Community Health Assessment 2015

Brunswick County, North Carolina

CONTENTS

Acknowledgements **3**

Executive Summary **4**

1 Background and Introduction **6**

2 Brief County Description **7**

2.1 Geographic *7*
2.2 Demographic *8*
2.3 Economic *9*
2.4 Crime / Homicide *13*
2.5 Education *14*

3 Health Data Collection Process **15**

4 CHA Findings **17**

4.1 Life Expectancy *17*
4.2 Maternal and Child Health *19*
4.3 Cancer *23*
4.4 Chronic Diseases (other than Cancer) *26*
4.5 Substance Abuse *33*
4.6 Injury Deaths *36*
4.7 Access to Health Care *37*
4.8 Overall Health Status *38*
4.9 Health Behaviors *39*
4.10 Regional Assessment Data *41*

5 Brunswick County Resources **43**

6 Community Priorities **45**

7 Appendices **48**

Appendix 1: Community Health Opinion Survey *49*
Appendix 2: Healthy North Carolina 2020 Objectives *51*
Appendix 3: Data Book 1 – Analysis of Primary Data *Separate*
Appendix 4: Data Book 2 – Analysis of Secondary Data *Separate*

Acknowledgements

Advisory Committee Members	
June Baker, Novant Health Victoria Bellamy, Novant Health Cherie Browning, BCHS Darnell Boyd, New Hanover Co. Health Dept. Ed Cochard, Coastal Horizons Helen Davis, Local School Representative Chelsea Gailey, Community Care of Lower Cape Fear David Goudy, Southport Lions Club Travis Greer, Robeson Co. Health Dept. Deeanna Hale-Holland, Coastal Horizons Center, Inc.	Yvonne Hatcher, Brunswick Transit System Sam Hickman, Brunswick Beacon Jackie Hill, Community member Karen Spahr, Chamber of Commerce, Oak Island/Southport Angela Medina, Center for Healthy Communities, UNC Wilmington Jillian Riley, Brunswick Housing Opportunities Sheila Roberts, New Hope Clinic, free clinic Kirk Singer, Dosher Hospital David Stanley, Department of Health and Human Services

Primary Distribution (survey distribution and small groups)	
CHA Advisory & Work Group CHA Community Partners Cyndi Glenn, BCHS David Stanley, BCHS Cris Harrelson, BCHS	Katelyn Matney, BCHS Susan Sinclair, UNC Wilmington* Mathew Santoyo, UNC Wilmington* Jenna Archer, ECU

**Also conducted secondary data analysis*

Review of Analyses and Discussion of Priorities	
CHA Advisory & Work Group CHA Community Partners Board of Health County Commissioners of Brunswick County	Tammy Brunelle, Coastal Horizons Brunswick County Cyndi Glenn, BCHS Cris Harrelson, BCHS David Stanley, BCHS Angela Medina, Center for Healthy Communities, UNCW

Community Partners Various community groups and individuals were involved in this assessment of the health of Brunswick County. Contributors included both local and regional partners including but not limited to:

Brunswick County School System: Joyce Beatty Brunswick County Libraries: Reecie Tate, Library Director Novant Health Brunswick Medical Center – Amy Myers, Manager, Public Relations and Marketing Brunswick Realtors Association Brunswick Transit System – Yvonne Hatcher, Executive Director Boiling Spring Lakes Food Pantry Community Care Network of the Lower Cape Fear – Shannon Robinson, Health Check Coordinator Hope Harbor Home	Lion's Club of Southport – Dr. Travis Pickens Martin Luther King Society Mexican Grocers Minority Infant Mortality Task Force of Brunswick County – Jere McMillan, Chair NAACP of Brunswick County – Bernest Hewitt, President New Hope Free Clinic – Sheila Roberts, Executive Director Office of Preparedness and Planning – Darnell Boyd, Preparedness Coordinator Southport/Oak Island Chamber of Commerce United Way – Tommy Taylor, Vice-President Community Impact -

Executive Summary

Brief Overview of Brunswick County

Brunswick County is located in the Southeastern most point in North Carolina bordered by New Hanover, Pender, Columbus, and Horry County, South Carolina. Brunswick County, with an estimated population of 118,836, has seen tremendous population growth: a 62.5% increase since 2000, and a 10.6% increase during the 4 years between 2010 and 2014. In the summer months, the population increases to approximately 180,000 with tourists and seasonal residents representing a 50% increase in the population. Brunswick County is expected to continue to increase steadily in population size over the next 20 years. Brunswick County is home to several beach- and ocean-access communities, and 43% of the population lives in rural, unincorporated areas. The county is divided into 19 municipalities and numerous unincorporated communities incorporated areas. Racial distribution is considerably different in Brunswick County compared to North Carolina overall. Brunswick County has a higher percentage of white residents, a lower percentage of African American residents, and a lower percentage of Hispanic or Latino residents. The average age of Brunswick County residents is generally higher than the state averages; 27% are age 65 and older (nearly twice the state-wide proportion of 14.5%).

CHA Findings

The unemployment rate (2014 preliminary) was 7.6%, and this is similar to peer counties which ranged from 6.5% to 7.8%. Over sixteen percent (16.1%) of Brunswick County residents were defined as living in poverty during the period from 2010 through 2014, an increase compared to the 14.6% in 2009. The percentage of children living in poverty in Brunswick County's was 28%. Nearly one-half (49%) of school children in Brunswick County meet the criteria for free lunch which was higher than all of the other peer counties (range:35% to 48%).

Results from the Community Health Opinion Survey suggest that Brunswick County residents are concerned about chronic disease, drug and alcohol abuse, and obesity. Based on community opinion, the main reason for not getting adequate medical treatment is lack of health insurance (or inability to pay), and that this factor impacts the quality of care received. A majority of respondents (71%) indicated that county residents lack the funds to pay for health insurance and medicine (57%); more so than food, shelter, transportation, and utilities. To improve health, survey respondents indicated that job opportunities (42%) followed by additional health services (36%) would be beneficial. When asked about which screenings or educational information services were needed in the community, "cholesterol, blood pressure, and diabetes" was the most frequent response (55%) followed by "cancer" (48%); and "mental health" (44%) In addition, 42% indicated that "substance abuse" screenings or educational information services were needed. Information obtained from listening groups was similar in message.

After completion of the analysis of data compiled it was determined that Brunswick County is:

- Getting worse in the areas of *injury/accidental deaths, obesity, and low birth weights*;
- Staying the same in the areas of *physical activity, uninsured, and violent crime*
- Getting better in the areas of *premature death*

Although, not all areas that were evaluated in this CHA have associated Healthy NC 2020 goals, several of the Healthy NC metrics emerged as needing improvement:

- *Mental health: substance abuse, access to mental health providers*
- *Chronic diseases: cardiovascular, heart disease, stroke, and diabetes*
- *Injury/accidental death, motor vehicle crashes, alcohol related car accidents, child mortality*

Brunswick County was evaluated as part of the Southeastern North Carolina Regional Health Collaborative (SENCRHC) as a collaborative effort between UNC Wilmington's College of Health and Human Services and the health directors of the following 5 counties: Brunswick, Columbus, New Hanover, Onslow, and Pender. In January 2015, the 5-county report was completed and published. (Planning for Public Health: A Regional Assessment for Creating Healthy Communities, available at http://uncw.edu/sencrhc/CountyHealthAssessments.html .)

Through this assessment, health priority areas were developed through an analysis of health indicators created as part of the planning process combined in a weighted overlay analysis based on 2010 Census data, built

environment amenities, and proximity to facilities that support healthy lifestyles.[1] Each of these health indicators were weighted by the Health & Wellness Advisory Committee based on the indicators' impact on health outcomes. Socioeconomic Status (SES) was ranked as the most significant factor in determining health outcomes throughout the region. A Health and Wellness Priority Areas Map and was created for each county in the SENCRHC region (Appendix 3, Data Book 2). For Brunswick County, the three communities of **Northwest, Navassa, and Ash** and their immediate vicinities were identified as priority communities due primarily to low socioeconomic status and lack of access to health and wellness facilities. Areas along the northern border of the county, though sparsely populated, also lack access to amenities and community facilities available to the southeastern communities along the coast.

Priority Areas

Upon completion of the primary and secondary analyses (Appendix 2 and 3, Data Books 1 and 2), a series of community meetings were held to review the analysis and discuss priority areas. In addition, the data books were distributed to community partners for review and comment.

The following priority areas emerged:

- Chronic diseases, including diabetes, cancer, and hypertension
- Substance Abuse/Mental Health broadly to include drugs, alcohol, smoking, access to mental health services
- Injury/accidental death

[1] Southeastern NC Regional Health Collaborative, *Planning for Public Health: A Regional Assessment for Creating Healthy Communities*, Jan 2015 [http://uncw.edu/sencrhc/CountyHealthAssessments.html]

1 Background and Introduction

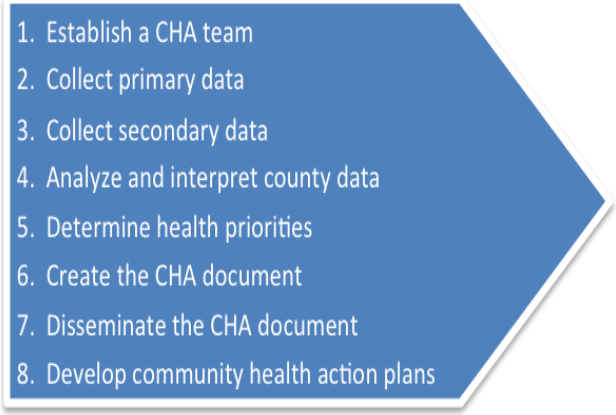
Why conduct a Community Health Assessment?

Community Health Assessments (CHAs) are conducted every four years in Brunswick County. A CHA is a "systematic collection, assembly, analysis, and dissemination of information about the health of the community" (NC DPH 2014, CDC 2013). The overall purpose of the CHA is to gather information about community health issues, concerns, and needs; and to use that information to identify priority areas for health-related improvements. Particular attention is paid to disparities among subpopulations. Specific action plans are developed to address the priorities identified. The CHA is also required for state-level accreditation of Brunswick County Health Services (G.S. 130A-34.1). Both the CHA and the action plans are submitted to the NC Division of Public Health (NC DPH) for review and approval. At least two priority areas are identified that are specific to the county; these must also align with state-level health goals. Healthy NC 2020 serves as our state's health improvement plan, which will address and improve our state's most pressing health priorities. The Healthy North Carolina 2020 health objectives address all aspects of health with the aim of improving the health status of every North Carolinian. The action plans developed as a result must emphasize the value of health promotion and disease prevention, be broad enough to make an impact on the county level, and include measurable results.

A successful CHA involves transparency, community engagement, and proactive collaboration among organizations representing various sectors of the population (CDC 2013). Conducting a CHA is a systematic process consisting of 8 distinct phases (NC DPH 2014) (Figure 1).

This report summarizes the findings from the 2016 Brunswick County CHA. Additional details are located in the appendices of this report. Action plans will be developed in the months following the submission of the CHA.

Figure 1. Phases of CHA Process



Collaboration and Oversight

Brunswick County's 2016 CHA was a collaborative effort, led by Brunswick County Health Services. It was a partnership with numerous agencies and organizations. Dosher Hospital, who's Community Health Needs Assessment was completed in 2015, generously shared their survey and focus group data, which was used in their recent assessment. In addition, representatives from Dosher served on the Advisory Committee.

The CHA Advisory Committee was formed to oversee the process. The Advisory Committee met prior to the primary data collection phase (June 2015) and again to review the analyses and begin the process of developing priorities (December 2015). A Work Group was formed to advise and assist with the day-to-day activities of the CHA. The Work Group met monthly from June through January, and as needed. The organizations identified with an asterisk (*) in the following table were also represented in the Work Group.

CHA Advisory Committee Representation

Sector	Agencies and Organizations
Hospitals	Dosher Hospital, Novant Health Brunswick Medical Center*
Health Care Clinics	New Hope Clinic (reduced fee clinic)*
Mental Health Providers	Coastal Horizons*
Community Organization	Southport Lions Club, Community Care of Lower Cape Fear
Housing	Brunswick Housing*
Education	Local public schools, University of North Carolina Wilmington
Economic	Chamber of Commerce Oak Island/Southport
Transportation	Brunswick Transit
Media	Brunswick Beacon
Local Government	Brunswick County Health Services*
Other	Community member
Neighboring Counties	Robeson Co. Health Dept., New Hanover Co. Health Dept.*

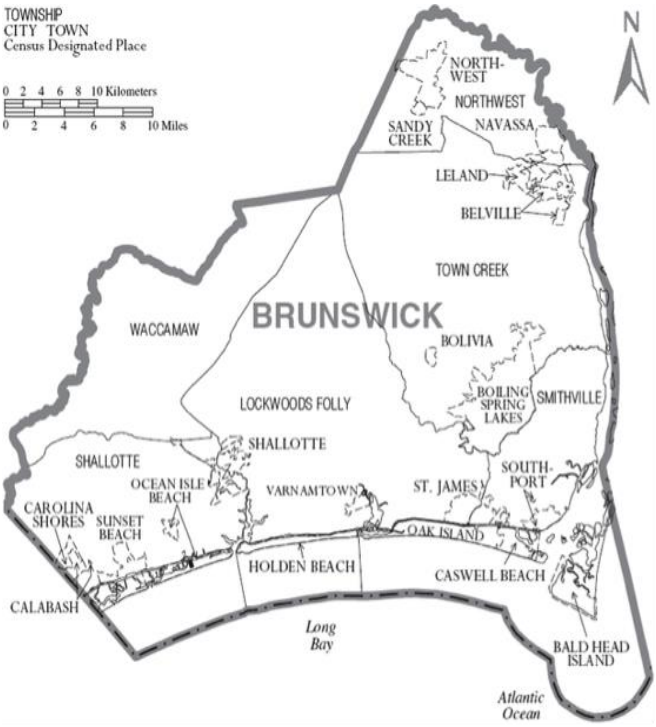
**Also involved as a member of the CHA Work Group.*

The CHA was strengthened by the collaborative nature and engagement of the Advisory Committee and Work Group. Their participation was critical in Phases 2-7, particularly in the collection of primary data, the determination of health priorities, and the dissemination of the CHA document. The efforts of the CHA team and other community agencies and individuals were instrumental in ensuring diversity during the CHA process.

2 Brief County Description

2.1 Geographic

Brunswick County is located in the Southeastern most point in North Carolina bordered by New Hanover, Pender, Columbus, and Horry County, South Carolina. The temperate climate and the 45 miles of beautiful, south-facing beaches have opened it up to tremendous population growth over the past few years, outpacing the state and the nation (BCED). In addition, population growth in Brunswick County can be attributed to its proximity and access to two fast-growing cities, Wilmington, NC and Myrtle Beach, SC, (VISIT NC).



Brunswick County is home to several beach- and ocean-access communities including Bald Head Island, Calabash, Caswell Beach, Holden Beach, Leland, Ocean Isle Beach, Shallotte, Southport, Sunset Beach, and Oak Island. The county has a total of 1,050 square miles, of which 855 square miles are land and 195 square miles are water.

Bolivia, a small city with approximately 150 residents, is the county seat of Brunswick County. In 2013, Brunswick County was moved from the Wilmington NC Metropolitan Statistical Area (MSA) into the MSA encompassing Myrtle Beach and surrounding South Carolina communities. Local and state leaders challenged this decision, unsuccessfully.

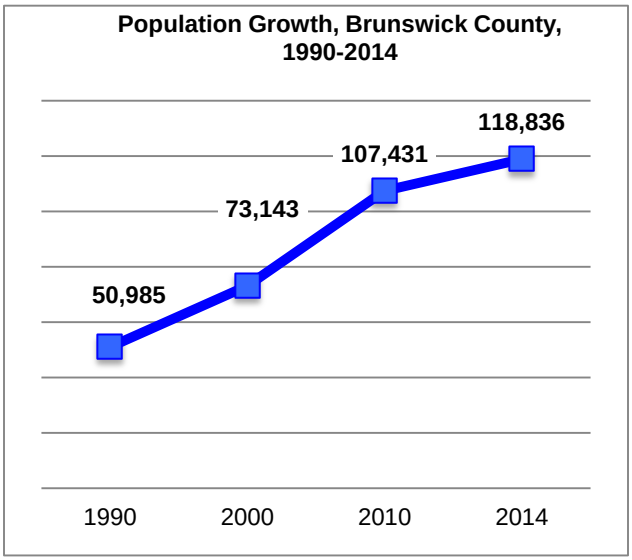
In Brunswick County, 43% of the population lives in rural, unincorporated areas. The county is divided into 19 municipalities and numerous unincorporated communities incorporated areas.

Municipalities. Brunswick County municipalities include: Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, and Varnamtown.

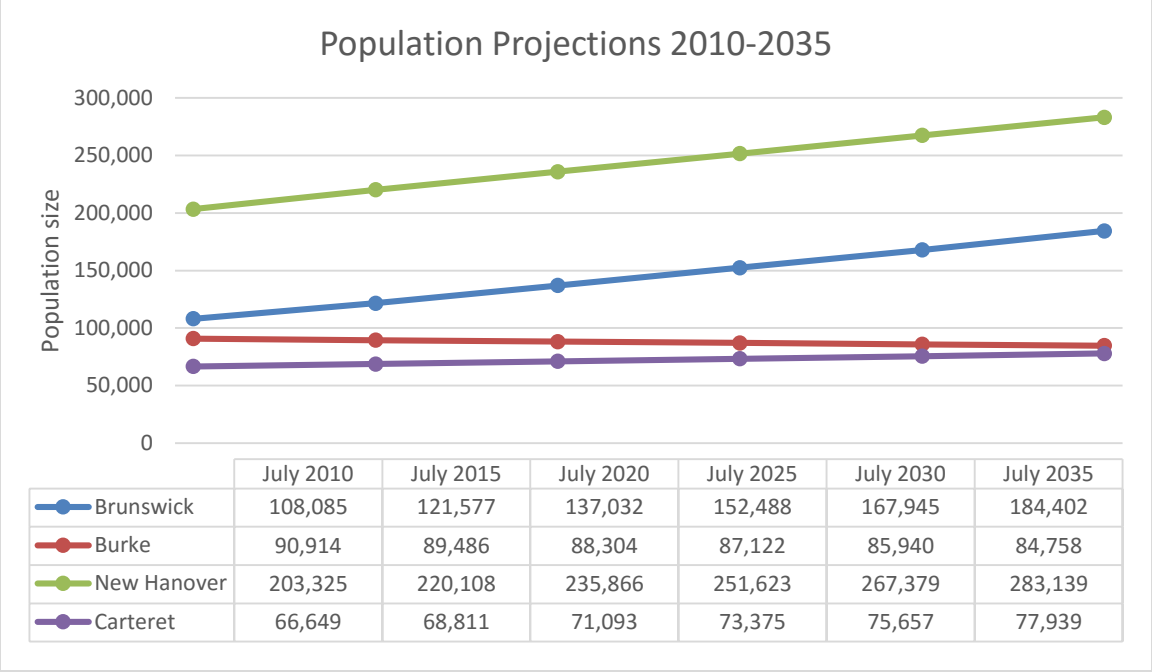
Unincorporated Communities. There are many unincorporated communities in Brunswick County, including Antioch, Ash, Batarota, Bell Swamp, Bishop, Biven, Bonaparte Landing, Boone's Neck, Bowensville, Brunswick Station, Camp Branch, Cedar Grove, Cedar Hill, Civietown, Clairmont, Clarendon, Coolvale, Doe Creek, Eastbrook, Easy Hill, Piney Grove, Supply, Sunset Harbor, Winnabow, among others.

