

# **Cancer Prevention in Eastern North Carolina**

## **Task 3: Final Report**

### **A Cancer Profile of Eastern North Carolina**

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**Cancer Profile of Eastern North Carolina  
for Breast, Cervical, and Colorectal Cancers**

March 2012

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## Introduction

In 2009, cancer became the leading cause of death in North Carolina. [1] Some of the primary reasons for this shift include an aging population and successful management of cardiovascular disease (CVD), resulting in an increase in cancer incidence and a decline in CVD death rates. Historically, the eastern region of North Carolina has experienced greater cancer mortality than the rest of North Carolina as a whole.

The Department of Public Health, Brody School of Medicine at East Carolina University in collaboration with the North Carolina (NC) Comprehensive Cancer Program, Division of Public Health in the NC Department of Health and Human Services publishes the “Cancer Profile of Eastern North Carolina for Breast, Cervical, and Colorectal Cancers” with the aim to provide a brief characterization of the relationship between the demographic, social, and behavioral aspects of the region with the incidence and mortality of these screening-preventable cancers. Cancers summaries contained in this report are the focus of active statewide efforts to increase screening and reduce mortality.

For the purpose of the profile, Eastern North Carolina (ENC) is defined as a 29-county region which includes: Beaufort, Bertie, Camden, Carteret, Chowan, Craven, Currituck, Dare, Duplin, Edgecombe, Gates, Greene, Hertford, Hyde, Jones, Lenoir, Martin, Nash, Northampton, Onslow, Pamlico, Pasquotank, Perquimans, Pitt, Tyrrell, Washington, Wayne, and Wilson counties. The Rest of North Carolina (RNC) constitutes the remaining 71 counties.

The Cancer Profile is presented by region and 29-counties in alphabetic order. Each geographic area includes the following description:

- Economic,
- Demographic,
- Cancer surveillance ( incidence and mortality rates for breast, cervical, and colorectal cancers), and
- Risk factor information.

County-specific cancer incidence and mortality data are presented by gender and race, if available. Since this document is essentially descriptive, no attempt is made to compare or interpret data between individual counties and no conclusions are provided. We anticipate the reader of this profile may conclude that challenges remain to reduce the burden of cancer in eastern North Carolina that will involve individual, health system, and community-based interaction and collaboration to resolve.



## Methods

### Types of Cancers

The Cancer Profile focuses on three types of screening-preventable cancers: invasive female breast cancer, cervical cancer, and colorectal (CRC) cancers. Each of these cancers has screening modalities for cancer prevention and/or early detection. Rates for invasive cancer are reported; *in situ* cancer is omitted.

### Sources of data

Regional and state demographic and economic data came from several sources. Economic and demographic data were obtained from the North Carolina Department of Commerce [2] for largest industry based on numbers of persons employed (2011), county economic tier designations (2011); the U.S. Census Bureau [4,5] for median household income (2009), percent persons living below the poverty level (2009) in a county, population counts (2010); and the County Health Rankings website [6] for estimated high school graduation defined as percent of ninth grade cohort that graduates in four years (2007-2008), and percent uninsured defined as percent of adults 18-64 without insurance (2007). [6]

Cancer incidence and mortality rates for the region of ENC compared to the RNC were obtained from the NC Central Cancer Registry [7] while the county-specific cancer incidence and mortality data were obtained from the State Cancer Profiles, National Cancer Institute (NCI). [8] Healthy People 2010 data were provided by the Centers for Disease Control and Prevention (CDC). [9] Behavioral risk factor data were obtained from the Behavioral Risk Factor Surveillance System (BRFSS) available through three sources: the North Carolina State Center for Health Statistics (NC DHHS) [10], the County Health Ranking Website [6] and through the NC Health Data Explorer (East Carolina University, Center for Health Systems Research and Development) .[11]

### Dates of Data

Regional and state demographic and economic data came from several sources [2-6]. These data are range between the years of 2008 and 2010. Industry data were compiled by the North Carolina Department of Commerce [2] from data available through the U.S. Department of Labor, Bureau of Labor Statistics. [12] For example, the population totals are from 2010, median household income data are from 2009, while high school graduation rates are from 2008. Emphasis was placed on obtaining data from the same year(s) and source. Where possible, the most recent data were used for the Cancer Profile.

