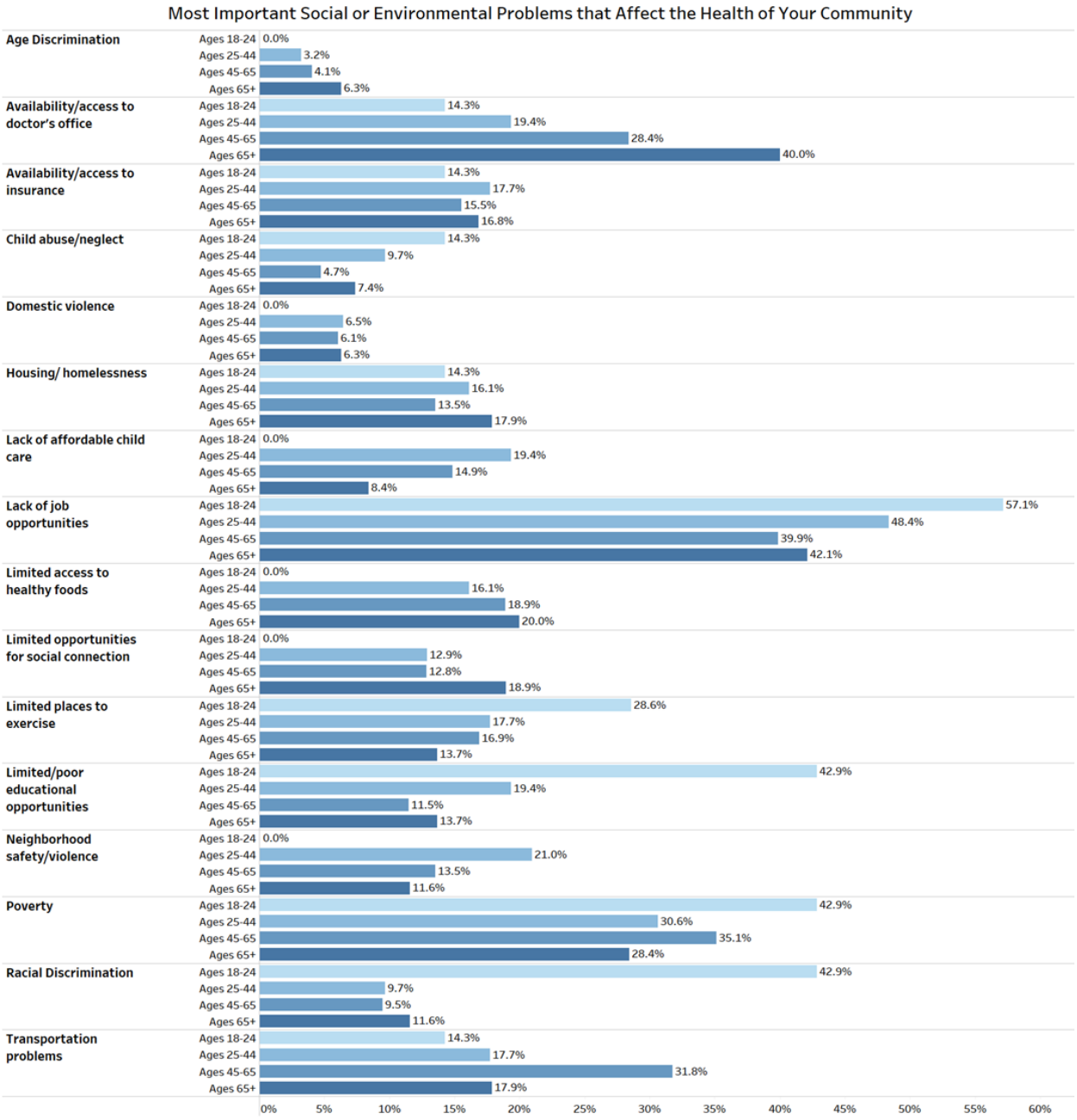
Community members were also asked to identify the most important social or environmental problems that affect the health of the community. As displayed in the figure below, the most frequent problems identified were lack of job opportunities (43%) and poverty (32%). As discussed above, adequate income can impact the ability for individuals and families to have health insurance coverage and to access healthcare, as well as the health living opportunities. Another 30% of respondents identified the availability or access to doctor's offices as a top social or environmental problem, highlighting access to care challenges within the community. Transportation (24%) was identified as the fourth most frequent social or environmental problem that affects the health of the community.

Figure 3.7: What are the three most important social or environmental problems that affect the health of your community? Please select up to three.



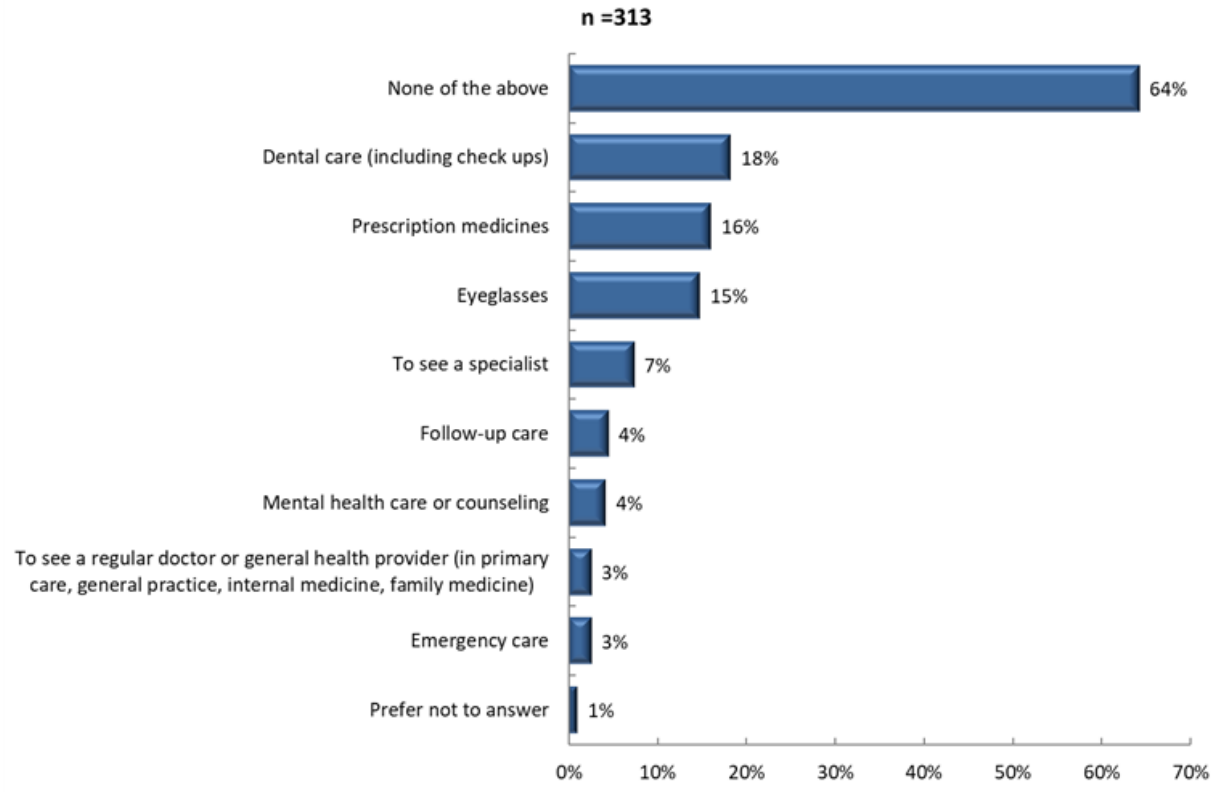
Responses differed by the age group of respondents. Older adults identified the availability or access to doctor's offices more frequently as a significant social or environmental problem than younger adults. Transportation was identified more frequently among respondents aged 45 to 64. Lack of job opportunities and poverty were identified most frequently by younger adults. Younger adults aged 18 to 24 were also more likely to identify racial discrimination as an important social or environmental problem impacting the health of the community than all other age groups.

Figure 3.8: What are the three most important social or environmental problems that affect the health of your community? (by age group)



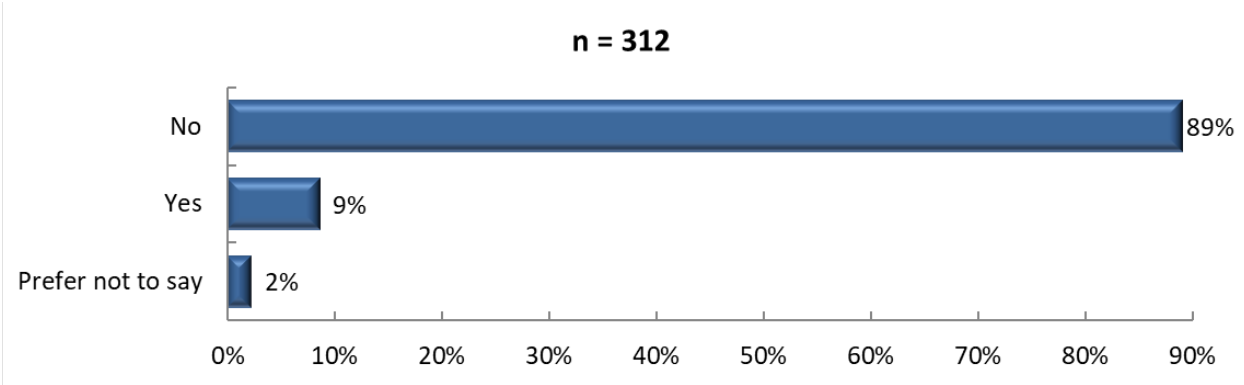
Bertie County community member respondents were also asked if there was a time during the past 12 months that they needed specific care and were unable to receive it due to affordability. As displayed in the figure below, 18% of respondents indicated affordability barriers prevented them from accessing dental care. The second highest response identified prescription medicine (16%) access was impacted due to lack of affordability, followed by eyeglasses (15%).

Figure 3.9: During the past 12 months, was there any time when you needed any of the following, but didn't get it because you couldn't afford it?



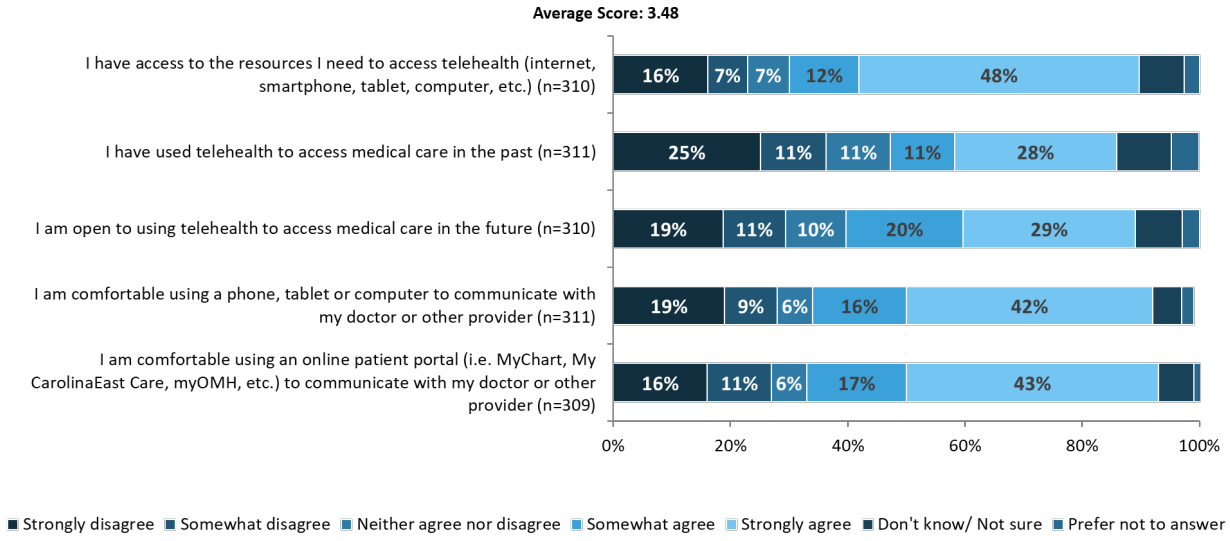
Respondents were asked if they have put off or neglected going to the doctor due to distance or transportation, to which 9% of respondents answered yes, further emphasizing that transportation can be a barrier for at least a portion of the community.

Figure 3.10: Do you put off or neglect going to the doctor because of distance or transportation?



Respondents were also asked to agree or disagree with statements related to telehealth, including statements about having access to the necessary resources to use telehealth, past experience using telehealth, and comfort level in using technology or patient portals to communicate with health professionals. Only 16% of respondents strongly agreed to having access to the necessary resources, with the same percentage of respondents strongly agreeing to being comfortable using an online patient portal and nearly 20% strongly agreeing to being open to using telehealth to access medical care in the future.

Figure 3.11: How much do you agree or disagree with the following statements about telehealth? Telehealth means connecting virtually with a medical provider using a smartphone, tablet or computer.



For additional detail on survey findings, see **Appendix 5**.

Primary Data Findings – Focus Groups

Five focus groups were conducted during the CHNA process. A common theme across all five groups was healthcare access and quality. Focus group participants highlighted long wait times and appointment availability, the high cost of care, and health insurance coverage limitations. Additionally, focus group participants discussed limited options for dental and behavioral health providers in the community.

Most focus groups also described limited employment opportunities in the county, and transportation was also noted as a barrier to accessing healthcare services. Multiple focus groups suggested local health leaders should bring more services to people in the community or more mobile health units out in the community to improve health and well-being in Bertie County.

For a more detailed description of focus group findings, see **Appendix 5**.

PRIORITY NEED: BEHAVIORAL HEALTH

Context and National Perspective

The definition of behavioral health often describes conditions related to both mental health and substance use.[23] Mental health is defined as an emotional, psychological, and social state of well-being. Mental health impacts every stage of life and affects how one is able to handle their relationships, daily stressors, and health behaviors.[24] After evaluating data from a variety of sources including surveys and focus groups conducted throughout the assessment process, the Steering Committee identified behavioral health, including both mental health and substance use, to be an area of urgent need within Bertie County.

Mental illnesses are common in the United States: in 2021, an estimated 57.8 million U.S. adults – nearly one in five – were living with a mental illness.[25] There is risk for developing a mental illness across the lifespan, with over one in five children and adults in the U.S. reported to have a mental illness, and nearly one in twenty-five adults currently coping with a serious mental illness (SMI) such as major depression, schizophrenia or bipolar disorder. [26]

Mental illness can occur due to multiple different factors, such as genetics, drug and/or alcohol usage, isolation, adverse childhood experiences, and chronic health conditions. Additionally, mental illness can act like other chronic health conditions, in that it can worsen or improve depending on the environment. Mental health services have evolved in the past five years, especially during the COVID-19 pandemic. However, accessing mental health care services can be challenging. According to the National Institute of Mental Health, less than half (47.2%) of adults with a common mental illness received any mental health services in 2021. Those who had an SMI were more likely (65.4%) to have received mental health services that same year.[27] While access to telehealth mental health services has increased, those living in rural areas may still find it difficult to access care. This is a particular concern among those who are low-income or experiencing homelessness, two groups at high risk for developing an acute or chronic mental health condition. As of 2023, over seven million people in the U.S. who reported having a mental illness lived in a rural area.[28]

Mental illness is a prevalent concern in North Carolina, with nearly 1.5 million adults reported to have a mental health condition in 2023. Additionally, that same year, 1 in 7 individuals who were identified as homeless also were living with an SMI. Access to mental health care in North Carolina is changing, however it is still unavailable to many. Specifically, over 452,000 individuals did not seek care in 2023, with 44.8% citing cost as the main reason. Additionally, those that live in North Carolina are seven times more likely

[23] Source: American Medical Association (2022). *What is behavioral health?* Retrieved September 13th, 2023, from https://www.ama-assn.org/delivering-care/public-health/what-behavioral-health.

[24] Source: CDC. (2024). About mental health. Retrieved October 1, 2024, from: https://www.cdc.gov/mentalhealth/learn/index.htm

[25] Source: National Institute of Mental Health (2023). *Mental Illness*. Retrieved September 13th, 2023, from https://www.nimh.nih.gov/health/statistics/mental-illness.

[26] Source: CDC. (2024). Mental health. Retrieved October 1, 2024, from https://www.cdc.gov/mentalhealth/learn/index.htm

[27] Source: National Institute of Mental Health. (2023). Mental Illness. Retrieved October 1, 2024, from https://www.nimh.nih.gov/health/statistics/mental-illness

[28] RHI Hub. (2023). Rural mental health. Retrieved October 1, 2024 from: https://www.ruralhealthinfo.org/topics/mental-health

to be pushed out of network of their behavioral health providers, than a primary care provider, furthering cost as a cause for stopping treatment. [29]

Substance use disorders (SUDs) are one of the fastest rising categories of behavioral health disorders. According to the American Psychiatric Association, SUDs are a complex condition in which there is uncontrolled use of a substance (such as alcohol or drugs), despite harmful consequences.[30] SUDs often occur in conjunction with other mental illness. In 2023, 16 million (46.9%) young adults aged 18-25 reported having either a SUD or Acute Mental Illness (AMI) in the past year. In that same year, 17.1% (48.5 million) of all U.S. adults were reported as having an SUD.[31] These trends have been increasing in recent years. According to the National Center for Drug Abuse Statistics, in 2018 (3.7%) of all adults aged 18 and older (9.2 million) had both an AMI and at least one SUD.[32] By 2021, this had increased to 13.5% of U.S. adults, with the highest incidence among Multiracial adults.

There are multiple common forms of SUD, such as alcohol use, cocaine use, cannabis use, opioid use, and methamphetamine use disorders. An individual living with one SUD can also be coping with another at the same time, such as co-occurring use of alcohol and cannabis.[33] Treatment SUDs generally cannot follow a cookie-cutter approach, as each person receiving treatment will have different withdrawal and coping needs. Treatment is typically provided through various therapies, inpatient admissions, and forms of medication-assisted treatment such as methadone. Opioid overdoses are one of the most common types of deaths related to SUDs, and can be preventable and treatable if caught in time. Multiple efforts have been coordinated within the past two years to incorporate the storage of overdose reversing medications such as Naloxone in public facilities such as federal facilities, and over the counter, as was approved in 2023 by the FDA. This is critical, as in 2022, the number of opioid overdoses nationwide surpassed 81,051 – a 63% increase in overdoses since 2019.[34]

Substance use disorders have also had an impact in North Carolina. Over 36,000 overdose deaths occurred in the state between 2000 and 2022 – an average of more than 1,600 deaths each year.[35] Multiple programs have been developed in North Carolina to combat substance use disorder, notably surrounding opioid usage, which has led to an increase in access and usage of Medication Assisted Treatment (MAT) and methadone clinics within the state. Additionally, North Carolina launched the Opioid and Substance use action plan, which involved the development of multiple interventions, dashboards, and educational

[29] Source: NAMI (2023). *Mental Health in North Carolina.* Retrieved October 10, 2024, from https://www.nami.org/wp-content/uploads/2023/07/NorthCarolinaStateFactSheet.pdf

[30] Source: American Psychiatric Association (2024). *Addiction and Substance Use Disorders*. Retrieved January 16, 2024, from https://www.psychiatry.org/patients-families/addiction-substance-use-disorders.

[31] Source: SAMHSA (2024). *Highlights from the 2023 National Survey on Drug Use and Health*. Retrieved October 10th, 2024 from https://www.samhsa.gov/data/sites/default/files/reports/rpt42731/2022-nsduh-main-highlights.pdf.

[32] Source: National Center for Drug Abuse Statistics (2023). *Drug Abuse Statistics*. Retrieved January 8th, 2024, from https://drugabusestatistics.org/.

[33] Source: Cleveland Clinic. (2024). Substance Use Disorder (SUD). Retrieved October 1, 2024, from https://my.clevelandclinic.org/health/diseases/16652-drug-addiction-substance-use-disorder-sud

[34] Source: KFF. (2023). Saunders, H., Rudowitz, R. (2023). Will the availability of Over-The-Counter Narcan increase access? Retrieved October 1, 2024 from https://www.kff.org/policy-watch/will-availability-of-over-the-counter-narcan-increase-access/

[35] Source: NCDHHS. (2022). *Overdose epidemic.* Retrieved October 3, 2024 from: https://www.ncdhhs.gov/about/department-initiatives/overdose-epidemic#:~:text=Combating%20North%20Carolina's%20Opioid%20Crisis,is%20devastating%20families%20and%20communities.

materials to help support counties and organizations with reducing not only overdose deaths, but the incidence of SUDs as well.

The pandemic impacted public mental health and well-being in many ways. Community members continue to grapple with the pandemic-related effects of isolation and loneliness, financial instability, long-term health impacts and grief, all of which are drivers for developing a substance use disorder. In addition, both drug overdose and suicide deaths have sharply increased over the past several years – often disproportionately impacting younger people and communities of color.[36]

Access to services that address mental health and substance use is an ongoing challenge across the U.S. According to the Substance Abuse and Mental Health Services Administration (SAMHSA), in 2021, less than half (47.2%) of U.S. adults who reported having a mental illness utilized any type of mental health services, including inpatient, outpatient or telehealth services or prescription drug therapies. Demand for mental health services, particularly anxiety and depression treatment, remains high across the nation, while the prevalence of stress- and trauma-related disorders, along with substance use disorders, continues to grow. The American Psychological Association reports that the percentage of psychologists in the U.S. seeing more patients than they did before the pandemic increased from 15% in 2020 to 38% in 2021 to 43% in 2022. Further, 60% of psychologists reported having no openings for new patients and 38% maintained a waitlist for their services.

Secondary Data Findings

Secondary data collected through the CHNA process identified behavioral health as an area of concern for residents of Bertie County. Specifically, the rate of mental health providers per 100,000 population was 82% lower than the state average. As displayed in the figure and table below, the average number of poor mental health days per month reported by Bertie County residents was higher than those reported for the state and nation. The rate of deaths of despair[37] in Bertie County was slightly lower than the state average but higher than the national average.

Table 3.5: Behavioral Health Indicators

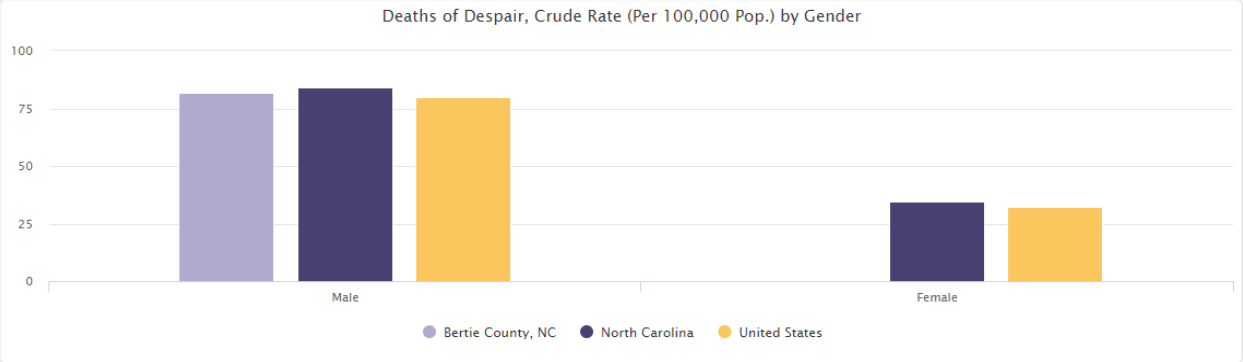
Indicator	Bertie County	North Carolina	United States
Deaths of Despair (Crude Rate per 100,000 Population)	58.0	58.7	55.9
Average Number of Poor Mental Health Days (per Month)	5.2	4.6	4.9
Mental Health Providers (Rate per 100,000 Population)	27.9	155.7	178.7

[36] Source: Panchal, N., Saunders H., Rudowitz, R. and Cox, C. (2023). The Implications of COVID-19 for Mental Health and Substance Use. *Kaiser Family Foundation*. Retrieved from https://www.kff.org/mental-health/issue-brief/the-implications-of-covid-19-for-mental-health-and-substance-use.

[37] Deaths of despair includes deaths by intentional self-harm (suicide), alcohol-related conditions and drug poisoning.

There was also a gender disparity for deaths of despair, in which the mortality rate was significantly higher among men compared to women. The figure below highlights this gender disparity.

Figure 3.12: Crude Rate of Deaths of Despair by Gender



In terms of substance use, Bertie County performed better than the state and national average on each of the indicators in the table below; however, the community still experienced excessive drinking among adults and emergency department utilization due to opioid use disorder. The opioid overdose death rate was also lower in Bertie County compared to the state rate.

Table 3.6: Substance Use Indicators

Indicator	Bertie County	North Carolina	United States
Percentage of Adults Reporting Excessive Drinking	13%	18%	18%
Opioid Use Disorder Emergency Department Utilization (Rate per 100,000 Beneficiaries)	33	43	41
Alcohol-Involved Crash Deaths, Annual (Rate per 100,000 Population)	0	2.9	2.3
Opioid Overdose Death Rate (Crude Rate per 100,000 Population)	21.9	25.1	N/A
Substance Abuse Providers (Rate per 100,000 Population)	5.6	25.0	27.9

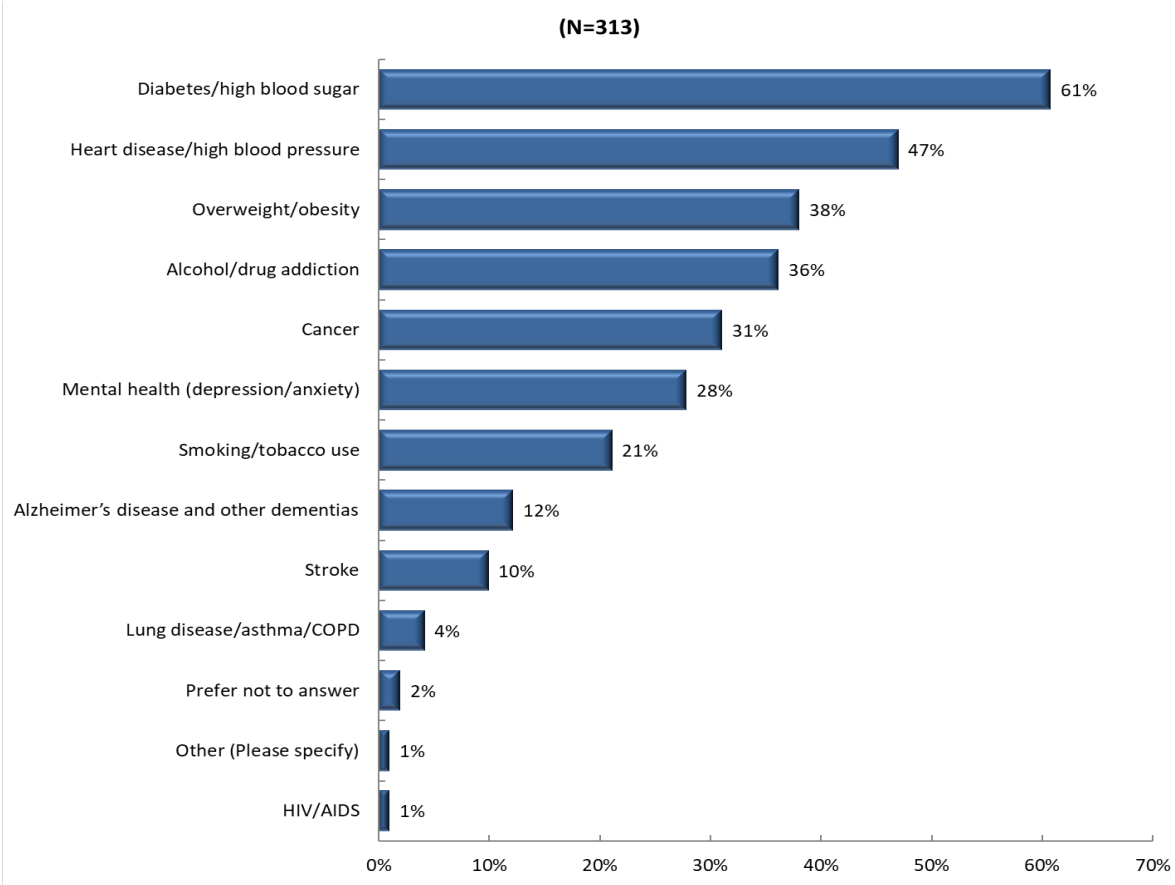
As previously discussed in the Access to Care section above, there are low rates of behavioral health providers in the community, including mental health, addiction/substance abuse, and buprenorphine providers. This may create challenges for those individuals in the community who are experiencing mental health and substance use issues.

For additional detail on secondary data findings, see **Appendix 3.**

Primary Data Findings – Community Member Web Survey

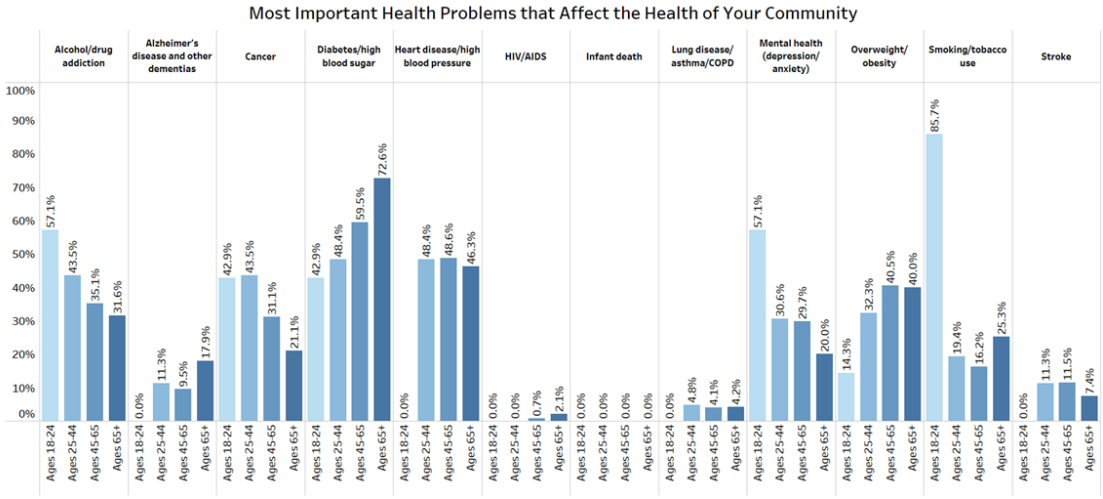
Bertie County residents highlighted different aspects of behavioral health as areas of community concern on the web-based survey. When asked to identify the most important community health needs, 36% of respondents identified alcohol/drug addiction and 28% of respondents identified mental health (depression/anxiety). These were the third and sixth most frequent of all community health needs identified, respectively. In addition, approximately one-fifth of respondents identified smoking/tobacco use as one of the most important health problems in the community.

Figure 3.13: What are the three most important health problems that affect the health of your community? Please select up to three.



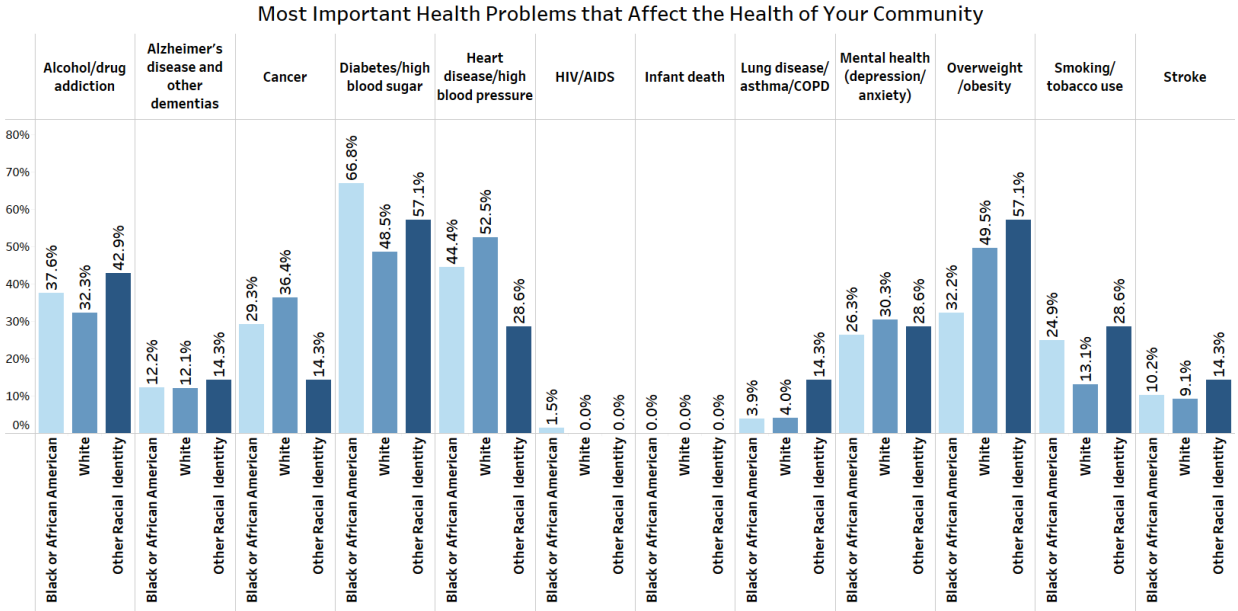
When these data were examined by the demographics of the community respondents, key differences emerged, especially by age. The youngest cohort of respondents, ages 18 to 24, were more likely than all other age groups to identify alcohol/drug addiction, mental health, and smoking/tobacco use as the most important health problems in the community, as displayed in the figure below. In fact, 57% of respondents in this age group identified alcohol/drug addiction and mental health as a top concern, while nearly 86% of respondents in this age group identified smoking/tobacco use as a top concern.

Figure 3.14: What are the three most important health problems that affect the health of your community? Please select up to three. (by age group)



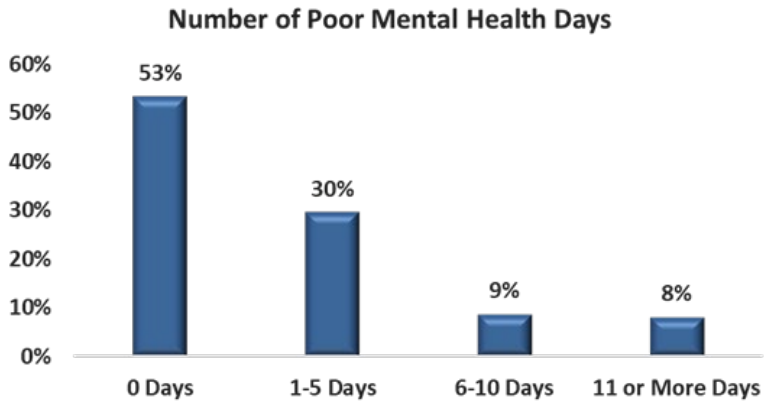
Alcohol/drug addiction was more frequently identified by respondents who identified as Black or African American (38%) and all other races (43%) than those who identified as White (32%). Conversely, mental health was slightly more frequently identified by respondents who identified as White (30%) than Black or African American (27%) or all other races (29%). Smoking/tobacco use was identified by respondents who identified as Black or African American (10%) and all other races (14%) slightly more than those who identified as White (9%). These perceived differences by demographic characteristics may be important in planning efforts to address behavioral health in the community.

Figure 3.15: What are the three most important health problems that affect the health of your community? Please select up to three. (by race)



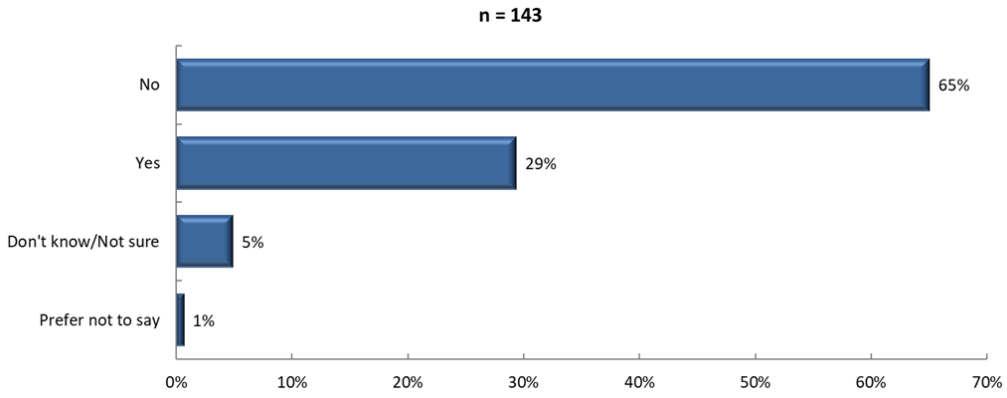
When respondents were asked about their own mental health, 47% of respondents indicated they experienced one or more poor mental health days in the past 30 days, with an average of three poor mental health days in the past month among all respondents.

