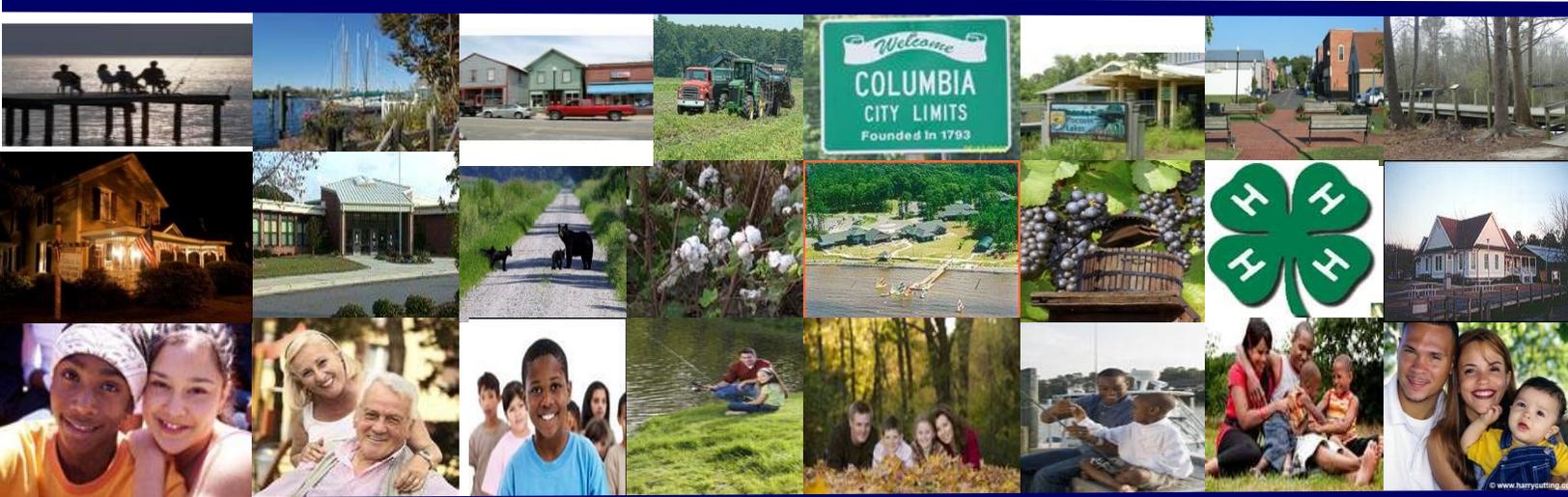




# Martin-Tyrrell-Washington District Health Department

## Tyrrell County Community Health Assessment 2014



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- Terrell Davis, MTW Health Director, hosted a key leaders meeting to solicit input on the problems and possible strategies to creating a healthier Tyrrell County and health department. Approximately 25 key leaders participated from a number of organizations including Tyrrell County Commissioners, Register of Deeds, Tyrrell County Manager, Town of Columbia (mayor), Law enforcement (sheriff), Martin County Community College (health sciences), Chamber of Commerce, Department of Social Services (director), School System (SHAC Chairman & School Nurse), and MTW District Board of Health.
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## Introduction

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Local public health agencies in North Carolina (NC) are required to conduct a comprehensive Community Health Assessment (CHA) at least once every four years. The CHA is required of public health departments in the consolidated agreement between the NC Division of Public Health (NC DPH) and the local public health agency. Furthermore, a CHA is required for local public health department accreditation through the NC Local Health Department Accreditation Board (G.S. § 130A-34.1). As part of the US Affordable Care Act of 2011, non-profit hospitals are also now required to conduct a community health (needs) assessment at least every three years. Recognizing that duplicate assessment efforts are a poor use of community resources, local health departments (LHDs) and non-profit hospitals across the state are developing models for collaboratively conducting the community health assessment process. For the MTW district, a partnership between MTW District Health Department and local hospitals has been a long-standing tradition, but they do not help fund or participate in previous community health assessments because our hospitals are (for profit) and they are not required to conduct a community needs assessment. Tyrrell County does not have a hospital in the county. This document is the culmination of the most recent partnership between local agencies, businesses, faith communities, local government and community residents and volunteers.

The community health assessment, which is both a process and a document, investigates and describes the current health status of the community, what has changed since the last assessment, and what still needs to change to improve the health of the community. The process involves the collection and analysis of a large range of data, including demographic, socioeconomic and health statistics, environmental data, and professional and public opinion. The *document* is a summary of all the available evidence and serves as a resource until the next assessment. The completed CHA serves as the basis for prioritizing the community's health needs, and culminates in planning to meet those needs.

Billie Patrick, Public Health Educator with the Martin-Tyrrell-Washington District Health Department (MTW) conducted the 2014 Community Health Assessment for the three counties of the MTW district, following the guidance by the *Community Assessment Guidebook: North Carolina Community Health Assessment*, published by the NC Office of Healthy Carolinians/Health Education and the NC State Center for Health Statistics. The assessment also adheres to the 2013 standards for community assessment stipulated by the NC Local Health Department Accreditation (NCLHDA) Program.

Dare Wiley, an MPH candidate in the Department of Public Health at the Brody School of Medicine, East Carolina University worked with the Health Educator to develop a multi-phase plan for conducting the assessment. The phases included: (1) a research phase to identify, collect and review demographic, socioeconomic, health and environmental data; (2) a data synthesis and analysis; (3) a period of data reporting and discussion among the partners; (4) a community input phase to elicit opinion and ideas regarding the assessment outcomes among community stakeholders; and (5) a prioritization and decision-making phase. Upon completion of this work the CHA partners and the community will have the tools they need to develop plans and activities that will improve the health and well-being of the people living in Tyrrell County.

## Assessment Methodology

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In order to learn about the specific factors affecting the health and quality of the life of Tyrrell County residents, the Health Educator tapped numerous readily available secondary data sources. For data on Tyrrell County demographic, economic and social characteristics sources included: the US Census Bureau; Log Into North Carolina (LINC); NC Office of State Budget and Management; NC Department of Commerce; Employment Security Commission of NC; NC Division of Aging and Adult Services; NC Child Advocacy Institute; NC Department of Public Instruction; NC Department of Administration; NC Department of Juvenile Justice and Delinquency Prevention; NC Division of Medical Assistance; NC Division of Child Development; NC Division of Health Services Regulations; the Cecil B. Sheps Center for Health Services Research; and the Annie E. Casey Foundation *Kids County Data Center*. Local sources for socioeconomic data included: the Tyrrell County Department of Social Services; Tyrrell County Schools; and other Tyrrell County agencies and organizations. The author has made every effort to obtain the most current data available at the time of the report was prepared.

The primary source of health data for this report was the NC State Center for Health Statistics, including its County Health Data Books, Behavioral Risk Factor Surveillance System, Vital Statistics, and Cancer Registry. Other health data sources included: US Centers for Disease Control and Prevention; NC DPH Epidemiology Section; NC Division of Mental Health, Developmental Disabilities and Substance Abuse Services; National Center for Health Statistics; Healthy People 2020; NC DPH Nutrition Services Branch; UNC Highway Safety Research Center; and the NC Department of Transportation.

Because in any community health assessment it is instructive to relate local data to similar data in other jurisdictions, Tyrrell County data is compared to like data describing the state of NC as a whole, as well as to data from Bertie County, a state-recommended “peer county”. Also used for comparison is data for the average measure of each parameter in the three counties in the MTW jurisdiction: Martin County, Tyrrell County, and Washington County. In some cases Tyrrell County data is compared to US-level data, or to Healthy People 2020 goals or other standardized measures. Where appropriate, trend data has been used to show changes in indicators over time, at least since the 2010 Tyrrell County CHA, but sometimes further back than that.

Environmental data were gathered from sources including: US Environmental Protection Agency; NC Department of Environment and Natural Resources Divisions of Air Quality, Waste Management, and Environmental Health; and NC State Laboratory of Public Health.

MTW and its partners conducted a community health survey among members of the public and community leaders as well as Listening Groups among community members as part of the CHA process. The methodologies and results of these surveys are presented in a separate section of this report.

## Executive Summary

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### Overview of Purpose and Process

---

A Community Health Assessment (CHA) is a process by which community members gain an understanding of the health concerns and health-care systems of the community by identifying, collecting, analyzing, and disseminating information on community assets, strengths, resources, and needs. Assessing the community's needs is one of the core functions of Public Health to ensure that we are providing care and services that are needed by the community.

The 2014 Tyrrell County Community Health Assessment was a collaborative effort between Tyrrell County Government, Tyrrell County Health Department, Safe Kids Riverbend Coalition, and many community partners and volunteers.

This report will serve as an update to the 2010 Community Health Assessment, providing trend data on key health issues, guiding the work of community groups, coalitions, and organizations to improve the health and quality of life in Tyrrell County.

### Summary of Demographics, Trends, and Select Findings

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- The population of Tyrrell County has decreased by 6.8% since 2010.
- Tyrrell County is racially composed of 58.9% White, 36.6% Black, and 6.8% Hispanic.
- The Hispanic population has increased since 2010 from 5.4% to 6.8% of the population.
- The Asian population has increased since 2010 from 0.2% to 2.5% of the population. This increase is more than 100%
- The two largest demographic population groups in the county are 0-18 years old (18.3%) and 65+ (18.9%).
- The median age in Tyrrell County is 41.3 years old and the median household income in Tyrrell is \$34,216.
- Overall poverty rate in Tyrrell County is 20.8% from (2009-2013), a minor decrease from 23.3% (2006-2010).
- Approximately 29.8% of the households in Tyrrell County were food insecure in 2013.
- Unemployment rate in Tyrrell County averaged 5.9% in November 2014.
- Major industry in the county includes fishing industry, tourism and agriculture.
- Tyrrell County maintains the "Tier I Designation," as one of the most economic distressed counties in North Carolina.
- Tyrrell County's High School Graduation rate was 71.5% compared to the state rate of 84.9%.

## Leading Causes of Death Ages in Tyrrell County 2009-2013, (Age Adjusted Death Rates)

**Table 1. Leading Causes of Death, Age Adjusted Death Rates 2009-2013**

Cause of Death	Death Rate – Tyrrell County	Death Rate – NC
Cancer**	229.7	173.3
Heart Disease**	266.9	170.0
Cerebrovascular Disease (Stroke)**	79.6	43.7
Chronic Lower Respiratory Diseases	60.6	46.1
Motor Vehicle Injuries**	42.1	13.7
Diabetes**	32.8	21.7
Nephritis, nephritic syndrome& nephrosis	28.1	17.6
Other Unintentional Injuries	28.1	13.7
Alzheimer’s Disease	23.4	5.8
Pneumonia & Influenza	18.7	17.9

\*\* Indicates Tyrrell’s age-adjusted death rates are significantly higher than the state’s age-adjusted death rate for that cause of death

### Health Indicators

- Chronic Diseases such as Heart Disease, Cancer, and Stroke remain the top three leading causes of death in Tyrrell County.
- Maternal smoking rate was 19.8 in Tyrrell County, and continues to be significantly higher than the state average of 10.6 per 1,000 live births.
- Breast Cancer and colon cancer were the leading causes of cancer deaths in Tyrrell County.
- Suicide death rate shows a significant increase from 0.0 (2006-2010) to 20.2 (2007-2011) per 100,000 population.
- Tyrrell County’s maternal health indicators are higher than the state’s rate for Low Birth Weight, and Teen Pregnancy, as well as Infant Death.
- According to the 2013 Behavioral Risk Factor Surveillance data, 66.1% of the population self-reported as overweight or obese.

### Community Input

One requirement for the community health assessment process is the collection of primary data from members of the community. Tyrrell County elected to conduct listening groups with key leaders/stakeholders throughout the county, as well as conduct a community health opinion survey where interview locations were randomly selected using a modified cluster sampling methodology. The community health opinion survey was adapted from the Community Assessment Guidebook, NC Division of Public Health.

Five (5) listening sessions with 52 participants were held to ascertain community members’ perception of health concerns and suggestions for improving health within the community and other issues important to residents. Groups are listed in Appendix D. The groups were selected in order to gain information from or about segments of the community with a focus on demographics: race, ethnicity, and age; disparate populations: including lower income adults, elderly, ethnic populations; and professionals and service providers who work with these populations.

Goals of the listening sessions were to:

- Gain an understanding of the health concerns within the community (concerns);
- Gain an understanding of the health care systems within the community (services and resources);
- Identify the factors that affect the health of the community (determinants); and

- Determine the availability of health resources within the community (services and resources).

Questions were developed with the intent to discover the community's viewpoint and concerns about life in the community, health concerns, and other issues important to residents. Participants were asked how they define a "healthy community", how people stay healthy, what they thought were the most serious health problems in the community, challenges to meet health care needs, and ways to improve the health of county residents. Questions are listed in Appendix D.

The community health opinion surveys were conducted by students from UNC Chapel Hill, Public Health Leadership Program that visit Tyrrell County every year during their spring break to provide support and service within the county. The students developed census maps of Tyrrell County and surveyed community residents door-to-door. A total of 116 surveys were completed.

Survey teams were comprised of UNC Chapel Hill students, as well as volunteers recruited from the county. Survey protocol followed procedures established for community health assessments whereby surveys were conducted during work hours and early evening hours, as well as some Saturdays. When target households resulted in refusals or not-at-home, survey teams proceeded on to the next household on their route and within the designated survey cluster.

Survey responses were analyzed using SurveyMonkey. This means of analysis allows you to see a summary view of your data, individual responses, create custom charts, and use filters to focus on specific data views and segments. It will also compare and show results to see trends and patterns in your data.

The survey instrument and results are provided in the Appendix B of this document. Spanish surveys were available for the Hispanic population. An instruction card in Spanish was handed to any Spanish speaking resident explaining the survey and that an interpreter would be available to conduct the survey via phone if preferred. An area on the instruction card was provided for the resident to write their name and phone number.

A review of secondary data was conducted by examining county level health data primarily compiled by the NC State Center for Health Statistics. Examples of such data included leading causes of mortality, health care resources availability, and prevalence data from the Behavioral Risk Factor Surveillance Survey (BRFSS). Other resources were utilized such as the Cecil G. Sheps Center for Health Services Research at the University of North Carolina – Chapel Hill.

It is well recognized that other factors within a community affect the health of a community. Demographic, educational, economic, and environmental data for the county were reviewed as well to determine the potential for impact on health status within the community.

Additionally where possible, Tyrrell County data were compared to data from eastern North Carolina, North Carolina and the United States. A review of data across several years was also conducted to determine trends in health status for Tyrrell County.

These data were compiled and presentations were made to the CHA Committee at the October 2012 and November 2012 meetings. Members were given an additional month to review the data and ask questions.

At the December 2012 meeting of the CHA Committee, each member was given an opportunity to vote for the five (5) top health priorities. The health categories/priorities were based on the NC 2020 Health Objectives. The voting results were compiled at the meeting and priorities were identified by utilizing a nominal group process. Members discussed the distribution of votes, as well as the opportunities for

action/improvement within a proposed priority area. Priorities were selected based on this process. The Committee identified priority health concerns for all of Tyrrell County, as well as identified which of these priorities the Committee would address for the next four years.

From January - May 2013, the planning committee members representing health care, public health, community members and leaders, education and faith community leaders came together to look at priorities areas for the purpose of developing action plans. These action plans will be used to guide the work of the committee for the next four years and serve as a basis for reporting status annually toward addressing the priorities identified in this community health assessment process. Health status reports will be made available annually to the Board of Health as well as the general public in the form of publications and/or presentations.

## Outcomes

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The CHA Planning Committee recommended the following as priority health areas for 2015 – 2018.

1. Physical Activity/Nutrition/Healthy Weight
2. Chronic Diseases (including heart disease, high blood pressure, diabetes)
3. Access to Care/Transportation
4. Substance Abuse Prevention
5. Communicable Disease Control (STDs)

## Recommendations

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The team picked three (3) top health issues; (1) physical activity/nutrition/healthy weight, (2) chronic diseases (including heart disease, diabetes, & high blood pressure), and (3) substance abuse prevention.

## Next Steps

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Additional community meetings will be held in 2015 to discuss and develop a Community Action Plan to address the priority areas identified. For more information or to learn how to become involved, contact the Martin-Tyrrell-Washington District Health Department, 252-791-3125

## Dissemination Plan

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Printed copies of the 2014 Community Health Assessment will be made available at the local libraries. An electronic version of this report will be available for download on the Martin-Tyrrell-Washington District Health's website, [www.mtwdistricthealth.org](http://www.mtwdistricthealth.org) and the health department's facebook page. A press release will be issued following the submission of the report, and a presentation will be made to the Martin-Tyrrell-Washington District Board of Health. Additionally, if your agency or organization would like a presentation or explanation on the findings from the 2014 Community Health Assessment, or if you would like to learn more about upcoming projects or initiatives related to the Community Health Assessment please call the Martin-Tyrrell-Washington District Health at 252-791-3125.

## Chapter 1: Demographic Data

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### Geography

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Tyrrell County is a county located in the U.S. state of North Carolina. As of the 2010 census, the population was 4,407 making it the least populous county in the state. The Albemarle-Pamlico Peninsula is located in the northeastern North Carolina, inshore of Nags Head and the Outer Banks in the Inner Banks region. The county has a total area of 594 square miles, of which 389 square miles is land and 205 square miles (35%) is water. Adjacent counties include Washington County – west, Dare County – east, and Hyde County – south. County climate and weather is seasonally mild, however with an average elevation of 4 feet above sea level, residents are no stranger to hurricanes, flooding, and tropical weather. On average there are 211 sunny days per year and the average high temperature in July is 89 degrees and in January the average low is 31 degrees.

The national protected area found in Tyrrell County is the Pocosin Lakes National Wildlife Refuge.

### History

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Tyrrell County... nature's buffer zone, sprawled between the urban mainland and the popular stretch of North Carolina's Outer Banks. Here is where the red wolf howls; bald eagles and northern barriers soar across the sunset. American alligators live at their northern limits near ancient pocosin forests. Conservation gems like Palmetto-Pearlree Preserve, Emily and Richard Preyer Buckridge Coastal Preserve, Pocosin Lake National Wildlife Refuge and the new bayside Eastern 4-H Environmental Education Conference Center help highlight Tyrrell County's remarkable natural wealth.

Tyrrell County is a diverse economic and ecological destination located between the northeast North Carolina urban mainland and the Outer Banks. Tyrrell County was named for Sir John Tyrrell, one of the Lords Proprietors of the Carolina colony. Tyrrell County's original boundaries originally stretched westward from *Roanoke Island* to near present day Tarboro. In 1870 the territory was divided and resulted in what is now known as Tyrrell, Martin, Washington and Dare counties. Elizabethtown, later renamed Columbia, was established on the banks of the Scuppernong River in 1793 and became the Tyrrell County seat in 1799.

Somerset Place State Historic Site, a representative antebellum plantation dating from 1785, is located near Columbia. Beginning in 1829, this was home to two generations of the Collins family-Josiah Collins III, his wife Mary, and their six sons. It was also home to more than three hundred enslaved men, women, and children of African descent whose lives and work are interpreted here as well. Somerset Place offers an insightful view of plantation life during the antebellum period.

Tyrrell County hosts a special and abundant environment where black bear and bobcats roam. Bald eagles and peregrine falcon soar over alligator and rose-crested orchids and pitcher plants. Commerce is also at home in Tyrrell County where world class agri-business and fishing helps feed the world and provides seeds for others to chart their economic harvests. The county hosts a wealth of water and land based ecotourism venues and is embraced by the Scuppernong and Alligator Rivers and the Albemarle Sound. The county is poised for residential, recreational and commercial growth and is aggressively finalizing the infrastructure necessary for multi-faceted development enhancing an already unparalleled quality of life.

Tyrrell County's wild and remote nature may have contributed to its sparse population and light development in the past. Today, however, abundant water, forests and wildlife are recognized as some of

its most valuable assets and are helping to build a healthy, sustainable future for this beautiful part of North Carolina.

As Cora Barksdale stated in the early 20<sup>th</sup> century, “*Columbia...the town I’ve imagined in my dreams but never believed existed.*” Columbia’s quaint charm and Tyrrell County’s wild beauty has captured the heart of more than a few. In a world sometimes too anxious to attract tourists, Tyrrell County stands out as “the real thing”...genuine, down home, unpretentious.

## Population Characteristics

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### General Population Characteristics

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The following general population characteristics of Tyrrell County and its peer county were based on 2010 US Census data presented in Table 2. See Appendix (56).

- As of the 2010 US Census, the population of Tyrrell County was 4,407.
- The overall median age in Tyrrell County is 42.0, 2.7 years older than the median age for the three-county MTW district and 0.9 years older than Bertie County, an assigned peer county. The median age in Tyrrell County was 4.6 years older than the median age for NC as a whole.

### Population by Township

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Tyrrell County is divided into five townships: Alligator, Columbia, Gum Neck, Scuppernong, and South Fork. The following population information was derived from 2010 US Census data presented in Table 3. See Appendix A (56).

- Columbia Township was the largest township by population in Tyrrell County, accounting for almost 62% of the county’s population.
- Scuppernong Township was the second-largest township in Tyrrell County, with 18.1% of the county’s population.
- South Fork was the smallest township in the Tyrrell County, and was home to only 1.2% of the overall county population.
- Gum Neck was the youngest township in the county in terms of median age: 38.4 years.
- Alligator Township was the oldest township in the county, with a median age of 39.7 years.

## Population Growth

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Table 4 presents’ historical population county and population projections from 1980 through 2030. From this data, it appears that the Tyrrell County population has been decreasing since 2000, and that a modest rate of growth is not expected to continue through 2030. Although the rate of growth for Tyrrell County is projected to be lower than the comparable rate for the state as a whole, it is projected to be higher than the regional average for the period 2010 through 2030. See Appendix A (56).

### Birth Rate

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Overall population growth is a function both of increase (via immigration and birth) and decrease (via emigration and death). Figure 1 illustrates that the birth rate is declining in NC and all three other jurisdictions in the comparison. In Tyrrell County, the birth rate decreased from 12.1 live births per 1,000 population in the 2004-2008 aggregate period to 10.2 live births per 1,000 population in the 2009-2013 aggregate period, a decrease of 1.9%. The birth rate for NC exceeded the comparable rates in the other jurisdictions for every period cited. See Appendix A (57).

## Race and Ethnicity

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The population of Tyrrell County is more racially diverse than both the MTW district and our peer county as a whole. For example, according to data in Table 5 from the 2010 US Census, the white population in Tyrrell County was approximately 61.4% of the total population, a proportion approximately more than half the comparable proportion in Bertie County, our peer county as a whole and more than half of the comparable proportion for the district. See Appendix A (57).

- Whites composed 61.4% of the total population; regionally the comparable figure was 40.5% and statewide the figure was 68.5%.
- Blacks/African Americans composed 28.1% of the total population; regionally the comparable figure was 40.4% and statewide the figure was 21.5%.
- American Indians and Alaskan Natives composed 2.0% of the total population; regionally the comparable figure was 0.7% and statewide the figure was 1.3%.
- Hispanics/Latinos of any race composed 5.4% of the total population; regionally the comparable figure was 4.0% and statewide the figure was 8.4%.
- Asians, Native Hawaiians and Other Pacific Islanders composed 2.5% of the total population; regionally the comparable figure was 1.0% and statewide the figure was 2.3%.
- These numbers indicate a slight decrease in White and Black races and the Hispanic population since the 2010 Community Health Assessment. However, the Asian population substantially increased from 0.2% to 2.5%, an increase of more than 100%

## Age Distribution

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The following information about the age (and gender) distribution of the Tyrrell County population was derived from the 2010 US Census data presented in Table 6. Generally, these data demonstrate that Tyrrell County had a population skewed older than the distribution for the state as a whole. See Appendix A (58).

- In terms of both numbers (354) and percent 8.1%, the largest segment of the population in Tyrrell County was the age group 45 to 49 years. This differed slightly from NC as a whole, where the segment composing the largest number and percent (7.3%) of the state's population was the same age group 45 to 49 years.
- Persons 65 years of age or older composed 16.9% of the population in Tyrrell County, but 12.8% of the population of NC.
- Persons 19 years of age and younger composed 10.4% of the population in Tyrrell County, but 26.8% of the population of NC.
- In both Tyrrell County and NC, in the age groups 45-49 and older the percent of the population composed of males exceeded or equaled the percent of the population composed of females.

Figures 2 and 3 compare the age distribution of the NC population to the age distribution of the populations in Tyrrell County and the MTW District, respectively. Throughout the district and Tyrrell County, there was a smaller proportion of young persons and a larger proportion of older persons than demonstrated in the state age distribution profile. See Appendix A (58-59).

## Non-English Speaking Population

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The foreign-born population in a community is one that potentially does not speak English, and so it is a concern to service providers. NC, the greatest proportion of the increase in foreign-born persons is represented by immigrants of Hispanic origin; however, statewide there has also been an influx of foreign-born immigrants from Southeast Asia.

According to US Census Bureau estimates summarized in Table 7: See Appendix A (59).

- There were 165 foreign-born residents residing in Tyrrell County in 2010. Using a base 2010 county population figure of 4,407, foreign-born residents made up 4% of the total county population at that time.
- Since 1980, the largest influx of the foreign-born population in Tyrrell County 109 persons arrived between 2000 and 2010, an increase of 51.4% over that 10-year span. The rate of the district average increase was approximately the same as the comparable figure for our peer county as a whole, 69.4%.
- Between 2000 and 2010 the foreign-born population in both the district and Bertie County grew by approximately the same percentage, ~67%.

## Linguistic Isolation

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“Linguistic isolation”, reflected as an inability to communicate because of a lack of language skills, can be barrier prevention for foreign-born residents from accessing needed services. The US Census Bureau tracks linguistically isolated households according to the following definition:

*A linguistically isolated household is one in which no member 14 years and over (1) speaks only English, or (2) speaks a non-English language and speaks English “very well”. In other words, all members 14 years old and over have at least some difficulty with English.*

The following information about linguistically isolated households is derived from the 2005-2009 five-year US Census Bureau estimates presented in Table 8. See Appendix A (59).

- Of the 1,744 Tyrrell County households included in the statistic, an estimated 92 (5.3%) spoke a language other than English. Of these, an estimated 72 (78.3%) were linguistically isolated.
- The only linguistically isolated households in Tyrrell County in the period cited occurred within the Spanish-speaking population.

## Age Distribution of the Latino Population

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Since the Hispanic/Latino population is the principal linguistically-isolated group in Tyrrell County, further knowledge of the characteristics of this group is helpful in anticipating service needs.

In Tyrrell County, as in other counties in NC, a major impetus for immigration – at least until the economic downturn that began in 2008 – was the prospect of employment opportunities. One would expect then that the age groups predominant in this population would be those in their “prime” for work, especially the physical labor-type jobs in construction, agricultural, and fishing industries available to them in the coastal region of the state. The spouses of these workers would be in the midst of their childbearing years, so it might also be expected that this population would have children.

Figure 4 is a graphic depiction of the 2010 US Census population profile by group of the total Tyrrell County population compared to the same profile for the Hispanic/Latino population. See Appendix A (60).

- In Tyrrell County all age groups under the age of 40 were present in higher proportions in the Hispanic/Latino population than in the overall county population. There were lower proportions for Hispanics/Latinos than for the general population in all the other age groups.
- The highest proportions of the Hispanic/Latino population in Tyrrell County occurred in the 5-9 and the 25-29 age groups. In the overall county population, the highest proportions were in age groups covering the span from 45 to 59.

## Economic Climate

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### Tier Designations

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Every year, the North Carolina Department of Commerce annually ranks the state's 100 counties based on economic well-being and assigns each a Tier designation. The 40 most distressed counties are designated at Tier 1, the next 40 at Tier 2 and the 20 least distressed as Tier 3. Tyrrell County continues its designation as "Tier 1". The designations, which are mandated by state law (G.S. 143B-437.08), determine a variety of state funding opportunities to assist in economic development including tax incentives. Eligible businesses that locate in lower-tiered counties such as Tyrrell County are eligible for some grant programs and larger tax credits than those that locate in higher ranked areas. Bertie County our peer county is also designated as a Tier 1 county.

### Income

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While revenue indicators give us some idea of economic health from the community economic development standpoint, income measures tell us about the economic well-being of individuals in the community. Among the more useful income measures are personal income, family income, and household income. For comparison purposes, personal income is calculated on a per capita basis; family income and household income are viewed as a median value for a target population. The following are definitions of each of the three income categories:

- *Per capita personal income* is the income earned per person 15 years of age or older in the reference population.
- *Median household income* pertains to the incomes of all the people 15 years of age or older living in the same household (i.e., occupying the same housing unit) regardless of relationship. For example, two roommates sharing an apartment would be a household but not a family.
- *Median family income* pertains to the income of all the people 15 years of age or older living in the same household who are related either through marriage or bloodline. For example, in the case of a married couple who rent out a room in their house to a nonrelative, the household would include all three people, but the family would be just the couple.

Table 9 summarizes recent income data for Tyrrell County and its comparators. Among these jurisdictions: See Appendix A (60).

- Tyrrell County had the lowest income figures in one category, and its measures were consistently and significantly below the comparable state averages.
- Per capita personal income was highest statewide and lowest in Bertie County, our peer county, where the figure was almost \$8,500 lower than the state figure.
- Median household income was highest statewide and lowest in Bertie County, our peer county, where the figure was almost \$16,500 lower than the state figure.
- Median family income was highest statewide and lowest in Tyrrell County, where it was more than \$18,432 below the state average.

### Employment

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The following definitions will be useful in understanding the data in this section.

1. *Labor force*: includes all persons over the age of 16 who, during the week, are employed, unemployed or in the armed services.
2. *Unemployed*: civilians who are not currently employed but are available for work and have actively looked for a job within the four weeks prior to the date of analysis; also, laid-off civilians waiting for a job within the four weeks prior to the date on analysis; also, laid-off civilians

waiting to be called back to their jobs, as well as those who will be starting new jobs in the next 30 days.

3. *Unemployment rate*: calculated by dividing the number of unemployed persons by the number of people in the civilian labor force.

## Employment by Sector

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Tyrrell County Board of Education and Health Services accounted for the largest percentage of the Tyrrell County workforce at 31.01%, followed in fourth place by Public Administration, at 20.22%. No other single sector accounted for as much as 10% of the total workforce in Tyrrell County.

- District-wide, the sector employing the largest percentage of the workforce 17.30% also was Health Care and Social Assistance, followed by Manufacturing, 13.22%, and Education Services 14.16%.
- In Bertie County, the sector employing the largest percentage of the workforce (23.90%) also was Health Care and Social Assistance, followed by Manufacturing (12.11%), and Educational Services 12.02%.
- Statewide, the sector employing the largest percentage of the workforce was Health Care and Social Assistance 14.33%, followed by Manufacturing 11.64% and Retail Trade 11.46%.
- The average annual wage per employee in Tyrrell County in 2011 was \$27,861, \$5,913 less than the average annual wage per employee in Bertie County, \$2,350 less than the average district-wide and \$18,911 less than average statewide.

## Largest Employers

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Table 10 lists the largest 10 employers in Tyrrell County as of the end of the 2<sup>nd</sup> Quarter, 2014. See Appendix A (60).

- The largest employer in Tyrrell County was the Tyrrell County Board of Education and Health Services, followed by the Department of Public Safety.
- Largest Top Employers in Tyrrell County:
  1. *Tyrrell County Board of Education & Health Services*
  2. *Department of Public Safety*
  3. *White Cap Linen*
  4. *County of Tyrrell*
  5. *Captain Neil's Seafood, Inc.*
  6. *Black Gold Farms, Inc.*
  7. *Food Lion Trade, Inc.*
  8. *Gary G. Comstock*
  9. *Cherry Farms Seed Company*
  10. *Double Dee Farms, Inc.*

## Travel for Employment

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Data gathered by the US Census Bureau on how many resident workers travel outside the county for employment can help demonstrate whether or not a county provides adequate employment opportunities for its own citizens. The economic impact of out-of-state employment is that those workers may pay taxes and spend part of their income out of state. Table 11 summarizes 2009-2013 estimated travel for employment data for Tyrrell County and its comparator jurisdictions. See Appendix A (61).

- A majority 61% of Tyrrell County resident workers were employed within the county.
- Of the 553 Tyrrell County resident workers who left the county for work, 11 worked out-of- state and 542 worked elsewhere in NC.

- In Bertie County, 55.2% of resident workers worked in-county; of the 3,211 who worked elsewhere, 5.1% (367) worked out-of-state.
- District-wide, only 59.5 of resident workers worked in-county; approximately .24% worked out-of-state.
- Statewide, roughly 72% of resident workers worked in their county of residence; 26% worked in another county, and less than 3% worked out-of-state.

## Unemployment

Figure 5 plots the unemployment rate in Tyrrell County and its jurisdictional comparators. See Appendix A (61).

- Beginning with 2008 data, the unemployment rate began to rise sharply in all four jurisdictions. Unemployment began to decrease in Tyrrell and Bertie Counties as well as the district as a whole beginning in 2012. The decrease statewide began in 2011.
- Throughout the period cited, the unemployment rate in Tyrrell County was the highest among the four jurisdictions.

## Poverty

The poverty rate is the percent of the population (both individuals and families) whose money income (which includes job earnings, unemployment compensation, social security income, public assistance, pension/retirement, royalties, child support, etc.) is below a federally established threshold; this is the “100%-level” figure.

Table 12 shows the annual poverty rate for the period from 1970-2000 and the estimated poverty rate for two five years periods: 2006-2010 and 2007-2011. The data in this table describe an overall rate, representing the entire population in each geographic entity. As subsequent data will show, poverty may have strong racial and age components that are not discernible in these numbers. See Appendix A (61).

- In Tyrrell County, the three-county MTW district and the state of NC, the poverty rate fell each decade from 1970 through 2000. Since 2000, the poverty rate in Tyrrell County has been wavering from 34.1% 2008-12 to 23.2% 2009-13.
- In the MTW district, the average poverty rate remained at around 23.4 in 2000 and 2009-13, but rose 11% to 34.1% in 2008-12.
- The poverty rate in Bertie County was quite unstable over the entire period cited, and stood at 23.4% in 2009-13.
- Bertie County had the highest poverty rate among the four jurisdictions for the decades 1970 through 2000 and the second-highest rates were in Tyrrell County.
- Overall, the poverty rates in all four jurisdictions fell between 1970 and 2009-13. In Tyrrell County, the overall decrease was 49%.

Table 13 presents poverty data stratified by broad racial group (white/black). It is clear from these data the Blacks/African Americans have much higher poverty rates than whites. See Appendix A (62).

- Across all time periods and in all jurisdictions cited in the table, the poverty rate among black was two to three times the poverty rate among whites.

Table 14 presents poverty data stratified by age group. From these data it is apparent that children suffer disproportionately from poverty. See Appendix A (62).

- In all four jurisdictions in every time period cited in the table, the poverty rate for children under the age of 18 exceeded the overall poverty rate from 3% to 19%, with the greatest average variance 83% occurring in the Bertie County. The remaining average variances were 60.4% in Tyrrell County, 72.0% in the MTW district, and 33.3% in NC.

## Children Receiving Free or Reduced-Price School Lunch

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Other data corroborate the impression that children, especially the very young, bear a disproportionate burden of poverty, and that their burden is increasing. One measure of poverty among children is the number and/or percent of school-age children who are eligible for and receive free or reduced price school lunch.

Students have to be eligible to receive meals; not everyone who is eligible will choose to enroll in the program and receive meals. To be eligible for *free* lunch under the National School Lunch Act students must live in households earning at or below 130 percent of the Federal poverty guidelines. To be eligible for *reduced-price* lunch students must live in households earning at or below 185 percent of the Federal poverty guidelines.

Table 15 and 16 show the percent of students enrolled to receive free or reduced-priced lunch. The source for the data in Table 15 is the national Annie E. Casey Foundation *Kids County Data Center*; the source for the data in Table 16 (specific to Tyrrell County only) is Tyrrell County Schools. To help readers grasp the numbers behind the percentages in all jurisdictions, Table 17, based on data from the NC Department of Public Instruction, shows the number of students who received either free or reduced-price school lunch in several recent school years (SY2008-09 through SY2013-14). See Appendix A (62).

- The percentage of students in Tyrrell County enrolled for free or reduced-price school lunch appeared to vary without a clear pattern throughout the school years presented in the table. In SY 2013-14, 77.1% of students were enrolled in the program; this figure was one of the lowest compared to SY2008-09 at 71.6%.
- Free and reduced-price school lunch enrollment in the other jurisdictions also seemed to vary without a clear pattern. The percent of students eligible for free or reduced-price lunch statewide reached its highest over the period cited in SY2013-14.

While the table above presented the percentage of students enrolled in free and reduced-price lunch programs. Table 16 presents' data on the number and percent of students eligible for free and reduced-price lunch, which should be the higher figures. According to the locally provided data in Table 17, the total percent of students eligible for free and reduced-price lunch reached a four-year maximum of 18.2% in the current school year, SY2013-14. See Appendix A (63).

From the *counts* of students receiving free or reduced-price lunch presented in Table 17 it is perhaps more clear how the population using that benefit has grown over time. See Appendix A (63).

- In Tyrrell County the number of students receiving free or reduced-price lunch decreased 1.2% between SY2008-09 and SY2013-14.
- District-wide the comparable figure increased 1.1% between SY2008-09 and SY2013-14.
- Statewide, the number of students receiving free or reduced-price lunch increased 17.8% over the same period, with incremental increases every school year.

## County Economic Service Utilization

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The Tyrrell County Department of Social Services (DSS) manages a number of programs that provide assistance to low-income people.

The *Food and Nutrition Services* program (formerly known as Food Stamps) helps eligible households buy the food they need for a nutritionally adequate diet. Benefits may be used to purchase most foods at participating stores; they may not be used to purchase tobacco, pet food, paper products, soap products, or alcoholic beverages.

*WorkFirst* is North Carolina's Temporary Assistance for Needy Families (TANF) program, through which parents can get short-term training and other services, including cash supports, to help them become employed and self-sufficient. Most families have two years to move off *WorkFirst* Family Assistance.

Table 18 presents data on the economic services provided by Tyrrell County DSS in FY 2012-13. See Appendix A (63).

- If a “case” is an individual, the caseload for food and nutrition services that totaled 462 represented 10.5% of the Tyrrell County population in the 2010 US Census.
- *WorkFirst* sometimes is not a very popular program due to stringent requirements once an individual enrolls. This may be why the total caseload is smaller than the number of applications approved.

## Housing

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Table 19 presents US Census Bureau data on housing by type 2000 and 2009-2013. See Appendix A (64).

There was roughly 25.6% vacant housing in Tyrrell County in both time periods cited, higher than the state average and the district average, which may have reflected housing geared to seasonal residents or tourists.

- Of the occupied housing units in Tyrrell County, approximately 75.4% were owner occupied; 24.6% were renter occupied.
- The highest proportion of mobile homes in both periods 32.9 was in Tyrrell County.
- In 2000 the median monthly mortgage cost \$981 was highest statewide and second highest in the MTW district at \$725; in 2009-13 the highest median monthly mortgage cost was statewide at \$1,281. The lowest mortgage cost in both periods was in Tyrrell County in 2000 at \$501 and in 2009-13 was in Bertie County at \$959.
- In 2000 \$985 and 2009-13 \$1,281 the highest median gross monthly cost for rent was the state average.
- Median gross monthly rent cost in Tyrrell County increased by 58.3% between 2000 and 2009-13.

Table 20 presents data on housing costs as a percent of household income. See Appendix A (64).

- In both time periods cited, the percentage of *renter-occupied* housing units costing more than 30% of household income was highest in Bertie County, and the percentage increased 5% from one period to the next.
- In 2008-2012 the percentage of *mortgaged* housing units costing more than 30% of household income was highest in Tyrrell County 47% and also in 2009-2013 at 46%.
- In Tyrrell County the percentage of mortgaged units costing more than 30% in household income decreased 1% between intervals.