The latest available incidence and mortality data for ENC, collectively, (29 counties) and the rest of North Carolina (71 counties) were for the 5-year span of 2004-2008 (North Carolina Central Cancer Registry). [7] The latest available county-specific incidence rates were for 2004-2008, while the latest county-specific mortality rates were from 2003-2007 (State Cancer Profiles, NCI, CDC) .[8] Behavioral Risk Factor Surveillance System (BRFSS) data reported in the Cancer Profile ranges from the years 2003-2009. [6, 10, 11]

## Collection of Data

The team conducted a website search for data sources for county-level economic and demographic data. Cancer incidence and mortality rates and cancer risk factor data were identified from standard sources (Cancer Control Planet and BRFSS). [8,10] The website search resulted in the creation of an annotated list of potential data sources for the Cancer Profile spreadsheet. Additional resources were derived through contacts already established by the team. For county-specific data, a text template was designed to simplify and systematize the process of inputting county-level data. Utilizing chosen sources, spreadsheets were created and data extracted into Microsoft Excel that included data specific to each section of the county-specific template. For example, all demographic data for 29 counties were compiled into a spreadsheet so that rates and percentages could be easily entered into the text template. Similar spreadsheets were created for county-specific economic, cancer surveillance, and BRFSS data.

## Analysis of Data

Some data required further analysis or calculations to derive necessary information for the Cancer Profile. The measure of largest industry by county was derived from industry data that showed the numbers employed by type of industry per county. Data for Eastern North Carolina counties were sorted by number employed by industry (greatest to smallest). The industry with the highest number of employees was reported as the largest industry in the county. [2] Median household income for Eastern North Carolina was calculated by taking the median of the median for each county. [4] It is assumed that the county-specific median values were obtained from a sample and that the 29 county samples are from the same underlying distribution. County-specific estimated high school graduation rate was defined as percent of ninth grade cohort that graduated in four years (2007-2008). [6] The estimated high graduate rate was based on incomplete reporting by some school districts for counties in eastern NC. County Health rankings used public school survey data for the 2007-2008 school year to estimate graduate rates in 2010. [6] County-specific percent uninsured was defined as percent of adults 18-64 without insurance (2007). [6]

Utilizing 2010 Census data, the reporting of percent population by age and race in ENC was derived from totaling the individual county population counts and then calculating it as a percent of the total population of ENC.[5] For example, all total population counts for ENC counties were added together to get the total population of ENC (1,401,803, Census 2010). To derive the total African American population in ENC, the individual county population counts of African American persons were added together and then divided by the total ENC population for the percent African American in ENC.

For the region-specific data, crude (unadjusted) cancer incidence and mortality rates for ENC and RNC 71 counties was produced by the NC Central Cancer Registry, 2011.[7] Rates for the 5 year period 2004-2008 are for adults (age 20 and over) , and use bridged-race population estimates obtained from the CDC's National Center for Health Statistics, Vintage 2009. Rates for female breast cancer and cervix uteri cancer exclude males in population denominators. Regional age-specific rates are presented for white and African Americans. Hispanic ethnicity is included in white race. Rates based on counts less than 16 are unstable. ENC regional cancer rates by gender are age-adjusted as provided by the NC Center for Health Statistics.

County-specific cancer incidence (2004-2008) and mortality (2003-2007) rates were obtained from the State Cancer Profiles from the website Cancer Control P.L.A.N.E.T. (NCI, CDC). [8] The 95% Confidence Intervals (CIs) for the county rates provide a measure of how certain or uncertain the estimated rate is and can be used to generally assess how different one rate is from another. Some incidence and mortality rates were suppressed due to small numbers and instability of rate estimates. County-specific Incidence rates (cases per 100,000 population per year) are age-adjusted to the 2000 US standard population (19 age groups: <1, 1-4, 5-9, ... , 80-84, 85+). Rates are for invasive cancer only. For further information: <http://statecancerprofiles.cancer.gov/help/about/descriptions.html#incidence>.

Mortality rates were obtained from the State Cancer Profiles from the website Cancer Control P.L.A.N.E.T. These rates are provided by the National Vital Statistics System at the National Center for Health Statistics, CDC. [8] For further information: [http://statecancerprofiles.cancer.gov/help/about/descriptions.html#death\\_rates](http://statecancerprofiles.cancer.gov/help/about/descriptions.html#death_rates).

Staff from the Center for Health Systems Research and Development aggregated BRFSS data for the ENC section of the Profile (29 counties) and RNC (71 counties). [10]

## Limitations of Data

County industry data, (measured by numbers employed by industry type) used to determine largest industry may be suppressed in particular industries due to laws protecting employer confidentiality. [2] It is unknown how common this was by county.