Figure 3.16: Now thinking about your MENTAL health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health NOT good?



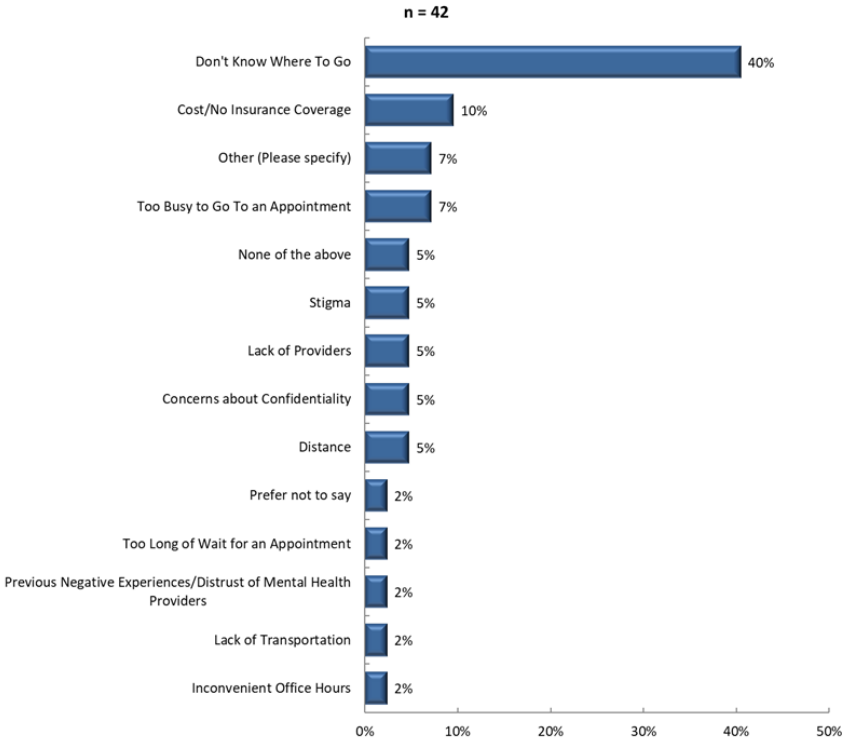
Community member respondents who indicated they experienced at least one poor mental health day in the previous month were also asked if there was a time in the past 12 months when they needed mental healthcare or counseling but did not get it at that time. Nearly 30% of these respondents answered yes.

Figure 3.17: Was there a time in the past 12 months when you needed mental healthcare or counseling, but did not get it at that time?



The top responses for why care was not received for this group, included not knowing where to go for care (40%) and cost/no insurance coverage (10%), suggesting accessibility concerns exist in the community impacting community members' ability to receive needed mental healthcare.

Figure 3.18: What was the MAIN reason you did not get mental health care or counseling?



For additional detail on survey findings, see **Appendix 5**.

Primary Data Findings – Focus Groups

Two focus groups highlighted behavioral health needs in Bertie County. In the focus group held at Greater Wynn's Grove Baptist Church, behavioral health was discussed as a great need in the county, with a specific focus on the lack of locally available mental health providers and treatment options. In another focus group, held at ECU Health and Wellness Center, a perception that substance use, including alcohol and drugs, was elevated in the community was discussed. Participants expressed a feeling that the community was "overrun" with drugs and alcohol. Focus group participants also discussed the need to focus on programs for school-aged children.

For a more detailed description of focus group findings, see **Appendix 5**.

PRIORITY NEED: HEALTHY LIVING

Context and National Perspective

Focus on a healthy lifestyle is critical for maintaining one's physical health – the monitoring and maintenance of the human body. There are many factors involved in an individual's overall physical health status, such as disease prevention, timely access to primary and preventive healthcare, exercise, and

maintaining a healthy diet. Living a healthy lifestyle is not a one size fits all approach, and many individuals choose to incorporate different healthy behaviors at different times, slowly building more and more healthy habits. The CDC recommends multiple healthy behaviors that can be integrated for healthier living, such as getting enough sleep, moving more and sitting less, limiting alcohol intake, and eating healthy food. Sleep needs can vary from person to person; however, the CDC recommends that an adult gets at least 7 hours of regular sleep. Another healthy behavior that can be incorporated is movement, starting at least 20 minutes a day with some light activity, such as walking or dancing. [38]

Another form of healthy living and disease prevention is taking a proactive role in preventative health care, which can often start with one's diet. According to experts, losing just 5-10 % of one's current weight can lower the risk for multiple chronic conditions such as diabetes, arthritis, cancer, and high blood pressure. When speaking with a primary doctor, or a nutritionist about creating a healthy diet, it is important to have some information prepared, such as food allergies, health goals, the types of medication taken, and any other health concerns that one may have. When considering a diet for weight loss, ensuring that the diet is both filling and matches a daily activity level is key. When implementing a new diet, there are a few recommendations for success. First, eating when hungry and stopping when full is key, and choosing to eat filling foods that one might enjoy, such as one's favorite vegetables, fruit, or lean protein. Secondly, seasoning the food with different herbs and spices, and reducing the amount of salt and sugar in a recipe if possible. Finally, drinking enough water throughout the day helps with digestion and other body functions.[39]

When considering healthy living in rural communities, research has shown that just one in four adults in rural areas are consistently performing at least four healthy behaviors.[40] Rural areas often have fewer or less diverse grocery stores, with many relying on smaller general stores, which may not always have fresh produce and meat. Additionally, these areas may also not have safe places to walk or exercise, such as sidewalks, recreation centers, or parks.

In North Carolina, over half (52%) of adults do not get at least two and a half hours of moderate exercise per week, and over 70% don't meet weekly muscle strengthening recommendations. However, 84% of adults eat at least one vegetable a day, and over 60% eat fruit at least once a day.[41] North Carolina's Department of Health and Human Services has implemented several workshops and classes that individuals can take to learn healthy habits, such as Living Healthy workshops. Additionally, several nonprofits have implemented programs to help individuals learn healthy behaviors, and North Carolina also has an extensive WIC program, as well as the NCCares 360 program, which seeks to connect individuals with all necessary resources for living a healthier life.

[38] Source: Centers for Disease Control and Prevention. (2023). *Taking care of your body.* Retrieved October 3, 2024 from: https://www.cdc.gov/howrightnow/taking-care/index.html

[39] Source: U.S. Department of Veterans Affairs. (2023). *Healthy living overview.* Retrieved October 10th, 2024 from https://www.prevention.va.gov/Healthy_Living/index.asp

[40] Source: CDC (n.d.) *Health behaviors in rural America.* Retrieved October 3, 2024 from https://www.cdc.gov/rural-health/php/public-health-strategy/public-health-considerations-for-health-behaviors-in-rural-america.html#:~:text=People%20living%20in%20rural%20areas,and%20getting%20regular%20health%20screenings.

[41] Source: Eat Smart Move More North Carolina. (2017). *The roles of nutrition and physical activity in Chronic Disease in North Carolina.* Retrieved October 23, 2024 from https://www.communityclinicalconnections.com/wp-content/themes/cccph/assets/downloads/2024/07/factsheets/Physical/CCCPHB_FactSheet_HealthyEating-0724.pdf

Secondary Data Findings

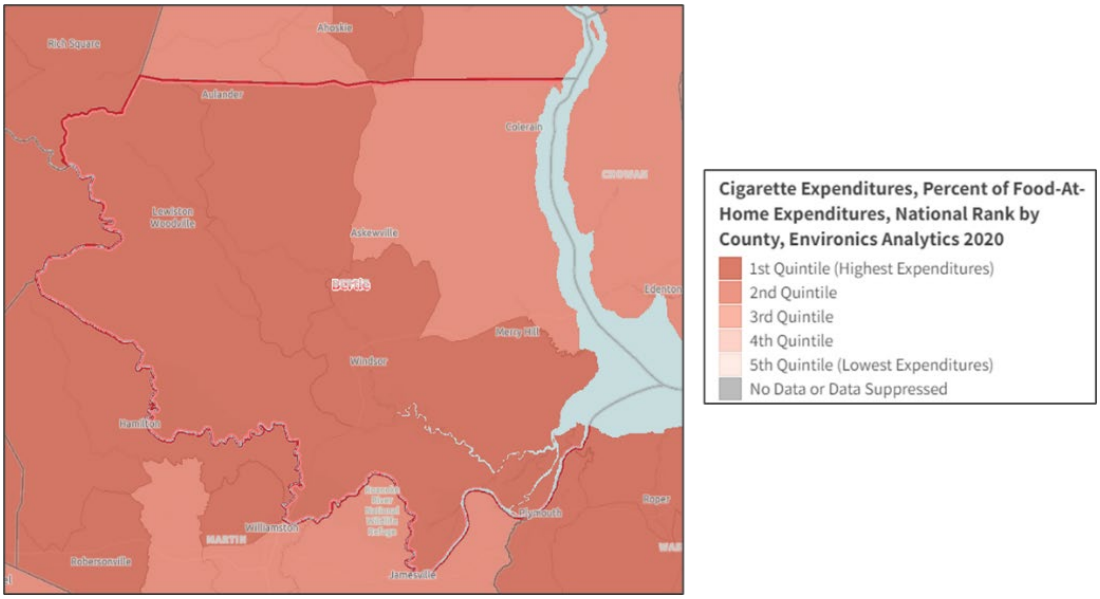
Secondary data collected through the CHNA process also identified healthy living as a priority concern area for residents living in Bertie County. As displayed in the table below, several food security, diet, and exercise indicators for Bertie County were worse than the state and national values. These indicators can impact physical health and increase the risk of various chronic health conditions. Bertie County had a lower walkability score and higher percentage of physically inactive residents compared to the state of North Carolina. It also had a much lower percentage of the population with access to exercise opportunities compared to both state and national values. Additionally, compared to the state, Bertie County had significantly higher rates of food insecurity among children and low food access among low-income residents but fewer fast-food restaurants per 100,000 population.

Table 3.8: Health Behavior and Food Security Indicators

Indicator	Bertie County	North Carolina	United States
% Adults Reporting Currently Smoking	23.1	15.0	-
Walkability Index Score	4	7	10
% Physically Inactive	31.5	21.6	-
Percentage of Population with Access to Exercise Opportunities	44%	73%	84%
Food Insecurity Rate	14%	11%	10%
Child Food Insecurity Rate	28%	15%	13%
Percent Low Income Population with Low Food Access	51%	21%	19%
Food Environment - Fast Food Restaurants Establishments (Rate per 100,000 Population)	44.6	77.4	96.2

A higher percentage of adults in Bertie County reports currently smoking cigarettes or tobacco products compared to the state average. In addition, cigarette expenditures (as a percentage of average food budget) are higher in much of Bertie County compared to the rest of the state.

Figure 3.19: Cigarette Expenditures



Bertie County also performed worse on almost all chronic disease indicators, confirming the need for a continued focus on healthy living in the county. The rates of asthma, diabetes, heart disease, hypertension, kidney disease, and stroke demonstrated high need in Bertie County, as displayed below. While almost a quarter of adults were reported as having obesity, this percentage was lower than the state and national values.

Table 3.9: Chronic Disease-Related Indicators

Indicator	Bertie County	North Carolina	United States
Adults (Age 18+) with Asthma	11.2%	9.8%	9.7%
Adults (Age 20+) with Diagnosed Diabetes	9.9%	9.0%	8.9%
Adults (Age 18+) Ever Diagnosed with Coronary Heart Disease	6.9%	5.5%	5.2%
Adults (Age 18+) with Hypertension	42.1%	32.1%	29.6%
Adults (Age 18+) with High Cholesterol	31.8%	31.4%	31.0%
Adults (Age 18+) with Kidney Disease	3.8%	2.9%	2.7%

Adults (Age 18+) Ever Having a Stroke	4.5%	3.1%	2.8%
Adults with BMI > 30.0 (Obese)	24.0%	29.7%	30.1%
Adults (Age 18+) with Poor Dental Health	20.4%	12.0%	13.9%
Percent Reporting Poor or Fair Health	23.2%	14.4%	-

The cancer incidence rate in Bertie County was lower than the state rate but slightly higher than the national rate. In contrast, the cardiovascular disease and stroke hospitalization rates were higher compared to the state and national rates.

Table 3.10: Cancer Incidence and Cardiovascular Disease and Stroke Hospitalizations

Indicator	Bertie County	North Carolina	United States
Cancer Incidence (Rate per 100,000 Population)	445.6	464.4	442.3
Emergency Room Visits (Rate per 1,000 Population)	921	563	535
Cardiovascular Disease Hospitalizations (Rate per 1,000 Medicare Beneficiaries)	13.1	11.7	10.4
Ischemic Stroke Hospitalizations (Rate per 1,000 Medicare Beneficiares)	10.8	9.5	8.0

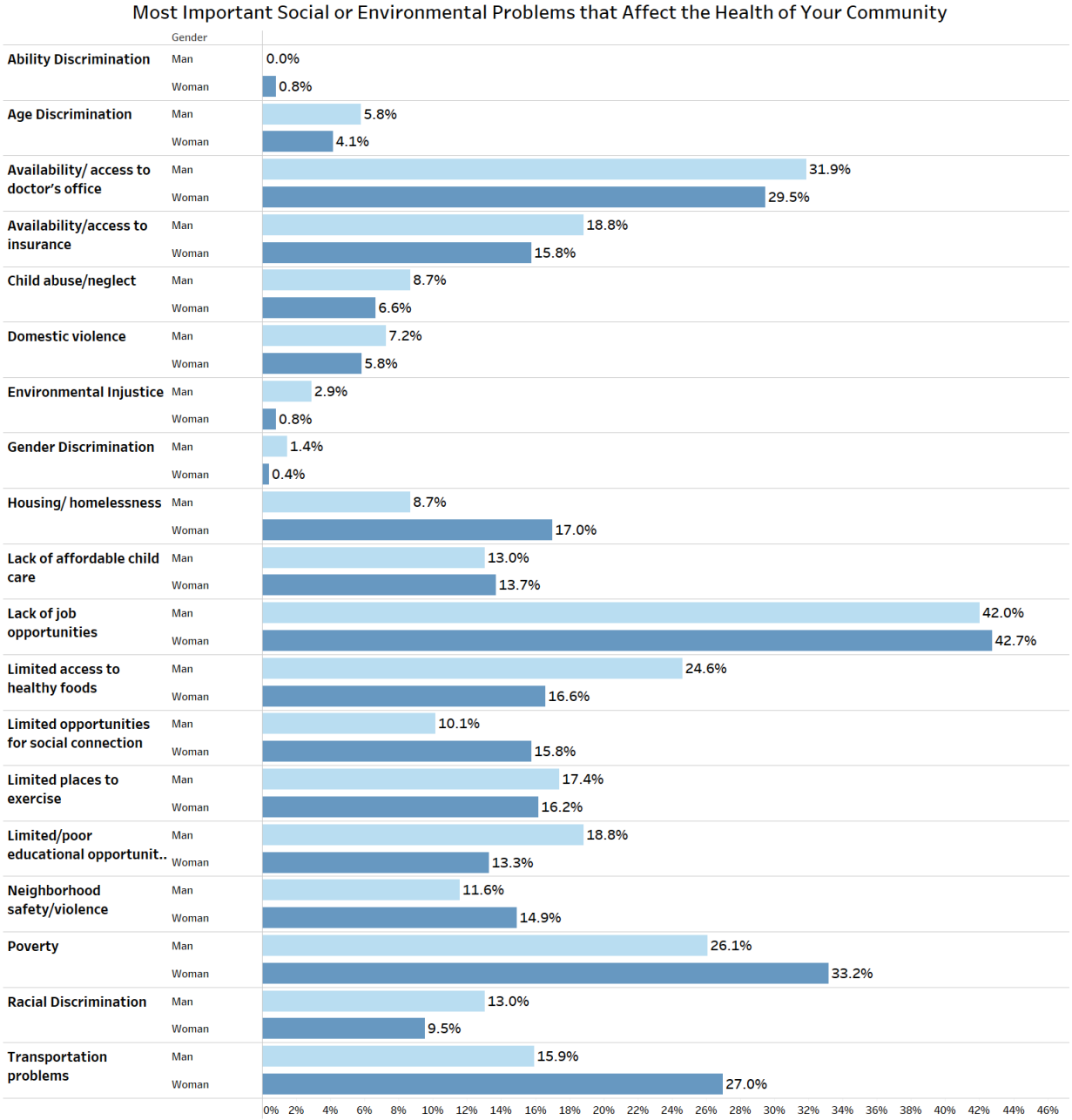
For additional detail on secondary data findings, see **Appendix 3.**

Primary Data Findings – Community Member Web Survey

Bertie County residents identified several healthy living concerns in the community in the web survey. As identified in **Figure 3.7** in the Access to Healthcare section, 18% of community respondents indicated limited access to healthy foods and 16% indicated limited places to exercise were top social or environmental problems affecting the health of the community.

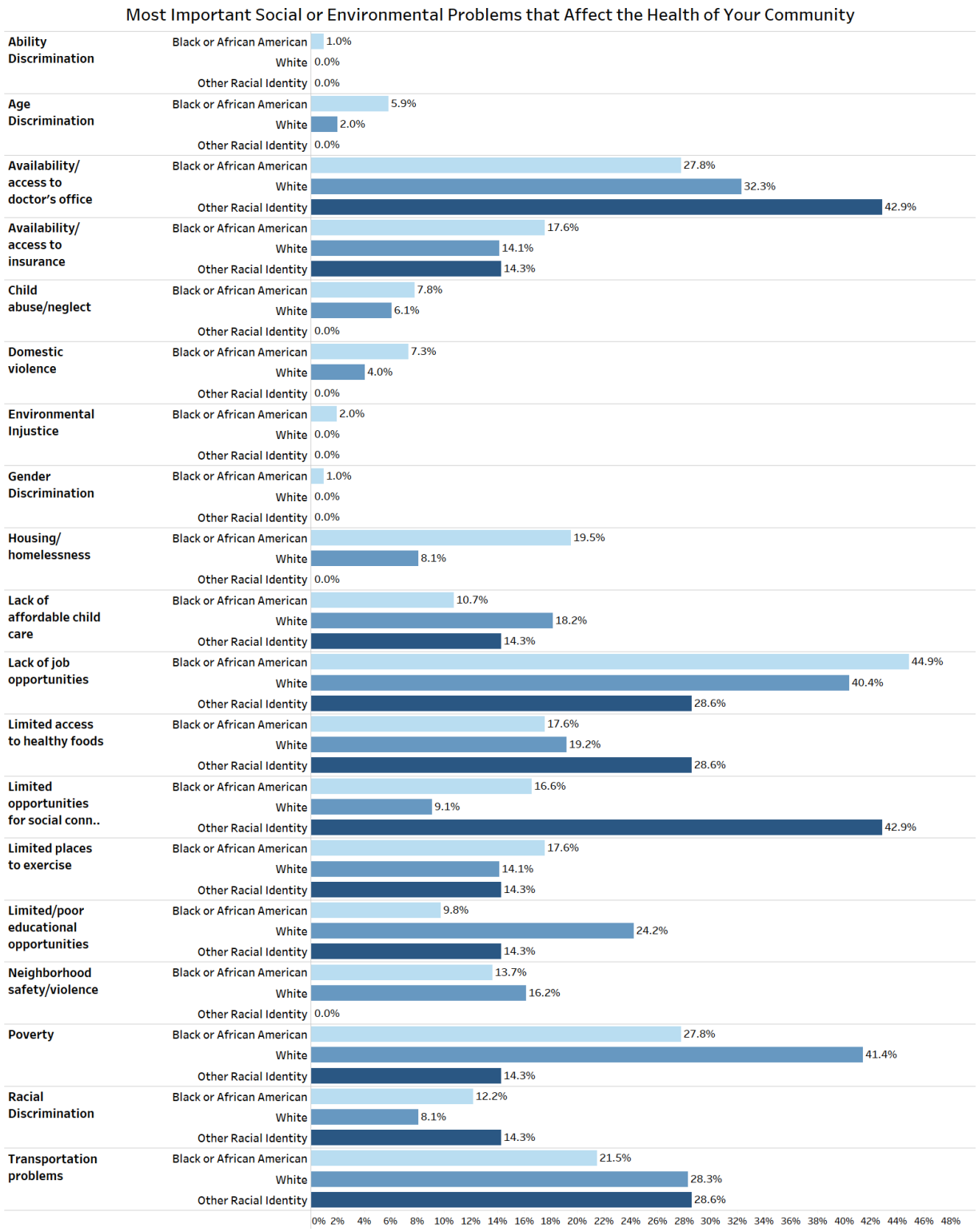
Responses somewhat differed by demographic characteristics of the respondents. When examined by gender, men (25%) more frequently identified limited access to healthy foods than women (17%), while responses for limited places to exercise were nearly equivalent.

Figure 3.20: What are the three most important social or environmental problems that affect the health of your community? Please select up to three (by gender)



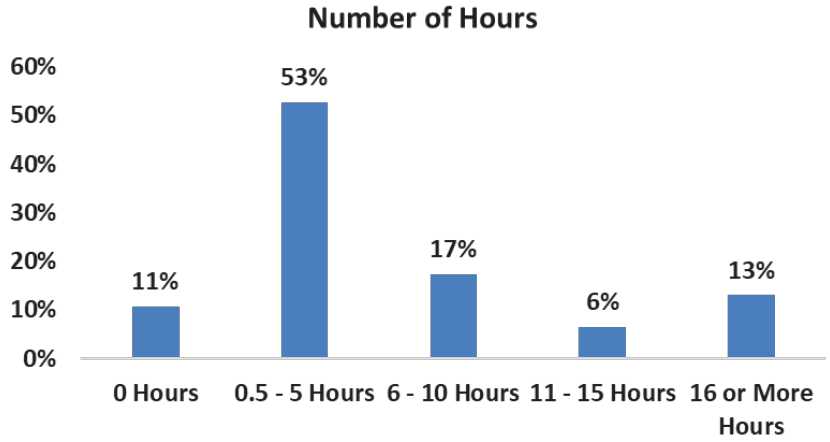
Respondents who identified with another racial identity (29%) were more likely to select access to healthy foods as a problem than those who identified as White (19%) or Black or African American (18%). In contrast, those who identified as Black or African American (18%) were more likely to select limited places to exercise as a problem than the other races (14%).

Figure 3.21: What are the three most important social or environmental problems that affect the health of your community? Please select up to three (by race)



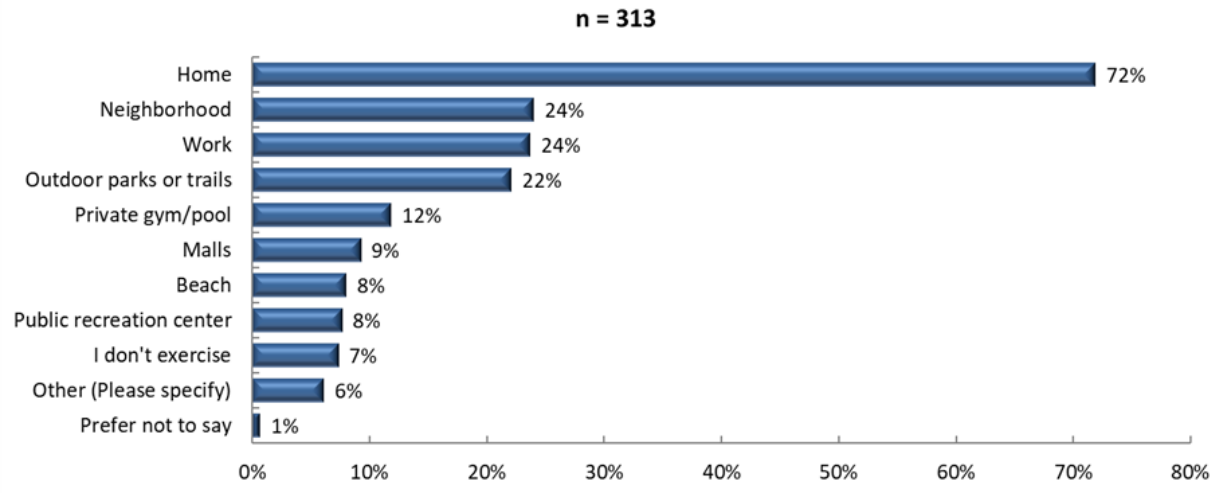
When respondents were asked how often they were physically active outside of their jobs in the last month, 11% indicated they were not active at all, while 53% indicated they were active between 0.5 and 5 hours. On average, community member respondents in Bertie County were active 8 hours in the preceding week, suggesting opportunities for increasing physical activity in the community.

Figure 3.22: During the past month, approximately how much time (in hours) per week were you physically active outside of your regular job?



When survey participants were asked where they engage in exercise or physical activities in the community, the majority indicated at home (72%) with quarter also indicating in the neighborhood or at work.

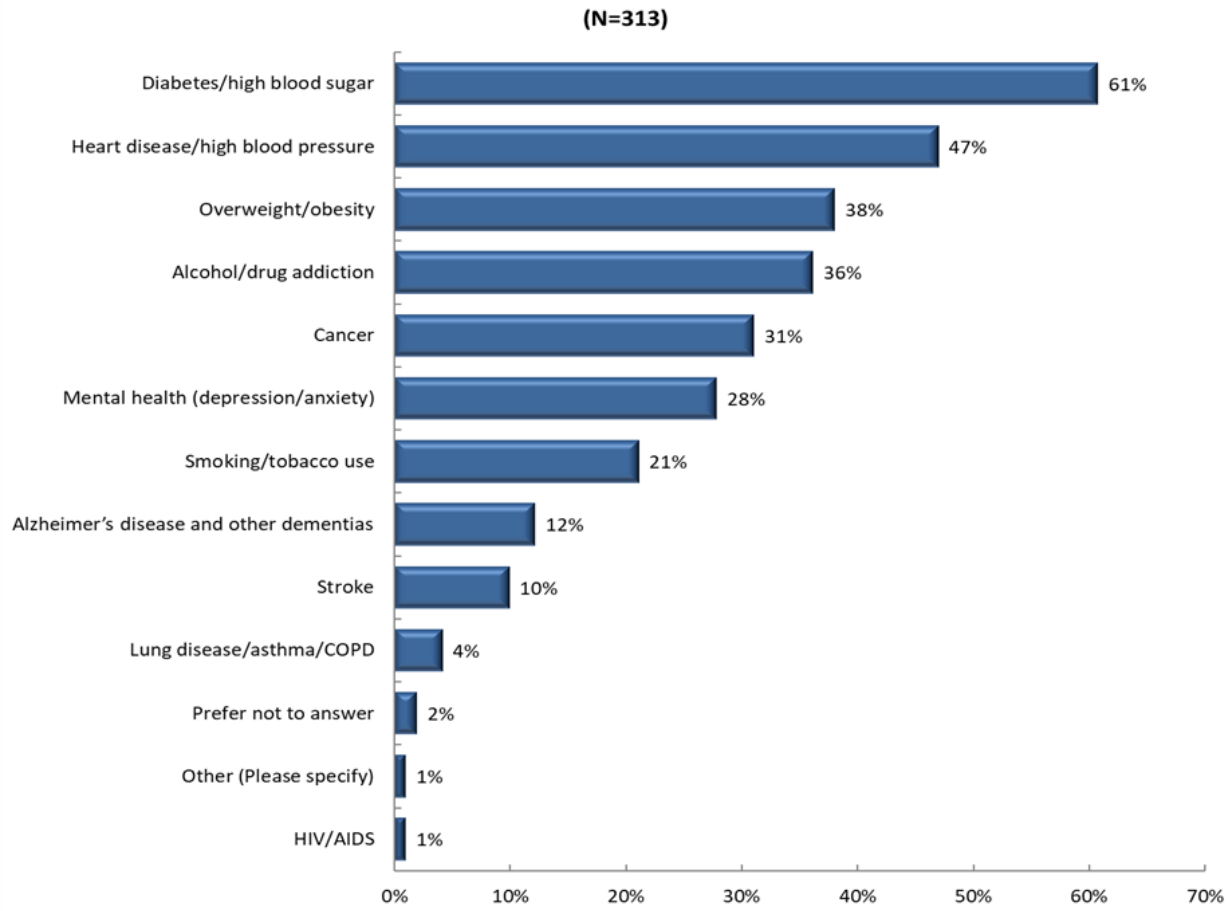
Figure 3.23: When you are active, where do you engage in exercise or physical activities? (Select all that apply.)



In addition to healthy living concerns, Bertie County respondents also highlighted chronic health conditions as top community concerns in the survey. Diabetes/high blood sugar, heart disease/high blood pressure, and overweight/obesity were identified as the top three health problems affecting the

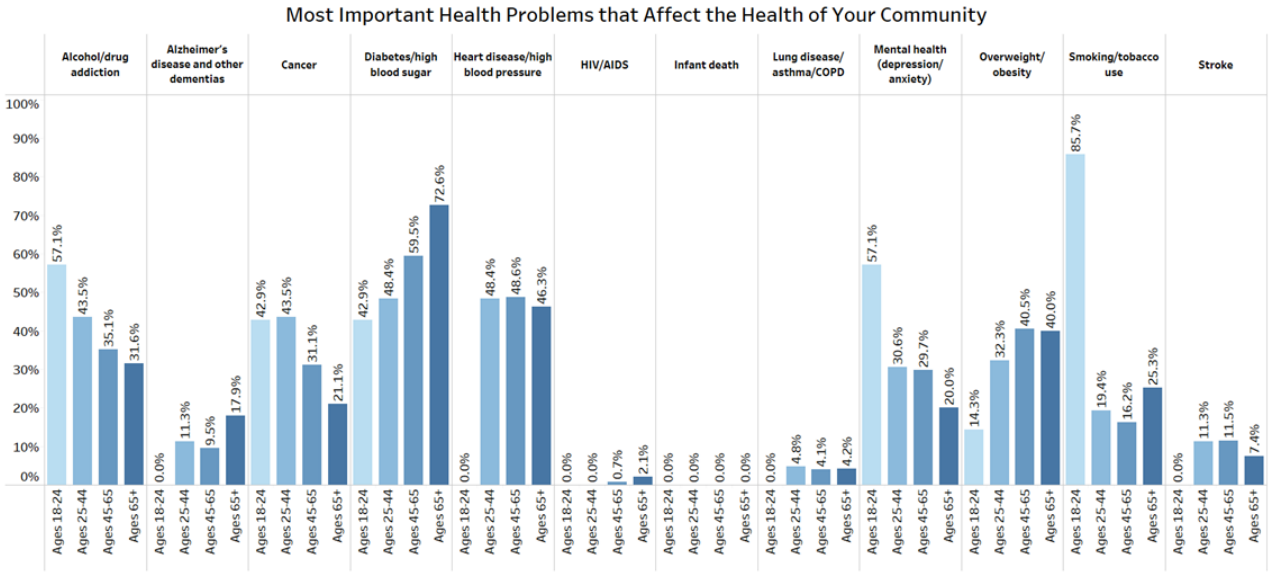
community. Nearly one-third of respondents also identified cancer as a top problem. These health conditions are frequently linked to healthy lifestyle habits, underscoring the importance of healthy living in the community.

Figure 3.24: What are the three most important health problems that affect the health of your community? Please select up to three.



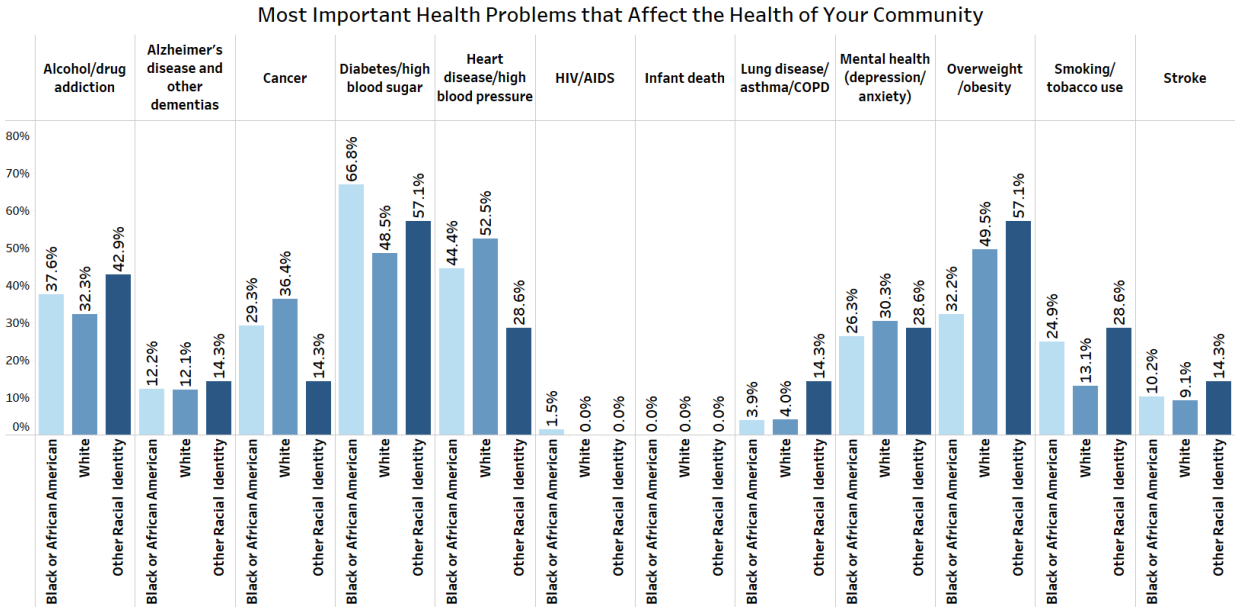
When these results were examined by various demographics of the respondents, responses varied. Older adults viewed diabetes as a more significant problem than younger respondents, as displayed in figure below. Compared to those aged 45 to 65 and those aged 65+, younger cohorts viewed cancer as a more significant health problem in the community.

Figure 3.25: What are the three most important health problems that affect the health of your community? (by age group)



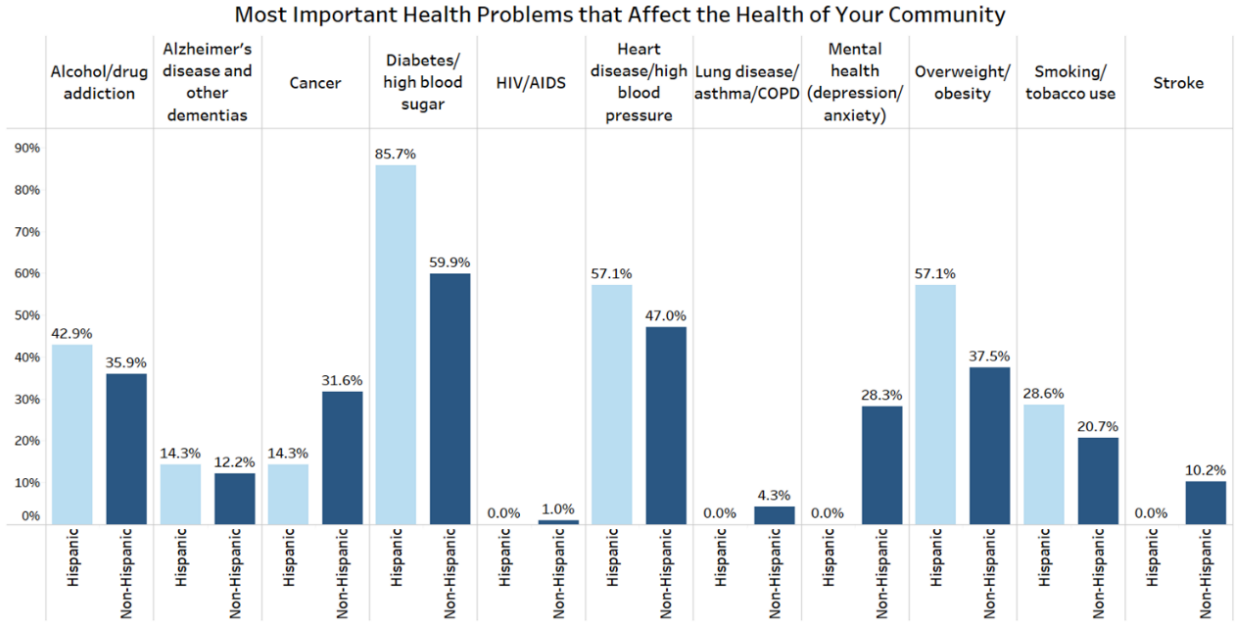
Respondents identifying as Black or African American (67%) identified diabetes/high blood sugar more frequently than respondents identifying as White (49%) or all other races (57%). Those identifying as White (53%) were more likely to select heart disease/high blood pressure as an important community health problem than those identifying as Black or African American (45%) or all other races (29%). In contrast, those identifying all other races (57%) were more likely to identify overweight/obesity as a top community health problem compared to others.