## Affordable Housing

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According to information from the NC Rural Economic Development Center based on 2006-2010 US Census data estimates, 36% of housing in Tyrrell County was classified as “unaffordable”, compared to 37% in Bertie County, and averages of 31% district-wide and 32% statewide. This data is at least partially reflective of the population living in households that pay more than 30% of the household income for housing costs.

The US Department of Housing and Urban Development (HUD) maintains a system for tracking “affordable” housing for its low-income clients, to whom it provides housing subsidies. HUD services are delivered through Public and Indian Housing Authority (PHA) offices throughout NC.

There is no PHA office located in Tyrrell County to assist residents in accessing HUD services. The nearest offices are in Elizabeth City (Pasquotank County), Edenton (Chowan County), Hertford (Perquimans County), Plymouth (Washington County), Ahoskie (Hertford County), Williamston (Martin County) and Washington (Beaufort County). At the time this report was developed, there were no HUD subsidized single-family homes available in Tyrrell County and only two low-rent apartment facilities: an ARC facility in Windsor for developmentally disabled persons, and a family apartment facility, Windsor Oaks, also in Windsor. The US Department of Agriculture (USDA) catalogues information about rental properties available in rural areas. The agency’s Multi-Family Housing (MFH) Rental website provides an online guide to Government assisted rental projects. At the time this report was developed, the MFH website listed four qualifying rental properties in Bertie County.

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## Homelessness

The NC Coalition to End Homelessness coordinates a statewide Point-In-Time Count, an unduplicated count of homeless people, held on one night in the last week of January each year. It is not clear which of the counties in the MTW district do or do not participate in this count, but results are available only for Tyrrell County, which reported 2 total homeless persons in 2012 and 1 in 2013.

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## Households

Table 21 describes the number of persons living in households in the four comparator jurisdictions. See Appendix A (65).

- The average number of persons per household in Tyrrell County 2.48 was tied with the state average and higher than the district average 2.40, and lower than Bertie County 2.58.
- The percent of one-person households in Tyrrell County 28.2 was lower than the comparable figure for two of the other jurisdictions and higher than the state average 27.0.
- The percent of the one-person households where the resident is age 65 and older in Tyrrell County 35.4% was higher than the comparable figures for the other jurisdictions.

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## Single Parent Families

Data in Table 22 describes some characteristics of single-parent families. In order to interpret the table please note the following definitions provided by the data source: See Appendix A (65).

- *Family*: A family consists of two or more persons, including the householder, who are related by birth, marriage, or adoption, and who live together as one household; all such persons are considered as members of one family. (Persons not in families and not inmates of institutions are classified as unrelated individuals.)
- *Families with Own Children*: Families with their own children under age 18. An “own child” is a never-married child under 18 years of age who is a son, daughter, stepchild, or adopted child of the householder.
- *Female Householder Families with Children*: Families with a female householder, with no husband present, and with their own children under 18.
- *Male Householder Families with Children*: Families with a male householder, no wife present, and with their own children under 18.
- *Children Living With Both Parents*: Children under 18 who live with both parents; own children of householders living in households that are classified as married-couple family households.

- *Children Not Living With Both Parents:* Children under 18 who do not live with both parents. Includes children under 18 living: in a family with a male householder and no wife present, in a family with a female householder and no husband present, with other relatives with a spouse of a householder.
1. In Tyrrell County the percent of children under the age of 18 not living with both parents increased by 4% (from 46.7% to 51.0%) between 2000 and 2010. Statewide the increase was 13% (from 55.1% to 67.8%).
  2. In Tyrrell County the percent of female family householders with children under the age of 18 decreased 8.3% (from 31.0% to 22.7%) between 2000 and 2010. Over the same period, the percent of male family householders with children under the age of 18 decreased .4% (from 6.8% to 6.4%). Statewide between 2000 and 2010 there was a decrease of .8% in the percent of female family householders with children (from 22.8% to 22.0 %), and a .3% increase in the percent of male family householders with children (from 6.1% to 6.4%).

## Grandparents Responsible for Minor Children

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Table 23 presents data on grandparents with responsibility for minor children. Data on grandparents as primary caregivers were derived from US Census Bureau American Community Survey questions. Data were collected on whether a grandchild lives with a grandparent in the household, whether the grandparent has responsibility for the basic needs of the grandchild, and the duration of that responsibility. Responsibility of basic needs determines if the grandparent financially responsible for food, shelter, clothing, day care, etc., for any or all grandchildren living in the household (under 18 years) as the numerator and number of grandparents living with own grandchildren (under 18 years) as the denominator. See Appendix A (66).

- In Tyrrell County for the period cited, 2009-2013, an estimated 55% of grandparents living with their minor grandchildren were also responsible for their care.
- Among the jurisdiction being compared, the estimated percentage of grandparents living with and responsible for their minor grandchildren was highest 73% in the district average; statewide was the lowest 49% comparable figure.

## Education

### Higher Education

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There are no four-year colleges or universities physically located in Tyrrell County, but there are several surrounding the MTW District and one located in the district accessible to Tyrrell County residents. One community college, Martin Community College, located in Williamston, in Martin County.

### Martin Community College

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Martin Community College (MCC) is a regional community college located in Williamston, NC (Martin County) with a satellite campus located in Windsor (Bertie County). MCC provides adult basic education, adult high school education, extension classes, and selected curriculum courses in 20 vocational and technical areas. MCC also offers an Associate in Arts College Transfer Program and Transfer Core Diploma. The college offers online curricular and continuing education classes via a system called ed2go.

### College of the Albemarle

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The College of the Albemarle (COA) is a community college that serves northeastern NC with sites in several locations throughout the region, including a campus in Edenton, one in Elizabeth City, and a third in Manteo. A comprehensive community college, COA offers two-year degrees in college transfer and

career programs., basic skills programs continuing education classes for personal enrichment as well as credit, customized business and industry training, and cultural enrichment opportunities including an annual summer program called College for Kids. The COA is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award associate degrees.

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### Elizabeth City State University

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Elizabeth City State University (ECSU) is a four-year state university located in Elizabeth City, NC (Pasquotank County). Originally an institution for African-American students, the university now has an increasingly multicultural student body. A constituent institution of The University of North Carolina System, ECSU offers 37 baccalaureate degrees and four master's degrees in four academic schools: Arts and Humanities; Business and Economics; Education and Psychology; and Mathematics, Science and Technology. The university has academic programs that appeal to various interests and fields of study, including the honors program, military science, study abroad, Viking Fellows for Education majors, and "signature" programs in aviation and pharmacy.

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### East Carolina University

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East Carolina University (ECU) is a large, four-year state university located in Greenville, NC (Pitt County). ECU is a constituent member of the UNC System founded in 1907 to alleviate the desperate shortage of teachers in the eastern part of NC. Since then, the ECU College of Education has been joined by programs of high distinction in health care and the fine and performing arts. Today the university offers over 100 bachelor's degree programs, more than 70 master's degree programs, four specialist degree programs, an MD program, and 16 doctoral programs. The university is the largest educator of nurses in NC, and its Brody School of Medicine is consistently ranked among the top medical schools in the nation that emphasize primary care. The school was recently ranked second in the nation by the American Academy of Family Physicians for productivity of family physicians.

ECU is the state's leader in distance education, offering more than 60 degrees and certificate programs in subjects such as business, education, health care, and technology. Two of the top 74 distance-education programs in the nation are run by ECU's colleges of nursing and education.

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### Public Schools

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Tyrrell County Schools provide pre-kindergarten through 12<sup>th</sup> grade instruction to approximately 540 students in the county. The High School is classified by the state as "exceeds growth"; the Elementary and Middle School are designated as "did not exceed growth". Tyrrell County's one high school is ranked in the top ten percent in the northeastern region in the state based on 2013-2014 end-of-course test results in algebra 1, English 1 and biology, which are used to measure academic proficiency in the state's academic accountability program.

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### Private and Home Schooling Data

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In Tyrrell County, there are 25 home schools serving approximately 40 children. There are no private schools in Tyrrell County. The source of this information came from the Tyrrell County School System for year 2014.

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### Educational Attainment

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Table 24 presents data on several measures of educational attainment. See Appendix A (66).

As of a 2009-13 US Census Bureau estimate, Tyrrell County had the lowest percentages of both high school graduates 72% and residents with a bachelor's degree or higher 8% among the four jurisdictions being compared.

According to the SY2012-13 End of Grade (EOG) Test results, significantly lower percentages of third graders in Bertie County public schools demonstrated grade appropriate proficiency in both reading 27% and math 24% than students in the other three jurisdictions. End of Grade test performance among Tyrrell County eighth graders was better, with 46% scoring at or above grade level in reading, and 15% scoring at or above grade level in math statewide.

### High School Drop Out Rate

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Table 25 presents data on the high school (grades 9-12) drop-out rate. According to the Department of Public Instruction, a “drop-out” is any student who leaves for any reason before graduation or completion of a program of studies without transferring to another elementary to secondary school. For reporting purposes, a drop-out is a student who was enrolled at some time during the previous school year, but who was not enrolled (and who does not meet reporting exclusions) on day 20 of the current year. The data is specific to high school students. See Appendix A (66).

- The high school drop-out rate in Tyrrell County increased over the period cited SY2008-09 through SY2012-13 in the table, but was highest 3.67 in SY2012-13.
- From SY2008-09 through SY2010-11 the drop-out rate in Tyrrell County was the lowest among the three jurisdictions.

### Graduation Rate

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The four-year cohort graduation rates for subpopulations of 9<sup>th</sup> graders entering high school in SY2010-11 and graduating in SY2013-14 are presented in Table 26. See Appendix A (67).

- The overall graduation rate 88% and the graduation rate for males 85% were highest in Tyrrell County Schools. The graduation rate among females was highest in Tyrrell County 91%; the second highest rate was statewide 88%.

Local historical graduation rate data provided by Tyrrell County schools show that the four-year cohort graduation rate was 81% in SY2010-11, 78% in SY2011-12, 87% in SY2012-13 and 88% in SY2013-14 (as shown above).

Similar data on the five-year graduation rate shows greater and steadier improvement. The five-year cohort graduation rate was 81% in SY2010-11, but improved to 87% in SY2012-13 and to 88% in 2013-14.

### School Crime and Violence

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Along with test scores and dropout rates, schools now also track and report acts of crime and violence that occur on school property.

The NC State Board of Education has defined 17 criminal acts that are to be monitored and reported, ten of which are considered dangerous and violent:

- Homicide
- Assault resulting in serious bodily injury
- Assault involving the use of a weapon
- Rape
- Sexual offense
- Sexual assault
- Kidnapping
- Robbery with a dangerous weapon
- Taking indecent liberties with a minor

The other seven criminal acts are:

- Assault on school personnel
- Bomb threat
- Burning of a school building
- Possession of alcoholic beverage
- Possession of controlled substance in violation of law
- Possession of a firearm or powerful explosive
- Possession of a weapon

Table 27 summarizes crime and violence catalogued by the NC Department of Public Instruction for schools in Tyrrell County, the MTW district, Bertie County and the state overall. See Appendix A (67).

The number and rate of acts of school crime and violence in Tyrrell County Schools and the other jurisdictions fluctuated dramatically over the periods cited. Only the statewide average showed any stability, likely due to the large size of the sample. The state rate increased in the two most recent school years cited.

## Crime and Safety

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### Crime Rates

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All crime statistics reported below were obtained from the NC Department of Justice, State Bureau of Investigation unless otherwise noted.

Index crime is composed of violent crime and property crime. Violent crime includes murder, forcible rape, robbery, and aggravated assault; property crime includes burglary, larceny, arson, and motor vehicle theft.

Table 28 presents the rates for index crime, violent crime, and property crime for the period from 2009 through 2013. See Appendix A (67).

- The overall index crime rate in Tyrrell County fluctuated between 2009 and 2012 but was lower than the comparable rates for Bertie County and NC as a whole throughout the period cited and lower than the average index crime rate for the district in every year.
- The largest component of index crime in all four jurisdictions was property crime.
- In every year listed the violent crime rate in Tyrrell County was the lowest among the four jurisdictions.

Table 29 presents detail on index crime committed in Tyrrell County from 2009-2013. Note the following definitions: See Appendix A (68).

- \* *Robbery*: larceny by the threat of violence;
  - \* *Aggravated assault*: a physical attack on another person which results in serious bodily harm and/or is made with a deadly or dangerous weapon such as a gun, knife, sword, ax or blunt instrument;
  - \* *Burglary*: unlawful breaking and entering into the premises of another with the intent to commit a felony;
  - \* *Larceny*: the theft of property without use of force; and
  - \* *Motor vehicle theft*: the theft or attempted theft of a motor vehicle.
1. The predominant violent crime reported in every year cited was aggravated assault.
  2. Larceny was the predominant property crime reported in every year and in 2013, the burglary rate was the highest.

## Chapter 2: Health Statistics and Health Outcomes

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### Methodology

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Routinely collected mortality and morbidity surveillance data and behavior survey data can be used to describe the health status of Tyrrell County residents. These data, which are readily available in the public domain, typically use standardized definitions, thus allowing comparisons among county, state and national figures. There is, however, some error associated with each of these data source. Surveillance systems for communicable diseases and cancer diagnoses, for instance, rely on reports submitted by health care facilities across the state and are likely to miss a number of cases, and mortality statistics are dependent on the primary cause of death certificates without consideration of co-occurring conditions.

### Understanding Health Statistics

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#### Age-adjustment

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Mortality rates, or death rates, are often used as measures of the health status of a community. Many factors can affect the risk of death, including race, gender, occupation, education and income. The most significant factor is age, because the risk of death inevitably increases with age; that is, as a population ages, its collective risk of death increases. Therefore, an older population will automatically have a higher overall death rate just because of its age distribution. At any one time some communities have higher proportion of “old” people. In order to compare mortality data from one community with the same kind of data from another, it is necessary first to control for differences in the age composition of the communities being compared. This is accomplished by *age-adjusting* the data. Age-adjustment is a statistical manipulation usually performed by the professional responsible for collecting and cataloging health data, such as the staff of the NC State Center for Health Statistics (NC SCHS). It is not necessary to understand the nuances of age-adjustment to use this report. Suffice it to know that age-adjusted data are referred for comparing health data from one population or community to another and have been used in this report whenever available.

#### Aggregate Data

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Another convention typically used in the presentation of health statistics is aggregate data, which combines annual data gathered over a multi-year period, usually three or five years. The practice of presenting data that are aggregated avoids the instability typically associated with using highly variable year-by-year data consisting of relatively few cases or deaths. It is particularly important to aggregate data for smaller jurisdictions like Tyrrell County. The calculation is performed by dividing the number of cases or deaths due to a particular disease over a period of years by the sum of population size for each of the years in the same period.

#### Incidence

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Incidence is the population-based rate at which new cases of a disease occur and are diagnosed. It is calculated by dividing the number of newly diagnosed cases of a disease or condition during a period by the population size during that period. Typically, the resultant value is multiplied by 100,000 and is expressed as cases per 100,000; sometimes the multiplier is a smaller number, such as 10,000. Incidence rate is calculated according to the following formula:

$$\text{(Number of new cases/population)} \times 100,000 = \text{new cases per 100,000 people}$$

The incident rates for certain diseases, such as cancer, are simple to obtain, since data on newly discovered cases is routinely collected by the NC Central Cancer Registry. However, diagnoses of other conditions, such as diabetes or heart disease, are not normally reported to central data-collecting agencies, so accurate incidence data on these conditions is rare.

## Mortality

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Mortality is calculated by dividing the number of deaths due to specific diseases in a given period by the population size in the same period. Like incidence, mortality is a rate, usually presented as number of deaths per 100,000 residents. Mortality rates are easier to obtain than incidence rates since the underlying (or primary) cause of death is routinely reported on death certificates. However, some error can be associated with cause-of-death classification, since it is sometimes difficult to choose a single underlying cause of death from potentially many occurring conditions.

Mortality rate by cause is calculated according to the following formula:

$$\text{(Number of deaths due to a cause/population)} \times 100,000 = \text{deaths per 100,000 people}$$

## Morbidity

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Morbidity as used in this report refers generally to the presence of injury, sickness or disease (and sometimes the symptoms and/or disability resulting from those conditions) in the population. Morbidity data usually is presented as a prevalence percentage, or a count, but not a rate.

## Prevalence

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Prevalence, which described the extent of a problem, refers to the number of existing cases of a disease or health condition in a population at a defined point in time or during a period. Prevalence expresses a proportion, not a rate. Prevalence is often estimated by consulting hospital record; for instance, hospital discharge records available from NC SCHS show the number of residents within a county who use hospital in-patient services for given diseases during a specific period. Typically, these data underestimate the true prevalence of the given disease in the population, since individuals who do not seek medical care or who are diagnosed outside of the hospital discharge rates do not necessary indicate decreasing prevalence; rather they may be a result of a lack of access to hospital care.

## Trends

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Data for multiple years is included in this report wherever possible. Since comparing data on a year-by-year basis can yield very unstable trends due to the often small number of cases, events or deaths per year (see below), the preferred method for reporting incidence and mortality data is long-term trends using the age-adjusted, multi-year aggregate format. Most trend data used in this report is of that type.

## Small Numbers

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Year-to-year variance in small numbers of events can make dramatic differences in rates that can be misleading. For instance, an increase from two events one year to four the next could be statistically insignificant but result in a calculated rate increase of 100%. Aggregating annual counts over a five year period before calculating a rate is one method used to ameliorate the effect of small numbers. Sometimes even aggregating data is not sufficient, so the NC State Center for Health Statistics recommends that all rates based on fewer than 20 events, whether covering an aggregate period or not, be considered “unstable”, and interpreted only with caution. In recent years, the NC SCHS has suppressed mortality rates based on fewer than 20 events in a five-year aggregate period. Other state entities that report health statistics may use their own minimum reporting thresholds. To be sure that unstable health data do not

become the basis for local decision-making, this report will highlight and discuss primarily rates based on 20 or more events in a five-year aggregate period and on 10 or more events in a single year. Where exceptions occur, the narrative will highlight the potential instability of the rate being discussed.

## Describing Difference and Change

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In describing differences in data of the same type from two populations or locations, or changes over time in the same kind of data from one population or locations, both of which appear frequently in this report, it is useful to apply the concept of percent difference or change. While it is always possible to describe difference or change by the simple subtraction of a smaller number from a larger number, the result often is inadequate for describing and understanding the scope or significance of the difference or change. Converting the amount of difference or change to a *percent* takes into account the relative size of the numbers that are changing in a way that simple subtraction does not, and makes it easier to grasp the meaning of the change. For example, there may be a rate for a type of event (e.g. death) that is one number one year and another number five years later. Suppose the earlier figure is 12.0 and the latter figure is 18.0. The simple mathematical difference between these rates is 6.0. Suppose also there is another set of rates that are 212.0 in one year and 218.0 five years later. The simple mathematical difference between these rates also is 6.0. Although the same, these simple numerical differences are not of the same significance in both instances. In the first example, converting the 6 point difference to a percent yields a relative change factor of 50%; that is, the smaller number increased by half, a large fraction. In the second example, converting the 6 point difference to a percent yield a relative change factor of 2.8%; that is, the smaller number in the comparison increased by a relatively small fraction. In these examples the application of percent makes it very clear that the difference in the first example is of far greater degree than the difference in the second example. This document uses percentage almost exclusively to describe and highlight degrees of difference and change, both positive (e.g., increase, larger than, etc.) and negative (e.g., decrease, smaller than, etc.)

## Behavioral Risk Factor Surveillance System (BRFSS)

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Bertie County residents participate in the state's annual Behavioral Risk Factor Surveillance System (BRFSS) Survey, as part of an aggregate 41-county sample that encompasses the entire eastern third of NC. It is not possible to isolate survey responses from Bertie County BRFSS participants without oversampling the county, which rarely occurs. Since the aggregate regional data covers such a diverse area, the results cannot responsibly be interpolated to describe health in Bertie County. As a result, BRFSS data will not be used in this document *except* for local BRFSS data manipulated by the CDC to yield a county-level *estimate*.

## Final Health Data Caveat

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Some data that is used in this report may have inherent limitations, due to sample size, or its age, for example, but is used nevertheless because there is no better alternative. Whenever this kind of data is used, it will be accompanied by a warning about its limitations.

## Health Rankings

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### America's Health Rankings

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Each year for more than 20 years, America's Health Rankings, a project of the United Health Foundation, has tracked the health of the nation and provided a comprehensive perspective on how the nation and each state measure up. America's Health Rankings is the longest running state-by-state analysis of health in the US.

America's Health Rankings are based on several kinds of measures, including *determinants* (socioeconomic and behavioral factors and standards of care that underlie health and well-being) and outcomes (measures of morbidity, mortality, and other health conditions). Together the determinants and outcomes help calculate an overall rank. Table 30 shows where NC stood in the 2014 rankings relative to the "best" and "worst" states, where first-ranked is best. See Appendix A (68).

## County Health Rankings

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Building on the work of America's Health Rankings, the Robert Wood Johnson Foundation, collaborating with the University of Wisconsin Population Health Institute, undertook a project to develop health rankings for the counties in all 50 states. In this project, each state's counties are ranked according to health outcomes and the multiple health factors that determine a county's health. Each county receives a summary rank for its health outcomes and health factors and also for the four different types of health factors: health behaviors, clinical care, social and economic factors, and the physical environment.

Table 31 presents the 2014 county rankings for Tyrrell County, the MTW district average and Bertie County in terms of health outcomes and health factors; Table 32 presents additional detail for these jurisdictions as well as the average for NC and national benchmarks. See Appendix A (68 - 69).

- Tyrrell County ranks 88<sup>th</sup> overall in NC, chiefly due to a high mortality rate ranking 88<sup>th</sup> and a high morbidity ranking 87<sup>th</sup>.
- The best Tyrrell County rankings are the physical environment 3<sup>rd</sup> and in the health factors under health behaviors 48<sup>th</sup>.

It should be noted that the County Health Rankings serve a limited purpose, since the data on which they are based in some cases is very old and different parameters are measured in different time periods.

## Maternal Health and Infant Health

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### Pregnancy

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The following definitions and statistical conventions will be helpful in understanding the data on pregnancy:

- Reproductive age = 15-44
- Total pregnancies = live births + induced abortions + fetal death at 20+ weeks gestation
- Pregnancy rate = number of pregnancies per 1,000 women of reproductive age
- Fertility rate = number of induced abortions per 1,000 women of reproductive age
- Abortion rate = number of induced abortions per 1,000 women of reproductive age
- Birth rate = number of live births per 1,000 population (*Note that in the birth rate calculation the denominator includes the entire population, both men and women, not just women of reproductive age*). Since the birth rate is a measure of population growth, it was presented among the demographic data in Chapter Two of this report.

### Pregnancy, Fertility and Abortion Rates, Women Age 15-44

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Table 33 presents total annual pregnancy, fertility and abortion rates for women age 15-44 for the period from 2009-2013. See Appendix A (70).

- The *total pregnancy rate* in Tyrrell County (84%) was higher than the total pregnancy rate for the MTW district (78%) and higher than the comparable pregnancy rate (71%) for NC in year 2013. The total pregnancy rate in Tyrrell County decreased by 9% overall between 2009 and 2013.

- The *total fertility rate* in Tyrrell County (79%) was higher than the total fertility rate (69%) for the MTW district and higher than the comparable fertility rate (60%) for NC and the rate (58%) in Bertie County in the year 2013. The total fertility rate in Tyrrell County decreased by 2% overall between 2009 and 2013.
- The *total abortion rate* in Tyrrell County was higher than the total abortion rate for the MTW district in 2009 (11.7) and lower than the comparable abortion rate for NC in every year cited. The total abortion rate in Tyrrell County could not be measured due to the small numbers between 2010 through 2013 which indicates unstable rates.

Beginning in 2010, NC SCHS began reporting stratified pregnancy, fertility and abortion data in a different manner than previously. Prior to 2010 the data was stratified by “total”, “white” and “minority”. After that date and to the present time, the data has been stratified by “total”, “White non-Hispanic”, “African-American non-Hispanic”, “Other non-Hispanic”, and “Hispanic”. Because of this change, stratified data prior to 2010 is not directly comparable to 2012 and 2013 data. Table 34 presents pregnancy, fertility, and abortion rates stratified according to the new model. See Appendix A (70).

- Pregnancy and fertility rates among Tyrrell County Hispanics exceeded those of the other racial and ethnic groups in the county in 2012 and 2013; the rates cited, however, were all based on below-threshold numbers of events and should be considered unstable. Stable rates for African-American, non-Hispanic women were higher than the comparable stable rates for other racial and ethnic groups.

### Pregnancies among Teens (age 15-19) and Adolescents (under age 15)

Table 35 presents data on the number of teen pregnancies in each jurisdiction from 2005-2013. See Appendix A (71).

Table 36 presents trend data on the number of adolescent pregnancies in each jurisdiction from 2005-2013. See Appendix A (71).

### Pregnancy Risk Factors

#### High Parity and Short Interval Births

According to the NC SCHS, a birth is high parity if the mother is younger than 18 when she has had one or more births, or aged 18 or 19 and has had two or more births, or is 20-24 and has had four or more births, etc. A short-interval birth involves a pregnancy occurring less than six months since the last birth. High-parity and short-interval pregnancies can be a physical strain on the mother and sometimes contribute to complicated pregnancies and/or poor birth outcomes.

Table 37 presents data on high-parity and short interval births for the period 2009-2013. See Appendix A (71).

- The percentage of high-parity births among women under age 30 in Tyrrell County (17.4%) was lower than the comparable average for the district (201.1%) and higher than the state (16.0%). Among women age 30 or older the rate in Tyrrell County (23.2%) was lower than the district rate (24.6%) but higher than the state average (21.7%).
- The percentage of short-interval births was lowest in Tyrrell County (9.1%) and lowest district-wide and statewide (12.6%).

## Smoking during Pregnancy

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Smoking during pregnancy is an unhealthy behavior that may have negative effects on both the mother and the fetus. Smoking can lead to fetal and newborn death, and contribute to low birth weight and pre-term delivery. In pregnant women, smoking can increase the rate of placental problems, and contribute to premature rupture of membranes and heavy bleeding during delivery.

Table 38 presents trend data on smoking during pregnancy for the aggregate periods from 2001-2005 through 2005-2009. See Appendix A (72).

- The percent of births to mothers who smoked during pregnancy was lowest in Bertie County in every period.
- The percentages of mothers who smoked during their pregnancies rose in Tyrrell County between 2001-2005 and 2008-2012 and then dropped in 2009-2013.

## Pregnancy Outcomes

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### Low Birth Weight and Very Low Birth Weight

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Low birth-weight can result in serious health problems in newborns (e.g., respiratory distress, bleeding in the brain, and heart, intestinal and eye problems), and cause lasting disabilities (mental retardation, cerebral palsy, and vision and hearing loss) or even death.

Table 39 present five-year aggregate data on low birth-weight births: infants weighing 2500 grams (5.5 pounds or less) and infants weighing 1500 grams (3.3 pounds or less). See Appendix A (72).

- In the first period cited (2008-2012) the percentages of total low birth weight births among blacks were highest in Tyrrell County and the percentages of total very low birth weight births among Hispanics were highest in Bertie County; in the second period cited (2009-2013) the percentages of total low birth weight births among Hispanics were highest in Tyrrell County and the percentages of total very low weight births among Hispanics were highest in Bertie County.
- Note that several of the racially/ethnically stratified percentages shown in the table were based on small numbers of events and should be considered unstable. In NC as a whole, where the percentages were based on larger numbers, black non-Hispanic women had the highest percentage of low birth-weight births and very low birth weight births.

## Cesarean Section Delivery

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Table 40 presents data on the percent of births delivered by Cesarean section. See Appendix A (72).

As elsewhere in the US, the percentage of Cesarean section delivery in all four jurisdictions has risen over time. Over the period cited in the table, Cesarean deliveries rose by 66% in Tyrrell County, 99% in the MTW district, 93% in Bertie County, and 71% statewide.

## Infant Mortality

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Infant mortality is the number of infant (under one year of age) deaths per 1,000 live births.

Table 41 presents infant mortality data for Tyrrell County, the MTW district, Bertie County and the state of NC. See Appendix A (73).

- Due to infant deaths numbering fewer than 20 per aggregate period in Tyrrell County in most aggregate periods, stable rates for comparison are few. The unstable rates for Tyrrell County are reported in all years cited.

Table 42 demonstrates that when stratified by race/ethnicity, infant mortality rates in the local jurisdictions under study all were unstable due to small numbers of infant deaths. State data however, indicated that the infant mortality rate among African-American non-Hispanics was 2½ times the comparable rate for White non-Hispanics. See Appendix A (73).

## Life Expectancy

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*Life expectancy* is the average number of additional years that someone at a given age would be expected to live if he/she were to experience throughout life the age-specific death rates observed in a specified reference period. Life expectancies in terms of years of life remaining can be calculated for any age. Because life expectancy is an average, however, a particular person may well die many years before or many years after their “expected” survival, due to life experiences, environment, and personal genetic characteristics.

*Life expectancy from birth* is a frequently utilized and analyzed component of demographic data. It represents the average life span of a newborn and is considered an indicator of the overall health of a population or community.

Life expectancy rose rapidly in the twentieth century due to improvements in public health, nutrition and medicine, and continued progress in these areas can be expected to have further positive impact on life expectancy in the future. Decreases in life expectancy are also possible, influenced mostly by epidemic disease (e.g. plagues of history and AIDS in the modern era), and natural and man-made disasters. One of the most significant influences on life expectancy in populations is infant mortality, since life expectancy at birth is highly sensitive to the rate of death in the first few years of life.

Table 43 presents gender and race stratified life expectancy at birth data for all jurisdictions. See Appendix A (74).

- Overall life expectancy at birth in Tyrrell County increased by 3.2 years, from 74.1 to 77.3 (4%), between 1990-1992 and 2011-2013.
- In both periods cited Tyrrell County life expectancy at birth for females was higher than life expectancy for males, and the gap broadened from 8.5 years to 1.2 years because life expectancy increased by .5 years for females and by 7 years for males.
- In 1990-1992 the life expectancy for Tyrrell County whites exceeded the life expectancy for African-Americans by 10.7 years; but in the 2011-2013 periods the life expectancy changed where the African-American exceeded whites by 11.7 years.
- Of the jurisdictions being compared, overall life expectancies at birth were lowest in Bertie County in both periods cited.

## Mortality

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### Leading Causes of Death

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This section describes mortality for the 10 leading causes of death, as well as mortality due to major site-specific cancers. This list of topics and the accompanying data was retrieved from the NC SCHS County Health Databook. Unless otherwise noted, the numerical data are age-adjusted and represent five-year aggregate periods.

Table 44 compares mortality rates for the 10 leading causes of death in Tyrrell County, the MTW district, Bertie County and NC and the US for the five-year aggregate period 2009-2013 (or otherwise noted). The causes of death are listed in descending order of rank in Tyrrell County. Note that the NC SCHS

suppressed rates for some causes of death in each county (denoted by “n/a”) because the number of deaths fell below the Center’s threshold of 20 per five-year aggregate period. For that reason, discussion of some county-level differences will be limited. See Appendix A (74).

Difference between Tyrrell County and NC mortality rates are discussed below.

Relative to the state of NC:

- The overall mortality rate in Tyrrell County (900.4) was 14% higher than the overall state mortality rate (790.9).
- The first two leading causes of death were: first, total cancer (224.6), second, diseases of the heart (173.3); however, the total cancer mortality rate in Tyrrell County was 30% higher than the state rate, and the heart diseases mortality rate in Tyrrell County (208.7) was 23% higher than the state rate (170.0).
- Diabetes mellitus ranked higher in Tyrrell County. The mortality rate for diabetes in Tyrrell County was (32.8), 51% higher than the comparable state rate of (21.7).
- Cerebrovascular disease ranked higher in Tyrrell County. The mortality rate for stroke in Tyrrell County was (79.6), but the county rate nevertheless was 45% higher than the state rate (43.7).
- Chronic lower respiratory disease was higher in Tyrrell County; the county rate (60.9) was 32% lower than the comparable state rate (46.1).
- Unintentional motor vehicle injury mortality ranked higher in Tyrrell County with the local rate (42.1) was 32% higher than the state rate (13.7).
- Mortality due to unintentional motor vehicle injuries ranked lower in Tyrrell County yet the county rate (28.1) was 4.1% lower than the state rate (29.3).
- Mortality due to Alzheimer’s disease ranked lower in Tyrrell County (23.4), but the mortality rate was higher (28.9) statewide.
- Mortality attributable to nephritis, nephrotic syndrome and nephrosis ranked higher in Tyrrell County, the county mortality rate (28.1) was 37% higher than the comparable state rate (17.6).
- Mortality due to Suicide ranked higher in Tyrrell County (18.7) which was 56% higher than the comparable state rate (12.2).

Compared to the average mortality rate for the three counties in the MTW district, mortality rates in Tyrrell County were higher for every cause of death with a rate listed

### Gender Disparities in Leading Causes of Death

In the past, NC CHA’s have demonstrated significant differences in mortality rates between men and women. Table 45 compares gender stratified rates for the 10 leading causes of death in Tyrrell County and its comparator jurisdictions. The usefulness of the table is hampered somewhat by numerous suppressed rates. See Appendix A (75).

In Tyrrell County, mortality rates for males were higher than comparable rates for females for:

- Total Cancer (by 42%)
- Diseases of the heart (by 117%)

While gender-stratified mortality rates for Tyrrell County were suppressed for the remaining causes of death, the *number* of deaths among males surpassed the *number* of death among females for all other causes of death except Alzheimer’s disease and chronic lower respiratory disease.

In Tyrrell County, the overall mortality rate for males (1,065.3) was 41% higher than the overall mortality rate for females (757.5).

### Racial Disparities in Leading Causes of Death

Because of below-threshold numbers of deaths during the period, 2009-2013, age-adjusted racially-stratified mortality rates for Tyrrell County available only for white and African-American non-Hispanics, and for only some causes of death.

According to data in Table 46, in Tyrrell County the overall mortality rate for white non-Hispanics (1,157.5) was 78% higher than the overall mortality rate for white non-Hispanics (900.4). Racial differences in mortality will be described in detail as each cause of death is discussed separately in subsequent sections of this report. See Appendix A (75).

### Age Disparities in Leading Causes of Death

Each age group tends to have its own leading causes of death. Table 47 lists the three leading causes of death by age group for the five-year aggregate period from 2009-2013. (Note that for this purpose it is important to use *non-age adjusted* death rates.) See Appendix A (76).

The leading cause(s) of death in each of the age groups in Tyrrell County were:

- Age Group 0-19: Conditions originating in the perinatal period
- Age Group 20-39: Motor vehicles injuries
- Age Group 40-64: Cancer – all sites
- Age Group 65-84: Cancer – all sites
- Age Group 85+: Diseases of the heart

Noteworthy differences in the age pattern of mortality among the three jurisdictions being compared are as follows:

- Conditions originating in the perinatal period were more prominent causes of death among the 0-19 age group in all jurisdictions listed below.
- Motor vehicle injuries disease were more prominent causes of death in the 20-39 groups in Bertie County and Tyrrell County and other unintentional injuries was more prominent in the same age group statewide.
- Cancer was among the three leading causes of death in the 40-64 and 64-84 age groups in all three jurisdictions and diseases of the heart in the 85+ age groups was number one in all three jurisdictions.

Difference in mortality statistics will be covered as each cause of death is discussed separately below, in the order of highest Tyrrell County rank to lowest, beginning with total cancer. It is important to emphasize once more that because of below-threshold numbers of deaths there will be no stable county rates for some causes of death, especially among racially stratified groups. Some unstable data will be presented in this document, but always accompanied by cautions regarding its use.

### Cancer

Cancer is a term for diseases in which abnormal cells divide without control and can invade nearby tissue. Cancer cells also can spread to other parts of the body through the blood and lymph systems. If the disease remains unchecked, it can result in death.

## Total Cancer

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Total cancer (cancer of all types) was the leading cause of death in Tyrrell County, the MTW district, Bertie County and the state of NC in the 2009-2013 periods cited previously.

## Total Cancer Mortality Rate Trend

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Figure 6 displays total cancer mortality trends over time in the four jurisdictions being compared in this CHA. See Appendix A (76).

- The total cancer mortality rate in Tyrrell County fluctuated for several aggregate periods before falling in 2006-2010 and 2009-2013 to a current rate of 226.5.
- Throughout much of the entire time period cited the total cancer mortality rate in Tyrrell County exceeded the comparable rates for the district and the state but was lower than the rate for Bertie County for aggregate periods 2002-2006 through 2004-2008.
- In every jurisdiction except Tyrrell County the total cancer mortality rate in 2009-2013 was lower than the rate in 2002-2006.
- At the state level, the total cancer mortality rate fell over the periods cited, to a current low 173.5.

## Gender and Racial Disparities in Total Cancer Mortality

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Table 48 presents total cancer mortality data for the aggregate period 2009-2013, stratified by race and sex. See Appendix A (77).

- Note that due to below-threshold numbers of total cancer deaths among some minority populations in Tyrrell County and elsewhere, mortality rates for those groups were suppressed.
- In the jurisdictions where total cancer mortality rates for African-American non-Hispanics were available they exceeded comparable rates for white non-Hispanics. For example, in Tyrrell County the total cancer mortality rate for African-American non-Hispanic was lower than the rate for white non-Hispanic. In Bertie County the rate difference for those two groups was around 8%. District-wide the comparable difference was 13%; statewide the difference was 15%.
- There appeared to be a significant gender difference in total cancer mortality in all jurisdictions; this disparity will be described in greater detail below.

Figure 7 depicts gender-stratified total cancer mortality rates in Tyrrell County for the aggregate periods 2002-2006 through 2009-2013. See Appendix A (77).

- It appears that the gender difference in total cancer mortality noted in Tyrrell County for 2009-2013 is actually longstanding.
- The total cancer mortality rate for females was wavering over most of the periods cited while the comparable rates for males was more variable.

Table 49 presents total cancer mortality rate data stratified by gender and race/ethnicity for the period 2009-2013. See Appendix A (78).

- Because of below-threshold numbers of total cancer deaths in some stratified populations the NC SCHS suppressed the related mortality rates.
- In Tyrrell County and the MTW district the total cancer mortality rates for White non-Hispanic males exceeded the rate for African-American non-Hispanic males, but the rates for African-American non-Hispanic males exceeded the rates for white non-Hispanic males in Bertie County and statewide. Female rates for white non-Hispanic exceeded African-American non-Hispanic for Tyrrell County, the MTW district and Bertie County; statewide, African-American non-Hispanic was higher than white non-Hispanic.
- At the state level, total cancer mortality rates among African-American non-Hispanic, both males and females, were higher than comparable rates among their white, non-Hispanics counterparts.

Total cancer mortality rates were lowest statewide among both male and female Hispanics since there were no comparable rates for the other jurisdictions.

## Diseases of the Heart

Heart disease is an abnormal organic condition of the heart or of the heart and circulation. Heart disease is the number one killer in the US and a major cause of disability. The most common cause of heart disease, coronary artery disease, is a narrowing or blockage of the coronary arteries, the blood vessels that supply blood to the heart itself. Coronary artery disease is the major reason people have heart attacks, but other kinds of heart problems may originate in the valves in the heart, or the heart may not pump well and cause heart failure. Heart disease was the second leading cause in Tyrrell County, the MTW district, Bertie County and the state of NC in the 2009-2013 periods cited previously.

## Heart Disease Hospitalizations

Table 50 presents hospital discharge rate trend data for several years. According to this data from NC SCHS, heart disease has been cause for a very high rate of hospitalization among MTW district residents, a rate significantly higher than the comparable state and Tyrrell County. See Appendix A (78).

## Heart Disease Mortality Rate Trend

Figure 8 displays the heart disease mortality rate trend over time in the four jurisdictions being compared in this CHA. See Appendix A (78).