2.2 Demographic

Population Size. According to the estimated 2014 US Census, Brunswick County has a population of 118,836 reflecting a 62.5% increase since 2000 and a 10.6% increase during the 4 years between 2010 and 2014. In the summer months, the population increases to approximately 180,000 with tourists and seasonal residents representing a 50% increase in the population. The NC Office of Budget and Management projects that growth in Brunswick County will continue to increase steadily, surpassing 150,000 in 10 years and 180,000 in 20 years.



Source: Brunswick County Economic Development



Source: Institute for Health Metrics and Evaluation

Age. The average age of Brunswick County residents is generally higher than the state averages:

- 27% are age 65 and older (nearly twice the state-wide proportion of 14.5 %.)
- 4.5% are under age 5
- 17.2% are under 18

Gender. Females make up 52.2 % of the total population

Population Estimates (US Census, 2014)	Brunswick	NC
Population Size		
Population estimates, 2014	118,836	9,943,964
Population change, 2010 - 2014	10.6%	4.3%
Population percent under 5 years, 2014	4.5%	6.2%
Population percent under 18 years, 2014	17.2%	23.1%
Population percent 65 years & over, 2014	27%	14.5%
Race		
White	85.4%	71.5%
Black or African American	11.2%	22.1%
American Indian and Alaska Native	0.9%	1.6%
Asian	0.7%	2.7%
Native Hawaiian/Other Pacific Islander	0.1%	0.1%
Two or More Races	1.7%	2.1%
Ethnicity		
Hispanic or Latino	4.8%	9.0%

Source: Census Quickfacts, County Data

Race/Ethnicity

Racial distribution is considerably different in Brunswick County compared to North Carolina overall. Brunswick County has a higher percentage of white residents, a lower percentage of African America residents, and a lower percentage of Hispanic or Latino residents.

Disability. Just over 12% of the population under the age of 65 years in Brunswick County (12.3%) lives with a disability (2010-2014). This is similar to all peer counties (range: 8.8% - 14.7%) and higher than the state overall (9.5%).

2.3 Economic

Brunswick County is strategically located just north of Myrtle Beach and just south of Wilmington, NC with convenient access to modern system of four lane highways providing efficient access both north-south (I-95 and US 17) and east-west (US 74 and 76). Brunswick County has easy access to the Port of Wilmington and two airports,

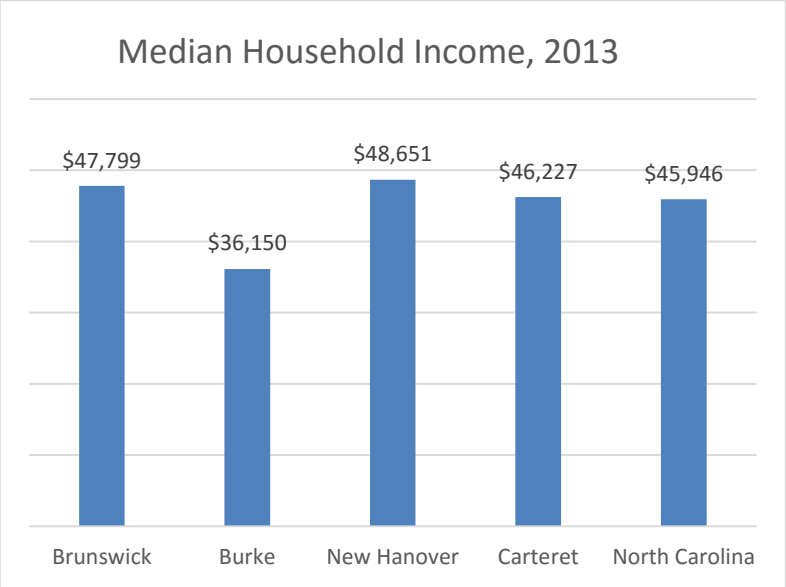
(one in Wilmington and one in Myrtle Beach). The International Logistics Park of North Carolina and the Mid Atlantic Logistics Center have recently been completed consisting of over 2,200 acres of industrial zoned land (BCED). Brunswick County offers a skilled workforce and educational and training opportunities through Brunswick Community College and its Continuing Education and Workforce Development Programs support the economic development (BCC 2016). A community profile developed by the Brunswick County Economic Development elaborates further and can found here: http://brunswickedc.com/business-resources/brunswick-county-community-profile. Climate and lifestyle, a variety of resources and amenities, and livability are major advantages for economic development, appealing to people of all ages, preferences, and stages of life and career.

Employment and Income

The median household income for Brunswick County was $47,799, similar to most peer counties and NC overall. Just over half of the population (53.9%) of the civilian population age 16 or older comprise the civilian workforce in Brunswick County, of which, 48.7% are female (2009-2013).

The unemployment rate (2014 preliminary) was 7.6% and appears to be decreasing, based on the preliminary estimates for 2015 of 6.6% (as of November 2015).

The major employers in Brunswick County, specifically, those employing 500 individuals or more, are listed in the following table. The two largest employers are from the local government sector, the Brunswick County Board of Education and the County of Brunswick.



Source: Census Quickfacts, County Data

Employers in Brunswick County with 500 or more employees.

Employer	Employment Sector	No. of Employees
Brunswick Co. Board of Education	Education and Health Services	1000+
County of Brunswick	Public Administration	1000+
Duke Progress Energy Service Co	Trade, Transportation, & Utilities	500-999
Wal-Mart Associates Inc.	Trade, Transportation, & Utilities	500-999
Food Lion	Trade, Transportation, & Utilities	500-999
Novant Health Brunswick Medical Center	Education and Health Services	500-999

Source: Brunswick County Economic Development Commission

Housing

As of July 1, 2014, Brunswick County reported 81,416 housing units reflecting a 5.1% increase (3,934 units) since April 1, 2010. This increase is higher than the overall increase in NC (2.9%) and all peer counties (which ranged from 0.5% to 4%). The bordering county of New Hanover experienced a 4% increase indicative of growth in the coastal southeastern NC region. These trends are also seen in the number of building permits issued in 2014.

Housing Statistics	Brunswick	Burke	New Hanover	Carteret	NC
Housing units, July 1, 2014	81,416	48,898	105,532	40,656	4,452,334
Housing units, April 1, 2010	77,482	48,179	101,436	40,879	4,327,528
Change from 2010-2014 (%)	5.1%	1.5%	4.0%	0.5%	2.9%
Owner-occupied (%), 2009-2013	76.4%	70.2%	58.9%	71.7%	66.4%
Median value, owner-occupied, 2009-13	$186,600	$111,700	$215,200	$193,500	$153,600
Median gross rent, 2009-13	$860	$780	$900	$626	$776
Building permits, 2014	1,973	230	1,749	94	49,911

Source: Census Quick facts County data

The median value of owner-occupied housing units was $186,600, lower than most peer counties but not lower than NC overall. The median gross rent for Brunswick County rental properties was $860 per month in 2014. The owner-occupied housing unit rate was considerably higher (76.4%) in Brunswick County than in peer counties and NC overall which, combined, ranged from 58.9% to 71.7%.

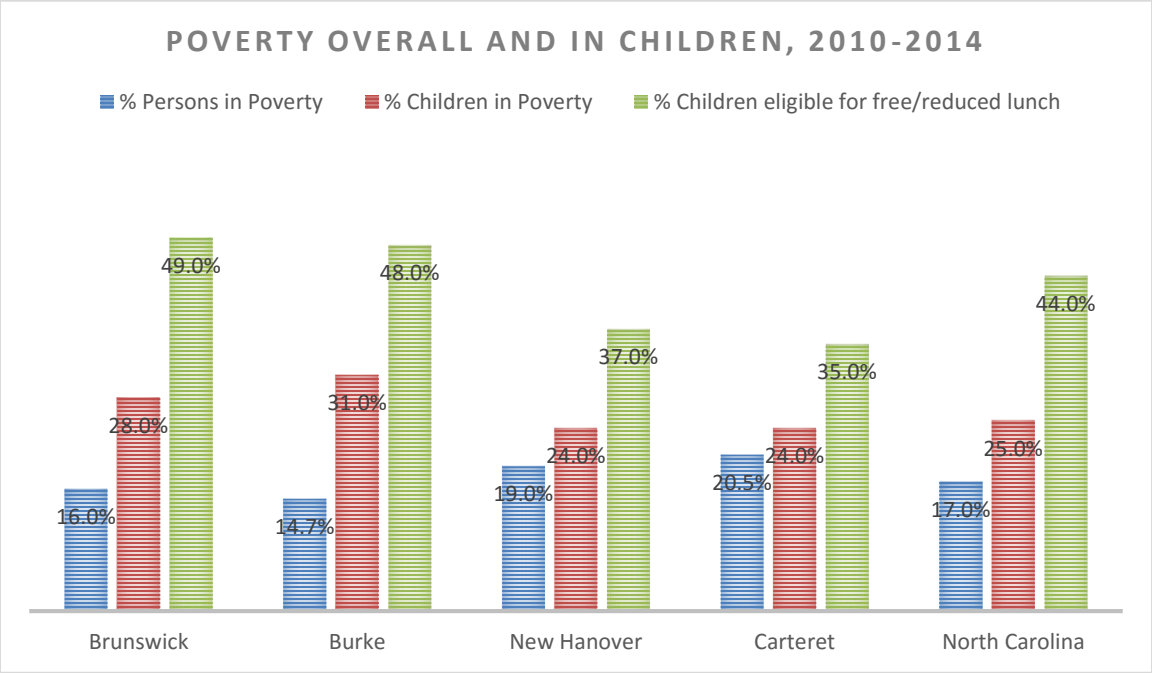
Brunswick County has an estimated 47,600 households with 2.3 persons on average, living in each. The population is relatively stable; 86% lived in the same house in the prior year; this rate is higher than in peer counties and in NC overall. The percentages of households whose occupants are not proficient English (1.4%) or in which a language other than English is spoken (6.3%) are lower than most of the peer counties and NC overall.

Households, Brunswick County, 2009-2013					
	Brunswick	**Burke**	**New Hanover**	**Carteret**	**NC**
Number of households	47,600	34,597	86,010	29,352	3,715,565
Persons per household (aver)	2.30	2.52	2.33	2.27	2.53
Persons age 1+ living in same house as 1 year ago (%),	86%	83.4%	80.2%	88.1%	84.7%
Households not proficient in English (%)	1.4%	2.7%	2.2%	2.0%	2.7%
Persons age 5+ living in home with language other than English spoken (%)	6.3%	8.6%	7.6%	5.0%	10.9%

Source US Census Bureau: State and County Quickfacts

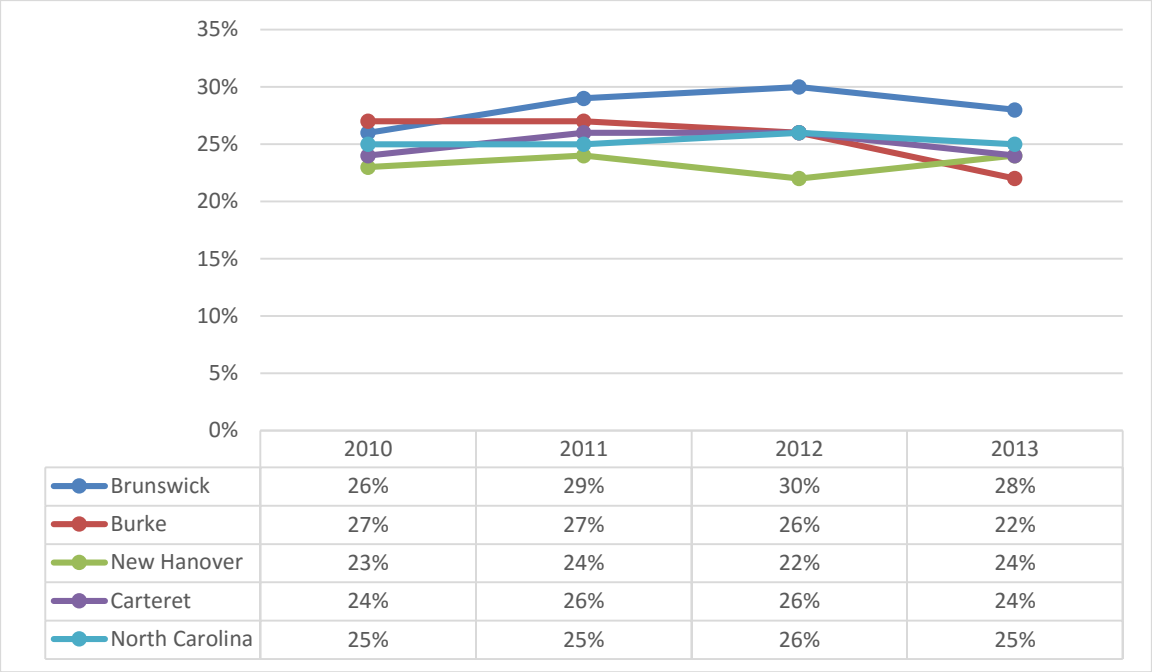
Poverty

Over sixteen percent (16.1%) of Brunswick County residents were defined as living in poverty during the period from 2010 through 2014, an increase compared to the 14.6% in 2009. Brunswick County's rate of poverty among children was 28%, and this is similar to its peer counties (which ranged from 24% to 31%) and NC overall (25%).



Source US Census Bureau: State and County Quickfacts; 2015 County Health Rankings

Children Living at or below the Federal Poverty Level (%), 2010-2013

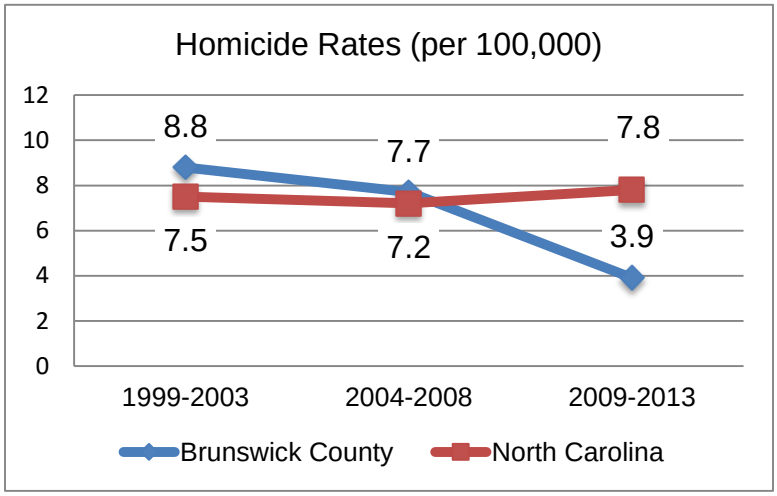


	2010	2011	2012	2013
Brunswick	26%	29%	30%	28%
Burke	27%	27%	26%	22%
New Hanover	23%	24%	22%	24%
Carteret	24%	26%	26%	24%
North Carolina	25%	25%	26%	25%

Source: Kids Count Data Center, Annie E. Casey Foundation

2.4 Crime / Homicide

The rate of homicide was 3.5 per 100,000 (average rate for 2010-2014), and this is similar to peer counties (corresponding rates in Burke: 4; New Hanover: 5.3; and Carteret: 3) and less than the homicide rate statewide (6 per 100,000). The homicide rate in Brunswick County has decreased steadily since 1999. Brunswick County currently meets the Healthy NC goal.



Healthy NC 2020 Goal

Reduce the homicide rate to **6.7** (per 100,000 population).

Source: State Center for Health Statistics, North Carolina

2.5 Education

Brunswick County has 19 public schools:

- 10 elementary
- 4 middle
- 3 high schools
- 1 early college high school
- 1 alternative learning program

These 19 schools serve 11,945 students and include 1,561 total employees, 763 certified teachers, and 106 national board certified teachers. Each day, 7,325 students are transported to schools by 130 buses traveling a total of 10,405 miles per day. From 2009-2013, 86.3% of residents were high school graduates or higher. The high school graduation rate system-wide was 79.2% for the 2014-2015 academic year.

Graduation Rates, 2014-2015	
Brunswick County Academy	66.7%
Early College High School	91.2%
North Brunswick High School	84.7%
South Brunswick High School	80.2%
West Brunswick High School	78.5%
System Graduation Rate	79.2%

Source: Brunswick County Schools

Among adults in Brunswick County age 25 and older, 25.1% have a bachelor's degree or higher (2009-2013). This percentage is lower than the statewide rate of 27.3% but similar to the peer county rates which range from 17.4% to 36.6%.

Brunswick Community College is the county's only college or university. It was established in 1979 and is a tax-supported, public, nonprofit school under the control of a board of trustees. Brunswick Community College offers a variety of educational programs including two-year associate degree programs, professional and technical programs, workforce development courses, and continuing education. In academic year 2012-2013, Brunswick Community College:

- Employed 149 full-time and 290 part-time faculty members
- Enrolled 2,037 students taking credit-bearing courses
- Enrolled 5,018 students taking non-credit bearing courses

Brunswick Community College students are approximately half male and half female; and of these, 75% were white, 20% were minorities, and 5% were unknown (BCC 2016). The students' average age was 37.1 years. After leaving Brunswick Community College, 70% of students remained in the Brunswick Community College service area; 15% of students settled outside the region but in North Carolina, and 15% settled outside the state.