Data on access to primary care are considered unreliable for the following reasons. Although the relationship between primary care providers and improved health outcomes is supported in the literature, this measure has a number of limitations. First, primary care providers are classified by county, but providers living on the edge of counties or who practice in multiple locations may see patient populations that reside in surrounding counties. Therefore, this measure may either over- or underestimate patient access to primary care in some situations since patient-provider interaction is not restricted by county boundaries. This estimate does, however, suggest access to medical care.

In the Cancer Profile, the cancer incidence and mortality rates for overall ENC cannot be compared to the cancer incidence and mortality rates of individual counties in ENC because the data come from two different sources [7,8], and each source uses different population denominators. NC Central Cancer Registry incidence and mortality rates, used for the Eastern North Carolina Profile are crude rates. [7] National Cancer Institute, State Cancer Profile incidence and mortality rates, used for the County-Level Profiles are age-adjusted. [8] The magnitude of differences between RNC and ENC rates may be compared, as well as rates between ENC counties; the regional rates cannot be compared to county rates.

Suppression of data due to small numbers may mean that the Cancer Profile reports less cancer incidence and mortality data for certain counties, especially in regards to specific gender and/or racial data.

BRFSS results for the ENC Profile as compared to County-Level profiles cannot be compared because of the use of different population denominators and because of different units of measure (in some instances). [6,10,11]

## Methods References

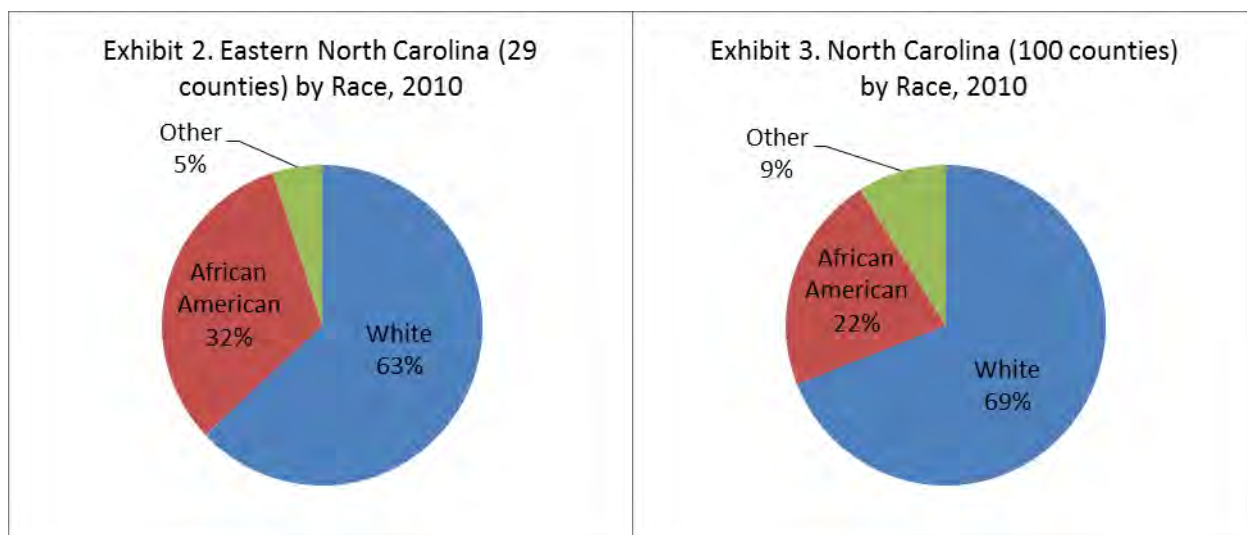
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The NC Department of Commerce annually ranks counties based on economic well being and assigns each a tier designation. The 40 most distressed counties are designated as Tier 1, the next 40 as Tier 2, and the 20 least distressed as Tier 3. For 2011, 15 of the 29 ENC counties were designated as Tier 1 (52%), most economically distressed; 11 ENC counties (38%) were designated as Tier 2; and 3 ENC counties (10%) were designated as Tier 3, least economically distressed. Overall, Eastern North Carolina counties comprise approximately 38% of all Tier 1 counties, the most economically distressed counties in the state. [4] Economically, several coastal counties in the region comprise a more affluent demographic group than counties in the interior coastal plain.