Figure 3.26: What are the three most important health problems that affect the health of your community? Please select up to three. (by race)



Differences were even more dramatic among ethnicity of the respondents. Bertie County respondents who identified as Hispanic were much more likely to identify diabetes, heart disease/high blood pressure, and overweight/obesity as significant health problems affecting the community, as displayed in the figure below. Considering these differences in targeted efforts to address specific community health indicators may be important.

Figure 3.27: What are the three most important health problems that affect the health of your community? (by ethnicity)



For additional detail on survey findings, see **Appendix 5**.

Primary Data Findings – Focus Groups

Similar to the secondary data and survey data discussed above, healthy living concerns also emerged in the focus groups. Food access and security was a significant theme across all five focus groups conducted. Related community challenges highlighted by Bertie County focus group participants included the high cost of healthy food, limited time to cook healthy foods, and food deserts or lack of grocery stores that makes purchasing healthy food difficult. Some participants also noted that work can prevent having the time to cook healthy meals, which can contribute to chronic illnesses.

Focus group participants also discussed impacts to healthy living through educational, environmental quality (pollution and trash), built environment (lack of high-speed internet and lack of safe recreational opportunities for young people), and housing-related deficits in the community. Several focus groups discussed the need for more education for Bertie County residents on how to stay healthy and on the available programs and resources in the community.

Bertie County focus group participants also identified several chronic health conditions as the most serious health problems in the community, specifically diabetes, high blood pressure, cancer, and heart disease.

For a more detailed description of focus group findings, see **Appendix 5**.

PRIORITY NEED: SEXUAL HEALTH

Context and National Perspective

The term sexual health covers a wide range of reproductive and sexuality-based factors. The World Health Organization's definition is the fundamental health and reproductive well-being of individuals, couples, and families, and the positive and respectful approach to sexuality and sexual relationships.[42] Public health concerns related to sexual health include comprehensive sexual education, the incidence and prevalence of sexually transmitted diseases, LGBTQIA+-friendly clinical care, teen pregnancies, and women's reproductive health and family planning. One of the most common forms of sexual health addressed in communities is the incidence of sexually transmitted infections (STI). STI rates have grown exponentially since 2018, with more than 2.5 million cases of syphilis, gonorrhea, and chlamydia reported in 2022 alone. Additionally, rates of syphilis alone have grown 17% annually since 2018, and cases are expected to continue to rise. However, Gonorrhea incidence rates have continued to decline at 8.7% per year.[43]

Although abstinence is the most effective way to prevent an STI, education on safe sex practices and how and where to obtain treatment is also beneficial for reducing and treating STIs. Stigma is a major barrier to accessing screenings and treatment, which are often free or low-cost. People may feel embarrassed for contracting an infection, even if they were safe or were unaware of their partner's condition. Tackling the stigma of seeking testing or treatment has come far in recent years, with increased access to over-the-counter tests, discreet screenings, telehealth services, and increased visibility in media and entertainment.

In rural areas, sexual health and STIs often run into the same barriers as other priority health conditions, in that access to clinical health services may be more limited, hindering one's ability to get tested and treated for the condition. Additionally, stigma surrounding STI's may be higher, further reducing one's resolve to seek out treatment.

Although it remains a concern in many places, teenage pregnancy has declined significantly in the U.S, falling 78% between 1991 and 2021. Teen pregnancy rates vary widely by race and ethnicity, with the highest national rate (24 per 1,000 births) among AIAN (non-Hispanic/Latino) females, and the lowest rate (2 per 1,000 births) among Asian (non-Hispanic/Latino) females. The rate among Black or African American teens is slightly lower at 22 per 1,000 births, and the rate is 21 for Hispanic/Latino teens, and 9 for white teens. While not concrete, it has been suggested that the increase in access to contraception and sexual education has played a large part in this decline. Due to the differences in education levels and access to

[42] Source: WHO. (2024). *Sexual health.* Retrieved October 3, 2024 from https://www.who.int/health-topics/sexual-health#tab=tab_1

[43] Source: CDC (2022). *Sexually Transmitted Infections (STIs)*. Retrieved October 3, 2024, from https://www.cdc.gov/std/statistics/2022/default.htm

reproductive care, these rates fluctuate throughout the country, especially when considering health disparities among minorities. Multiple SDoH can increase the risk for teen pregnancy, such as unemployment, income, education level, and whether the teen is in foster care.[44] Therefore, ensuring equitable access to comprehensive sexual education and reproductive care is key to reducing teen pregnancies.

In North Carolina, the overall rate of teen pregnancy was 22.9 per 1,000 births in 2020 (the most recent data available). Hispanic/Latino teens had the highest rate (39.5 per 1,000 births) — nearly twice the overall rate.[45] The statewide rate has continued to decline as it has nationally, with increased access to sex education and North Carolina's push for open communication regarding sexual health.

North Carolina promotes open communication between partners regarding sexual health and using safe sex practices to prevent pregnancy and exposure to STIs, as well as promoting vaccines for conditions such as Mpox and HPV. Additionally, North Carolina has programs in place to ensure that tests, vaccinations and treatments are free and discreet at many healthcare facilities and local public health departments.

Secondary Data Findings

Secondary data evaluated through the CHNA process also led to the identification of sexual health concerns in Bertie County. As displayed in the table below, the HIV/AIDs rate per 100,000 population in Bertie County is more than double the North Carolina and national rates, making this an indicator of particularly high need. In contrast, the chlamydia rate in Bertie County was much lower than the state and national rates. Another indicator of high need was the teen birth rate. This rate of teen births per 1,000 female population ages 15 to 19 was 76% higher in Bertie County compared to the state rate.

Table 3.11: Sexual Health Indicators

Indicator	Bertie County	North Carolina	United States
HIV / AIDS Infections (Rate per 100,000 Population)	32.3	15.5	12.7
Teen Births (Rate per 1,000 Female Population Age 15-19)	32.0	18.2	16.6
Chlamydia Rate (Rate per 100,000 Population)	135.0	603.3	495.0

[44] Source: CDC. (2024). *About teen pregnancy.* Retrieved October 11th, 2024, from https://www.cdc.gov/reproductive-health/teen-pregnancy/index.html

[45] Source: NC state center for health statistics (2020). *2020 NC resident pregnancy rates.* Retrieved October 11th, 2024 from https://schs.dph.ncdhhs.gov/data/vital/pregnancies/2020/Table2B-2020-pregpubrates-1519Preg-v2.pdf

There was a significant racial disparity observed among teen births in Bertie County, in which the teen birth rate was much higher among Black teens than White teens. Note that data for other races and ethnicity were suppressed due to low counts. The figure below highlights this teen birth rate disparity.

Figure 3.28: Teen Birth Rate by Race/Ethnicity

For additional detail on secondary data findings, see **Appendix 3.**

Primary Data Findings – Community Member Web Survey

While sexual health community concerns were highlighted through the secondary data, they were not highlighted through the community member survey. However, this may be due to the lack of relevant questions and response options. HIV/AIDs was only identified as a top three most important health problem affecting the community by 1% of survey respondents. Sex education was also listed among respondents who chose to write in their own responses.

For additional detail on survey findings, see **Appendix 5**.

Primary Data Findings – Focus Groups

Sexual health did not emerge as a top community concern among the five focus groups conducted in Bertie County, however some concerns previously described by the focus groups, such as difficulty accessing healthcare and the need for more community health education have the potential to impact sexual health in Bertie County.

To address these concerns, the participants suggested broadening access to programs through the health department, tailoring programs to working families, and better advertising of programs and available resources. They also noted the importance of coming out into the community to hold seminars or events.

For a more detailed description of focus group findings, see **Appendix 5**.

CHAPTER 4 | HEALTH RESOURCE INVENTORY

NCLHDA requirements for local health departments and IRS requirements for nonprofit hospitals require the CHNA report to include a description of the resources available in a county to address the significant health needs identified in the assessment. This section includes information about local organizations in Bertie County that provide resources to address general community health needs, as well as the county's 2024 priority need areas: Access to Healthcare; Behavioral Health; Chronic Health Conditions; and Family, Community and Social Support.

Category	Organization Name
County Resource Directories	**Bertie County Government Directory of Services** - alphabetical list of links to services **Law Enforcement:** There are three municipalities in Bertie County that have their own police departments: Aulander, Windsor, and Lewiston-Woodville. The rest of the county is covered by the Bertie County Sheriff's Office, headquartered in Windsor. Bertie County Sherrif's Office **Safety**: The Bertie County, NC fire department directory includes 12 fire departments and fire stations. • Aulander Municipal Volunteer Fire Department • Colerain Volunteer Fire Department • Perrytown Fire Department • Trap Fire Department • Kelford Fire Department • Lewiston Woodville Volunteer Fire Department • Merry Hill Midway Volunteer Fire Department • Powellsville Volunteer Fire Department • Roxobel Volunteer Fire Department • Blue Jay Fire Department • Windsor Fire Department • Askewville Volunteer Fire Department **Public Libraries**: There are three public libraries that serve the people of Bertie County. • Lawrence Memorial Public Library • Sallie Harrell Jenkins Memorial Library • Albemarle Regional Library

Community services	**The Bertie County Council on Aging** serves all Bertie County senior citizens, age 60 and older. Council programs serve between 400 and 500 seniors and their family caregivers during a typical year. Programs include: • Congregate nutrition provides a noontime meal Monday through Friday at three sites in the county: Windsor, Aulander, and Colerain. Each participant age 60 and older is asked to contribute $1.00 toward the cost of a meal. • Home delivered meals, or "Meals on Wheels" provides a lunchtime meal to home-bound seniors on Monday through Friday. There are two delivery routes in the county, one in Windsor and one in Aulander. Meals-to-go are available for pick-up, but not delivery, in Colerain. Each participant age 60 and older is asked to contribute $1.00 toward the cost of a meal. • Transportation for seniors from all areas of the county is provided to the Windsor nutrition site, the Department of Social Services, the Health Department, grocery stores, drug stores, the post office and other county sites on a pre-scheduled basis through a contract with the Choanoke Public Transportation Authority. Each participant is asked to contribute $1.00 to help subsidize the service. • In-home respite care via certified nursing assistants is provided to relieve primary, unpaid caregivers. Space is limited and many families are on a waiting list. Each family is asked to contribute $1.00 per hour toward the cost of the service. • The Senior Center, located in Windsor, provides activities for seniors and information on services available to them. S.H.I.I.P (Senior's Health Insurance Information Program) trains seniors to peer counsel in their community concerning Medicare, Medicare Supplements and long-term care. AARP Tax Aide is available during February, March, and April to assist in state and federal income tax returns for seniors 60 and older with low to middle incomes. • The Senior Center also plans and administers day field trips. Wellness, Exercise and Arts and Crafts classes and programs are offered at sites in Windsor and Colerain. Winsor conducts two classes Monday, Wednesday, and Friday. Colerain holds classes on Tuesdays and Thursdays. Arts and crafts classes are held throughout the fall, winter, and spring. • Health Services, such as flu shots and blood pressure checks, are provided by the health department at nutrition sites. • Library Services available to seniors include a large-print library and periodic visits from a Bookmobile.

CHAPTER 5 | NEXT STEPS

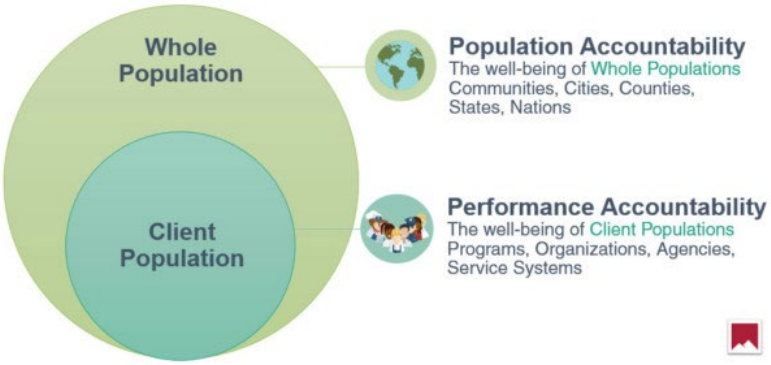
The CHNA findings are used to develop effective community health improvement strategies to address the priority needs identified throughout the process. The next and final step in the CHNA process is to develop community-based health improvement strategies and action plans to address the priorities identified in this assessment. Health leaders in Bertie County will leverage information from this CHNA to develop implementation and action plans for their local community, while also working together with other community partners to ensure the priority need areas are being addressed in the most efficient and effective way. Bertie County leaders recognize that the most effective strategies will be those that have the collaborative support of community organizations and residents. The strategies developed will include measurable objectives through which progress can be measured.

APPENDIX 1 | STATE OF THE COUNTY HEALTH REPORT

Results-Based Accountability Framework

To meet North Carolina accreditation requirements, LHDs are required to track progress on their implementation plans by publishing an annual State of the County Health Report (SOTCH). The SOTCH is guided by the Results-Based Accountability (RBA) Framework, and demonstrates that the LHD is tracking priority issues identified in the community health (needs) assessment process, identifying emerging issues, and implementing any relevant new initiatives to address community concerns.

Figure A1.1: Population vs. Performance Accountability



RBA provides a disciplined way of thinking about – and acting upon – complex social issues, with the goal of improving the lives of all members of the community. The framework is organized to recognize two distinct types of accountability: population and performance. Population accountability refers to the well-being of entire populations, and RBA recognizes that it is challenging, if not impossible, to hold individual organizations accountable for solving systemic problems. Conversely, performance accountability recognizes that individual organizations are accountable for the outcomes and impact of their programs, policies and practices as they relate to their client populations. **Figure A1.1** illustrates the way population and performance accountability interact.

In the CHIP process, RBA asks three key questions: how much did we do, how well did we do it, and is anyone better off? To more effectively answer these questions, and develop measurable strategies to address community health concerns, North Carolina LHDs use a software called Clear Impact Scorecard to develop their SOTCH and track progress against their goals. Clear Impact Scorecard is performance management and reporting software used by non-profit and government agencies to efficiently and effectively explain the impact of their work. The scorecard mirrors RBA and links results with indicators and programs with performance measures. Bertie County's most recent SOTCH is presented on the following pages.

State of the County Health Report

HNC 2030 Scorecard: Albemarle Regional Services - 2021-2023

ALBEMARLE REGIONAL HEALTH SERVICES
Partners in Public Health

Albemarle Regional Health Services is excited to share the Healthy NC 2030 Scorecard for the eight counties in our district health department. This Community Health Improvement Scorecard is an easy way to learn about some of the efforts currently underway to address three health priorities identified in the (CHA):

- ***Healthy Lifestyle Behaviors***
- ***Access to Healthcare***
- ***Mental Health/Substance Misuse***

This Scorecard also serves as **ARHS's** community health improvement plan (CHIP), fulfilling the **NC Local Health Department Accreditation** requirements that local health departments complete two CHIPs following the CHA submission and a State of the County's Health Report for **ARHS** on years when not completing the CHA.

For each priority, this Scorecard spotlights:

- A Result Statement, a picture of where we would like to be,
- Important local Indicators or measures of how we are doing linked to Healthy NC2030 indicators and
- Select Programs or activities and
- Key Performance Measures that show how those programs are making an impact.

Instructions: Click anywhere on the scorecard to learn more about programs and partners that are working together to improve health. The letters below represent key components of the Scorecard.

Results	R
Indicators	I
Programs	P
Performance Measures	PM

Use the icons to expand items and the icons to read more. This scorecard is not intended to be a complete list of all the programs and partners who are working on these issues in **ARHS**.

Community Health Assessment

2021 Community Health Assessment

	Time Period	Current Actual Value	Current Trend	Baseline % Change

Access to Healthcare

All individuals and families in the ARHS service area have access to equitable, comprehensive care.

	Time Period	Current Actual Value	Current Trend	Baseline % Change
FHLI-NC HNC2030 Uninsured: % of North Carolina population under age 65 without health insurance (Total)	2021	10.4%	↘ 2	-15% ↘
FHLI-NC HNC2030 Life Expectancy (Total) in North Carolina: Average number of years of life remaining for people who have attained a given age.	2022	76.2	↗ 1	-2% ↘
FHLI-NC HNC2030 Primary Care Clinicians: Number of NC counties with a (full-time equivalent) "primary care workforce" to "county population" ratio of 1:1,500	2017	62:1	→ 0	0% →

		Time Period	Current Actual Value	Current Trend	Baseline % Change
ARHS Primary Care clinic					
How Much	# of primary care visits at ARHS	2023	987	↗ 2	98% ↗
Healthy Lifestyle Behaviors					
All Individuals and families in the ARHS service area live a healthy lifestyle.					
FHLI-NC HNC2030	Sugar-Sweetened Beverage (SSB) Consumption Among Adults in NC: % of Adults (Total) reporting consumption of one or more sugar-sweetened beverages (SSBs) per day.	2022	36.8%	↗ 1	12% ↗
FHLI-NC HNC2030	Life Expectancy (Total) in North Carolina: Average number of years of life remaining for people who have attained a given age.	2022	76.2	↗ 1	-2% ↘
FHLI-NC HNC2030	Infant mortality rate in North Carolina: Rate of Infant Deaths (Total) per 1,000 Live Births	2022	6.8	→ 1	-3% ↘
FHLI-NC HNC2030	Teen Birth Rate: Number of births in NC per 1,000 population (Total) to females aged 15-19	2022	15.0	↘ 7	-36% ↘
Albemarle GetFit!					
How Much	Number of individuals enrolled in program	2023	86	↗ 1	87% ↗
How Well	% of GetFit! participants self reporting that they engage in at least 150 minutes of fitness each week	2023	38.0%	↗ 1	9% ↗
New Healthy Food Initiatives					
How Much	Number of individuals reached	2023	422	→ 0	0% →
How Much	Numbers of individuals receiving nutrition education	2023	222	→ 0	0% →
How Well	% of Individuals that self report they have increased their fruit/vegetable consumption	2023	18.0%	→ 0	0% →
New Faithful Families					
How Much	Number of individuals enrolled in program	2023	30	→ 0	0% →
How Well	% of Individuals that self report they have increased their fruit/vegetable consumption	2023	18.0%	→ 0	0% →
Chronic Disease Prevention and Management					
How Well	% of individuals receiving chronic disease education who self report positive behavior changes	2023	20%	→ 0	0% →
How Much	Number of individuals receiving chronic disease management through support groups	2023	45	↘ 1	-21% ↘
How Much	Number of individuals receiving chronic disease prevention education	2023	570	↘ 1	146% ↗
Mental Health/Substance Misuse					

All individuals and families in the ARHS service area have wellness and resiliency, free from stigma of mental illness and substance misuse.	Time Period	Current Actual Value	Current Trend	Baseline % Change
FHLI-NC HNC2030 Percent of Adults Using Tobacco in North Carolina (Total)	2022	21.6%	↗ 1	-10% ↘
FHLI-NC HNC2030 Percent of High School Youth Using Tobacco in North Carolina (Total)	2019	27.3%	↘ 1	-1% ↘
FHLI-NC HNC2030 Percent of Middle School Youth Using Tobacco in North Carolina (Total)	2019	10.4%	↘ 2	-10% ↘
FHLI-NC HNC2030 Drug Overdose Death Rate in North Carolina: Drug Poisoning Deaths (Total) per 100,000 population	2022	42.1	↗ 4	205% ↗
FHLI-NC HNC2030 Suicide Rate (TOTAL) in North Carolina (per 100, 000)	2022	14.4	↗ 1	11% ↗

ARHS Behavioral Health Program	Time Period	Current Actual Value	Current Trend	Baseline % Change
How Much # of behavioral health visits at ARHS	2023	2,426	↗ 1	346% ↗

Tobacco Prevention and Education	Time Period	Current Actual Value	Current Trend	Baseline % Change
How Much # of counties or municipalities that adopt tobacco free policies	2023	1	→ 0	0% →
How Much # of individuals receiving tobacco education	2023	2,130	↗ 2	647% ↗
How Much # of individuals utilizing QuitlineNC	2023	114	↘ 1	-28% ↘
How Much # of media messages provided throughout region	2023	100	↘ 1	-38% ↘

Substance Misuse Awareness and Prevention	Time Period	Current Actual Value	Current Trend	Baseline % Change
How Much # of education outreach activities	2023	74	↘ 1	-21% ↘
How Much # of community partners promoting NENC Connect website	2022	100	→ 0	0% →
How Much # of individuals accessing NENC Connect website	2022	460	↗ 1	130% ↗
How Much # of medication take back events held	2023	3	↗ 1	200% ↗

New Suicide Prevention Training	Time Period	Current Actual Value	Current Trend	Baseline % Change
How Much # of individuals trained in suicide prevention	2023	90	→ 0	0% →
How Well % of individuals trained that self report utilizing skills learned	2023	0	→ 0	0% →

SOTCH REPORTS

2022 SOTCH Report	Time Period	Current Actual Value	Current Trend	Baseline % Change

2023 SOTCH Report	Time Period	Current Actual Value	Current Trend	Baseline % Change

APPENDIX 2 | SECONDARY DATA METHODOLOGY AND SOURCES

Many individual secondary data measures were analyzed as part of the CHNA process. These data provide detailed insight into the health status and health-related behavior of residents in the county. These secondary data are based on statistics of actual occurrences, such as the incidence of certain diseases, as well as statistics related to SDoH.

Methodology

All individual secondary data measures were grouped into six categories and 20 corresponding focus areas based on "common themes." In order to draw conclusions about the secondary data for Bertie County, its performance on each data measure was compared to targets/benchmarks. If Bertie County's performance was more than five percent worse than the comparative benchmark, it was concluded that improvements could be needed to better the health of the community. Conversely, if an area performed more than five percent better than the benchmark, it was concluded that while a need is still present, the significance of that need relative to others is likely less acute. The most recently available data were compared to these targets/benchmarks in the following order (as applicable):

- For all available data sources, state and national averages were compared.

The following methodology was used to assign a priority level to each individual secondary data measure:

- If the data were more than 5 percent worse = High need
- If the data were within or equal to 5 percent (better or worse) = Medium need
- If the data were more than 5 percent better = Low need

These measures are noted with an asterisk.

Additionally, data measures were also viewed with regard to performance over time and whether the measure has improved or worsened compared to the prior CHNA timeframe.

Data Sources

The following tables are organized by each of the twenty focus areas and contain information related to the secondary data measures analyzed including a description of each measure, the data source, and most recent data time periods.

Table A2.1: Access to Care

Measure	Description	Data Source	Most Recent Data Year(s)
Primary Care Providers (per 100,000 population)	Number of providers with a CMS National Provider Identifier (NPI) that specialize in primary care. Primary health providers include practicing physicians specializing in general practice medicine, family medicine, internal medicine, and pediatrics.	Centers for Medicare and Medicaid Services (CMS) – National Plan and Provider Enumeration System (NPPES). Data accessed via the North Carolina Data Portal, June 2024.	2024
Mental Health Providers (per 100,000 population)	Number of providers with a CMS National Provider Identifier (NPI) that specialize in mental health. Mental health providers include licensed clinical social workers and other credentialed professionals specializing in psychiatry, psychology, counseling, or child, adolescent, or adult mental health.	CMS –NPPES. Data accessed via the North Carolina Data Portal, June 2024.	2024
Addiction/Substance Abuse Providers (per 100,000 population)	Number of providers who specialize in addiction or substance abuse treatment, rehabilitation, addiction medicine, or providing methadone. The providers include Doctors of Medicine (MDs), Doctors of Osteopathic Medicine (DOs), and other credentialed professionals with a Center for Medicare and Medicaid Services and a valid National Provider Identifier (NPI).	CMS –NPPES. Data accessed via the North Carolina Data Portal, June 2024.	2024
Buprenorphine Providers (per 100,000 population)	Number of providers authorized to treat opioid dependency with buprenorphine. Buprenorphine is the first medication to treat opioid dependency that is permitted to be prescribed or dispensed in physician offices, significantly increasing treatment access. Qualified physicians are required to acquire and maintain certifications to legally dispense or prescribe opioid dependency medications.	US Department of Health and Human Services (DHHS), Substance Abuse and Mental Health Services Administration. Data accessed via the North Carolina Data Portal, June 2024.	2023

Measure	Description	Data Source	Most Recent Data Year(s)
Dental Health Providers (per 100,000)	Number of oral health providers with a CMS National Provider Identifier (NPI). Providers included are those who list "dentist", "general practice dentist", or "pediatric dentistry" as their primary practice classification, regardless of sub-specialty.	CMS – NPPES. Data accessed via the North Carolina Data Portal, June 2024.	2024
Health Professional Shortage Areas - Dental Care	Percentage of the population that is living in a geographic area designated as a "Health Professional Shortage Area" (HSPA), defined as having a shortage of dental health professionals. This indicator is relevant because a shortage of health professionals contributes to access and health status issues.	U.S. Census Bureau, American Community Survey (ACS). Data accessed via the North Carolina Data Portal, June 2024.	2018-2022
Federally Qualified Health Centers (FQHCs)	Number of Federally Qualified Health Centers (FQHCs) in the community. This indicator is relevant because FQHCs are community assets that provide health care to vulnerable populations; they receive extra funding from the federal government to promote access to ambulatory care in areas designated as medically underserved.	U.S. DHHS, CMS, Provider of Services File. Data accessed via the North Carolina Data Portal, June 2024.	2023
Population Receiving Medicaid	Percentage of the population with insurance enrolled in Medicaid (or other means-tested public health insurance). This indicator is relevant because it assesses vulnerable populations which are more likely to have multiple health access, health status, and social support needs; when combined with poverty data, providers can use this measure to identify gaps in eligibility and enrollment.	U.S. Census Bureau, ACS. Data accessed via the North Carolina Data Portal, June 2024.	2018-2022
Uninsured Population (SAHIE)	Percentage of adults under age 65 without health insurance coverage. This indicator is relevant because lack of health insurance is a primary barrier to healthcare access including regular primary care, specialty care, and other health services that contribute to poor health status. The lack of health insurance is considered a *key driver* of health status.	U.S. Census Bureau, Small Area Health Insurance Estimates (SAHIE). Data accessed via the North Carolina Data Portal, June 2024.	2022

Table A2.2: Built Environment

Measure	Description	Data Source	Most Recent Data Year(s)
Broadband Access (Access to DL Speeds >= 25MBPS and UL Speeds >= 3 MBPS)	Percentage of population with access to high-speed internet. Data are based on the reported service area of providers offering download speeds of 25 MBPS or more and upload speeds of 3 MBPS or more. These data represent both wireline and fixed/terrestrial wireless internet providers. Cellular internet providers are not included.	Federal Communications Commission (FCC) FABRIC Data. Additional data analysis by CARES. Data accessed via the North Carolina Data Portal, June 2024.	2023
Broadband Access (Access to DL Speeds >= 100MBPS and UL Speeds >= 20 MBPS)	Percentage of population with access to high-speed internet. Data are based on the reported service area of providers offering download speeds of 100 MBPS or more and upload speeds of 20 MBPS or more. These data represent both wireline and fixed/terrestrial wireless internet providers. Cellular internet providers are not included.	FCC FABRIC Data. Additional data analysis by CARES. Data accessed via the North Carolina Data Portal, June 2024.	2023
Households with No Computer	Percentage of households who don't own or use any types of computers, including desktop or laptop, smartphone, tablet, or other portable wireless computer, and some other type of computer, based on the 2018-2022 American Community Survey estimates.	U.S. Census Bureau, ACS. Data accessed via the North Carolina Data Portal, June 2024.	2018-2022
Households with No or Slow Internet	Percentage of households who either use dial-up as their only way of internet connection or have internet access but don't pay for the service, or have no internet access in their home, based on the 2018-2022 American Community Survey estimates.	U.S. Census Bureau, ACS. Data accessed via the North Carolina Data Portal, June 2024.	2018-2022
Liquor Stores	Number of liquor stores per 100,000 population provides a measure of environmental influences on dietary behaviors and the accessibility of healthy foods. Note this data excludes establishments preparing and serving alcohol for consumption on premises (including bars and restaurants) or which sell alcohol as a secondary retail product (including gas stations and grocery stores).	U.S. Census Bureau, County Business Patterns. Additional data analysis by CARES. Data accessed via the North Carolina Data Portal, June 2024.	2022

Measure	Description	Data Source	Most Recent Data Year(s)
Adverse Childhood Experiences (ACEs)	Percentage of children in North Carolina (total) with two or more ACEs. ACEs are potentially traumatic events that occur in childhood (0-17 years), including experiencing violence, abuse, or neglect; witnessing violence in the home or community; and having a family member attempt or die by suicide. Also included are aspects of the child's environment that can undermine their sense of safety, stability, and bonding, such as substance abuse problems, mental health problems, instability due to parental separation, and instability due to household members being in jail or prison. Other traumatic experiences that impact health and well-being may include not having enough food to eat, experiencing homelessness or unstable housing, or experiencing discrimination. ACEs can have lasting effects on health and well-being in childhood and life opportunities well into adulthood, for example, education and job potential. These experiences can increase the risks of injury, sexually transmitted infections, teen pregnancy, suicide, and a range of chronic diseases including cancer, diabetes, and heart disease.	Clear Impact Healthy North Carolina (HNC) 2030 Scorecard, 2021-2024. Data accessed June 2024.	2022

Table A2.4: Diet and Exercise

Measure	Description	Data Source	Most Recent Data Year(s)
Physical inactivity (percent of adults that report no leisure time physical activity)	Percentage of adults ages 20 and over reporting no leisure-time physical activity in the past month. Examples of physical activities include running, calisthenics, golf, gardening, or walking for exercise. The method for calculating Physical Inactivity changed. Data for Physical Inactivity are provided by the CDC Interactive Diabetes Atlas which	Behavioral Risk Factor Surveillance System. Data accessed via Robert Wood Johnson Foundation & University of Wisconsin Population Health Institute County Health Rankings & Roadmaps, June 2024.	2021

Measure	Description	Data Source	Most Recent Data Year(s)
	combines 3 years of survey data to provide county-level estimates. In 2011, BRFSS changed their methodology to include cell phone and landline participants. Previously only landlines were used to collect data. Physical Inactivity is created using statistical modeling.		
Community Design - Walkability Index Score	The National Walkability Index (2021) is a nationwide index score developed by the Environmental Protection Agency (EPA) that ranks block groups according to their relative walkability using selected variables on density, diversity of land uses, and proximity to transit from the Smart Location Database. The block groups are assigned their final National Walkability Index scores on a scale of 1 to 20 where the higher a score, the more walkable the community is.	EPA – Smart Location Database. Data accessed via the North Carolina Data Portal, June 2024.	2021
Access to Exercise Opportunities	Percentage of individuals in the county who live reasonably close to a location for physical activity. Locations for physical activity are defined as parks or recreational facilities. The numerator is the 2020 total population living in census blocks with adequate access to at least one location for physical activity (adequate access is defined as census blocks where the border is a half-mile or less from a park, 1 mile or less from a recreational facility in an urban area, or 3 miles or less from a recreational facility in a rural area) and the denominator is the 2020 resident county population. This indicator is used in the 2024 County Health Rankings.	ArcGIS Business Analyst and Living Atlas of the World, YMCA & U.S. Census Tigerline Files. Data accessed via the North Carolina Data Portal, June 2024.	2023
Recreation and Fitness Facility Access (per 100,000 population)	Number of establishments primarily engaged in operating fitness and recreational sports facilities featuring exercise and other active physical fitness conditioning or recreational sports activities, such as swimming, skating, or racquet sports. Access to recreation and fitness facilities	U.S. Census Bureau, County Business Patterns. Additional data analysis by CARES. Data accessed via the North Carolina Data Portal, June 2024.	2022

Measure	Description	Data Source	Most Recent Data Year(s)
	encourages physical activity and other healthy behaviors.		
Sugar-Sweetened Beverage (SSB) Consumption Among Adults	Percentage of total adults reporting consumption of one or more SSBs per day.	Clear Impact. HNC2030 Scorecard, 2021-2024. Data accessed June 2024.	2022

Table A2.5: Education

Measure	Description	Data Source	Most Recent Data Year(s)
Population with Limited English Proficiency	Percentage of the population aged 5 and older who speak a language other than English at home and speak English less than "very well". This indicator is relevant because an inability to speak English well creates barriers to healthcare access, provider communications, and health literacy/education.	U.S. Census Bureau, ACS. Data accessed via the North Carolina Data Portal, June 2024.	2018-2022
High School Graduation Rate	Percentage of high school students who graduate within four years. The adjusted cohort graduation rate (ACGR) is a graduation metric that follows a "cohort" of first-time 9th graders in a particular school year, and adjusts this number by adding any students who transfer into the cohort after 9th grade and subtracting any students who transfer out, emigrate to another county, or pass away.	U.S. Department of Education, EDFacts. Additional data analysis by CARES. Data accessed via the North Carolina Data Portal, June 2024.	2020-2021
No High School Diploma	Percentage of the population aged 25 and older without a high school diploma (or equivalency) or higher. This indicator is relevant because educational attainment is linked to positive health outcomes.	U.S. Census Bureau, ACS. Data accessed via the North Carolina Data Portal, June 2024.	2018-2022
Student Math Proficiency (4th Grade)	Percentage of 4th grade students testing below the "proficient" level on the Math portion of state-specific standardized tests.	U.S. Department of Education, EDFacts. Additional data analysis by CARES. Data accessed via the North Carolina Data Portal, June 2024.	2020-2021
Student Reading Proficiency (4th Grade)	Percentage of 4th grade students testing below the "proficient" level on the English Language Arts portion of state-specific standardized tests.	US Department of Education, EDFacts. Additional data analysis by CARES. Data accessed	2020-2021

Measure	Description	Data Source	Most Recent Data Year(s)
		via the North Carolina Data Portal, June 2024.	
School Funding Adequacy	The average gap in dollars between actual and required spending per pupil among public school districts. Required spending is an estimate of dollars needed to achieve U.S. average test scores in each district.	School Finance Indicators Database. Data accessed via RWJF & UWPHI County Health Rankings & Roadmaps, June 2024.	2021
School Funding Adequacy – Spending per Pupil	Actual spending per pupil among public school districts.	School Finance Indicators Database. Data accessed via RWJF & UWPHI County Health Rankings & Roadmaps, June 2024.	2021

Table A2.6: Employment

Measure	Description	Data Source	Most Recent Data Year(s)
Unemployment Rate (percent of population age 16+ but unemployed)	Percentage of the civilian non-institutionalized population age 16 and older (non-seasonally adjusted) that is unemployed but seeking work. This indicator is relevant because unemployment creates financial instability and barriers to access including insurance coverage, health services, healthy food, and other necessities that contribute to poor health status.	U.S. Department of Labor, Bureau of Labor Statistics. Data accessed via the North Carolina Data Portal, June 2024.	2024
Average Annual Unemployment Rate, 2013-2023	Average yearly percentage across the given time period of the civilian non-institutionalized population age 16 and older (non-seasonally adjusted) that is unemployed but seeking work. This indicator is relevant because unemployment creates financial instability and barriers to access including insurance coverage, health services, healthy food, and other necessities that contribute to poor health status.	U.S. Census Bureau, ACS. Data accessed via the North Carolina Data Portal, June 2024.	2024

Table A2.7: Environmental Quality

Measure	Description	Data Source	Most Recent Data Year(s)
Climate and Health – Flood Vulnerability	Estimated number of housing units within the special flood hazard area (SFHA) per county. The SFHAs have	Federal Emergency Management Agency (FEMA), National Flood	2011

Measure	Description	Data Source	Most Recent Data Year(s)
	1% annual chance of coastal or riverine flooding.	Hazard Layer. Data accessed via the North Carolina Data Portal, June 2024.	
Air and Water Quality – Drinking Water Safety	Number of drinking water violations recorded in a two-year period. Health-based violations include incidents where either the amount of contaminant exceeded the maximum contaminant level (MCL) safety standard, or where water was not treated properly. In cases where a water system serves multiple counties and has a violation, each county served by the system is given a violation.	EPA. Data accessed via the North Carolina Data Portal, June 2024.	2023

Table A2.8: Family, Community, and Social Support

Measure	Description	Data Source	Most Recent Data Year(s)
Childcare Cost Burden	Childcare costs for a median-income household with two children as a percentage of household income. Data are included as part of the 2024 County Health Rankings.	The Living Wage Calculator, Small Area Income and Poverty Estimates. Data accessed via the North Carolina Data Portal, June 2024.	2023
Young People Not in School and Not Working	Percentage of youth ages 16-19 who are not currently enrolled in school and who are not employed.	U.S. Census Bureau, ACS. Data accessed via the North Carolina Data Portal, June 2024.	2018-2022

Table A2.9: Food Security

Measure	Description	Data Source	Most Recent Data Year(s)
Food Insecurity Rate	Estimated percentage of the population that experienced food insecurity at some point during the report year. Food insecurity is the household-level economic and social condition of limited or uncertain access to adequate food.	Feeding America. Data accessed via the North Carolina Data Portal, June 2024.	2021
Food Insecure Children	Estimated percentage of the population under age 18 that experienced food insecurity at some point during the report year. Food insecurity is the household-level economic and social condition of	Feeding America. Data accessed via the North Carolina Data Portal, June 2024.	2021

Measure	Description	Data Source	Most Recent Data Year(s)
	limited or uncertain access to adequate food.		
Low-Income and Low Food Access	Percentage of the low-income population with low food access. Low food access is defined as living more than 1 mile (urban) or 10 miles (rural) from the nearest supermarket, supercenter, or large grocery store. Data are from the April 2021 Food Access Research Atlas dataset. This indicator is relevant because it highlights populations and geographies facing food insecurity.	U.S. Department of Agriculture (USDA), Economic Research Service, USDA – Food Access Research Atlas. 2019. Data accessed via the North Carolina Data Portal, June 2024.	2019
Limited access to healthy foods	Percentage of population who are low-income and do not live close to a grocery store.	USDA Food Environment Atlas. Data accessed via RWJF & UWPHI County Health Rankings & Roadmaps, June 2024.	2019
Food Environment - Fast Food Restaurants (per 100,000 population)	Number of fast food restaurants per 100,000 population. The prevalence of fast food restaurants provides a measure of both access to healthy food and environmental influences on dietary behaviors. Fast food restaurants are defined as limited-service establishments primarily engaged in providing food services (except snack and nonalcoholic beverage bars) where patrons generally order or select items and pay before eating.	US Census Bureau, County Business Patterns. Additional data analysis by CARES. 2022. Data accessed via the North Carolina Data Portal, June 2024.	2022
Food Environment - Grocery Stores (per 100,000 population)	Number of grocery establishments per 100,000 population. Grocery stores are defined as supermarkets and smaller grocery stores primarily engaged in retailing a general line of food, such as canned and frozen foods; fresh fruits and vegetables; and fresh and prepared meats, fish, and poultry. Delicatessen-type establishments are also included. Convenience stores and large general merchandise stores that also retail food, such as supercenters and warehouse club stores, are excluded. Healthy dietary behaviors are supported by access to healthy	US Census Bureau, County Business Patterns. Additional data analysis by CARES. 2022. Data accessed via the North Carolina Data Portal, June 2024.	2022

Measure	Description	Data Source	Most Recent Data Year(s)
	foods, and grocery stores are a major provider of these foods.		