- The heart disease mortality rate fell considerably in all four jurisdictions over the periods cited.
- The largest decrease over the periods cited 2002-2006 through 2008-2012 – 24% - occurred in Bertie County.
- The heart disease mortality rate for Tyrrell County fell by 17% (from 322.1 to 266.9) between 2007-2011 and 2009-2013.
- At the state level, the heart disease mortality rate fell 14% over the periods cited.

## Gender and Racial Disparities in Heart Disease Mortality

Table 51 presents heart disease mortality data for the aggregate period 2009-2013, stratified by race and sex. See Appendix A (79).

- Among white non-Hispanic persons, the heart disease mortality rate was lowest statewide and highest in Tyrrell County.
- Note that due to below-threshold numbers of heart disease deaths among some minority populations in Tyrrell County and elsewhere, mortality rates were suppressed for those groups.
- There appeared to be a large gender difference in heart disease mortality in all jurisdictions; this disparity will be described in greater detail below.

Figure 9 depicts gender-stratified heart disease mortality rates in Tyrrell County for the aggregate periods 2002-2006 through 2009-2013. See Appendix A (79).

- It appears that the gender difference in heart disease mortality noted in Tyrrell County for 2009-2013 is actually longstanding. Noteworthy also is the apparent decrease in heart disease mortality among both men and women since the 2002-2006 periods.

Table 52 presents heart disease mortality rate data stratified by gender and race/ethnicity for the period 2009-2013. See Appendix A (80).

- Because of below-threshold numbers of heart disease deaths in some stratified minority populations the NC SCHS suppressed the related mortality rates.

- In Bertie County the heart disease mortality rate among African-American, non-Hispanic males was 23% *lower* than the rate among white non-Hispanic males, and the heart disease mortality rate among African-American, non-Hispanic females was 3.1% *lower* than the rate among white non-Hispanic than the rate among white non-Hispanic females.
- At the district level, heart disease mortality rates among African-American non-Hispanics, both male and female, were *higher* than comparable rates for white non-Hispanics, with the difference 31% among males and 19% among females.
- At the state level, heart disease mortality rates among African-Americans non-Hispanic, both male and female, were approximately 15% *higher* than among their white non-Hispanic counterparts. Heart disease mortality statewide was *lowest* among both male and female Hispanics.

## Cerebrovascular Disease

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Cerebrovascular disease describes the physiological conditions that lead to stroke. Strokes happen when blood flow to the brain stops and brain cells begin to die. There are two types of stroke. Ischemic stroke (the more common type) is caused by a blood clot that blocks or plugs a blood vessel in the brain. The other kind called hemorrhagic stroke, is caused by a blood vessel that breaks and bleeds in the brain.

In the 2009-2013 aggregate period cerebrovascular disease was the third leading cause of death in Tyrrell County, the MTW district, and the fourth leading cause of death in Bertie County and statewide.

## Cerebrovascular Disease Hospitalizations

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Table 53 presents the hospital discharge rate trend data for cerebrovascular disease (CVD). According to this data, CVD caused a significant proportion of illness-related hospitalizations among Tyrrell County residents over time, for the most part at a higher rate than in the other jurisdictions. See Appendix (80).

## Cerebrovascular Disease Mortality Rate Trend

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Figure 10 displays the CVD mortality rate trend over time for each of the four jurisdictions being compared in this CHA. See Appendix A (80).

- The CVD mortality rates in Bertie County was higher than the comparable rates for the district and the state but lower than the rates for Tyrrell County for intervals 2002-2006 and 2003-2007.
- CVD mortality rates in every jurisdiction fell over the periods cited. The decrease was largest 31% in the district average.

## Gender and Racial Disparities in Cerebrovascular Disease Mortality

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Table 54 presents CVD mortality data for the aggregate period 2009-2013, stratified by race and sex. See Appendix A (81).

- Among white non-Hispanic persons, the CVD mortality rate was highest in Bertie County (41.6) and lowest in Tyrrell County (N/A). See Appendix A (81).
- Note that due to below-threshold numbers of CVD disease deaths among some stratified populations in Tyrrell County and elsewhere, mortality rates were suppressed for those groups.
- Statewide the CVD mortality rate for African-Americans non-Hispanic persons was 16% higher than the rate for white non-Hispanic persons. A similar racial disparity in CVD mortality was noted in Bertie County as well.
- In Bertie County and statewide, the CVD mortality rate for males was higher than the comparable rate for females.

Figure 11 depicts gender-stratified CVD mortality rates in Tyrrell County for the aggregate periods 2002-2006 through 2009-2013. See Appendix A (81).

- The graph demonstrates that the CVD mortality rates among Tyrrell County males was higher than the CVD mortality rates among Tyrrell County females for the periods 2002-2006 through 2004-2008. The CVD numbers dropped so low (less than 20) for the periods 2005-2013 that the rates could not be measured and are considered unstable.

Table 55 presents CVD mortality rate data fully stratified by gender and race/ethnicity for the period 2009-2013. See Appendix A (82).

- Because of below-threshold numbers of CVD deaths in some stratified categories, the NC SCHS suppressed the associated mortality rates, leaving little data to compare.
- At the state level, the CVD mortality rate was highest among African-American non-Hispanic males, followed by African-American non-Hispanic females, white non-Hispanic males, and white non-Hispanic females. CVD mortality rates statewide were lowest among male and female Hispanics.
- CVD mortality rates were higher for males than for females in every racial group.

## Chronic Lower Respiratory Disease (CLRD)

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Chronic lower respiratory disease (CLRD) is composed of three major diseases, chronic bronchitis, emphysema, and asthma, all of which are characterized by shortness of breath caused by airway obstruction and sometimes lung tissue destruction. The obstruction is irreversible in chronic bronchitis and emphysema, reversible in asthma. Before 1999, CLRD was called *chronic obstructive pulmonary disease* (COPD). Some in the field still use the designation COPD, but limit it to mean chronic bronchitis and emphysema only. In the US, tobacco use is a key factor in the development and progression of CLRD/COPD, but exposure to air pollutants in the home and workplace, genetic factors, and respiratory infections also play a role.

CLRD was the fourth leading cause of death in Tyrrell County and the MTW District, and the fifth leading cause of death in Bertie County and third statewide in the 2009-2013 periods (cited previously).

Table 56 presents the hospital discharge rate trend data for COPD (the term still used by some data-compiling organizations). According to this data, COPD caused a significant proportion of illness-related hospitalizations among Tyrrell County residents over time, for the most part at a higher rate than in the other jurisdictions. See Appendix A (82).

## CLRD Mortality Rate Trend

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Figure 12 displays the CLRD mortality rate trend over time for each of the four jurisdictions being compared in this CHA. See Appendix A (82).

- The CLRD mortality rate in Tyrrell County, although lower than the comparable rate for NC throughout the intervals cited, decreased 5% overall, decreasing from (34.5) in 2002-2006 to (N/A) in 2009-2013 because the number of deaths were less than 20 and the rates could not be measured.
- The district CLRD mortality rate also decreased, by 9% between 2002-2006 and 2009-2013.
- The CLRD mortality rate in Bertie County fell 3% over the same interval.
- At the state level, the CLRD mortality rate was essentially unchanged over the periods.

## Gender and Racial Disparities in CLRD Mortality

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Table 57 presents CLRD mortality data for the aggregate period 2009-2013, stratified by race and sex. See Appendix A (83).

- Among white non-Hispanic persons, the CLRD mortality rate was lowest in Tyrrell County and highest statewide.
- Note that due to below-threshold numbers of CLRD disease deaths among some stratified populations in Tyrrell County and elsewhere, mortality rates were suppressed for those groups.
- In Bertie County the CLRD mortality rate for African-American non-Hispanic persons was 28.3% lower than the rate for white non-Hispanic persons.
- There appeared to be a gender differences in CLRD mortality in each jurisdiction, with the rate of males higher than the rate for females in every case.

### Gender and Racial Disparities in Chronic Lower Respiratory Disease Mortality

Table 58 presents CLRD mortality data for the aggregate period 2009-2013, stratified by race and sex. See Appendix A (84).

- Among white non-Hispanic persons, the CLRD mortality rate was highest statewide and lowest in Tyrrell County.
- Note that due to below-threshold numbers of CLRD disease deaths among some stratified populations in Tyrrell County and elsewhere, mortality rates were suppressed for those groups.
- In Bertie County the CLRD mortality rate for African-Americans non-Hispanic persons was 14% lower than the rate for white non-Hispanic persons. Statewide the racial disparity was 23% lower for CLRD in African-American non-Hispanic than white non-Hispanic.
- In Bertie County and statewide, the CLRD mortality rate for males was higher than the comparable rate for females.

Figure 13 depicts gender-stratified CLRD mortality rates in Tyrrell County for the aggregate periods 2002-2006 through 2009-2013. See Appendix A (83).

- The graph demonstrates that the CLRD mortality rates among Tyrrell County males was higher than the CLRD mortality rates among Tyrrell County females for the periods 2002-2006 through 2004-2008. The CVD numbers dropped so low (less than 20) for the periods 2005-2013 that the rates could not be measured and are considered unstable.

Figure 14 presents CLRD mortality rate data fully stratified by gender and race/ethnicity for the period 2009-2013. See Appendix A (84).

- Because of below-threshold numbers of CLRD deaths in some stratified categories, the NC SCHS suppressed the associated mortality rates.
- At the state level, the CLRD mortality rate was highest among white non-Hispanic males, followed by white non-Hispanic females, African-American non-Hispanic males, non-Hispanic males of other races, and African-American non-Hispanic females. CLRD mortality rates statewide were lowest among male and female Hispanics.
- At the state level CLRD mortality rates were higher for males than for females in every racial group.

### Unintentional Motor Vehicle Injury

The NC State Center for Health Statistics distinguishes unintentional motor vehicle injuries from all other injuries when calculating mortality rates and ranking leading causes of death. (Deaths due to all other unintentional injuries will be discussed in a subsequent section of this report). Mortality attributable to unintentional motor vehicle injury was the fifth leading cause of death in Tyrrell County, in the top ten

district-wide, the tenth in Bertie County, and was not listed in the top ten causes of death statewide for the aggregate period 2009-2013 (previously cited).

### Unintentional Motor Vehicle Injury Hospitalizations

Neither the NC SCHS nor the two district hospitals participating in this assessment use a diagnosis specific for hospitalizations caused by motor vehicle injury. Table 59 presents the hospital discharge rate trend data from NC SCHS for a category as well as other unintentional injuries. See Appendix A (84).

- The injuries and poisonings inpatient hospitalization rate in Tyrrell County was the highest of the four listed in every year cited. In 2013 the Tyrrell County rate was almost twice the district average.

### Unintentional Motor Vehicle Injuries Mortality Rate Trend

Figure 15 displays the unintentional motor vehicle injury mortality rate trend over time for each of the four jurisdictions being compared in this CHA. See Appendix A (85).

- The unintentional motor vehicle injury mortality rate in Bertie County was significantly higher than the comparable rates in all the other jurisdictions throughout the period cited except for the periods of 2007-2001 through 2009-2013 then Tyrrell County was the highest. Tyrrell County was consistently the lowest until 2007-2013.
- Although it rose for a span in the middle of the period cited, the unintentional motor vehicle injury mortality rate in Bertie County has fallen 26% since 2004-2008.
- At the state level, the unintentional motor vehicle injury mortality rate fell 6% over the period cited.

### Gender and Racial Disparities in Unintentional Motor Vehicle Injury Mortality

Table 60 presents unintentional motor vehicle injury mortality data for the aggregate period 2009-2013, stratified by race and sex. See Appendix A (85).

- Among white non-Hispanic persons, the unintentional motor vehicle injury mortality rate was lowest in Tyrrell County and highest statewide.
- Note that due to below-threshold numbers of unintentional motor vehicle injury deaths among some stratified populations in Tyrrell County and elsewhere, mortality rates were suppressed for those groups.
- Statewide the unintentional motor vehicle injury mortality rate for African-American non-Hispanic persons was .2% higher than the rate for white non-Hispanic persons.
- There appeared to be a gender differences in unintentional motor vehicle injury mortality statewide, with the rate of males higher than the rate for females.

Figure 16 depicts gender-stratified unintentional motor vehicle injury mortality rates in Tyrrell County for the aggregate periods 2002-2006 through 2009-2013. See Appendix A (86).

- The unintentional motor vehicle injury mortality rate among males in the county was, on occasion, almost four times the comparable rate for females. Note, however, that all of the rates for females were either unstable or suppressed (as indicated by “0”), due to below-threshold numbers of deaths.

Table 61 presents unintentional motor vehicle injury mortality rate data fully stratified by gender and race/ethnicity for the period 2009-2013. See Appendix A (86).

- Because of below-threshold numbers of unintentional motor vehicle injury deaths in some stratified categories, the NC SCHS suppressed the associated mortality rates.

- At the state level, the unintentional motor vehicle injury mortality rates were lowest among white non-Hispanic males, followed by African-American non-Hispanic females, then non-Hispanic females of other races, and African-American non-Hispanic females. Unintentional motor vehicle injury mortality rates statewide were highest among Hispanic males and lower among female Hispanics.
- At the state level unintentional motor vehicle injury mortality rates were higher for males than for females in every racial group.

### Age Disparities in Unintentional Motor Vehicle Injury Mortality

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The unintentional motor vehicle injury mortality rate has a strong age component. Table 62 presents unintentional motor vehicle injury mortality data, stratified by age group. Note that this data is *not* age-adjusted. See Appendix A (87).

- Statewide, the all age group has the highest motor vehicle injury mortality rate 29.9, followed by the 20-39 age groups 18.5.
- Although to age-stratified mortality rates in all the counties were unstable, they appeared to follow the same pattern as NC as a whole.

### Alcohol-Related Traffic Crashes

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Table 63 presents several years of data on the proportion of traffic crashes that were alcohol-related. See Appendix A (87).

- The percent of alcohol-related crashes varied over time without a clear pattern in all the jurisdictions.
- In Tyrrell County the five-year average of alcohol-related traffic crashes was 11%. District-wide 4%, in Bertie County it was 5%, and in NC it was 5%.

Table 64 presents details on the outcomes of alcohol-related crashes in 2013. See Appendix A (87).

- In 2013 in Tyrrell County 5.3% of all crashes, 4.2% of all property damage only crashes, 11.8% of non-fatal crashes, and 0% of all fatal crashes were alcohol-related. Note, however, that the figure of percent of alcohol-related fatal crashes was based on a small number of deaths, and may be unstable.
- Statewide in 2013 4.9% of all crashes, 3.5% of all property damage only crashes, 7.6% of all non-fatal crashes, and 28.0% of fatal crashes were alcohol-related.

### Diabetes Mellitus

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Diabetes is a disease in which the body's blood glucose levels are too high due to problems with insulin production and/or utilization. Insulin is a hormone that helps glucose get to cells where it is used to produce energy. With Type 1 diabetes, the body does not make insulin. With Type 2 diabetes, the more common type, the body does not make or use insulin well. Without enough insulin, glucose stays in the blood. Over time, having too much glucose in the blood can damage the eyes, kidneys, and nerves. Diabetes can also lead to heart disease, stroke and even the need to remove a limb. Diabetes was the sixth leading cause of death in Tyrrell County and the seventh leading cause of death statewide in 2009-2013; it ranked third in Bertie County and fifth district-wide (cited previously).

### Diabetes Mellitus Hospitalization

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Table 65 presents hospital discharge rate trend data for diabetes. The rates for Bertie County were higher than the rates for the district or NC as a whole. See Appendix A (88).

## Overall Diabetes Mellitus Mortality Rate Trend

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Figure 17 displays the diabetes mortality rate trend over time for each of the four jurisdictions being compared in this CHA. See Appendix A (88).

- The diabetes mortality rate in Bertie County was higher than the district and state rates throughout the period cited. The Bertie county diabetes mortality rate was higher than the Tyrrell County rate for all of the eight periods cited, and when it was higher it also was the highest among the four jurisdictions.
- The diabetes mortality rate in Tyrrell County increased for several periods but in 2005-2009 through 2009-2013 the numbers could not be measured due to small number (less than 20) so they are considered unstable.
- The diabetes mortality rate for NC as a whole decreased 5.4% over the period cited.

## Gender and Racial Disparities in Diabetes Mellitus Mortality

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Table 66 presents diabetes mortality data for the aggregate period 2009-2013, stratified by race and sex. See Appendix A (88).

- Among white non-Hispanic persons, the diabetes mortality rate was highest in Bertie County and lowest in Tyrrell County. The rate for statewide was the second highest.
- Due to below-threshold numbers of diabetes deaths among some minority populations in Tyrrell County and elsewhere, mortality rates were suppressed for those groups.
- Statewide, the diabetes mortality rate was higher among males than among females.

Figure 18 depicts gender-stratified diabetes mortality in Tyrrell County for the aggregate periods 2002-2006 through 2009-2013. See Appendix A (89).

- While the diabetes mortality rate among Tyrrell County males recently has been higher than the comparable rate among females, it was not always the case. The rate difference was reversed early in the period cited, and with the recent gap between males and females narrowing, it may reverse again in the future.

Table 67 presents diabetes mortality rate data fully stratified by gender and race/ethnicity for the period 2009-2013. See Appendix A (89).

- Because of below-threshold numbers of diabetes deaths among some stratified populations, the NC SCHS suppressed the associated mortality rates.
- At the state level, the diabetes mortality rate was highest among African American non-Hispanic males, followed by African American non-Hispanic females, white non-Hispanic males, and white non-Hispanic females.
- Statewide, diabetes mortality rates were higher for males than for females in every racial group. In Bertie County the diabetes mortality rate for African American non-Hispanic males 86.7 was 17% higher than the rate for African American non-Hispanic females 69.9; statewide the rate difference between these two subpopulations was 12%.
- Tyrrell County and the district average where the use of “n/a” in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.

## Nephritis, Nephrotic Syndrome, and Nephrosis

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Nephritis refers to inflammation of the kidney, which causes impaired kidney function. Nephritis can be due to a variety of causes, including kidney disease, autoimmune disease, and infection. Nephrotic syndrome refers to a group of symptoms that include protein in the urine, low blood protein levels, high cholesterol levels, high triglyceride levels, and swelling. Nephrosis refers to any degenerative disease of

the kidney tubules, the canals that make up much of the substance of the kidney. Nephrosis can be caused by kidney disease, or it may be a complication of another disorder, particularly diabetes.

This composition set of kidney disorders was the seventh leading cause of death in Tyrrell County and eighth district-wide, the ninth leading cause of death in Bertie County and statewide in 2009-2013 (cited previously).

### Nephritis, Nephrotic Syndrome and Nephrosis Hospitalizations

Table 68 presents the hospital discharge rate trend data for the composite of kidney disorders. According to this data, kidney disease caused a higher rate of hospitalizations in Bertie County than in Tyrrell County, the MTW district and statewide throughout the period cited. See Appendix A (89).

### Overall Nephritis, Nephrotic Syndrome and Nephrosis Mortality Rate Trend

Figure 19 displays the kidney disease mortality rate trend over time for each of the four jurisdictions being compared in this CHA. See Appendix A (90).

- The kidney disease mortality rate was highest in Bertie County and lowest in Tyrrell County and district-wide for most of the periods cited.
- The nephritis, nephrotic syndrome and nephrosis mortality rate in Tyrrell County was lower than the comparable rates for Bertie County throughout the intervals cited and lower than the district and state rates for all of the intervals cited.
- The kidney disease mortality rate in Tyrrell County decreased 8% overall (from 15.3 to 7.5) amid years 2002-2009 through 2009-2013.
- District-wide the kidney disease mortality rate decreased 1.3%; however, the district average rate was based on several unstable county rates.
- In Bertie County the kidney disease mortality rate fell 7% over the periods cited.
- The kidney disease mortality rate for NC as a whole fluctuated .6% overall between periods 2002-2006 through 2009-2013.

### Gender and Racial Disparities in Nephritis, Nephrotic Syndrome and Nephrosis Mortality

Table 69 presents kidney disease mortality data for the aggregate period 2009-2013, stratified by race and sex. See Appendix A (90).

- Note that due to below-threshold numbers of kidney disease deaths among stratified populations in Tyrrell County and elsewhere, mortality rates were suppressed for those groups.
- Statewide, the kidney disease mortality rate among African American non-Hispanic persons was more than twice the rate for white non-Hispanic persons.

Figure 20 depicts gender-stratified kidney disease mortality rates in Tyrrell County for the aggregate periods 2002-2006 through 2009-2013. See Appendix A (91).

- According to the graph, the kidney disease mortality rate among Tyrrell County males appeared to be higher than the comparable rate among Tyrrell County females for most of the time periods shown. However, it should be noted that all the gender-stratified kidney disease mortality rates in the graph were either unstable or suppressed.

Because of below-threshold numbers of kidney disease deaths in all stratified categories at the county level, the NC SCHS suppressed the associated mortality rates so there is no race and sex-specific data to compare among counties or the region.

At the state level, the nephritis, nephrotic syndrome and nephrosis mortality rate was highest among African American non-Hispanics persons. Statewide, the kidney disease mortality rate was highest among African American non-Hispanic males 39.2; followed by African American non-Hispanic females 31.0, white non-Hispanic males 18.3, white non-Hispanic females 11.6, and non-Hispanic females of other races 8.5. Kidney disease mortality rates statewide were lowest among Hispanic females 6.1.

### All Other Unintentional Injury

This category includes death without purposeful intent due to poisoning, falls, burns, choking, animal bites, drowning, and occupational or recreational injuries; it expressly excludes unintentional injury due to motor vehicle crashes. (Death due to injury involving motor vehicles is a separate cause of death and was covered previously).

All other unintentional injury was the seventh leading cause of death in Tyrrell County, Bertie County and district-wide and fifth statewide in the 2009-2013 periods (cited previously).

### All Other Unintentional Injury Mortality Rate Trend

Figure 21 displays the all other unintentional injury mortality rate trend over time for each of the four jurisdictions being compared in this CHA. See Appendix A (91).

- The all other unintentional injury mortality rate in Tyrrell County was quite variable over the period cited, but rose 0.8% overall, from (18.3) in 2002-2006 to (19.1) in 2009-2013.
- District-wide the mortality rate for all other unintentional injuries dropped 4% over the period cited, from (27.3) in 2002-2006 to (23.3) in 2009-2013.
- At the state level, the all other unintentional injury mortality rate rose 2% over the periods cited.

### All Other Unintentional Injury Hospitalizations

Table 70, cited previously, presented the hospital discharge rate trend data from NC SCHS for a category called injuries and poisonings, which included hospitalizations for injuries resulting from motor vehicle crashes as well as for all other unintentional injuries. As noted previously, the injuries and poisonings hospitalization discharge rate in Bertie County was the highest of the four listed in every year cited except in 2013 the district average was the highest. In 2013 the district rate was almost twice Tyrrell County's. See Appendix A (92).

Figure 22 depicts age-adjusted death rates of all other unintentional injury mortality rates in the four jurisdictions for the aggregate periods 2002-2006 through 2009-2013. See Appendix A (92).

- This data appears to indicate a significant age-adjusted death rate summary for all other unintentional injuries. These death rates with a small number (<50) of deaths in the numerator should be interpreted with caution.
- At the state level, the all other unintentional injury mortality rate was higher, with an increase of 2% over the periods (27.0 in 2002-2006 to 29.3 in 2009-2013) except for the intervals in Bertie County (35.3 in 2007-2011 and 35.4 in 2009-2013) were higher. Overall Bertie County increased 8% throughout all period intervals. Tyrrell County was the lowest in all period intervals with an increase of 2% (11.8 in 2002-2006 and 25.4 in 2009-2013) and the district average fluctuated throughout all period intervals.

### Gender and Racial Disparities in All Other Unintentional Injury Mortality

Table 71 presents all other unintentional injury mortality data of the aggregate period 2009-2013, stratified by race and sex. See Appendix A (93).

- Note that due to below-threshold numbers of all other unintentional injury deaths among some stratified populations, mortality rates were suppressed for those groups.
- Statewide the mortality rate for white non-Hispanics was 14% higher than the comparable rate for African American non-Hispanics;
- There appeared to be gender differences in the all other unintentional injury mortality rate in each jurisdiction with non-suppressed rates, with rates for males higher than rates for females.

Because of below-threshold numbers of all other unintentional injury deaths in all stratified categories at the county level, NC SCHS suppressed the associated mortality rates, so there is not race and sex-specified data to compare among counties or the region.

## Alzheimer's Disease

Alzheimer's disease is a progressive neurodegenerative disease affecting mental abilities including memory, cognition and language. Alzheimer's disease is characterized by memory loss and dementia. The risk of developing Alzheimer's disease increases with age (e.g. almost half of those 85 years and older suffer from Alzheimer's disease).

Alzheimer's disease was the ninth leading cause of death in Tyrrell County and the sixth for the MTW district and the fifth leading cause of death in Bertie County and the sixth for NC in the 2009-2013 aggregate periods (cited previously).

### Alzheimer's Disease Mortality Rate Trend

Figure 23 displays the Alzheimer's disease mortality rate trend over time for each of the four jurisdictions being compared in this CHA. See Appendix A (93).

- The Alzheimer's disease mortality rate in Tyrrell County was lower than the comparable rate for NC throughout the intervals cited. However, the Tyrrell County rate decreased 0.8% over the period, for (7.7 in 2002-2006 to 6.9 in 2009-2013). Over the same period the NC rate rose 2%.
- District-wide the Alzheimer's disease mortality rate rose 4%, (from 13.3 in 2002-2006 to 17.6 in 2009-2013).

### Gender and Racial Disparities in Alzheimer's Disease Mortality

Table 72 presents Alzheimer's disease mortality data for the aggregate period 2009-2013, stratified by race and sex. See Appendix A (94).

- Note that due to below-threshold numbers of Alzheimer's disease deaths among most stratified populations in Tyrrell County and elsewhere, mortality rates were suppressed for those groups.
- Among African American non-Hispanic persons, the Alzheimer's disease mortality rate was lowest statewide 26.3 and highest in Bertie County 35.0.
- Statewide, the Alzheimer's disease mortality rate is highest among white non-Hispanic persons (29.8), followed by African American non-Hispanics (26.3), non-Hispanics of other races (9.2), and Hispanics (9.9).
- Statewide there appeared to be a significant gender difference in Alzheimer's disease mortality with the rate for females (32.0) significantly higher than the rate for males (23.0). There were too many suppressed rates at the county level to make gender comparisons.

Figure 24 depicts gender-stratified Alzheimer's disease mortality rates in Tyrrell County for the aggregate periods 2002-2006 through 2009-2013. See Appendix A (94).

- It appears that there may be a large gender difference in Alzheimer's mortality rates in Tyrrell County rate (6.9 male/18.0 female) for the period of 2003-2006 through (0.0 male/10.1 female)

for 2004-2008. According to data in the graph, the Alzheimer's disease mortality rate among Tyrrell County females was several times higher than the comparable mortality rate among Tyrrell County males. Although all the rates for males were either unstable or suppressed due to below-threshold numbers of events, this disproportional pattern of gender-based Alzheimer's disease mortality is common throughout NC.

Because of below-threshold numbers of Alzheimer's disease deaths in all stratified categories at the county level, the NC SCHS suppressed the associated mortality rates, so there is not race and sex-specific data to compare among counties or the district.

At the state level, the Alzheimer's disease mortality rate in all racial groups was higher among females than males, and higher among whites than minorities. Statewide, the Alzheimer's diseases mortality rate were highest among white non-Hispanic females (33.1), followed by African American non-Hispanic females (27.8), non-Hispanic females of other races (11.8), white non-Hispanic males (23.5), and African American non-Hispanic males (22.3) and non-Hispanic males of other races (n/a). The Alzheimer's disease mortality rate for Hispanic males statewide was suppressed due to a below-threshold number of deaths.

## **Pneumonia and Influenza**

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Pneumonia and influenza are disease of the lungs. Pneumonia is an inflammation of the lungs caused by either bacteria or viruses. Bacterial pneumonia is the most common and serious form of pneumonia and the common cold. Influenza (the "flu") is a contagious infection of the throat, mouth and lungs caused by an airborne virus.

Pneumonia/influenza was ranked the tenth cause of death in Tyrrell County in 2009-2013 due to below-threshold numbers of deaths. It was ranked the eighth leading cause of death in the MTW district and statewide in that period and it did not rank in the top ten leading causes of death in Bertie County (cited previously).

## **Pneumonia and Influenza Hospitalizations**

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Table 73 presents hospital discharge rate trend data. According to this data from NC SCHS, pneumonia and influenza has consistently generated a higher discharge rate in Bertie County than in other jurisdictions. See Appendix A (95).

## **Overall Pneumonia and Influenza Mortality Rate Trend**

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Figure 25 displays the pneumonia/influenza mortality rate trend over time for each of the four jurisdictions being compared in this CHA. See Appendix A (95).

- The pneumonia/influenza mortality rate in Tyrrell County appeared to be rising (from 23.2 to 34.5 or 11%) between the years 2002-2006 to 2004-2008; until the last five rates were suppressed due to below-threshold numbers of deaths.
- The pneumonia/influenza mortality rate in Bertie County seemed to be falling even more dramatically despite five suppressed data points. The decrease between the 2002-2006 rates (24.2) and the 2004-2008 rates (16.3) was 8%.
- Between the 2002-2006 and 2004-2008 aggregate periods the MTW district experienced an increase of 2% in the pneumonia/influenza mortality rate. While the increase stopped, the data was suppressed due to below-threshold numbers of death.
- At the state level, the pneumonia/influenza mortality rate fell gradually to a current low 5%.

## Gender and Racial Disparities in Pneumonia and Influenza Mortality

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Table 74 presents pneumonia/influenza mortality data for the aggregate period 2009-2013, stratified by race and sex. See Appendix A (95).

- Due to below-threshold numbers of pneumonia/influenza deaths among stratified populations in Tyrrell County and elsewhere, mortality rates were suppressed for those groups, so no county-level comparisons are possible.
- At the state level the pneumonia/influenza mortality rate for African American non-Hispanic persons (16.9) was slightly lower than the rate for white non-Hispanic persons (18.3).
- There appeared to be a gender difference in the pneumonia/influenza mortality rate in each jurisdiction with non-suppressed rates, with males suffering the higher rates.

Figure 26 depicts gender-stratified pneumonia/influenza mortality rates in Tyrrell County for the aggregate periods 2002-2006 through 2009-2013. See Appendix A (96).

- It appeared that there has been a long-term gender difference in the pneumonia/influenza mortality rate in Tyrrell County. At times over the period cited below, the rate for males was twice the rate for females. It should be noted however, that all the rates for the period cited were either unstable or suppressed.

Because of below-threshold numbers of pneumonia/influenza deaths in all stratified categories at the county level, the NC SCHS suppressed the associated mortality rates, so there is no race and sex-specific data to compare among counties or the region.

At the state level, the pneumonia/influenza mortality rate generally was higher among males than among females in each racial group; among Hispanics, the gender-stratified rates were the same. Statewide, the pneumonia/influenza mortality rate was highest among African American non-Hispanic males (21.6); followed by white non-Hispanic males (20.6), white non-Hispanic females (16.8), African American non-Hispanic (14.4) and non-Hispanic females of other races (12.0). Pneumonia/influenza mortality rates statewide were lowest among Hispanic males (5.8) and Hispanic females (6.9), and non-Hispanic males of other races (N/A).

## Chronic Liver Disease and Cirrhosis

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Chronic liver disease describes an on-going disturbance of liver function that causes illness. Liver disease, also referred to as hepatic disease, is a broad term that covers all the potential problems that cause the liver to fail to perform its designated functions. Usually, more than 75% or three quarters of liver tissue needs to be affected before decrease in function occurs. Cirrhosis is a term that describes permanent scarring of the liver. In cirrhosis, the normal liver cells are replaced by scar tissue that cannot perform any liver function.

Chronic liver disease and cirrhosis was ranked tenth cause of death in Tyrrell County in 2009-2013. Chronic liver disease and cirrhosis was an unranked cause of death in Bertie County and statewide in the period cited above due to below-threshold numbers of deaths. It is being discussed here in this report on the basis of causing the next highest number of deaths in Tyrrell County after pneumonia and influenza.

## Chronic Liver Disease and Cirrhosis Hospitalizations

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Table 75 presents hospital discharge rate trend data for chronic liver disease and cirrhosis. Note that the most of the county-level rates were unstable. See Appendix A (96).

## Overall Chronic Liver Disease and Cirrhosis Mortality Rate Trend

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Figure 27 displays the chronic liver disease and cirrhosis mortality rate trend over time for each of the four jurisdictions being compared in this CHA. See Appendix A (97).

- All of the chronic liver disease and cirrhosis mortality rates plotted for Tyrrell County or the other local jurisdictions were unstable or suppressed. Given the large number of unstable or suppressed rates detailed comparisons are not warranted.
- The chronic liver disease and cirrhosis mortality rate for NC as a whole was essentially unchanged at approximately 9.1 over the period cited.

### Gender and Racial Disparities in Chronic Liver Disease and Cirrhosis Mortality

Table 76 presents chronic liver disease and cirrhosis mortality data for the aggregate period 2009-2013, stratified by race and sex. See Appendix A (97).

- Note that due to below-threshold numbers of chronic liver disease and cirrhosis deaths among stratified populations in Tyrrell County and elsewhere, mortality rates were suppressed for those groups.
- Statewide, the chronic liver disease and cirrhosis mortality rate was significantly higher among males (52.9) than among females (42.0), and higher among white non-Hispanics (50.9) than among African American non-Hispanics (28.0); other racial (9.7) and ethnic groups (8.8).

Figure 28 depicts gender-stratified chronic liver disease and cirrhosis mortality rates in Tyrrell County for the aggregate periods 2002-2006 through 2009-2013. See Appendix A (98).

- According to the graph, the chronic liver disease and cirrhosis mortality rate among Tyrrell County males appeared to be higher than the comparable rate among Tyrrell County females for all the time periods shown. However, it should be noted that all the gender-stratified mortality rates in the graph were either unstable or suppressed.

Because of below-threshold numbers of chronic liver disease and cirrhosis deaths in all stratified categories at the county level, the NC SCHS suppressed the associated mortality rates, so there is no race and sex-specific data to compare among counties or the district.

At the state level, the chronic liver disease and cirrhosis mortality rate generally was higher among males than among females in each racial and ethnic group. Statewide, the chronic liver disease and cirrhosis mortality rate was highest among white non-Hispanic males (14.5), followed by African American non-Hispanic males (10.6). Chronic liver disease and cirrhosis mortality rates statewide were lowest among African American non-Hispanic females (4.5), and Hispanic males (5.7). The mortality rate for Hispanic females was suppressed due to below-threshold numbers of chronic liver disease and cirrhosis deaths.

### Suicide

Suicide was ranked the tenth leading cause of death in Tyrrell County in 2009-2013 due to below-threshold numbers of deaths. It did not rank in the top ten leading causes of death in the MTW district, in Bertie County, and statewide in that period (cited previously). It is being discussed here in this report on the basis of causing the next highest number of deaths in Tyrrell County after chronic liver disease and cirrhosis.

Figure 29 displays the suicide mortality rate trend over time for each of the four jurisdictions being compared in this CHA. See Appendix A (98).

- The suicide mortality rates for Tyrrell and Bertie Counties depicted in the graph all were unstable or suppressed.

- The suicide mortality rate for the district displayed an increase of (2%), rising from 0.0 in 2002-2006 to 3.9 in 2004-2008. However, since the district rate represented an average of county rates many of which were unstable, the district rate likely was unstable as well.
- The state suicide rate was relatively stable at approximately 12.2 throughout the period cited.

## Gender and Racial Disparities in Suicide Mortality

Table 77 presents suicide mortality data for the aggregate period 2009-2013, stratified by race and sex. See Appendix A (99).

- Note that due to below-threshold numbers of suicide deaths among stratified populations in Tyrrell County and elsewhere, mortality rates were suppressed for those groups.
- Statewide there appeared to be a gender-based difference in suicide mortality, with the rate for males over 3 1/2 times the comparable rate for females.

Figure 30 depicts gender-stratified suicide mortality rates in Tyrrell County for the aggregate periods 2002-2006 through 2009-2013. See Appendix A (99).

- It appears that there was a strong gender difference in the suicide mortality rate in Tyrrell County. The graph demonstrates that the suicide rate among Tyrrell County males was not comparable to the Tyrrell County female mortality rates. Although all the rates for both sexes were either unstable or suppressed due to below-threshold numbers of deaths, this disproportionate-pattern of gender-based suicide mortality is common throughout NC.

Because of below-threshold numbers of suicide deaths in all stratified categories at the county level, the NC SCHS suppressed the associated mortality rates, so there is no race and sex-specific data to compare among counties or the district.

At the state level, the suicide mortality rate was higher among males than among females in each racial group. Statewide, the suicide mortality rate was highest among white non-Hispanic males (24.9), followed by African American non-Hispanic males (8.7), other races non-Hispanic males (7.3), Hispanic males (5.4) and white non-Hispanic females (7.2). Suicide mortality rates statewide were lowest among Hispanic females (1.3), African American non-Hispanic females (1.5) and non-Hispanic females of other races (N/A).

## Morbidity

Morbidity refers generally to the current presence of injury, sickness or disease (and sometimes the symptoms and/or disability resulting from those conditions) in the living population. In this report, communicable disease (including sexually-transmitted infections), asthma, diabetes, obesity, oral health, and mental health conditions are the topics covered under morbidity.

The parameter most frequently used to describe the current extent of any condition of morbidity in a population is prevalence: the number of existing cases of a disease or health condition in a population at a defined point in time or during a period. Prevalence usually is expressed as a proportion, not a rate, and often represents an estimate rather than a direct count.

## Communicable Disease

A communicable disease is a disease transmitted through direct contact with an infected individual or indirectly through a vector.

## Sexually Transmitted Infections

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The topic of communicable diseases includes sexually transmitted infection (STIs). The STIs of greatest regional interest are chlamydia and gonorrhea. HIV/AIDS is sometimes grouped with STIs, since sexual contact is one mode of HIV transmission. While AIDS, as the final stage of HIV infection, was discussed previously among the leading causes of death, HIV is discussed here as a communicable disease.

### Chlamydia

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Chlamydia is the most frequently reported bacterial STI in the US, with an estimated 2.8 million new cases reported in each year. Chlamydia cases frequently go undiagnosed and can cause serious problems in men and women, such as penile discharge and infertility respectively, as well as infections in newborn babies of infected mothers.

Table 78 incidence data (i.e., new cases diagnosed) on chlamydia infections. See Appendix A (100).

- There is considerable variability in the annual incidence rates for chlamydia at the county level, which is not uncommon for an infectious disease (see also disclaimer, below).
- The chlamydia incidence rate in district average was well above the comparable NC rate and Tyrrell County in every year cited.
- The NC Communicable Disease Branch provides the following disclaimer to this chlamydia incidence data:

*Note: chlamydia case reports represent persons who have a laboratory-confirmed Chlamydial infection. It is important to note that Chlamydial infection is often asymptomatic in both males and females and most cases are detected through screening. Changes in the number of reported cases may be due to changes in screening practices. The disease can cause serious complications in females and a number of screening programs are in place to detect infection in young women. For this reason, Chlamydia case reports are always highly biased with respect to gender. The North Carolina STD Surveillance data system has undergone extensive changes since 2008 when North Carolina implemented North Carolina Electronic Disease Surveillance System (NC ESS). During this transition, Chlamydia morbidity counts for some counties may have been affected. Report totals for 2013 should be considered with this in mind. Reports are summarized by the date received in the Communicable Disease Surveillance Unit office rather than by date of diagnosis.*

### Gonorrhea

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Gonorrhea is the second most commonly reported bacterial STI in the US. The highest rates of gonorrhea have been found in African Americans, people 20 to 24 years of age, and women, respectively. In women, gonorrhea can spread in to the uterus and fallopian tubes, resulting in pelvic inflammatory disease (PID). PID affects more than one million women in the US every year and can cause tubal pregnancy and infertility in as many as 10 percent of infected women. In addition, some health researchers think gonorrhea enhances the risk of getting HIV infection.

Table 79 presents incidence data (i.e., new cases diagnosed) for gonorrhea infections. See Appendix A (100).