3 Health Data Collection Process

In North Carolina, county health officials are required to evaluate both primary and secondary data for the community health assessment. The purpose of this evaluation is to assess health outcomes and determinants, reflect community perspectives, and identify community assets (Myers & Stoto, 2006, CDC 2013).

Primary Data Collection

According to guidance provided in the Community Health Assessment Guide (NCPH, 2014), either a community health opinion survey or small group discussions are required for the primary data collection aspect of the CHA. The CHA Advisory Committee decided to conduct both a Community Health Opinion Survey and small group discussions.

Community Health Opinion Survey - Methods

Prior to beginning the primary data collection phase, Brunswick County health officials explored the possibility of combining efforts with other local agencies with similar requirements to maximize resources and minimize duplication of effort and impact on the community (NC DPH Guidelines). In late 2015, Dosher Memorial Hospital (Southport, NC) launched a community health opinion survey as a component of their 2015 Community Health Needs Assessment (CHNA). Dosher agreed to share data from this effort with Brunswick County Health Services (BCHS) for their upcoming 2016 CHA. Therefore, BCHS used the same survey instrument as was used by Dosher to efficiently build upon their work (Appendix 1).

Using a stratified convenience sampling approach, a sample of the Brunswick County population was surveyed for opinions about the health status, resources, and needs in the county. The Dosher survey data was heavily weighted by Dosher's primary catchment area (Southport and surrounding areas), so the BCHS survey efforts focused on other areas of Brunswick County in an attempt to improve representativeness. In addition, BCHS conducted monthly preliminary analyses of participant demographics during the survey administration period to identify under-represented population segments in terms of age, race, gender, and zip code and intensify recruitment efforts in these strata.

Invitations to complete the survey were distributed widely throughout the community using a variety of mechanisms including print, online, and television media outlets; email lists of community members, homeowner associations, and employers; government agencies including the BCHS, the public school system, and the community college; and health care providers. Over 2,500 paper surveys were distributed around the community, facilitated largely by members of the CHA Advisory Committee, Work Group, and BCHS personnel.

The survey was available in paper and online formats and in English and Spanish. Dosher's survey was open from December 2014 through February 2015, and 619 individuals participated. BCHS's survey was open from June 2015 through November 2015 and collected an additional 786 responses, for a total of 1405 surveys.

Focus Groups and Listening Groups

Small group meetings were conducted to supplement the survey data, improve the diversity of the community members providing input, improve representativeness, and capture data related to health disparities. Dosher hosted two focus groups. BCHS hosted five listening groups, as described in the table below.

Small Group Meetings

Community (Date) [Host]	Type of Group/Venue (zip code)	Demographics
Southport (27Jan15) [Dosher]	New Hope Clinic, provides free health care for uninsured and low income (28461)	Gender: both; Age: varied; Race: varied Attendees described as: • Residents from Boiling Spring Lakes, Oak Island, St. James, Southport • New & long-term county residents • Retired county residents • Free clinic healthcare providers • Representatives from: Relay for Life; local assisted living facilities & nursing home; an addiction assistance ministry
Southport (30Jan15) [Dosher]	Dosher Memorial Hospital (28461)	
Leland (31Oct15) [BCHS]	Faith-based recreational event (28451)	Gender: men; Age: 18-35 Race: African American, Caucasian
Navassa (18Nov15) [BCHS]	Church gathering (28451)	Gender: both; Age: elderly Race: African American
Southport (02Nov15) [BCHS]	Met with work crew just after completion of work day (28451)	Gender: men; Age: 18-35 Race: African American, Caucasian
Ash (04Nov15) [BCHS] BCHS	Individuals who live & work in Ash area, met at a school (28420)	Gender: both; Age: varied Race: African American
Northwest (4Nov15) [BCHS]	Met at local church (28451)	Gender: both; Age: varied Race: African American

BCHS: Brunswick County Health Services

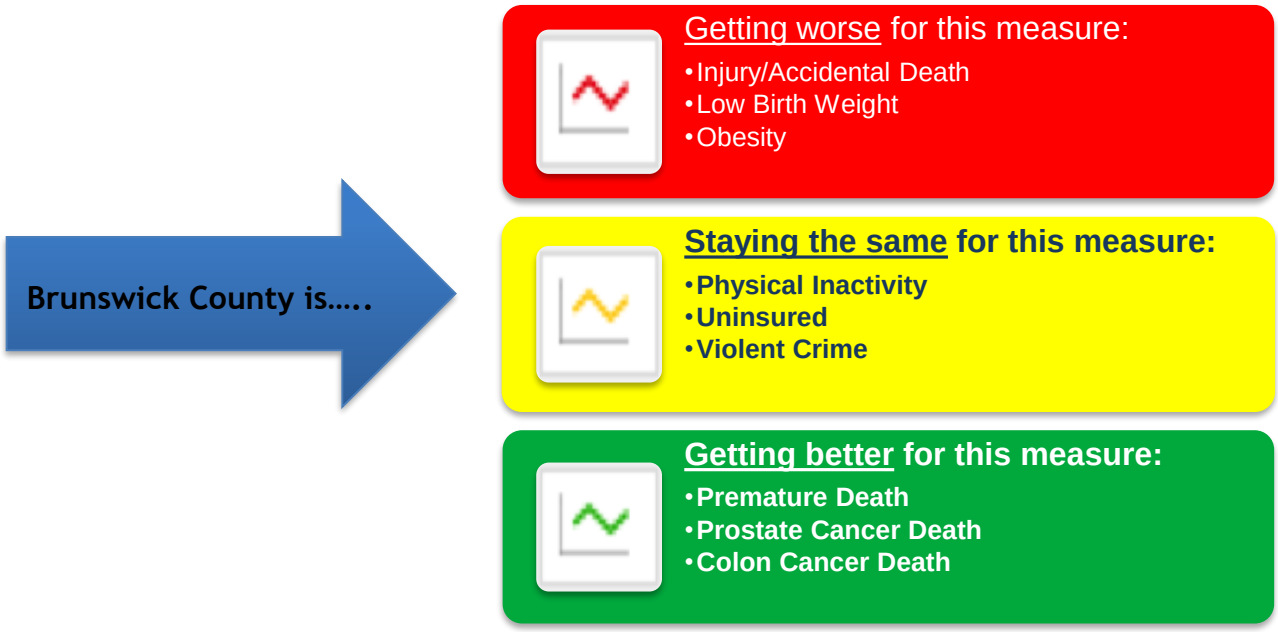
Secondary Data Collection

Statistics from secondary data can provide valuable insights into specific factors in the community that influence health and well-being. Several sources of secondary data are available from local, state, and national organizations and government agencies, including those focused on health, education, economics, environment, and social and behavioral factors. Much of the secondary data used in this report is provided by the NC State Center for Health Statistics (SCHS), the US Census Bureau, and Brunswick County agencies, organizations, and businesses.

For comparison purposes, secondary data statistics from Brunswick County are compared with North Carolina overall and North Carolina peer counties. Comparison with peer counties is a requirement from North Carolina Division of Public Health (NC DPH), unless a regional approach is involved. Brunswick County is among four counties in a peer group with Burke, New Hanover, and Carteret counties. Peer groups are based on several socio-demographic and populations parameters. Additional details are found in Appendix 3, Data Book 2.

4 CHA Findings

The previous section describes the methods used to collect data for the Brunswick County CHA. Primary data is collected from community members specifically for purposes of the current community health assessment. This was accomplished through a Community Health Opinion Survey and small group meetings. Secondary data includes information about the population, environment, and population health. This information is collected from local, state, and national sources. Detailed results from the primary and secondary data analyses can be found in the data books available in Appendix 2 (Data Book 1) and 3 (Data Book 2). This section highlights key findings from the primary and secondary data.



4.1 Life Expectancy

Leading Causes of Death

Cancer was the leading cause of death among Brunswick County residents in 2014 followed by diseases of the heart. These two leading causes account for 49% of all deaths in Brunswick County in 2014. Across the peer counties, the top 4 leading causes of death were the same (although ranked differently)—cancer, diseases of the heart, chronic lower respiratory diseases, and cerebrovascular diseases. When compared to North Carolina overall, the top 4 leading causes of death were not only identical to Brunswick County but were also ranked identically to Brunswick County.

Leading Causes of Death in Brunswick, 2014

Rank	Cause	Number	%
1	Cancer	350	27.1
2	Diseases of heart	283	21.9
3	Chronic lower respiratory diseases	92	7.1
4	Cerebrovascular diseases	55	4.3
5	All other unintentional injuries	45	3.5
6	Diabetes mellitus	42	3.3
7	Alzheimer's disease	41	3.2
8	Influenza and pneumonia	28	2.2
9	Nephritis, nephrotic syndrome and nephrosis	22	1.7
10	Intentional self-harm (suicide)	20	1.6
	All other causes (Residual)	**312**	**24.1**
Total Deaths -- All Causes		1290	100

Leading Causes of Death in North Carolina - All Counties, 2014

Rank	Cause	Number	%
1	Cancer	19,301	22.7
2	Diseases of heart	17,547	20.6
3	Chronic lower respiratory diseases	5,020	5.9
4	Cerebrovascular diseases	4,691	5.5
5	Alzheimer's disease	3,240	3.8
6	All other unintentional injuries	3,152	3.7
7	Diabetes mellitus	2,685	3.2
8	Influenza and pneumonia	1,869	2.2
9	Nephritis, nephrotic syndrome and nephrosis	1,790	2.1
10	Motor vehicle injuries	1,386	1.6
	All other causes (Residual)	24,531	28.7
Total Deaths -- All Causes		85,212	100

Source: State Center for Health Statistics, North Carolina

Premature Death

Premature death is the years of potential life lost before the age of 75. Every death before the age of 75 contributes to the total number of total years of potential life lost. If a person were to die at 25, that contributes 50 years of life lost to the county total, whereas as person who dies at 65 would contribute 10 years. The measure is presented as a rate per 100,000 population and is age adjusted. This is a measure of premature mortality which focuses on deaths that could have been prevented, and improving public health interventions to impact disease and death.

Between the years 2011-2013, Brunswick had 8,342 years of life lost, which is similar to that of the peer counties which ranged from 6,257 to 8,354 years. Brunswick is improving significantly in this area, which has been declining from 8,485 years in 2009-2013, and from 9,564 years in 2006-2007.

4.2 Maternal and Child Health

Infant Mortality

The infant mortality rate is often used as an indicator of a population's health and well-being. Factors affecting the health of the population overall are reflected in the death rate of the youngest segment of the population. The national infant mortality rate for 2013 was 5.96 per 1,000 live births. Nationally, marked differences are seen between African Americans and whites. The infant mortality rate among African Americans (11.11) is more than twice that of whites (5.06). This discrepancy has decreased since 2015, but remains problematic. The 2013 rates among Hispanics is 5.0; American Indian/Alaska Native is 7.61; and Asian/Pacific Islander is 4.07 (Mathews et al, 2015).

Annual infant mortality rates in Brunswick County varied greatly in the past few years, and this is largely the result of small numbers. Therefore, rates from multiple years should be used.

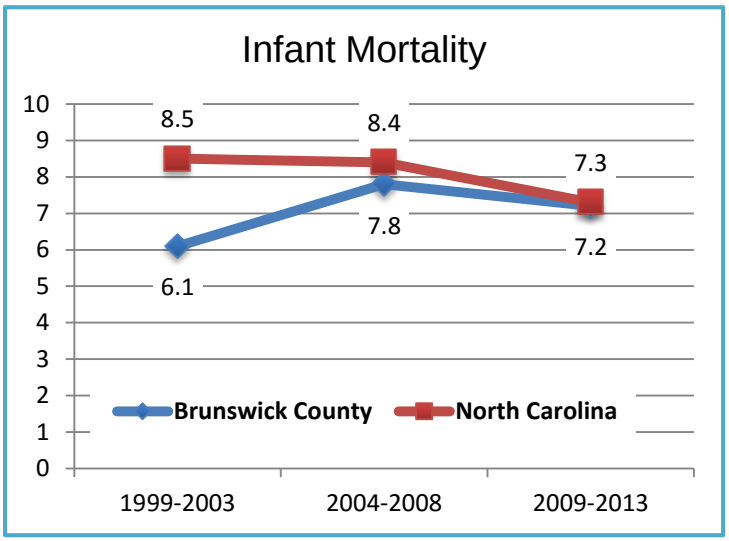
Annual Infant Mortality Rates (IMR), Brunswick County, 2012–2014 (per 1,000 live births)

Year	Infant deaths (total)	Annual IMR Overall	Annual IMR	
			African Americans	Whites
2012	10	9.7	23.4 (3 deaths)	8.8 (7 deaths)
2013	8	8.0	6.9 (1 death)	9.3 (7 deaths)
2014	4	3.6	7.6 (1 death)	3.5 (3 deaths)

Source: State Center for Health Statistics, North Carolina

In Brunswick County, from 2010 - 2014, there were a total of 33 infant deaths resulting in an *infant mortality rate* of 6.5 overall, and 9.2 African Americans and 6.8 in whites. Over time, the 4-year rate has ranged from 6.1 to 7.2. The 2010-2014 estimate of 6.5 is just above the Healthy NC 2020 goal of 6.3.

The 2010-2014 disparity ratio is 1.35, and this is the lowest ratio across peer counties (2.61 - 3.76) and NC overall (2.39). This ratio is well below the Healthy NC 2020 goal of 1.92.



Source: State Center for Health Statistics, North Carolina

Infant Mortality: Racial Disparities between Non-Hispanic Whites And African Americans 2010-2014

County of Residence	Infant Deaths		Births		Infant Mortality Rate*		Disparity Ratio
	White	African Amer.	White	African Amer.	White	African Amer.	
Brunswick	27	6	3,982	652	6.8	9.2	**1.35**
Burke	22	2	3,278	200	6.7	10.0	1.49
New Hanover	22	19	7,625	2,115	2.9	9.0	3.10
Carteret	20	2	2,577	187	7.8	10.7	1.37
NC	1,811	1,858	336,619	143,596	5.4	12.9	2.39

*Rate per 1,000 live births; annual rates for race & ethnicity are not included due to small numbers in each category.
Source: State Center for Health Statistics, North Carolina

Births

In 2014, there were 1,102 live infants born as Brunswick County residents. Of these, race was reported as 78.3% white; 11.9% African American; and 8.1% Hispanic.

Brunswick County Births, 2014

Race/ Ethnicity	All Births		Teen Births (15-19 yrs.)		Births from Unmarried Women	
	No. of Births	% of All Births (n=1102)	No. of Births	Percent, by Race/ Ethnicity	No. of Births	Percent, by Race/ Ethnicity
White, NH	863	78.3%	42	4.9%	305	35.3%
African American, NH	131	11.9%	16	12.2%	90	68.7%
Other, NH	13	1.2%	2	15.4%	5	38.5%
Hispanic	89	8.1%	9	10.1%	38	42.7%
Not Reported	6	0.5%	--			0.0%
All Births	1,102	100%	69	6.3%	438	39.7%

NH = Non-Hispanic
Source: State Center for Health Statistics, North Carolina

Teen Births

The overall percentage of teen births (women age 15-19) in Brunswick County in 2014 was 6.3%. Teen births were highest among African American (12.2%) and Hispanic (10.1%) women.

Low Birth Weight

From 2009-2013, the percentage of Brunswick County's live births that were below 2,500 grams (5 pounds, 8 ounces) at birth was 8.6%, lower than the statewide estimate of 9.0% and higher than the peer counties (which ranged from 7.3 to 8.1%). Among all Brunswick County infants born in 2014, 90 (8.2%) had low birth weight.

- 70 (6.4%) had *low birth weight* (1501-2500 grams), and
- 20 (1.8%) had *very low birth weight* (less than/equal 1,500 grams)

Prenatal Care

The American Congress of Obstetricians and Gynecologists (ACOG) Guidelines for Perinatal Care recommend that the prenatal care office visit begin no later than 8-10 weeks of pregnancy. In Brunswick County, 72% (790) of pregnant women received prenatal care in the 12 weeks (corresponding to the first trimester). Only 56% (50/89) of Hispanic women and only 63% (83/131) of African American women received prenatal care in the first trimester.

Pregnancy Risk Factors

Among all Brunswick County female residents giving birth in 2014, 63% had no reported pregnancy risk factors. Among the three large race/ethnicity groups, gestational diabetes ranged from 8% to 10% (highest in the Hispanic population); and gestational hypertension ranged from 7% to 9% (highest in white population).

Risk factors among pregnant women ending in live born infants, Brunswick County, 2014

Reported Risk Factors	All Women		White		African American		Hispanic	
	No.	% of All Births (n=1102)	No.	Percent, by Race/ Ethnicity	No.	Percent, by Race/ Ethnicity	No.	Percent, by Race/ Ethnicity
No risk factors reported	694	63%	541	63%	83	63%	57	64%
Pre-pregnancy diabetes	14	1%	7	1%	4	3%	3	3%
Gestational diabetes	84	8%	65	8%	9	7%	9	10%
Pre-pregnancy hypertension	26	2%	21	2%	5	4%	0	0%
Gestational hypertension	103	9%	85	10%	10	8%	6	7%
Previous C-section	157	14%	125	14%	16	12%	14	16%

NC SCHC Babybook, 2015

Smoking during Pregnancy

Smoking during pregnancy continues to be problematic in Brunswick County. The percentage of pregnant women who smoked during pregnancy (during 2011-2014) was 15.1%, which is not higher than the percentages in the peer counties (which ranged from 7.9% to 19.6%) but is higher than in NC overall (10.4%).

NC Residents where Mother Smoked During Pregnancy, 2011-2014

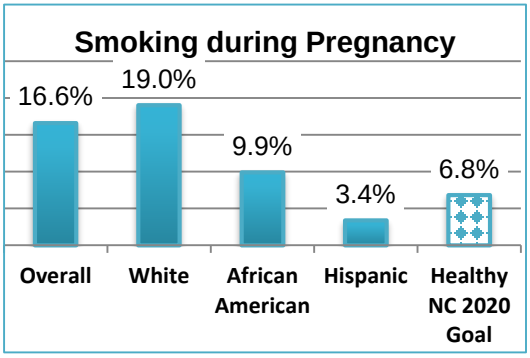
County	No.	Percent
Brunswick	631	15.1%
Burke	676	19.6%
New Hanover	714	7.9%
Carteret	458	18.5%
NC	50,024	10.4%

http://www.schs.state.nc.us/data/databook/CD7C%20Smoking.html

NC DHHS SCHS; Key Health Indicators

In 2014, the overall rate of smoking during pregnancy was 16.6% (183/1102), well above the Healthy NC 2020 Goal of 6.8%.