Table A2.10: Housing and Homelessness

Measure	Description	Data Source	Most Recent Data Year(s)
Renter Costs – Average Gross Rent	Average gross rent is the contract rent plus the estimated average monthly cost of utilities (electricity, gas, and water and sewer) and fuels (oil, coal, kerosene, wood, etc.) if these are paid by the renter (or paid for the renter by someone else). Gross rent provides information on the monthly housing cost expenses for renters. When the data is used in conjunction with income data, the information offers an excellent measure of housing affordability and excessive shelter costs. The data also serve to aid in the development of housing programs to meet the needs of people at different economic levels, and to provide assistance to agencies in determining policies on fair rent.	U.S. Census Bureau, ACS. Data accessed via the North Carolina Data Portal, June 2024.	2018-2022
Housing Cost Burden, Severe (50%)	Percentage of the households where housing costs are 50% or more total household income. This indicator provides information on the cost of monthly housing expenses for owners and renters. The information offers a measure of housing affordability and excessive shelter costs. The data also serve to aid in the development of housing programs to meet the needs of people at different economic levels.	U.S. Census Bureau, ACS. Data accessed via the North Carolina Data Portal, June 2024.	2018-2022
Housing & Urban Development (HUD)-Assisted Housing Units (per 10,000 households)	Number of HUD-funded assisted housing units available to eligible renters as well as the unit rate (per 10,000 total households).	U.S. Department of HUD. Data accessed via the North Carolina Data Portal, June 2024.	2017-2021
Substandard Housing, Severe	Percentage of owner- and renter-occupied housing units having at least one of the following conditions: 1) lacking complete plumbing facilities, 2) lacking complete kitchen	U.S. Census Bureau, ACS. Data accessed via the North Carolina Data Portal, June 2024.	2011-2015

Measure	Description	Data Source	Most Recent Data Year(s)
	facilities, 3) with 1.51 or more occupants per room, 4) selected monthly owner costs as a percentage of household income greater than 50%, and 5) gross rent as a percentage of household income greater than 50%. Selected conditions provide information in assessing the quality of the housing inventory and its occupants. This data is used to easily identify homes where the quality of living and housing can be considered substandard.		
Homeless Children and Youth	Number of homeless children and youth enrolled in the public school system during the school year 2019-2020. According to the data source definitions, homelessness is defined as lacking a fixed, regular, and adequate nighttime residence. Those who are homeless may be sharing the housing of other persons, living in motels, hotels, or camping grounds, in emergency transitional shelters, or unsheltered. Data are aggregated to the report-area level based on school-district summaries where three or more homeless children are counted.	US Department of Education, EDFacts. Additional data analysis by CARES. 2019-2020. Data accessed via the North Carolina Data Portal, June 2024.	2019-2020

Table A2.11: Income

Measure	Description	Data Source	Most Recent Data Year(s)
Median Family Income	Median family income based on the latest 5-year American Community Survey estimates. A family household is any housing unit in which the householder is living with one or more individuals related to him or her by birth, marriage, or adoption. Family income includes the incomes of all family members ages 15 and older.	U.S. Census Bureau, ACS. Data accessed via the North Carolina Data Portal, June 2024.	2018-2022
Gender Pay Gap	Ratio of women's median earnings to men's median earnings for all full-time, year-round workers, presented as "cents on the dollar." Data are	U.S. Census Bureau, ACS. Data accessed via the North Carolina Data Portal, June 2024.	2018-2022

Measure	Description	Data Source	Most Recent Data Year(s)
	acquired from the 2018-2022 ACS and are used in the 2024 County Health Rankings.		
Population Below 100% Federal Poverty Level (FPL)	Percentage of population living in households with income below the FPL. This indicator is relevant because poverty creates barriers to access including health services, healthy food, and other necessities that contribute to poor health status.	U.S. Census Bureau, ACS. Data accessed via the North Carolina Data Portal, June 2024.	2022
Population Below 200% FPL	Percentage of population living in households with income below 200% of the FPL. This indicator is relevant because poverty creates barriers to access including health services, healthy food, and other necessities that contribute to poor health status.	U.S. Census Bureau, ACS. Data accessed via the North Carolina Data Portal, June 2024.	2018-2022
Children Below 200% FPL	Percentage of children living in households with income below 200% of the FPL. This indicator is relevant because poverty creates barriers to access including health services, healthy food, and other necessities that contribute to poor health status.	U.S. Census Bureau, ACS. Data accessed via the North Carolina Data Portal, June 2024.	2018-2022
Population Receiving SNAP (SAIPE)	Average percentage of the population receiving SNAP benefits during the month of June during the most recent report year. The Supplemental Nutrition Assistance Program, or SNAP, is a federal program that provides nutrition benefits to low-income individuals and families that are used at stores to purchase food.	U.S. Census Bureau, Small Area Income and Poverty Estimates. Data accessed via the North Carolina Data Portal, June 2024.	2021
Children Eligible for Free/Reduced Price Lunch	Percentage of public school students eligible for the free or reduced price lunch program in the latest report year. Free or reduced price lunches are served to qualifying students in families with income between 185 percent (free lunch) and or 130 percent (reduced price) of the US federal poverty threshold as part of the federal National School Lunch Program (NSLP).	National Center for Education Statistics (NCES) – Common Core of Data. Data accessed via the North Carolina Data Portal, June 2024.	2022-2023

Table A2.12: Length of Life

Measure	Description	Data Source	Most Recent Data Year(s)
Premature Death (years of potential life lost before age 75 per 100,000 population age-adjusted)	Number of events (i.e., deaths, births, etc.) in a given time period (three-year period) divided by the average number of people at risk during that period. Years of potential life lost measures mortality by giving more weight to deaths at earlier ages than deaths at later ages. Premature deaths are deaths before age 75. All of the years of potential life lost in a county during a three-year period are summed and divided by the total population of the county during that same time period-this value is then multiplied by 100,000 to calculate the years of potential life lost under age 75 per 100,000 people. These are age-adjusted.	National Center for Health Statistics – Natality and Mortality Files; Census Population Estimates Program. Data accessed via RWJF & UWPHI County Health Rankings & Roadmaps, June 2024.	2019-2021
Premature Age-Adjusted Mortality	Number of deaths among residents under age 75 per 100,000 population (age-adjusted).	National Center for Health Statistics – Natality and Mortality Files; Census Population Estimates Program. Data accessed via RWJF & UWPHI County Health Rankings & Roadmaps, June 2024.	2019-2021
Life expectancy	Average life expectancy at birth (age-adjusted to 2000 standard). Data were from the National Center for Health Statistics - Mortality Files (2019-2021) and are used for the 2024 County Health Rankings.	National Center for Health Statistics – Natality and Mortality Files; Census Population Estimates Program. Data accessed via RWJF & UWPHI County Health Rankings & Roadmaps, June 2024.	2019-2021

Table A2.13: Maternal and Infant Health

Measure	Description	Data Source	Most Recent Data Year(s)
Births with no or late prenatal care	Percentage of women who did not obtain prenatal care until the 7th month (or later) of pregnancy or who didn't have any prenatal care, as of all who gave birth during the three-year period from 2017 to 2019. This	CDC – National Vital Statistics System (NVSS). CDC WONDER. CDC, Wide-Ranging Online Data for Epidemiologic Research. Data accessed	2017-2019

Measure	Description	Data Source	Most Recent Data Year(s)
	indicator is relevant because engaging in prenatal care decreases the likelihood of maternal and infant health risks. This indicator can also highlight a lack of access to preventive care, a lack of health knowledge, insufficient provider outreach, and/or social barriers preventing utilization of services.	via the North Carolina Data Portal, June 2024.	
Low birthweight (percent of live births with birthweight < 2500 grams)	Percentage of live births where the infant weighed less than 2,500 grams (approximately 5 lbs., 8 oz.). The numerator is the number of low birthweight infants born over a 7-year time span, while the denominator is the total number of births in a county during the same time.	National Center for Health Statistics – Natality Files. Data accessed via RWJF & UWPHI County Health Rankings & Roadmaps, June 2024.	2016-2022
Infant Mortality	Number of all infant deaths (within 1 year) per 1,000 live births. Data were from the National Center for Health Statistics - Mortality Files (2015-2021) and are used for the 2024 County Health Rankings.	National Center for Health Statistics – Natality and Mortality Files. Data accessed via RWJF & UWPHI County Health Rankings & Roadmaps, June 2024.	2015-2021

Table A2.14: Mental Health

Measure	Description	Data Source	Most Recent Data Year(s)
Poor Mental Health Days	Average number of self-reported mentally unhealthy days in past 30 days among adults (age-adjusted to the 2000 standard). Data are included as part of the 2024 County Health Rankings.	CDC, Behavioral Risk Factor Surveillance System (BRFSS). Data accessed via the North Carolina Data Portal, June 2024.	2021
Deaths of Despair (Suicide and Drug/Alcohol Poisoning) (per 100,000 population)	Average rate of death due to intentional self-harm (suicide), alcohol-related disease, and drug overdose, also known as "deaths of despair", per 100,000 population. Figures are reported as crude rates. Rates are re-summarized for report areas from county level data, only where data is available. This indicator is relevant because death of despair is an indicator of poor mental health.	CDC – NVSS. Data accessed via the North Carolina Data Portal, June 2024.	2018-2022
Suicide (per 100,000 population)	Five-year average rate of death due to intentional self-harm (suicide) per	CDC – NVSS. Data accessed via the North	2018-2022

Measure	Description	Data Source	Most Recent Data Year(s)
	100,000 population from 2018 to 2022. Figures are reported as crude rates. Rates are re-summarized for report areas from county level data, only where data is available. This indicator is relevant because suicide is an indicator of poor mental health.	Carolina Data Portal, June 2024.	

Table A2.15: Physical Health

Measure	Description	Data Source	Most Recent Data Year(s)
Poor or fair health (percent of adults reporting fair or poor health age-adjusted)	Percentage of adults in a county who consider themselves to be in poor or fair health. This measure is based on responses to the BRFSS question: "In general, would you say that your health is excellent, very good, good, fair, or poor?" The value reported in the County Health Rankings is the percentage of respondents who rated their health "fair" or "poor." Poor or Fair Health is age-adjusted. Poor or Fair Health estimates are created using statistical modeling.	Behavioral Risk Factor Surveillance System. Data accessed via RWJF & UWPHI County Health Rankings & Roadmaps, June 2024.	2021
Asthma Prevalence (Adult)	Percentage of adults ages 18 and older who answer "yes" to both of the following questions: "Have you ever been told by a doctor, nurse, or other health professional that you have asthma?" and the question "Do you still have asthma?"	CDC, BRFSS. Data accessed via the North Carolina Data Portal, June 2024.	2022
Heart Disease (Adult)	Percentage of adults ages 18 and older who report ever having been told by a doctor, nurse, or other health professional that they had angina or coronary heart disease.	CDC, BRFSS. Data accessed via the North Carolina Data Portal, June 2024.	2022
High Blood Pressure (Adult)	Percentage of adults ages 18 and older who report ever having been told by a doctor, nurse, or other health professional that they have high blood pressure (HTN). Women who were told high blood pressure only during pregnancy and those who were told they had borderline hypertension were not included.	CDC, BRFSS. Data accessed via the North Carolina Data Portal, June 2024.	2021
High Cholesterol (Adult)	Percentage of adults ages 18 and older who report having been told by a doctor, nurse, or other health	CDC, BRFSS. Data accessed via the North	2021

Measure	Description	Data Source	Most Recent Data Year(s)
	professional that they had high cholesterol.	Carolina Data Portal, June 2024.	
Diabetes Prevalence (Adult)	Percentage of adults ages 20 and older who have ever been told by a doctor that they have diabetes. This indicator is relevant because diabetes is a prevalent problem in the U.S.; it may indicate an unhealthy lifestyle and puts individuals at risk for further health issues.	CDC, National Center for Chronic Disease Prevention and Health Promotion. Data accessed via the North Carolina Data Portal, June 2024.	2021
Kidney Disease (Adult)	Percentage of adults ages 18 and older who report ever having been told by a doctor, nurse, or other health professional that they have kidney disease.	CDC, BRFSS. Data accessed via the North Carolina Data Portal, June 2024.	2021
Stroke (Adult)	Percentage of adults ages 18 and older who report ever having been told by a doctor, nurse, or other health professional that they have had a stroke.	CDC, BRFSS. Data accessed via the North Carolina Data Portal, June 2024.	2022
Obesity	Percentage of adults ages 20 and older self-report having a Body Mass Index (BMI) greater than 30.0 (obese). Respondents were considered obese if their BMI was 30 or greater. BMI (weight [kg]/height [m]2) was derived from self-report of height and weight. Excess weight may indicate an unhealthy lifestyle and puts individuals at risk for further health issues.	CDC, National Center for Chronic Disease Prevention and Health Promotion. Data accessed via the North Carolina Data Portal, June 2024.	2021
Poor Dental Health – Teeth Loss	Percentage of adults ages 18 and older who report having lost all of their natural teeth because of tooth decay or gum disease.	CDC, BRFSS. Data accessed via the North Carolina Data Portal, June 2024.	2022
Cancer Incidence – All Sites (per 100,000 population)	Age-adjusted incidence rate (cases per 100,000 population per year) of cancer (all sites) adjusted to 2000 U.S. standard population age groups (Under age 1, 1-4, 5-9, ..., 80-84, 85 and older).	State Cancer Profiles. Data accessed via the North Carolina Data Portal, June 2024.	2016-2020
Emergency Room (ER) Visits (per 100,000 Medicare beneficiaries)	Rate of ER visits among Medicare beneficiaries age 65 and older (per 100,000 beneficiaries). This indicator is relevant because ER visits are "high intensity" services that can burden on both health care systems and patients. High rates of ER visits "may	CMS – Geographic Variation Public Use File. Data accessed via the North Carolina Data Portal, June 2024.	2022

Measure	Description	Data Source	Most Recent Data Year(s)
	indicate poor care management, inadequate access to care or poor patient choices, resulting in ER visits that could be prevented".		
Hospitalizations – Heart Disease (per 1,000 Medicare beneficiaries)	Hospitalization rate for coronary heart disease among Medicare beneficiaries ages 65 and older for hospital stays occurring between 2018 and 2020.	CDC – Atlas of Heart Disease and Stroke. Data accessed via the North Carolina Data Portal, June 2024.	2018-2020
Hospitalizations – Stroke (per 1,000 Medicare beneficiaries)	Hospitalization rate for Ischemic stroke among Medicare beneficiaries ages 65 and older for hospital stays occurring between 2018 and 2020.	CDC – Atlas of Heart Disease and Stroke. Data accessed via the North Carolina Data Portal, June 2024.	2018-2020

Table A2.16: Quality of Care

Measure	Description	Data Source	Most Recent Data Year(s)
Seasonal Influenza Vaccine	Percentage of adults ages 18 and older who reported receiving an influenza vaccination in the past 12 months. These data are derived from responses to the 2019 BRFSS.	CDC – FluVaxView. Data accessed via the North Carolina Data Portal, June 2024.	2019
Hospitalizations – Preventable Conditions (per 100,000 Medicare beneficiaries)	Preventable hospitalization rate among Medicare beneficiaries for the latest reporting period. Preventable hospitalizations include hospital admissions for one or more of the following conditions: diabetes with short-term complications, diabetes with long-term complications, uncontrolled diabetes without complications, diabetes with lower-extremity amputation, chronic obstructive pulmonary disease, asthma, hypertension, heart failure, bacterial pneumonia, or urinary tract infection. Rate is presented per 100,000 beneficiaries.	CMS, Mapping Medicare Disparities Tool. Data accessed via the North Carolina Data Portal, June 2024.	2021
Readmissions – All Cause (Medicare Population)	Rate of 30-day hospital readmissions among Medicare beneficiaries ages 65 and older. Hospital readmissions are unplanned visits to an acute care hospital within 30 days after discharge from a hospitalization. Patients may have unplanned readmissions for any reason,	CMS – Geographic Variation Public Use File. Data accessed via the North Carolina Data Portal, June 2024.	2022

Measure	Description	Data Source	Most Recent Data Year(s)
	however readmissions within 30 days are often related to the care received in the hospital, whereas readmissions over a longer time period have more to do with other complicating illnesses, patients' own behavior, or care provided to patients after hospital discharge.		

Table A2.17: Safety

Measure	Description	Data Source	Most Recent Data Year(s)
Incarceration Rate	Percentage of individuals born in each census tract who were incarcerated at the time of the 2010 Census as estimated by Opportunity Atlas data.	Opportunity Insights. Data accessed via the North Carolina Data Portal, June 2024.	2018
Juvenile Arrest Rate (per 1,000 juveniles)	Rate of delinquency cases per 1,000 juveniles. Data are acquired from the 2021 Easy Access to State and County Juvenile Court Case Counts (EZACO) and are used in the 2024 County Health Rankings.	Office of Juvenile Justice and Delinquency Department, Easy Access to State and County Juvenile Court Case Counts (EZACO). Data accessed via the North Carolina Data Portal, June 2024.	2021
Violent Crime (per 100,000 people)	Annual rate of reported violent crimes per 100,000 people during the three-year period of 2015-2017. Violent crime includes homicide, rape, robbery, and aggravated assault.	Federal Bureau of Investigation (FBI), FBI Uniform Crime Reports. Additional analysis by the National Archive of Criminal Justice Data. Data accessed via the North Carolina Data Portal, June 2024.	2015-2017
Mortality – Firearm (per 100,000 population)	Five-year average rate of death due to firearm wounds per 100,000 population, which includes gunshot wounds from powder-charged handguns, shotguns, and rifles. Figures are reported as crude rates for the time period of 2018 to 2022. This indicator is relevant because firearm deaths are preventable, and are a cause of premature death.	CDC – National Vital Statistics System. Data accessed via the North Carolina Data Portal, June 2024.	2018-2022

Measure	Description	Data Source	Most Recent Data Year(s)
Mortality – Poisoning (per 100,000 population)	Five-year average rate of death due to poisoning (including drug overdose) per 100,000 population. Figures are reported as crude rates for the time period of 2018 to 2022. Rates are re-summarized for report areas from county level data, only where data is available. This indicator is relevant because poisoning deaths, especially from drug overdose, are a national public health emergency.	CDC – National Vital Statistics System. Data accessed via the North Carolina Data Portal, June 2024.	2018-2022

Table A2.18 Sexual Health

Measure	Description	Data Source	Most Recent Data Year(s)
Sexually transmitted infections (chlamydia rate per 100,000 population)	Number of newly diagnosed chlamydia cases per 100,000 population	National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention. Data accessed via RWJF & UWPHI County Health Rankings & Roadmaps, June 2024.	2021
HIV Incidence (rate per 100,000 population)	Incidence rate of HIV infection or infection classified as state 3 (AIDS) per 100,000 population. Incidence refers to the number of confirmed diagnoses during a given time period, in this case is January 1st and December 31st of the latest reporting year.	CDC, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention. Data accessed via the North Carolina Data Portal, June 2024.	2022
Teen Births (per 1,000 female population age 15-19)	Seven-year average number of births per 1,000 female population age 15-19. Data were from the National Center for Health Statistics - Natality files (2016-2022) and are used for the 2024 County Health Rankings.	CDC – National Vital Statistics System. Data accessed via the North Carolina Data Portal, June 2024.	2016-2022

Table A2.19: Substance Use Disorders

Measure	Description	Data Source	Most Recent Data Year(s)
Excessive Drinking – Heavy Alcohol Consumption	Percentage of adults that self-report excessive drinking in the last 30 days. Data for this indicator were based on survey responses to the 2021 Behavioral Risk Factor Surveillance System (BRFSS) annual survey and are used for the 2024 County Health	CDC, BRFSS. Data accessed via the North Carolina Data Portal, June 2024.	2021

Measure	Description	Data Source	Most Recent Data Year(s)
	Rankings. Excessive drinking is defined as the percentage of the population who report at least one binge drinking episode involving five or more drinks for men and four or more for women over the past 30 days, or heavy drinking involving more than two drinks per day for men and more than one per day for women, over the same time period. Alcohol use is a behavioral health issue that is also a risk factor for a number of negative health outcomes, including: physical injuries related to motor vehicle accidents, stroke, chronic diseases such as heart disease and cancer, and mental health conditions such as depression and suicide. There are a number of evidence-based interventions that may reduce excessive/binge drinking; examples include raising taxes on alcoholic beverages, restricting access to alcohol by limiting days and hours of retail sales, and screening and counseling for alcohol abuse.		
Mortality - Motor Vehicle Crash – Alcohol-Involved (annual rate per 100,000 population)	Crude rate of persons killed in motor vehicle crashes involving alcohol as an annual rate per 100,000 population. Fatality counts are based on the location of the crash and not the decedent's residence. Motor vehicle crash deaths are preventable and are a leading cause of death among young persons.	U.S. Department of Transportation, National Highway Traffic Safety Administration, Fatality Analysis Reporting System. Data accessed via the North Carolina Data Portal, June 2024.	2018-2022
Opioid Use Disorder (per 100,000 Medicare beneficiaries)	Rate of emergency department utilization for opioid use and opioid use disorder among the Medicare population. Figures are reported as age-adjusted to year 2000 standard. Rates are re-summarized for report areas from county level data, only where data is available. This indicator is relevant because mental health and substance use is an indicator of poor health.	CMS, Mapping Medicare Disparities Tool. Data accessed via the North Carolina Data Portal, June 2024.	2021

Measure	Description	Data Source	Most Recent Data Year(s)
Mortality – Opioid Overdose (per 100,000 population)	Five-year average rate of death due to opioid drug overdose per 100,000 population. Figures are reported as crude rates for the time period of 2018 to 2022. Rates are re-summarized for report areas from county level data, only where data is available. This indicator is relevant because opioid drug overdose is the leading cause of injury deaths in the United States, and they have increased dramatically in recent years.	CDC – NVSS. Data accessed via the North Carolina Data Portal, June 2024.	2018-2022

Table A2.20: Tobacco Use

Measure	Description	Data Source	Most Recent Data Year(s)
Adult smoking	Percentage of the adult population that currently smokes every day or most days and has smoked at least 100 cigarettes in their lifetime. Adult Smoking estimates are created using statistical modeling.	Behavioral Risk Factor Surveillance System. Data accessed via RWJF & UWPHI County Health Rankings & Roadmaps, June 2024.	2021

Table A2.21: Transportation Options and Transit

Measure	Description	Data Source	Most Recent Data Year(s)
Households with No Motor Vehicle	Percentage of households with no motor vehicle based on the latest 5-year American Community Survey estimates.	U.S. Census Bureau, ACS. Data accessed via the North Carolina Data Portal, June 2024.	2018-2022
Commuter Travel Patterns - Public Transportation	Percentage of population using public transportation as their primary means of commuting to work. Public transportation includes buses or trolley buses, streetcars or trolley cars, subway or elevated rails, and ferryboats.	U.S. Census Bureau, ACS. Data accessed via the North Carolina Data Portal, June 2024.	2018-2022
Community Design – Distance to Public Transit	Proportion of the population living within 0.5 miles of a GTFS (General Transit Feed Specification) or fixed-guideway transit stop. Transit data is available from over 200 transit agencies across the United States, as well as all existing fixed-guideway	EPA – Smart Location Database. Data accessed via the North Carolina Data Portal, June 2024.	2021

Measure	Description	Data Source	Most Recent Data Year(s)
	transit service in the U.S. This includes rail, streetcars, ferries, trolleys, and some bus rapid transit systems.		

APPENDIX 3 | SECONDARY DATA COMPARISONS

Description of Focus Area Comparisons

When viewing the secondary data summary tables, please note that the following color shadings have been included to identify how Bertie County compares to North Carolina and the national benchmark. If both statewide North Carolina and national data was available, North Carolina data was preferentially used as the target/benchmark value.

Secondary Data Summary Table Color Comparisons

Color Shading	Priority Level	Bertie County Description
	Low	Represents measures in which Bertie County scores are **more than five percent better** than the most applicable target/benchmark and for which a low priority level was assigned.
	Medium	Represents measures in which Bertie County scores are comparable to the most applicable target/benchmark scoring **within or equal to five percent**, and for which a medium priority level was assigned.
	High	Represents measures in which Bertie County scores are **more than five percent worse** than the most applicable target/benchmark and for which a high priority level was assigned.

Note: Please see the methodology section of this report for more information on assigning need levels to the secondary data.

Please note that to categorize each metric in this manner and identify the priority level, the Bertie County value was compared to the benchmark by calculating the percentage difference between the values, relative to the benchmark value:

(Bertie Co Value – Benchmark Value)/(Benchmark) x 100 = % Difference Used to Identify Priority Level

For example, for the % Limited Access to Healthy Foods metric, the following calculation was completed:

(24.5-7.5)/(7.5) x 100% = 226.7% = Displayed as **High Priority Level**, Shaded in Red

This metric indicates that the percentage of the population with limited access to healthy foods in Bertie County is 226.7 percent worse (or, in this case, higher) than the percentage of the population with limited access to healthy foods in the state of North Carolina.

Detailed Focus Area Benchmarks

Table A3.1: Access to Care

Measure	National Benchmark	North Carolina Benchmark	Bertie County Data	Most Recent Data Year	Bertie County Need
Primary Care Providers Rate	112.4	101.1	33.5	2024	High
Mental Health Providers Rate	178.7	155.7	27.9	2024	High
Addiction/Substance Abuse Providers Rate	27.9	25.0	5.6	2024	High
Buprenorphine Providers Rate	15.5	15.2	5.3	2023	High
Dental Health Providers Rate	39.1	31.5	22.3	2024	High
% Living in Health Professional Shortage Areas (HPSAs) – Dental Care	17.8%	34.0%	56.2%	2018-2022	High
Federally Qualified Health Centers (FQHCs)	3.5	4.1	16.7	2023	Low
% Receiving Medicaid	22.3%	20.2%	27.3%	2018-2022	High
% Uninsured	10.2%	12.5%	11.7%	2022	Low

Table A3.2: Built Environment

Measure	National Benchmark	North Carolina Benchmark	Bertie County Data	Most Recent Data Year	Bertie County Need
Broadband Access (Access to DL Speeds >= 25MBPS and UL Speeds >= 3 MBPS)	93.8%	93.6%	72.2%	2023	High
Broadband Access (Access to DL Speeds >= 100MBPS and UL Speeds >= 20 MBPS)	91.2%	90.4%	68.7%	2023	High
Households with No Computer	6.1%	6.9%	17.9%	2018-2022	High

Measure	National Benchmark	North Carolina Benchmark	Bertie County Data	Most Recent Data Year	Bertie County Need
Households with No or Slow Internet	11.7%	13.0%	36.3%	2018-2022	High
Liquor Stores	13.3	6.2	Suppressed	2022	N/A
Adverse Childhood Experiences (ACEs)	N/A	N/A	18.5%	2022	N/A

Table A3.3: Diet and Exercise

Measure	National Benchmark	North Carolina Benchmark	Bertie County Data	Most Recent Data Year	Bertie County Need
% Physically Inactive	N/A	21.6%	31.5%	2021	High
Walkability Index Score	10	7	4	2021	High
% with Access to Exercise Opportunities	84.1%	73.0%	44.0%	2023	High
Recreation and Fitness Facility Access	14.8	13.1	Suppressed	2022	N/A
Sugar-Sweetened Beverage (SSB) Consumption	N/A	N/A	36.8%	2022	N/A

Table A3.4: Education

Measure	National Benchmark	North Carolina Benchmark	Bertie County Data	Most Recent Data Year	Bertie County Need
% Limited English Proficiency	8.2%	4.6%	0.4%	2018-2022	Low
High School Graduation Rate	81.1%	87.6%	81.9%	2020-2021	High
% with No High School Diploma	10.9%	10.6%	19.5%	2018-2022	High
Student Math Proficiency	63.9%	65.8%	92.0%	2020-2021	High
Student Reading Proficiency	60.1%	59.5%	71.9%	2020-2021	High
School Funding Adequacy	N/A	-$4,742	-$20,171	2021	High
School Funding Adequacy –	N/A	$10,655	$14,072	2021	Low

Measure	National Benchmark	North Carolina Benchmark	Bertie County Data	Most Recent Data Year	Bertie County Need
Spending per pupil					

Table A3.5: Employment

Measure	National Benchmark	North Carolina Benchmark	Bertie County Data	Most Recent Data Year	Bertie County Need
Unemployment Rate	3.9%	3.7%	4.3%	2024	High
Average Annual Unemployment Rate, 2013-2023	3.6%	3.5%	4.4%	2024	High

Table A3.6: Environmental Quality

Measure	National Benchmark	North Carolina Benchmark	Bertie County Data	Most Recent Data Year	Bertie County Need
Flood Vulnerability	6.5%	4.9%	5.1%	2011	High
Drinking Water Safety	16,107	194	0	2023	Low

Table A3.7: Family, Community and Social Support

Measure	National Benchmark	North Carolina Benchmark	Bertie County Data	Most Recent Data Year	Bertie County Need
Childcare Cost Burden	28.8%	27.0%	37.0%	2023	High
% Young People Not in School or Working	6.9%	7.5%	7.8%	2018-2022	Medium

Table A3.8: Food Security

Measure	National Benchmark	North Carolina Benchmark	Bertie County Data	Most Recent Data Year	Bertie County Need
% Food Insecure	10.3%	11.4%	14.1%	2021	High
% Food Insecure Children	13.3%	15.3%	28.3%	2021	High
% Low-Income and with Low Food Access	19.4%	21.3%	50.6%	2019	High
% Limited Access to Healthy Foods	N/A	7.5%	24.5%	2019	High
Fast Food Restaurants	96.2	77.4	44.6	2022	Low
Grocery Stores	23.4	18.7	Suppressed	2022	N/A

Table A3.9: Housing and Homelessness

Measure	National Benchmark	North Carolina Benchmark	Bertie County Data	Most Recent Data Year	Bertie County Need
Renter Costs – Average Gross Rent	$1,366	$1,090	$644	2018-2022	Low
% Severe Housing Cost Burden	14.1%	12.2%	18.2%	2018-2022	High
Assisted Housing Units	413.9	319.2	335.9	2017-2021	High
% Severe Substandard Housing	18.5%	16.1%	19.8%	2011-2015	High
% Homeless Children	2.8%	1.9%	0.3%	2019-2020	Low

Table A3.10: Income

Measure	National Benchmark	North Carolina Benchmark	Bertie County Data	Most Recent Data Year	Bertie County Need
Median Family Income	$92,646	$82,890	$59,840	2018-2022	High
Gender Pay Gap	81.0%	83.0%	104%	2018-2022	Low
% Living Below 100% FPL	12.5%	13.3%	21.4%	2022	High
% Living Below 200% FPL	28.8%	31.6%	47.5%	2018-2022	High
% Children Living Below 200% FPL	37.2%	41.1%	55.3%	2018-2022	High
% Receiving SNAP	12.4%	15.7%	25.2%	2021	High
Children Eligible for Free/Reduced Price Lunch	51.7%	50.8%	98.8%	2022-2023	High

Table A3.11: Length of Life

Measure	National Benchmark	North Carolina Benchmark	Bertie County Data	Most Recent Data Year	Bertie County Need
Years of Potential Life Lost Rate	N/A	8,853	12,847	2019-2021	High
Premature Age-Adjusted Mortality	N/A	420	561	2019-2021	High
Life Expectancy	77.6	76.6	73.5	2019-2021	Medium

Table A3.12: Maternal and Infant Health

Measure	National Benchmark	North Carolina Benchmark	Bertie County Data	Most Recent Data Year	Bertie County Need
Births with Late or No Prenatal Care	6.1%	6.9%	Suppressed	2019	N/A
Low Birthweight	N/A	9.4%	13.2%	2016-2022	High
Infant Mortality Rate	5.7	7.0	N/A	2015-2021	N/A

Table A3.13: Mental Health

Measure	National Benchmark	North Carolina Benchmark	Bertie County Data	Most Recent Data Year	Bertie County Need
Poor Mental Health Days	4.9	4.6	5.2	2021	High
Deaths of Despair Rate	55.9	58.7	58.0	2018-2022	Medium
Suicide Death Rate	13.8	13.4	N/A	2018-2022	N/A

Table A3.14: Physical Health

Measure	National Benchmark	North Carolina Benchmark	Bertie County Data	Most Recent Data Year	Bertie County Need
% Poor or Fair Health	N/A	14.4%	23.2%	2021	High
% Adults with Asthma	9.7%	9.8%	11.2%	2022	High
% Adults with Heart Disease	5.2%	5.5%	6.9%	2022	High
% Adults with High Blood Pressure	29.6%	32.1%	42.1%	2021	High
% Adults with High Cholesterol	31.0%	31.4%	31.8%	2021	Medium
Diabetes Prevalence	8.9%	9.0%	9.9%	2021	High
% Adults with Kidney Disease	2.7%	2.9%	3.8%	2021	High
% Stroke	2.8%	3.1%	4.5%	2022	High
Obesity	30.1%	29.7%	24.0%	2021	Low
% Teeth Loss	13.9%	12.0%	20.4%	2022	High
Cancer Incidence Rate	442.3	464.4	445.6	2016-2020	Medium
Emergency Room Visits	535	563	921	2022	High

Measure	National Benchmark	North Carolina Benchmark	Bertie County Data	Most Recent Data Year	Bertie County Need
Heart Disease Hospitalization Rate	10.4	11.7	13.1	2018-2020	High
Stroke Hospitalization Rate	8.0	9.5	10.8	2018-2020	High

Table A3.15: Quality of Care

Measure	National Benchmark	North Carolina Benchmark	Bertie County Data	Most Recent Data Year	Bertie County Need
Children/adults vaccinated annually against seasonal influenza	44.5%	45.6%	37.2%	2021	High
Preventable Hospital Rate	2,752	2,957	3,982	2021	High
Readmissions Rate	18.1%	17.6%	20.3%	2022	High

Table A3.16: Safety

Measure	National Benchmark	North Carolina Benchmark	Bertie County Data	Most Recent Data Year	Bertie County Need
Incarceration Rate	1.3%	1.5%	2.1%	2018	High
Juvenile Arrest Rate	13.9	16.0	N/A	2021	N/A
Violent Crime	416.0	365.7	214.8	2015-2017	Low
Firearm Death Rate	13.4	15.5	N/A	2018-2022	N/A
Poisoning Death Rate	28.5	31.5	29.5	2018-2022	Low

Table A3.17: Sexual Health

Measure	National Benchmark	North Carolina Benchmark	Bertie County Data	Most Recent Data Year	Bertie County Need
Chlamydia Rate	495.0	603.3	135.0	2021	Low
HIV Incidence Rate	12.7	15.5	32.3	2022	High
Teen Births	16.6	18.2	32.0	2016-2022	High

Table A3.18: Substance Use Disorders

Measure	National Benchmark	North Carolina Benchmark	Bertie County Data	Most Recent Data Year	Bertie County Need
% Excessive Drinking	18.1%	18.2%	13.1%	2021	Low
% Driving Deaths with Alcohol	2.3	2.9	0.0	2018-2022	Low
Opioid Use Disorder Rate	41.0	43.0	33.0	2021	Low
Opioid Drug Overdose Deaths	N/A	25.1	21.9	2018-2022	High

Table A3.19: Tobacco Use

Measure	National Benchmark	North Carolina Benchmark	Bertie County Data	Most Recent Data Year	Bertie County Need
% Smokers	14.5%	15.0%	23.1%	2021	High

Table A3.20: Transportation Options and Transit

Measure	National Benchmark	North Carolina Benchmark	Bertie County Data	Most Recent Data Year	Bertie County Need
% Households with No Motor Vehicle	8.3%	5.4%	11.3%	2018-2022	High
% Public Transit	3.8%	0.8%	1.0%	2018-2022	Low
% Living Near Public Transit	34.8%	10.9%	0.0%	2021	High

APPENDIX 4 | PRIMARY DATA METHODOLOGY AND SOURCES

Primary data were collected through focus groups, which were conducted in-person, and a web-based Community Member survey.