- The District Average gonorrhea incidence rate was the highest among the four jurisdictions in every aggregate period.

### Human Immune Deficiency Virus (HIV)

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From the standpoint of traditional incidence rates, the number of new HIV cases in small counties like Tyrrell County and its comparators tend to be low and yield extremely variable or suppressible rates. (For example, there was 1 new HIV case in Tyrrell County in the three year period from 2011-2013). Instead,

Table 80 approximates a *prevalence* estimate for each jurisdiction on the basis of how many persons are living with HIV on a particular date. See Appendix A (100).

- As of December 31, 2013 there were 2 people with HIV/AIDS living Tyrrell County.

## Asthma

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Asthma, a disease that affects the lungs, is one of the most common long-term diseases of children, but adults also can have asthma. Asthma causes wheezing, breathlessness, chest tightness, and coughing at night, early in the morning, or upon exertion. The symptoms result because the sides of the airways in the lungs swell and the airways shrink. Less air gets in and out of the lungs, and mucous naturally produced by the body further clogs the airways. In most cases, the cause of asthma is unknown (although there likely is a hereditary component), and there is no known cure. Asthma can be hard to diagnose.

Table 81 presents hospital discharge data for asthma, stratified by age, for the period 2001-2013. (At the present time this is the best measure of asthma prevalence available from NC SCHS). See Appendix A (101).

- All the county-level data exhibited considerable variability due to small and varying numbers of asthma cases and resulting unstable rates.
- At the state level, the discharge rate for youth (age 0-14) was from 54% to 67% higher than the discharge rate for all ages.

## Mental Health

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With the mental health system in the state – and Tyrrell County – still coping with system reform growing pains, mental health merits a closer look.

As previously noted in the Mental Health Services and Facilities section of this report, the unit of NC government responsible for overseeing mental health services is the Division of Mental Health, Developmental Disabilities and Substance Abuse Services (DMH/DD/SAS).

In 2001, the NC General Assembly passed the Mental Health System Reform Act, which ended the previous system by which quasi-independent local entities such as counties and regional agencies delivered mental health services by directly employing the care providers. The new law essentially privatized mental health services by requiring the governmental local management entities (LMEs) to contract with other public or private providers or provider groups to serve area residents in need of mental health services. The local counties and regions no longer directly controlled the provision of services, but instead were responsible for managing provider contracts.

The local management entity serving Tyrrell County (as well as the rest of the MTW district) is East Carolina Behavioral Health (ECBH), which is headquartered in Greenville, NC.

One goal of mental health reform in NC was to refocus mental health, developmental disabilities and substance abuse in the community instead of in state mental health facilities. The data below clearly illustrates how utilization of state-level services has diminished.

## Mental Health Service Utilization

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Table 82 presents an annual summary of the number of persons in each jurisdiction served by LMEs/Area Programs from 2005 through 2010. See Appendix A (101).

- In Tyrrell County the number of persons served by mental health area programs fluctuated from year to year over the period cited, but increased 4% overall between 2009 and 2013. Corresponding decreases were 46% in the district and 47% in Bertie County.
- Statewide, there was an increase in the number of persons served between 2009 and 2013, but the state totals have since recovered similar to 2009 levels.

Since mental health reform in NC, only the most seriously ill mental health patients qualify for treatment at state psychiatric hospitals. The individual must be assessed as meeting the diagnostic criteria for (1) acute schizophrenia and/or other psychotic disorders, (2) acute mood disorders or (3) the combination of both, with or without medical and/or physical complications that are within the parameters of what the state hospital can manage.

At the present time, there are three state-operated psychiatric hospitals in NC; Broughton Hospital (Morganton), Central regional Hospital (Butner), and Cherry Hospital (Goldsboro).

Table 83 presents a summary of the number of persons in each jurisdiction served in NC State Psychiatric Hospitals for the periods from 2009 through 2013. See Appendix A (101).

- The number of persons served in state psychiatric hospitals increased in every jurisdiction over the period cited. In Tyrrell County the increase was 50% from 2011 to 2013; in Bertie County the net decrease was 25%, and statewide it increased 69% from 2009 to 2013.

### Developmental Disabilities Service Utilization

According to NC MH/DD/SAS, *developmental disability* means a severe, chronic disability of a person which:

- a. Is attributable to a mental or physical impairment or combination of mental and physical impairments;
- b. Is manifested before the person attains age 22, unless the disability is caused by a traumatic head injury and is manifested after age 22;
- c. Is likely to continue indefinitely;
- d. Results in substantial functional limitations in three or more of the following areas of major life activity: self-care, receptive and expressive language, capacity for independent living, learning, mobility, self-direction and economic self-sufficiency; and
- e. Reflects the person's need for a combination and sequence of special interdisciplinary, or generic care, treatment, or other services which are of a lifelong or extended as a developmental delay.

The NC Council on Developmental Disabilities estimated that as of January, 2013 there were over 167,000 persons in NC with a developmental disability.

Although community care is preferred where available, the state currently operates three facilities serving the developmentally disabled: Caswell Developmental center (Kinston), Murdoch Development Center (Butner), and J. Iverson Riddle Developmental Center (Morganton).

Table 84 presents a summary of the persons in each jurisdiction served in NC State Developmental Centers for the period from 2011 through 2013. See Appendix A (102).

- The numbers of persons in the three local jurisdictions served in state developmental centers were small and variable and demonstrated no definitive pattern.
- At the state level, the number of persons served decreased by 2% between 2011 and 2013.

## Substance Abuse Service Utilization

### Alcohol and Drugs

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There are three state-operated residential alcohol and drug abuse treatment centers (ADATC): the Julian F. Keith ADATC (Black Mountain), the R.J. Blackley ADATC (Butner), and the Walter B. Jones ADATC (Greenville).

Table 85 presents a summary of the persons in each jurisdiction served in NC State ADATC for the period of 2009 through 2013. See Appendix A (102).

- The numbers of persons in the three local jurisdictions served in state alcohol and drug abuse treatment centers were small and variable, and demonstrated no definitive pattern.
- At the state level, the number of persons served increased by 10% between 2009 and 2013.

Table 86 present the 2012 BRFSS Survey Results shows results of binge drinking in eastern NC. See Appendix A (102).

### Substance Use and Abuse among Youth

#### Tobacco

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While there is no Tyrrell County specific data on youth tobacco use there is regional data through a youth tobacco survey conducted annually through the NC DPH Tobacco Prevention and Control Branch. Tyrrell County is included among the 37 counties in the Branch's Eastern/Coastal Region (Region 1).

Table 87 presents the 2012 BRFSS Survey Results presents results of current smokers which include anyone who smoke every day, as well as individuals who smoke some days, including social settings. When asked about tobacco use, approximately 22.2% of population in \*\*Eastern NC are current smokers. See Appendix A (103).

## Chapter 3: Environmental Data

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### Water Quality

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Tyrrell County has 2 community water systems and is a part of the Pasquotank Watershed. The primary water source type is groundwater. Public water systems in North Carolina are monitored and regulated by the Public Water Supply System within the Division of Environmental Health, NC Department of Environment and Natural Resources. The Environmental Protection Agency (EPA) provides water quality standards and requires that water systems are periodically monitored for bacteria and other compounds. If any of these tests exceed the EPA action level, the water system must correct the problem, return to compliance with EPA water quality standards or provide alternative water supply to its customers.

There was no data found to indicate that any particular water system in Tyrrell County has an on-going water quality issue. Residents can review the results of water quality monitoring for their water system by visiting <https://www.pwss.enr.state.nc.us/NCDWW/>.

### Air Quality

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The North Carolina Division of Air Quality within the North Carolina Department of Environment and Natural Resources monitors outdoor air quality throughout North Carolina. According to Tyrrell County's 2008 Air Quality report, Tyrrell County has an average of 226 days good air quality, 69 days of moderate air quality, 3 days of unhealthy air quality for sensitive groups and 1 day of unhealthy air quality. Below is the NC Division of Air Quality Color Code Guide. This guide is used to alert the public of air quality issues related to the ozone levels.<sup>1</sup>

## Chapter 4: Health and Wellness

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In Tyrrell County, there is one (1) establishment that offers full-service grocery services. For the purposes of this assessment, a “full-service grocery” is defined as an establishment that is open seven days week, offers a variety of fresh fruits and vegetables at competitive prices, and accepts the Supplemental Nutrition Assistance Program (SNAP) EBT, and WIC methods of payment.

### Parks and Recreational Facilities - Physical Activity

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Studies show one of the most effective ways to offset weight gain is through increased physical activity. Coincidentally, individuals looking to increase physical activity encounter barriers when access to recreational facilities is limited. In particular, parks without active transportation connections lessen the amount of physical activity an individual may experience when choosing to recreate. Further, those individuals without access to a private vehicle will be less inclined to visit parks and recreation facilities without non-monitored motorized access.

Significant portions of Tyrrell County lack ready access to physical activity facilities, while Columbia residents has a facility located within one to miles or walking distance. You have to pay a membership fee which is a burden for a lot of residents. There are no parks or walking trails mapped out in Tyrrell County. Residents that live in Columbia can walk around town.

### Smoke Free Facilities

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All public schools and restaurants in Tyrrell County are smoke-free. The governmental and county buildings are also smoke-free and have policies in place.

# APPENDIX A

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**Table 2: General Demographic Characteristics (2010 US Census)**

**Table 2. General Demographic Characteristics (2010 US Census)**

Location	Total Population	Number of Males	% Population Male	Median Age Male	Number of Females	% Population Female	Median Age Female	Overall Median Age
Tyrrell County	4,407	2,434	55.2	37.9	1,973	44.8	46.1	42.0
<i>District Average</i>	14,047	6,696	49.6	42.5	7,351	50.4	46.8	44.7
Bertie County	21,282	10,534	49.5	39.5	10,748	50.5	45.7	42.9
State of NC	9,535,483	4,645,492	48.7	36.0	4,889,991	51.3	38.7	37.4

Note: percentages by gender are calculated. Source: US Census Bureau, American Fact Finder, 2010 Census, Summary File DP-1, 2010 Demographic Profile Data, Profile of General Population and Housing Characteristics: 2010; <http://factfinder2.census.gov>.

**Table 3: Population by Township, Tyrrell County (2010 US Census)**

**Table 3. Population by Township, Tyrrell County (2010 US Census)**

Township	Number of Person	% of County Population	Median Age
Columbia	2715	62.0	39.8
Scuppernong	798	18.1	43.4
Gum Neck	462	10.5	38.4
Alligator	381	8.6	39.7
South Fork	51	1.2	34.7
Tyrrell County Total	4,407	100	32.7

Source: US Census Bureau, American Fact Finder, 2010 Census, Summary File DP-1, 2010 Demographic Profile Data, Profile of General Population and Housing Characteristics: 2010; <http://factfinder2.census.gov>.

**Table 4: Decadal Population Growth (1980-2030)**

**Table 4. Decadal Population Growth (1980-2030)**

Location	Number of Persons and Percent Change										
	1980	1990	% Change 1980-1990	2000	% Change 1990-2000	2010	% Change 2000-2010	2020 Projection	% Change 2010-2020	2030 Projection	% Change 2020-2030
Tyrrell County	3,975	3,856	-3.0	4,149	7.6	4,407	6.4	3,947	-10.4	3,686	-6.6
<i>District Average</i>	14,908	14,310	-3.9	14,472	3.7	14,044	-0.4	17,121	-8.1	12,188	-6.3
Bertie County	21,024	20,388	-3.0	19,757	-3.1	21,282	7.7	26,677	6.6	24,042	6.0
State of NC	5,880,095	6,632,448	12.8	8,046,485	21.3	9,535,483	18.5	10,966,956	15.0	12,465,481	13.7

Note: percentage change is calculated. Source: Log into North Carolina (LINC) Database. Topic Group Population and Housing, Total Population, Population (Data Item 5001); [http://data.osbm.stat.nc/pls/linc/dyn\\_linc\\_main.show](http://data.osbm.stat.nc/pls/linc/dyn_linc_main.show)

*Figure 1: Birth Rate Trend, Live Births per 1,000 Total Population*

**Figure 1. Birth Rate Trend, Live Births per 1,000 Total Population  
(Five-Year Aggregates, 2004-2008 through 2009-2013)**



Source: NC State Center for Health Statistics, Health Data, County Level Data, County Health Databooks 2008, 2009, 2010, 2011, 2012, 2013; <http://www.schs.state.nc.us/schs/data/databook/>.

*Table 5: Population Distribution by Race/Ethnicity*

**Table 5. Population Distribution by Race/Ethnicity  
(2010 US Census)**

Number and Percent															
Location	Total	White		Black or African American		American Indian & Alaskan Native		Asian, Native Hawaiian & Other Pacific Islander		Some Other Race		Two or More Races		Hispanic or Latino of Any Race	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Tyrrell Co	4,407	2,625	61.4	1,200	28.1	87	0	105	.5	132	.1	116	.7	240	.8
<i>District Average</i>	13,837	7,215	40.5	6,034	40.4	66	.7	66	.0	238	.2	168	.6	492	.0
Bertie Co	21,282	7,488	35.2	13,296	62.5	96	.5	109	.5	96	.5	197	.9	267	.3
State NC	9,535,483	6,528,950	68.5	2,048,628	21.5	122,110	.3	215,566	.3	414,030	.3	206,199	.2	800,120	.4

Source: US Census Bureau, American FactFinder, 2010 Census, 2010 Demographic Profile Data, Summary File DP-1, Profile of General Population and Housing Characteristics: 2010; <http://factfinder2.census.gov>.

*Table 6: Population Distribution by Age & Gender, Number and Percent (2010 US Census)*

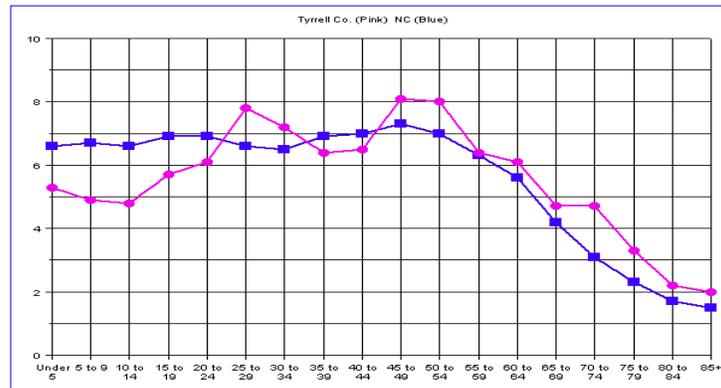
**Table 6. Population Distribution by Age and Gender, Number and Percent (2010 US Census)**

Age Group	Tyrrell County						North Carolina					
	No. in Population			Percent of Population			No. in Population			Percent of Population		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
All Ages	4,407	2,434	1,973	100.0	55.2	44.8	9,535,483	4,645,492	4,888,991	100	48.7	51.3
Under 5	233	108	125	5.3	2.5	2.8	632,040	322,871	309,169	6.6	3.4	3.2
5 to 9	215	113	102	4.9	2.6	2.3	635,945	324,900	311,045	6.7	3.4	3.3
10 to 14	212	114	98	4.8	2.6	2.2	631,104	322,795	308,309	6.6	3.4	3.2
15 to 19	250	120	130	5.7	2.7	2.9	659,591	338,271	321,320	6.9	3.5	3.4
20 to 24	267	191	76	6.1	4.3	1.7	661,573	336,648	324,925	6.9	3.5	3.4
25 to 29	342	236	106	7.8	5.4	2.4	627,036	311,499	315,537	6.6	3.3	3.3
30 to 34	316	222	94	7.2	5.0	2.1	619,557	304,807	314,750	6.5	3.2	3.3
35 to 39	282	175	107	6.4	4.0	2.4	659,843	324,681	335,162	6.9	3.4	3.5
40 to 44	28	170	117	6.5	3.9	2.7	667,308	329,652	337,656	7.0	3.5	3.5
45 to 49	357	198	159	8.1	4.5	3.6	698,753	341,432	357,321	7.3	3.6	3.7
50 to 54	354	190	164	8.0	4.3	3.7	669,893	323,702	346,191	7.0	3.4	3.6
55 to 59	283	148	135	6.4	3.4	3.1	600,722	285,244	315,478	6.3	3.0	3.3
60 to 64	267	129	138	6.1	2.9	3.1	538,039	255,034	283,005	5.6	2.7	3.0
65 to 69	205	98	107	4.7	2.2	2.4	403,024	188,125	214,899	4.2	2.0	2.3
70 to 74	208	86	122	4.7	2.0	2.8	294,543	133,021	161,522	3.1	1.4	1.7
75 to 79	145	69	76	3.3	1.6	1.7	223,655	94,981	128,674	2.3	1.0	1.3
80 to 84	96	42	54	2.2	1.0	1.2	165,396	65,573	101,823	1.7	0.7	1.1
85 years and over	88	25	63	2.0	0.6	1.4	147,461	44,256	103,205	1.5	0.5	1.1

Source: US Census Bureau, American FactFinder, 2010 Census, 2010 Demographic Profile Data, Summary File DP-1, Profile of General Population and Housing Characteristics: 2010; <http://factfinder2.census.gov>.

*Figure 2: Population Distribution by Age, Tyrrell County and NC (2013)*

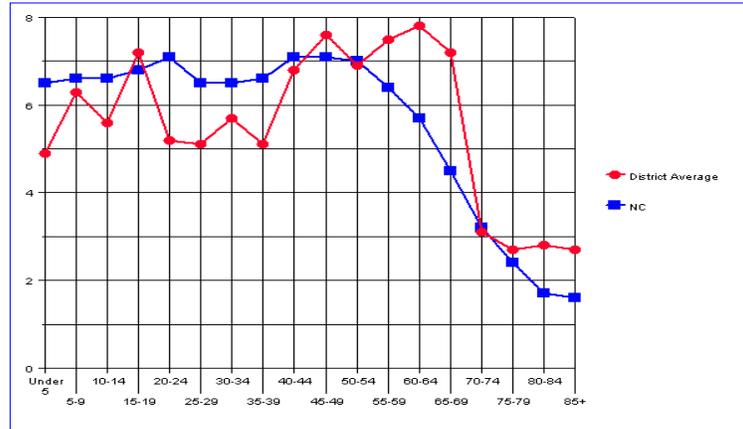
**Figure 2. Population Distribution by Age, Tyrrell County and NC (2013)**



Source: US Census Bureau, American FactFinder, 2010 Census, 2010 Demographic Profile Data, Summary File DP-1, Profile of General Population and Housing Characteristics: 2010 (Geographies as noted); <http://factfinder2.census.gov>.

Figure 3: Population Distribution by Age, MTW District and NC (2013)

Figure 3. Population Distribution by Age, MTW District and NC (2013)



Source: US Census Bureau, American FactFinder, 2010 Census, 2010 Demographic Profile Data, Summary File DP-1, Profile of General Population and Housing Characteristics: 2010 (Geographies as noted); <http://factfinder2.census.gov>.

Table 7: Growth of the Foreign-born Population (Before 1980 and 2010)

Table 7. Growth of the Foreign-born Population (Before 1980 through 2010)

Location	Number of Persons Arriving				% Increase 2000-2010
	Before 1980	1980-1989	1990-1999	After 2000	
Tyrrell County	28	2	26	109	51.4
<i>District Average</i>	52	22	90	106	65.0
Bertie County	52	31	38	84	69.4
State of NC	111,761	104,544	240,941	311,461	67.4

Source: US Census Bureau, American Fact Finder, And 2010 ACS 5-Year Estimates, Table B05005: Year of Entry by Citizenship Status in the United States. <http://factfinder2.census.gov>.

Table 8: Household Language by Linguistic Isolation (Five-Year Estimate, 2005-2009)

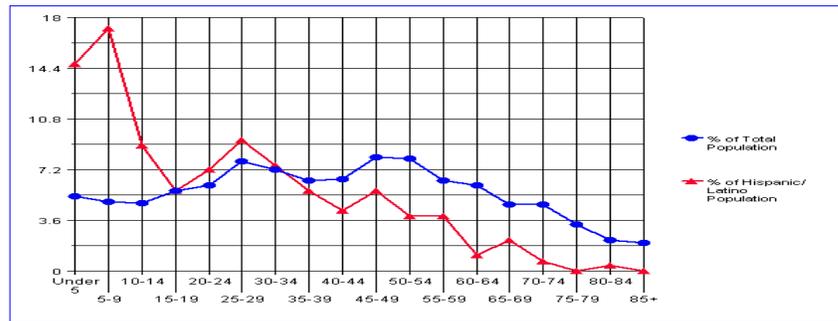
Table 8. Household Language by Linguistic Isolation (Five Year Estimate, 2005-2009)

Location	Total Households	English Speaking	Number of Households							
			Spanish Speaking		Speaking Other Indo-European Language		Speaking Asian or Pacific Island Language		Speaking Other Languages	
			Isolated	Not Isolated	Isolated	Not Isolated	Isolated	Not Isolated	Isolated	Not Isolated
Tyrrell County	1,744	1,652	72	20	0	0	0	0	0	0
<i>District Average</i>	5,478	5,243	95	119	4	17	0	0	0	0
Bertie County	7,766	7,550	32	161	0	14	0	9	0	0
State of NC	3,541,807	3,194,328	71,843	137,729	7,637	67,897	10,388	35,597	2,466	13,922

Source: US Census Bureau, American Fact Finder, Table B16002: Household Language by Linguistic Isolation, 2009 American Community Survey 5-Year Estimates. <http://factfinder.census.gov>.

Figure 4: Age Distribution of Overall and Latino Population in Tyrrell County (2013)

Figure 4. Age Distribution of Overall and Latino Populations in Tyrrell County (2013)



NC State Center for Health Statistics; NC Health Data Query System: Population Estimates Using NC HS Bridged Population Data 2013.

Table 9: Income Measures

Table 9. Income Measures

Location	Per Capita Personal Income 2014	Per Capita Income Difference from State	Estimated Median Households Income 2014	Median Households Income Difference from State	Estimated Median Family Income 2014	Median Family Income Difference from State
Tyrrell County	\$18,728	-\$6,556	\$31,996	-\$14,338	\$38,493	-\$18,432
District Average	\$19,145	-\$6,139	\$32,699	-\$13,635	\$42,254	-\$14,671
Bertie County	\$16,864	-\$8,420	\$29,779	-\$16,555	\$40,850	-\$16,075
State of NC	\$25,284	n/a	\$46,334	n/a	\$56,925	n/a

US Census Bureau, American Fact Finder, 2010 ACS 5-Year Estimate. <http://factfinder2.census.gov>. Source (except as noted): NC Department of Commerce, Access NC, Community Demographics, County Report, County Profile, <http://accessnc.commerce.state.nc.us/EDIS/page1.html>.

Table 10: Largest Top Employers in Tyrrell County (Second Quarter, 2014)

Table 10. Largest Top Employers in Tyrrell County (Second Quarter, 2014)

Rank	Company	Industry	Employment
1	Tyrrell County Board of Education & Health Services	Education & Health Services	100 – 249
2	Department of Public Safety	Public Administration	100 – 249
3	White Cap Linen	Other Services	100 – 249
4	County of Tyrrell	Public Administration	50 – 99
5	Captain Neil's Seafood, Inc.	Manufacturing	50 – 99
6	Black Gold Farms, Inc.	Natural Resources & Mining	50 – 99
7	Food Lion Trade, Inc.	Trade, Transportation, Utilities	50 – 99
8	Gary G. Comstock	Natural Resources & Mining	Below 50
9	Cherry Farms Seed Company	Natural Resources & Mining	Below 50
10	Double Dee Farms, Inc.	Natural Resources & Mining	Below 50

**Table 11: Place of Work Resident Worker over Age 16 (Five-Year Estimate, 2009-2013)**

**Table 11. Place of Work Resident Worker Over Age 16  
(Five-Year Estimate, 2009-2013)**

Location	Total # Workers Over 16	# Working in NC	% Working in NC	# Working in County	% Working in County	# Working Out of County	% Working Out of County	# Working Out of State	Working Out of State	Total # Leaving County for Work	Total % Leaving County for Work
Tyrrell Co	1,417	1,406	99.2	864	61.0	542	38.2	11	.78	553	39.0
<i>District Average</i>	14,436	14,404	99.7	8,591	59.5	5,811	40.2	34	.24	5,845	40.4
Bertie Co	7,163	6,796	94.9	3952	55.2	2844	39.7	367	5.1	3,211	44.8
State NC	4,227,986	4,121,984	97.5	3,039,407	72.0	1,082,577	25.6	106,002	2.5	1,188,579	28.1

Note: percentages are calculated and may include some rounding error. Source: US Census Bureau, American Fact Finder, 2011 ACS 5-Year Estimate, Table B08007: Sex of Workers by Place of Work, State and County Level; <http://factfinder.census.gov>.

**Figure 5: Annual Unemployment Rate (2000-2013)**

**Figure 5. Annual Unemployment Rate (2000-2013)**



Note: 2012 figures represent the average monthly rate from January through September. Source: NC Employment Security Commission, Labor Market Information, Workforce Information, Employed, Unemployed and Unemployment Rates, Labor Force Statistics, Single Areas for All Years; <http://eslmi03.esc.state.nc.us/ThematicLAUS/clfasp/startCLFSAAY.asp>.

**Table 12: Annual Poverty Rate**

**Table 12. Annual Poverty Rate  
(1970-2000; 2008-2012 and 2009-2013 Five-Year Estimates)**

Location	Percent of All People in Poverty					
	1970	1980	1990	2000	2008-2012	2009-2013
Tyrrell County	44.8	25.2	25.0	23.3	34.1	23.2
<i>District Average</i>	36.3	23.7	22.6	21.4	36.0	23.4
Bertie County	44.3	29.4	25.9	23.5	38.2	23.4
State of NC	20.3	14.8	13.0	12.3	14.8	17.5
Source:	a	a	A	a	b	c

a - Log Into North Carolina (LINC) Database, Topic Group Employment and Income (Data Item 6094); [http://data.osbm.state.nc.us/pls/linc/dyn\\_linc\\_main.show](http://data.osbm.state.nc.us/pls/linc/dyn_linc_main.show).

b - US Census Bureau, American Fact Finder, American Community Survey, 2010 American Community Survey 5-Year Estimates, Data Profiles, County, North Carolina (Counties as listed); <http://factfinder2.census.gov>.

c - US Census Bureau, American Fact Finder, American Community Survey, 2011 American Community Survey 5-Year Estimates, Data Profiles, County, North Carolina (Counties as listed); <http://factfinder2.census.gov>

**Table 13: Persons in Poverty by Race**

**Table 13. Persons in Poverty by Race  
(2000; 2008-2012 and 2009-2013 Five-Year Estimates)**

Location	2000				2008-2012				2009-2013			
	Total No. in Poverty	Total % in Poverty	% White Poverty	% Black Poverty	Total No. in Poverty	Total % in Poverty	% White Poverty	% Black Poverty	Total No. in Poverty	Total % in Poverty	% White Poverty	% Black Poverty
Tyrrell Co.	867	23.3	11.0	39.9	803	21.6	13.5	33.7	757	20.8	14.4	31.9
<i>District Av</i>	2,995	21.8	9.6	14.5	3,405	24.3	14.9	34.9	3,121	22.6	14.5	32.4
Bertie Co.	4,597	23.5	9.4	31.5	4,837	24.3	8.6	32.7	4,612	23.4	11.3	30.1
State of NC	958,667	12.3	8.4	22.8	1,563,464	16.8	12.5	26.8	1,643,389	17.5	13.2	24.6
Source	a	a	a	a	b	b	b	b	c	c	c	c

a - Log Into North Carolina (LINC) Database, Topic Group Employment and Income (Data Items 6094, 6096, 6098);

[http://data.osbm.state.nc.us/pls/linc/dyn\\_linc\\_main.show](http://data.osbm.state.nc.us/pls/linc/dyn_linc_main.show).

b - US Census Bureau, American Fact Finder, American Community Survey, 2010 American Community Survey 5-Year Estimates, Data Profiles, County, North Carolina (Counties as listed); <http://factfinder2.census.gov>.

c - US Census Bureau, American Fact Finder, American Community Survey, 2011 American Community Survey 5-Year Estimates, Data Profiles, County, North Carolina (Counties as listed); <http://factfinder2.census.gov>.

**Table 14: Person in Poverty by Age**

**Table 14. Persons in Poverty by Age  
(2000; 2006-2010 and 2007-2011 Five-Year Estimates)**

Location	2000			2008-2012			2009-2013		
	Total % in Poverty	% Children Under 18 in Poverty	% Adults +65 or Older in Poverty	Total% in Poverty	% Children Under 18 in Poverty	% Adults +65 or Older in Poverty	Total % in Poverty	% Children Under 18 in Poverty	% Adults +65 or Older in Poverty
Tyrrell County	23.3	15.7	13.2	21.6	40.1	16.7	20.8	35.7	16.3
<i>District Average</i>	21.8	25.0	19.3	24.3	40.7	17.0	22.5	37.4	17.4
Bertie County	23.5	30.7	28.3	24.3	43.0	20.5	23.4	40.4	19.1
State of NC	12.3	15.7	13.2	16.8	23.8	10.2	17.5	24.9	10.0
Source	a	a	a	b	b	b	c	c	c

a - Log Into North Carolina (LINC) Database, Topic Group Employment and Income (Data Items 6094, 6100, 6104);

[http://data.osbm.state.nc.us/pls/linc/dyn\\_linc\\_main.show](http://data.osbm.state.nc.us/pls/linc/dyn_linc_main.show).

b - US Census Bureau, American Fact Finder, American Community Survey, 2010 American Community Survey 5-Year Estimates, Data

**Table 15: Percent of Students Enrolled for Free or Reduced-Price School Lunch**

**Table 15. Percent of Students Enrolled for Free or Reduced-Price School Lunch  
(SY 2008-09 throughout SY 2013-14)**

Location	Percent of Students Enrolled for Free or Reduced-Price Lunch					
	SY2008-09	SY2009-10	SY2010-11	SY2011-12	SY2012-13	SY2013-14
Tyrrell County	71.6	82.1	75.0	81.2	78.1	77.1
<i>District Average</i>	72.4	77.6	75.6	82.6	79.4	80.5
Bertie County	79.5	84.4	74.0	83.7	89.0	97.3
State of NC	49.9	53.7	53.9	56.0	56.1	58.0

Source: Annie E. Casey Foundation, Kids Count Data Center, Data by State, North Carolina, Profiles (state and counties as noted), Other Education, Percent of Students Enrolled in Free and Reduced Lunch; <http://datacenter.kidscount.org/data/bystate/StateLanding.aspx?state=NC>.

**Table 16: Tyrrell County Students Eligible for Free or Reduced-Price Lunch**

**Table 16. Tyrrell County Students Eligible for Free or Reduced-Price Lunch  
(SY2010-11 through SY2013-14)**

	SY2010-11		SY2011-12		SY2012-13		SY2013-14	
	No.	%	No.	%	No.	%	No.	%
Enrollment	565	n/a	569	n/a	550	n/a	537	n/a
Paid	141	25	102	18	120	22	123	23
Reduced	43	8	66	12	68	12	62	12
Free	381	67	401	70	362	66	352	66

Source: Myra Shoffner, Tyrrell County Schools; Personal communication to Billie Patrick, Public Health Educator, MTW District Health Department, Tyrrell County Health Department.

**Table 17: Number of Students Receiving Free or Reduced-Price Lunch**

**Table 17. Number of Students Receiving Free or Reduced-Price Lunch  
(SY2008-09 through SY2013-14)**

Location	Number of Students Enrolled for Free or Reduced-Price Lunch					
	SY 2008-09	SY2009-10	SY2010-11	SY2011-12	SY2012-13	SY2013-14
Tyrrell County	419	467	424	461	430	414
<i>District Average</i>	1,501	1,515	1,475	2,440	1,487	1,518
Bertie County	2,290	2,377	2,019	2,231	2,319	2,353
State of NC	703,887	752,708	759,361	793,055	803,302	826,558

Source: NC Department of Instruction, Data & Statistics, and Other Education Data: Select Financial Data, Free and Reduced Meals Application Data (by school year). <http://www.ncpublicschools.org/fbs/resources/data/>.

**Table 18: Economic Services Provided by Tyrrell County Department of Social Services**

**Table 18. Economic Services Provided by Tyrrell County Department of Social Services  
(FY2013-14 YTD as of January 30, 2014)**

Program	Applications Taken	Applications Approved	Total Caseload
<b>Food and Nutrition</b>	19	840	462
<b>WorkFirst</b>	0	12	7

Source: Chris Carson, Tyrrell County Department of Social Services. Personal Communication to Billie Patrick, Public Health Educator III, Martin-Tyrrell-Washington District Health Department, Washington County Health Department, January 2014.

Table 19: Housing by Type

Table 19. Housing by Type  
(2000 and 2009-2013 Five-Year Estimate)

2000													
Location	Total Housing Units	Vacant Housing Units		Occupied Housing Units		Owner Occupied Units		Median Monthly Housing Cost, Owner Mortgage	Renter Occupied Units		Median Gross Monthly Rent	Mobile Home Units	
		No.	%	No.	%	No.	%		No.	%		No.	%
Tyrrell County	2,032	495	24.4	1,537	75.6	1,151	74.9	\$501	386	25.1	\$375	708	29.1
District Average	6,379	737	40.1	5,641	84.7	3,716	73.4	\$725	1,542	26.5	\$378	1,593	23.6
Bertie County	9,050	1,307	14.4	7,743	85.6	5,797	74.9	\$649	1,946	25.1	\$358	2,865	31.7
State of NC	3,523,944	391,931	11.1	3,132,013	88.9	2,172,355	69.4	\$985	959,658	30.6	\$548	577,323	16.4
Source:	a	a	a	a	a	A	a	b	a	a	c	d	d

2009 – 2013													
Location	Total Housing Units	Vacant Housing Units		Occupied Housing Units		Owner Occupied Units		Median Monthly Housing Cost, Owner Mortgage	Renter Occupied Units		Median Gross Monthly Rent	Mobile Home Units	
		No.	%	No.	%	No.	%		No.	%		No.	%
Tyrrell County	1,990	510	25.6	1,480	74.4	1,116	75.4	\$1,053	364	18.2	\$776	602	30.3
District Average	6,659	1,364	22.0	5,327	78.0	1,613	72.5	\$1,048	1,467	22.0	\$670	1,594	25.2
Bertie County	9,750	2,121	21.8	7,629	78.2	3,035	52.8	\$959	1,882	24.7	\$586	2,865	32.1
State of NC	3,715,565	633,458	14.6	3,115,565	85.4	2,172,355	66.4	\$1,281	1,249,177	33.6	\$759	577,323	13.0
Source:	e	e	e	e	e	E	e	f	e	e	f	f	f

a - US Census Bureau, American FactFinder, 2000 US Census, Summary File 1 (SF-1), 2000 Demographic Profile Data, DP-1, Profile of General Population and Housing Characteristics: 2000 (geographies as listed); <http://factfinder2.census.gov>.  
 b - US Census Bureau, American FactFinder, 2000 US Census, Summary File 3 (SF-3), 100-Percent Data, Table H091, Median Selected Monthly Owner Costs (Dollars) for Specified Owner-Occupied Housing Units by Mortgage Status (geographies as listed); <http://www.factfinder2.census.gov>.  
 c - Log Into North Carolina, LINC Services; State and Counties: North Carolina and selected counties; Topic Group: Population and Housing; Housing Characteristics (Data Field V6115), 2000; [http://data.osbm.state.nc.us/pls/linc/dyn\\_linc\\_main.show](http://data.osbm.state.nc.us/pls/linc/dyn_linc_main.show)  
 d - US Census Bureau, American FactFinder, 2000 US Census, Summary File 3 (SF-3), Table QTH4, Physical Housing Characteristics - All Housing Units: 2000 (geographies as listed); <http://www.factfinder2.census.gov>.  
 e - US Census Bureau, American FactFinder, 2010 US Census, Summary File 1 (SF-1), 2010 Demographic Profile Data, DP-1, Profile of General Population and Housing Characteristics: 2010 (geographies as listed); <http://factfinder2.census.gov>. f - US Census Bureau, American Fact Finder, 2010 ACS 5-Year Estimates, Table DP04: Selected Housing Characteristics (geographies as listed). <http://factfinder2.census.gov>.

Table 20: Estimated Housing Cost as Percent of Household Income

Table 20. Estimated Housing Cost as Percent of Household Income  
(2008-2012 and 2009-2012 Five-Year Estimates)

Location	Renter Occupied Units						Mortgage Housing Units					
	2008-2012			2009-2013			2008-2012			2009-2013		
	Total Units	Units Spending > 30% Household Income on Housing		Total Units	Units Spending > 30% Household Income on Housing		Total Units	Units Spending > 30% Household Income on Housing		Total Units	Units Spending > 0% Household Income on Housing	
		#	%		#	%		#	%		#	%
Tyrrell County	285	124	43.6	364	121	39.8	626	295	47.1	5017	231	46.1
District Average	1,261	732	32.1	1,224	653	53.4	1,962	685	38.0	718	626	34.3
Bertie County	1,472	858	58.3	1,385	877	63.3	3,036	1,076	35.5	3,023	1,074	35.5
State of NC	1,095,577	554,428	50.6	1,153,233	574,369	51.0	1,667,158	539,993	32.6	1,645,120	110,964	13.7

a - Log Into North Carolina (LINC) Database, Topic Group Population and Housing (Data Items 6044, 6046, 6048, 6049, 6050, 6051), 2000 and 2010; [http://data.osbm.state.nc.us/pls/linc/dyn\\_linc\\_main.show](http://data.osbm.state.nc.us/pls/linc/dyn_linc_main.show).  
 b - Figures are calculated

**Table 21: Household Characteristics (2010 US Census)**

**Table 21. Household Characteristics (2010 US Census)**

Location	Total Number Households	Person Per Household	No. Households One-Person	% Households One-Person	No. Households One-Person and Age ≥65	% Households One-Person and Age ≥65
Tyrrell County	1,595	2.48	449	28.2	565	35.4
<i>District Average</i>	5,813	2.40	1,723	29.4	1,842	32.7
Bertie County	8,359	2.58	2571	30.8	2717	32.5
State of NC	3,745,155	2.48	1,011,348	27.0	895,832	23.9

1 - A household includes all the persons who occupy a housing unit. A housing unit is a house, an apartment, a mobile home, a group of rooms, or a single room that is occupied (or if vacant, is intended for occupancy) as separate living quarters. Separate living quarters are those in which the occupants live and eat separately from any other persons in the building and which have direct access from the outside of the building or through a common hall. The occupants may be a single family, one person living alone, two or more families living together, or any other group of related or unrelated persons who share living arrangements. (People not living in households are classified as living in group quarters. Source: US Census Bureau, American FactFinder, 2010 Census, 2010 Demographic Profile Data, Summary File DP-1, Profile of General Population and Housing Characteristics (geographies as noted); <http://factfinder2.census.gov>.