An evaluation of the 2014 rates by race/ethnicity indicates that smoking during pregnancy is highest among white women (19%) followed by African American women (9.9%).



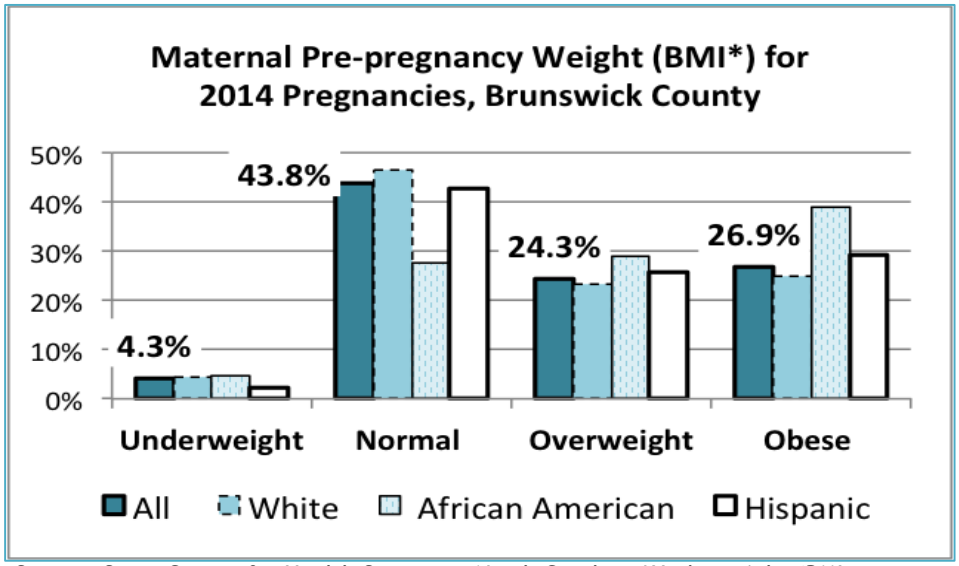
Source: State Center for Health Statistics, North Carolina

Healthy NC 2020 Goals

1. Reduce the infant mortality racial disparity between whites and African Americans to 1.92
2. Reduce the infant mortality rate (per 1,000 live births) to 6.3
3. Reduce the percentage of women who smoke during pregnancy to 6.8%

Obesity and Overweight during Pregnancy

In Brunswick County, 26.9% of women were considered "obese" just prior to pregnancy (pre-pregnancy weight) in 2014, and 24.3% were "overweight", as measured by body mass index (BMI). BMI is a measurement used to estimate body fat based on height and weight. Thus, over one-half were either overweight or obese.



Source: State Center for Health Statistics, North Carolina **Underweight (BMI <18.5); Normal (BMI 18.5-24.9); Overweight (BMI 25-29.9); Obese (BMI 30+)*

Why is pre-pregnancy weight important?

Recent studies have shown that the heavier a woman is before she becomes pregnant, the greater her risk of pregnancy complications. Obesity during pregnancy is associated with increased use of health care services, and longer hospital stays for delivery. Overweight and obese women who lose weight before pregnancy are likely to have healthier pregnancies (CDC, 2015).

4.3 Cancer

Cancer death rates (also referred to as mortality rates) and incidence rates are provided in the following two tables, for selected sites. Cancer death rates reflect the number of deaths from cancer during that time period. Brunswick County's death rates are not markedly different from peer counties with the exception of "lung/bronchial" cancer and "all cancers". ***Cancer incidence*** describes the number of new cases during the specified time period, who have not died from the cancer.

Age-Adjusted Cancer Mortality Rates For Selected Sites Per 100,000 Population, 2009-2013

	Colon/ Rectum		Lung/ Bronchus		Female Breast		Prostate		All Cancers	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Brunswick	95	11.5	498	56.1	82	19.6	68	19.8	1,440	167.9
Burke	95	16.0	368	61.6	65	19.9	34	15.2	1,106	188.5
New Hanover	145	12.3	577	48.9	119	17.6	109	24.3	1,938	164.9
Carteret	72	14.8	316	63.2	41	15.5	35	16.8	950	192.1
NC	7,424	14.3	27,357	51.8	6,361	21.7	4,287	22.1	90,717	173.5

Source: NC SCHS Statistics and Reports

Age-Adjusted Cancer Incidence Rates For Selected Sites Per 100,000 Population, 2009-2013

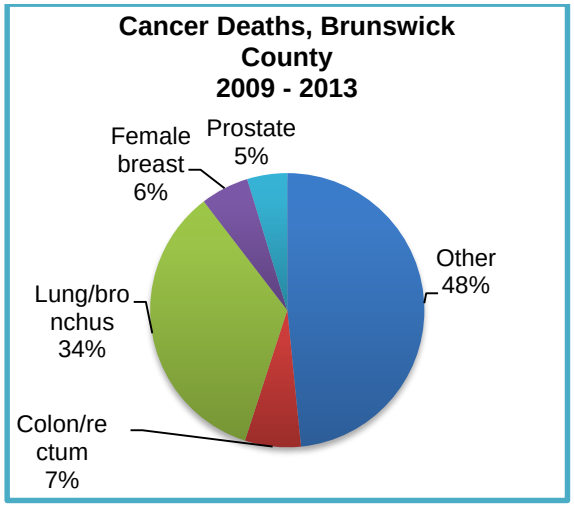
	Colon/ Rectum		Lung/ Bronchus		Female Breast		Prostate		All Cancers	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Brunswick	278	34.1	589	67.5	590	136.4	476	103.3	3,652	434.4
Burke	298	52.0	498	83.7	506	164.5	299	106.7	3,056	532.3
New Hanover	374	32.9	775	68.2	927	153.1	581	105.6	5,258	466.5
Carteret	206	42.1	383	76.4	370	149.4	268	105.2	2474	504.5
NC	20,343	39.8	37,215	71.9	43,740	157.0	34,064	139.4	252,620	488.9

Source: NC SCHS Statistics and Reports

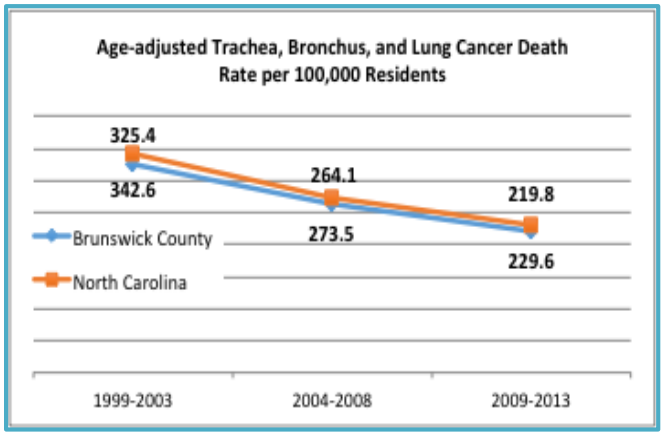
The Brunswick County statistics for cancer incidence show encouraging trends. Brunswick County has the lowest incidence rates for female breast cancer, prostate cancer, and all cancers, compared to the peer counties and NC overall. Lung cancer is no longer higher than all peer counties when considering incidence rather than mortality (deaths). Of all 1,440 cancer deaths reported in Brunswick County from 2009 through 2013, 34% (498/1440) were cancer of the lung/bronchus and 48% were "other". Among all new cases of cancer in Brunswick County 2009-2013, lung/bronchus cancer represents only 16% (589/3652) compared to 34% of lung/bronchus cancer deaths. This trend may suggest that lung/bronchus cancer rate is decreasing overall and/or that people with lung cancer are living longer.

Lung Cancer

The mortality rate for lung cancer (trachea, bronchus, and lung cancer) has been gradually declining over the years, yet remains above the rate for NC overall. The Brunswick County mortality rate is slightly higher than the previous time period (56.5 vs. 55.5), up an additional 1 case per 100,000 (age-adjusted). Brunswick County will continue to monitor this trend. Lung cancer incidence rates (new cases) declined from 75.4 per 100,000 (2005-2009) to 69.7 per 100,000 (2009-2013).



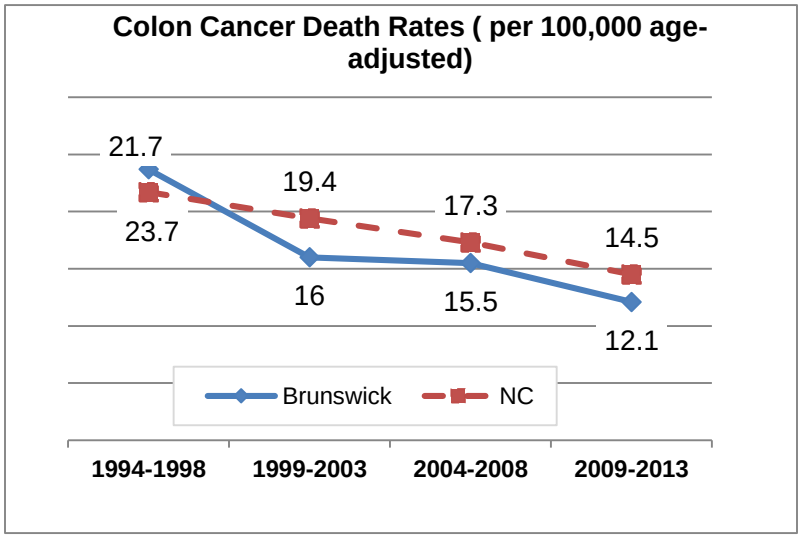
Source: NC SCHS Statistics and Reports



Source: NC SCHS Statistics and Reports

Colon Cancer

Progress is seen in the death rates for colon cancer (cancer of the rectum, and anus) in Brunswick County. The most current rate (2010-2014) has significantly decreased from 1995-1999, decreasing from 19.5 to 12.4 per 100,000. Compared to peer counties and NC overall, Brunswick County rates are among the lowest.



Source: NC SCHS Statistics and Reports

Colon Cancer Rates (age-adjusted), 2010-2014

County	Mortality (Deaths)	Incidence
Brunswick	12.4	31.9
Burke	14.1	52.0
New Hanover	12.3	32.9
Carteret	13.8	42.1
North Carolina	14.1	39.8

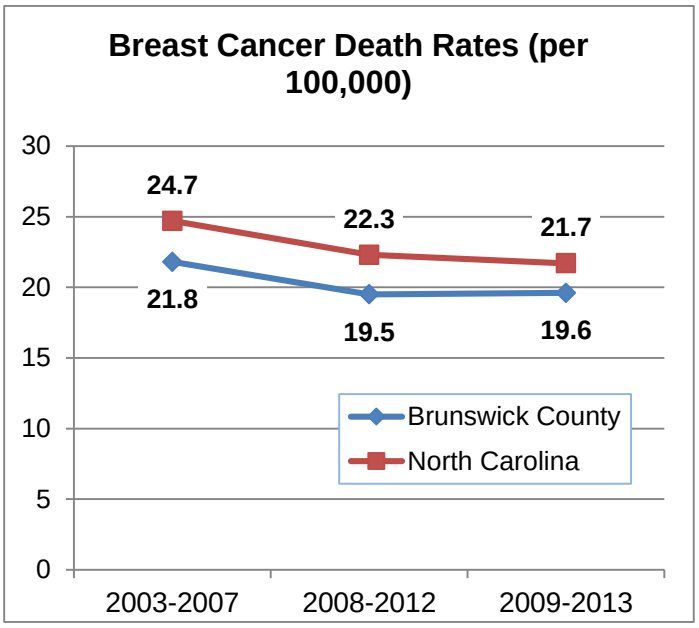
Source: NC SCHS Statistics and Reports

Healthy NC 2020 Goal
Reduce the colorectal cancer mortality rate (per 100,000 population) to **10.1**

Breast Cancer

Brunswick County's breast cancer death rate (19.6 per 100,000) is similar to peer counties (range: 15.5 - 19.9) and lower than the state overall (21.7). Brunswick county's breast cancer death rates have decreased over time: 21.8 per 100,000 (2003-2007) to 19.6 per 100,000 (2009-2013).

Brunswick County has the lowest breast cancer incidence rate (136.4 per 100,000) among peer counties (range: 149.4 – 1694.5) and the state overall (157.0).



Source: NC SCHS Statistics and Reports

4.4 Chronic Diseases (other than Cancer)

Cardiovascular Disease, Heart Disease, and Stroke

The death rates for cardiovascular disease, heart disease, and cerebrovascular disease (stroke) have all declined in Brunswick County since 1999-2003.

The death rates for cardiovascular disease and heart disease closely mirror the statewide rates. Although improvements have been made, the most current rate of cardiovascular disease (219.8 per 100,000) is well above the Healthy NC 2020 goal of 161.5, which proves that this must remain a focus for the country.

Cardiovascular Disease Death Rates per 100,000 (age-adjusted)

	Brunswick County	North Carolina
1999-2003	325.4	342.6
2004-2008	264.1	273.5
2009-2013	219.8	229.6
Source: NC SCHS Statistics and Reports		

Healthy NC 2020 Goals
reduce the cardiovascular disease mortality rate (per 100,000 population) to **161.5**

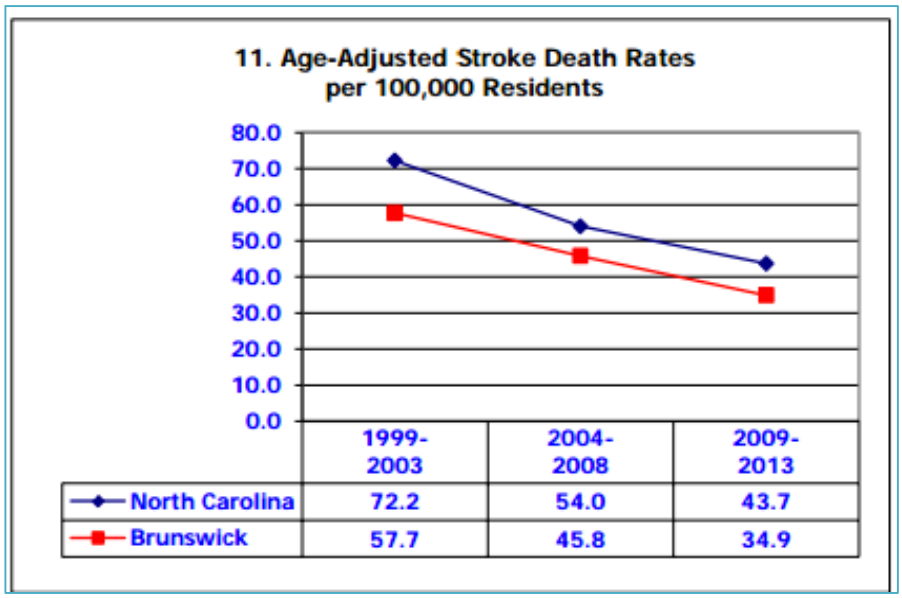
Hospitalizations for Cardiovascular Disease, Brunswick County Residents, 2014

- 2,278 hospitalizations (includes heart disease and cerebrovascular disease (e.g., stroke)
- Average hospital stay: 4.3 days
- Total charges: over $ 91 million
- Average cost per day: $9,409
- Average cost per case: $40,059

Heart Disease Death Rates per 100,000 (age-adjusted)

	Brunswick County	North Carolina
1999-2003	240.2	247.1
2004-2008	196.3	200.3
2009-2013	171.2	170.2

Source: NC SCHS Statistics and Reports



Source: NC SCHS Statistics and Reports

Diabetes

In 2012, 11.4% of Brunswick County residents had a diagnosis of diabetes, which is well above the Healthy NC 2020 goal of 8.6% but similar to peer counties (which ranged from 8.4% to 12.8%).

Healthy NC 2020

Decrease the percentage of adults with diabetes to **8.6%**

When asked, in the Community Health Opinion Survey, "*What health screenings or education/ information services are needed in your community?*" 55% responded with "Cholesterol/Blood Pressure/ Diabetes."

Hospitalizations for Diabetes
Brunswick County Residents, 2014

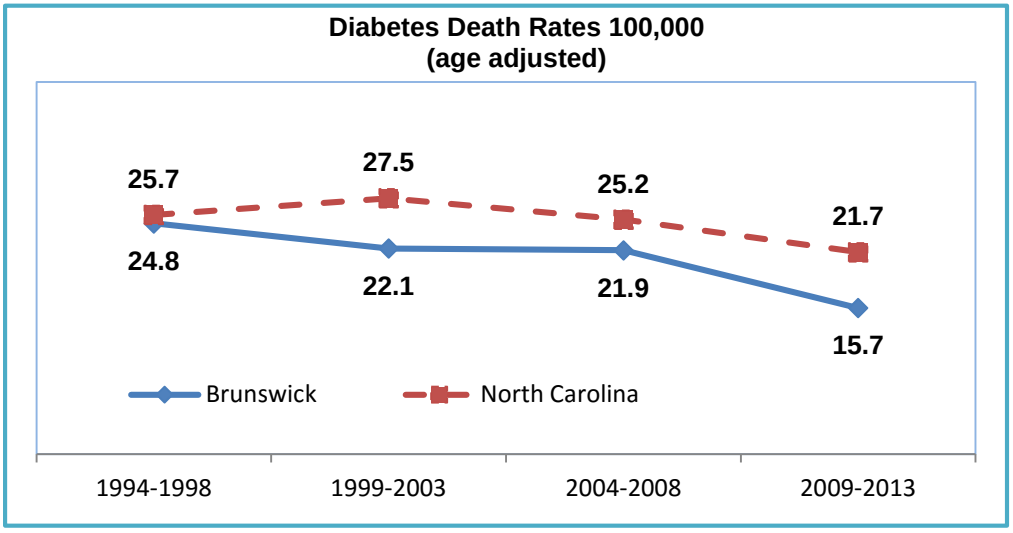
- 166 hospitalizations
- Average hospital stay: 4.3 days
- Total charges: over $3.2 million
- Average cost per day: $4,573
- Average cost per case: $19,558

Diabetes 2009-2013	No. Deaths	Age-Adjusted Death Rate
Brunswick	123	15.7
Burke	134	22.9
New Hanover	190	16.1
Carteret	77	15.6
NC	11,220	21.7

Source: NC SCHS. Trends in Key Health Indicators.