Methodologies

The methodologies varied based on the type of primary data being analyzed. The following section describes the various methodologies used to analyze the primary data, along with key findings.

Focus Groups

The following five focus groups were conducted in person between May 13th and June 23rd, 2024. These groups included representation from key leaders, non-profit partners, patients, and community members.

- Bertie Diabetes Support Group
- Tobacco Camp (Migrant Farmworkers)
- Bertie Senior Center
- ECU Health and Wellness Center
- Greater Wynn's Grove Baptist Church

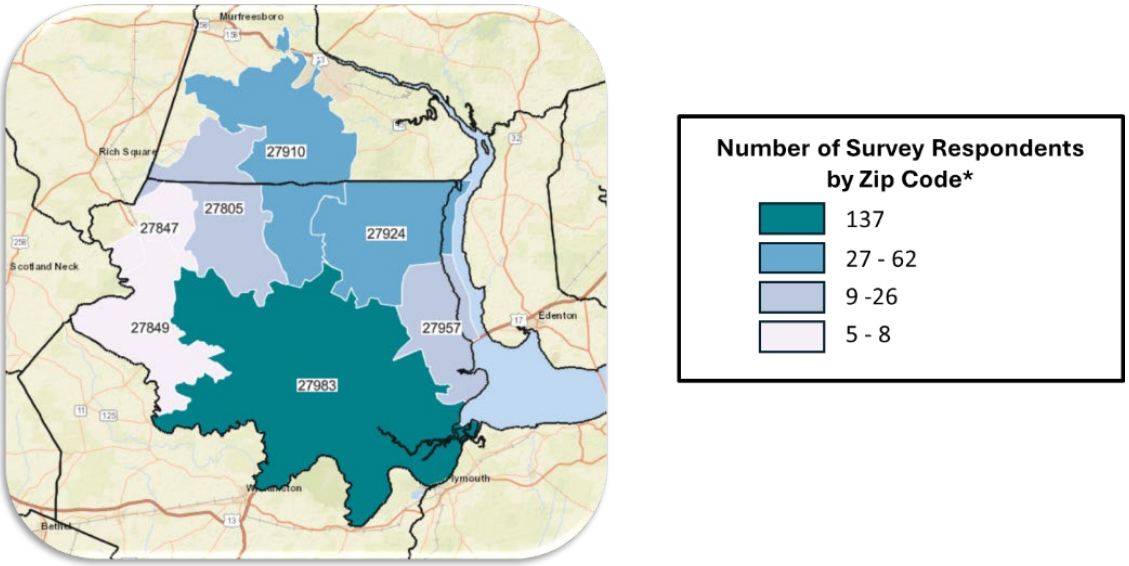
Input was gathered on the following topics:

- Community health concerns
- Social and environmental concerns that may impact health
- Access to care
- Other topics of concern for Bertie County

Community Member Web Survey

A total of 313 surveys were completed by individuals living, working or receiving healthcare in the Bertie County community. The survey was available in both English and Spanish, however no surveys were completed in Spanish. Consistent with one of the survey process goals, survey community member respondents were representative of a broad geographic area encompassing areas throughout the county. The map below provides additional information on survey respondents' ZIP code of residence.

Figure A4.1: Respondent Zip Code of Residence



In general, survey questions focused on:

- Community health problems and concerns
- Community social/environmental problems and concerns
- Specific topics of interest to Bertie County:
    - Access to care
    - Diet and Exercise
    - Food Access and Security
    - Housing and homelessness
    - Mental health
    - Physical health
    - Substance use disorders
    - Transportation and transit

The key findings from the Community Survey are detailed below:

- Diabetes/high blood sugar, heart disease/high blood pressure, and overweight/obesity were identified as the top 3 health problems affecting the community. About one-third of respondents also identified alcohol/drug addiction and cancer as top health problems.
- Cost, insurance, and transportation were the top three barriers to receiving health care identified by the community.
- Lack of job opportunities, poverty, and availability/access to doctor's offices were identified as the top three most important social or environmental problems that affect the health of the community. Almost one quarter of respondents also identified transportation as a significant problem.

Information describing the respondents to the Community Member Survey are displayed below:

Figure A4.2: Respondents by Age Group

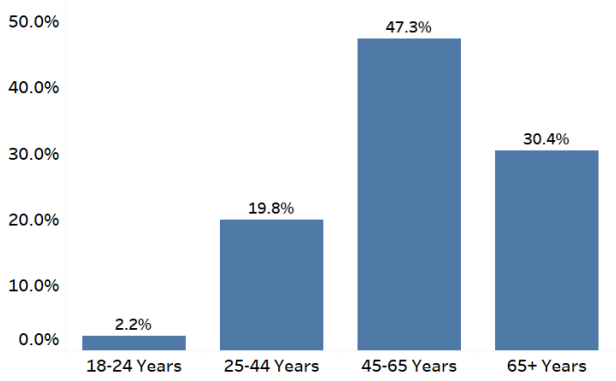


Figure A4.3: Respondents by Gender

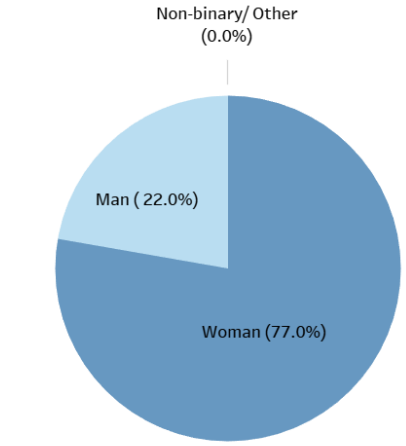


Figure A4.4: Respondents by Ethnicity

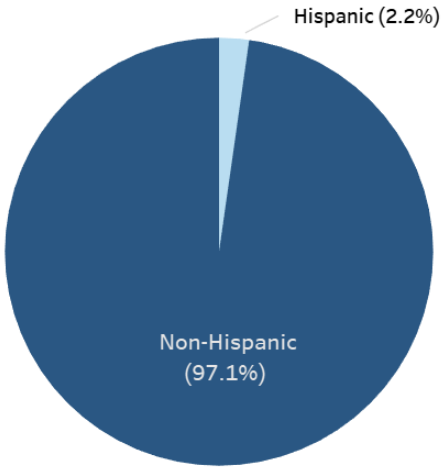
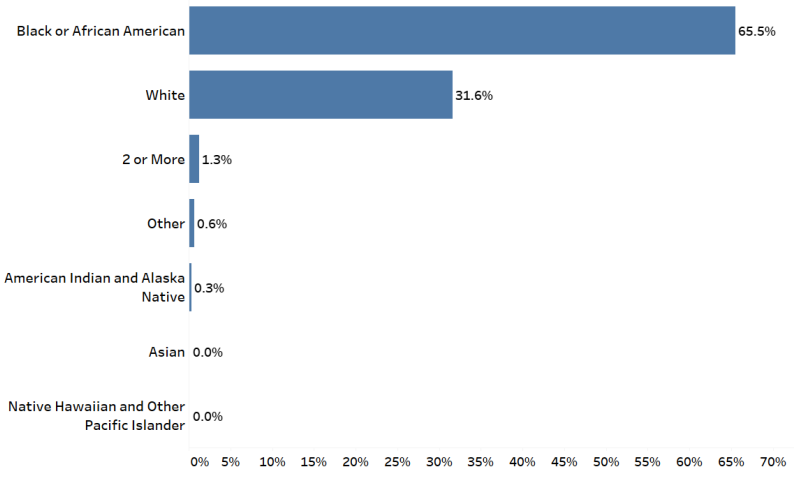


Figure A4.5: Respondents by Race



The questions administered via the Community Member Survey instrument are below. The survey instrument was also available in Spanish, and a copy of the Spanish language survey instrument is available on request.

Dear Community Member,

We invite you to participate in your county's Community Health Needs Survey.

Your responses to this optional survey are anonymous and will inform how hospitals and agencies work to improve health in your county. This is not a research survey. It will take less than 10 minutes to complete.

Instructions: You must be 18 years or older to complete this survey. Please answer all questions and return the survey as indicated.

For questions about this survey, contact Ascendient Healthcare Advisors: emilymccallum@ascendient.com

Thank you for your time and participation!

Topic: Demographics

1. What is the zip code where you currently live? _____

2. What is your age group?

   □ 18-24
   □ 25-44
   □ 45-65
   □ 65+
   □ Don't know/ Not sure
   □ Prefer not to say

3. Which of the following best describes your gender? *Select all that apply:*

   □ Man
   □ Woman
   □ Non-binary, genderqueer, or gender nonconforming
   □ Additional gender category: _____
   □ Prefer not to say

4. How would you describe your race? *Select all that apply:*

   □ American Indian and Alaska Native
   □ Asian
   □ Black or African American
   □ Native Hawaiian and Other Pacific Islander
   □ White
   □ Other race: _____
   □ Don't know/Not sure
   □ Prefer not to say

5. Are you of Hispanic or Latino origin, or is your family originally from a Spanish speaking country?[46]

   □ Yes
   □ No
   □ Don't know/Not sure
   □ Prefer not to say

6. What is the highest grade or year of school you completed?

   □ Less than 9th grade
   □ 9-12th grade, no diploma
   □ High school graduate (or GED/equivalent)
   □ Some college (no degree)
   □ Associate's degree or vocational training
   □ Bachelor's degree
   □ Graduate or professional degree
   □ Don't know/Not sure
   □ Prefer not to say

7. Which language is most often spoken in your home? *Select one:*

   □ English
   □ Spanish
   □ Other, please specify: _____
   □ Don't know/Not sure
   □ Prefer not to say

[46] The U.S. Census Bureau defines "Hispanic or Latino" as "a person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin regardless of race."

8. For employment, are you currently...*Select all that apply:*

□ Employed full-time (40+ hours per week)
□ Employed part-time (under 40 hours per week)
□ Retired
□ Student
□ Armed forces/military
□ Self-employed
□ Homemaker
□ Temporarily unable to work due to illness or injury
□ Unemployed for less than one year
□ Unemployed for more than one year
□ Permanently unable to work
□ Prefer not to answer

9. Which category best describes your yearly household income before taxes? Do not give the dollar amount, just give the category. Include all income received from employment, social security, support from family, welfare, Aid to Families with Dependent Children (AFDC), bank interest, retirement accounts, rental property, investments, etc.

□ Less than $15,000
□ $15,000 - $24,999
□ $25,000 - $34,999
□ $35,000 - $49,999
□ $50,000 - $74,999
□ $75,000 - $99,999
□ $100,000 - $149,999
□ $150,000 - $199,999
□ $200,000 or more
□ Prefer not to say

Topic: Community Health Opinion Questions

10. What are the **three** most important health problems that affect the health of your community? *Please select up to three:*

□ Alcohol/drug addiction
□ Alzheimer's disease and other dementias
□ Mental health (depression/anxiety)
□ Cancer
□ Diabetes/high blood sugar
□ Heart disease/high blood pressure
□ HIV/AIDS
□ Infant death
□ Lung disease/asthma/COPD
□ Stroke
□ Smoking/tobacco use
□ Overweight/obesity
□ Other (please specify): _____
□ Prefer not to answer

11. What are the **three** most important social or environmental problems that affect the health of your community? *Please select up to three:*

□ Availability/access to doctor's office
□ Availability/access to insurance
□ Child abuse/neglect
□ Age Discrimination
□ Ability Discrimination
□ Gender Discrimination
□ Racial Discrimination
□ Domestic violence
□ Housing/homelessness
□ Lack of affordable childcare
□ Lack of job opportunities
□ Limited access to healthy foods
□ Limited places to exercise
□ Neighborhood safety/violence
□ Limited opportunities for social connection
□ Poverty
□ Limited/poor educational opportunities
□ Transportation problems
□ Environmental injustice
□ Other (please specify): _____
□ Prefer not to answer

12. What are the **three** most important reasons people in your community do not get health care? *Please select up to three:*

□ Cost – too expensive/can't pay
□ Wait is too long
□ No health insurance
□ No doctor nearby
□ Lack of transportation
□ Insurance not accepted
□ Language barriers
□ Cultural/religious beliefs
□ Other (please specify): _____
□ Prefer not to answer

Topic: Access to Care

13. DURING THE PAST 12 MONTHS, were you told by a health care provider or doctor's office that they did not accept your health care coverage?

□ Yes
□ No
□ Don't know
□ Prefer not to answer

14. Where do you USUALLY go when you are sick or need advice about your health? *Select all that apply:*

□ Doctor's office, clinic or health center
□ Urgent care or minute clinic
□ Hospital emergency room
□ Some other place [please specify]: _____
□ Don't go to one place most often
□ Don't know
□ Prefer not to answer

15. There are many reasons people delay getting medical care. Have you delayed getting care for any of the following reasons in the PAST 12 MONTHS? *Select all that apply:*

□ Didn't have transportation
□ You live in a rural area where distance to the health care provider is too far
□ You were nervous about seeing a health care provider
□ Couldn't get time off work
□ Couldn't get childcare
□ You provide care to an adult and could not leave him/her
□ Couldn't afford the copay
□ Your deductible was too high/could not afford the deductible
□ You had to pay out of pocket for some or all of the visit/procedure
□ I did not delay care for any reason
□ Other *(please specify)*: _____
□ Prefer not to answer

16. DURING THE PAST 12 MONTHS, was there any time when you needed any of the following, but didn't get it because you couldn't afford it? *Select all that apply:*

□ Prescription medicines
□ Mental health care or counseling
□ Emergency care
□ Dental care (including checkups)
□ Eyeglasses
□ To see a regular doctor or general health provider (in primary care, general practice, internal medicine, family medicine)
□ To see a specialist
□ Follow-up care
□ None of the above
□ Prefer not to answer

17. If you get sick or have an accident, how worried are you that you will be able to pay your medical bills?

□ Very worried
□ Somewhat worried
□ Not at all worried
□ Don't know
□ Prefer not to answer

18. How much do you agree or disagree with the following statements about telehealth? Telehealth means connecting virtually with a medical provider using a smartphone, tablet or computer. 1 = Strongly disagree; 2 = somewhat disagree; 3 = neither agree nor disagree; 4 = somewhat agree; 5 = strongly agree

	1	2	3	4	5	Don't know	Prefer not to say
a. I have access to the resources I need to access telehealth (internet, smartphone, tablet, computer, etc.)	□	□	□	□	□	□	□
b. I have used telehealth to access care from my doctor or other provider in the past	□	□	□	□	□	□	□
c. I am open to using telehealth to access medical care in the future	□	□	□	□	□	□	□
d. I am comfortable using a phone, tablet or computer to communicate with my doctor or other provider	□	□	□	□	□	□	□
e. I am comfortable using an online patient portal (i.e. MyChart, My CarolinaEast Care, myOMH, etc.) to communicate with my doctor or other provider	□	□	□	□	□	□	□

Topic: Diet & Exercise

19. Think about the food you ate during the past week. On average, how many servings of fruit did you eat, not including juices? (For example, one serving equals a medium apple, a small banana, or 7 strawberries.)

□ Number of servings: _____

20. On average, how many servings of vegetables did you eat, not including potatoes? (For example, one serving equals 6 baby carrots, small bell pepper, or half of a large squash or zucchini.)

    □ Number of servings: _____

21. About how many cans, bottles, or glasses of sugar-sweetened beverages, such as regular sodas, sugar sweetened tea, or energy drinks, do you drink each day?

    □ Number of drinks: _____

22. During the past month, approximately how much time (in hours) per week were you physically active outside of your regular job?

    □ Number of hours: _____

23. When you are active, where do you engage in exercise or physical activities? *Select all that apply:*

    □ Beach
    □ Home
    □ Malls
    □ Neighborhood
    □ Private gym/pool
    □ Public recreation center
    □ Outdoor parks or trails
    □ Work
    □ Other (please specify): _____
    □ I don't exercise
    □ Don't know
    □ Prefer not to answer

Topic: Housing and Homelessness

24. In the past 12 months, were there times when you:

	Yes	No	Don't Know	Prefer not to say
a. Were worried about having enough money to pay your rent or mortgage?	□	□	□	□
b. Did not have electricity, water, or heating in your home?	□	□	□	□

25. In the PAST THREE YEARS, were there times when you:

	Yes	No	Don't Know	Prefer not to say
a. Had to live with a friend or relative because of a housing emergency, even if this was only temporary?	□	□	□	□
b. Were evicted or displaced from your home?	□	□	□	□
c. Were living on the street, in a car, or in a temporary shelter?	□	□	□	□

26. Think about the place where you live. Do you have problems with any of the following? *Select all that apply:*

□ Bug infestation
□ Mold
□ Lead paint or pipes
□ Inadequate heat
□ Inadequate cooling (air conditioning)
□ Holes in the floor
□ Oven or stove not working
□ No or not working smoke detector
□ Water leaks
□ None of the above
□ Prefer not to say

Topic: Mental Health

27. Now thinking about your MENTAL health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health NOT good?

□ Number of days: _____

28. Was there a time in the past 12 months when you needed mental health care or counseling, but did not get it at that time?

□ Yes
□ No
□ Don't know
□ Prefer not to say

29. If you answered 'Yes' to the previous question, what was the MAIN reason you did not get mental health care or counseling?

□ Cost/No insurance coverage
□ Distance
□ Don't know where to go
□ Concerns about confidentiality
□ Inconvenient office hours
□ Lack of childcare
□ Lack of providers
□ Lack of transportation
□ Previous negative experiences/Distrust of mental health providers
□ Stigma
□ Too busy to go to an appointment
□ Too long of wait for an appointment
□ Trouble getting an appointment
□ Other *(please specify)*: _____
□ None of the above
□ Don't know/Not sure
□ Prefer not to say

30. Are you currently taking medication or receiving treatment, therapy, or counseling from a health professional for any type of MENTAL or EMOTIONAL HEALTH NEED?

□ Yes
□ No
□ Prefer not to say

Topic: Physical Health

31. Considering your physical health overall, would you describe your health as…

□ Excellent
□ Very Good
□ Good
□ Fair
□ Poor
□ Don't know/Not sure
□ Prefer not to say

32. Within the past year (anytime less than one year ago), have you:

	Yes	No	Don't Know	Prefer not to say
a. Had a routine/annual physical or check-up?	□	□	□	□
b. Been to the dentist/dental hygienist?	□	□	□	□

33. Have you ever been told by a doctor, nurse, or other health professional that you have any of the following health conditions? *Select all that apply:*

□ Arthritis
□ Asthma
□ Cancer
□ Chronic Obstructive Pulmonary Disease (COPD)
□ Dementia/Short-term memory loss
□ Depression or anxiety
□ Diabetes (not during pregnancy)
□ Heart disease, stroke, or other cardiovascular disease
□ High blood pressure (hypertension)
□ High cholesterol
□ Immunocompromised condition not otherwise listed
□ Kidney disease
□ Liver disease
□ Long COVID
□ Lung disease
□ Osteoporosis
□ Physical disabilities
□ Mental illness not otherwise listed (including bipolar disorder, schizophrenia, borderline personality disorder, dissociative identity disorder)
□ Sexually transmitted diseases (including chlamydia, syphilis, gonorrhea and HIV)
□ Stroke
□ Vision and sight problems
□ Other *(please specify)*:
_____
□ None of the above
□ Don't know/Not sure
□ Prefer not to say

34. What do you need to be able to manage your current health conditions (for example, heart conditions, high blood pressure, stroke, diabetes, asthma, cancer, COPD, congestive heart failure, arthritis, HIV, depression, anxiety, other mental health condition, etc.) to stay healthy? *Please select all that apply:*

□ I don't have a current health condition to manage
□ Health insurance to cover the care I need
□ Assistance finding a doctor
□ Assistance making and keeping appointments with my doctor(s)
□ Assistance understanding all the directions from my doctor(s)
□ Information to understand how to take my medication(s)
□ Assistance paying for my prescription(s)/medication(s) or medical equipment
□ Health care in my home
□ Coordination of my overall care among multiple health care providers
□ Access to healthy foods
□ Access to places to exercise safely
□ Transportation assistance
□ Financial assistance for co-pays, deductibles
□ Home modification assistance (for example, installing a wheelchair ramp or a handicapped-accessible shower)
□ Other *(please specify)*: _____
□ None
□ Don't know
□ Prefer not to say

Topic: Substance Use Disorders

35. Considering all types of alcoholic beverages, how many times during the past 30 days did you have 4 (females)/ 5 (males) or more drinks on an occasion?

□ Number of drinks: _____

36. How often do you consume any kind of alcohol product, including beer, wine or hard liquor?

□ Every Day
□ Some Days
□ Not at all
□ Don't know/not sure
□ Prefer not to say

37. In the past year, have you or a member of your household intentionally misused any form of prescription drugs (e.g. used without a prescription, used more than prescribed, used more often than prescribed, or used for any reason other than a doctor's instructions)?

□ Yes
□ No
□ Don't know/not sure
□ Prefer not to say

38. To what degree has your life been negatively affected by YOUR OWN or SOMEONE ELSE's substance abuse issues, including alcohol, prescription, and other drugs? Would you say:

□ A Great Deal
□ Somewhat
□ A Little
□ Not at All
□ Don't know/Not sure
□ Prefer not to say

Topic: Transportation and Transit

39. In a typical week, what kinds of transportation do you use the most? *Select all that apply:*

□ Car
□ Bus
□ Walk
□ Taxi, Uber, or Lyft
□ Ride with someone
□ Bike
□ Motorcycle
□ Paying for rides from family or friends
□ Other, please specify: _____
□ Prefer not to say

40. In the past 12 months has lack of transportation kept you from medical appointments, meetings, work, or getting things for daily living? *Select all that apply:*

□ Yes, it has kept me from medical appointments or getting medications
□ Yes, it has kept me from non-medical meetings, appointments, work, or getting things that I need
□ No
□ Prefer not to say

41. Do you put off or neglect going to the doctor because of distance or transportation?

□ Yes
□ No
□ Don’t know/not sure
□ Prefer not to say

APPENDIX 5 | DETAILED PRIMARY DATA FINDINGS

Focus Groups

Key findings from the focus groups are summarized below.

Focus Group General Findings

All five focus groups conducted in Bertie County identified several common health concerns and barriers to care. First, they identified food access and security, noting that food prices are too high, people have limited time to cook, and there are food deserts throughout the county. The second common theme described healthcare access and quality as barriers to receiving care. There are long wait times, a lack of available providers, high care costs, insurance coverage limitations, and limited local options for dental and behavioral healthcare. Lastly, the focus groups identified transportation and transit as a challenge, specifically the lack of options for those without a vehicle and who cannot afford the high cost of cabs.

Focus Group 1 Unique Insights: East Carolina University (ECU) Health & Wellness Center

Twelve community members participated in the focus group conducted at ECU Health & Wellness. Most (11) identified as women and half identified as white with the other half identifying as Black or African American. One participant identified as Hispanic. All participants identified that they were over the age of 40. This group identified several key health concerns and barriers to care. First, they identified a lack of education, particularly around how to live healthy lives. The group also identified health equity as a concern, specifically regarding racial disparities in the community. Housing and homelessness was also an important topic for this group, specifically related to the lack of affordable housing and homeless shelters in the community. Additionally, physical health issues such as diabetes, high blood pressure, cancer, heart disease, and ALS were top concerns. Lastly, there is a perception of high usage of drugs and alcohol in the community.

Participants had several suggestions for how to address these health concerns and barriers to care in their community. First, they suggested local health leaders should get out into the community more and listen to the specific needs of residents so that they can take that information back to the legislature to address. They also suggested writing grants for youth programs so that young people have safe spaces to be outside of school. Lastly, the participants stated that workshops, mobile services, and better transit would help provide community members with opportunities to receive health information and to address the barrier of lack of transportation.

Focus Group 2 Unique Insights: Migrant Farmworkers (Tobacco Camp)

Seven migrant farmworkers participated in a focus group to discuss health and social/environmental challenges specific to their community. While the group identified having work as a positive aspect of life in Bertie County, they all agreed that working long hours at jobs that are dangerous is detrimental to overall health. This is due to lack of time to cook healthy food and the likelihood of physical health problems such as diabetes, high blood pressure, stress, headaches, and chronic pain. Participants also identified environmental quality (specifically the presence of pollution and trash) as an important issue impacting the quality of life in the county. When asked if they can find healthcare in a reasonable time and if their experiences with providers are positive, the majority of the group stated they are able to get medical care when needed and they have largely positive experiences.

When asked what they would like local health leaders in Bertie County to do to improve well-being, most participants stated that having more mobile health units out in the community would be beneficial. Additionally, they stated a need to spread the word about the agricultural health team and its benefits. Lastly, the group stated donating to the migrant health center would improve health and quality of life.

Focus Group 3 Unique Insights: Bertie Senior Center

At the Bertie Senior Center focus group, the group aligned on employment and income being a serious issue in their county. More specifically, they stated it is difficult to find work outside of the hospital, factories, or the school system. Additionally, the group had concerns around the prevalence of diabetes, high blood pressure, cancer, and lung disease.

Suggestions to local health leaders include getting churches more involved, setting up a local resource channel on TV, and involving local librarians to reach community members where they are. Additionally, the group stated the importance of providing education, keeping people informed, and bringing community members together to build trust in the community.

Focus Group 4 Unique Insights: Diabetes Support Group

The Bertie County Diabetes Support Group focus group identified three main health and social issues. The first was employment and income, stating that there is a lack of good jobs in the community and a need for an expansion of industry in the county. Second, the group identified lack of affordable, quality housing. Last, the group identified several physical health issues such as diabetes, heart disease, multiple sclerosis, and cancer as prevalent in the county.

To address these concerns, the participants suggested broadening access to programs through the health department, tailoring programs to working families, and better advertising of programs and available resources. They also noted the importance of coming out into the community to hold seminars or events, and while it was suggested that health professionals host these events, the group acknowledged that doctors cannot do this work alone and need more help.

Focus Group 5 Unique Insights: Greater Wynn's Grove Baptist Church

Community members who participated in the focus group held at the Greater Wynn's Grove Baptist Church had several insights into the health and social/environmental issues impacting well-being in Bertie County. One unique issue this group discussed was the built environment in the county, specifically the lack of accessible high-speed internet and a lack of safe recreational opportunities for young people. Additionally, this group noted that education was an important social issue, because it is difficult to recruit and retain good educators. The group also noted that many young people leave the county for college and do not return. Another social challenge in the county is a lack of or loss of job opportunities and the high cost of childcare. Participants also noted there are no local options for behavioral health treatment making managing mental health issues a major concern. Similar to other local focus groups, this group also noted the lack of affordable housing and physical health issues such as obesity, high blood pressure, diabetes, high cholesterol, and kidney disease.

Some of the solutions this group identified included making services and goods more affordable, particularly for the elderly, bringing more health providers to underserved parts of the county, and finding ways to build a sense of community. Most focus groups agreed that going out into the community and meeting people where they are is an essential step towards a healthier Bertie County.

Community Member Web Survey

Charts detailing key findings from the Community Member Survey are displayed below:

Topic: Additional Demographic Information

Figure A5.1: What is the highest grade or year of school you completed?

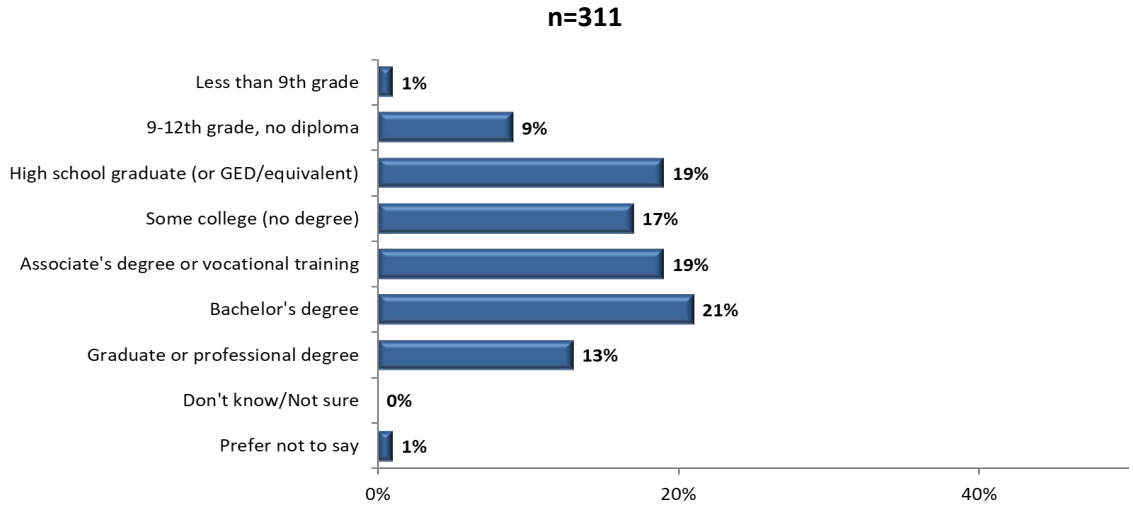


Figure A5.2: Which language is most often spoken in your home? (Choose one)

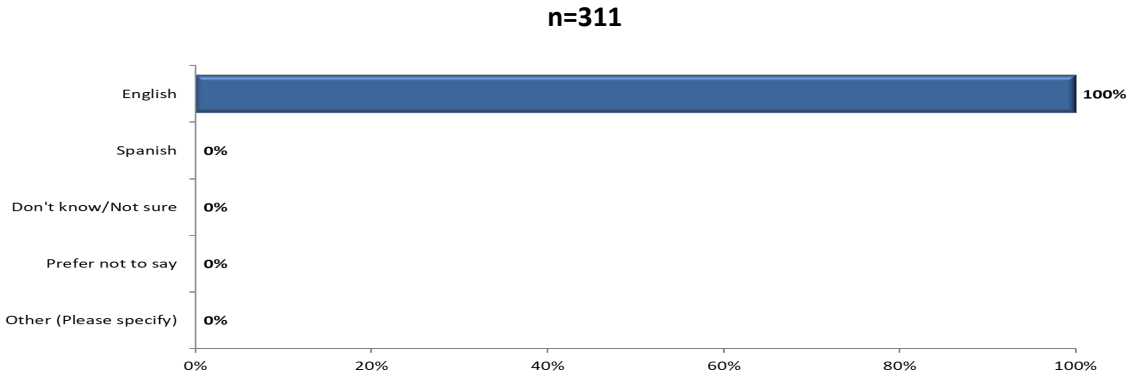


Figure A5.3: For employment, are you currently... (Select all that apply.)