**Table 22: Single-Parent Families (2000-2010)**

**Table 22. Single-Parent Families (2000 and 2010)**

Location	2000										
	Total Families	Total Families with Own Children	Female Family Householders with Children < 18		Male Family Householders with Children <18		Total Children <18	Children <18 Living with Both Parents		Children <18 Not Living with Both Parents	
	Number	Number	No.	%	No.	%	Number	No.	%	No.	%
Tyrrell County	1,506	439	135	31.0	30	6.8	940	501	53.3	439	46.7
<i>District Average</i>	4,203	1,770	556	31.4	96	5.4	3,679	1,975	53.7	1,704	86.2
Bertie County	5,424	2,303	783	34.0	135	5.9	5,163	2,488	48.2	2,675	52.0
State of NC	2,158,869	995,648	227,351	22.8	60,791	6.1	1,964,047	1,266,526	64.5	697,521	55.1
Source	a	a	a	b	a	b	b	b	b	a	b

Location	2010										
	Total Families	Total Families with Own Children	Female Family Householders with Children < 18		Male Family Householders with Children <18		Total Children <18	Children <18 Living with Both Parents		Children <18 Not Living with Both Parents	
	Number	Number	No.	%	No.	%	Number	No.	%	No.	%
Tyrrell County	1,076	519	118	22.7	33	6.4	795	390	49.1	405	51.0
<i>District Average</i>	3,886	1,926	529	27.5	96	5.0	2,849	1,422	49.9	1,427	50.1
Bertie County	5,424	2,303	783	34.0	135	5.9	5,163	2,488	48.2	2,675	52.0
State of NC	2,499,174	1,331,533	292,504	22.0	85,199	6.4	2,281,635	1,359,045	59.5	922,590	67.8
Source	a	a	a	b	a	b	b	a	b	a	b

a - Log Into North Carolina (LINC) Database, Topic Group Population and Housing (Data Items 6044, 6046, 6048, 6049, 6050, 6051), 2000 and 2010; [http://data.osbm.state.nc/pls/linc/dyn\\_linc\\_main.show](http://data.osbm.state.nc/pls/linc/dyn_linc_main.show).

b - Figures are calculated

**Table 23: Grandparents with Responsibility for Minor Children**

**Table 23. Grandparents with Responsibility for Minor Children  
(Five-Year Estimate, 2009-2013)**

Location	No. of Grandparents Living with Own Grandchildren (<18 Years)	Grandparents Responsible for Grandchildren (<18 Years)	
		Est. No.	%
Tyrrell County	86	47	54.7
<i>District Average</i>	431	227	73.3
Bertie County	761	413	54.3
State of NC	206,632	100,422	48.6

Source: US Census Bureau, American FactFinder, 2006-2010 American Community Survey 5-Year Estimates. Selected Social Characteristics in the United States (DP02); <http://factfinder2.census.gov>.

**Table 24: Educational Attainment**

**Table 24. Educational Attainment**

Location	% Population High School Graduate or Higher	% Population Bachelor's Degree or Higher	% 3 <sup>rd</sup> Graders At or Above Grade Level, ABC's EOG Reading Test	% 3 <sup>rd</sup> Graders At or Above Grade Level, ABC's EOG Math Test	% 8 <sup>th</sup> Graders At or Above Grade Level, ABC's EOG Reading Test	% 8 <sup>th</sup> Graders At or Above Grade Level, ABCs EOG Math Test	SAT Participation Rate	Average Total SAT Scores
	2013	2013	SY2012-13	SY2012-13	SY2012-13	SY2012-13	SY2012-13	SY2012-13
Tyrrell County	71.5	8.4	32.6	44.2	45.6	14.9	54.0	913
<i>District Average</i>	77.3	10.7	32.3	34.5	34.4	21.0	59.3	879
Bertie County	72.6	9.3	27.3	23.7	22.4	15.7	71.0	798
State of NC	84.9	30.2	45.2	46.8	41.0	34.2	62.0	1,010
Source	a	a	b	B	b	b	b	b

a - US Census Bureau, American Fact Finder, American Community Survey, 2009-2013 American Community Survey (ACS) 5-Year Estimates, Data Profiles, Detailed Tables, Selected Social Characteristics, Educational Attainment, by State or County; <http://factfinder.census.gov>.  
 b - NC Department of Public Instruction, Data and Statistics, Education Data, NC School Report Cards. District Profile. <http://www.ncreportcards.org/src/>.

**Table 25: High School Drop-Out Rate**

**Table 25. High School Drop-Out Rate  
(SY 2008-09 through 2012-13)**

Location	Drop-Out Rate				
	SY2008-09	SY2009-10	SY2010-11	SY2011-12	SY2012-13
Tyrrell County Schools	1.10	2.38	2.48	3.55	3.67
<i>District Average</i>	2.47	3.01	3.08	3.15	2.89
State of NC	4.27	3.75	3.43	3.01	2.45

a - NC Department of Public Instruction, Research and Evaluation, Dropout Data and Collection Process, Annual Dropout Reports; <http://www.ncpublicschools.org/research/dropout/reports/>.

**Table 26: Four Year Cohort Graduation Rate**

**Table 26. Four Year Cohort Graduation Rate  
(9<sup>th</sup> Graders Entering SY2010-11 and Graduating SY2013-14 or Earlier)**

Location	All Students			Males			Females			Economically Disadvantaged		
	Total Students	# Students Graduating	% Students Graduating	Total Students	# Students Graduating	% Students Graduating	Total Students	# Students Graduating	% Students Graduating	Total Students	# Student Graduating	% Students Graduating
Tyrrell Schools	34	30	88.2	13	11	84.6	21	19	90.5	21	18	85.7
<i>District Average</i>	144	115	82.9	72.7	57.3	81.3	119	58	84.1	80.3	63	80.6
State of NC	109,714	92,035	83.9	55,846	44,840	80.3	53,868	47,195	87.9	47,828	37,311	78.0

Note: subgroup information is based on data collected when a student is last seen in the cohort

Source: Public Schools of North Carolina, Cohort Graduation Rate. 4-Year Cohort Graduation Rate Report, 2008-09 Entering 9<sup>th</sup> Graders Graduating in 2011-12 or Earlier. <http://www.ncpublicschools.org/accountability/reporting/cohortgradrate>.

**Table 27: School Crime and Violence Trend**

**Table 27. School Crime and Violence Trend  
(SY2009-10 and SY2013-14)**

Location	SY2009-10		SY2010-11		SY2011-12		SY2012-13		SY2013-14	
	No. Acts	Rate								
Tyrrell County	2	3.5	0	0.0	2	3.5	1	1.8	0	0.0
<i>District Average</i>	13	5.5	12	4.6	12	6.4	6	3.4	5	5.7
Bertie County	12	4.3	17	6.2	15	5.6	6	2.3	9	11.5
State of NC	6,524	15.9	6,132	14.6	5,980	14.1	5,759	13.1	5,475	12.4
Source	a	a	a	a	A	a	b	b	b	b

1. For list of reportable acts see accompanying text

2. Rate is number of acts per 1,000 students

a - NC Department of Public Instruction, Research and Evaluation, Discipline Data, Annual Reports, Annual Reports of School Crime and Violence (years as noted); <http://www.ncpublicschools.org/research/discipline/reports/#consolidated>.

b - NC Department of Public Instruction, Research and Evaluation, Discipline Data, Consolidated Data Reports. Crime & Violence Table C-5. <http://www.ncpublicschools.org/research/discipline/reports/#consolidated>

**Table 28: Crime Rates, Crime per 100,000 Population (2009-2013)**

**Table 28. Crime Rates, Crime per 100,000 Population (2009-2013)**

Location	Crime Rates per 100,000 Population											
	2009			2010			2011			2012		
	Index Crime	Violent Crime	Property Crime	Index Crime	Violent Crime	Property Crime	Index Crime	Violent Crime	Property Crime	Index Crime	Violent Crime	Property Crime
Tyrrell Co	1,472.0	210.3	1,261.7	1,559.6	70.6	1,529.1	1,617.3	159.5	1,457.9	1,520.0	115.2	1,404.9
<i>District Average</i>	3,141.8	576.5	2,565.3	1,892.0	168.9	1,736.6	1,922.9	215.1	2,929.9	3,148.4	323.7	2,824.7
Bertie Co.	2,203.2	240.8	1,962.4	1,871.2	112.5	1,758.7	2,138.3	188.3	1,950.1	1,995.0	157.2	1,837.7
State NC	4,178.4	417.2	3,761.2	3,955.7	374.4	3,581.41	3,919.8	354.6	3,565.2	3,767.2	358.6	3,408.6

\* - Indicates incomplete or missing data.

Source: NC Department of Justice, State Bureau of Investigation, Crime, View Crime Statistics, Crime Statistics (by Year); <http://ncdoj.gov/Crime/View-Crime-Statistics.aspx>.

**Table 29: Types of Crimes Reported in Tyrrell County (2009-2013)**

**Table 29. Types of Crimes Reported in Tyrrell County (2009-2013)**

Type of Crime	Number of Crime				
	2009	2010	2011	2012	2013
<b>Violent Crime</b>					
<i>Murder</i>	0	0	0	0	0
<i>Rape</i>	2	0	2	1	0
<i>Robbery</i>	3	1	0	2	1
<i>Aggravated Assault</i>	4	2	5	2	6
<b>Property Crime</b>					
<i>Burglary</i>	11	10	8	10	14
<i>Larceny</i>	39	53	50	46	35
<i>Motor Vehicle Theft</i>	4	2	6	5	2
<b>Total Index Crime</b>	63	68	71	66	58

Source: NC State Bureau of Investigation, Crime in North Carolina, North Carolina Crime Statistics, Crime Statistics in Detailed Reports (By Year), 2011 Annual Reports, County Offenses Ten Year Trend, <http://crimereporting.ncdoj.gov/>

**Table 30: Rank of North Carolina in America’s Health Rankings (2014)**

**Table 30. Rank of North Carolina in America’s Health Rankings (2014)**

Location	National Rank (Out of 50)		
	Overall	Determinants	Outcomes
Hawaii	1	3	1
North Carolina	37	40	36
Mississippi	50	50	50

United Health Foundation, 2014. America's Health Rankings; <http://www.americashealthrankings.org/NC/2014>.

**Table 31: County Health Rankings (2014)**

**Table 31. County Health Rankings (2014)**

Location	County Rankings (Out of 100)						
	Health Outcomes		Health Factors				Overall
	Mortality	Morbidity	Health Behaviors	Clinical Care	Social & Economic Factors	Physical Environment	
Tyrrell County	85	88	48	87	82	3	88
<i>District Average</i>	73	84	49	76	85	25	78
Bertie County	99	91	80	58	88	14	95

County Health Rankings and Roadmaps, 2014. University of Wisconsin Population Health Institute; <http://www.countyhealthrankings.org/app/north-carolina/2013/rankings/outcomes/overall/by-rank>.

Table 32: County Health Rankings Details (2014)

Table 32. County Health Rankings Details (2014)

Health Factor	Tyrrell County	District Average	Bertie County	NC County Ranking	National Benchmarks
<b>Mortality</b>					
Premature Death	9,791	9,503	11,207	7,480	6,811
<b>Morbidity</b>					
Poor or fair health	n/a	13.3%	28%	18%	12.4%
Poor physical health days	n/a	3.2	4.1	3.6	3.7
Poor mental health days	n/a	0.9	2.3	3.4	3.5
Low Birthweight	13.2%	12.4%	13.4%	9.1%	8.1%
<b>Health Factors</b>					
<b>Health Behaviors</b>					
Adult smoking	n/a	4%	19%	20%	18.1%
Adult obesity	31%	33%	35%	29%	28%
Food environment index	6.8	6.2	5.7	6.9	7.6
Physical inactivity	30%	30%	32%	25%	30%
Access to exercise inactivity	52%	39.3	38%	65%	77%
Excessive drinking	n/a	n/a	n/a	13%	15%
Alcohol-impaired driving deaths	14%	17%	40%	33%	32%
Sexually transmitted infections	573	618	848	568	458
Teen births	56	58	59	44	31
<b>Clinical Care</b>					
Uninsured	25%	20%	17%	19%	18%
Primary care physicians	n/a	3229:1	4,175:1	1,462:1	1,355:1
Dentists	n/a	2,659:1	10,327:1	2,022:1	1,663:1
Mental health providers	2,169:1	1,449.1	3,442::1	696:1	753:1
Preventable hospital stays	69	85	75	60	65
Diabetic screening	84%	86%	85%	88%	84%
Mammography screening	69.8%	66.9%	70.4%	67.6%	63%
<b>Social &amp; Economic Factors</b>					
High school graduation	n/a	53%	79%	79%	0.8
Some college	36.9%	32.3%	40.7%	63.1%	63%
Unemployment	9.7%	11.1%	12.1%	9.5%	8.1%
Children in poverty	40%	41%	38%	26%	23%
Inadequate social support	n/a	8.3%	n/a	21%	21%
Children in single-parent households	57%	51.3%	50%	36%	33%
Violent crime rate	147	524	174	372	387
Injury deaths	n/a	40	86	65	59
<b>Physical Environment</b>					
Daily fine particulate matter	11.4	11.4	11.7	12.3	11.1
Drinking water violations	0%	0%	0%	2%	8%
Severe housing problems	16%	19%	19%	16%	19%
Driving alone to work	71%	78%	78%	81%	76%
Long commute – driving alone	44%	37%	29%	30%	34%

Source: County Health Rankings and Roadmaps, 2014. University of Wisconsin Population Health Institute; <http://www.countyhealthrankings.org/app/north-carolina/2014/rankings/outcomes/overall>.

**Table 33: Total Pregnancy, Fertility and Abortion Rates, Ages 15-44**

**Table 33. Total Pregnancy, Fertility and Abortion Rates, Ages 15-44  
(Single Years, 2009-2013)**

Location	Female Ages 15-44														
	2009			2010			2011			2012			2013		
	Pregnancy Rate	Fertility Rate	Abortion Rate	Pregnancy Rate	Fertility Rate	Abortion Rate	Pregnancy Rate	Fertility Rate	Abortion Rate	Pregnancy Rate	Fertility Rate	Abortion Rate	Pregnancy Rate	Fertility Rate	Abortion Rate
Tyrrell Co	92.0	76.9	11.7	79.4	73.0	*	80.0	72.0	*	69.6	61.1	*	83.8	78.5	*
<i>District Average</i>	82.3	69.7	8.9	71.5	63.0	6.2	73.2	63.9	6.4	67.5	59.1	3.0	77.9	69.1	6.5
Bertie Co	72.3	68.0	13.5	72.3	56.9	14.9	73.1	59.5	12.7	64.0	54.1	9.4	68.5	57.7	9.9
NC	78.9	95.1	13.4	76.4	62.7	13.2	73.3	61.5	11.4	72.1	61.0	10.7	70.8	60.3	10.1

Note: Bold type indicates an unstable rate based on a small number (fewer than 10 cases)  
Source: NC Center for Health Statistics, County-level Data, County Health Data Books (2007-2013). Pregnancy and Live Births. Pregnancy, Fertility, & Abortion Rates per 1,000 Population, by Race, by Age: <http://www.schs.state.nc.us/SCHS/data/databook/>.

**Table 34: Pregnancy, Fertility, and Abortion Rates, Ages 15-44, Stratified by Race/Ethnicity**

**Table 34. Pregnancy, Fertility, and Abortion Rates, Ages 15-44, Stratified by Race/Ethnicity  
(2012 and 2013)**

Location	Female Ages 15-44						
	2012			2013			
	Pregnancy Rate	Fertility Rate	Abortion Rate	Pregnancy Rate	Fertility Rate	Abortion Rate	
Tyrrell County	Total	69.6	61.1	8.5	83.3	78.5	*
	White, Non-Hispanic	63.3	60.2	3.0	88.9	85.7	*
	African-American, Non-Hispanic	84.8	66.7	18.2	*	*	*
	Other, Non-Hispanic	0.0	0.0	0.0	*	*	*
	Hispanic	83.3	69.4	13.9	*	*	*
<i>District Average</i>	Total	67.4	59.1	7.7	78.9	69.1	6.5
	White, Non-Hispanic	57.3	53.7	3.5	71.8	66.0	*
	African-American, Non-Hispanic	78.3	64.3	12.9	54.7	44.1	4.8
	Other, Non-Hispanic	25.1	25.1	0.0	*	*	*
	Hispanic	83.8	72.1	10.7	68.5	44.7	*
Bertie County	Total	64.0	54.1	9.4	54.6	57.7	9.9
	White, Non-Hispanic	48.5	46.6	1.9	50.7	50.7	*
	African-American, Non-Hispanic	70.8	56.5	13.4	*	60.4	13.4
	Other, Non-Hispanic	54.1	54.1	0.0	*	*	*
	Hispanic	98.4	98.4	0.0	*	*	*
State of NC	Total	72.1	61.0	10.7	61.8	60.3	10.1
	White, Non-Hispanic	63.0	56.1	6.6	61.8	55.4	6.1
	African-American, Non-Hispanic	79.6	59.1	19.8	79.0	59.7	18.6
	Other, Non-Hispanic	79.7	69.7	9.5	79.4	69.5	9.5
	Hispanic	102.6	91.4	10.8	98.6	87.9	10.3

Note: Rates based on Small Numbers (fewer than 20 cases) are unstable and are not reported.  
Source: NC Center for Health Statistics, County-level Data, County Health Data Books (2007-2013). Pregnancy and Live Births. Pregnancy, Fertility, & Abortion Rates per 1,000 Population, by Race, by Age: <http://www.schs.state.nc.us/SCHS/data/databook/>.

**Table 35: Number of Teen Pregnancies (Ages 15-19)**

**Table 35. Number of Teen Pregnancies (Ages 15-19)  
(Single Years, 2005-2013)**

Location	Number of Pregnancies, Ages 15-19								
	2005	2006	2007	2008	2009	2010	2011	2012	2013
Tyrrell County	9	8	11	13	12	6	5	6	2
<i>District Average</i>	34	38	40	33	34	28	20	14	17
Bertie County	53	59	64	60	50	37	28	26	35
State of NC	18,259	19,192	19,165	19,398	18,142	15,957	13,909	12,535	11,178

Source: NC State Center for Health Statistics, North Carolina Health Data Query System. Pregnancy Data. North Carolina Reported Pregnancy Data. Year: 2003-2011. (Counties and age groups as indicated); <http://www.schs.state.nc.us/SCHS/data/preg/preg.cfm>.

**Table 36: Number of Adolescent Pregnancies (Under Age 15)**

**Table 36. Number of Adolescent Pregnancies (Under Age 15)  
(Single Years, 2005-2013)**

Location	Number of Pregnancies, Ages 14 and Younger								
	2005	2006	2007	2008	2009	2010	2011	2012	2013
Tyrrell County	0	1	0	1	0	1	0	0	0
Bertie County	1	0	1	4	1	3	1	0	0
State of NC	468	405	404	376	324	282	255	214	182

Source: NC State Center for Health Statistics, North Carolina Health Data Query System. Pregnancy Data. North Carolina Reported Pregnancy Data. Year: 2005-2011. (Counties and age groups as indicated); <http://www.schs.state.nc.us/SCHS/data/preg/preg.cfm>.

**Table 37: High Parity and Short Interval Births**

**Table 37. High Parity and Short Interval Births  
(Single Five-Year Aggregate Period, 2009-2013)**

Location	High Parity Births				Short Interval Births	
	Mothers < 30		Mothers > 30		No.	%
	No.	%	No.	%		
Tyrrell County	26	17.4	16	23.2	14	9.1
<i>District Average</i>	115	20.1	44	24.6	72	13.7
Bertie County	166	21.3	49	23.0	105	16.2
State of NC	61,454	16.0	48,339	21.7	50,564	12.6

1. Number at risk due high parity
2. Percent of all births with age of mother in category indicated
3. Number with interval from last delivery to conception of six months or less
4. Percent of all births excluding 1st pregnancies

a - NC State Center for Health Statistics, County-level Data, County Health Data Book (2013), Pregnancy and Births, 2009- 2013 Number At Risk NC Live Births due to High Parity by County of Residence; <http://www.schs.state.nc.us/SCHS/data/databook/>.

b - NC State Center for Health Statistics, County-level Data, County Health Data Book (2013), Pregnancy and Births, 2009-2013 NC Live Births by County of Residence, Number with Interval from Last Delivery to Conception of Six Months or Less; <http://www.schs.state.nc.us/SCHS/data/databook/>.

**Table 38: Smoking during Pregnancy Trend**

**Table 38. Smoking during Pregnancy Trend  
(Five-Year Aggregate Periods, 2001-2005 through 2005-2009)**

Location	Number and Percent of Births to Mothers Who Smoked Prenatally									
	2001-2005		2006-2010		2007-2011		2008-2012		2009-2013	
	No.	%	No.	%	No.	%	No.	%	No.	%
Tyrrell County	5	10.9	n/a	n/a	5	11.1	10	27.8	10	22.2
<i>District Average</i>	22	12.8	n/a	n/a	18	12.9	22	16.2	24	18.0
Bertie County	24	10.5	n/a	n/a	21	10.4	17	9.5	14	7.5
State of NC	12,975	11.0	n/a	n/a	13,159	10.9	12,727	10.6	12,242	10.3

Source: NC State Center for Health Statistics, Vital Statistics, Volume 1 (2005, 2006, 2007,-2008, 2009, 2010, and 2011): Population, Births, Deaths, Marriages, Divorces, (geography as noted), Mother Smoked; <http://www.schs.state.nc.us/schs/data/vitalstats.cfm>.

**Table 39: Percent of Low and Very Low Weight Births by Race/Ethnicity**

**Table 39. Percent of Low (<=2500 grams) and Very Low (<=1500 grams) Weight Births by Race/Ethnicity (Five Year Aggregate Periods, 2008-2012 and 2009-2013)**

Location	Birth Rate	Percent of Low (<=2500 Grams) and Very Low (<=1500 Grams) Weight Births by Race/Ethnicity									
		2008-2012					2009-2013				
		Total	White Non-Hispanic	Black Non-Hispanic	Other Non-Hispanic	Hispanic	Total	White Non-Hispanic	Black Non-Hispanic	Other Non-Hispanic	Hispanic
Tyrrell County	Low	12.6	11.7	15.2	0.0	14.0	13.4	13.9	12.5	12.5	17.9
	Very Low	1.6	1.8	1.5	0.0	2.3	1.7	1.7	1.8	0.0	2.6
<i>District Average</i>	Low	12.2	7.2	12.4	2.8	6.4	12.3	8.1	11.0	7.2	8.2
	Very Low	2.3	3.2	5.6	4.2	2.5	2.2	3.0	6.0	4.7	3.0
Bertie County	Low	12.6	8.2	14.4	0.0	10.0	11.7	8.6	13.1	0.0	8.7
	Very Low	2.7	1.4	3.2	0.0	10.0	2.6	1.1	3.2	0.0	8.7
State of NC	Low	9.5	7.6	14.1	9.3	6.5	9.4	7.5	13.9	9.3	6.6
	Very Low	1.9	1.3	3.3	1.4	1.2	1.9	1.3	3.3	1.5	1.2

Note: Bold type indicates an unstable rate based on a small number (fewer than 20 cases).

Source: NC State Center for Health Statistics, County-level Data, County Health Data Books (2012, 2013), Pregnancy and Births, Low and Very Low Weight Births; <http://www.schs.state.nc.us/SCHS/data/databook/>.

**Table 40: Cesarean Section Deliveries**

**Table 40. Cesarean Section Deliveries.  
(Five-Year Aggregate Periods, 2001-2005 through 2009-2013)**

Location	Percent of Resident Births Delivered by Cesarean Section						
	2003-2007	2004-2008	2005-2009	2006-2010	2007-2011	2008-2012	2009-2013
Tyrrell County	15.5	16.8	34.1	36.2	35.6	36.9	39.0
<i>District Average</i>	17.6	16.9	33.5	34.0	34.1	34.4	35.3
Bertie County	15.5	15.5	27.0	28.6	29.0	30.8	32.2
State of NC	18.1	18.3	30.9	31.2	31.2	31.1	30.9

Source: NC State Center for Health Statistics, County-level Data, County Health Data Books (2007-2013), Pregnancy and Births, Births Delivered by Caesarian Section; <http://www.schs.state.nc.us/SCHS/data/databook/>

**Table 41: Total Infant Death Rates per 1,000 Live Births**

**Table 41. Total Infant Death Rates per 1,000 Live Births  
(Five-Year Aggregate Periods, 2003-2007 through 2009-2013)**

Location	Infant Deaths													
	2003-2007		2004-2008		2005-2009		2006-2010		2007-2011		2008-2012		2009-2013	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Tyrrell County	2	8.0	2	7.8	0	0.0	2	7.9	2	8.1	2	8.9	3	*
<i>District Average</i>	8	8.2	9	9.1	10	8.3	10	10.9	9	10.7	8	10.6	7	*
Bertie County	17	14.4	19	15.8	21	17.5	20	17.1	19	17.0	15	14.1	12	*
State of NC	5234	8.4	5333	8.4	5289	8.3	5066	7.9	4899	7.8	4675	7.5	4441	7.3

Note: Bold type indicates a likely unstable rate based on a small (fewer than 20) number of cases.

Source: NC Center for Health Statistics, County-level Data, County Health Data Books (2007-2013), Mortality, Infant Death Rates per 1,000 Live Births; <http://www.schs.state.nc.us/SCHS/data/databook/>.

**Table 42: Infant Deaths, Stratified by Race/Ethnicity**

**Table 42. Infant Deaths, Stratified by Race/Ethnicity  
(Five-Year Aggregate Periods, 2008-2012 through 2009-2013)**

Location		Infant Deaths			
		2008-2012		2009-2013	
		No.	Rate	No.	Rate
Tyrrell County	Total	2	8.9	3	*
	White, non-Hispanic	2	18.0	2	*
	African-American, non-Hispanic	0	0	0	*
	Other, non-Hispanic	0	0	0	*
	Hispanic	0	0	1	*
<i>District Average</i>	<i>Total</i>	8	10.6	7	*
	White, non-Hispanic	3	8.4	2	*
	African-American, non-Hispanic	5	6.3	5	*
	Other, non-Hispanic	0	0.0	0	*
	Hispanic	0	0.0	0	*
Bertie County	Total	15	14.1	12	*
	White, non-Hispanic	1	3.6	0	*
	African-American, non-Hispanic	13	17.1	11	*
	Other, non-Hispanic	0	0	0	*
	Hispanic	1	50.0	1	*
State of NC	Total	4,675	7.5	4,441	7.3
	White, non-Hispanic	1,918	5.6	1,850	5.4
	African-American, non-Hispanic	2,064	14.0	1,967	13.6
	Other, non-Hispanic	181	5.9	178	5.7
	Hispanic	512	5.3	446	4.8

Note: Bold type indicates a likely unstable rate based on a small (fewer than 20) number of cases.

Source: NC Center for Health Statistics, County-level Data, County Health Data Books (2007-2013), Mortality, Infant Death Rates per 1,000 Live Births; <http://www.schs.state.nc.us/SCHS/data/databook/>.

**Table 43: Life Expectancy at Birth, by Gender and Race**

**Table 43. Life Expectancy at Birth, by Gender and Race  
(1990-1992 through 2011-2013)**

Location	Life Expectancy in Years									
	Persons Born in 1990-1992					Persons Born in 2011-2013				
	Overall	Male	Female	White	African-American	Overall	Male	Female	White	African-American
Tyrrell County	74.1	69.8	78.3	78.5	67.8	77.3	76.6	77.8	74.7	86.5
District Average	73.1	59.9	77.2	76.5	68.9	77.3	75.2	79.1	77.1	79.5
Bertie County	71.2	66.8	75.5	73.0	70.1	77.0	74.8	78.9	79.0	75.8
State of NC	74.9	71.0	78.7	76.4	69.8	78.2	75.7	80.6	78.8	75.9

Source: NC State Center for Health Statistics, County-level Data, Life Expectancy, State and County Estimates, Life Expectancy: North Carolina 1990-1992 and 2011-2013, State and County; <http://www.schs.state.nc.us/schs/data/lifexpectancy/>.

**Table 44: Mortality Rates for 10 Leading Causes of Death**

**Table 44. Mortality Rates for 10 Leading Causes of Death**

Cause of Death	Number of Deaths 2009 – 2013	Age Adjusted Death Rate 2009-2013 Tyrrell County	Age Adjusted Death Rate 2009-2013 North Carolina
Cancer (All Sites)	64	299.7	173.3
Heart Disease	57	266.9	170.0
Cerebrovascular Disease (Stroke)	17	79.6	43.7
Chronic Lower Respiratory Disease	13	60.9	46.1
Unintentional Motor Vehicle Injuries	9	42.1	13.7
Diabetes	7	32.8	21.7
Nephritis, nephrotic syndrome, & nephrosis	6	28.1	17.6
Other Unintentional injuries	6	28.1	29.3
Alzheimer’s Disease	5	23.4	2.9
Pneumonia & Influenza	4	18.7	17.9
Chronic liver disease & cirrhosis	4	18.7	9.5
Suicide	4	18.7	12.2
All Causes	246	900.4	790.9

Rate = Number of events per 100,000 population, where the Standard = Year 2000 US Population

Sources: NC State Center for Health Statistics, County Health Data Book (2013), Mortality, 2007-2011 Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

**Table 45: Sex-Specific Age-Adjusted Death Rates for the 10 Leading Causes of Death**

**Table 45. Sex-Specific Age-Adjusted Death Rates for the 10 Leading Causes of Death, Tyrrell County and Comparators (Single Five-Year Aggregate Period 2009-2013)**

Cause of Death	Tyrrell County				Bertie County				District Average				State of NC			
	Males		Females		Males		Females		Males		Females		Males		Females	
	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate
1 Cancer (All Sites)	4	273.3	0	92.3	48	241.3	05	28.3	32	32.1	.08	32.8	48,489	17.6	90,717	173.3
2 Heart Disease	5	300.8	2	38.6	40	235.1	24	38.3	31	24.5	3	95.8	45,303	17.3	40,982	134.0
3 Cerebrovascular Disease	9	n/a	8	n/a	3	50.9	8	4.5	2	n/a	26	n/a	8,829	4.1	12,987	42.5
4 Chronic Lower Respiratory Disease	5	n/a	8	n/a	6	n/a	6	n/a	17	n/a	19	n/a	10,834	2.9	12,512	42.0
5 Unintentional Motor Vehicle Injuries	5	n/a	4	n/a	9	n/a	5	n/a	7	n/a	5	n/a	4,740	0.2	1,947	7.7
6 Diabetes	3	n/a	4	n/a	5	58.5	1	6	22	n/a	18	n/a	5,482	8.4	11,220	1.7
7 Nephritis, nephrotic syndrome & nephrosis.	2	n/a	4	n/a	4	n/a	9	n/a	7	n/a	10	n/a	4,307	1.4	4,543	5.1
8 Other Unintentional injuries	4	n/a	2	n/a	2	40.0	9	n/a	7	n/a	5	n/a	4,740	0.2	1,947	.7
9 Alzheimer's Disease	0	n/a	5	n/a	7	n/a	4	3.8	3	n/a	23	n/a	3,938	3.0	10,062	2.0
10 Septicemia	1	n/a	2	n/a	7	n/a		n/a	7	n/a	9	n/a	3,070	4.6	3,661	2.3
11 Pneumonia & Influenza	2	n/a	2	n/a	8	n/a		n/a	7	n/a	8	n/a	4,956	6.2	8,890	7.9
12 Chronic Liver Disease & Cirrhosis	3	n/a	1	n/a	6	n/a	6	n/a	9	n/a	4	n/a	3,351	3.2	1,777	6.2
13 Suicide	4	n/a	0	n/a	9	n/a		n/a	7	n/a	2	n/a	4,672	9.8	1,398	5.4
14 Acquired Immune Deficiency Syndrome	0	n/a	0	n/a	6	n/a	3	n/a	2	n/a	1	n/a	1,010	1	461	1.8
15 Homicide	1	n/a	0	n/a	3	n/a	2	n/a	0	n/a	1	n/a	2,119	0	623	2.5
Total Death All Causes	30	1065.3	16	57.5	29	1072.1	06	14.2	387	1467.7	404	513.6	198,885	40.6	201,462	673.4

Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.

Source - NC State Center for Health Statistics, County Health Data Book (2013), Mortality, 2007-2011 Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

**Table 46: Race-Specific Age-Adjusted Death Rates for the Leading Causes of Death**

**Table 46. Race-Specific Age-Adjusted Death Rates for the Leading Causes of Death, Tyrrell County (Single Five-Year Aggregate Period, 2009-2013)**

Cause of Death	Tyrrell County									
	White non-Hispanic		African-American non-Hispanic		Other Race non-Hispanic		Hispanic		Overall	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
1 Cancer (All Sites)	49	278.9	14	n/a	0	n/a	1	n/a	4	224.6
2 Heart Disease	44	275.0	13	n/a	0	n/a	0	n/a	7	208.7
3 Cerebrovascular Disease	14	n/a	3	n/a	0	n/a	0	n/a	17	n/a
4 Chronic Lower Respiratory Disease	11	n/a	2	n/a	0	n/a	0	n/a	3	n/a
5 Unintentional Motor Vehicle Injuries	3	n/a	5	n/a	1	n/a	0	n/a	9	n/a
6 Diabetes	3	n/a	4	n/a	0	n/a	0	n/a	7	n/a
7 Nephritis, nephrotic syndrome & nephrosis	4	n/a	2	n/a	0	n/a	0	n/a	6	n/a
8 Other Intentional injuries	6	n/a	0	n/a	0	n/a	0	n/a	6	n/a
9 Alzheimer's Disease	4	n/a	1	n/a	0	n/a	0	n/a	5	n/a
10 Septicemia	3	n/a	0	n/a	0	n/a	0	n/a	3	n/a
11 Pneumonia & Influenza	2	n/a	2	n/a	0	n/a	0	n/a	4	n/a
12 Chronic Liver Disease & Cirrhosis	4	n/a	0	n/a	0	n/a	0	n/a	4	n/a
13 Suicide	3	n/a	1	n/a	0	n/a	0	n/a	4	n/a
14 Acquired Immune Deficiency Syndrome	0	n/a	0	n/a	0	n/a	0	n/a	0	n/a
15 Homicide	1	n/a	0	n/a	0	n/a	0	n/a	1	n/a
Total Death All Causes	189	1,157.5	54	532.7	1	n/a	2	n/a	246	900.4

*Table 47: Leading Causes of Death by Age Group, By Unadjusted Death Rates*

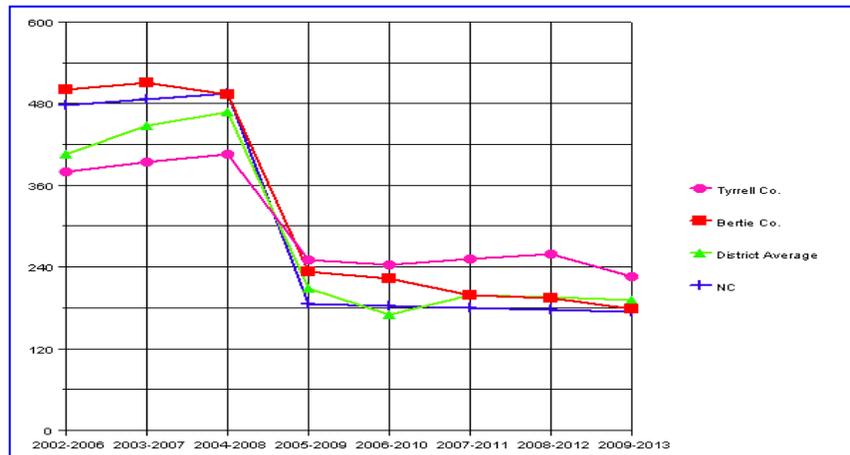
**Table 47. Three Leading Causes of Death by Age Group, by Unadjusted Death Rates, Tyrrell County and Comparators (Five-Year Aggregate Period, 2009-2013)**

Age Group	Rank	Cause of Death		
		Tyrrell County	Bertie County	States of NC
00-19	1	Conditions originating in the perinatal period	Conditions originating in the perinatal period	Conditions originating in the perinatal period
		Total Deaths --- All Causes		
	2		Motor vehicle injuries	Congenital anomalies (birth defects)
20-39	3		Diabetes mellitus	Motor vehicle injuries
	1	Motor vehicle injuries	Motor vehicle injuries	Other Unintentional injuries
	2	Other unintentional injuries	Other unintentional injuries	Motor vehicle injuries
40-64	3	Diseases of the heart	HIV disease	Suicide
		Suicide	Cancer – All Sites	
		Homicide		
65-84	1	Cancer – All Sites	Cancer – All Sites	Cancer – All Sites
	2	Diseases of the Heart	Diseases of the heart	Diseases of the heart
	3	Motor vehicle injuries	Diabetes mellitus	Other Unintentional injuries
85+	1	Cancer – All Sites	Cancer – All Sites	Cancer – All Sites
	2	Diseases of the heart	Diseases of the heart	Diseases of the heart
	3	Chronic lower respiratory diseases	Diabetes mellitus	Chronic lower respiratory diseases
	1	Disease of the heart	Diseases of the heart	Diseases of the heart
	2	Cancer – All Sites	Cancer – All Sites	Cancer – All Sites
	3	Cerebrovascular disease	Alzheimer’s disease	Alzheimer’s disease

Source: NC State Center for Health Statistics, County Health Data Book (2013), Mortality, Death Counts and Crude Death Rates per100,000 for Leading Causes of Death, by Age Groups, NC, 2009-2013; <http://www.schs.state.nc.us/SCHS/data/databook/>.

*Figure 6: Overall Total Cancer Mortality Rate Trend per 100,000 Population*

**Figure 6. Overall Total Cancer Mortality Rate Trend per 100,000 Population (Five-Year Aggregate Periods, 2000-2004 through 2009-2013)**



Source: NC State Center for Health Statistics, County Health Data Books (2002-2013), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook>

*Table 48: Race/Ethnicity-Specific and Sex-Specific Total Cancer Mortality*

**Table 48. Race/Ethnicity-Specific and Sex-Specific Total Cancer Mortality  
(Single Five-Year Aggregate Period, 2009-2013)**

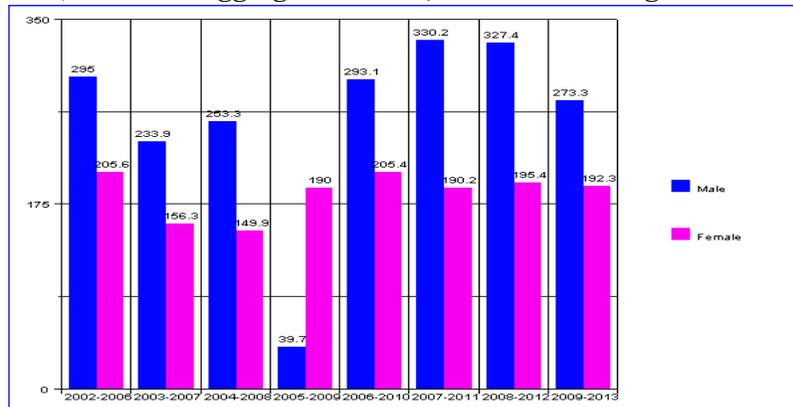
Location	Deaths, Number and Rate (Deaths Per 100,000 Population)													
	White non-Hispanic		African-American non-Hispanic		Other non-Hispanic		Hispanic		Male		Female		Overall	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Tyrrell County	49	278.4	14	n/a	0	n/a	0	n/a	34	273.3	30	192.3	64	224.6
<i>District Average</i>	109	208.0	69	180.2	0	n/a	0	n/a	94	242.8	84	154.1	178	189.5
Bertie County	108	165.1	144	178.9	0	n/a	0	n/a	148	241.3	105	128.3	253	174.0
State of NC	70043	171.3	18515	201.5	597	94.0	776	65.2	48489	217.6	42228	143.0	90717	173.3

Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.