Diabetes deaths. In 2014, there were 42 deaths from diabetes in Brunswick County and 25 deaths in 2013. It was the county's 6th leading cause of death and the 7th in North Carolina overall.

For the years 2009 through 2013, the county's diabetes death rate was 15.7 per 100,000, similar to peer counties which ranged from 15.6 to 22.9, and below the statewide rate of 21.7. Since the time period of 1994 through 1998, diabetes deaths have decreased from 24.8 to 15.7 per 100,000.

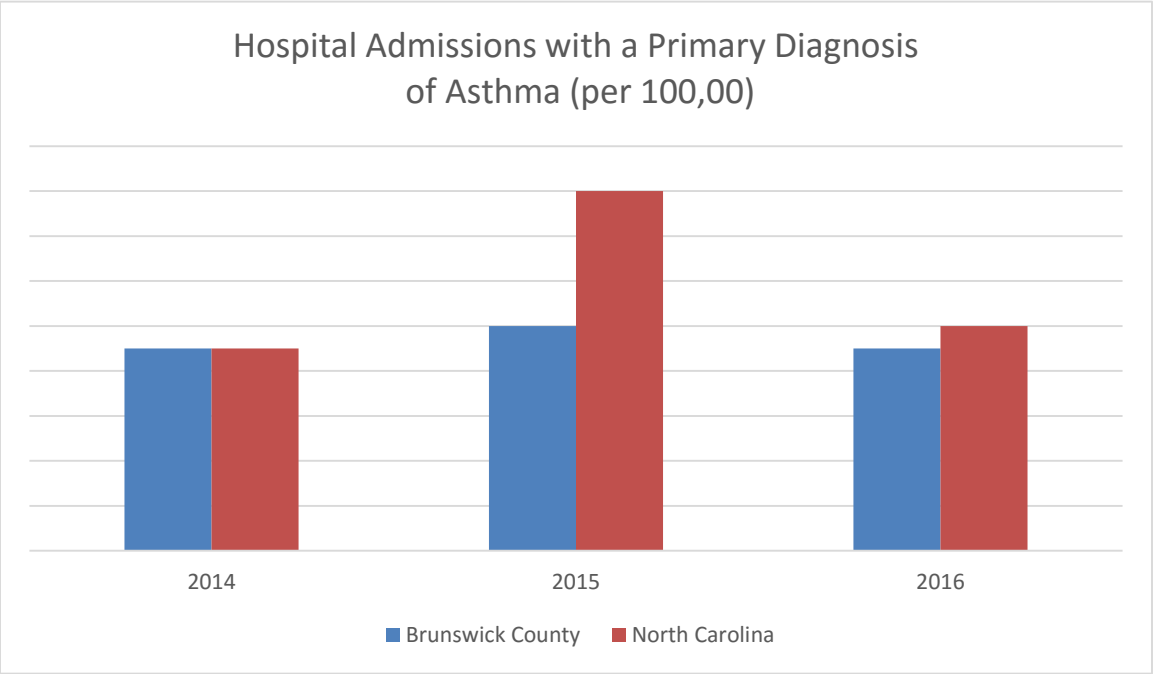


Source: NC SCHS Statistics and Reports

Asthma

Rates for asthma-related hospitalization are similar to the statewide rates for 2014. For all ages, the Brunswick County rate is 85.8 per 100,000 (102 individuals) and 146.9 (25 individuals) for children 0 to 14 years of age.

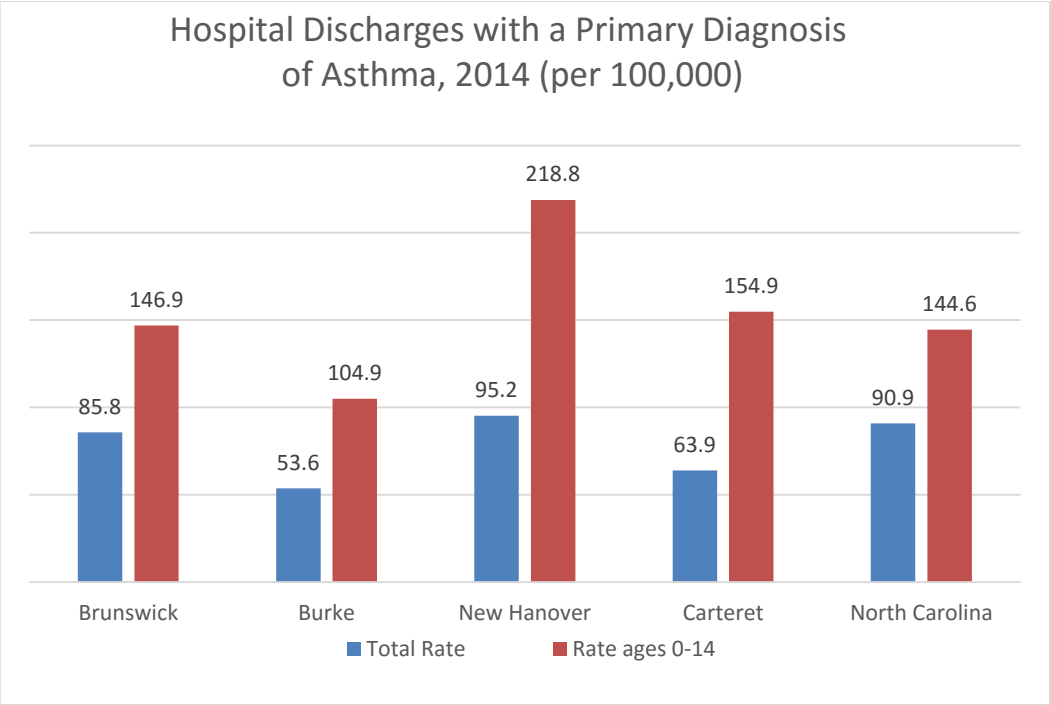
Asthma hospitalizations have decreased steadily for "all ages" and for children ages 0-14, an initial decrease was seen with a subsequent leveling off. In both situations, the rate was lower the statewide rate.



Hospitalizations for Asthma. Brunswick County Residents, 2014

- 102 hospitalizations
- Average hospital stay: 3.7 days
- Total charges: $1.4 million
- Average cost per day: $3,713
- Average cost per case: $13,725

Source: North Carolina Center for Health Statistics. Vital Statistics. Source: North Carolina Center for Health Statistics. Vital Statistics



Source: North Carolina Center for Health Statistics. Vital Statistics.

Mental Health

Studies have shown that mental illness, particularly depressive disorders, is strongly linked to the occurrence, successful treatment, and course of many chronic diseases including diabetes, cancer, cardiovascular disease, asthma, and obesity (Chapman et al, 2005, CDC 2015). Many risk behaviors for chronic disease; such as physical inactivity, smoking, excessive drinking, and insufficient sleep are also influenced by mental illness (Chapman et al, 2005).

Healthy NC 2020 Goals
Mental Health

1. Reduce the suicide rate (per 100,000 population) to **8.32.**
2. Decrease the average number of poor mental health days among adults in the past 30 days to **2.8.**
3. Reduce the rate of mental health-related visits to emergency departments (per 10,000 population) to **82.8.**

Suicide

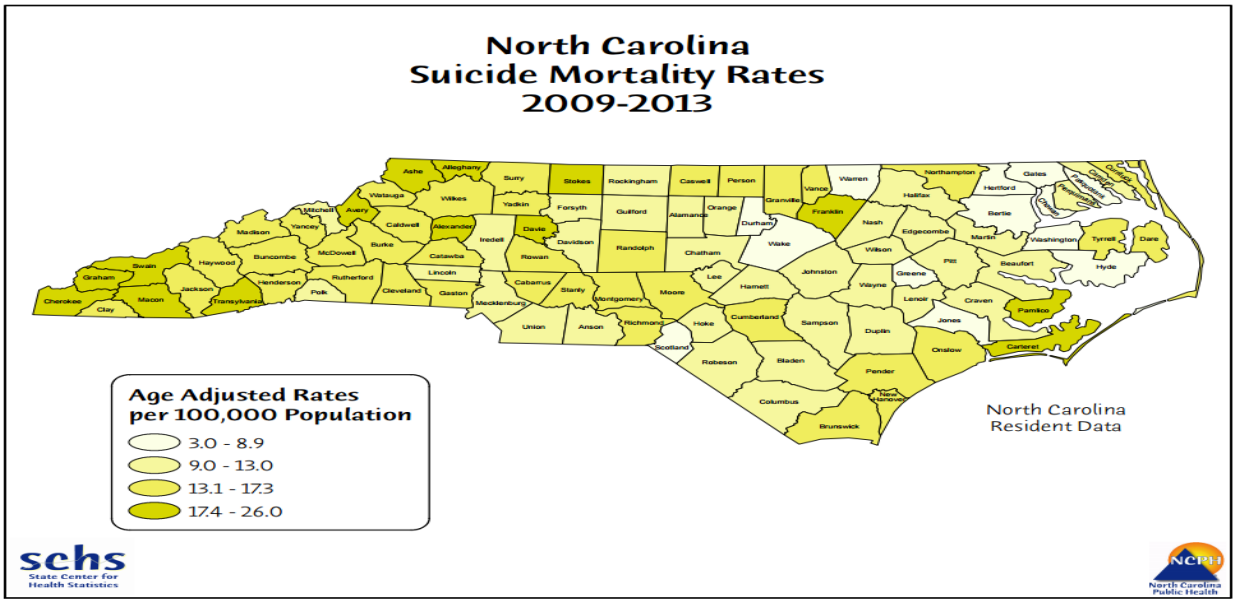
Suicide was the 10th leading cause of death in Brunswick County in 2014. Twenty suicide deaths were reported, representing 1.6% of all Brunswick County deaths in 2014. Brunswick County's age-adjusted suicide rate was 14.7 per 100,000 population, which is almost double the Healthy NC 2020 goal of 8.32. Suicide rates in Brunswick County were similar to peer counties (range, 14.3 to 17.8) and the statewide rate (12.4) for 2010-2014. From 2010-2014, 92 suicide deaths occurred in Brunswick County.

Suicide Mortality Rates, 2010-2014 (age adjusted)

	No. Deaths 2014	No. Deaths 2010-2014	Age-Adjusted Death Rate* 2010-2014
Brunswick	20	92	14.7
Burke	14	78	15.9
New Hanover	40	155	14.3
Carteret	14	67	17.8
NC	1,347	6,256	12.4

***Per 100,000 population* Source: NC SCHS Statistics and Reports**

Suicide in the Region. When examining the southeastern NC region on the map below, it appears that all of the adjoining coastal counties of Brunswick, New Hanover, Pender, and Onslow have a higher suicide rate than the adjoining inland counties.



North Carolina State Center for Health Statistics. Vital Statistics. (http://www.schs.state.nc.us/data/hsa/vital.htm)

Poor Mental Health Days

The average number of "poor mental health days" for Brunswick County over the period from 2012 through 2014 was 3.5 days, and this was similar in peer counties (range: 3.1 – 4.8 days) and NC overall (3.4 days). The Healthy NC 2020 goal is 2.8 days. "Poor mental health days" is a health-related quality of life measurement obtained through the Behavioral Risk Factor Surveillance System survey, a national survey. The metric is based on the survey question: *"Thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?"*

Mental Health Providers Access

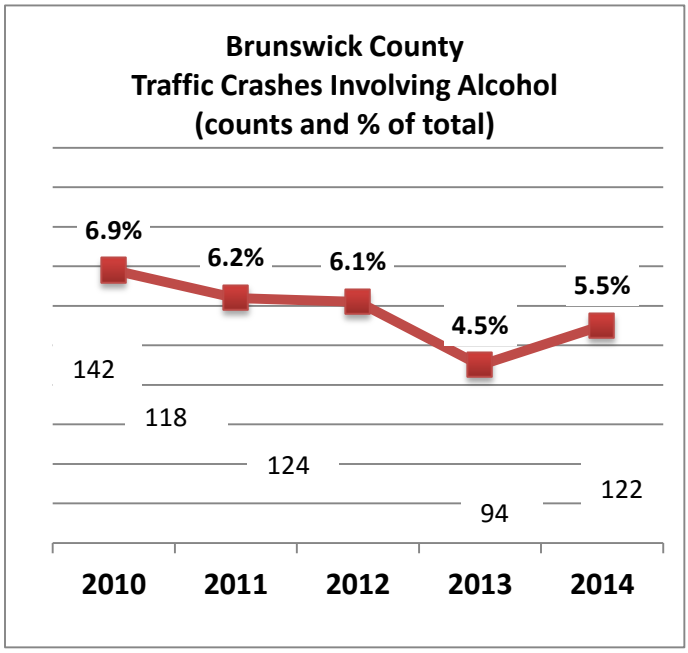
The measurement, "Mental Health Providers", is a ratio of the county population to the number of mental health providers including psychiatrists, psychologists, licensed clinical social workers, counselors, marriage and family therapists and advanced practice nurses specializing in mental health care. In 2014, there were an estimated 1,267 residents for every mental health provider in Brunswick County. This (1267:1) is considerably worse than the ratios for peer counties (275:1-835:1) and the statewide ratio of 472:1. The peer county rates were: Burke 454:1, New Hanover 275:1; Carteret 835:1.

4.5 Substance Abuse

Alcohol

Traffic Crashes Involving Alcohol. During a 5-year period (2010 through 2014), 600 traffic crashes occurred in Brunswick County involving alcohol. This represents 5.8% of the 10,338 traffic crashes during that time period. Since 2010, traffic crashes involving alcohol have decreased in Brunswick County from 6.8% in 2010 to 5.5% in 2014. These rates compare to the statewide rates of 5% (2010-2014).

The percentage of alcohol-related driving deaths in Brunswick County from 2009-2013 was 38%, much higher than the rates in peer counties (which ranged from 29% to 35%) and in NC overall (33%). This is significant since the number of crashes are decreasing but the number of deaths are increasing.



Source: NC SCHS Statistics and Reports

Healthy NC 2020 Goal
Reduce the percentage of traffic crashes that are alcohol-related to 4.7%

Excessive Drinking. Fifteen percent of adults in Brunswick County reported binge or heavy drinking during the 2006 – 2012 time period. This is consistent with rates in the peer counties and NC overall.

Drug Abuse

Controlled substances were dispensed in Brunswick County in 2014 at a rate of 263.2 prescriptions per 200 residents, exceeding the statewide rate of 201 per 200 residents.

Data Source: CSRS registration data (multiple years), Division of Mental Health, Developmental Disability and Substance Abuse Services

Data Analyses: Injury Epidemiology & Surveillance Unit, NC Injury and Violence Prevention Branch

Opioids were dispensed in 2014 at a rate of 109.1 prescriptions per 100 residents, exceeding the statewide rate of 79.7.

Data Source: CSRS registration data (multiple years), Division of Mental Health, Developmental Disability and Substance Abuse Services

Data Analyses: Injury Epidemiology & Surveillance Unit, NC Injury and Violence Prevention Branch

Law Enforcement Departments Carrying Naloxone in Brunswick County:

Brunswick County Sheriff's Office - began 12/15

Boiling Spring Lakes Police Department - began 2/16

Caswell Beach Police Department - began 3/16

Leland Police Department - began 3/16

Source: North Carolina Harm Reduction Coalition

In an effort to address the substance abuse problem within the county, many agencies have made targeted efforts to address the problem. The sheriff's department has had a series of town hall meetings across the county to discuss

crime, safety, and the growing addiction problem within the county. The Partnership for Success coalition was established to reduce overdoses through the public health prevention model. The goals of the collation are to reduce supplies of unneeded medication, provide community based prevention education, educate providers about safe prescribing practices, and to get individuals into drug treatment when needed. This coalition was formed after receiving a grant written by Coastal Horizons to address the increasing problems within the county. Coastal Horizons, which is the local critical access behavioral health agency, provide substance abuse and mental health services, crisis intervention, family preservation, and criminal justice services.

Secure drop boxes for unused medications have been established had several locations throughout the county, including the Brunswick County Sheriff's Office in Bolivia, the Brunswick County Sheriff's Office satellite location in Calabash, Brunswick County Sheriff's Office satellite location in Leland, Boiling Spring Lakes Police Department, Ocean Isle Beach Police Department, and the Leland Police Department. Dosher Hospital also has a community medication collection which is known as Operation Medicine Cabinet and involves Brunswick County Sheriff's Office, Southport Police Department, and the Drug Enforcement Agency.

The 911 Good Samaritan and Naloxone Access Law For Overdoses that passed April 9th, 2013 states that persons who seek medical assistance for someone experiencing a drug overdose cannot be prosecuted for possession of small amounts of drugs, possession of drug paraphernalia, or underage drinking if evidence for the charge was obtained as a result of the person seeking help. The victim is protected from these charges as well. As of August 1, 2015, a person who seeks medical assistance for someone experiencing a drug overdose cannot be considered in violation of a condition of parole, probation, or post-release, even if that person was arrested. The victim is also protected. Also, the caller must provide his/her name to 911 or law enforcement to qualify for the immunity. Medical providers who prescribe naloxone, including to third parties, are immune from civil or criminal charges as long as they act in good faith. This immunity also extends to pharmacists who dispense naloxone.

The North Carolina Harm Reduction Coalition (NCHRC) works with all of these agencies to provide support, and is able to provide naloxone to our law enforcement agencies, Coastal Horizons for clients undergoing treatment, and those in the community. As a result of these efforts, NCHRC has documented 35 reversals from naloxone that was issued in Brunswick County from August 1, 2013 to March 14, 2016.

Unintentional Poisoning

Unintentional poisoning, commonly referred to as "overdose", is a poisoning in which the individual exposed to the substance is not attempting to cause harm to him/her or others (CDC WISCARS, 2010).

Emergency Department Visits for Unintentional Medication & Drug Overdose Brunswick County Residents, 2014

Top 6 Reported Substances:

- Benzodiazepine-based tranquilizers
- Other opiates and related narcotics
- Unspecified drug
- Other specified drug
- Unspecified sedative or hypnotic
- Heroin

In North Carolina, most unintentional poisoning (90%) involves abuse or misuse of medications (prescription or over-the-counter) or illicit drugs (such as heroin). The remaining 10% involves other toxins or chemicals, such as exhaust fumes and gases, pesticides, acids, organic solvents, and petroleum products. (CDC WISCARS, 2010; Austin and Finkbeiner, 2013). Opioid analgesic deaths involving medications such as methadone, oxycodone, and hydrocodone have increased significantly in North Carolina (Austin and Finkbeiner, 2013).