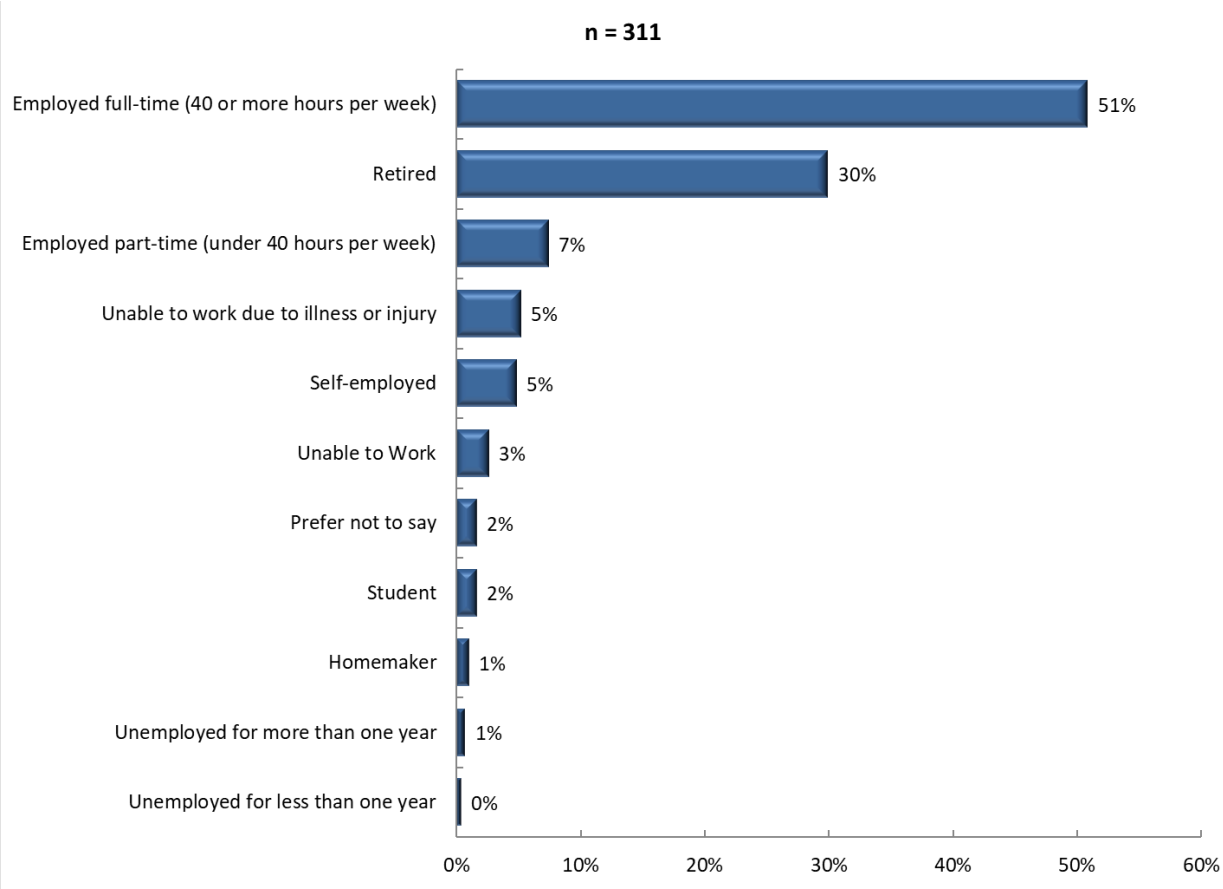
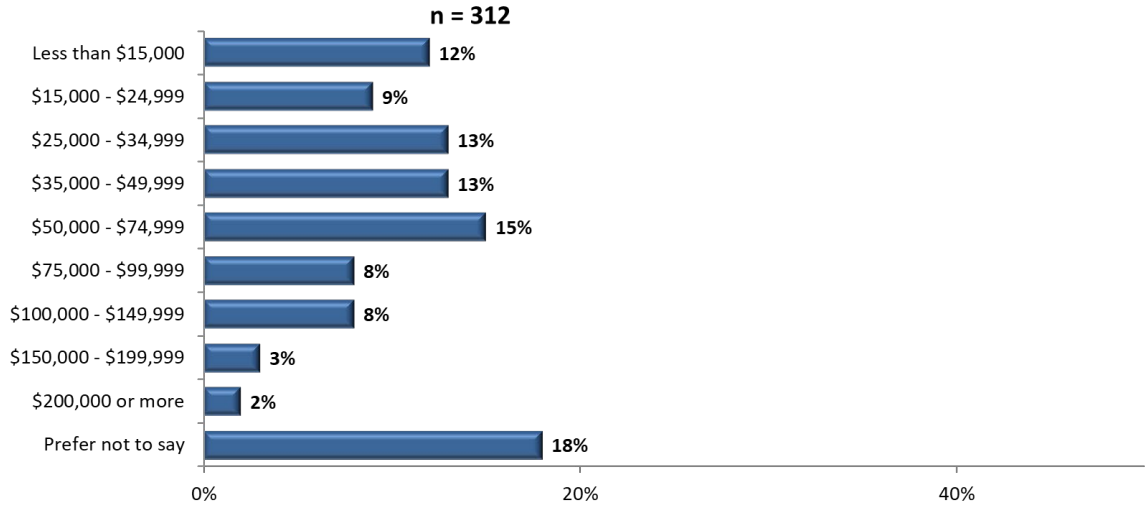
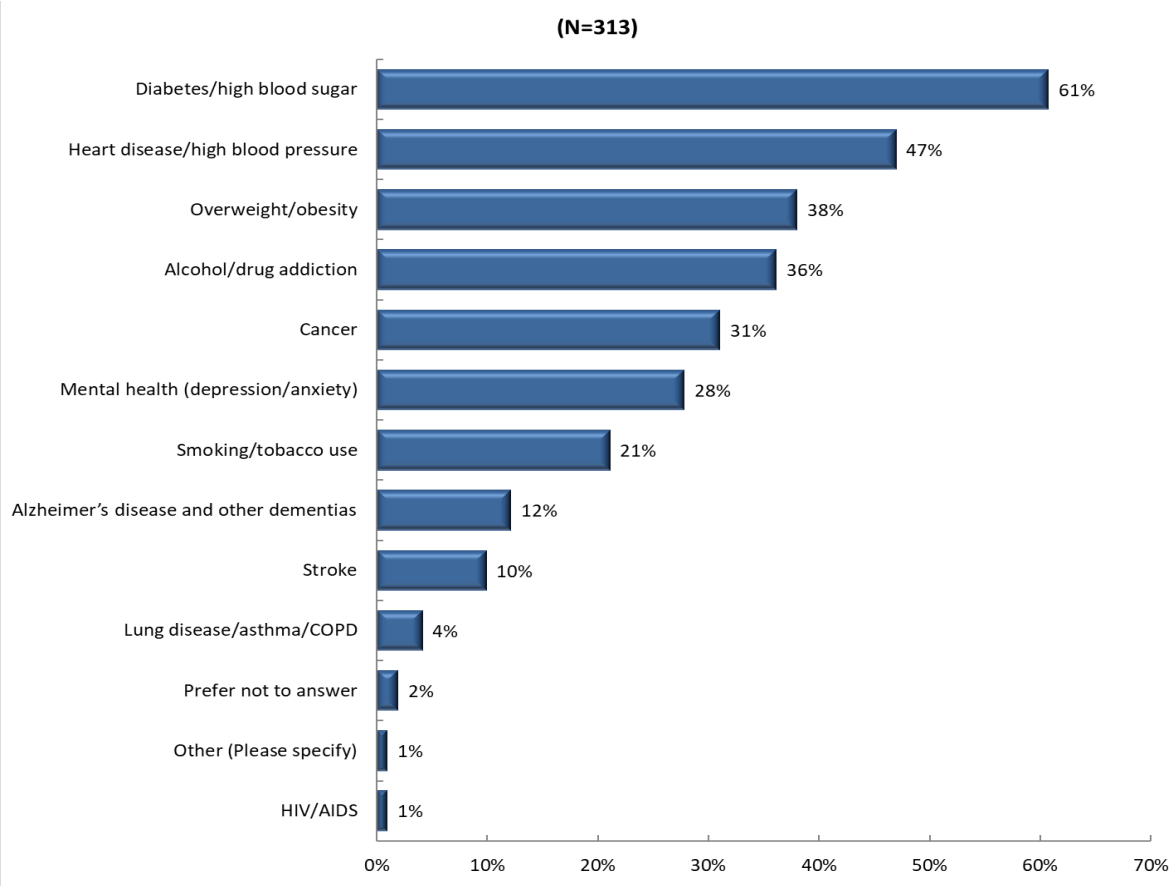


Figure A5.4: Which category best describes your yearly household income before taxes?



Topic: Community Health Opinion Questions

Figure A5.5: What are the three most important health problems that affect the health of your community? Please select up to three.



Other (Please specify):

- "Sex education needs to be aggressively taught in the schools"
- "Lupus"

Figure A5.6: What are the three most important health problems that affect the health of your community? Please select up to three. (by age)

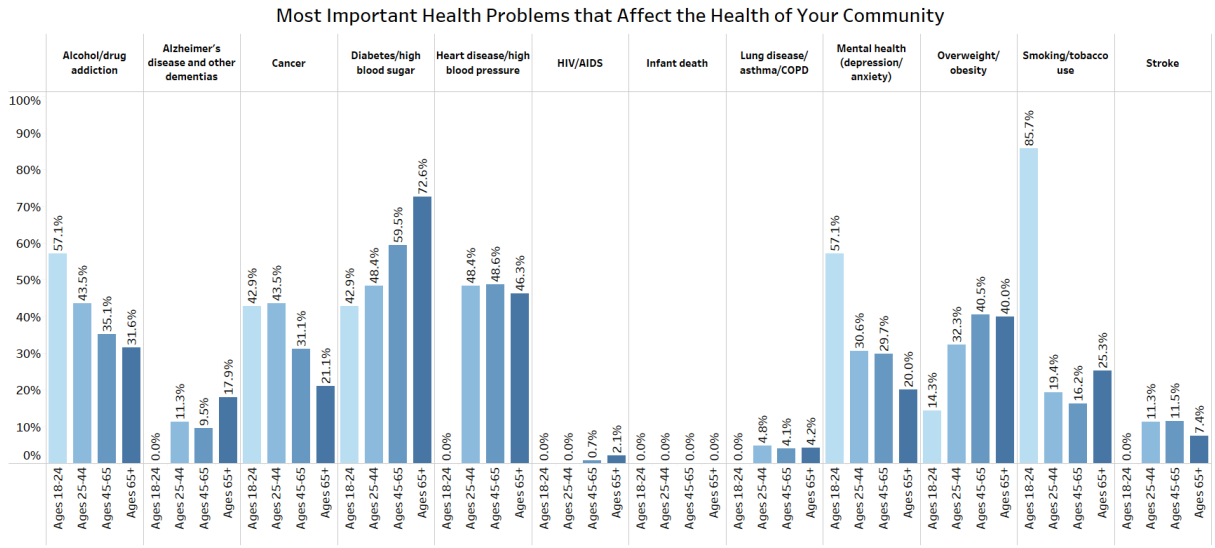


Figure A5.7: What are the three most important health problems that affect the health of your community? Please select up to three. (by gender)

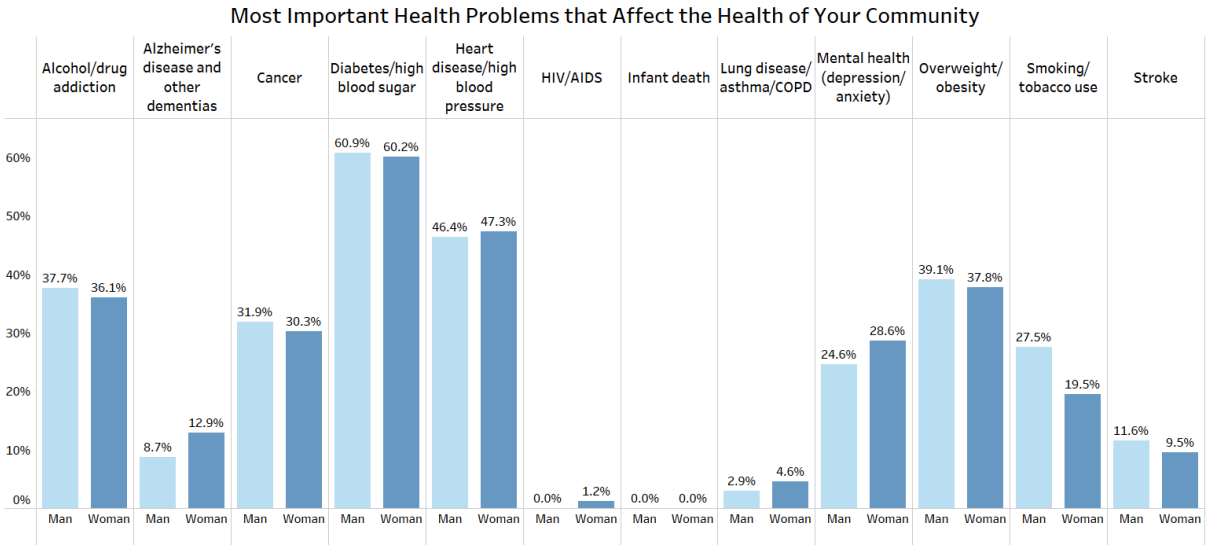


Figure A5.8: What are the three most important health problems that affect the health of your community? Please select up to three. (by race)

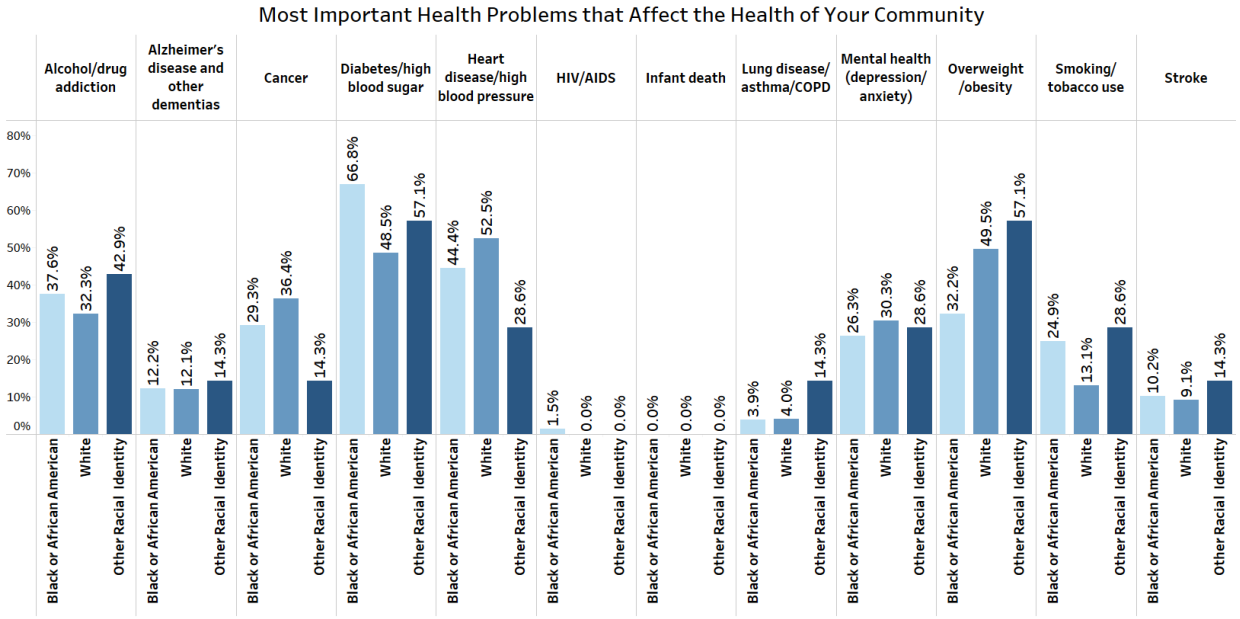


Figure A5.9: What are the three most important health problems that affect the health of your community? Please select up to three. (by ethnicity)

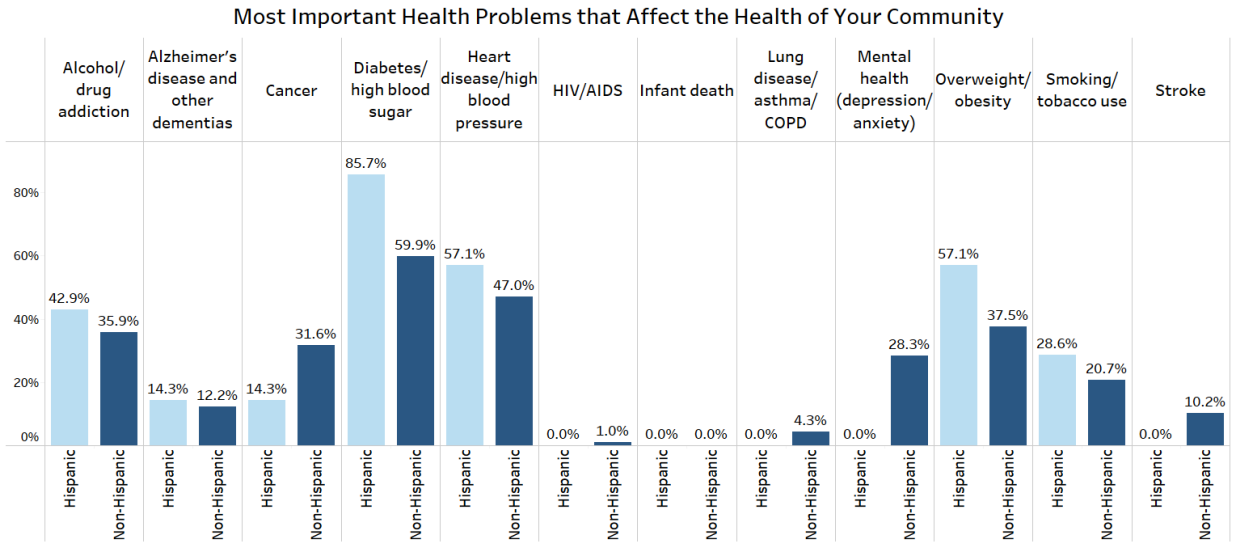
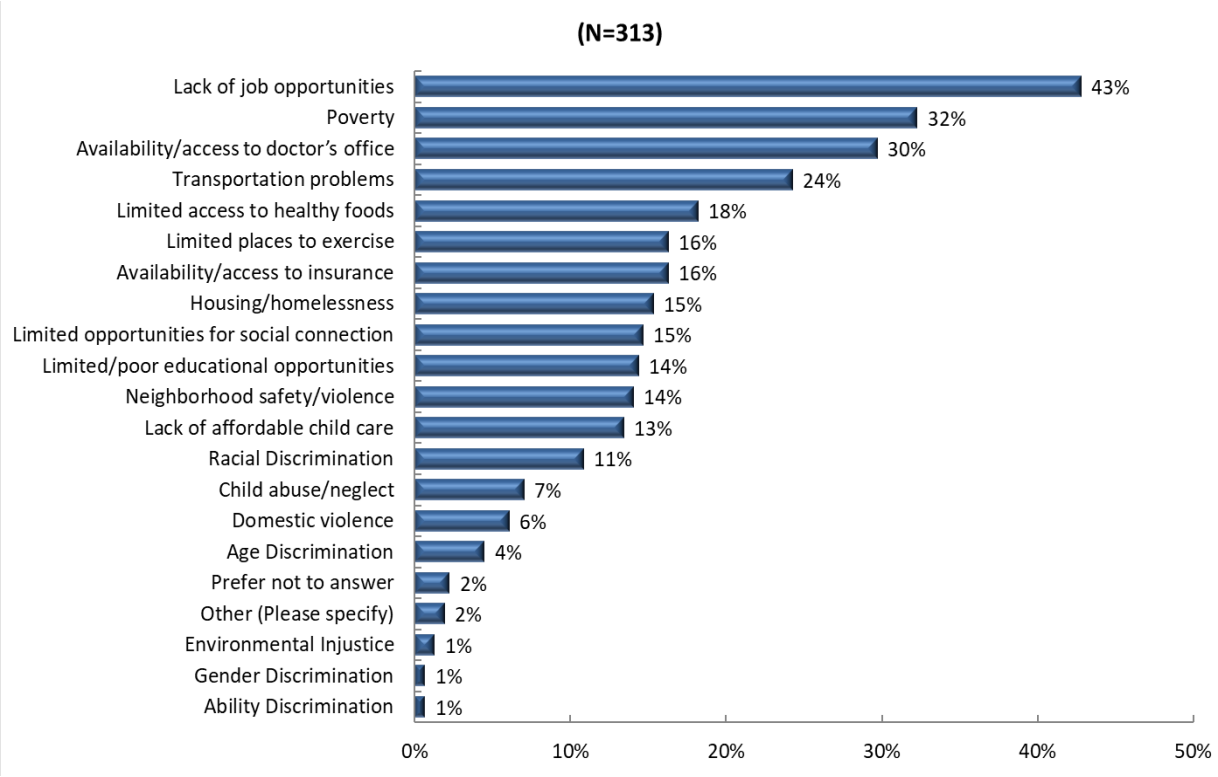


Figure A5.10: What are the three most important social or environmental problems that affect the health of your community? Please select up to three.



Other (Please specify)

- "People choose not to exercise"
- "No school for our students in the neighborhood it closing /closed"
- "No doctors"
- "Lack of grocery stores"
- "I feel that it would be good to have multiple places to exercise however it is a mindset because we have to want to do better. Maybe a restaurant that cooks healthy foods."

Figure A5.11: What are the three most important social or environmental problems that affect the health of your community? Please select up to three (by age)

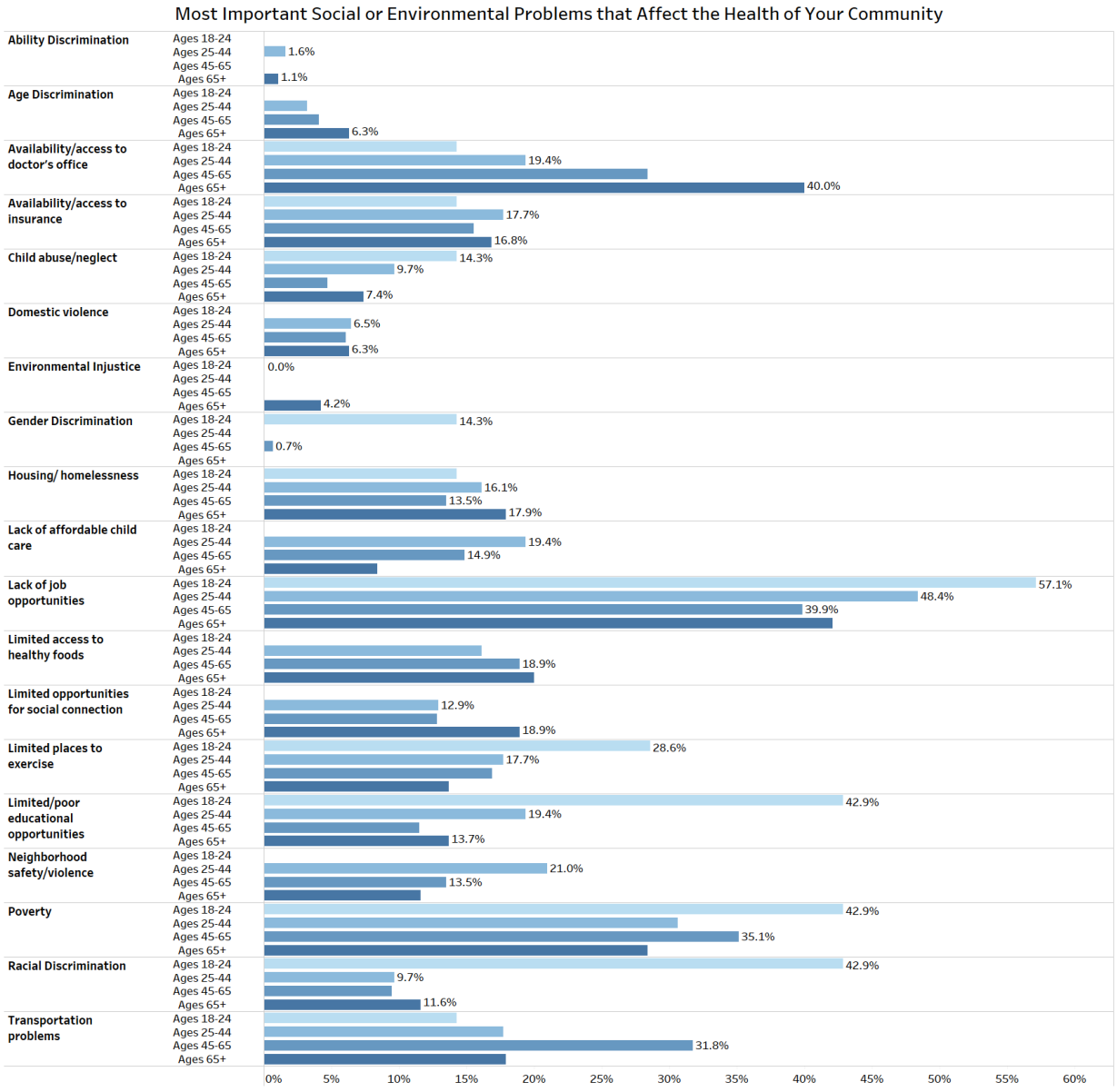


Figure A5.12: What are the three most important social or environmental problems that affect the health of your community? Please select up to three (by gender)

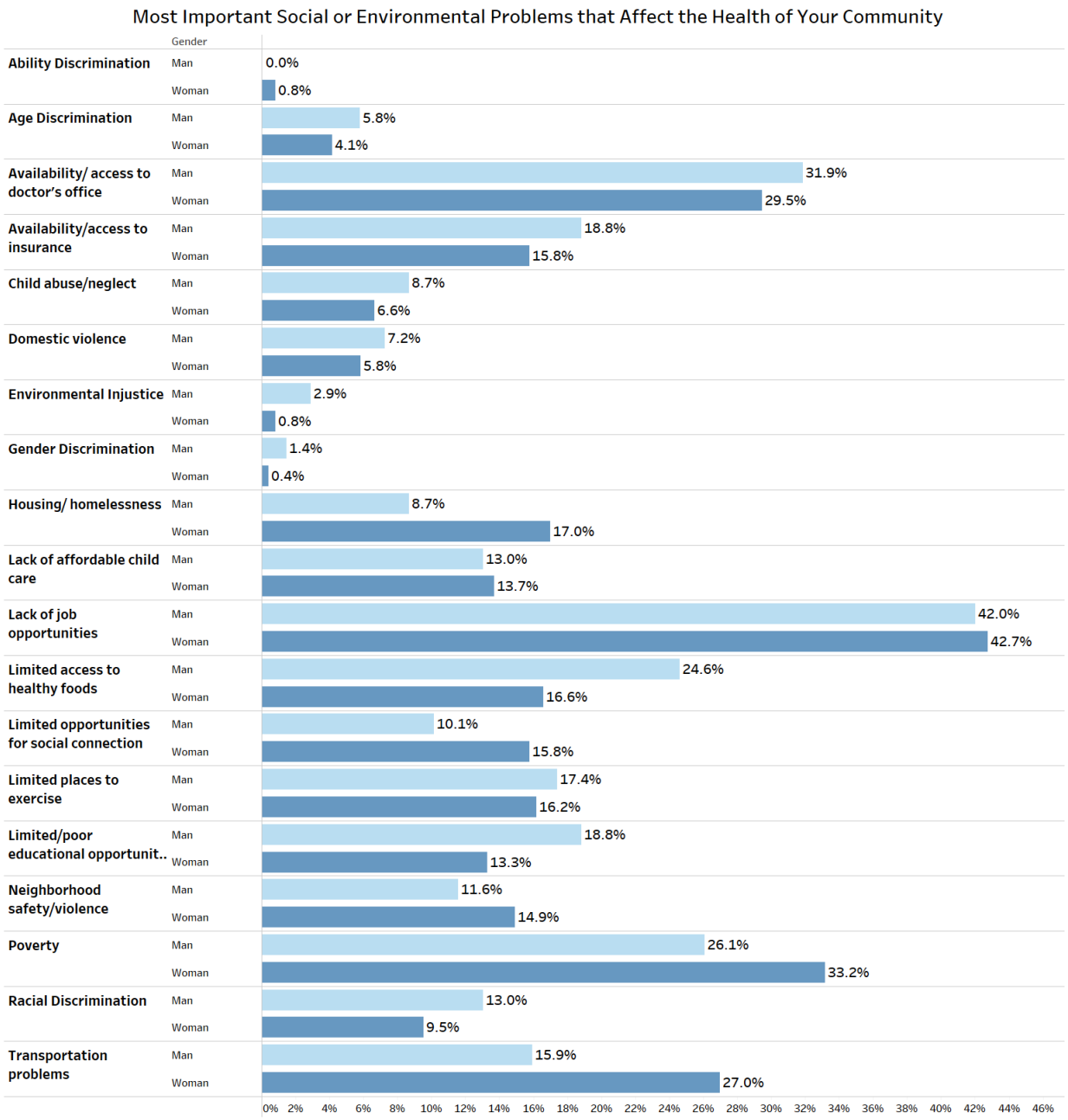


Figure A5.13: What are the three most important social or environmental problems that affect the health of your community? Please select up to three (by race)

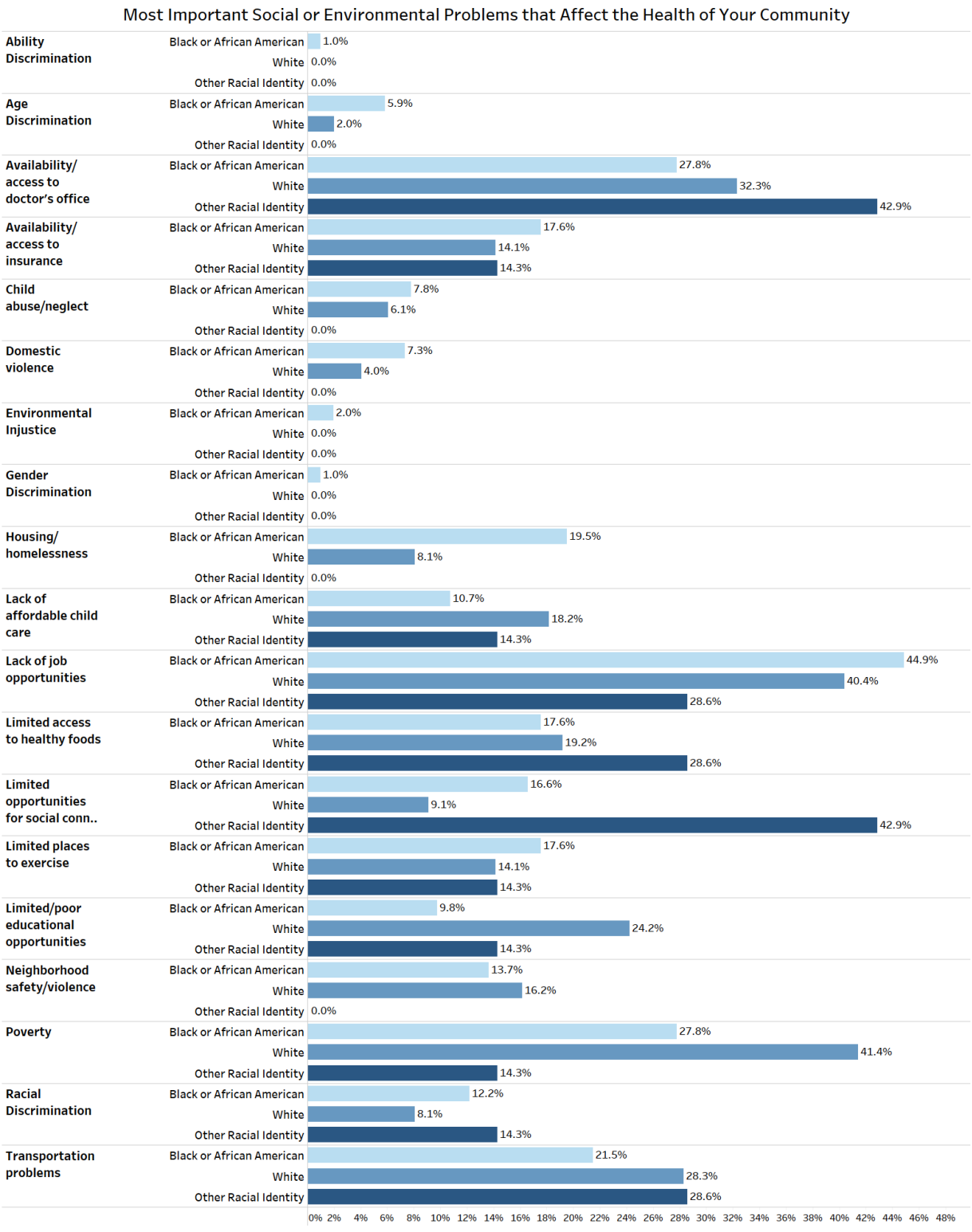


Figure A5.14: What are the three most important social or environmental problems that affect the health of your community? Please select up to three (by ethnicity)

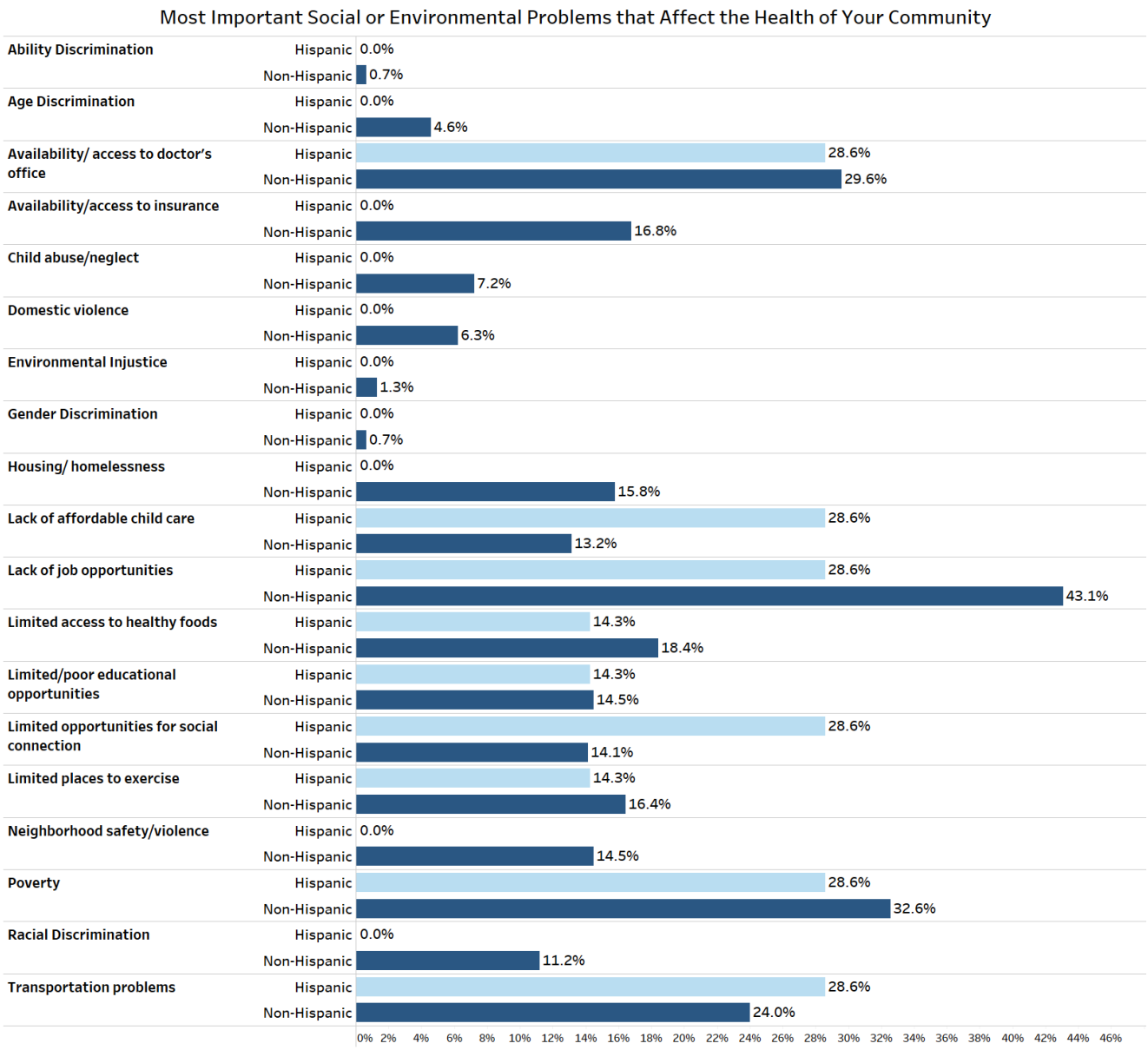
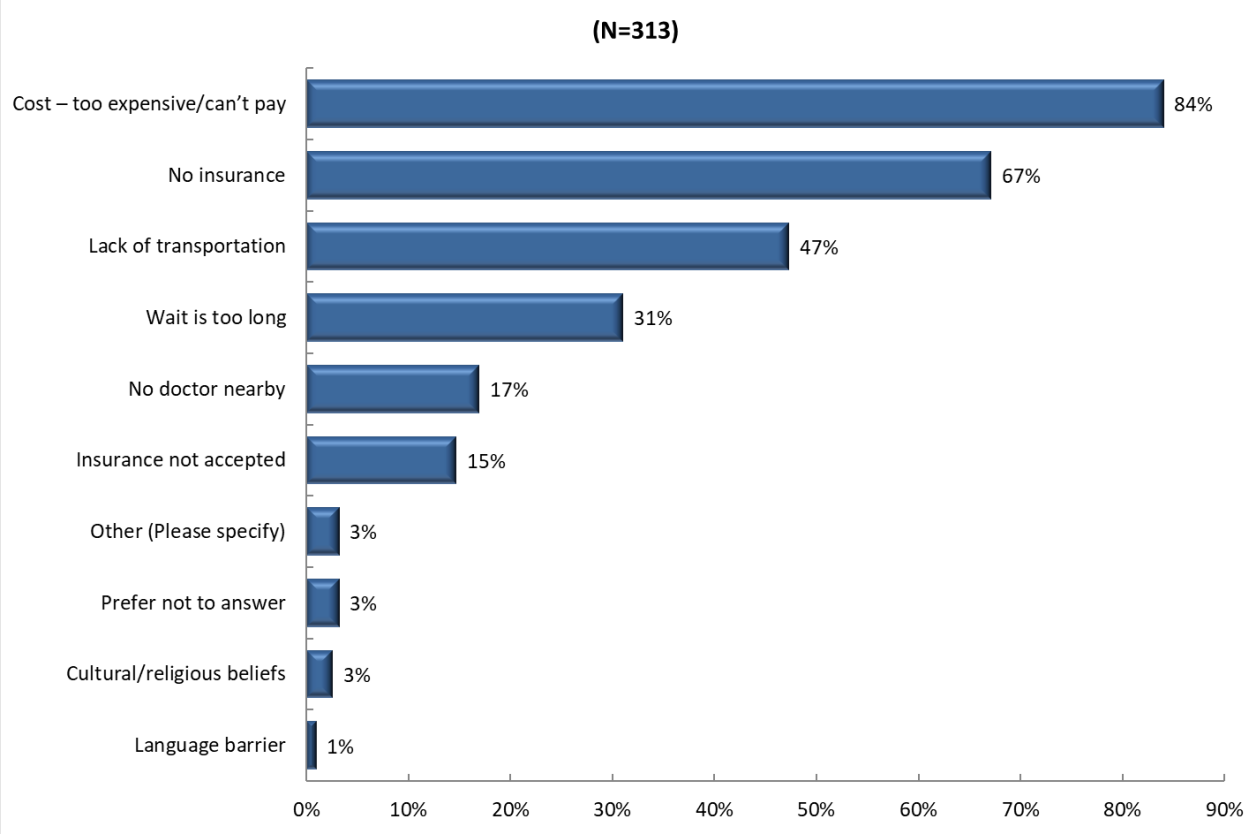


Figure A5.15: What are the three most important reasons people in your community do not get health care when they need it? Please select up to three.