Source: NC State Center for Health Statistics, County Health Data Book (2014), Mortality, 2009-2013 Race/Ethnicity Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

*Table 7: Sex-Specific Total Cancer Mortality Rate Trend, Tyrrell County*

**Figure 7. Sex-Specific Total Cancer Mortality Rate Trend, Tyrrell County  
(Five-Year Aggregate Periods, 2002-2006 through 2009-2013)**



Source: NC State Center for Health Statistics, County Health Data Books (2006-2013), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

**Table 49: Race/Ethnicity and Sex-Specific Total**

**Cancer Mortality Rate**

**Table 49. Race/Ethnicity and Sex-Specific Total Cancer Mortality Rate (Single Five-Year Aggregate Period, 2009-2013)**

Location	Rate (Deaths Per 100,000 Population)							
	Males				Females			
	White non-Hispanic	African-American non-Hispanic	Other non-Hispanic	Hispanic	White non-Hispanic	African-American non-Hispanic	Other non-Hispanic	Hispanic
Tyrrell County	346.0	n/a	n/a	n/a	221.0	n/a	n/a	n/a
District Average	273.2	155.1	n/a	n/a	156.6	101.2	n/a	n/a
Bertie County	219.8	258.0	n/a	n/a	129.9	128.2	n/a	n/a
State of NC	212.3	274.0	105.4	75.1	142.4	159.5	86.1	57.2

Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases. Source: NC State Center for Health Statistics, County-level Data, County Health Data Book (2013), Mortality, 2007-2011 NC Resident Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates, by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

**Table 50: Heart Disease Hospital Discharge Rate Trend (2007-2013)**

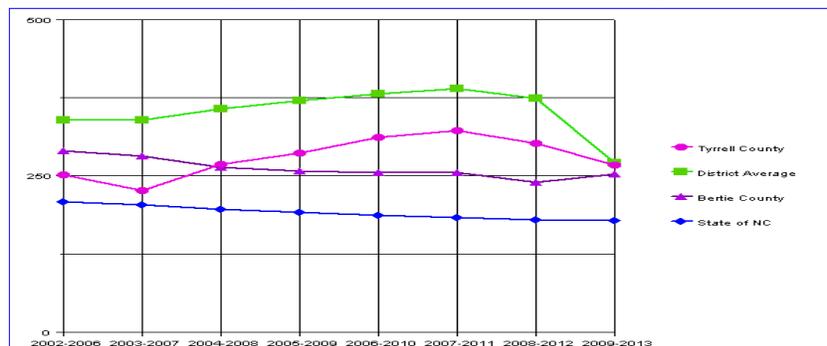
**Table 50. Heart Disease Hospital Discharge Rate Trend (2007-2013)**

Location	Rate (Discharge per 1,000 Population)							
	2007	2008	2009	2010	2011	2012	2013	
Tyrrell County	13.3	11.7	15.1	15.2	15.6	15.0	13.4	
District Average	17.5	16.8	14.4	17.8	18.0	17.3	17.0	
Bertie County	15.9	15.9	16.1	17.2	14.9	16.4	17.2	
State of NC	12.2	11.8	11.4	11.3	10.9	10.7	10.3	

Source: NC State Center for Health Statistics, County-level Data, County Health Data Books (2007-2013), Morbidity, Inpatient Hospital Utilization and Charges by Principal Diagnosis and County of Residence; <http://www.schs.state.nc.us/SCHS/data/databook/>.

**Figure 8: Overall Heart Disease Mortality Rate Trend**

**Figure 8. Overall Heart Disease Mortality Rate Trend (Five-Year Aggregate Periods, 2002-2006 through 2009-2012)**



Source: NC State Center for Health Statistics, County Health Data Books (2006-2013), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

*Table 51: Race/Ethnicity-Specific and Sex-Specific Heart Mortality*

**Table 51. Race/Ethnicity-Specific and Sex-Specific Heart Mortality  
(Single Five-Year Aggregate Period, 2009-2013)**

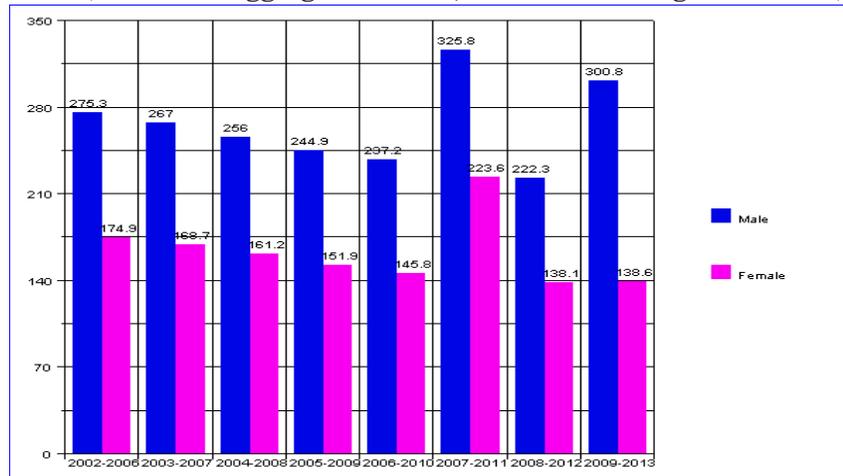
Location	Deaths (Number and Rate per 100,000 Population)													
	White non-Hispanic		African-American non-Hispanic		Other Races non-Hispanic		Hispanic		Male		Female		Overall	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Tyrrell Co	44	275.0	13	n/a	0	n/a	0	n/a	35	300.8	22	138.6	57	208.7
District Avg.	157	272.8	106	201.7	1	n/a	0	n/a	131	333.7	133	195.8	264	256.0
Bertie Co.	130	197.8	134	167.2	0	n/a	0	n/a	140	235.1	124	138.3	264	180.6
State of NC	67,667	168.0	16,926	193.2	343	66.0	02	50.7	45,303	217.3	40,982	134.0	86,285	170.0

Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.

Source: NC State Center for Health Statistics, County Health Data Book (2013), Mortality, 2007-2011 Race/Ethnicity Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

*Figure 9: Sex-Specific Heart Disease Mortality Rate Trend, Tyrrell County*

**Figure 9. Sex-Specific Heart Disease Mortality Rate Trend, Tyrrell County  
(Five-Year Aggregate Periods, 2002-2006 through 2009-2013)**



Source: NC State Center for Health Statistics, County Health Data Books (2006-2013), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

**Table 52: Race/Ethnicity and Sex-Specific Heart Disease Mortality Rate**

**Table 52. Race/Ethnicity and Sex-Specific Heart Disease Mortality Rate (Single Five-Year Aggregate Period, 2009-2013)**

Location	Rate (Deaths per 100,000 Population)							
	Males				Females			
	White non-Hispanic	African American non-Hispanic	Other non-Hispanic	Hispanic	White non-Hispanic	African American non-Hispanic	Other non-Hispanic	Hispanic
Tyrrell County	372.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a
District Average	257.1	370.1	n/a	n/a	206.3	253.8	n/a	n/a
Bertie County	268.6	207.8	n/a	n/a	140.4	136.1	n/a	n/a
State of NC	215.1	252.3	75.6	58.7	131.2	153.2	58.1	43.1

Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.  
 Source: NC State Center for Health Statistics, County-level Data, County Health Data Book (2013), Mortality, 2007-2011 NC Resident Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates, by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

**Table 53: Cerebrovascular Disease Discharge Rate Trend (2009-2013)**

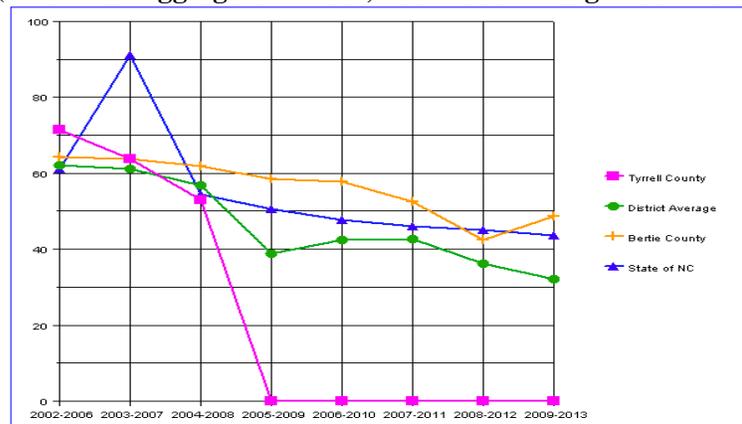
**Table 53. Cerebrovascular Disease Discharge Rate Trend (2009-2013)**

Location	Rate (Discharges per 1,000 Population)						
	2007	2008	2009	2010	2011	2012	2013
Tyrrell County	4.2	3.0	3.3	5.0	2.7	1.6	3.9
District Average	5.4	4.6	4.4	4.9	4.6	4.3	5.0
Bertie County	4.1	4.3	3.8	4.9	4.8	4.6	4.3
State of NC	3.1	3.0	3.1	3.1	3.0	3.0	2.9

Source: NC State Center for Health Statistics, County-level Data, County Health Data Books (2007-2013), Morbidity, Inpatient Hospital Utilization and Charges by Principal Diagnosis and County of Residence; <http://www.schs.state.nc.us/SCHS/data/databook/>.

**Figure 10: Overall Cerebrovascular Disease Mortality Rate Trend**

**Figure 10. Overall Cerebrovascular Disease Mortality Rate Trend (Five-Year Aggregate Periods, 2002-2006 through 2009-2013)**



Source: NC State Center for Health Statistics, County Health Data Books (2006-2013), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

*Table 54: Race/Ethnicity and Sex-Specific Cerebrovascular Disease Mortality*

**Table 54. Race/Ethnicity and Sex-Specific Cerebrovascular Disease Mortality  
Single Five-Year Aggregate Period, 2009-2013**

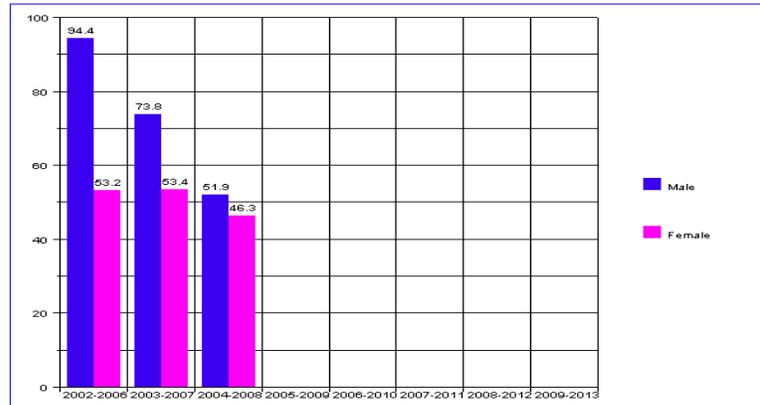
Location	Deaths (Number and Rate per 100,000 Population)													
	White non-Hispanic		African-American non-Hispanic		Other Races non-Hispanic		Hispanic		Male		Female		Overall	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Tyrrell Co	14	n/a	3	n/a	0	n/a	0	n/a	9	n/a	8	n/a	17	n/a
<i>District Avg.</i>	79	40.9	22	32.5	0	n/a	0	n/a	22	n/a	26	43.0	48	48.8
Bertie Co.	27	41.6	44	54.9	0	n/a	0	n/a	33	50.9	38	44.5	71	48.8
State of NC	16,525	41.3	4,833	57.1	146	29.1	69	17.6	8,829	44.1	12,987	42.5	21,816	43.7

Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.

Source: NC State Center for Health Statistics, County Health Data Book (2014), Mortality, 2009-2013 Race/Ethnicity Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

*Figure 11: Sex-Specific Cerebrovascular Disease Mortality Rate Trend, Tyrrell County*

**Figure 11. Sex-Specific Cerebrovascular Disease Mortality Rate Trend, Tyrrell County  
(Five-Year Aggregate Period, 2002-2006 through 2009-2013)**



Source: NC State Center for Health Statistics, County Health Data Books (2006-2013), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

**Table 55: Race/Ethnicity and Sex-Specific Cerebrovascular Disease Mortality Rate**

**Table 55. Race/Ethnicity and Sex-Specific Cerebrovascular Disease Mortality Rate (Single Five-Year Aggregate Period, 2009-2013)**

Location	Rate (Deaths per 100,000 Population)							
	Males				Females			
	White non-Hispanic	African American non-Hispanic	Other non-Hispanic	Hispanic	White non-Hispanic	African American non-Hispanic	Other non-Hispanic	Hispanic
Tyrrell County	372.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a
District Average	257.1	370.1	n/a	n/a	206.3	253.8	n/a	n/a
Bertie County	268.6	207.8	n/a	n/a	140.4	136.1	n/a	n/a
State of NC	215.1	252.3	75.6	58.7	131.2	153.2	58.1	43.1

Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.  
 Source: NC State Center for Health Statistics, County-level Data, County Health Data Book (2013), Mortality, 2007-2011 NC Resident Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates, by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

**Table 56: Hospital Discharge CLRD Rate Trend (2007-2013)**

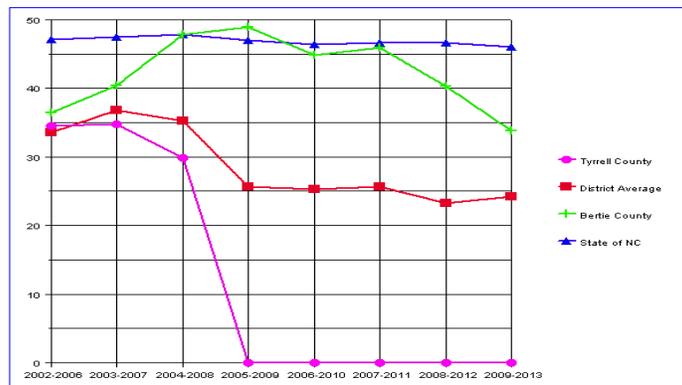
**Table 56. Hospital Discharge CLRD Rate Trend (2007-2013)**

Location	Rate (Discharge per 1,000 Population)						
	2007	2008	2009	2010	2011	2012	2013
Tyrrell County	2.3	2.3	3.1	4.1	4.1	3.9	3.9
District Average	4.0	3.9	4.7	7.7	5.4	3.7	4.0
Bertie County	4.5	3.9	5.3	4.6	4.8	2.1	2.1
State of NC	3.1	3.4	3.4	3.2	4.0	2.1	1.9

Source: NC State Center for Health Statistics, County-level Data, County Health Data Books (2007-2013), Morbidity, Inpatient Hospital Utilization and Charges by Principal Diagnosis and County of Residence; <http://www.schs.state.nc.us/SCHS/data/databook/>.

**Figure 12: Overall CLRD Mortality Rate Trend**

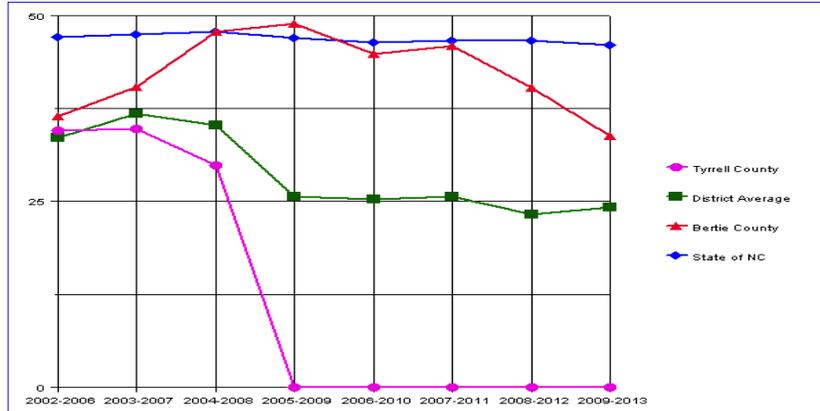
**Figure 12. Overall CLRD Mortality Rate Trend (Five-Year Aggregate Periods, 2002-2006 through 2009-2013)**



Source: NC State Center for Health Statistics, County Health Data Books (2006-2013), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

Figure 13: Race/Ethnicity-Specific and Sex-Specific CLRD Mortality

Figure 13. Race/Ethnicity-Specific and Sex-Specific CLRD Mortality (Single-Five Year Aggregate Period, 2009-2013)



Source: NC State Center for Health Statistics, County Health Data Books (2006-2013), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

Table 57: Race/Ethnicity and Sex-Specific CLRD Mortality

Table 57. Race/Ethnicity and Sex-Specific CLRD Mortality Single Five-Year Aggregate Period, 2009-2013

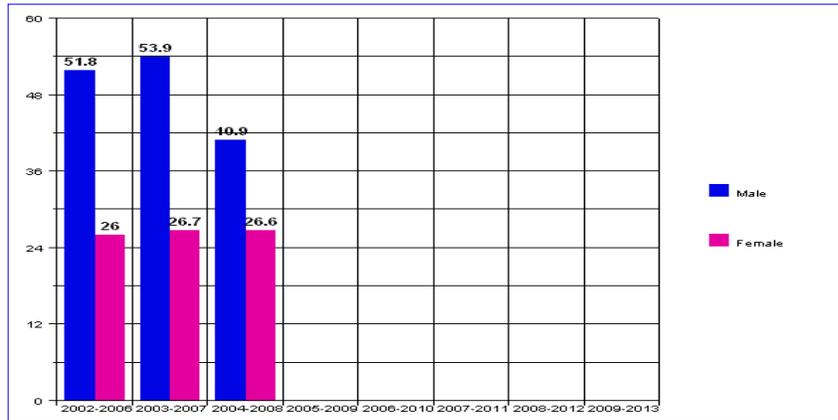
Location	Deaths (Number and Rate per 100,000 Population)													
	White non-Hispanic		African-American non-Hispanic		Other Races non-Hispanic		Hispanic		Male		Female		Overall	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Tyrrell Co	11	n/a	2	n/a	0	n/a	0	n/a	5	n/a	8	n/a	13	n/a
District Avg.	30	31.8	19	n/a	0	n/a	0	n/a	12	n/a	19	n/a	36	24.2
Bertie Co.	28	41.8	23	28.3	0	n/a	0	n/a	29	50.4	22	23.6	51	33.8
State of NC	20,684	50.9	2,384	28.0	44	9.7	6	8.8	10,834	52.9	12,512	42.0	23,346	46.1

Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.

Source: NC State Center for Health Statistics, County Health Data Book (2014), Mortality, 2009-2013 Race/Ethnicity Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

*Figure 14: Sex-Specific CLRD Mortality Rate Trend, Tyrrell County*

**Figure 14. Sex-Specific CLRD Mortality Rate Trend, Tyrrell County  
(Five-Year Aggregate Period, 2002-2006 through 2009-2013)**



Source: NC State Center for Health Statistics, County Health Data Books (2006-2013), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

*Table 58: Race/Ethnicity and Sex-Specific CLRD Mortality Rate*

**Table 58. Race/Ethnicity and Sex-Specific CLRD Mortality Rate  
(Single Five-Year Aggregate Period, 2009-2013)**

Location	Rate (Deaths per 100,000 Population)							
	Males				Females			
	White non-Hispanic	African American non-Hispanic	Other non-Hispanic	Hispanic	White non-Hispanic	African American non-Hispanic	Other non-Hispanic	Hispanic
Tyrrell County	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
District Average	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bertie County	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
State of NC	56.0	41.5	11.9	9.5	47.9	20.8	8.4	8.4

Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.  
Source: NC State Center for Health Statistics, County-level Data, County Health Data Book (2013), Mortality, 2007-2011 NC Resident Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates, by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

*Table 59: Injuries and Poisonings Hospital Discharge Rate Trend (2007-2013)*

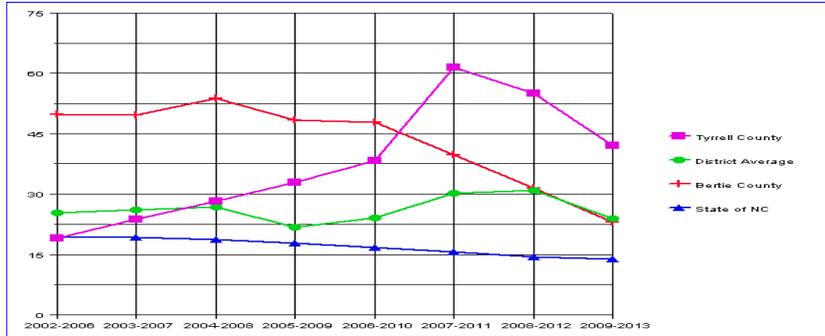
**Table 59. Injuries and Poisonings Hospital Discharge Rate Trend (2007-2013)**

Location	Rate (Discharge per 1,000 Population)						
	2007	2008	2009	2010	2011	2012	2013
Tyrrell County	5.1	6.8	7.3	5.7	8.5	6.0	7.1
District Average	7.9	7.7	8.2	8.4	9.3	8.9	8.9
Bertie County	11.1	11.1	11.0	9.1	10.1	11.6	11.4
State of NC	8.6	8.5	8.3	8.2	8.2	8.1	7.7

Source: NC State Center for Health Statistics, County-level Data, County Health Data Books (2007-2013), Morbidity, Inpatient Hospital Utilization and Charges by Principal Diagnosis and County of Residence; <http://www.schs.state.nc.us/SCHS/data/databook/>.

*Figure 15: Overall Unintentional Motor Vehicle Injury Mortality Rate Trend*

**Figure 15. Overall Unintentional Motor Vehicle Injury Mortality Rate Trend  
(Five-Year Aggregate Periods, 2002-2006 through 2009-2013)**



Source: NC State Center for Health Statistics, County Health Data Books (2006-2013), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>

*Table 60: Race/Ethnicity and Sex-Specific Unintentional Motor Vehicle Injury Mortality*

**Table 60. Race/Ethnicity and Sex-Specific Unintentional Motor Vehicle Injury Mortality  
Single Five-Year Aggregate Period, 2009-2013**

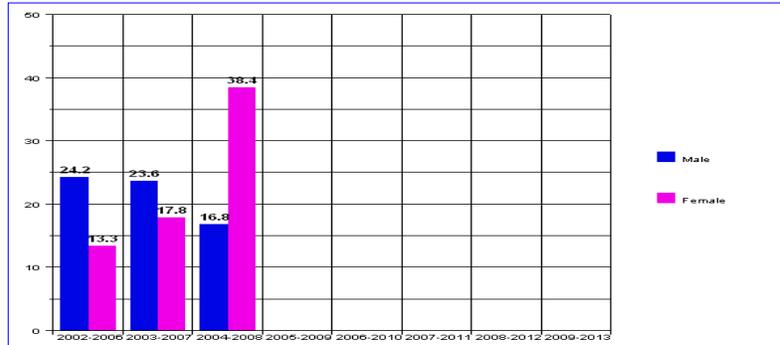
Location	Deaths (Number and Rate per 100,000 Population)													
	White non-Hispanic		African-American non-Hispanic		Other Races non-Hispanic		Hispanic		Male		Female		Overall	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Tyrrell Co	3	n/a	5	n/a	1	n/a	0	n/a	5	n/a	4	n/a	9	n/a
District Avg.	7	n/a	8	n/a	0	n/a	1	n/a	7	n/a	7	n/a	21	6.2
Bertie Co.	8	n/a	16	n/a	0	n/a	0	n/a	19	n/a	5	n/a	24	23.3
State of NC	4,555	13.9	1,477	14.1	64	5.5	42	10.3	4,740	20.2	1,927	7.7	6,687	13.7

Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.

Source: NC State Center for Health Statistics, County Health Data Book (2014), Mortality, 2009-2013 Race/Ethnicity Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

Figure 16: Sex-Specific Unintentional Motor Vehicle Injury Mortality Rate Trend, Tyrrell Co.

Figure 16. Sex-Specific Unintentional Motor Vehicle Injury Mortality Rate Trend, Tyrrell County (Five-Year Aggregate Periods, 2002-2006 through 2009-2013)



Source: NC State Center for Health Statistics, County Health Data Books (2006-2013), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

Table 61: Race/Ethnicity and Sex-Specific Unintentional Motor Vehicle Injury Mortality Rate

Table 61. Race/Ethnicity and Sex-Specific Unintentional Motor Vehicle Injury Mortality Rate (Single Five-Year Aggregate Period, 2009-2013)

Location	Rate (Deaths per 100,000 Population)							
	Males				Females			
	White non-Hispanic	African American non-Hispanic	Other non-Hispanic	Hispanic	White non-Hispanic	African American non-Hispanic	Other non-Hispanic	Hispanic
Tyrrell County	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
District Average	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bertie County	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
State of NC	20.0	22.6	8.0	14.8	8.2	7.0	3.2	4.9

Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.

Source: NC State Center for Health Statistics, County-level Data, County Health Data Book (2013), Mortality, 2007-2011 NC Resident Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates, by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

**Table 62: Unintentional Motor Vehicle Injury Mortality, Numbers and Rates by Age**

**Table 62. Unintentional Motor Vehicle Injury Mortality, Numbers and Rates, by Age (Five-Year Aggregate Rate, 2009-2013)**

Location	Number of Deaths and Unadjusted Death Rates per 100,000 Population							
	All Ages		0-19		20-39		40-64	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Tyrrell County	9	42.1	n/a	n/a	3	51.9	5	53.7
<i>District Average</i>	15	27.6	18	13.5	n/a	n/a	7	31.0
Bertie County	24	31.6	5	21.3	7	28.7	7	18.6
State of NC	14,403	29.9	833	6.5	2,390	18.5	2,332	14.5

Note: Bold type indicates a likely unstable rate based on a small (fewer than 20) number of cases.

Source: NC State Center for Health Statistics, 2013 County Health Databook, Death Counts and Crude Death Rates per 100,000 Population for Leading Causes of Death, by Age Groups, NC 2007-2011; <http://www.schs.state.nc.us/SCHS/data/databook/>.

**Table 63: Alcohol-Related Traffic Crashes Trend (Single Years, 2006-2013)**

**Table 63. Alcohol-Related Traffic Crashes Trend (Single Years, 2006-2013)**

Location	2009			2010			2011			2012			2013		
	Total Crashes			Total Crashes			Total Crashes			Total Crashes			Total Crashes		
	# Reportable Crashes	# Alcohol Related Crashes	% Alcohol Related Crashes	# Reportable Crashes	# Alcohol Related Crashes	% Alcohol Related Crashes	# Reportable Crashes	# Alcohol Related Crashes	% Alcohol Related Crashes	# Reportable Crashes	# Alcohol Related Crashes	% Alcohol Related Crashes	# Reportable Crashes	# Alcohol Related Crashes	% Alcohol Related Crashes
Tyrrell Co.	155	9	5.8	152	8	5.3	126	6	4.8	94	5	5.3	113	6	5.3
<i>District Avg.</i>	368	19	5.2	383	16	4.0	284	15	4.6	312	21	6.3	291	16	4.9
Bertie Co.	513	15	2.9	510	32	6.3	424	19	4.5	405	28	6.9	431	18	4.2
State of NC	209,695	11,384	5.4	213,573	10,696	5.0	108,509	10,708	5.1	213,641	11,274	5.3	220,309	10,802	4.9

Note: statistical information for North Carolina Alcohol Facts was obtained from the NC Administrative Office of the Courts (AOC) and the NC Division of Motor Vehicles (DMV) for the years 2000 through 2011 (single years). Note: Percentages appearing in bold type are based on fewer than 10 alcohol-related crashes per year. Such figures are likely unstable and should be interpreted with caution.

1 - UNC Chapel Hill, Highway Safety Research Center. North Carolina Alcohol Facts (2006-2011); <http://www.hsrb.unc.edu/ncaf/crashes.cfm>.

2 - Calculated (% alcohol related crashes is calculated by dividing # alcohol-related crashes by # reportable crashes)

**Table 64: Outcomes of Alcohol-Related Traffic Crashes (2013)**

**Table 64. Outcomes of Alcohol-Related Traffic Crashes (2013)**

Location	Total Crashes			Property Damage-Only Crashes			Non-Fatal Crashes			Fatal Crashes		
	# Reportable Crashes	# Alcohol Related Crashes	% Alcohol Related Crashes	# Reportable Crashes	# Alcohol Related Crashes	% Alcohol Related Crashes	# Reportable Crashes	# Alcohol Related Crashes	% Alcohol Related Crashes	# Reportable Crashes	# Alcohol Related Crashes	% Alcohol Related Crashes
Tyrrell Co.	113	6	5.3	96	4	4.2	17	2	1.8	0	0	0.0
<i>District Avg.</i>	291	16	6.5	218	8	3.7	71	8	11.3	0	n/a	n/a
Bertie County	431	18	4.8	288	11	3.8	140	7	5.0	3	0	0.0
State of NC	220,309	10,802	4.9	149,604	5,172	3.5	69,547	5,306	7.6	1,158	324	28.0

UNC Chapel Hill, Highway Safety Research Center. North Carolina Alcohol Facts (2006-2011); <http://www.hsrb.unc.edu/ncaf/crashes.cfm>.

Calculated (% alcohol related crashes is calculated by dividing # alcohol-related crashes by # reportable crashes)

**Table 65: Diabetes Hospital Discharge Rate Trend (2007-2013)**

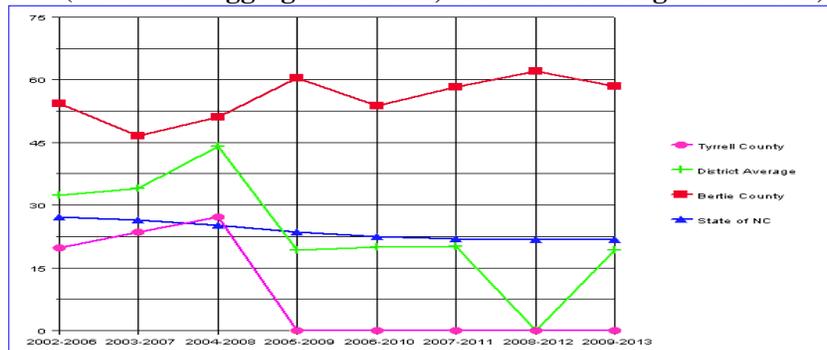
**Table 65. Diabetes Hospital Discharge Rate Trend (2007-2013)**

Location	Rate (Discharge per 1,000 Population)						
	2007	2008	2009	2010	2011	2012	2013
Tyrrell County	2.1	1.6	1.2	0.9	1.4	0.7	1.7
District Average	2.7	2.5	1.9	2.6	2.9	2.1	2.8
Bertie County	3.7	2.8	2.4	2.3	3.0	2.5	3.7
State of NC	1.9	1.8	1.8	1.9	2.0	1.9	1.9

Source: NC State Center for Health Statistics, County-level Data, County Health Data Books (2007-2013), Morbidity, Inpatient Hospital Utilization and Charges by Principal Diagnosis and County of Residence; <http://www.schs.state.nc.us/SCHS/data/databook/>.

**Figure 17: Overall Diabetes Mellitus Mortality Rate Trend**

**Figure 17. Overall Diabetes Mellitus Mortality Rate Trend (Five-Year Aggregate Periods, 2002-2006 through 2009-2013)**



Source: NC State Center for Health Statistics, County Health Data Books (2006-2013), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

**Table 66: Race/Ethnicity-Specific and Sex-Specific Diabetes Mellitus Mortality**

**Table 66. Race/Ethnicity-Specific and Sex-Specific Diabetes Mellitus Mortality (Single Five-Year Aggregate Period, 2009-2013)**

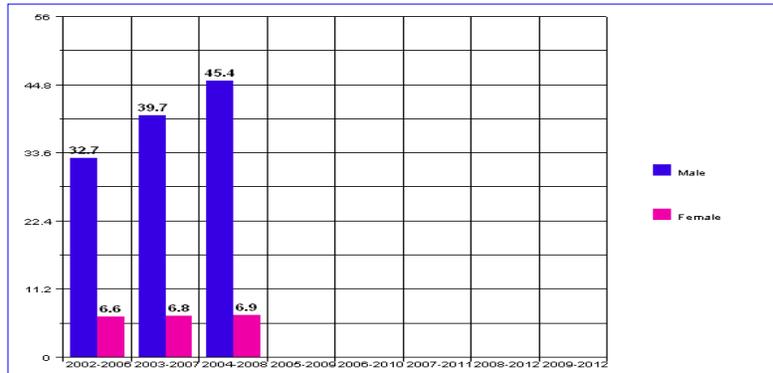
Location	Deaths (Numbers and Rates per 100,000 Population)													
	White non-Hispanic		African-American non-Hispanic		Other Races non-Hispanic		Hispanic		Male		Female		Overall	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Tyrrell Co	3	n/a	4	n/a	0	n/a	0	n/a	3	n/a	4	n/a	7	n/a
District Avg.	13	n/a	16	n/a	0	n/a	0	n/a	16	n/a	14	n/a	29	19.3
Bertie Co.	22	33.7	64	77.2	0	n/a	0	n/a	35	58.5	51	57.6	86	58.5
State of NC	7,403	17.4	3,835	43.4	53	9.9	94	8.1	5,738	25.7	5,482	18.4	11,220	21.7

Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.

Source: NC State Center for Health Statistics, County Health Data Book (2013), Mortality, 2007-2011 Race/Ethnicity Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

**Figure 18: Sex-Specific Diabetes Mellitus Mortality Rate Trend, Tyrrell County**

**Figure 18. Sex-Specific Diabetes Mellitus Mortality Rate Trend, Tyrrell County (Five-Year Aggregate Periods, 2002-2006 through 2009-2013)**



Source: NC State Center for Health Statistics, County Health Data Books (2006-2013), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

**Table 67: Race/Ethnicity and Sex-Specific Diabetes Mellitus Mortality Rate**

**Table 67. Race/Ethnicity and Sex-Specific Diabetes Mellitus Mortality Rate (Single Five-Year Aggregate Period, 2009-2013)**

Location	Rate (Deaths per 100,000 Population)							
	Males				Females			
	White non-Hispanic	African American non-Hispanic	Other non-Hispanic	Hispanic	White non-Hispanic	African American non-Hispanic	Other non-Hispanic	Hispanic
Tyrrell County	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>District Average</i>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bertie County	n/a	86.7	n/a	n/a	n/a	69.9	n/a	n/a
State of NC	21.6	50.2	14.2	8.1	14.0	38.5	7.2	8.2

Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.  
 Source: NC State Center for Health Statistics, County-level Data, County Health Data Book (2015), Mortality, 2009-2013 NC Resident Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates, by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

**Table 68: Overall Nephritis, Nephrotic Syndrome Hospital Discharge Rate Trend**

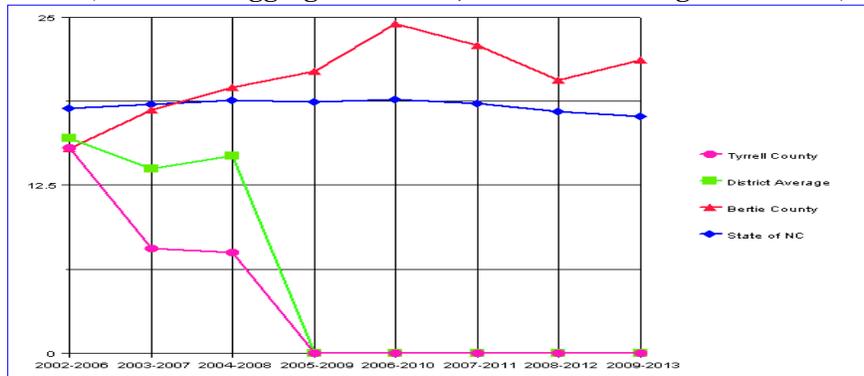
**Table 6. Nephritis, Nephrosis, Nephrotic Syndrome Hospital Discharge Rate Trend (2009-2013)**

Location	Rate (Discharge per 1,000 Population)						
	2007	2008	2009	2010	2011	2012	2013
Tyrrell County	1.4	1.4	0.7	0.9	0.9	0.9	2.2
<i>District Average</i>	1.7	1.5	1.6	1.2	2.2	3.7	2.6
Bertie County	3.5	2.7	2.8	3.2	2.7	4.1	3.9
State of NC	1.7	1.6	1.4	1.5	1.8	1.8	1.8

Source: NC State Center for Health Statistics, County-level Data, County Health Data Books (2007-2013), Morbidity, Inpatient Hospital Utilization and Charges by Principal Diagnosis and County of Residence; <http://www.schs.state.nc.us/SCHS/data/databook/>.

**Figure 19: Overall Nephritis, Nephrotic Syndrome and Nephrosis Mortality Rate Trend**

**Figure 19. Overall Nephritis, Nephrotic Syndrome and Nephrosis Mortality Rate Trend (Five-Year Aggregate Periods, 2002-2006 through 2009-2013)**



Source: NC State Center for Health Statistics, County Health Data Books (2006-2013), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

**Table 69: Race/Ethnicity-Specific and Sex-Specific Nephritis, Nephrotic Syndrome & Nephrosis Mortality**

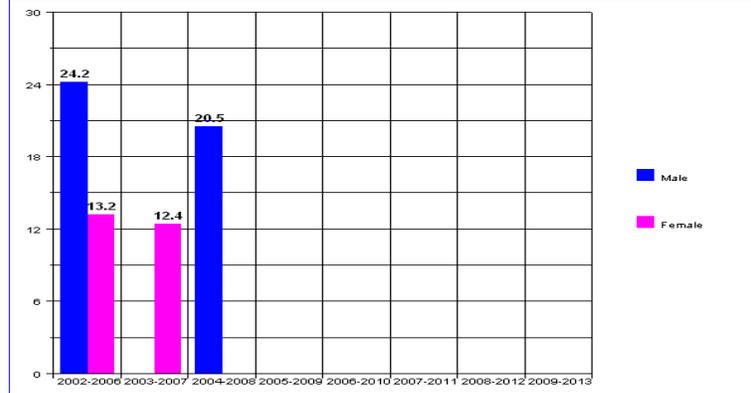
**Table 69. Race/Ethnicity-Specific and Sex-Specific Nephritis, Nephrotic Syndrome and Nephrosis Mortality (Single Five-Year Aggregate Period, 2009-2013)**

Location	Deaths (Numbers and Rates per 100,000 Population)													
	White non-Hispanic		African-American non-Hispanic		Other Races non-Hispanic		Hispanic		Male		Female		Overall	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Tyrrell Co	4	n/a	2	n/a	0	n/a	0	n/a	2	n/a	4	n/a	6	n/a
District Avg.	6	n/a	10	n/a	0	n/a	0	n/a	10	n/a	10	n/a	17	n/a
Bertie Co.	12	n/a	2	n/a	0	n/a	0	n/a	14	n/a	19	n/a	33	21.8
State of NC	5,724	14.3	2,919	34.1	42	7.9	8	8.6	4,307	21.4	4,543	15.1	8,850	17.6

Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.  
 Source: NC State Center for Health Statistics, County Health Data Book (2015), Mortality, 2009-2013 Race/Ethnicity Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

*Figure 20: Sex-Specific Nephritis, Nephrotic Syndrome, Nephrosis Mortality Rate Trend*

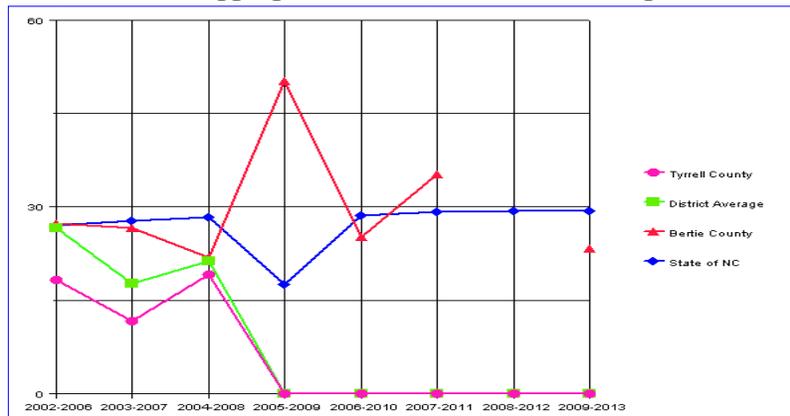
**Figure 20. Sex-Specific Nephritis, Nephrotic Syndrome, Nephrosis Mortality Rate Trend (Five-Year Aggregate Periods, 2002-2006 through 2009-2013)**



Source: NC State Center for Health Statistics, County Health Data Books (2006-2013), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

*Figure 21: Overall All Other Unintentional Injury, Mortality Rate Trend*

**Figure 21. Overall All Other Unintentional Injury Mortality Rate Trend (Five-Year Aggregate Periods, 2002-2006 through 2009-2013)**



Source: NC State Center for Health Statistics, County Health Data Books (2006-2013), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

*Table 70: Hospital Discharge Rate Trend, Tyrrell County Residents for Injury & Poisoning*

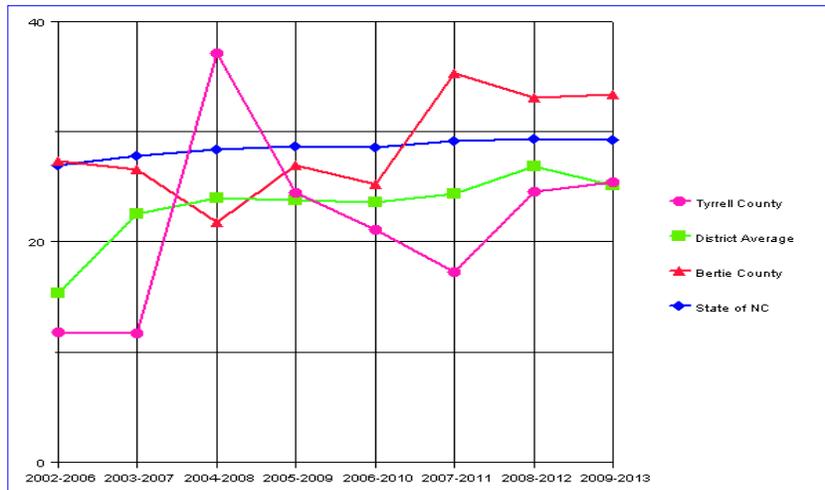
**Table 70. Hospital Discharge Rate Trend, Tyrrell County Residents for Injury and Poisoning, (2007-2013)**

Location	Rate (Discharge per 1,000 Population)						
	2007	2008	2009	2010	2011	2012	2013
Tyrrell County	5.1	6.8	7.3	5.7	8.5	6.0	7.1
District Average	7.9	7.7	8.2	8.4	9.3	8.9	15.3
Bertie County	11.1	11.1	11.0	9.1	10.1	11.6	11.4
State of NC	8.6	8.5	8.3	8.2	8.2	8.1	7.7

Source: NC State Center for Health Statistics, County-level Data, County Health Data Books (2007-2013), Morbidity, Inpatient Hospital Utilization and Charges by Principal Diagnosis and County of Residence; <http://www.schs.state.nc.us/SCHS/data/databook/>.