## Demographics

Based on data from the 2010 US Census, ENC had a total population of 1,401,803 persons. The population was 23.3% children (<18), 63.3% adults ages 18-64, and 13.4% elders (≥65). ENC was 32% African American (AA) (22% AA statewide) and 63% white (69% white statewide). Latinos/Hispanics (any race) comprised 6% of the population in Eastern North Carolina (8% statewide). The overall ENC population was 51% female and 49% male. [5]



Source: U.S. Census, 2010.

Source: U.S. Census, 2010.

## Burden of Cancer

For the years 2004-2008, there were 34,167 newly diagnosed cases of cancer in eastern North Carolina, and 184,700 new cases of cancer in the rest of North Carolina. The total all-cancer incidence rate for ENC was 7% higher than the all-cancer incidence rate for the rest of North Carolina (718.8 per 100,000 persons compared to 671.2 per 100,000 persons). [6] For cancer-specific ENC compared to RNC incidence and mortality rates see Exhibit 4 and 5.

During the same time period, of 84,936 statewide cancer deaths, 14,271 (17%) occurred in the 29 eastern North Carolina counties, and 70,665 deaths occurred in the rest of the state. The total all-cancer mortality rate for ENC was 16% higher than the all-cancer mortality rate for the rest of North

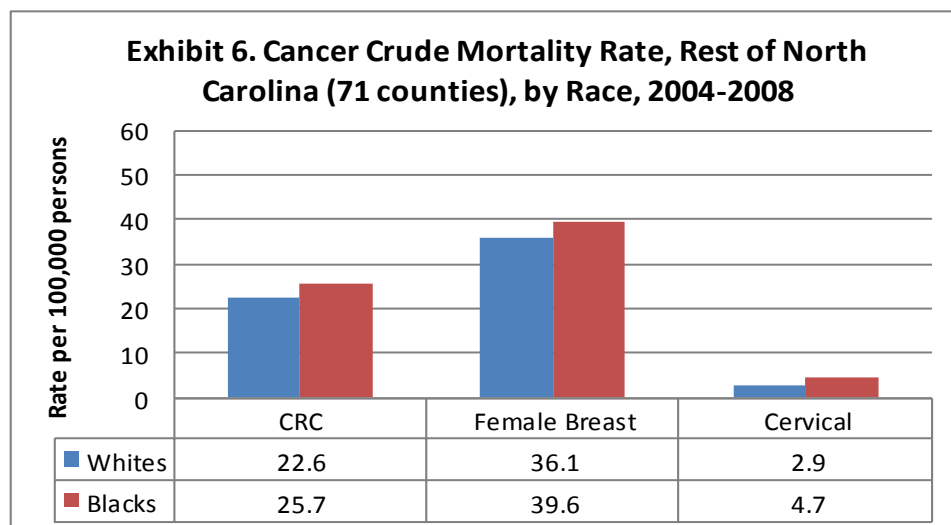


Carolina (300.2 per 100,000 persons compared to 256.8 per 100,000 persons). [6] For cancer-specific ENC vs. RNC incidence and mortality rates see Exhibit 4 and 5.

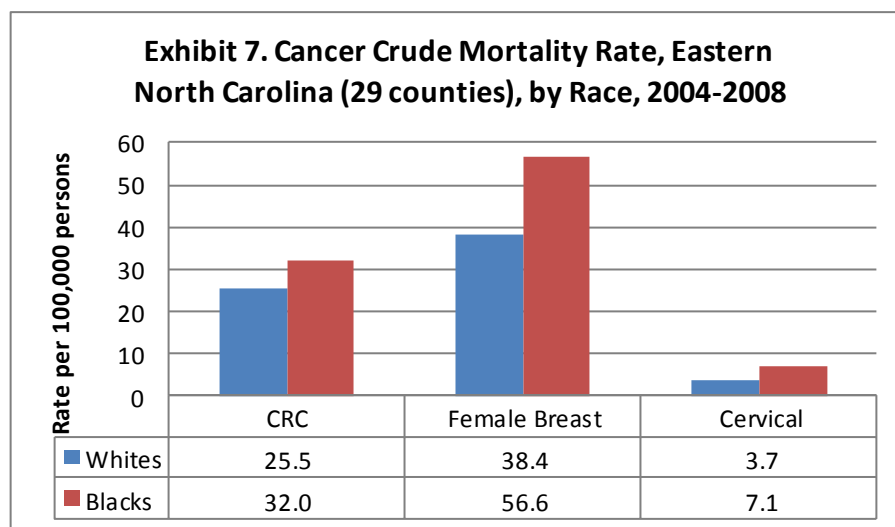
<b>Exhibit 4. Cancer Incidence Rates (crude) per 100,000 population, 2004-2008</b>		
Type of cancer	ENC-29	RNC-71
Colon/Rectum	76.2	64.3
Female Breast	201.5	181.4
Cervix Uteri	12.6	10.8
Source: NC Central Cancer Registry, 2011		