Other (Please specify)

- "People make choices and they tend to go to what they deem important and a lot of people do not think that health care is important until something happens."
- "Not working"
- "No motivation to stay health when life is so hard"
- "Limited doctor availability/no new patients"
- "Lack of Health Literacy"
- "Lack of education on need to receive health care"
- "Lack of education"
- "I believe black and brown people are not educated on the importance of health care."
- "A lot just do not care"

Figure A5.16: What are the three most important reasons people in your community do not get health care when they need it? Please select up to three. (by age)

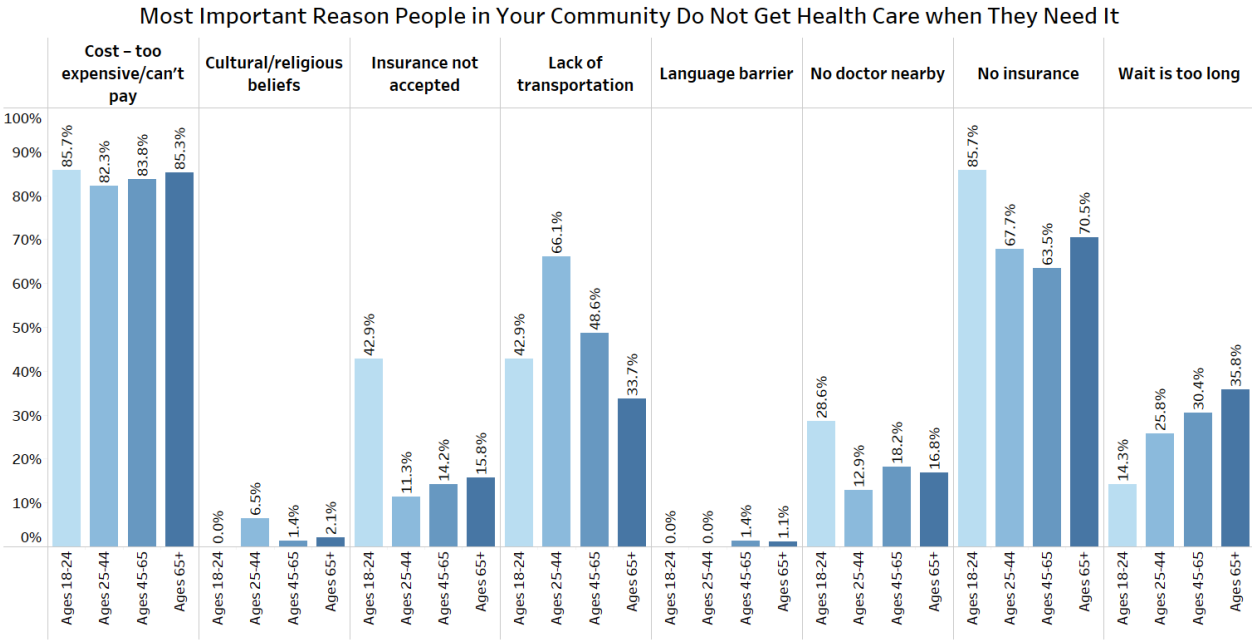


Figure A5.17: What are the three most important reasons people in your community do not get health care when they need it? Please select up to three. (by gender)

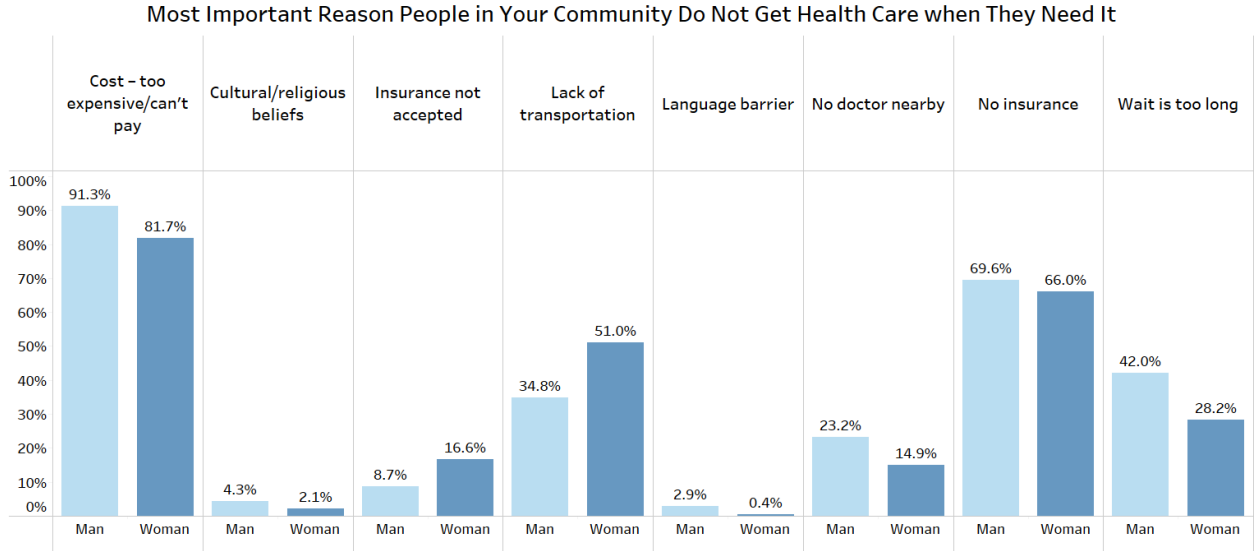


Figure A5.18: What are the three most important reasons people in your community do not get health care when they need it? Please select up to three. (by race)

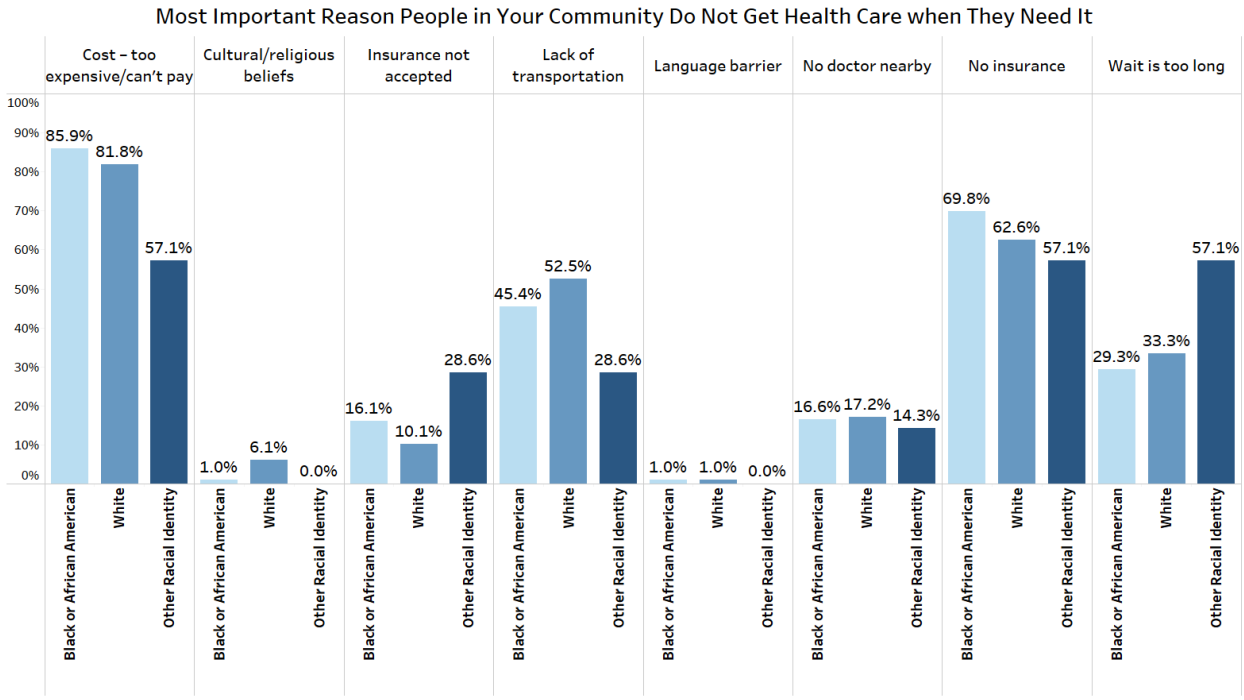
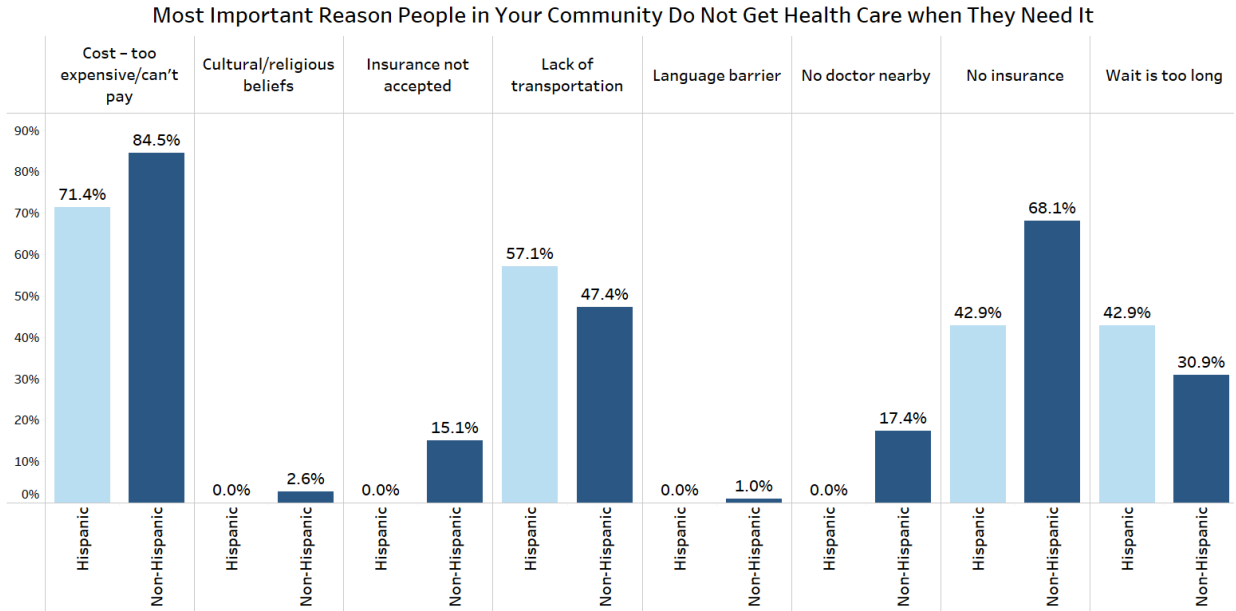


Figure A5.19: What are the three most important reasons people in your community do not get health care when they need it? Please select up to three. (by ethnicity)



Topic: Access to Care

Figure A5.20: DURING THE PAST 12 MONTHS, were you told by a health care provider or doctor's office that they did not accept your health care coverage?

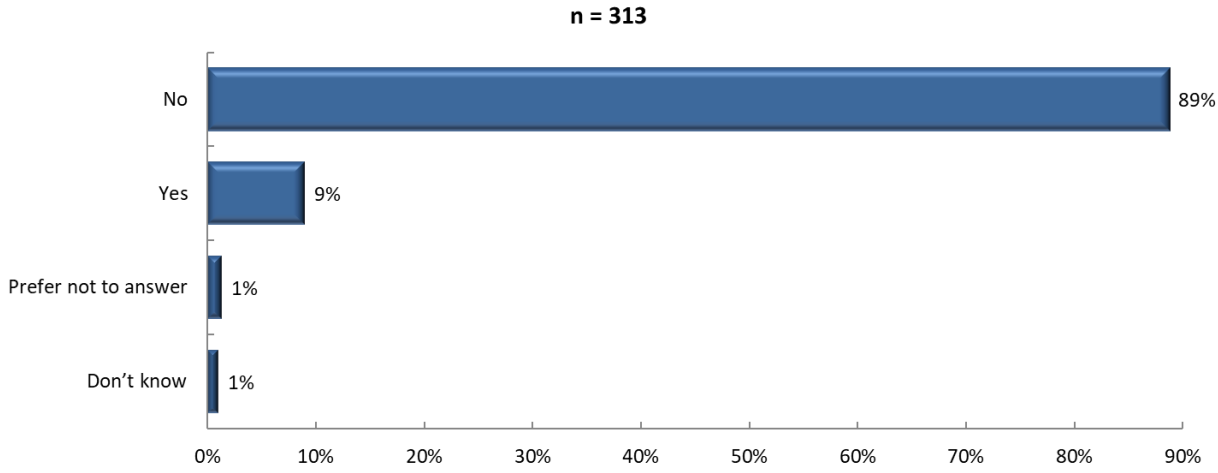


Figure A5.21: Where do you USUALLY go when you are sick or need advice about your health?

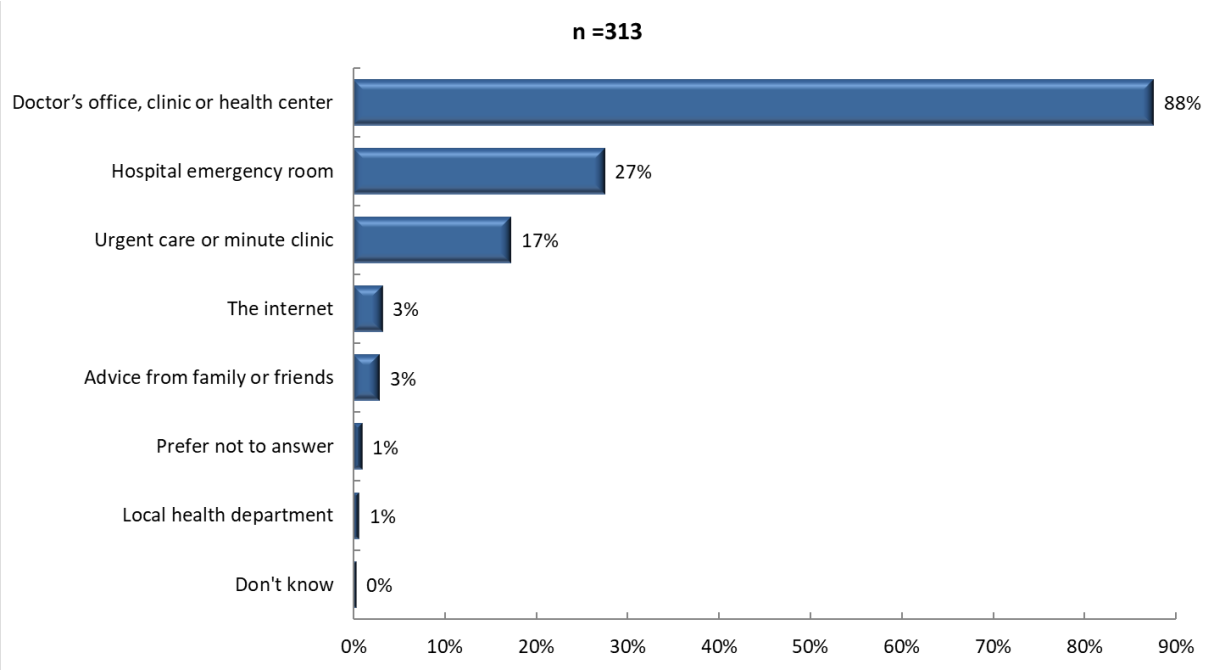
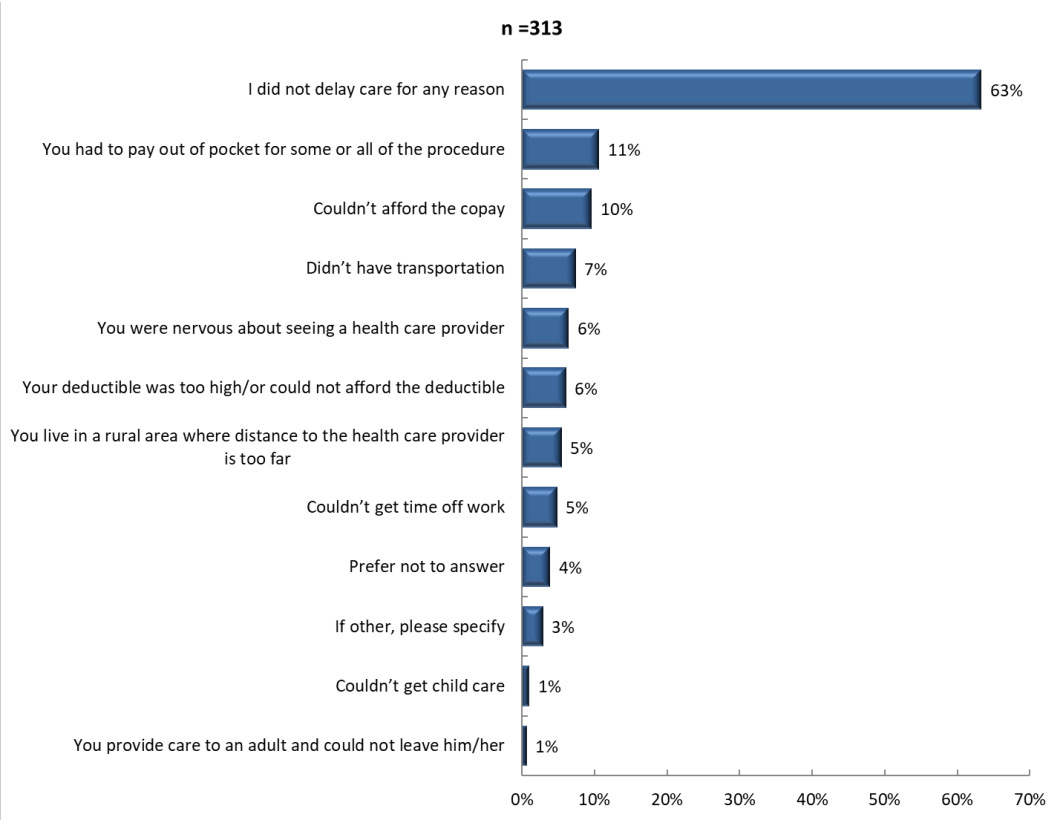


Figure A5.22: There are many reasons people delay getting medical care. Have you delayed getting care for any of the following reasons in the PAST 12 MONTHS?



Other (please specify):

- "Availability of Specialist. Long wait for appointment. 8+ months."
- "Difficult to find quality doctors that appear to care."
- "Dislike questions by doctor, long wait and doctor's attitude"
- "I have delayed a specialist visit because of the cost of the copay at $100 per visit"
- "No insurance"
- "Trust issues of doctors and care givers giving you the correct diagnosis. So most people hope that they get better without having to go to a ER or doctors office."
- "Wait too long"
- "Walk-in is too busy"

Figure A5.23: DURING THE PAST 12 MONTHS, was there any time when you needed any of the following, but didn't get it because you couldn't afford it?

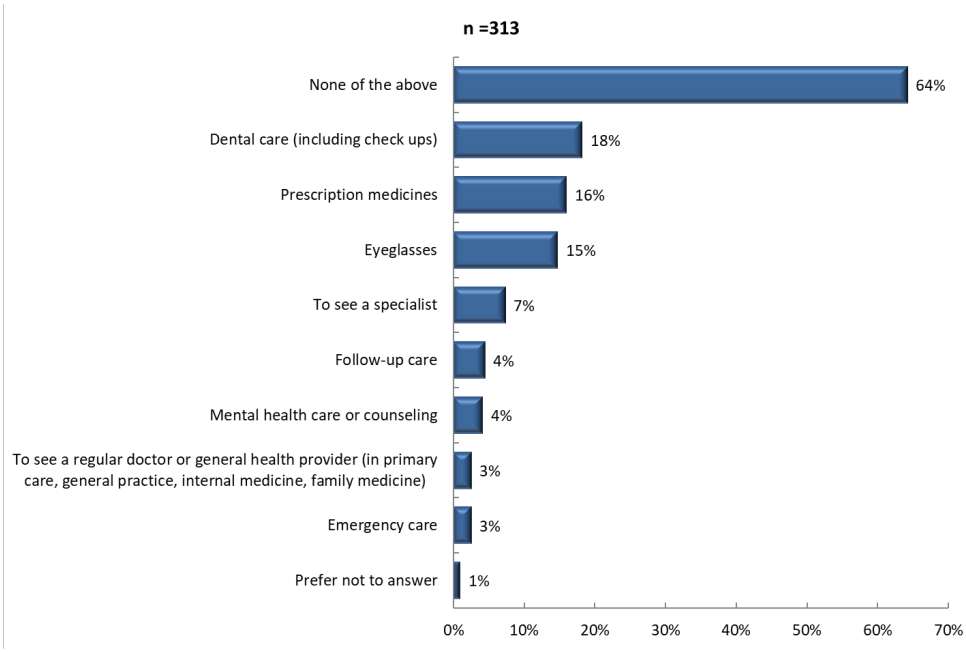


Figure A5.24: If you get sick or have an accident, how worried are you that you will be able to pay your medical bills?

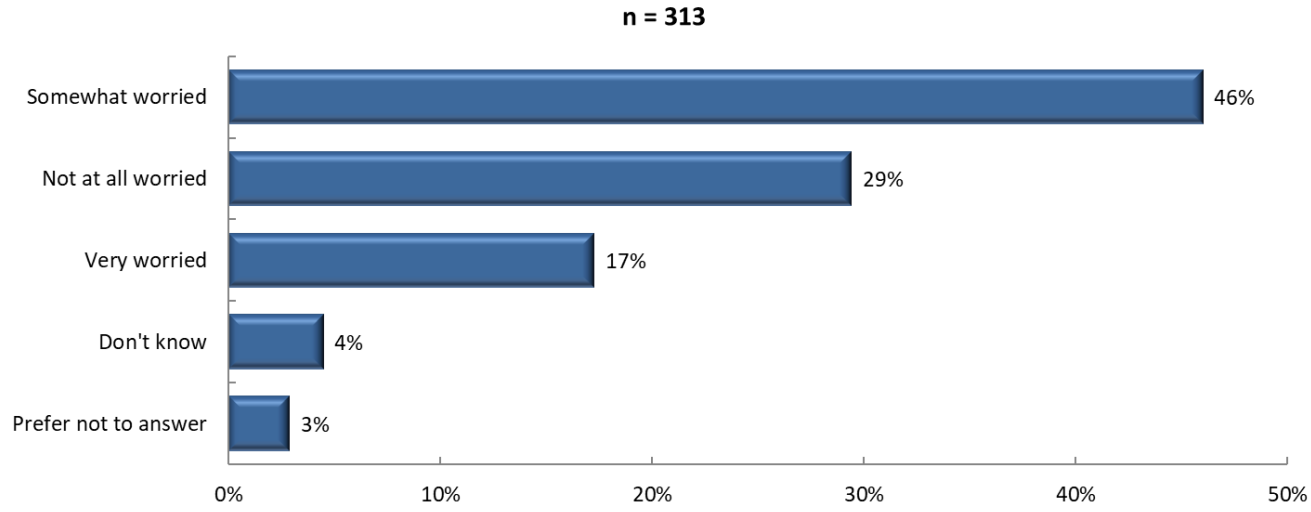
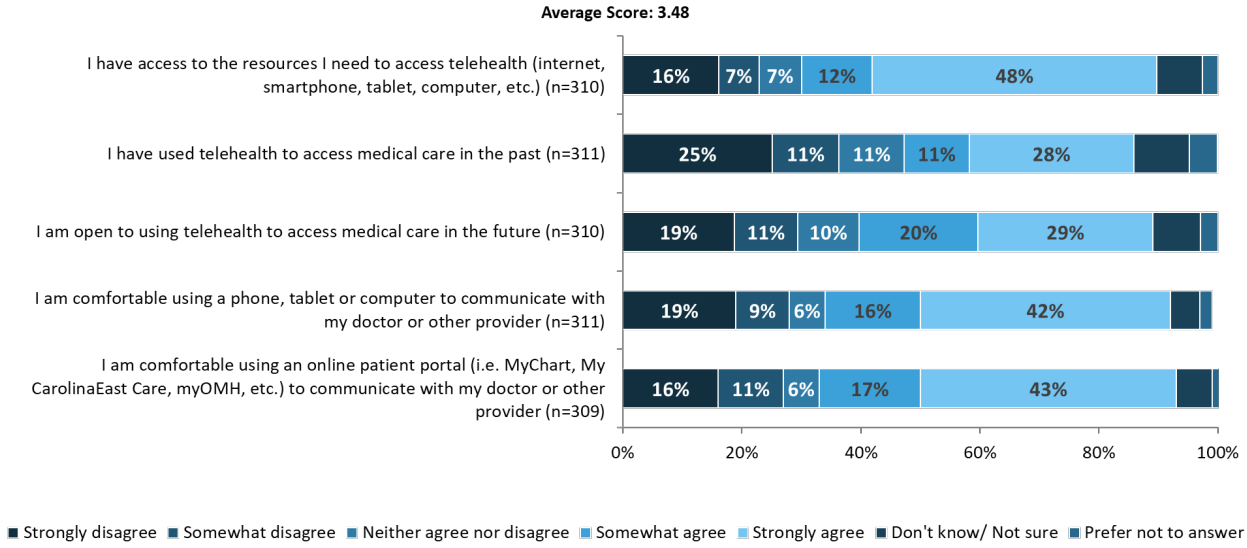
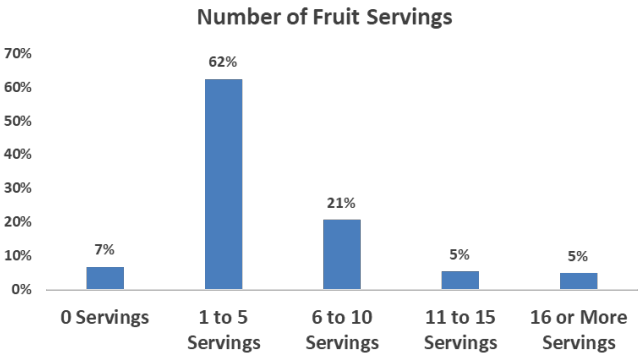


Figure A5.25: How much do you agree or disagree with the following statements about telehealth? Telehealth means connecting virtually with a medical provider using a smartphone, tablet or computer.
Scale from 1 to 5 with 1 being "strongly disagree" and 5 being "strongly agree"



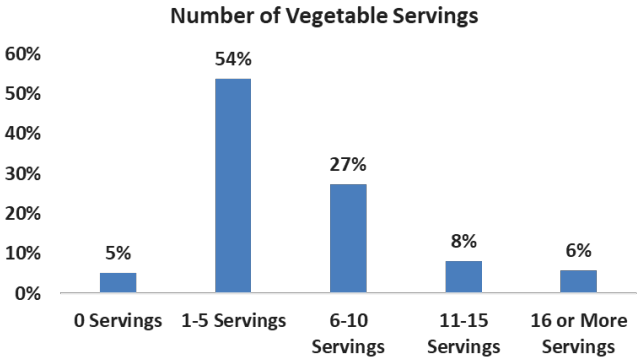
Topic: Diet and Exercise

Figure A5.26: Think about the food you ate during the past week. On average, how many servings of fruit did you eat, not including juices? (For example, one serving equals a medium apple, a small banana, or 7 strawberries) (n=311)



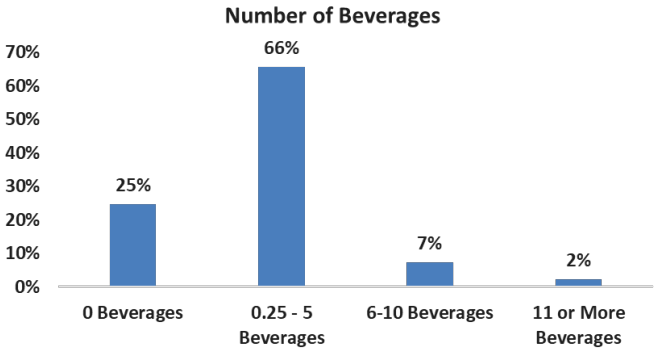
Measure	Value
Mean (Standard Deviation)	5 (6)
Median	4
Mode	2
Minimum-Maximum	0-43

Figure A5.27: Think about the food you ate during the past week. On average, how many servings of vegetables did you eat, not including potatoes? (For example, one serving equals 6 baby carrots, small bell pepper, or half of a large squash or zucchini) (n=311)



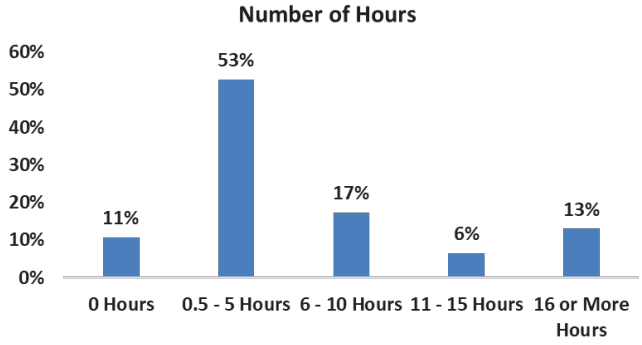
Measure	Value
Mean (Standard Deviation)	6 (5)
Median	5
Mode	4
Minimum-Maximum	0-40

Figure A5.28: About how many cans, bottles, or glasses of sugar-sweetened beverages, such as regular sodas, sugar sweetened tea, or energy drinks, do you drink each day? (n=311)



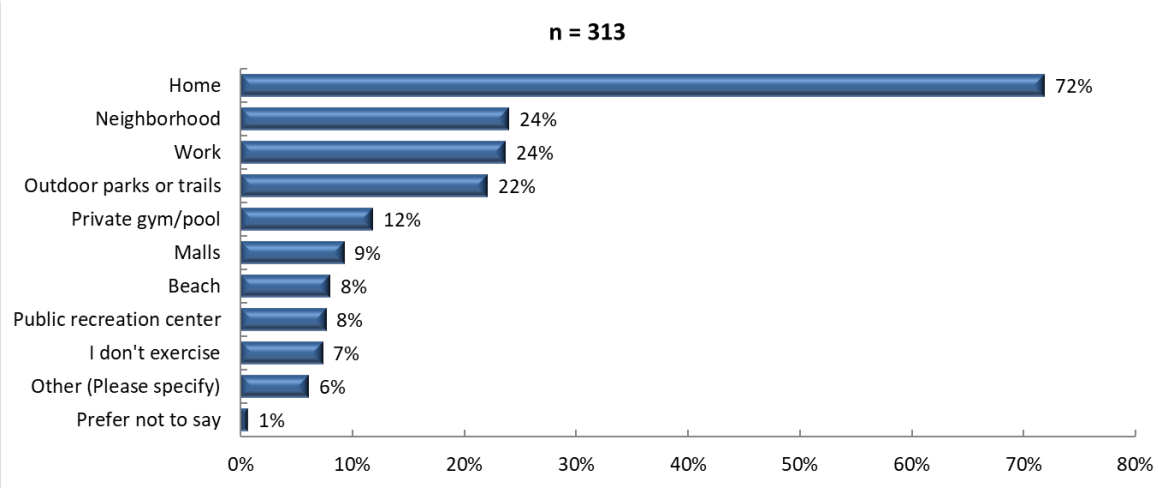
Measure	Value
Mean (Standard Deviation)	2 (4)
Median	1
Mode	1
Minimum-Maximum	0-52

Figure A5.29: During the past month, approximately how much time (in hours) per week were you physically active outside of your regular job?



Measure	Value
Mean (Standard Deviation)	8 (15)
Median	4
Mode	2
Minimum-Maximum	0-100

Figure A5.30: When you are active, where do you engage in exercise or physical activities? (Select all that apply.)



Other (please specify):

- "Animal shelter"
- "Church" (3 respondents)
- "Family farm", "Yard work", and/or "garden"
- "Golf"
- "Housework, there was my exercise"
- "Just walking not much of that. Too much pain", "Walking around house", "Walking"
- "Local gym" or "YMCA" (3 respondents)
- "Therapy"

Topic: Housing and Homelessness

Figure A5.31: In the past 12 months, were there times when you:

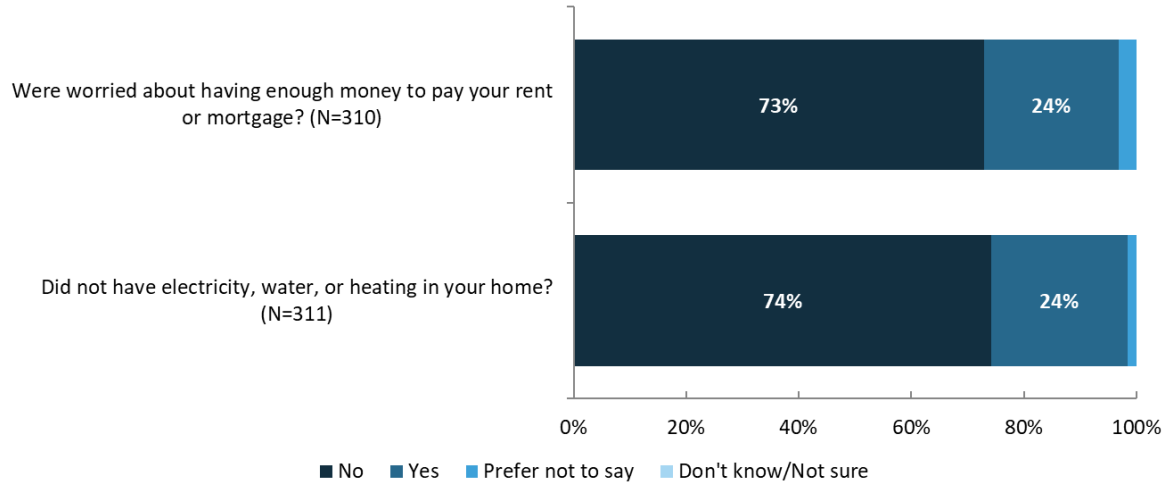


Figure A5.32: In the PAST THREE YEARS, were there times when you:

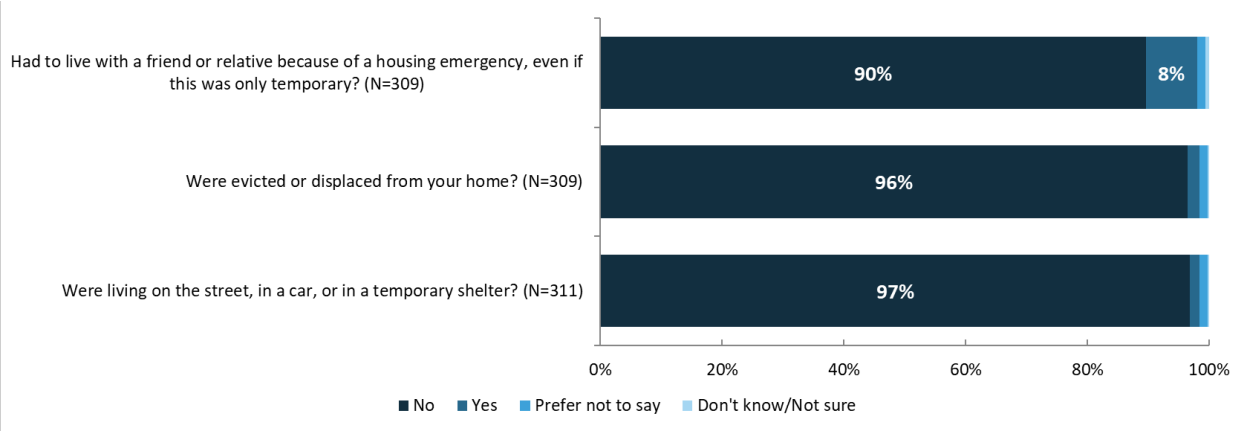
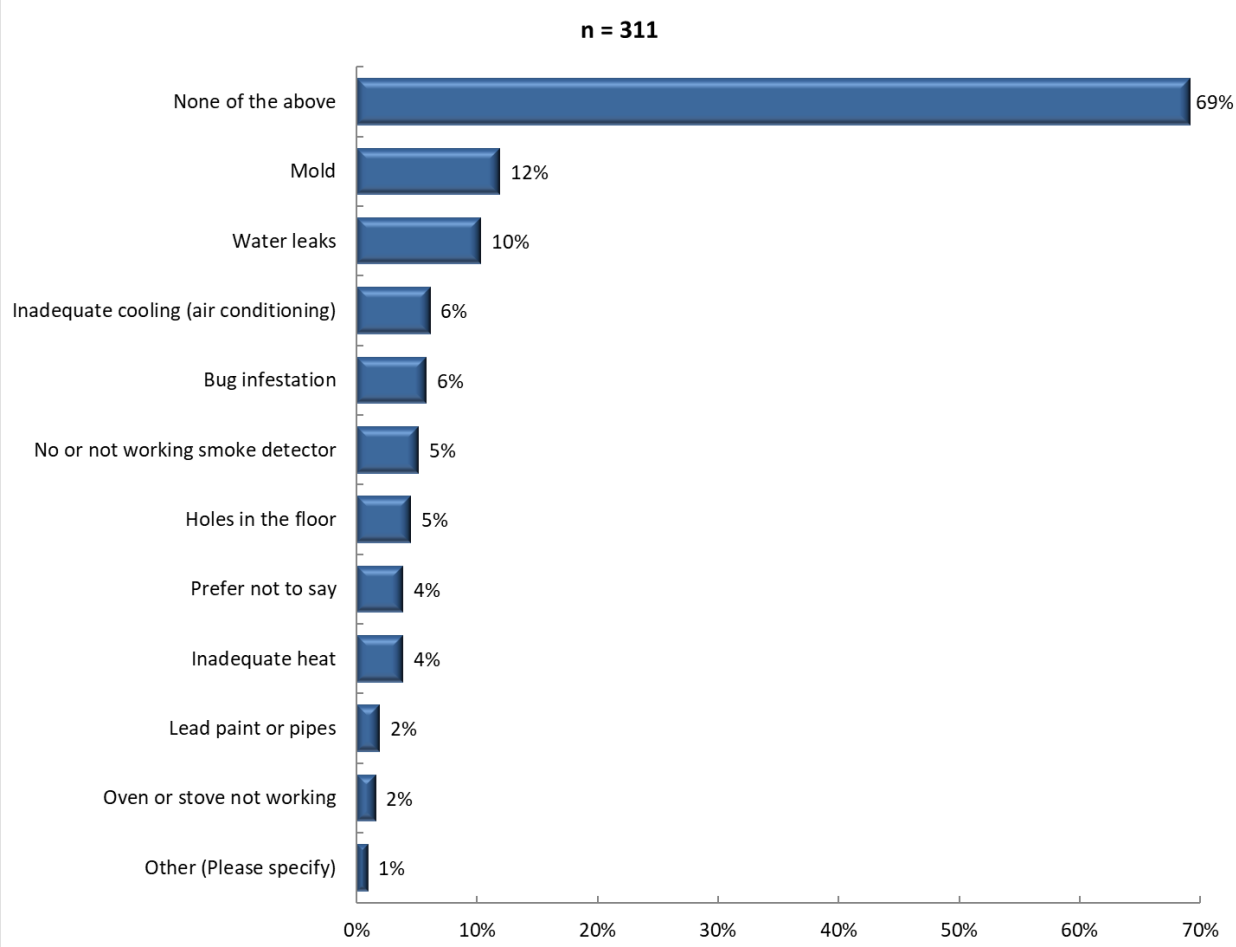


Figure A5.33: Think about the place you live. Do you have problems with any of the following? (Check all that apply.)