*Figure 22: Age-Adjusted All Other Unintentional Injuries Death Rate*

**Figure 22. Age-Adjusted All Other Unintentional Injuries Death Rate (Five-Year Aggregate Periods, 2002-2006 through 2009-2013)**



Source: NC State Center for Health Statistics, County Health Data Books (2006-2013), Mortality, Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook>

**Table 71: Race/Ethnicity-Specific and Sex-Specific Alzheimer’s Disease Mortality**

**Table 71. Race/Ethnicity-Specific and Sex-Specific All Other Unintentional Injury Mortality (Single Five-Year Aggregate Period, 2009-2013)**

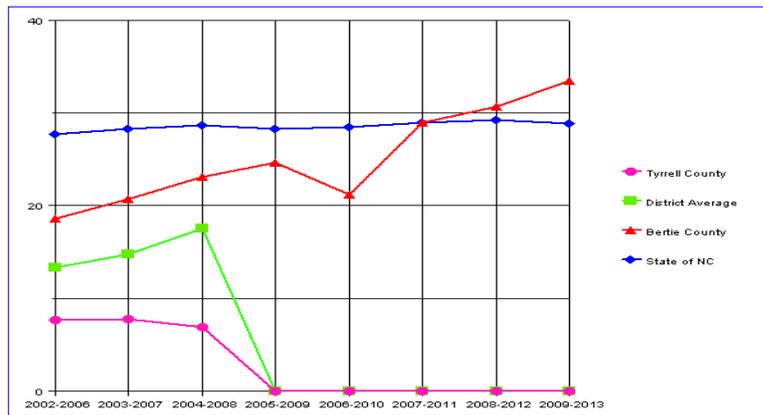
Location	Deaths (Numbers and Rates per 100,000 Population)													
	White non-Hispanic		African-American non-Hispanic		Other Races non-Hispanic		Hispanic		Male		Female		Overall	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Tyrrell Co	3	n/a	5	n/a	1	n/a	0	n/a	5	n/a	4	n/a	9	n/a
District Avg.	14	n/a	8	n/a	0	n/a	0	n/a	14	n/a	9	n/a	22	n/a
Bertie Co.	18	n/a	23	29.9	0	n/a	0	n/a	22	40.0	19	n/a	41	33.4
State of NC	11,970	33.9	1,891	19.7	74	9.8	78	11.6	8,464	38.7	5,939	21.3	14,403	29.3

Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.

Source: NC State Center for Health Statistics, County Health Data Book (2015), Mortality, 2009-2013 Race/Ethnicity Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

**Figure 23: Overall Alzheimer’s Disease Mortality Rate Trend**

**Figure 23. Overall Alzheimer’s Disease Mortality Rate Trend (Five-Year Aggregate Periods, 2002-2006 through 2009-2013)**



Source: NC State Center for Health Statistics, County Health Data Books (2006-2013), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

**Table 72: Race/Ethnicity-Specific and Sex-Specific Alzheimer’s Disease Mortality**

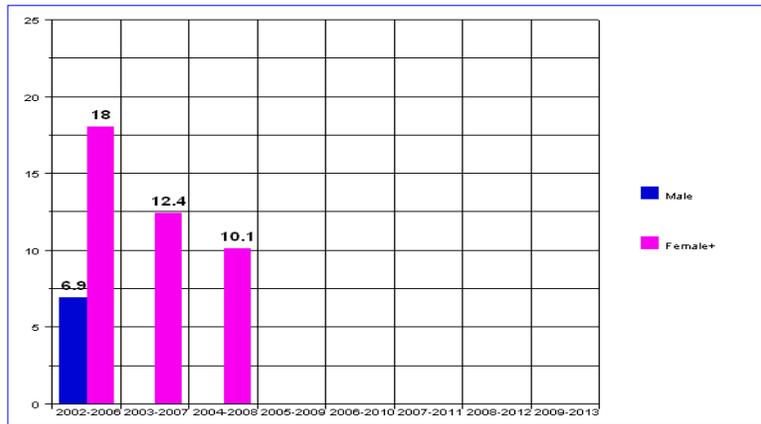
**Table 72. Race/Ethnicity-Specific and Sex-Specific Alzheimer’s Disease Mortality (Single Five-Year Aggregate Period, 2009-2013)**

Location	Deaths (Numbers and Rates per 100,000 Population)													
	White non-Hispanic		African-American non-Hispanic		Other Races non-Hispanic		Hispanic		Male		Female		Overall	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Tyrrell Co	4	n/a	1	n/a	0	n/a	0	n/a	0	n/a	5	n/a	5	n/a
District Avg.	20	n/a	10	n/a	0	n/a	0	n/a	5	n/a	23	n/a	29	n/a
Bertie Co.	22	33.3	29	35.0	0	n/a	0	n/a	17	n/a	34	n/a	51	33.5
State of NC	11,856	29.8	1,932	26.3	35	9.2	57	9.9	3,938	23.0	10,062	32.0	14,000	28.9

Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.  
 Source: NC State Center for Health Statistics, County Health Data Book (2015), Mortality, 2009-2013 Race/Ethnicity Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

**Figure 24: Sex-Specific Alzheimer’s Disease Mortality Rate Trend, Tyrrell County**

**Figure 24. Sex-Specific Alzheimer’s Disease Mortality Rate Trend, Tyrrell County (Five-Year Aggregate Periods, 2002-2006 through 2009-2013)**



Source: NC State Center for Health Statistics, County Health Data Books (2006-2013), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

**Table 73: Pneumonia and Influenza Hospital Discharge Rate Trend**

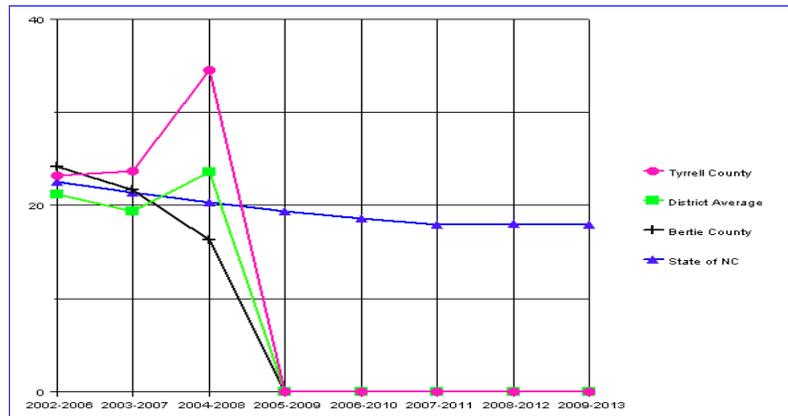
**Table 73. Pneumonia and Influenza Hospital Discharge Rate Trend (2007-2013)**

Location	Rate (Discharge per 1,000 Population)						
	2007	2008	2009	2010	2011	2012	2013
Tyrrell County	2.8	1.9	3.3	3.4	2.7	3.9	3.7
District Average	5.2	4.4	4.6	4.2	5.3	4.5	4.4
Bertie County	4.2	4.2	4.3	3.6	4.5	3.7	4.2
State of NC	3.4	3.3	3.5	3.1	3.2	3.2	3.1

Source: NC State Center for Health Statistics, County-level Data, County Health Data Books (2007-2013), Morbidity, Inpatient Hospital Utilization and Charges by Principal Diagnosis and County of Residence; <http://www.schs.state.nc.us/SCHS/data/databook/>.

**Figure 25: Overall Pneumonia and Influenza Mortality Rate Trend**

**Figure 25. Overall Pneumonia and Influenza Mortality Rate Trend (Five-Year Aggregate Periods, 2002-2006 through 2009-2013)**



Source: NC State Center for Health Statistics, County Health Data Books (2006-2013), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

**Table 74: Race/Ethnicity-Specific and Sex-Specific Alzheimer’s Disease Mortality**

**Table 74. Race/Ethnicity-Specific and Sex-Specific Pneumonia and Influenza Mortality (Single Five-Year Aggregate Period, 2009-2013)**

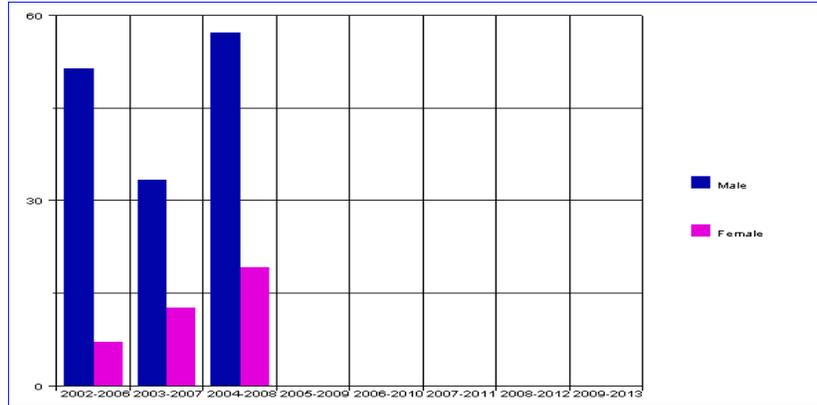
Location	Deaths (Numbers and Rates per 100,000 Population)													
	White non-Hispanic		African-American non-Hispanic		Other Races non-Hispanic		Hispanic		Male		Female		Overall	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Tyrrell Co.	2	n/a	2	n/a	0	n/a	0	n/a	2	n/a	2	n/a	4	n/a
District Avg.	8	n/a	6	n/a	0	n/a	0	n/a	7	n/a	7	n/a	14	n/a
Bertie Co.	8	n/a	8	n/a	0	n/a	0	n/a	8	n/a	8	n/a	16	n/a
State of NC	7,294	18.3	1,427	16.9	48	11.3	0	6.6	3,934	20.5	4,956	16.2	8,890	17.9

Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.

Source: NC State Center for Health Statistics, County Health Data Book (2015), Mortality, 2009-2013 Race/Ethnicity Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

*Figure 26: Sex-Specific Pneumonia and Influenza Mortality Rate Trend, Tyrrell Co.*

**Figure 26. Sex-Specific Pneumonia/Influenza Mortality Rate Trend, Tyrrell County (Five-Year Aggregate Periods, 2002-2006 through 2009-2013)**



Source: NC State Center for Health Statistics, County Health Data Books (2006-2013), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

*Table 75: Chronic Liver Disease and Cirrhosis Hospital Discharge Rate Trend Data*

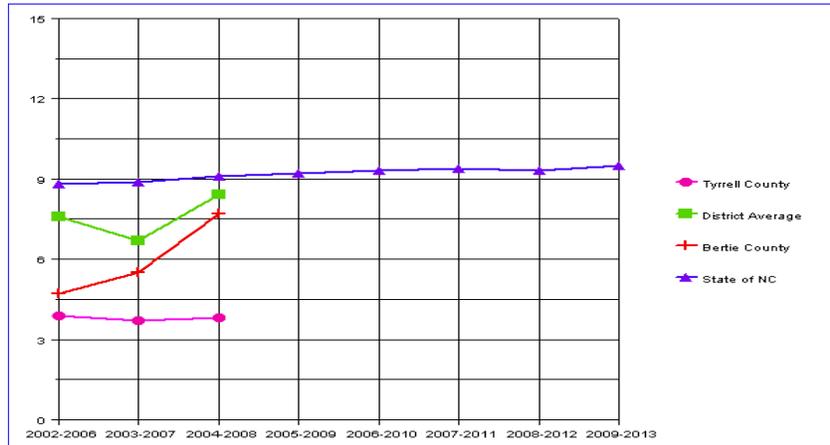
**Table 75. Chronic Liver Disease and Cirrhosis Hospital Discharge Rate Trend Data (2007-2013)**

Location	Rate (Discharge per 1,000 Population)						
	2007	2008	2009	2010	2011	2012	2013
Tyrrell County	0.0	0.0	0.2	0.7	0.5	0.0	0.0
District Average	0.2	0.3	0.1	0.5	0.4	0.1	0.2
Bertie County	0.2	0.5	0.3	0.0	0.0	0.2	0.2
State of NC	0.3	0.3	0.3	0.2	0.2	0.2	0.3

Source: NC State Center for Health Statistics, County-level Data, County Health Data Books (2007-2013), Morbidity, Inpatient Hospital Utilization and Charges by Principal Diagnosis and County of Residence; <http://www.schs.state.nc.us/SCHS/data/databook/>.

Figure 27: Overall Chronic Liver Disease and Cirrhosis Mortality Rate Trend

Figure 27. Overall Chronic Liver Disease and Cirrhosis Mortality Rate Trend (Five-Year Aggregate Periods, 2002-2006 through 2009-2013)



Source: NC State Center for Health Statistics, County Health Data Books (2006-2013), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

Table 76: Race/Ethnicity Specific and Sex-Specific Chronic Liver Disease and Cirrhosis

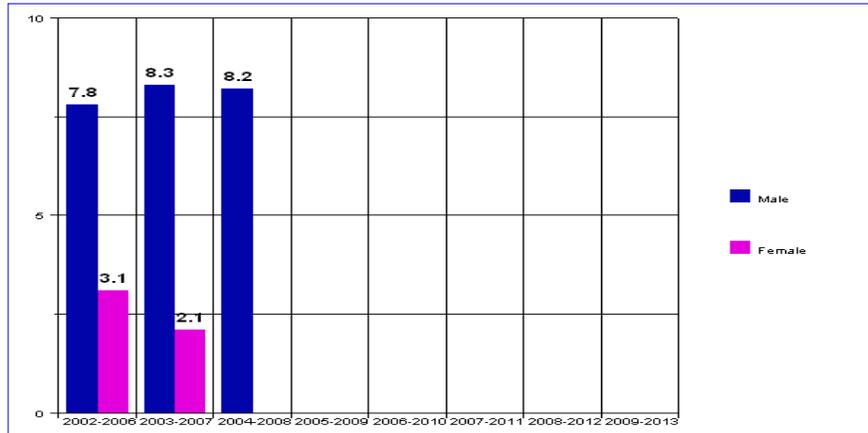
Table 76. Race/Ethnicity Specific and Sex-Specific Chronic Liver Disease and Cirrhosis Mortality (Five-Year Aggregate Period, 2009-2013)

Location	Deaths (Numbers and Rates per 100,000 Population)													
	White non-Hispanic		African-American non-Hispanic		Other Races non-Hispanic		Hispanic		Male		Female		Overall	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Tyrrell Co.	11	n/a	2	n/a	0	n/a	0	n/a	5	n/a	8	n/a	13	n/a
District Avg.	13	n/a	3	n/a	0	n/a	0	n/a	10	n/a	6	n/a	16	n/a
Bertie Co.	5	n/a	7	n/a	0	n/a	0	n/a	6	n/a	6	n/a	12	n/a
State of NC	20,684	50.9	2,384	28.0	44	9.7	6	8.8	10,834	52.9	12,512	42.0	23,346	46.1

Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.  
 Source: NC State Center for Health Statistics, County Health Data Book (2015), Mortality, 2009-2013 Race/Ethnicity Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

*Figure 28: Sex-Specific Chronic Liver Disease and Cirrhosis Mortality Rate Trend, Tyrrell Co*

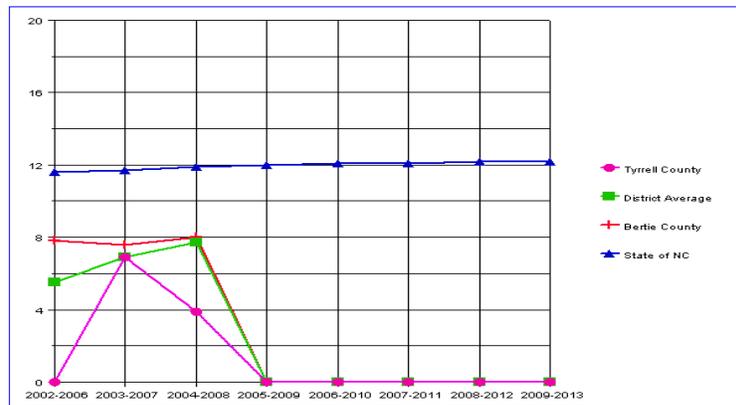
**Figure 28. Sex-Specific Chronic Liver Disease and Cirrhosis Mortality Rate Trend, Tyrrell County  
(Five-Year Aggregate Periods, 2002-2006 through 2009-2013)**



Source: NC State Center for Health Statistics, County Health Data Books (2006-2013), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

*Figure 29: Overall Suicide Mortality Rate Trend*

**Figure 29. Overall Suicide Mortality Rate Trend  
(Five-Year Aggregate Periods, 2002-2006 through 2009-2013)**



Source: NC State Center for Health Statistics, County Health Data Books (2006-2013), Mortality, Race-Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

*Table 77: Race/Ethnicity-Specific and Sex-Specific Suicide Mortality*

**Table 77. Race/Ethnicity-Specific and Sex-Specific Suicide Mortality  
(Single Five-Year Aggregate Period, 2009-2013)**

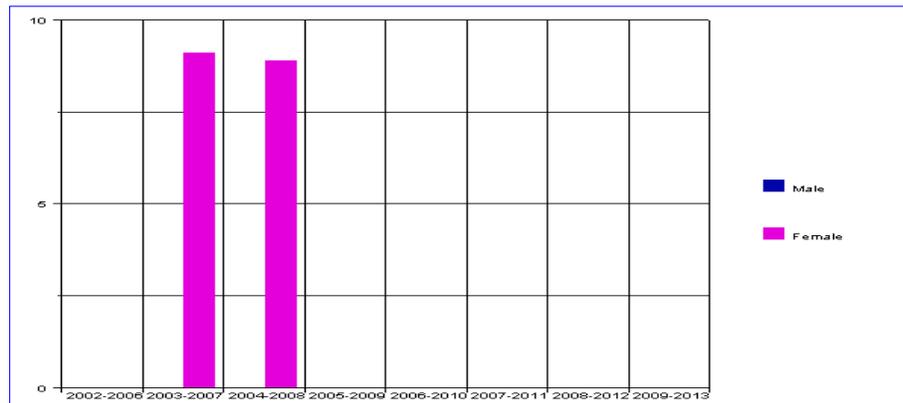
Location	Deaths (Numbers and Rates per 100,000 Population)													
	White non-Hispanic		African-American non-Hispanic		Other Races non-Hispanic		Hispanic		Male		Female		Overall	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Tyrrell Co.	3	n/a	1	n/a	0	n/a	0	n/a	4	n/a	0	n/a	4	n/a
District Avg.	8	n/a	.7	n/a	0	n/a	0	n/a	7	n/a	2	n/a	8	n/a
Bertie Co.	9	n/a	0	n/a	0	n/a	0	n/a	9	n/a	0	n/a	9	n/a
State of NC	5,315	15.7	497	4.8	65	5.1	130	3.6	4,672	19.8	1,398	5.4	6,070	12.2

Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases.

Source: NC State Center for Health Statistics, County Health Data Book (2015), Mortality, 2009-2013 Race/Ethnicity Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

*Figure 30: Sex-Specific Suicide Mortality Rate Trend, Tyrrell County*

**Figure 30. Sex-Specific Suicide Mortality Rate Trend, Tyrrell County  
(Five-Year Aggregate Periods, 2002-2006 through 2009-2013)**



Note: The use of "n/a" in lieu of a numeral indicates a likely unstable rate based on a small (fewer than 20) number of cases. Source: NC State Center for Health Statistics, County Health Data Book (2015), Mortality, 2009-2013 Race/Ethnicity Specific and Sex-Specific Age-Adjusted Death Rates by County; <http://www.schs.state.nc.us/SCHS/data/databook/>.

**Table 78: Chlamydia Infection Incidence Trend (2009-2013)**

**Table 78. Chlamydia Infection Incidence Trend (2009-2013)**

Location	Incidence, All Ages, Number and Rate (New cases per 100,000 Population)									
	2009		2010		2011		2012		2013	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Tyrrell County	24	588.5	20	742.8	24	549.1	14	322.7	26	599.4
Bertie County	85	609.1	88	447.2	86	616.0	90	699.8	81	606.0
<i>District Average</i>	137	708.2	158	742.8	175	835.2	148	716.6	110	532.6
State of NC	43,734	466.2	42,164	441.1	53,84	558.0	50,621	519.1	48,417	496.5

Source: NC DHHS, Division of Public Health, Epidemiology Section, Communicable Disease Branch. Facts and Figures, Annual Reports. North Carolina 2011 HIV/STD Surveillance Report, Table 7; <http://epi.publichealth.nc.gov/cd/stds/figures/std11rpt.pdf>.

**Table 79: Gonorrhea Infection Incidence Trend (2009-2013)**

**Table 79. Gonorrhea Infection Incidence Trend (2009-2013)**

Location	Incidence, All Ages, Number and Rate (New cases per 100,000 Population)									
	2009		2010		2011		2012		2013	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Tyrrell County	9	220.7	6	135.8	3	68.6	3	69.2	3	69.2
Bertie County	34	241.3	28	177.1	23	132.5	26	141.9	26	168.9
<i>District Average</i>	54	279.1	48	225.7	59	281.6	59	285.7	46	222.7
State of NC	14,811	157.9	14,153	177.8	17,158	177.8	14,324	146.9	13,665	140.0

Source: NC DHHS, Division of Public Health, Epidemiology Section, Communicable Disease Branch. Facts and Figures, Annual Reports. North Carolina 2011 HIV/STD Surveillance Report, Table 7; <http://epi.publichealth.nc.gov/cd/stds/figures/std11rpt.pdf>.

**Table 80: HIV Prevalence: HIV/AIDS Cases Living as of December 31, 2013**

**Table 80. HIV Prevalence: HIV and AIDS Cases Living as of December 31, 2013  
(By County of Residence)**

Location	Number of Living Cases
Tyrrell County	2
<i>District Average</i>	23
Bertie County	44
State of NC	11,829

Source: NC DHHS, Division of Public Health, Epidemiology Section, Communicable Disease Branch. Facts and Figures, Annual Reports. North Carolina 2011 HIV/STD Surveillance Report, Table 1; <http://epi.publichealth.nc.gov/cd/stds/figures/std11rpt.pdf>.

**Table 81: NC Hospital Discharges with a Primary Diagnosis of Asthma**

**Table 81. NC Hospital Discharges with a Primary Diagnosis of Asthma, Numbers and Rates per 100,000 (2011-2013)**

Location	Discharges, Number and Rate (Discharges per 100,000 Population)											
	2011				2012				2013			
	All Ages		Ages 0-14		All Ages		Ages 0-14		All Ages		Ages 0-14	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Tyrrell County	4	91.7	1	150.6	4	92.2	2	294.1	4	97.3	1	152.9
<i>District Average</i>	35	199.4	4	165.9	20	127.0	8	332.5	14	128.7	8	285.5
Bertie County	56	268.3	5	147.3	70	338.9	11	332.6	58	285.1	5	156.9
State of NC	9,880	102.3	3,004	157.3	9,786	100.3	3,128	163.7	9,021	91.6	2,841	152.9

Note: Bold type indicates a likely unstable rate based on a small (fewer than 10) number of cases.

Source: NC State Center for Health Statistics, County-level Data, County Health Data Book (2010-2013), Morbidity, Asthma Hospital Discharges (Total and Age 10-14) per 100,000 Population (years and counties as noted); <http://www.schs.state.nc.us/SCHS/data/databook>.

**Table 82: Persons Served by Mental Health Area Programs/Local Management Entities**

**Table 82. Persons Served by Mental Health Area Programs/Local Management Entities (2009-2013)**

Location	Number of Persons Served				
	2009	2010	2011	2012	2013
Tyrrell County	123	192	207	93	128
<i>District Average</i>	483	596	504	264	260
Bertie County	1,317	936	1,105	432	695
State of NC	305,155	332,796	360,180	315,284	306,080

Note: The figures in the table represent all clients of a community-based Area Program for mental health, developmental disabilities, and drug and alcohol abuse active at the beginning of the state fiscal year plus all admissions during the year. Also included are persons served in three regional mental health facilities. Multiple admissions of the same client are counted multiple times. County of residence is reported at the time of admission. State figures include clients reported to reside out-of state and sometimes contains individuals of Unknown County of residence. Source: Log Into North Carolina (LINC) Database, Topic Group Vital Statistics and Health (Data Item 519); [http://data.osbm.state.nc/pls/linc/dyn\\_linc\\_main.show](http://data.osbm.state.nc/pls/linc/dyn_linc_main.show).

**Table 83: Persons Served in NC State Psychiatric Hospitals (2009-2013)**

**Table 83. Persons Served in NC State Psychiatric Hospitals (2009-2013)**

Location	Number of Persons Served				
	2009	2010	2011	2012	2013
Tyrrell County	0	0	6	2	3
<i>District Average</i>	4	4	10	12	12
Bertie County	6	12	12	15	13
State of NC	3,964	4,572	5,754	7,188	9,643

Note: Sometimes referred to as "episodes of care", these counts reflect the total number of persons who were active (or the resident population) at the start of the state fiscal year plus the total of first admissions, readmissions, and transfers-in which occurred during the fiscal year at the three state alcohol and drug treatment centers. Excluded are visiting patients and outpatients. Multiple admissions of the same client are counted multiple times. County of residence is reported at the time of admission. North Carolina data include clients reported to reside out-of-state. Source: Log Into North Carolina (LINC) Database, Topic Group Vital Statistics and Health (Data Item 519); [http://data.osbm.state.nc/pls/linc/dyn\\_linc\\_main.show](http://data.osbm.state.nc/pls/linc/dyn_linc_main.show).

**Table 84: Persons Served in NC State Developmental Centers (2009-2013)**

**Table 84. Persons Served in NC State Developmental Centers (2009-2013)**

Location	Number of Persons Served		
	2011	2012	2013
Tyrrell County	2	0	2
<i>District Average</i>	3	0	3
Bertie County	10	0	10
State of NC	1,355	1,340	1,331

Source: NC Division of Mental Health, Developmental Disabilities and Substance Abuse Services, Statistics and Publications, Reports and Publications, Statistical Reports, Developmental Centers (FY2005-FY2010); <http://www.ncdhhs.gov/mhddsas/statspublications/reports/index.htm#statisticalreports>

**Table 85: Persons Served in NC Alcohol and Drug Abuse Treatment Centers (2009-2013)**

**Table 85. Persons Served in NC Alcohol and Drug Abuse Treatment Centers (2009-2013)**

Location	Number of Persons Served				
	2009	2010	2011	2012	2013
Tyrrell County	6	2	4	1	3
<i>District Average</i>	13	14	18	8	17
Bertie County	8	13	12	9	13
State of NC	4,812	4,483	4,590	4,265	4,343

Sometimes referred to as "episodes of care", these counts reflect the total number of persons who were active (or the resident population) at the start of the state fiscal year plus the total of first admissions, readmissions, and transfers-in which occurred during the fiscal year at the three state alcohol and drug treatment centers. Excluded are visiting patients and outpatients. Multiple admissions of the same client are counted multiple times. County of residence is reported at the time of admission. North Carolina data include clients reported to reside out-of-state.

Source: Log Into North Carolina (LINC) Database, Topic Group Vital Statistics and Health (Data Item 518); [http://data.osbm.state.nc/pls/linc/dyn\\_linc\\_main.show](http://data.osbm.state.nc/pls/linc/dyn_linc_main.show).

**Table 86: Behavioral Health Data: 2012 BRFSS Survey Results – Binge Drinking**

**2012 BRFSS Survey Results**

Binge Drinking: "Considering all types of alcoholic beverages, how many times during the past 30 days did you have (5 or more drinks for men or 4 or more drinks for women) on an occasion?" According to these results, approximately 30.2% of the population in \*\*Eastern NC has participated in binge drinking on one or more occasions in the past 30 days.

	Total Respond	None		Once		Twice		3-7 times		8-30 times	
		N	%	N	%	N	%	N	%	N	%
<b>North Carolina</b>	4,639	3,551	70.9	368	9.6	243	6.2	317	8.9	160	4.4
<b>*Eastern NC</b>	1,437	1,096	69.8	120	9.7	77	6.6	92	9.3	52	4.6
<b>Gender</b>											
Male	709	494	63.3	70	10.8	45	6.9	62	12.6	38	6.3
Female	728	602	79.0	50	8.2	32	6.1	30	4.4	***	***
<b>Race</b>											
White	1,022	793	71.0	84	10.1	6.1	6.1	56	7.8	38	5.1
African American	252	194	67.7	18	8.1	***	***	20	13.0	***	***
Other Minorities	153	102	67.5	16	9.0	***	***	***	***	***	***

**Table 87: Behavioral Health Data: 2012 BRFSS Survey Results - Smoking**

**2012 BRFSS Survey Results**

Current Smoker includes anyone who smoke every day, as well as individuals who smoke some days, including social settings. When asked about tobacco use, approximately 22.2% of population in \*\*Eastern NC are current smokers.

	Total Respond	Smoke everyday		Smoke some days		Former smoker		Never Smoked	
		N	%	N	%	N	%	N	%
<b>North Carolina</b>	11,727	1,544	14.8	610	6.1	3,366	25.5	6,207	53.6
<b>*Eastern NC</b>	3,855	522	15.6	215	6.6	1,133	26.0	1,985	51.9
<b>Gender</b>									
Male	1,474	232	17.8	87	7.3	547	31.0	608	43.9
Female	2,381	290	13.5	128	5.9	586	21.2	1,377	59.4
<b>Race</b>									
White	2,413	334	16.5	114	5.7	813	30.1	1,152	47.6
African American	860	104	14.3	60	9.3	179	18.5	517	57.9
Other Minorities	552	81	13.2	39	5.6	137	19.8	295	61.4

**\*\*Eastern North Carolina:** Beaufort, Bertie, Bladen, Brunswick, Camden, Carteret, Chowan, Columbus, Craven, Cumberland, Currituck, Dare, Duplin, Edgecombe, Gates, Greene, Halifax, Harnett, Herford, Hoke, Hyde, Johnston, Jones, Lenoir, Martin, Nash, New Hanover, Northampton, Onslow, Pamlico, Pasquotank, Pender, Perquimans, Pitt, Roberson, Sampson, Scotland, Tyrrell, Washington, Wayne, and Wilson counties.

**Community Opinion Survey**

“Do you currently smoke cigarettes or use tobacco products, including social settings?” Of those that participated in the survey, 26.6% of the respondents answered “yes” to using tobacco products.

And of those current users, it was asked, “Where is the first place you would go if you wanted to quit?” Of those that participated in the survey, 24.1% stated they would go to their primary care doctor however, 24.1% stated they would “quit on their own” or “cold turkey”.

Additionally, when asked, “In the past year, have you been exposed to secondhand smoke?” Of those that participated in the survey, 43.1% of the respondents answered “yes” to being exposed to secondhand smoke.

**Air Quality Table**

Air Quality Index Levels of Health Concern	Numerical Value	Meaning
Green/Good	0-50	Air quality is considered satisfactory, and air pollution poses little to no risk.
Yellow/Moderate	51-100	Air quality is acceptable; however, for some pollutants there may be a moderate health concern for a very small number of people who are unusually sensitive to air pollution.
Orange/Unhealthy for Sensitive groups	101-150	Members of sensitive groups who may experience health effects. The general public is not likely to be affected.
Red/Unhealthy	151-200	Everyone may begin to experience health effects; members of the sensitive groups may experience more serious health effect
Purple/Very Unhealthy	201-300	Health alert: everyone may experience more serious health effects
Maroon/Hazardous	>300	Health warnings of emergency conditions. The entire population is more likely to be affected

# APPENDIX B

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## Health Care Resources

Tyrrell County has very limited resources when it comes to health care availability. The county has two ambulatory health care clinics: Columbia Medical Center and Martin-Tyrrell-Washington District Health Department. Tyrrell County does not have any private practice physicians or dentists.

Columbia Medical Center is a rural health clinic with one family nurse practitioner and one registered nurse. The clinic is located in Columbia and takes all major medical insurances, Medicare, Medicaid and serves self-payers on a sliding fee scale. Columbia Medical Center serves the citizens of Tyrrell County and neighboring counties. The clinic is open Monday – Friday 8:00 am – 5:00 pm.

Columbia Medical Center does have specialists that visit the clinic on certain days such as a podiatrist, oncologist, and cardiologist. Services include CDL, sports, school, and employment physicals. They offer immunizations, pharmacy assistance program and the medical access program.<sup>1</sup>

Martin-Tyrrell-Washington District Health Department (MTW) is one of 85 health departments in North Carolina. The mission of the District Health Department is to strive to promote healthier lifestyles, reduce risks, disabilities, and years-of-life lost by providing personal and environmental health services. The Health Department is responsible for assessing the health of the community and health hazards in the community; assuring that needed health services are available in the community; enforcing laws and regulations that protect health and ensure safety; and advocating for policies that support the health of the public. The Health Department operates a variety of preventive health services in the area of women's and children's health and communicable disease control and including primary care. The Health Department also manages a dental clinic in Plymouth to ensure that the dental needs of the uninsured or underinsured children are met. The Health Department has competent health professionals. We have a Medical Physician, Physician's Assistant, Family Nurse Practitioner, Registered Nurses, Health Educators, Social Workers, Environment Health Specialists, and other Community Services Staff.

Roanoke Home Care (RHC) is the home care agency of Martin-Tyrrell-Washington District Health Department and is composed of a home health division, hospice division, and home care division. RHC is licensed by North Carolina and accredited by the Accreditation Commission for Health Care, Inc. for delivery of skilled nursing, physical and occupational therapy in-home aide services, medical social services, and infusion nursing. RHC maintains offices in Williamston, Plymouth, and Columbia, NC, to provide services in the district to the residents of our community.

The Tyrrell County Department of Social Services administers the following Public Assistance of Income Maintenance programs: Medicaid, Work First Cash Assistance, and Special Assistance to Adults, Food Stamps, and Energy Assistance. In addition to the public assistance programs, the Department of Social Services operated the child support enforcement program. The Department also provides protective services for abused and neglected children and adults, foster care for children and adults, adoption services, day care services for children, family planning, employment counseling services, and individual and family adjustment services. It also assists person in securing health care consumer education and other informational services.<sup>2</sup>

## Health Care Providers

The tables provided below indicate the types and numbers of health care professionals available in Tyrrell County. The information is based on 2009 data. Tyrrell County's number of health care professionals per person is not favorable compared to North Carolina's average number of health care professionals per person.

Tyrrell County is very needy when it comes to health care and health care providers. Most of the residents in Tyrrell County have to travel a far distance to meet their health care needs or go to a hospital. The following hospitals are utilized by Tyrrell County residents.

Chowan County Hospital, located in Edenton, NC 30 miles northeast of Columbia, offers a wide range of services and healthcare specialties to Tyrrell County residents. The hospital has 71 acute-care and 40 skilled care beds. The hospital provides intensive care service, a surgical center, an emergency department, a specialty care clinic, and a dedicated outpatient surgery area with endoscopy capabilities. Chowan Hospital is affiliated with the University Health Systems of Eastern North Carolina. This partnership provides access to state-of-the-art services offered by top notch academic center. Following are some of the services provided at the facility, \*Maternity Care \*Home Care \*Radiology, including CT nuclear screening, ultrasound, mammography, mobile MRI and bone density screening \*Telemedicine, providing consultation with specialists at other locations \*Rehabilitation, inpatient and outpatient \*Cardiopulmonary rehabilitation \*Wellness screenings and education and \*skilled nursing unit.

Washington County Hospital, located in Plymouth, NC, 35 miles west of Columbia, is a 49-bed JCAHO-accredited critical access facility. The hospital offers a full range of inpatient and outpatient services, a 24-hour emergency department, and hospital based and operated ambulance department, family practice, laboratory, radiology department, pharmacy, cardiopulmonary services, complete surgery facilities, telemedicine, and physical therapy.

Other emergency medical services are also provided to Tyrrell County residents at both the Dare County Hospital and the Vidant Pitt County Hospital, located in Greenville, NC. Both of these hospitals are more than 60 miles away from Columbia.

## Access to Care

### *Adults*

The following graphs compare the percentage of adults in Eastern North Carolina, North Carolina, and the United States who are insured versus uninsured. The tables below depict insurance status among all adults compared to adults age 18-64. Eastern North Carolina's percent of all adults insured is 73.4% compared to 22.2% for Eastern North Carolina's adults age 18-64. Among the groups compared Eastern North Carolina has the highest percent adults uninsured and the United States has the lowest percent of adults uninsured. About 71% of individuals in NC and Eastern North Carolina reported they could not see a doctor in the past 12 months due to cost.

Regarding access to dental care, the majority of Tyrrell County adults reported it had been greater than 12 months since they had their teeth cleaned by a dental hygienist. Nearly 50% reported they had one or more teeth removed because of tooth decay or gum disease. There are no dentists practicing in Tyrrell County. The MTW District Health now has a Dental Clinic in Columbia open two days per week from

8:00 am to 5:00 pm that serve adults and children. MTW also has a pediatric dental facility in Plymouth which accepts patients with Medicaid that is open five days per week from 8:00 am – 5:00 pm.

## **Access to Care**

### ***Children***

In Tyrrell County, there are approximately 823 children ages less than 21 enrolled in Medicaid according to the Division of Medical Assistance. Approximately half of Tyrrell County children ages birth – 21 are enrolled in Medicaid.

North Carolina Health Choice for Children extends health care coverage to children whose family income exceeds Medicaid eligibility criteria. There is an income eligibility that must be met, but it is less stringent than Medicaid eligibility requirements. In Tyrrell County, 83 children under age 19 are enrolled in Health Choice as of November 2013.

## **Mental Health**

### ***Albemarle Gap Analysis – Mental Health<sup>3</sup>***

East Carolina Behavioral Health (ECBH) is a local Management Entity designated by the NC Division of Mental Health, Development Disabilities and Substance Abuse Services to oversee the appropriate provision of state and federally funded services and supports. ECBH manages a local benefit to assist with the multiple challenges of managing services while containing cost.

East Carolina Behavioral Health does not provide direct services. The mission is to work in partnership with people who face significant challenges related to substance abuse, mental illness, and/or developmental disability. Their commitment is to provide consistently excellent, person-centered, family-oriented services within a recovery based system that is flexible, accessible, and respects the individual's freedom of choice. A person can access services by contacting the Access to Care Line at 1-877-685-2415. The Access to Care line is staffed by clinical professionals who provide triage, screening and referrals to providers throughout the ECBH area. Emergency assistance is provided 24-hours daily, 365 days a year.