<b>Exhibit 5. Cancer Mortality Rates (crude) per 100,000 population, 2004-2008</b>		
Type of cancer	ENC-29	RNC-71
Colon/Rectum	27.3	22.7
Female Breast	44.0	36.1
Cervix Uteri	4.8	3.3
Source: NC Central Cancer Registry, 2011		

Racial disparities in cancer incidence and mortality rates appear to be more pronounced in the eastern region of the state. For example, in 71-county area of RNC, the African American breast cancer rate was 9% higher than the white rate (39.6 per 100,000 persons compared to 36.1 per 100,000 persons). In ENC, for 2004-2008, the African American breast cancer mortality rate was 47% higher than the white rate (56.6 per 100,000 persons compared to 38.4 per 100,000 persons). See Exhibit 6 and 7. [6]



Source: NC Central Cancer Registry, 2011



Source: NC Central Cancer Registry, 2011

## Cancer Surveillance

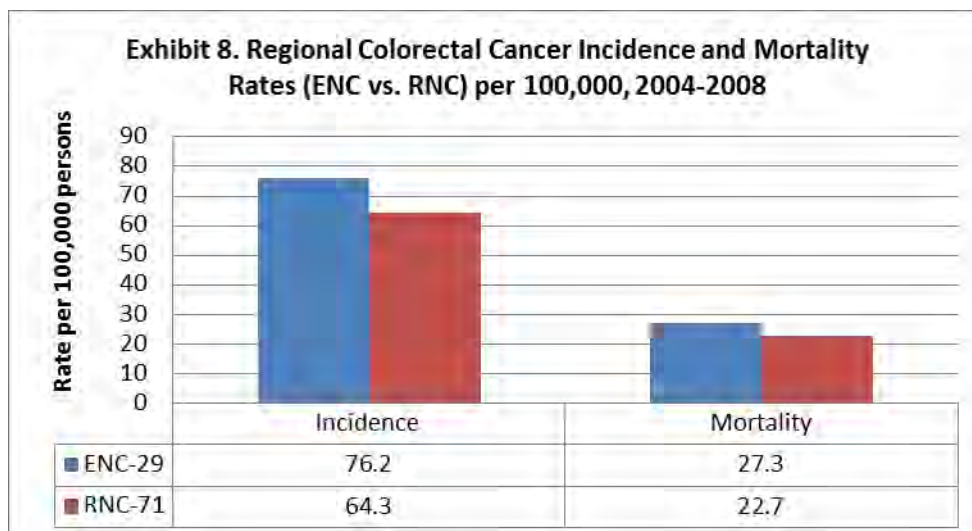
### Colon and Rectal Cancers (CRC)

The incidence and mortality rates of Colon and Rectal cancers in the 29 county eastern region of North Carolina were higher than the remaining 71 counties (RNC) for persons 20 years and over. For 2004-2008, the average crude incidence rate for colorectal cancer in ENC was 17% greater (expressed as a ratio) compared to RNC (76.2 per 100,000 persons compared to 64.3 per 100,000 persons). Similarly, the average crude mortality rate for colorectal cancer was 18% greater in ENC compared to RNC (27.3 per 100,000 persons compared to 22.7 per 100,000 persons) during 2004-2008.[6]

Within Eastern North Carolina, CRC incidence rates were slightly higher for African Americans (1% higher) than for whites (77.6 per 100,000 persons compared to 76.6 per 100,000 persons) for 2004-2008. CRC mortality rates were 25% greater for African Americans than for whites (32.0 per 100,000 persons compared to 25.5 per 100,000 persons) for the same time period.

By gender, ENC CRC incidence rates were higher for males (38% higher) than for females (63.3 per 100,000 persons compared to 43.1 per 100,000 persons) for 2004-2008. CRC mortality rates among males compared to females were 47% greater (23.2 per 100,000 compared to 15.8 per 100,000 persons) for 2004-2008.[6]