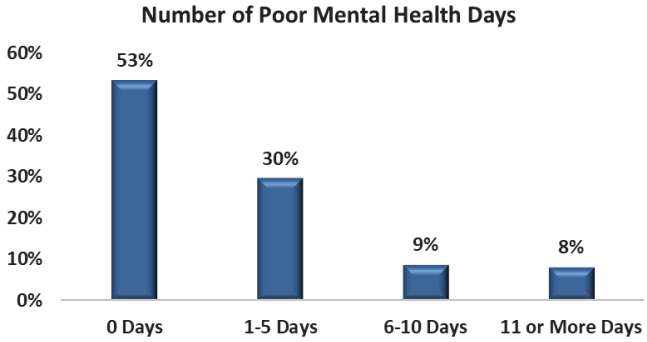


Other (please specify):

- "High fluoride in water"
- "I can't afford using my AC can't afford using my heat electrics too high for me to afford it. Try living on it fixed income and then come live in my house and be cold in the winter and hot in the summer. That's my world that's a lot of our world."
- "I don't have any of these issues and I guarantee the people who are having these issues will never see this survey. We need to do better with getting the appropriate resources into the hands of people who need them."

Topic: Mental Health

Figure A5.34: Now thinking about your MENTAL health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health NOT good? (n=306)



Measure	Value
Mean (Standard Deviation)	3 (6)
Median	0
Mode	0
Minimum-Maximum	0-30

Figure A5.35: Was there a time in the past 12 months when you needed mental health care or counseling, but did not get it at that time? Please note, only participants who responded that they had experienced at least 1 poor mental health day in the previous question were asked the current follow-up question

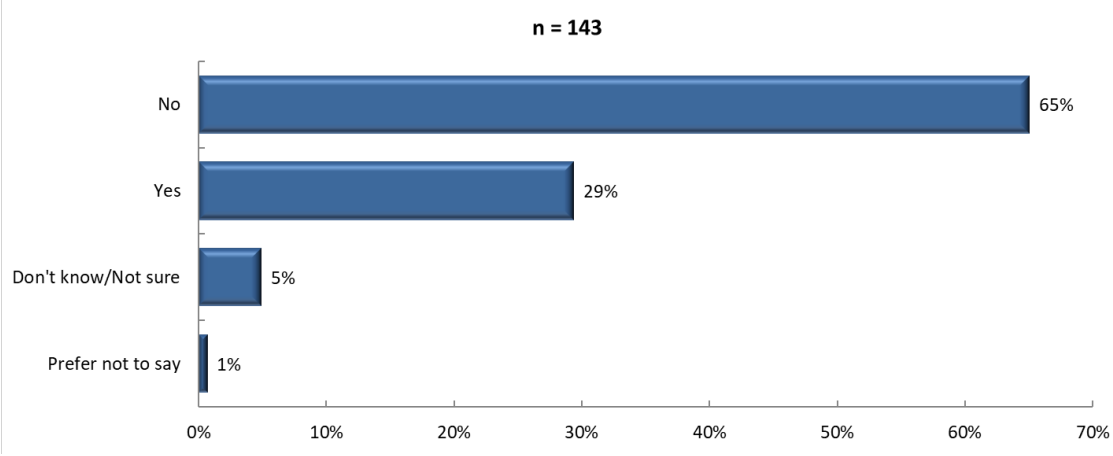
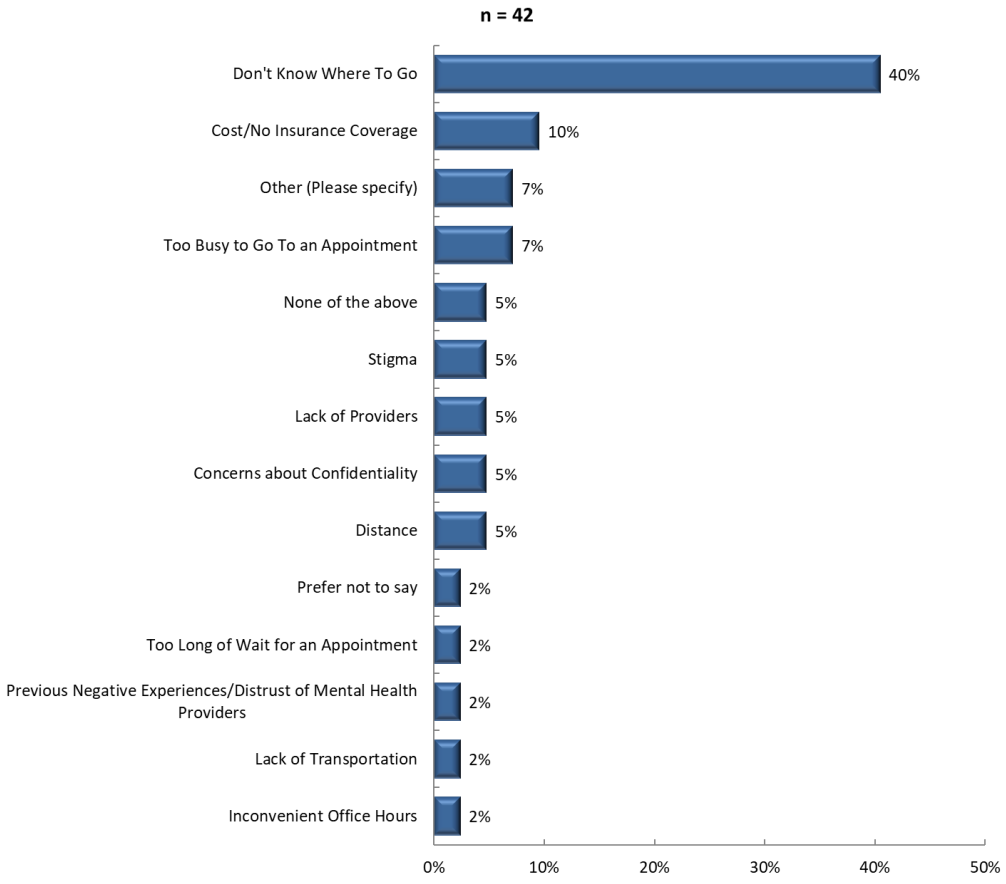


Figure A5.36: What was the main reason you did not get mental health care or counseling? Please note, only participants who answered "YES" to previous question were asked the current follow-up question

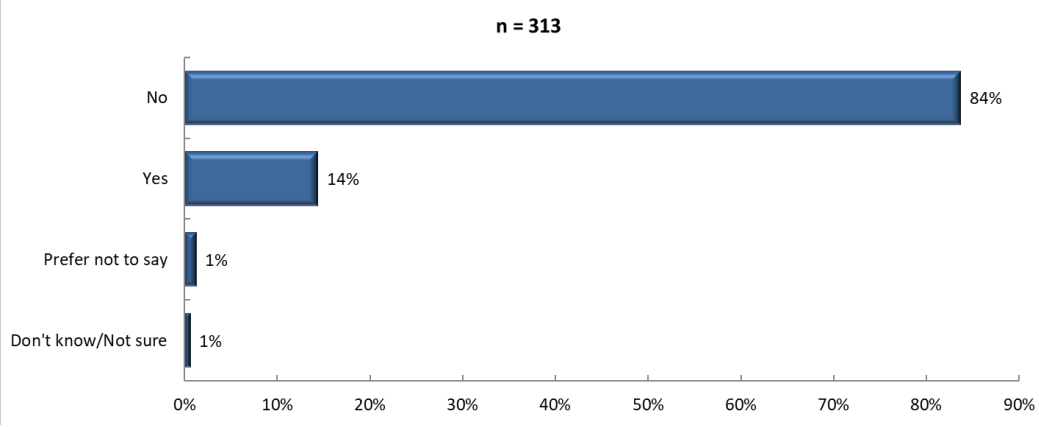


Other (Please specify):

- "Combination of cost, distance, and distaste based on previous attempts to access mental healthcare in the region around Windsor NC"
- "Felt I could handle on my own"

- “Only one local. Not convenient, had a bad experience with my grandson there”

Figure A5.37: Are you currently taking medication or receiving treatment, therapy, or counseling from a health professional for any type of MENTAL or EMOTIONAL HEALTH NEED?



Topic: Physical Health

Figure A5.38: Considering your physical health overall, would you describe your health as…

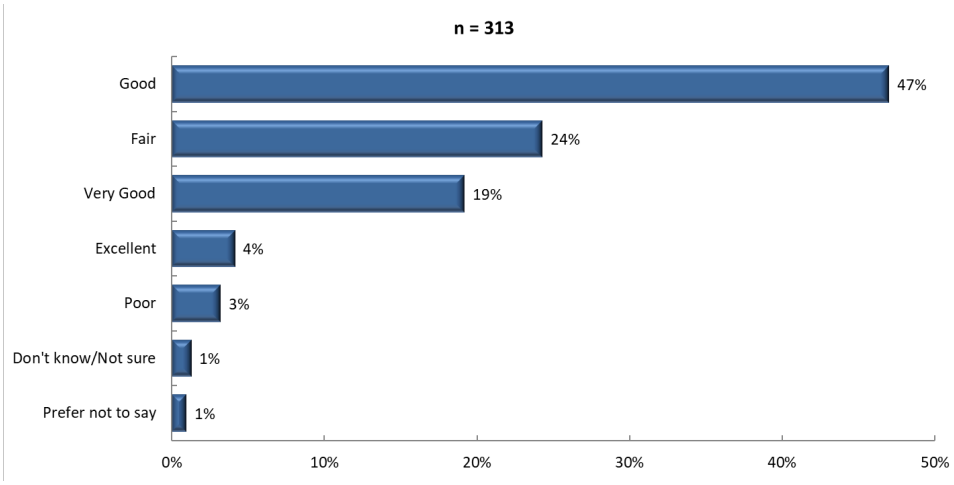


Figure A5.39: Within the past year (anytime less than one year ago), have you:

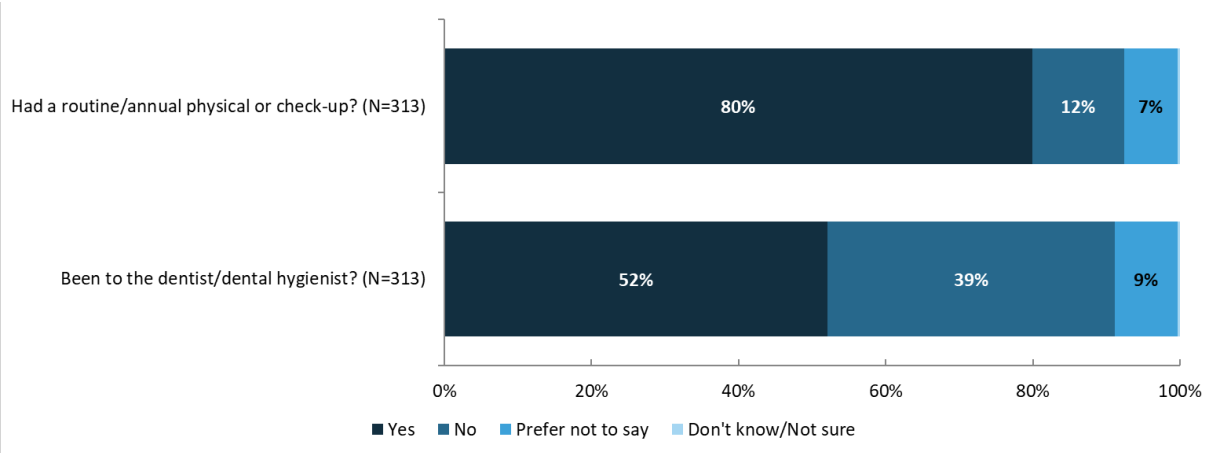
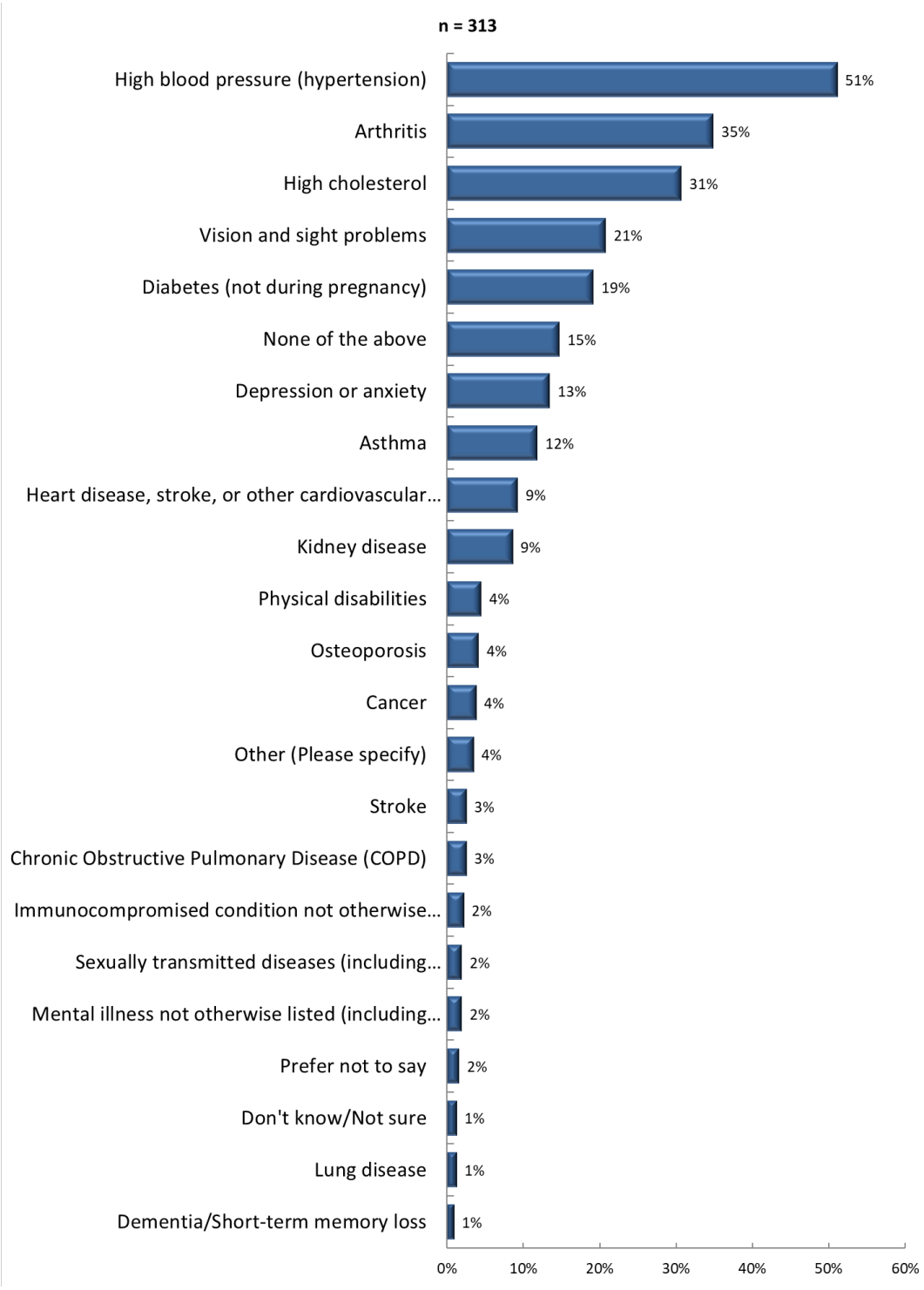


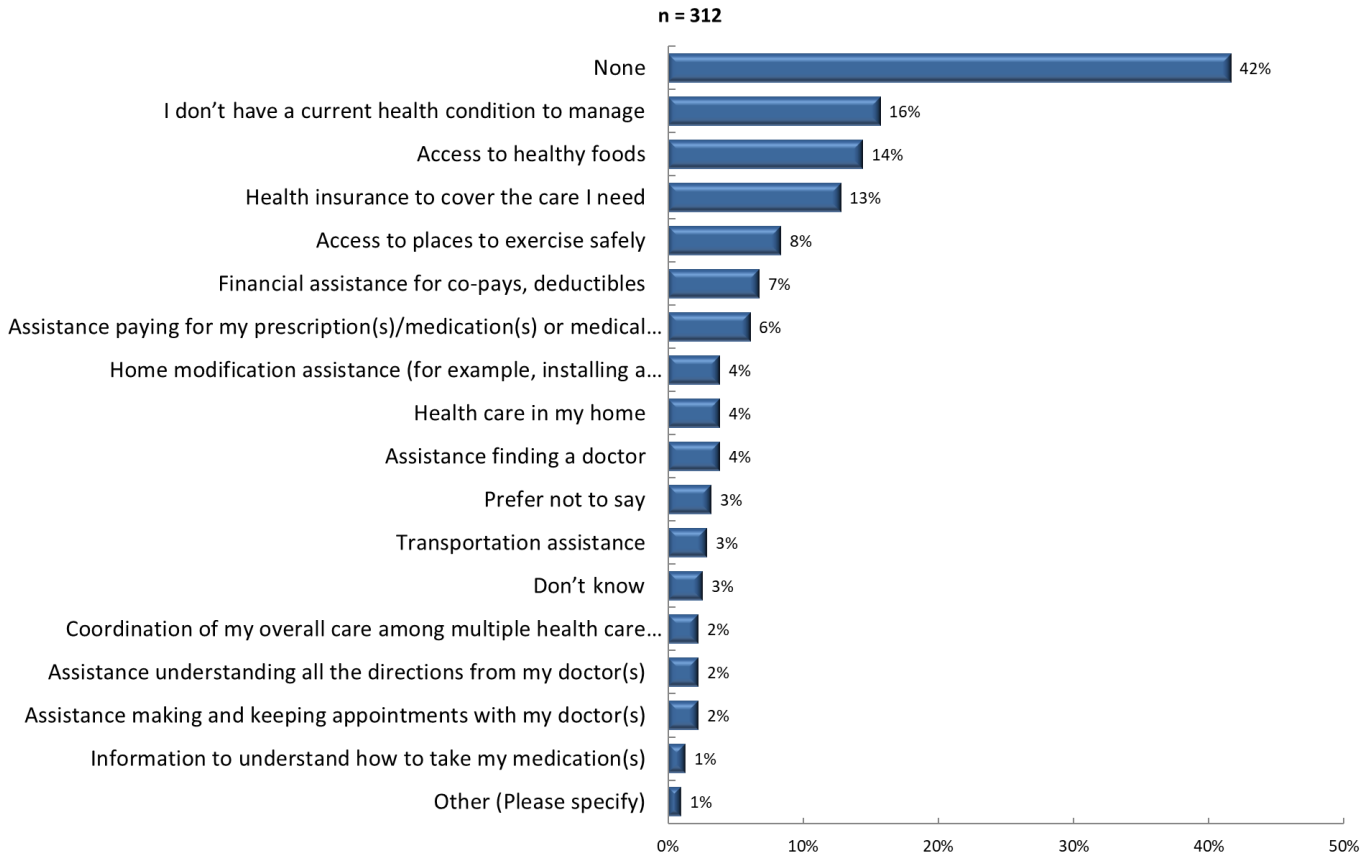
Figure A5.40: Have you ever been told by a doctor, nurse, or other health professional that you have any of the following health conditions? Select all that apply



Other (please specify):

- "Anemia" (2 Respondents)
- "Diverticulosis, GERD, gastritis"
- "Grave's disease"
- "HPV"
- "Lupus"
- "Lupus and fibromyalgia"
- "Migraines and seizures"
- "Obesity" or "Overweight"
- "TIA"

Figure A5.41: What do you need to be able to manage your current health conditions (for example, heart conditions, high blood pressure, stroke, diabetes, asthma, cancer, COPD, congestive heart failure, arthritis, HIV, depression, anxiety, other mental health condition, etc.) To stay healthy? (select all that apply.)

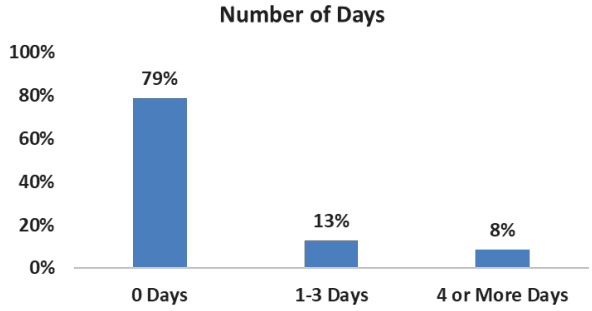


Other (please specify):

- "I have health insurance, but need to keep it, question was a bit confusing"
- "Need to exercise"
- "Will power to exercise"

Topic: Substance Use Disorders

Figure A5.42: Considering all types of alcoholic beverages, how many times during the past 30 days did you have 4 (females)/ 5 (males) or more drinks on an occasion? (n=306)



Measure	Value
Mean	1 (3)
Median	0
Mode	0
Minimum-Maximum	0-30

Figure A5.43: How often do you consume any kind of alcohol product, including beer, wine or hard liquor?

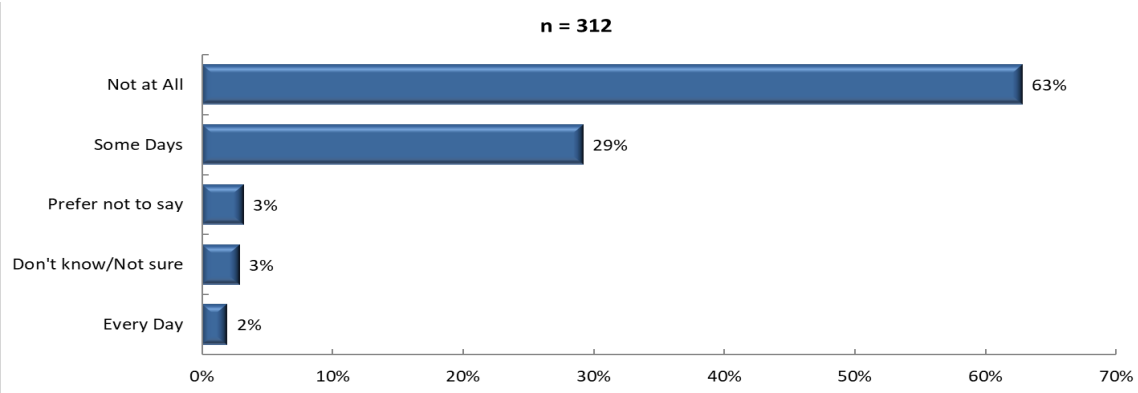


Figure A5.44: In the past year, have you or a member of your household misused any form of prescription drugs (e.g. used without a prescription, used more than prescribed, used more often than prescribed, or used for any reason other than a doctor's instructions)?

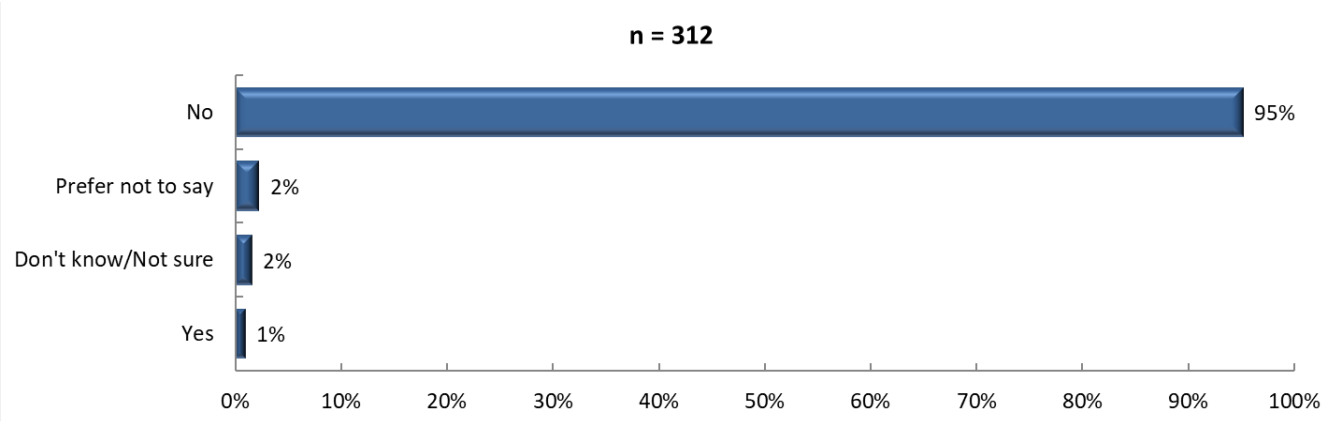
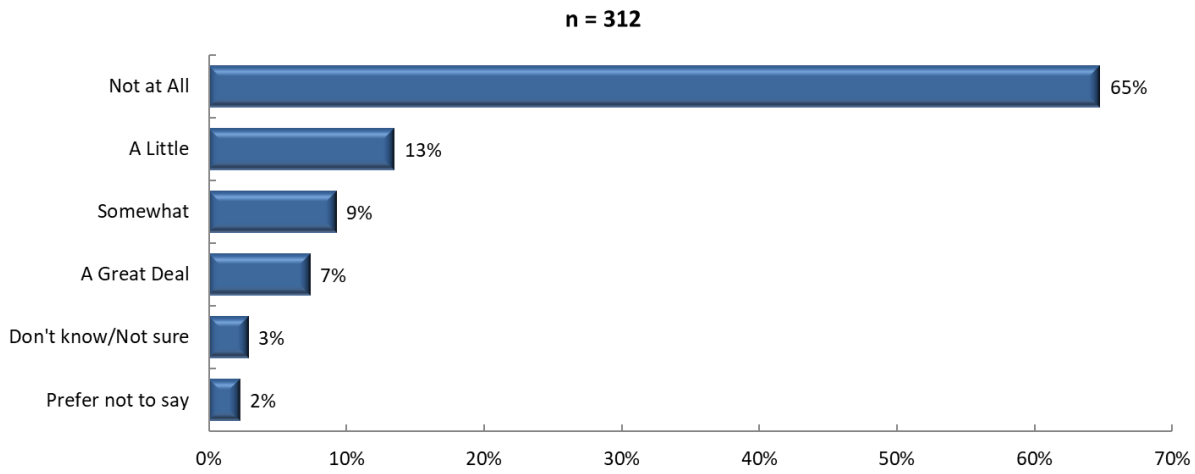


Figure A5.45: To what degree has your life been negatively affected by YOUR OWN or SOMEONE ELSE's substance abuse issues, including alcohol, prescription, and other drugs?



Topic: Transportation and Transit

Figure A5.46: In a typical week, what kinds of transportation do you use the most? (Select all that apply.)

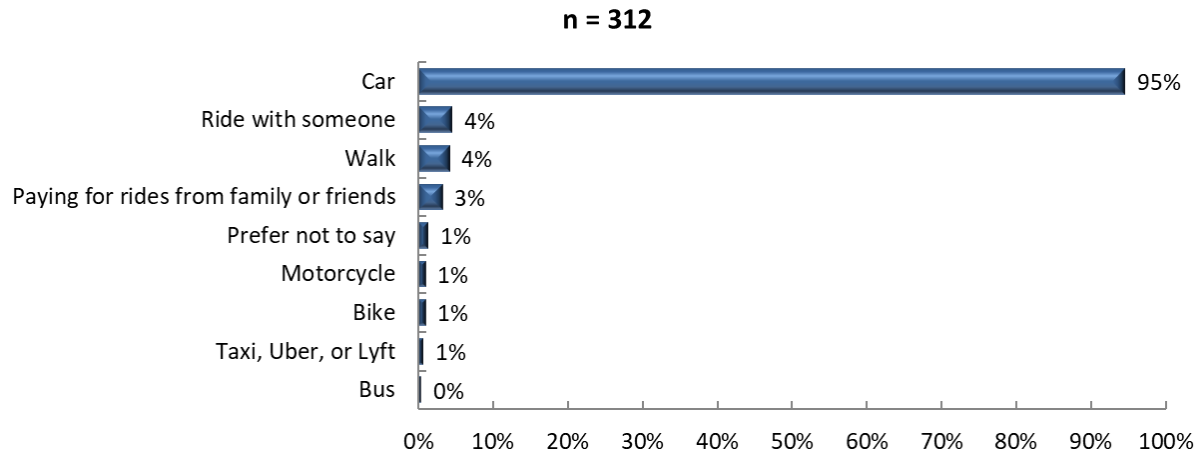


Figure A5.47: In the past 12 months has lack of transportation kept you from medical appointments, meetings, work, or getting things for daily living? Select all that apply:

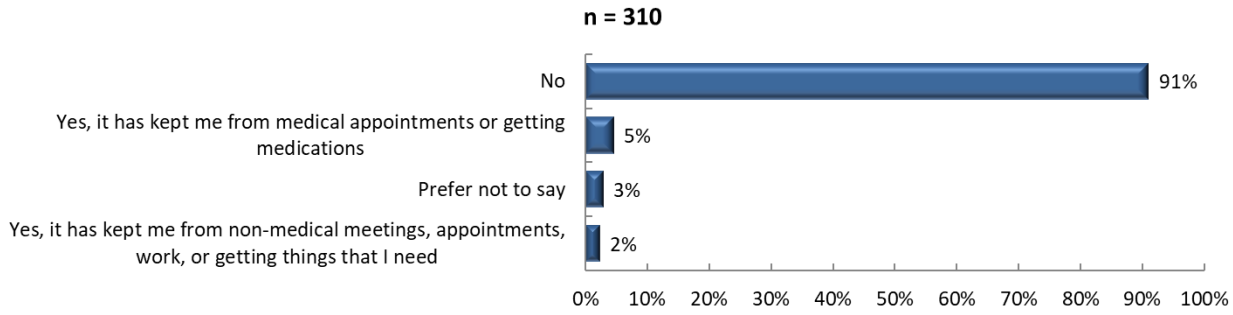
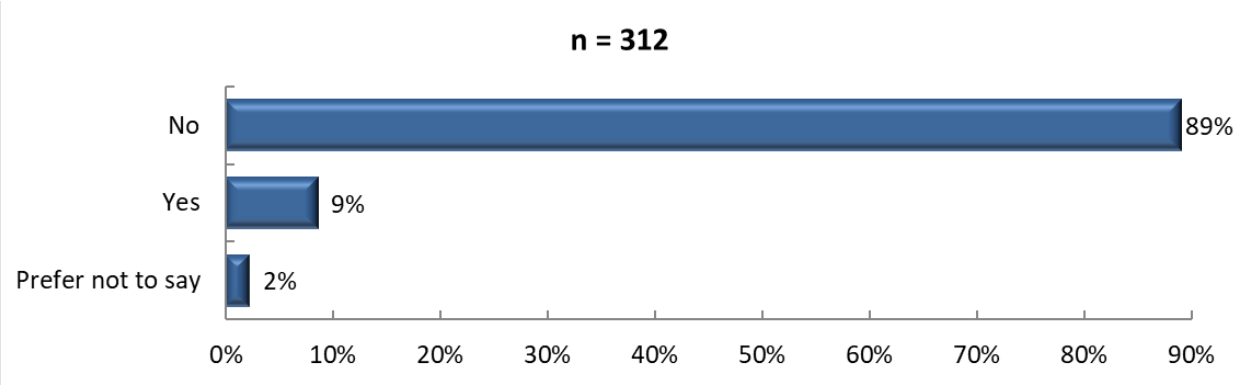


Figure A5.48: Do you put off or neglect going to the doctor because of distance or transportation?



APPENDIX 6 | SUMMARY OF DATA FINDINGS ACROSS SOURCES

Primary and Secondary data findings are summarized in full by the table below.[47]

Priority Area	Secondary Data	Community Survey	Focus Group 1	Focus Group 2	Focus Group 3	Focus Group 4	Focus Group 5
Behavioral Health: Mental Health							✓
Behavioral Health: Substance Use			✓				
Built Environment	✓						✓
Community Safety							
Diet & Exercise	✓						
Education			✓				✓
Employment & Income	✓	✓		✓	✓	✓	✓
Environmental Quality	✓			✓			
Family, Community & Social Support	✓						
Food Access & Security	✓		✓	✓	✓	✓	✓
Healthcare: Access & Quality	✓	✓	✓	✓	✓	✓	✓
Health Equity & Literacy			✓				
Housing & Homelessness	✓		✓			✓	✓
Length of Life							
Maternal & Infant Health							
Physical Health (Chronic Diseases, Cancer, Obesity)	✓	✓	✓	✓		✓	✓
Sexual Health	✓						
Tobacco Use	✓						
Transportation & Transit	✓		✓	✓	✓	✓	✓

[47] Survey results captured here reflect major findings from the Community Health Opinion Survey questions. Red boxes indicate categories identified as high need consistently across data sources.

APPENDIX 7 | EMERGENCY ROOM AND INPATIENT DATA