Deaths, Hospitalizations, & Emergency Department Visits for Unintentional Medication & Drug Overdose

	No.	Brunswick*	NC*
Deaths, 2014	20	**16.8**	9.7
Deaths, Age: 12-25 years, 2014	1	--	--
Hospitalization, 2013	60	**57.6**	41.1
ED Visits, 2013	121	**104.9**	72
ED Visits, Age 12-25 years, 2013	17	**114.1**	60.9

*Rate per 100,000 residents ED=Emergency departments

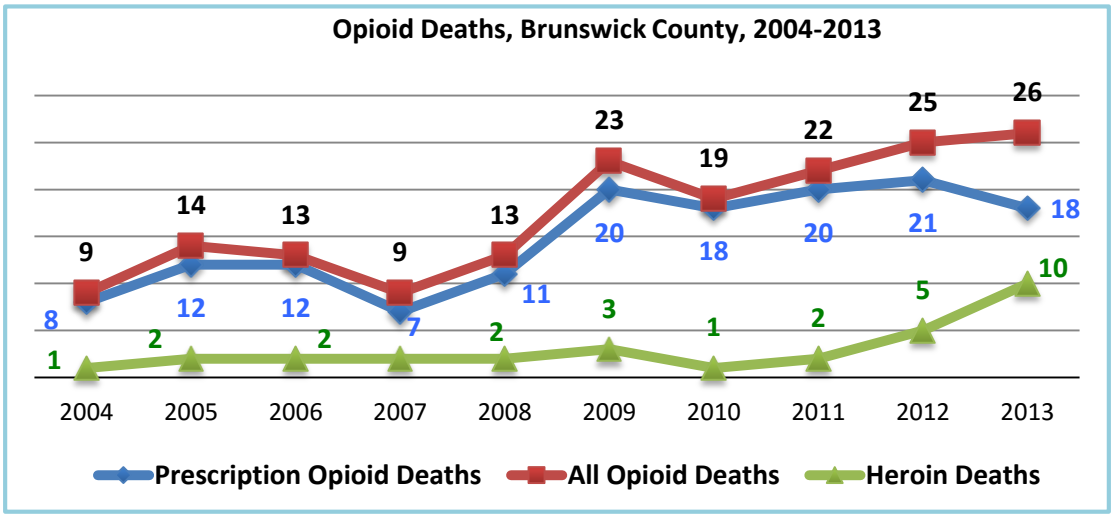
Source: NC Detect, vital data.

Drug Poisoning Deaths

The rate of drug poisoning deaths from 2008 through 2012 was 24.6 per 100,000; this rate exceeds the rate in all peer counties, (which ranged from 16.3 to 23.2) and in NC overall (12 per 100,000). Across NC, this rate ranges from 6 to 34 per 100,000.

In the Community Health Opinion Survey, responses to the following three questions addressed substance abuse:

1. In your opinion, what is the biggest health issue of concern in your community? Drug/Alcohol Abuse (19%) was the second most frequently reported concern.
2. *"What does your community need to improve the health of your family, friends, and neighbors?"* Mental Health Services was reported by 29%, and Substance Abuse Rehabilitation Services by 23%.
3. *"What health screenings or education/information services are needed in your community?"* Mental Health (including depression/anxiety) was reported by 44% and Substance Abuse by 42%.



Source: North Carolina State Center for Health Statistics. Vital Data.

4.6 Injury Deaths

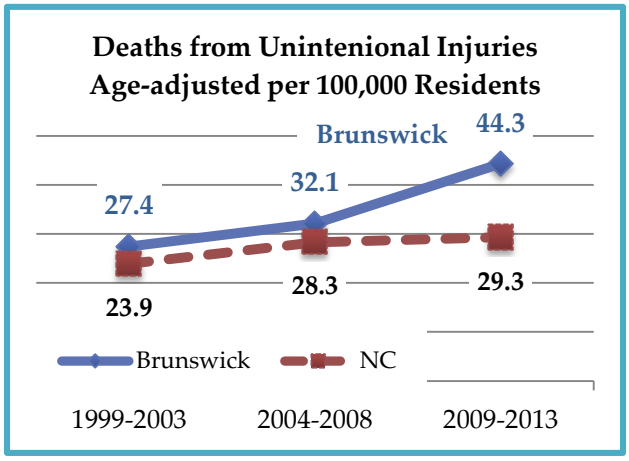
Nationally, injuries are one of the leading causes of death; unintentional injuries were the 5th leading cause and intentional injuries was the 10th leading cause of death in 2010 (CDC, 2013a). Intentional injuries include: suicide firearm, homicide firearm, and suicide suffocation. Unintentional injuries deaths were primarily motor vehicle crashes, poisoning, and falls. Unintentional injuries are a substantial contributor to premature deaths. Deaths from unintentional injury are more likely to occur in young people (CDC, 2013b). Unintentional injury was *the leading cause of death* in the following age groups nationally (in years):

- 1-4 years
- 5-9 years
- 10-14 years
- 15-24 years
- 25-34 years
- 35-44 years

The unintentional injury death rate includes all unintentional deaths resulting from an injury with the exception of motor vehicle accidents, and is expressed per 100,000 residents. The Brunswick County injury death rate due was 44.3 per 100,000 during the period from 2009-2013; this rate is much higher than the rates in peer counties (which ranged from 31 to 42) and in NC overall (29).

All Other Injuries/Unintentional Injury (excluding MVA Deaths)

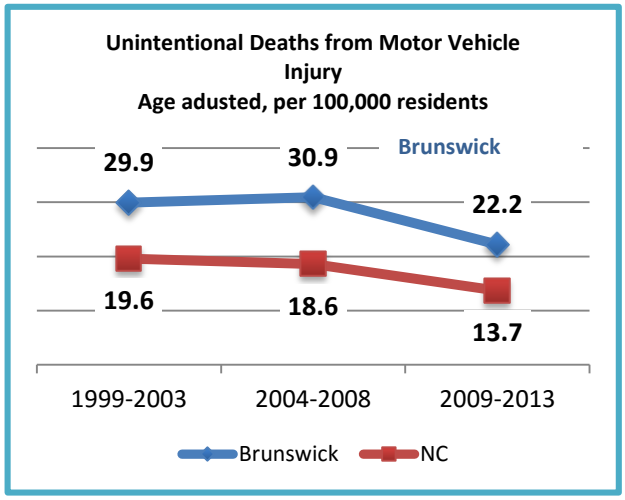
Deaths from *"all other unintentional injuries" (excluding motor vehicle accidents)* was the 5th leading cause of death in Brunswick County in 2014, representing 3.5% of all deaths and 45 people. This is the 6th leading cause of death statewide. The Brunswick County rate has increased considerably over time, from 27.4 to 44.3 per 100,000.



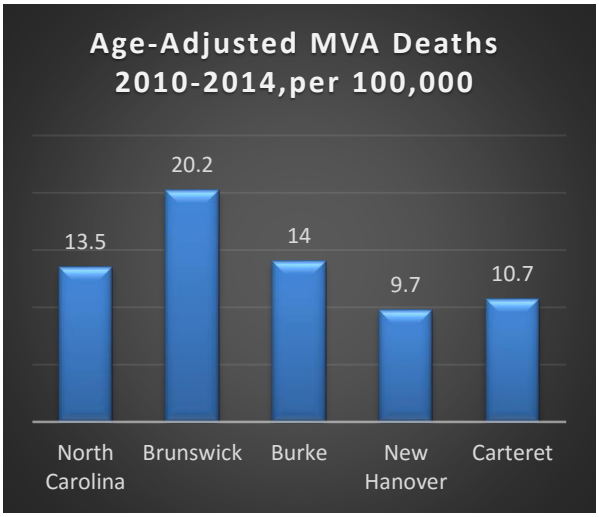
NC SCHS: Key Indicators

Deaths due to Injury from Motor Vehicle Accidents

Although the death rate from motor vehicle accidents (MVA) has declined in Brunswick County (22.2 per 100,000), it remains well above the rates for the state overall and peer counties. The MVA death rate has been consistently higher than the statewide rate for the about 15 years.



NC SCHS: Key indicators



Source: NC SCHS.
http://www.schs.state.nc.us/data/vital/lcd/2014/pdf/Vol2_2014_PRT.pdf

Deaths from MVA Injury, 2010-2014

	No. Deaths 2014	No. Deaths 2010-2014	Age-Adjusted Death Rate, 2010-2014
Brunswick	18	103	**20.2**
Burke	14	63	14.0
New Hanover	23	106	9.7
Carteret	3	37	10.7
NC	1,386	6,679	13.5

Source: NC SCHS.
http://www.schs.state.nc.us/data/vital/lcd/2014/pdf/Vol2_2014_PRT.pdf

Regional Pattern

Several neighboring counties also have high rates of MVA deaths. Age-adjusted deaths from motor vehicle accidents 2009-2013 (per 100,000):

- Brunswick: 22.2
- Columbus: 36.5
- Bladen 35.5
- Sampson 30.7

4.7 Access to Health Care

Brunswick County is federally designated as a Medically Underserved Area. Medically Underserved Areas are defined as areas with having too few primary care providers, high infant mortality, high poverty or a high elderly population (HRSA 2014). Brunswick County's index of medical underservice is 52.9 on a scale of 0 to 100, where 0 has the most shortages. Brunswick County is also designated as a Health Professional Shortage Area (HPSA) due to shortages in health care providers in primary medical care, dental and mental health/behaviors providers or facilities (HRSA 2014).

Compared to peer counties and NC overall, Brunswick County has the most severe shortages in health care providers. For example, there are 2,551 county residents for each (1) primary care physician. These ratios are considerably higher than peer county and statewide ratios. Many residents however do seek care in a neighboring county.

Approximately 20% of all Brunswick County residents are uninsured. This percentage (19.4%) is similar to peer counties Burke (20%) and New Hanover (18.5%); but higher than the Carteret (15.3%) and the state overall (15.2%). Eighteen percent of adults indicated during the past 12 months, they could not see a doctor because of cost.

The data used for this is accurate, but does not factor in the increase in population and increase in number of providers and practices in the past several years. Although this is still an indicator to work on, Brunswick has made improvement in this area.

In the Community Health Opinion Survey, participants were asked,

1. *"In your opinion, what do you think is the main reason that keeps people in your community from seeking medical treatment?"* The most frequent response was lack of insurance/unable to pay for doctor's visit. Nearly 65% (64.6%, 908 participants) stated *that this was the main reason Brunswick County residents would not seek medical treatment*.
2. "*Which factor do you feel most affects the quality of the health care you or people in your community receive?*" The most frequent response (67.8%, 953 participants) was economic factors such as low Income and no insurance.
3. *"In your opinion, do you feel people in your community lack the funds for any of the following?"* Food, Shelter, Health Insurance, Transportation, Medicine, Utilities, Other. The most frequent response was Health Insurance (71.3%, 1000), followed by Medicine (57.2%, 802).

Thirteen percent of survey respondents reported that they did not currently have health insurance. Despite the low ratios of health care providers to residents, Brunswick County was among the best performers in diabetic screening and mammography screening. Brunswick County is among the top performers nationally (90th percentile) on both of these measures.

4.8 Overall Health Status

Brunswick County's health status measures for "poor or fair health days" or "poor mental health days" are within the range of the peer counties. The percentage of adults reporting "poor or physical health days" was lower in Brunswick than in all peer counties or the state average.

In the Community Health Opinion Survey, participants were asked to rate their own health. Of the 1405 survey participants, 1180 (84%) ranked their health status as good, very good, or excellent. Nearly 14% ranked their health as fair or poor. The remaining 2% did not rank their health.

Community Health Opinion Survey
How do you rate own health?

Excellent:	8.0%
Very Good:	38.6%
Good:	37.4%
Fair:	12.0%
Poor:	1.9%

4.9 Health Behaviors

Smoking

In 2012, approximately 21% of adult Brunswick County residents were current smokers. Overall in North Carolina, about 18% of adults report themselves as current smokers and 25% as former smokers. Brunswick County had a similar percent of current adult smokers among peer counties (range: 18-24%).

Estimates from 2012 suggest that the percentage is higher than 20% in Brunswick County (IHME, 2015):

- Male 25.1%
- Females: 24.1%

Community Health Opinion Survey
Do you smoke?

Yes	**13%**
No	**66%**
Previous smoker	**18%**
No response	**3%**

Obesity and Physical Activity

During 2012, an estimated 29% of Brunswick County adults were obese (BMI 30 or more). This percentage (29%) is similar to peer counties (range: 26-31%) and the statewide percentage (statewide range: 21%-40%). This finding is consistent with low levels of leisure time physical activity (20.5%) in Brunswick County as well as the peer counties (21% to 30%). Brunswick County's obesity rates have been slowly increasing since 2004, when they were 22.7%.

Sexually Transmitted Infections

Brunswick County's rates of newly diagnosed chlamydia, syphilis are lower than all peer counties and the state overall. These trends have been consistently lower for up to four years, as shown in the following tables. Brunswick County's gonorrhea rates have fluctuated in the past few years, just as the peer county rates have done. During this time period, several things may have affected the rates such as implementation of an electronic disease surveillance system so all cases can be tracked to assure proper treatment, the treatment guidelines have changed which prompted the need to educate local providers and hospitals on proper treatment. All of these can impact local case numbers and rates.

The statewide range for newly diagnosed chlamydia cases (2009 through 2013) is 57 to 1,153 per 100,000 residents.

Newly Diagnosed Early Syphilis per 100,000 Population (Primary, Secondary, Early Latent)

	2012 Cases	2013 Cases	2014 Cases	2012-2014 Average Rate
Brunswick	4	1	1	1.8
Burke	6	8	14	3.8
New Hanover	4	6	17	4.2
Carteret	3	5	16	5.7

Source: NC EDSS) (data as of July 6, 2015)

Newly Diagnosed Chlamydia and Gonorrhea Rates, 2010-2014

	2010 Cases	2010 Rate	2011 Cases	2011 Rate	2012 Cases	2012 Rate	2013 Cases	2013 Rate	2014 Cases	2014 Rate
Newly Diagnosed Gonorrhea Rates (per 100,000 population)										
Brunswick	62	57.4	37	33.6	76	67.8	63	54.7	82	69.0
Burke	88	97.0	75	82.6	65	72.0	37	41.3	22	24.6
New Hanover	245	120.5	205	99.5	272	130.1	271	127.1	357	165.1
Carteret	50	74.9	44	65.3	48	70.8	29	42.3	23	33.4
Newly Diagnosed Chlamydia Rates (per 100,000 population)										
Brunswick	278	257.2	284	257.7	282	251.5	245	212.6	250	210.4
Burke	269	296.4	194	213.7	214	237.2	230	256.6	202	225.7
New Hanover	898	441.8	956	464.1	1055	504.5	964	452.2	1001	462.8
Carteret	204	305.8	199	295.3	207	305.4	172	251.0	186	270.3

**Rate is expressed per 100,000 population; Source: North Carolina Electronic Disease Surveillance System (NC EDSS) (data as of July 6, 2015). http://epi.publichealth.nc.gov/cd/stds/figures/std14rpt.pdf*

HIV

In 2014, 1,084 people were tested for HIV in Brunswick County. Of these, only 2 were newly positive (0.2%); this measure is consistent with peer counties (range: 0.1% - 0.3%).

Newly Diagnosed AIDS Average Rates by County of Residence at Diagnosis, 2012-2014

	2012 Cases	2013 Cases	2014 Cases	2012-2014 Average Rate
Brunswick	3	4	5	3.5
Burke	1	2	4	2.6
New Hanover	10	10	7	4.3
Carteret	2	3	5	4.9
North Carolina	782	862	706	8.0

*Rate is expressed per 100,000 population. Source: (NC EDSS) (data as of July 6, 2015).

4.10 Regional Assessment Data

Southeastern North Carolina Regional Health Collaborative

The Southeastern North Carolina Regional Health Collaborative (SENCRHC) was initiated in February, 2013 as a collaborative effort between UNCW College of Health and Human Services and the health directors of the following 5 counties: Brunswick, Columbus, New Hanover, Onslow, and Pender. In January 2015, the 5-county report was completed and published. It is available online: *Planning for Public Health: A Regional Assessment for Creating Healthy Communities (http://uncw.edu/sencrhc/ CountyHealthAssessments.html).*

Brunswick County Health and Wellness Priority Areas

As part of the regional assessment, health and wellness priority areas were identified. These priority areas were developed through an analysis of health indicators created as part of the planning process combined in a weighted overlay analysis based on 2010 Census data, built environment amenities, and proximity to facilities that support healthy lifestyles.[2] Each of these health indicators were weighted by the Health & Wellness Advisory Committee based on the indicators' impact on health outcomes. Socioeconomic Status (SES) was ranked as the most significant factor in determining health outcomes throughout the region. A Health and Wellness Priority Areas Map and was created for each county in the SENCRHC region.

Three specific areas of concern in Brunswick County were identified as priority areas: the **Northwest area, Navassa, and Ash** communities and their immediate vicinities. Low socioeconomic status and lack of access to several health and wellness services was evident in each of these communities. Areas along the northern border of the county, though sparsely populated, also lack access to amenities and community facilities available to the southeastern communities along the coast.