East Carolina Behavioral Health Serves the following counties: •Beaufort •Bertie •Camden •Chowan •Craven •Currituck •Dare •Gates •Hertford •Hyde •Jones •Martin •Northampton •Pamlico •Pasquotank •Perquimans •Pitt •Tyrrell and •Washington. It coordinates mental health, developmental disability and substance abuse services for children and adults of four counties in the Roanoke-Chowan region, including mental health counseling, emergency services including a 24-hour crisis hotline, a day program for adults with mental illness, community and school-based education and prevention programs, a child development center, early childhood intervention, a program for developmentally disabled adults, a program for mentally retarded or disabled adults, a detoxification and residential treatment center and outpatient counseling and treatment for DWI offenders.

# APPENDIX C

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## MTW Community Health Assessment Tyrrell County

We appreciate your willingness to participate in this Community Health Assessment Survey. It is completely voluntary, and it should take no longer than 20 minutes to complete. Your answers will be completely confidential. The information you give us will not be linked to you in any way. **If you have already completed this survey, or if you do not live in Tyrrell County, please STOP here.**

The purpose of this survey is to learn more about health and quality of life in the Martin, Tyrrell, and Washington Counties of North Carolina. The local health departments of Martin-Tyrrell-Washington District Health will use the results of this survey and other information to help develop plans for addressing the health problems and identify vulnerable populations of the region and its three constituent counties: Martin, Tyrrell and Washington.

### ELIGIBILITY

You must live in Tyrrell County and be at least 16 years of age for your answers to be reflected in this survey's data. Thank you again for your time and commitment to help address the health concerns in your county.

### PART 1: QUALITY OF LIFE

The first part of this survey is about the quality of life in Tyrrell County. After I read the statement, please tell me whether you strongly disagree, disagree, agree, or strongly agree with each of the next (8) statements.

#### 1. "There is good healthcare in Tyrrell County"

*Consider the cost and quality, number of options, and availability of healthcare in the county.*

12.84% Strongly Disagree      40.3% Disagree      41.28% Agree      5.50% Strongly Agree

#### 2. "Tyrrell County is a good place to raise children"

*Consider the quality and safety of schools and child care program, after school programs, and places to play in this county.*

0.00% Strongly Disagree      15.93% Disagree      59.29% Agree      24.78% Strongly Agree

#### 3. "Tyrrell County is a good place to grow old"

*Consider the county's elder-friendly housing, transportation to medical services, recreation, and services for the elderly.*

2.63% Strongly Disagree      9.65% Disagree      62.28% Agree      25.44% Strongly Agree

**4. “There is plenty of economic opportunity in Tyrrell County”**

*Consider the number and quality of jobs, job training/higher education opportunities, and availability of affordable housing in the county.*

44.55% Strongly Disagree      45.45% Disagree      10.00% Agree      0.00% Strongly Agree

**5. “Tyrrell County is a safe place to live”**

*Consider how safe you feel at home, in the workplace, in schools, at playgrounds, parks, shopping centers, etc.*

0.00% Strongly Disagree      6.19% Disagree      70.80% Agree      23.01% Strongly Agree

**6. “There is plenty of support for individuals and families during times of stress and need in Tyrrell County”**

*Consider social support in this county, neighbors, support groups, faith community, outreach community organizations, etc.*

9.71% Strongly Disagree      13.76% Disagree      59.63% Agree      17.43% Strongly Agree

**7. “Tyrrell County has clean air”**

3.54% Strongly Disagree      6.19 Disagree      75.22% Agree      15.04% Strongly Agree

**8. “Tyrrell County has clean water”**

12.50% Strongly Disagree      26.79% Disagree      57.14% Agree      3.57% Strongly Agree

**PART 2: COMMUNITY IMPROVEMENT**

The next set of questions will ask about community problems, issues, and services that are important to you. Remember your choices will not be linked to you in any way.

**9. Please look at this list of community issues. (Please choose only one)**

**In your opinion, which ONE issue most affects the quality of life in Tyrrell County?**

- |  |  |
|--|--|
| <u>6.31%</u> Pollution (air, water, land)        | <u>0.00%</u> Neglect and abuse (specific type)     |
| <u>9.01%</u> Dropping out of school              | <u>0.00%</u> Elder abuse                           |
| <u>64.86%</u> Low income/poverty                 | <u>0.00%</u> Child abuse                           |
| <u>0.00%</u> Homelessness                        | <u>1.80%</u> Violent crime (murder, assault, etc.) |
| <u>3.60%</u> Lack of/inadequate health insurance | <u>0.00%</u> Theft                                 |
| <u>1.80%</u> Hopelessness                        | <u>0.00%</u> Rape/Sexual assault                   |
| <u>2.70%</u> Discrimination/racism               | <u>3.60%</u> None                                  |
| <u>2.70%</u> Lack of community support           | <u>3.60%</u> Other: <u>See Responses Below</u>     |
| <u>0.00%</u> Domestic violence                   | <i>Lack of jobs</i>                                |
|  | <i>Too hard to choose</i>                          |

*Nursing Home facility*  
*Lack of serious commitment to a Christian God*  
*There is nothing for people here. They grow up and move away*  
*All important*  
*Attitude of youth*

**10. In your opinion, which ONE of the following services needs the most improvement in your neighborhood or community? (Please choose only one)**

<u>3.51%</u> Animal control	<u>7.02%</u> Positive teen activities
<u>5.26%</u> Child care options	<u>2.63%</u> Transportation options
<u>7.89%</u> Elder care options	<u>26.32%</u> Availability of employment
<u>6.14%</u> Services for disabled people	<u>8.77%</u> Higher paying employment
<u>7.89%</u> More affordable health services	<u>0.88%</u> Road maintenance
<u>1.75%</u> Better/more healthy food choices	<u>0.00%</u> Road safety
<u>5.26%</u> More affordable/better housing	<u>3.51%</u> None
<u>6.14%</u> Number of health care providers	<u>0.88%</u> Other: <u>See Responses Below</u>
<i>What kind? _____</i>	<i>All of the above</i>
<u>0.00%</u> Culturally appropriate health services	<i>Podiatrists, specialists, and hospitals</i>
<u>0.88%</u> Counseling mental health/support groups	<i>No answer to give</i>
<u>7.02%</u> Better/more recreational facilities (parks, trails, community centers)	<i>Hospital, walk in clinics, urgent care</i>
	<i>All kinds – MDs</i>
	<i>None listed</i>
<u>0.00%</u> Healthy family activities	

**PART 3: HEALTH INFORMATION**

**11. In your opinion, which THREE (3) health behaviors do people in your own community need more information about? {Please suggest THREE (3)}**

<u>22.81%</u> Eating well/nutrition	<u>20.18%</u> Preventing pregnancy and sexually transmitted diseases ( <i>safe sex</i> )
<u>21.93%</u> Exercising/fitness	<u>20.70%</u> Substance abuse prevention ( <i>ex: drugs and alcohol</i> )
<u>17.54%</u> Managing weight	<u>3.51%</u> Suicide prevention
<u>17.54%</u> Going to the dentist for check-ups or preventive care	<u>14.04%</u> Stress management
<u>1.75%</u> Getting prenatal care during pregnancy	<u>3.51%</u> Anger management
<u>11.40%</u> Getting flu shots and other vaccines	

<u>14.04%</u> Preparing for an emergency/disaster	<u>2.63%</u> Domestic violence prevention
<u>0.88%</u> Using child safety seats	<u>11.40%</u> Crime prevention
<u>1.75%</u> Using seat belts	<u>1.75%</u> Rape/sexual abuse prevention
<u>7.02%</u> Driving safely	<u>2.63%</u> None
<u>26.32%</u> Quitting smoking/tobacco use prevention	<u>16.97%</u> Elder care
<u>10.53%</u> Child care/parent	<u>4.39%</u> Other: <u>See Responses Below</u>
<u>21.05%</u> Caring for family members with special needs/ Disabilities	<i>Quality health care</i>
	<i>Information on medical programs</i>
	<i>Animal Control</i>
	<i>Don't know</i>
	<i>All of the above</i>

**12. Where do you get most of your health-related information? (Please choose only one)**

<u>8.04%</u> Friends and family	<u>17.86%</u> Internet	<u>0.00%</u> Help lines
<u>42.86%</u> Doctor/Nurse	<u>0.00%</u> My child's school	<u>6.25%</u> Books/magazines
<u>2.68%</u> Pharmacist	<u>2.68%</u> Hospital	<u>0.00%</u> Friends
<u>0.89%</u> Church	<u>9.82%</u> Health Department	<u>9.82%</u> Other: <u>See Responses Below</u>
		<i>Don't get any</i>
		<i>TV/News (3)</i>
		<i>My employer</i>
		<i>Library</i>
		<i>PA</i>
		<i>In the county</i>
		<i>Duke</i>
		<i>Bible</i>

**13. What health topics/diseases would you like to learn more about? (Write in all suggestions)**

- Heart Disease (9)
- Common Cold
- Stop Smoking
- Spinal Problems
- Obesity (2)
- Diabetes (7)
- Weight Loss
- Kidney Disease
- Dry Mouth Syndrome
- Seizures
- Child Obesity
- How to get help with stress
- Cancer/Breast Cancer (12)
- HIV/STDs
- Overall Wellness
- Leukemia
- Mersa and Meningitis
- Dementia
- Aging Related Diseases
- Ramp for Current Home
- Parkinson Disease
- None (27)
- Migraines (3)
- Shingles
- Alzheimer's Disease (3)
- Hypertension
- Jugular Thrombosis
- Nutrition
- General Health Topics
- Dry Eye Syndrome
- Chronic Heart Failure
- Peripheral Neuropathy

**14. Do you have children between the ages of 9 and 19 for which you are the caretaker?**  
*(Includes step-children, grandchildren, or other relatives)*

20.18% Yes  
79.82% No (*skip to question #16*)

**15. Which of the following health topics do you think your child/children need more information about?** *(Check all that apply)*

<u>26.32%</u> Dental hygiene	<u>0.00%</u> Eating Disorders	<u>15.79%</u> Alcohol
<u>26.32%</u> Tobacco Prevention	<u>26.32%</u> Depression/Anxiety	<u>0.00%</u> Suicide Prevention
<u>31.58%</u> Drug abuse	<u>5.26%</u> Mental Health issues	<u>36.84%</u> Sexual
<u>26.32%</u> Nutrition	<u>5.26%</u> Asthma Management	<u>36.84%</u> Intercourse/STDs
<u>5.26%</u> High Blood Pressure	<u>26.32%</u> Exercise/Fitness	<u>15.79%</u> Reckless
<u>10.53%</u> Diabetes Management	<u>15.79%</u> Overweight/Obesity	<u>42.11%</u> Driving/Speeding
	<u>42.11%</u> Texting & Driving	<u>0.00%</u> Other: _____

#### **PART 4: PERSONAL HEALTH**

**16. Would you say that, in general, your health is ...** *(Choose only one)*

<u>7.09%</u> Excellent	<u>13.27%</u> Fair
<u>27.43%</u> Very good	<u>8.85%</u> Poor
<u>39.82%</u> Good	<u>2.54%</u> Don't know/Not sure

**17. Have you ever been told by a doctor, nurse, or other health professional that you have any of the following health conditions?** *(Check either YES, NO, or DON'T KNOW)*

Asthma	<u>16.67%</u> Yes	<u>82.46%</u> No	<u>0.88%</u> Don't know
Depression or Anxiety	<u>18.42%</u> Yes	<u>80.70%</u> No	<u>0.88%</u> Don't know
High Blood Pressure	<u>53.98%</u> Yes	<u>46.02%</u> No	0.00% Don't know
High Cholesterol	<u>48.21%</u> Yes	<u>50.00%</u> No	<u>1.79%</u> Don't know
Diabetes ( <i>not during pregnancy</i> )	<u>21.05%</u> Yes	<u>78.07%</u> No	<u>0.88%</u> Don't know
Osteoporosis	<u>13.16%</u> Yes	<u>85.96%</u> No	<u>0.88%</u> Don't know
Overweight/Obesity	<u>28.07%</u> Yes	<u>71.93%</u> No	<u>0.88%</u> Don't know
Angina/Heart Disease	<u>22.81%</u> Yes	<u>76.32%</u> No	<u>0.88%</u> Don't know
Cancer	<u>14.29%</u> Yes	<u>83.93%</u> No	<u>1.79%</u> Don't know
Other: <u>See Responses Below</u>			
1. <i>Gout</i>			
2. <i>Atrial Fibrillation</i>			
3. <i>Heart Attack</i>			
4. <i>Arthritis</i>			
5. <i>Chronic Back Pain</i>			

- 6. None
- 7. Kidney
- 8. Arthritis
- 9. Appendicitis and Tonsillitis
- 10. Rheumatoid Arthritis
- 11. Varicose Veins
- 12. Shortness of Breath
- 13. Joint Pain
- 14. Enlarged heart, polio as a child, surgery on lung to remove benign mass
- 15. Mass on Kidney
- 16. Dementia
- 17. Parkinson Disease/Rheumatoid Arthritis
- 18. Diverticulitis

**18. In the past 30 days, have there been any days when feeling sad or worried kept you from going about your normal business?**

17.54% Yes                      82.46% No                      0.00% Don't know

**19. In the past 30 days, have you had any physical pain or health problems that made it hard for you to do your usual activities such as driving, working around the house, or going to work?**

**20.**

31.58% Yes                      68.42% No                      0.00% Don't know

**21. During a normal week, other than in your regular job, do you engage in any physical activity or exercise that lasts at least a half an hour?**

57.89% Yes                      42.11% No (*skip to question #23*)                      0.00% Don't know

**22. Since you said yes, how many times do you exercise or engage in physical activity during a normal week?**

See Responses Below (Write Number)

*(If you exercise more than once a day, count each separate physical activity that lasts for at least a half hour to one "time")*

1.	3	33.2
2.	5	34.7
3.	3	35.3
4.	4	36.3
5.	3	37.2
6.	2	38.3-4
7.	7	39.3
8.	7	40.7
9.	4	41.4
10.	7	42.7
11.	3	43.7
12.	4	44.4
13.	2	45.5
14.	3	46.7
15.	2	47.6

16.	7	48.3
17.	10	49.4
18.	6	50.3
19.	7	51.21
20.	4	52.7
21.	3-4	53.4
22.	1-2	54.2
23.	7	55.2
24.	3	56.6
25.	3	57.7
26.	4	58.2
27.	2	59.1
28.	2	60.3
29.	3	61.4
30.	7	62.6
31.	3-4	63.1
32.	5	64.7

**23. Where do you go to exercise or engage in physical activity? Check all that apply.**

<u>81.82%</u> Home	<u>25.76</u> Other: <u>See Responses Below</u>
<u>0.00%</u> Park	<i>Work</i>
<u>0.00%</u> Public Recreation Center	<i>Chowan Hospital Cardiac Rehab</i>
<u>19.70%</u> Walking Track/Trail	<i>Maintenance Program</i>
<u>3.03%</u> Private Gym	<i>In town</i>
	<i>In Town</i>
	<i>Neighborhood</i>
	<i>Kayaking</i>
	<i>Walking/biking in neighborhood</i>
	<i>To store</i>
	<i>Walk on my road</i>
	<i>Walk at school</i>
	<i>Need low cost exercising facility</i>
	<i>Hwy. 64 near Visitors Center Walk</i>
	<i>Work or School</i>
	<i>Walk on Roadside</i>
	<i>We need a gym because there is</i>
	<i>nothing here</i>
	<i>Walk on roadway</i>
	<i>Walk of road near home</i>

**24. Since you said “no”, what are the reasons you do not exercise for at least a half hour during a normal week? You can give as many of these reasons as you need to.**

<u>13.64%</u> My job is physical or hard labor	<u>36.36%</u> Other: <u>See Responses Below</u>
<u>4.55%</u> Exercise is not important to me	<i>Poor health/fatigue</i>
<u>15.91%</u> I don't have access to a facility that has the things I need, like a pool, golf course, or a track	<i>Just had surgery</i>
	<i>I just don't want to</i>
	<i>Weather</i>

<u>18.18%</u>	I don't have enough time to exercise	<i>No job/worried</i>
<u>2.27%</u>	I would need child care and I don't have it	<i>I work outside in my garden</i>
<u>0.00%</u>	I don't know how to find exercise partners	<i>Bad back</i>
		<i>RA</i>
<u>15.91%</u>	I don't like to exercise	<i>Just not a habit</i>
<u>2.27%</u>	It costs too much to exercise	<i>Fear of hurting my back</i>
<u>4.55%</u>	There is no safe place to exercise	<i>Nothing in here and is too far to drive to find a place</i>
<u>22.73%</u>	I'm too tired to exercise	<i>Pain in back and hips</i>
<u>13.64%</u>	I'm physically disabled	<i>Laziness, not a priority</i>
<u>2.27%</u>	I don't know	<i>Could but choose not to</i>
		<i>I don't want to</i>
		<i>Health issues, diseases</i>

- 25. How many cups PER WEEK of fruits and vegetables would you say you eat?**  
*(Write Number of cups in the space provided. One apple or 12 baby carrots equal one cup)*  
*Please do not include lettuce salad or potato products in your answer*

I eat \_\_\_\_\_ cups of fruit per week \_\_\_\_\_ I don't eat fruit

I eat \_\_\_\_\_ cups of vegetables per week \_\_\_\_\_ I don't eat vegetables

I drink \_\_\_\_ cups of 100% fruit juice per week \_\_\_\_\_ I don't drink 100% fruit juice

- 26. Do you currently smoke?** *(Include regular smoking in social settings)*

26.55% Yes                      73.45% No *(If no, skip to question # 27)*

- 27. Where would you go for help if you wanted to quit? (Please choose only one)**

<u>6.90%</u>	Quit Line NC	Other: <u>See Responses Below</u>
<u>24.14%</u>	Doctor	<i>Need to in my mind to try to quit</i>
<u>0.00%</u>	Church	<i>Cold turkey</i>
<u>6.90%</u>	Pharmacy	<i>Just try on my own</i>
<u>0.00%</u>	Private Counselor/therapist	<i>Internet</i>
<u>10.34%</u>	Health Department	<i>Quit for 17 years</i>
<u>10.34%</u>	I don't know	<i>Store</i>
<u>24.14%</u>	I don't want to quit	<i>I'd just quit</i>

- 28. Have you been exposed to secondhand smoke in the past year?**

43.12% Yes    54.13% No *(skip to question #29)*    2.75% Don't know *(skip to question # 29)*

**29. If yes, where do you think you are exposed to secondhand smoke most often?**

*(Check only one place)*

<u>43.75%</u> Home	<u>45.83%</u> Other: <u>See Responses Below</u>
<u>14.58%</u> Workplace	<i>Community</i>
<u>0.00%</u> Hospitals	<i>Cars</i>
<u>0.00%</u> School	<i>Public places</i>
<u>0.00%</u> I am not exposed to secondhand smoke	<i>Social and family</i>
	<i>Street</i>
	<i>Automobile</i>
	<i>Cars</i>
	<i>Public Places</i>
	<i>Friend's houses</i>
	<i>Friend's houses</i>
	<i>Burning trash</i>
	<i>No comment</i>
	<i>Going into stores</i>
	<i>Friend's houses</i>
	<i>Vehicle (brother smokes)</i>
	<i>Friend's house</i>
	<i>Neighbors</i>
	<i>Social setting</i>
	<i>Outside home, in store</i>
	<i>No details given</i>

**30. During the past 12 months, have you had a seasonal flu vaccine?**

48.65% Yes      51.35% No      0.00% Don't know

**PART 5: ACCESS TO CARE/FAMILY HEALTH**

**31. Where do you go MOST OFTEN when you are sick? (Please choose only one)**

<u>46.02%</u> Doctor's office	<u>5.31%</u> Other: <u>See Responses Below</u>
<u>7.08%</u> Health Department	<i>Chowan Hospital</i>
<u>7.08%</u> Hospital	<i>ER</i>
	<i>VA</i>
<u>31.86%</u> Medical Clinic	<i>Homeopathic</i>
	<i>VA Hospital</i>
<u>4.42%</u> Urgent Care Center	<i>Duke</i>

**32. What is your primary health insurance plan? This is the plan which pays the medical bills first or pays most of the medical bills?**

6.19% The State Employee Health Plan      2.65% The military, Tricare, CHAMPUS or VA

<u>28.32%</u> Blue Cross and Blue Shield	<u>0.00%</u> The Indian Health Service
<u>0.88%</u> Other private health insurance plan purchased from employer or workplace	<u>15.93%</u> No health plan of any kind
<u>3.54%</u> Other private health insurance plan purchased directly from an insurance company	<u>1.77%</u> Don't know
<u>42.48%</u> Medicare	<u>1.77%</u> Other (government plan): <u>See Responses Below</u>
<u>42.48%</u> Medicaid, Carolina ACCESS or Health Choice 55	AARP
	VA Optima State Employee

**33. In the past 12 months, did you have a problem getting the health care you needed for you personally or for a family member from any type of health care provider, dentist, pharmacy, or other facility?**

17.64% Yes      81.58% No (*skip to question #35*)      0.88% Don't know (*skip to question # 35*)

**34. Since you said “yes,” what type of provider or facility did you or your family member have trouble getting health care from? You can CHOOSE AS MANY of these as you need to. If there was a provider that you tried to see but we do not have listed here, please fill them in under “Other.”**

<u>27.78%</u> Dentist	<u>11.11%</u> Urgent Care Center
<u>55.56%</u> Family Doctor	<u>22.22%</u> Medical Clinic
<u>22.22%</u> Eye care/optometrist/ophthalmologist	<u>11.11%</u> Specialist (What type?) _____
<u>11.11%</u> Pediatrician	<u>11.11%</u> Other: <u>See Responses Below</u>
<u>16.67%</u> OB/GYN	<i>Pharmacy (2)</i>
<u>5.56%</u> Health Department	
<u>22.22%</u> Hospital	

**35. Which of these problems prevented you or your family member from getting the necessary health care? You can CHOOSE AS MANY of these as you need to. If you had a problem that we do not have written here, please fill it in under “Other.”**

<u>31.58%</u> No health insurance	<u>0.00%</u> Didn't know where to go
<u>31.58%</u> Insurance didn't cover what I/we needed	<u>26.32%</u> Couldn't get an appointment
<u>26.32%</u> My/our share of the cost (deductible/co-pay) was too high	<u>10.53%</u> The wait was too long
<u>5.26%</u> Doctor would not take my/our insurance or Medicaid	<u>36.84%</u> Other: <u>See Responses Below</u>
	<i>Location with cheapest coverage</i>
	<i>Transportation/cost</i>

<u>0.00%</u> Hospital would not take my/our insurance	<i>No Doctor</i>
<u>10.53%</u> Pharmacy would not take my/our insurance or Medicaid	<i>IDK</i>
<u>10.53%</u> Dentist would not take my/our insurance or Medicaid	<i>Daughter has no job</i>
<u>5.26%</u> No way to get there	<i>Far away</i>
	<i>Could not get clarity why child was not covered by Medicaid</i>

**36. If a friend or family member needed counseling for a mental health or a drug/alcohol abuse problem, who is the first person you would tell them to talk to?**

<u>8.55%</u> Private counselor or therapist	<u>20.35%</u> Other: <u>See Responses Below</u>
<u>28.32%</u> Doctor	<i>Family member</i>
<u>7.96%</u> Support group (e.g. AA, Al-Anon)	<i>Self</i>
<u>16.81%</u> Minister/religious official	<i>Self</i>
<u>1.77%</u> School counselor	<i>Edenton Substance Abuse Center</i>
<u>17.79%</u> Don't know	<i>Police – once it gets bad enough to be arrested</i>
	<i>Psychiatrist at hospital or psychologist</i>
	<i>Nurse at Medical Center</i>
	<i>Tideland Mental Health Center</i>
	<i>Health Department</i>
	<i>Primary Care Provider</i>
	<i>Mental Health Center</i>
	<i>Medical Clinic</i>
	<i>Health Department</i>
	<i>Dreams in Washington NC</i>
	<i>Columbia Medical Center</i>
	<i>Multiple selections</i>
	<i>Tideland Mental Health</i>

**PART 6: EMERGENCY PREPAREDNESS**

**36. Does your household have working smoke and carbon monoxide detectors?**

Smoke Detectors	<u>87.72%</u> Yes	<u>10.53%</u> No	<u>1.75%</u> I don't know
Carbon Monoxide	<u>36.04%</u> Yes	<u>56.76%</u> No	<u>7.21%</u> I don't know

**37. During a severe storm or other emergency, what is your household's primary disaster plan?**

<u>24.78%</u> Stay with family	<u>2.65%</u> Other (please specify): <u>See Responses Below</u>
<u>48.67%</u> Stay at home	<i>Stay with neighbor</i>
<u>19.47%</u> Evacuate to a shelter	<i>Depends if category is more than 3</i>
<u>2.65%</u> No sheltering plan	<i>Go to local church</i>

7.08% Don't know

**38. Does your family have a basic emergency supply kit?**

*(These kits include water, non-perishable food, any necessary prescriptions, first aid supplies, flashlight and batteries, non-electric can opener, blanket, etc.)*

60.53% Yes

36.84% No

2.63% Don't know

**39. Do you have adequate drinking water for everyone in the house for the next 7 days after a severe storm or disaster?**

64.91% Yes

32.46% No

2.63% Don't know

**40. Do you have adequate food for everyone in the house for the next 7 days after a severe storm or disaster?**

84.07% Yes

14.16% No

1.77% Don't know

**41. What would be your main way of getting information from authorities in a large-scale disaster or emergency? (Check only one)**

42.11% Television

5.26% Text messages (*emergency alert system*)

23.68% Phone

2.63% Don't know

17.54% Radio

3.51% Other: See Responses Below

6.14% Internet

*Husband is Emergency Personnel*

0.00% Print media (ex: newspaper)

*Family next door*

*Sheriff's Officer*

1.75% Social networking site (*ex. Facebook, etc.*)

0.88% Neighbors

**42. If public health authorities announced a mandatory evacuation from your neighborhood or community due to a large-scale disaster or emergency, would you evacuate?**

64.60% Yes

29.20% No

6.19% Don't know

**43. What would be the main reason you might not evacuate if asked to do so? (Check only one)**

6.35% Lack of transportation

31.5% Other: (describe): See Responses Below

22.22% Concern about leaving property behind

*Would leave*

6.35% Concern about personal safety

*On call for work at the prison*

*Thinks home is strong enough to withstand storm; assist in*

9.52% Concern about family safety *cleaning up*  
6.35% Concern about traffic jams and inability to get out *Don't where to go that is safer*  
4.76% Health problems (could not be moved) *Job requirements*  
15.87% Don't know *I would go no matter what*  
*Have to stay and work*  
*Just don't want to go*  
*Nothing would make me leave*  
*I would go no matter what*  
*Don't want to go*  
*Jobs*  
*Don't see the need to*  
*Have always stayed home during storms*  
*God will protect me*  
*Evacuate no matter what*  
*Nothing would stop me*  
*I would evacuate*  
*Because family member wouldn't want to go*  
*Would evacuate*

**44. Do you have pets?**

48.67% Yes                      51.33% No                      Don't know

**45. If yes, would having a pet prevent you from seeking alternative shelter or tending to your own health needs?**

21.43% Yes                      75.00% No                      3.57% Don't know

**46. Tyrrell County has a voluntary Special Medical Needs Registry. Do you think anyone in your household may qualify as having special medical needs? (If you answered "yes," answer question #47)**

13.39% Yes                      85.71% No                      0.89% Don't know

**47. Do any of the following apply to you or someone in your household?**

50.00% Individual(s) with severe respiratory problems (oxygen or ventilator dependent) who require a power source and/or ambulatory bag  
0.00% Individual(s) dependent on airway suctioning (tracheotomy)  
0.00% Individual(s) on IV (intravenous) therapy  
0.00% Individual(s) requiring tube feeding  
25.00% Diabetic patients requiring assistance with insulin  
8.33% Individual(s) requiring wound care or help with injections on a daily basis

41.67% Individual(s) with physical or mental conditions, including traumatic brain injury, require daily medical supervision

**48. Do you or anyone in your household have any other special needs such as visually impaired/blind, deaf/hard of hearing, homebound, or need transportation assistance?**

19.64% Yes                      80.36% No                      0.00% Don't know

**PART 7: DEMOGRAPHIC QUESTIONS**

**49. What is your age? (Mark age category)**

<u>1.75%</u> 16 – 19	<u>5.26%</u> 35 – 39	<u>8.77%</u> 55 – 59	<u>9.65%</u> 75 – 79
<u>3.51%</u> 20 – 24	<u>1.75%</u> 40 – 44	<u>11.40%</u> 60 – 64	<u>4.39%</u> 80 – 84
<u>2.63%</u> 25 – 29	<u>8.77%</u> 45 – 49	<u>8.77%</u> 65- 69	<u>8.77%</u> 85 and older
<u>5.26%</u> 30 – 34	<u>7.89%</u> 50 - 54	<u>11.40%</u> 70 – 74	

**50. Are you male or female?**

38.94% Male                      61.06% Female

**51. Are you Hispanic, Latino, or Spanish origin?**

1.80% Yes                      98.20% No (If no, skip to question #52)

**52. If yes, are you:**

50.00% Mexican, Mexican American, or Chicano

0.00% Puerto Rican

0.00% Cuban

50.00% Other Hispanic or Latino (please specify): *Spanish*

**53. What is your race? Please check all that apply. (if other, please write in your race)**

65.18% White

31.25% Black or African American

0.00% American Indian or Alaska Native

0.00% Asian Indian

- 1.79% Asian
- 0.00% Islander
- 2.68% Other, my race is not listed here: See Responses Below

*Cherokee*  
*No comment*  
*Hispanic*

**53. Do you speak a language other than English at home? (if no, skip to #55)**

4.42% Yes 95.58% No

**54. If yes, what language do you speak at home?**

*Please write in a language: Spanish (2) and Vietnamese (2)*

**55. What is your marital status? Mark only one. No explanation needed for “other.”**

<u>20.18%</u> Never Married/Single	<u>10.53%</u> Divorced
<u>42.11%</u> Married	<u>22.81%</u> Widowed
<u>2.63%</u> Unmarried partner	<u>0.00%</u> Other
<u>1.75%</u> Separated	

**56. What is the highest level of school, college or vocational training that you have finished? (Mark only one)**

- 5.26% Less than 9<sup>th</sup> grade
- 16.67% 9-12<sup>th</sup> grade, no degree
- 42.98% High school graduate (or equivalent)
- 14.91% Associate’s Degree or Vocational Training
- 11.40% Bachelor’s Degree
- 6.14% Graduate or professional degree
- 2.63% Other: See Responses Below

*Currently High School Student*  
*Some college*  
*1 year of college*

**57. What was your total household income last year, before taxes? Mark only one.**

18.18% Less than \$10,000 20.20% \$35,000 to \$49,999

<u>12.12%</u> \$10,000 to \$14,999	<u>15.15%</u> \$50,000 to \$74,999
<u>13.13%</u> \$15,000 to \$ 24,999	<u>3.03%</u> \$75,000 - \$99,999
<u>12.12%</u> \$25,000 to \$34,999	<u>6.06%</u> \$100,000 or more

**58. How many people does this income support?**

*(If you pay child support for a child that is not living with you, this still counts as someone living on your income)*

*Please write number here; 1 (43 Responses); 2 (41 Responses); 3(16 Responses); 4 (4 Responses); 5 (5 Responses); 6 (2 Responses)*

**59. What is your employment status? Check all that apply.**

<u>21.05%</u> Employed full-time	<u>7.02%</u> Disabled
<u>13.16%</u> Employed part-time	<u>1.75%</u> Student
<u>37.72%</u> Retired	<u>7.02%</u> Homemaker
<u>0.00%</u> Armed forces	<u>9.65%</u> Self-employed
<u>4.39%</u> Unemployed for <u>more</u> than 1 year	<u>5.26%</u> Unemployed for <u>less</u> than 1 year

**60. Do you have access to the internet?**

<u>67.86%</u> Yes	<u>31.25%</u> No	<u>0.89%</u> Don't know
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# Appendix D

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## Community Health Assessment Listening Session Groups

<i>Agency/Location</i>	<i>Group/Demographics</i>
Soundside Missionary Baptist Church Civic	Middle Age – Older Adults
All Soul’s Catholic Church	Hispanic/Latino
Tyrrell County Community Health Team	Professionals
Tyrrell County Senior Center	Older Adults
Alligator Chapel Church	African-Americans
Tyrrell County School Health Advisory Committee	Teens and Middle Age

### Listening Session Questions

1. When you hear the words “healthy community”, what comes to mind? How do you describe a healthy community?
2. What do folks in this community do to stay healthy? What do you personally do?
3. On a scale of 1 to 10 (1 being least healthy and 10 being the most healthy) how healthy are the citizens of Tyrrell County (as a single population)? Why did you choose that number?
4. From your perspective, what are the most serious health problems or concerns facing this community?
5. What are the current assets within our community to address these problems/concerns?
6. What are the barriers within our community that may impede progress toward addressing these problems/concerns?
7. Is there any group not receiving enough health care? If so, why?
8. Thinking of your own health needs and the needs of your friends and family, are you all able to get care when needed? What are the challenges to meeting your health care needs?

9. If I asked you to pick one thing to focus on to make Tyrrell County healthier, what would you pick and what would you do?
10. Is there anything else you would like to add, or you think would be helpful for us to know?

## **Listening Sessions**

Ten questions were asked of each group which is listed above. The four main questions that we focused on were 1) What are the major health problems/concerns in our community? 2) What are the current assets within our community to address these problems/concerns? 3) What are the barriers within our community that may impede progress toward addressing these problems; and 4) What should be our next steps to addressing these problems/concerns.

## **Method of analysis**

Detailed notes were taken by at least one person at each listening session. A thorough review was conducted of each transcribed report. The information was then evaluated based on the following four main categories: health problems; current assets in Tyrrell County to address the health problems; barriers to addressing the health problems; and suggested next steps to improving health for the people of Tyrrell County. These categories were based on questions used to conduct the listening sessions.

Staff worked independently to identify emergent themes based on the initial four categories. A code book was created and used to independently code the transcribed reports. Frequencies (counts) for each code were tabulated and final results were discussed the evaluators/coders. The themes were greater than 10 counts were listed as issues of greatest importance under each category.

**Health Problems:** When participants were questioned about the major health problems for Tyrrell County residents, the following emerged:

- Chronic illness
- Access to Care
- Substance Abuse (use of tobacco, drugs or alcohol)
- Chronic Disease (heart, diabetes, cancer, obesity)
- Behavioral Health (depression, anxiety, stress, sleep deprivation)

Twelve (12) different themes were identified for this category. Those mentioned were most prevalent overall. Other themes that emerged for this category were physical activity, environmental (mosquitoes), infectious disease, teen issues, parent/family issues, primary dentist/health care, aging, financial, and education.

The following *chronic illnesses* were identified by the participants as being the most prevalent health problems for Tyrrell County residents:

- Obesity

- Diabetes
- Cardiovascular disease
- Asthma/Severe allergies

The major concerns that emerged for the category *access to care* were as follows:

- Lack of follow-up by health care provider/negligence/lack of professionalism
- Lack of access to care
- Lack of language appropriate services/information

Lack of access to care, as it may encompass a large group of concerns, was mentioned solely by participants with no further detail and was therefore categorized as a separate entity among the major concerns to access to care.

Other concerns related to this category are provided below. However, they were mentioned as concerns for individual groups, but did not rank high overall.

- ✓ Transportation
- ✓ Patient compliance with care
- ✓ Long wait times/lengthy appointments and delays in help
- ✓ Lack of infrastructure/resources
- ✓ Lack of walk-in times for children
- ✓ Lack of health education
- ✓ Lack of employer respect of health care system
- ✓ Difficulty in navigating the system

**Current assets to addressing health problems:** When participants were questioned about what they believe to be the current assets in Tyrrell County to address these major health problems, the following results emerges:

- Health resources (Farmers Markets, people grow their own gardens)
- Health Facilities – e.g. health department, Columbia Medical Center, home health, mental health)
- Schools – e.g. school resources or school faculty/staff, after school programs, recreational programs at school
- County agencies
- Other assets mentioned included the faith-based organizations, community members, assistance programs)

This question was difficult for many of the participants because of such limited resources in Tyrrell County regarding health problems.

**Current barriers to addressing the major health problems in Tyrrell County:** The following issues were reported as being major barriers to addressing the health problems in Tyrrell County: (these were the areas recorded under each major theme)

- Resources – lack of available community resources including educational opportunities, recreational opportunities, availability of basic resources (water, electricity, gas), lack of staff, lack of daycares, safety issues

- Health Care – lack of accessibility to health care, lack of health insurance, lack of health providers, lack of affordable health care, lack of follow-up care by health care providers, lack of adequate training of health professionals or difficulty in navigating the health system, lengthy appointments or long waiting times, or lack of trust in health care providers
- Financial – lack of financial resources as a barrier to health, such as issues related to money, loss of funded programs, unemployment, poverty, housing concerns
- Lack of Collaboration – the lack of adequate communication and collaboration among community members and their health care providers, no sense of community, lack of consistency among providers or the need for more coordination among community barriers as barriers of health
- Teen issues – peer pressure, competitiveness in sports related activities, pressure to succeed, time management, school pressures, teen rebellion or social acceptability as barriers to lifestyle

Key steps to improving health of people in Tyrrell County: The following issues emerged as the key next steps for improving the health of Tyrrell County residents.

- *Advocacy/educate community leaders* – the need to better educate the community leaders, the general public and local officials about the available services or the urgency to promote health among the community, in other words, advocate for the general health needs of the community
- *Availability of health resources* – the need to provide additional health services to the community, such as clinics, health clinics with alternative hours of operation, improvement of health clinics in schools, reassessment of available services (EMS), or qualified interpreters
- *Improvement of integration of health in the school system* – the need to provide additional school resources, such as healthy food choices, PE classes, nurses, educational programs related to addictions and family planning/STDs, or the use of staff/faculty for improving the health conditions of the community
- *Coordination of resources/planning* – the need to assess available services, improve coordination and availability of community resources and the need for a more comprehensive plan and coordination of plans, clear vision, prioritization of activities or the need to make changes, the need to prepare adults for workforce, enforcement of laws as a means for improving the health conditions of the community
- *Family/Increase the opportunity for parental involvement* – parents be more involved in their children’s activities, parent involvement in community programs, educational opportunities for parents
- *Others* – community leaders, faith-based organizations, transportation, county/state agencies, media, resources for teens

## Review of Community Health Assessment for Accreditation

County: Tyrrell County

Date: 5/11/2015

Accreditation	Met	Not Met	Comments
<b>Activity 1.1</b> – LHD shall conduct a comprehensive CHA at least every 48 months that includes			By what date was the CHA submitted: ____/____/____
1.1.a Evidence of community collaboration in planning/ conducting assessment <b>Page #: 1-2; 6-11</b>			
1.1.b Reflect the demographic profile of population <b>Page #: 12-15</b>			
1.1.c Describe socioeconomic, educational & environment factors that affect health <b>Page #: 16-25</b>			
1.1.d Assemble/analyze secondary data to describe community health status <b>Page #: 26-32; 32-49</b>			
1.1.e Collect/analyze primary data to describe community health status <b>Page #: 8-11; 109-125; 126-129</b>			Appendix C and Appendix D
1.1.f Compile/analyze trend data to describe changes in community health status and factors affecting health <b>Page #: 49-53</b>			
1.1.g Use scientific methods for collecting/analyzing data <b>Page #: 55-103</b>			Appendix A
1.1.h Identify population groups at risk <b>Page #: 8-11; 55-103</b>			
1.1.i Identify existing and needed health resources <b>Page #: 105-107</b>			Appendix B
1.1.j Compare selected local data with data from other jurisdictions <b>Page #: 26-49; 55-103</b>			Appendix A
1.1.k Identify leading community health problems <b>Page #: 8-11; 55-103;</b>			