Increasing access is important, but access alone will not substantially alter health outcomes of the population in the county. An increase in the demand for physical activity and healthy eating opportunities must complement an increase in access. It is the shared responsibility of the local governments, planning departments, and the health department in the county to nurture such a demand.[3]

Table 14.1 Legend	
Low Priority	○
Moderate Priority	◑
High Priority	●

[2] Southeastern NC Regional Health Collaborative, *Planning for Public Health: A Regional Assessment for Creating Healthy Communities*, Jan 2015 [http://uncw.edu/sencrhc/CountyHealthAssessments.html]

[3]

Table 14.1 Brunswick County Health & Wellness Priority Areas			
Goal	**Northwest Area**	**Navassa Area**	**Ash Area**
1) Explore Strategies to Decrease Commute Times	●	●	◑
2) Increase Access to Healthcare Providers	●	◑	●
3) Increase Access to Dental Facilities	●	◑	●
4) Increase Social Cohesion and Provide Health Education	●	●	●
5) Increase Access To Full-Service Grocery Stores	●	○	●
6) Increase Access To Active Transportation Facilities	●	○	●
7) Increase Elderly Transit Access	N/A	○	N/A
8) Increase Access to Physical Activity Facilities	●	○	◑

Southeastern NC Regional Health Collaborative, *Planning for Public Health: A Regional Assessment for Creating Healthy Communities*, Jan 2015 [http://uncw.edu/sencrhc/CountyHealthAssessments.html]

5 Brunswick County Resources

Brunswick County Health Department Resource Guide: A regularly updated guide to health promotion/prevention services available to Brunswick County residents. Available at: http://www.ncmhco.org/uploads/3/4/1/5/3415740/health_resource_directory.pdf

2-1-1 (telephone number):

2-1-1 is an easy to remember, three-digit telephone number that connects people with important community services to meet every day needs and the immediate needs of people in crisis. For example, 2-1-1 can offer access to 1) affordable high quality child care/after-school care; 2) counseling and support groups; 3) health services; 3) food, clothing and housing and 4) services for seniors and the disabled. Callers simply dial 2-1-1 for information on vital local services. 2-1-1 is free, confidential, available 24 hours a day -- every day, multilingual and staffed by agents ready to help individuals find the connections needed.

Brunswick County Health Department Programs & Clinics

- Pregnancy Care Management: Services available at BCHS by public health social worker. Provides counseling and case management to at-risk low-income pregnant. Patients could be eligible for home visits by public health nurse during post-partum period and during their pregnancy if requested by physician. Eligibility is based on PCM case management.
- Breast Cervical Cancer Control Program (BCCCP): Free mammograms and pap smears are provided, for screening purposes, to women ages 18-65 and must be income eligible.
- Child Screening Clinic: Children ages birth to 21 are screened for routine health conditions and early detection of diseases or abnormalities. Includes a complete physical examination, education, and counseling. Kindergarten physical examination and dental varnish may also be provided.
- Care Coordination for Children (CC4C): This is a voluntary program available for families of children from birth to age 5 with certain conditions that may interfere with the child's physical, social, or emotional development. This program is free for eligible children and families.
- Communicable Disease: Confidential testing clinic for sexually transmitted and communicable diseases with physical exam. Provides education, treatment, and information on prevention.
- General Clinic: Offers wide range of health services where specific clinic is not established. Includes childhood/adult immunizations, allergy shots with physician's order, head lice inspection/treatment, screening for TB, high blood pressure, and cholesterol. Fees vary.
- Health Promotion: Provides screening services for the early detection of chronic diseases such as diabetes, cancer, hypertension, and cardiovascular diseases.
- Laboratory Services: Provides lab tests requested by each of the clinics in Health Services. Other lab testing may be performed with a doctor's order. Fees will vary.
- Maternity Clinic: Provides expectant moms residing in Brunswick County, with early and regular pre-natal care throughout their pregnancy. A postpartum visit is offered to our patients within 2 weeks of delivery.
- Newborn Home Visits: Offers a newborn assessment within 2 weeks of birth. Includes assessment of vital signs, weight, reflexes, feeding, and bonding. Referral to support programs, as needed.
- Outreach Services: The Mobile Health Unit is available to go into communities and provide health screenings and services. The health department staff also participates in community events.
- Pediatric Primary Care: Provides well and sick care for children from birth to 21. Services include physicals for childcare, day camps, sports participation, and college.
- Women, Infants and Children Nutrition Program (WIC) is a "supplemental nutrition program" offered through the Brunswick County Health Department, available to qualified applicants.
- Women's Preventative Health (Family Planning): Provides education, counseling, and contraception to women to assist planning/preventing pregnancy. Offers a complete physical. Teenagers do not need parental consent. Sliding scale fees. Also offers vasectomy to interested men; provides information on financial assistance for vasectomy costs for income-eligible men.
  - Clinics

    Offers health care services to uninsured/in need. Details in Resource Guide.

Little River Medical Center	New Hanover Community Health Center
Cape Fear Clinic	New Hope Clinic
CommWell Health of Ocean Isle Beach	Vocational Rehabilitation

- Dental Services
  Details about free/reduced fee services from numerous dental practices. Details in Resource Guide.
- Food Pantries: Services from over 20 food pantries are listed in the Resource Guide.

Other Resources

- Careline: Provides parents with resources and referral information.
- Child Care Resource & Referral: Referrals for childcare, community resources, resource library, parenting newsletter "Family Ties".
- Children's Developmental Services Association (CDSA): Determines eligibility for early intervention services under IDEA Part C, aged birth to 3 years including children referred under the Child Abuse Prevention and Treatment Act (CAPTA). Also provides case management services and oversight of all providers carrying out treatment for those children found eligible for services.
- Coastal Horizons Center, Inc.: Promotes choices for healthier lives, safer communities by providing a continuum of professional services for prevention, crisis intervention, sexual assault victims, criminal justice alternatives, and treatment of substance use and mental health disorders.
- Community Alternatives Program for Children (CAP-C): Medical case management and services in the home including nursing, personal care services, nutritional supplements, medical equipment and supplies and respite care to medically fragile children (up to age 19) with significant medical needs who desire to remain in their home and community.
- Family Support Network of Southeastern NC: Support services to parents with children that were born premature or with other special conditions-developmental or learning disability; chronic illness; emotional, behavioral or attention challenges; disability that resulted from a traumatic accident or illness; and/or is a foster child. Services include: parent-to-parent program, assistance with school issues, information and resource referrals locally and statewide, and training.
- Hope Harbor Home: Non-profit whose goals are to provide shelter/services to victims of domestic violence and sexual abuse and to educate community about dynamics of these issues
- Leland Family Resource Center: Inc. Grandparents Raising Grandchildren Support Group & Leland Family Literacy Center. Offers GED & ESL programs; daycare for pregnant & parenting women
- Lifeline Pregnancy Center: Offers free pregnancy tests, confidential peer counseling, and information on abortion alternatives, adoption, parenting, and pregnancy related issues.
- Parenting of Teens Support Group: Provides assistance to parents who for need help communicating with their teens, direction with discipline and insight into today's teen issues. Classes meet twice a month; facilitated by The Winds Counseling Center. Free, open to all.
- Parents as Teachers: Parent educators, including bilingual parent educators, provide information to parents on the stages of child development, learning materials and how to meet their child's needs. They conduct screenings and link parents to other community resources. The PAT educators conduct home visits and hold group events and meetings.
- Seaside United Methodist Church Grandparent Support Group. Support group for grandparents raising grandchildren. Meets weekly, peer support, faith-based, facilitated by Associate Pastor.
- Single Parent Support Group: Meets once per month. Children are invited to attend. Area churches provide the meeting location, dinner and childcare.
- Teen Family Resource Center: Provides continued high school education for pregnant and parenting teens as well as health services/education, parenting education, quality childcare and transportation for parent and child to school.
- Waccamaw Family Resource Center: GED, ESL & Parent/Child Preschool classes. Childcare & local transportation provided. Senior citizen's nutrition site. Other workshops & activities.

6 Community Priorities

Summary of CHA Findings

Brunswick County is located in the Southeastern most point in North Carolina bordered by New Hanover, Pender, Columbus, and Horry County, South Carolina. Brunswick County, with an estimated population of 118,836, has seen tremendous population growth: a 62.5% increase since 2000 and a 10.6% increase during the 4 years between 2010 and 2014. In the summer months, the population increases to approximately 180,000 with tourists and seasonal residents representing a 50% increase in the population. Brunswick County is expected to continue to increase steadily in population size over the next 20 years. Brunswick County is home to several beach- and ocean-access communities, and 43% of the population lives in rural, unincorporated areas. The county is divided into 19 municipalities and numerous unincorporated communities incorporated areas. Racial distribution is considerably different in Brunswick County compared to North Carolina overall. Brunswick County has a higher percentage of white residents, a lower percentage of African America residents, and a lower percentage of Hispanic or Latino residents. The average age of Brunswick County residents is generally higher than the state averages; 27% are age 65 and older (nearly twice the state-wide proportion of 14.5%).

CHA Findings

The unemployment rate (2014 preliminary) was 7.6%, and this is high compared to peer counties; however, it appears to be decreasing, based on the preliminary estimates for 2015 of 6.6%. Over sixteen percent (16.1%) of Brunswick County residents were defined as living in poverty during the period from 2010 through 2014, an increase compared to the 14.6% in 2009. Nearly one-half (49%) of school children in Brunswick County meet the criteria for free lunch.

Results from the Community Health Opinion Survey suggest that Brunswick County residents are concerned about chronic disease, drug and alcohol abuse, and obesity. Based on community opinion, the main reason for not getting adequate medical treatment is lack of health insurance (or inability to pay), and that this factor impacts the quality of care received. A majority of respondents (71%) indicated that county residents lack the funds to pay for health insurance and medicine (57%); more so than food, shelter, transportation, and utilities. To improve health, survey respondents indicated that job opportunities (42%) followed by additional health services (36%) would be beneficial. When asked about which screenings or educational information services were needed in the community, “cholesterol, blood pressure, and diabetes” was the most frequent response (55%) followed by “cancer” (48%); and “mental health” (44%) In addition, 42% indicated that “substance abuse” screenings or educational information services were needed. Information obtained from listening groups was similar in message

After obtaining data for the Community Health Assessment, it was determined that Brunswick County is:

- Getting worse in the areas of *access to care (providers), unemployment, injury/accidents, and low birth weights*;
- Staying the same in the areas of *physical inactivity, uninsured, and violent crime;* and
- Getting better in the areas of *premature death, prostate cancer deaths, and colon cancer deaths.*

Although, not all areas that were evaluated in this CHA have corresponding Healthy NC 2020 goals, several of the measurements emerged as needing improvement:

- *Mental health: suicide, poor mental health days*
- *Chronic diseases: cardiovascular, heart disease, and stroke; diabetes*
- *Injury/accident prevention: motor vehicle crashes, alcohol impaired driving accidents, child mortality, accidental poisoning overdose, preventable hospital stays*

Brunswick County was evaluated as part of the Southeastern North Carolina Regional Health Collaborative (SENCRHC) as a collaborative effort between UNCW College of Health and Human Services and the health directors of the following 5 counties: Brunswick, Columbus, New Hanover, Onslow, and Pender. Through this assessment, health priority areas were developed through an analysis of health indicators created as part of the planning process combined in a weighted overlay analysis based on 2010 Census data, built environment amenities, and proximity to facilities that support healthy lifestyles.[4] Each of these health indicators were weighted by the Health & Wellness Advisory Committee based on the indicators' impact on health outcomes. Socioeconomic Status (SES) was ranked as the most significant factor in determining health outcomes throughout the region. A Health and Wellness Priority Areas Map and was created for each county in the SENCRHC region (Appendix 3, Data Book 2). For Brunswick County, the three communities of **Northwest, Navassa, and Ash** and their immediate vicinities were identified area (geographic) priority communities due primarily to low socioeconomic status and lack access to several health and wellness. Areas along the northern border of the county, though sparsely populated, also lack access to amenities and community facilities available to the southeastern communities along the coast.

Priority Areas

Upon completion of the primary and secondary analyses, a series of community meetings were held to review the analysis and discuss priority areas. In addition, the data books were distributed to community partners for review and comment.

The following priority areas emerged:

- Chronic diseases, including diabetes, cancer, and hypertension
- Substance Abuse/Mental Health broadly to include drugs, alcohol, smoking, access to mental health services
- Injury/accident prevention

[4] Southeastern NC Regional Health Collaborative, *Planning for Public Health: A Regional Assessment for Creating Healthy Communities*, Jan 2015 [http://uncw.edu/sencrhc/CountyHealthAssessments.html]

References

Austin A, Finkbeiner S. The Burden of Unintentional Poisonings in North Carolina, October 2013. NC Division of Public Health. (http://www.injuryfreenc.ncdhhs.gov/About/UnintentionalPoisoningBurden2013.pdf)

Brunswick County Community College (BCC) 2016. (http://www.brunswickcc.edu/)

Brunswick County Department of Education. (http://www.co.brunswick.k12.nc.us/)

Brunswick County Economic Development. (http://www.brunswickedc.com/business-resources/major-employers).

Chapman DP, Perry GS, Strine TW. The vital link between chronic disease and depressive disorders. Prev Chronic Dis [serial online] 2005 Jan [date cited]. URL: http://www.cdc.gov/pcd/issues/2005/jan/04_0066.htm.

County Health Rankings & Roadmaps. (http://www.countyhealthrankings.org/)

Dosher Hospital Community Health Needs Assessment (http://www.dosher.org/docs/DOSHER_CHNA_2015.pdf)

Health Resources and Services Administration (HRSA) 01Jan2016. (http://datawarehouse.hrsa.gov/ tools/analyzers/muafind.aspx)

Institute for Health Metrics & Evaluation (IHME). US County Profile: Brunswick Co., NC. Seattle, WA: IHME 2015 [http://www.healthdata.org/sites/default/files/files/county_profiles/US/County_Report_Brunswick_County_North_Carolina.pdf]

Kids Count Data Center, Annie E. Casey Foundation (http://datacenter.kidscount.org/).

Mathews TJ, MacDorman MF, Thoma ME. Infant Mortality Statistics From the 2013 Period Linked Birth/Infant Death Data Set. National Vital Statistics Reports, Vol. 64, No. 9, August 6, 2015

Myers & Stoto, 2006, CDC Myers, S. & Stoto, M. (2006). Criteria for Assessing the Usefulness of Community Health Assessments: A Literature Review. RAND Corporation.

N.C. Department of Health and Human Services. N.C. Division of Public Health (NC DPH) Community Health Assessment Guidebook, June 2014. (http://publichealth.nc.gov/lhd/cha/docs/guidebook/CHA-GuideBook-June2014.pdf)

N.C. DPH Consolidated Agreement Language for Local Health Departments. G.S. 130A-34.1 (http://publichealth.nc.gov/lhd/cha/docs/FY13NCConsolidatedAgreementforCHA.pdf)

N.C. State Center for Health Statistics (NC SCHC) Babybook, 2014. http://www.schs.state.nc.us/schs/births/babybook/2014/brunswick.pdf

N.C. Office of Budget and Management (NC OBM). County Estimates. [http://www.osbm.nc.gov/demog/county-estimates]

N.C. Electronic Disease Surveillance System (NC EDSS). July 6, 2015. (http://epi.publichealth.nc.gov/cd/about/ncedss.html)

N.C. State Center for Health Statistics (NC SCHS). Vital Statistics. [http://www.schs.state.nc.us/data/hsa/vital.htm]

Southeastern NC Regional Health Collaborative (SENCRHC). Planning for Public Health: A Regional Assessment for Creating Healthy Communities, Jan 2015 [http://uncw.edu/sencrhc/CountyHealthAssessments.html]

U.S. Census Bureau, QuickFacts, 2014. (http://quickfacts.census.gov/qfd/states/37/37019.html)

U.S. Centers for Disease Control and Prevention (CDC), National Center for Injury Prevention and Control. Web-based Injury Statistics Query and Reporting System (WISQARS). 2010. (http://www.cdc.gov/injury/wisqars/index.html).

U.S. Centers for Disease Control and Prevention (CDC). Community Health Assessment for Population Health Improvement: Resource of Most Frequently Recommended Health Outcomes and Determinants, Atlanta, GA: Office of Surveillance, Epidemiology, and Laboratory Services, 2013. (http://wwwn.cdc.gov/CommunityHealth/PDF/Final_CHAforPHI_508.pdf)

U.S. Centers for Disease Control and Prevention. Deaths and mortality. Centers for Disease Control and Prevention Web Site. (CDC 2013a) (http://www.cdc.gov/nchs/fastats/deaths.htm. Updated April 5, 2013).

U.S. Centers for Disease Control and Prevention (CDC). Ten leading causes of death and injury. Centers for Disease Control and Prevention Web Site. (CDC 2013b) (http://www.cdc.gov/injury/wisqars/leadingcauses.html.

University of Wisconsin Population Health Institute. 2015 County Health Rankings & Roadmaps. (http://www.countyhealthrankings.org/)

VisitNC. (http://www.visitnc.com/brunswick-islands)

7 Appendices

Appendix 1: Community Health Opinion Survey

See following page

Appendix 2: Healthy North Carolina 2020 Objectives

See following page

Appendix 3: Data Book 1 – Analysis of Primary Data

Provided as a separate attachment

Appendix 4: Data Book 2 – Analysis of Secondary Data

Provided as a separate attachment

APPENDIX 1

COMMUNITY HEALTH NEEDS ASSESSMENT SURVEY 2015

Brunswick County Health Services appreciates your input. THANK YOU! (Data Collection to Oct 15, 2015)

1. In your opinion, what do most people die from in your community? *(Check only one)*
   ☐ Asthma/Lung Disease ☐ Cancer ☐ Diabetes ☐ Suicide ☐ HIV/AIDS
   ☐ Heart Disease ☐ Stroke/Cerebrovascular Disease ☐ Homicide/Violence ☐ Motor Vehicle Deaths
   ☐ Other (please specify) _____

2. In your opinion, what is the biggest health issue of concern in your community? *(Check only one)*
   ☐ Asthma/Lung Disease ☐ Chronic Disease (i.e. Cancer, Diabetes, Heart Disease/Stroke) ☐ Child Abuse
   ☐ Dental Health ☐ Drug/Alcohol Abuse ☐ Gangs/Violence ☐ Mental Health ☐ Obesity
   ☐ Teen Pregnancy ☐ Tobacco Use ☐ Vehicle Crashes ☐ Other (please specify) _____

3. In your opinion, what do you think is the main reason that keeps people in your community from seeking medical treatment? *(Check only one)*
   ☐ Cultural/Health Beliefs ☐ Fear (not ready to face health problem) ☐ Health services too far away
   ☐ Lack of insurance/Unable to pay for doctor's visit ☐ Lack of knowledge/understanding of the need
   ☐ None/No Barriers ☐ Not Important ☐ Transportation
   ☐ No appointments available at doctor when needed/Have to wait too long at doctor's office
   ☐ Other (please specify) _____

4. Which factor do you feel most affects the quality of the health care you or people in your community receive?*(Check only one)*
   ☐ Ability to read & write/Education ☐ Age ☐ Economic (Low Income, No Insurance, etc.)
   ☐ Language Barrier/Interpreter/Translator ☐ Race ☐ Sex/Gender ☐ Other (please specify) _____

5. In your opinion, do you feel people in your community lack the funds for any of the following: *(Check all that apply)*
   ☐ Food ☐ Health Insurance ☐ Home/Shelter ☐ Utilities (i.e. Electricity, Fuel, Water)
   ☐ Medicine ☐ Transportation ☐ Other (please specify) _____

6. How do you rate your own health? *(Check only one)*
   ☐ Excellent ☐ Very Good ☐ Good ☐ Fair ☐ Poor ☐ Don't Know/Not Sure

7. What does your community need to improve the health of your family, friends, and neighbors? *(Check all that apply)*
   ☐ Additional Health Services ☐ After-School Programs ☐ Healthier Food Choices ☐ Job Opportunities
   ☐ Mental Health Services ☐ Recreation Facilities ☐ Transportation ☐ Wellness Services
   ☐ Safe places to walk/play ☐ Substance Abuse Rehabilitation Services
   ☐ Specialty Physicians (Type? _____) ☐ Other (please specify) _____

8. Are you a smoker? ☐ Yes ☐ No ☐ In the Past

9. What health screenings or education/information services are needed in your community? *(Check all that apply)*
   ☐ Cancer ☐ Cholesterol/Blood Pressure/Diabetes ☐ Dental Screenings ☐ Disease Outbreaks ☐ Substance Abuse
   ☐ Nutrition ☐ Emergency Preparedness ☐ Eating Disorders ☐ Pregnancy Prevention ☐ Physical Activity
   ☐ Literacy ☐ HIV/Sexually Transmitted Diseases ☐ Mental Health (including depression/anxiety)
   ☐ Reckless Driving/Seatbelts/Child Car Seats ☐ Vaccinations/Immunizations ☐ Other (please specify) _____

10. Where do you and your family get most of your health information? *(Check all that apply)*
    ☐ Health Education Center ☐ Family or Friends ☐ Internet ☐ Doctor/Health Professional ☐ Television
    ☐ Hospital Newsletter ☐ Newspaper/Magazines ☐ Library ☐ Health Department ☐ Radio

11. Does your family have a basic emergency supply kit? (These kits include water, non-perishable food, any necessary prescriptions, first aid supplies, flashlights and batteries, non-electric can opener, blanket, etc.) ☐ Yes ☐ No ☐ Don't Know/Not Sure

12. What would be your main way of getting information from authorities in a large-scale disaster or emergency?*(Check only one)*
    ☐ Television ☐ Radio ☐ Internet ☐ Print Media (ex: newspaper) ☐ Social Networking site
    ☐ Neighbors ☐ Text Message (Emergency Alert System) ☐ Other (describe) _____ ☐ Don't Know/Not Sure

13. If public authorities announced a mandatory evacuation from your neighborhood or community due to a large-scale disaster or emergency, would you evacuate?*(Check only one)* ☐ Yes ☐ No ☐ Don't Know/Not Sure

14. What would be the main reason you might <u>not</u> evacuate if asked to do so?*(Check only one)*
    ☐ Not applicable, I would evacuate ☐ Lack of trust in public officials ☐ Concern about leaving property behind
    ☐ Concern about personal safety ☐ Concern about family safety ☐ Concern about leaving pets
    ☐ Concern about traffic jams and inability to get out ☐ Lack of Transportation ☐ Health problems (could not be moved)
    ☐ Other (describe) _____ ☐ Don't Know/Not Sure

For Statistical Purposes Only, Please Complete the Following:

I am: ☐ Male ☐ Female. My age is: ☐ under 25 ☐ 25-34 ☐ 35-44 ☐ 45-54 ☐ 55-64 ☐ 65-74 ☐ 75+

What is your zip code? _____ County_____ Town_____ Community_____

Highest Level Of Education: ☐ Some High School ☐ High School Diploma ☐ Technical School ☐ Some College ☐ College Graduate ☐ Masters ☐ Doctorate

My race is: ☐ White/Caucasian ☐ Black/African American ☐ Native American/Alaskan Native ☐ Asian ☐ Pacific Islander ☐ Multi-Racial

Are you of Hispanic, Latino, or Spanish origin? ☐ Yes ☐ No

If yes, are you ☐ Mexican, Mexican American, or Chicano ☐ Puerto Rican ☐ Cuban ☐ Other Hispanic or Latino (please specify) _____

Do you currently have Health Insurance? ☐ Yes ☐ No ☐ No, but did at an earlier time/previous job

Current Income Level: ☐ Unemployed ☐ 0-$20,000 ☐ $20,000-$40,000 ☐ $40,000-$60,000 ☐ $60,000-$100,000 ☐ Above $100,000

Do you live or work in the county where you completed this survey? ☐ Both ☐ Live ☐ Work ☐ Neither

When seeking care, what hospital do you visit first? *(Check only one)*
☐ Cape Fear Hospital ☐ Dosher Memorial Hospital ☐ New Hanover Regional Medical Center
☐ Brunswick Community Hospital ☐Other _____

<u>PLEASE MAIL TO:</u> Health Promotions Department, PO Box 9, Bolivia, NC 28422
<u>OR DROP OFF AT:</u> 25 Courthouse Drive, Bolivia, NC 28422

You can also repsond online at: surveymonkey.com/r/BCCHA2015

COMMUNITY HEALTH NEEDS SURVEY 2015

Un sondeo llevado a cabo por la **Brunswick County Health Services**. Gracias por su aportación! (Finaliza la encuesta 10/15/15)

1. En su opinion, de que muere la mayoria de las personas en su comunidad ? (Marca solo una)
   ☐ Asma/Enfermedad de los pulmones ☐ Cancer ☐ Diabetes ☐ Suicidio ☐ Virus del sida/SIDA ☐ Enfermedad del corazo
   ☐ Embolia/Enfermedad cerebrovascular ☐ Homicidio/Violencia ☐ Muertes por accidente de vehiculo
   ☐ Otra enfermedad (favor de especificar) _____

2. En su opinion, que es la preocupacion de salud mas grande en su comunidad ? (Marca solo una)
   ☐ Asma/Enfermedad de los pulmones ☐ Enfermedades cronicas (como cancer, diabetes, enfermedad del corazon/embolia) ☐ Abuso de ninos
   ☐ Salud Dental ☐ Abuso de drogas/Bebidas alcoholicas ☐ Bandas/Violencia ☐ Salud Mental ☐ Obesidad
   ☐ Embarazo de jovenes ☐ Uso de tabaco ☐ Accidentes de vehiculo ☐ Otra cosa (favor de especificar) _____

3. En su opinion, que prohibe a las personas en su comunidad buscar tratamiento medico ? (Marca solo una)
   ☐ Creencias culturales/de salud ☐ Miedo (no estan listos para enfrentar sus problemas de salud) ☐ Los servicios de salud estan muy lejos
   ☐ Falta de seguro medico/no puede pagar la visita con el medico ☐ Falta de conocimiento/entendimiento de la necesidad
   ☐ Nada/no hay obstaculos ☐ No es importante ☐ Falta de transporte
   ☐ No hay citas disponibles con el medico cuando las necesitan/Tienen que esperar mucho tiempo en la oficina del medico
   ☐ Otra razon (favor de especificar) _____

4. En su opinion, que factor incluido abajo afecta mas la calidad de los servicios medicos que recibe usted o las personas en su comunidad ? (Marca solo una)
   ☐ Capacidad de leer y escribir/educacion ☐ Edad ☐ Economico (falta de dinero o de seguro medico)
   ☐ Obstaculo de idioma/no interprete/no traductor ☐ Raza ☐ El sexo de la persona ☐ Otra (favor de especificar) _____

5. En su opinion, piensa usted que las personas en su comunidad les faltan dinero para algunas de las siguentes cosas ? (Marca todas las cajas que aplican)
   ☐ Comida ☐ Seguro de salud ☐ Casa/Refugio ☐ Empresas de servicios publicos (como electricidad, combustible, agua)
   ☐ Medicina ☐ Transporte ☐ Otra cosa (favor de especificar) _____

6. Como evaluaria usted su propia salud ? (Marca solo una)
   ☐ Excelente ☐ Muy bien ☐ Bueno ☐ Mediano ☐ Pobre ☐ Yo no se/No estoy seguro

7. Que necesita su comunidad para mejorar la salud de su familia, sus amigos, y sus vecinos ? (Marca todas las cajas que aplican)
   ☐ Mas servicios de salud ☐ Programas para ninos despues de la escuela ☐ Selecciones de comidas mas saludables ☐ Oportunidades para trabajar
   ☐ Servicios de Salud Mental ☐ Centros de Recreo ☐ Transporte ☐ Servicios de Bienestar
   ☐ Lugares seguros para caminar/jugar ☐ Servicios de rehabilitacion para los que abusan de las substancias
   ☐ Especialistas medicos (que tipo ? _____) ☐ Otra cosa (favor de especificar)_____

8. Es usted fumador? ☐ Si ☐ No ☐ En el enpasado

9. Que examenes de salud o educacion/servicios de informacion son necesitados en su comunidad ? (Marca todas las cajas que aplican)
   ☐ Cancer ☐ Colesterol/Presion arterial/Diabetes ☐ Examenes dentales ☐ Brote de enfermedad ☐ Abuso de substancia (drogas o alcohol)
   ☐ Nutricion ☐ Preparacion para emergencias ☐ Trastornos de comer ☐ Prevencion de embarazo ☐Actividad fisica
   ☐ Alfabetizacion ☐ HIV/SIDA/Enfermemdades sexuales transmitidas ☐ Salud mental (incluyendo depresion/ansiedad)
   ☐ Manejando sin cuidado/Cinturones de seguridad/Sillas de carros para ninos ☐ Vacunaciones/Inmunizaciones ☐ Otro(favor de especificar):_____

10. De donde recibe usted y su familia la mayoria de su informacion de salud ? (Marca todas las cajas que aplican)
    ☐ Centro de educacion de salud ☐ Familia o Amigos ☐ Internet ☐ Medico/Profesional de salud ☐ Television
    ☐ Boletin informativo del hospital ☐ Periodico/Revistas ☐ Biblioteca ☐ Departamento de Salud ☐ Radio

11. Tiene su familia un botiquin basico de provisiones para emergencias ? (Estos botinquines incluyen agua, comida no perecedera, sus medicinas y recetas necesarias, provisiones de primeros auxilios, linternas y pilas, abrelatas no electricas, cobijas, y mas)
    ☐ Si ☐ No ☐ No se/No estoy seguro

12. Que seria su manera principal de conseguir informacion de las autoridades en un desastre de gran escala o en una emergencia ? (Marca solo una)
    ☐ Television ☐ Radio ☐ Internet ☐ Medios imprimidos de comunicacion (como el periodico) ☐ Sitio de red social y comunicaciones
    ☐ Vecinos ☐ Mensajes de textos (Sistema de alertas para emergencias) ☐ Otra: (describela)_____ ☐ No se/No estoy seguro

13. Si las autoridades publicas anunciaron una evacuacion obligatoria de su vecindario o comunidad por desastre de gran escala o de una emergencia, evacuaria usted ? (Marca solo una) ☐ Si ☐ No ☐ No se/No estoy seguro

14. Que seria la razon principal por la que usted no evacuaria si ellos le pidieron hacerlo ? (Marca solo una)
    ☐ No aplicable, yo evacuaria. ☐ Falta de confianza en los oficiales publicos ☐ Preocupacion de dejar la propiedad detras
    ☐ Preocupacion de seguridad personal ☐ Preocupacion de seguridad de la familia ☐ Preocupacion de dejar animales domesticos
    ☐ Preocupacion de ser parado en trafico y incapacidad de salir ☐ Falta de transporte ☐ Problemas de salud (no puede ser movido)
    ☐ Otra (describela): _____ ☐ No se/No estoy seguro

Favor de contestar las preguntas abajo para propositos estadisticos <u>solamente</u>

Yo soy: ☐ Hombre ☐ Mujer ¿Es usted fumador?: ☐ Si ☐No ☐ En el pasado?

Mi edad es : ☐ menor de 25 ☐ 25-34 ☐ 35-44 ☐ 45-54 ☐ 55-64 ☐ 65-74 ☐ 75 o mas

Mi codigo postal es : _____ Condado_____ Ciudad_____ Comunidad_____

Mi raza es ☐ Blanco/Caucasian ☐ Negro/Afroamericano ☐ Americano Nativo/Nativo de Alaska · Asiatico ☐ Isleno Pacifico
☐ Otra:_____

Es usted de origen hispano. latino, o espanol ? ☐ Si ☐ No

Si su contesta es si, es usted ☐ Mexicano/Americano Mexicano, o Chicano ☐ Puertorriqueno ☐ Cubano
☐ Otro hispano o latino (favor de especificar): _____

Tiene usted ahora mismo algun tipo de seguro de salud ? ☐ Si ☐ No ☐ Ahora no, pero antes o en el trabajo anterior, si, yo tenia seguro medico

El nivel de ingresos actual: ☐ **Desempleados** ☐ 0-$20,000 ☐ $20,000-$40,000 ☐ $40,000-$60,000
☐$60,000-$100,000 ☐ **más $100,000**

Vive o trabaja usted en el condado donde completo este sondeo ? ☐ Los dos ☐ Vivo ☐ Trabajo ☐ Ninguno de los dos

Cuando usted esta buscando cuidado medico, que <u>hospital</u> visita usted primero ? (Marca solo una)
☐ Hospital de Cape Fear ☐ Hospital de Dosher Memorial ☐ Centro Medico de la Region de New Hanover
☐ Brunswick Comunidad Hospital ☐ Otro _____

<u>Envíe A:</u> Health Promotions Department, PO Box 9, Bolivia, NC 28422
<u>Deje A:</u> 25 Courthouse Drive, Bolivia, NC 28422

Administration Office

HEALTHY NORTH CAROLINA 2020
OBJECTIVES

APPENDIX 2

		2020 target
Tobacco Use		
1. Decrease the percentage of adults who are current smokers	20.3% (2009)	13.0%
2. Decrease the percentage of high school students reporting current use of any tobacco product	25.8% (2009)	15.0%
3. Decrease the percentage of people exposed to secondhand smoke in the workplace in the past seven days	14.6% (2008)	0%
Physical Activity and Nutrition		
1. Increase the percentage of high school students who are neither overweight nor obese	72.0% (2009)	79.2%
2. Increase the percentage of adults getting the recommended amount of physical activity	46.4% (2009)	60.6%
3. Increase the percentage of adults who consume five or more servings of fruits and vegetables per day	20.6% (2009)	29.3%
Injury and Violence		
1. Reduce the unintentional poisoning mortality rate (per 100,000 population)	11.0 (2008)	9.9
2. Reduce the unintentional falls mortality rate (per 100,000 population)	8.1 (2008)	5.3
3. Reduce the homicide rate (per 100,000 population)	7.5 (2008)	6.7
Maternal and Infant Health		
1. Reduce the infant mortality racial disparity between whites and African Americans	2.45 (2008)	1.92
2. Reduce the infant mortality rate (per 1,000 live births)	8.2 (2008)	6.3
3. Reduce the percentage of women who smoke during pregnancy	10.4% (2008)	6.8%
Sexually Transmitted Disease and Unintended Pregnancy		
1. Decrease the percentage of pregnancies that are unintended	39.8% (2007)	30.9%
2. Reduce the percentage of positive results among individuals aged 15 to 24 tested for chlamydia	9.7% (2009)	8.7%
3. Reduce the rate of new HIV infection diagnoses (per 100,000 population)	24.7 (2008)	22.2
Substance Abuse		
1. Reduce the percentage of high school students who had alcohol on one or more of the past 30 days	35.0% (2009)	26.4%
2. Reduce the percentage of traffic crashes that are alcohol-related	5.7% (2008)	4.7%
3. Reduce the percentage of individuals aged 12 years and older reporting any illicit drug use in the past 30 days	7.8% (2007-08)	6.6%
Mental Health		
1. Reduce the suicide rate (per 100,000 population)	12.4 (2008)	8.3
2. Decrease the average number of poor mental health days among adults in the past 30 days	3.4 (2008)	2.8
3. Reduce the rate of mental health-related visits to emergency departments (per 10,000 population)	92.0 (2008)	82.8

HEALTHY NORTH CAROLINA 2020
OBJECTIVES

	Current	2020 Target
Oral Health		
1. Increase the percentage of children aged 1-5 years enrolled in Medicaid who received any dental service during the previous 12 months	46.9% (2008)	56.4%
2. Decrease the average number of decayed, missing, or filled teeth among kindergartners	1.5 (2008-09)	1.1
3. Decrease the percentage of adults who have had permanent teeth removed due to tooth decay or gum disease	47.8% (2008)	38.4%
Environmental Health		
1. Increase the percentage of air monitor sites meeting the current ozone standard of 0.075 ppm	62.5% (2007-09)	100.0%
2. Increase the percentage of the population being served by community water systems (CWS) with no maximum contaminant level violations (among persons on CWS)	92.2% (2009)	95.0%
3. Reduce the mortality rate from work-related injuries (per 100,000 equivalent full-time workers)	3.9 (2008)	3.5
Infectious Disease and Foodborne Illness		
1. Increase the percentage of children aged 19-35 months who receive the recommended vaccines	77.3% (2007)	91.3%
2. Reduce the pneumonia and influenza mortality rate (per 100,000 population)	19.5 (2008)	13.5
3. Decrease the average number of critical violations per restaurant/ food stand	6.1 (2009)	5.5
Social Determinants of Health		
1. Decrease the percentage of individuals living in poverty	16.9% (2009)	12.5%
2. Increase the four-year high school graduation rate	71.8% (2008-09)	94.6%
3. Decrease the percentage of people spending more than 30% of their income on rental housing	41.8% (2008)	36.1%
Chronic Disease		
1. Reduce the cardiovascular disease mortality rate (per 100,000 population)	256.6 (2008)	161.5
2. Decrease the percentage of adults with diabetes	9.6% (2009)	8.6%
3. Reduce the colorectal cancer mortality rate (per 100,000 population)	15.7(2008)	10.1
Cross-cutting		
1. Increase average life expectancy (years)	77.5 (2008)	79.5
2. Increase the percentage of adults reporting good, very good, or excellent health	81.9% (2009)	90.1%
3. Reduce the percentage of non-elderly uninsured individuals (aged less than 65 years)	20.4% (2009)	8.0%
4. Increase the percentage of adults who are neither overweight nor obese	34.6% (2009)	38.1%