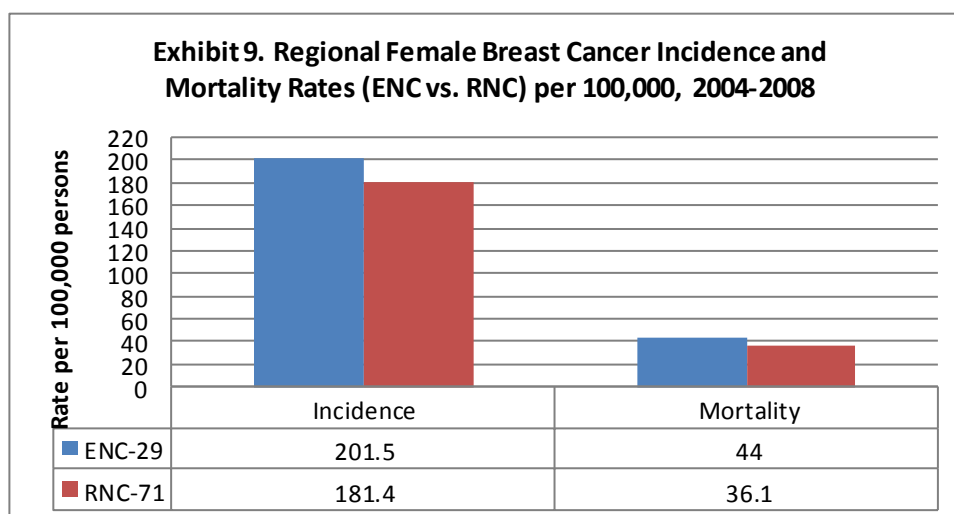


Source: NC Central Cancer Registry, 2011

### Female Breast Cancer

The incidence and mortality rates of female breast cancer in the 29 county eastern region of North Carolina are higher than the remaining 71 counties (RNC) for persons 20 years and over. For 2004-2008, the average crude incidence rate for breast cancer in ENC was 11% greater (expressed as a ratio) compared to RNC (201.5 per 100,000 women compared to 181.4 per 100,000 women). Similarly, the average crude mortality rate for breast cancer was 20% greater in ENC compared to RNC (44.0 per 100,000 women compared to 36.1 per 100,000 women) during 2004-2008. [6]

Within Eastern North Carolina, breast cancer incidence rates were 15% greater for white women than for African American women (212.1 per 100,000 women compared to 183.4 per 100,000) for 2004-2008. However, breast cancer mortality rates were 38% higher among African American women than white women for the same time period (56.6 per 100,000 women compared to 38.4 per 100,000). [6]

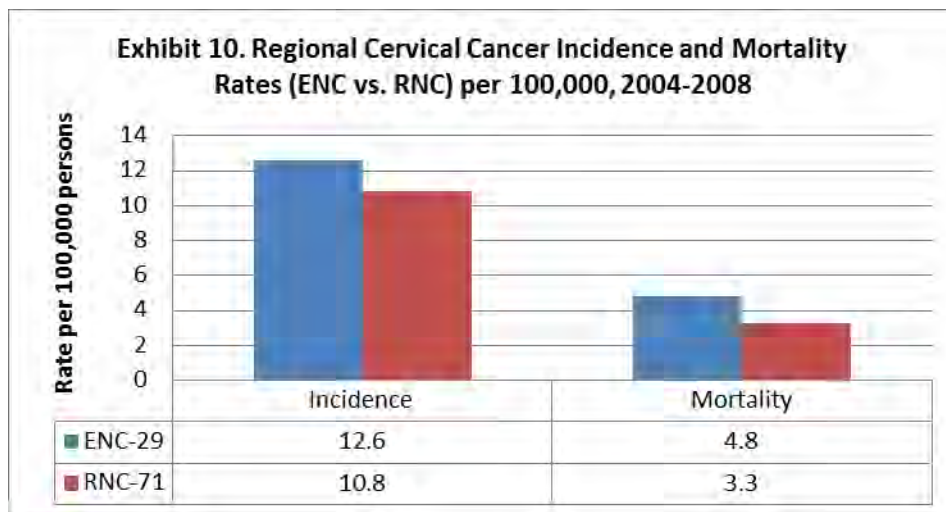


Source: NC Central Cancer Registry, 2011

### Cervix Uteri Cancer

The incidence and mortality rates of cervical cancer in 29 county eastern region of North Carolina are higher than the remaining 71 counties (RNC) for women 20 years and over. For 2004-2008, the average crude incidence rate for cervical cancer in ENC was 15% greater (expressed as a ratio) compared to RNC (12.6 per 100,000 women compared to 10.8 per 100,000 women). Similarly, the average crude mortality rate for cervical cancer was 37% greater in ENC compared to RNC (4.8 per 100,000 women compared to 3.3 per 100,000 women) during 2004-2008.[6]

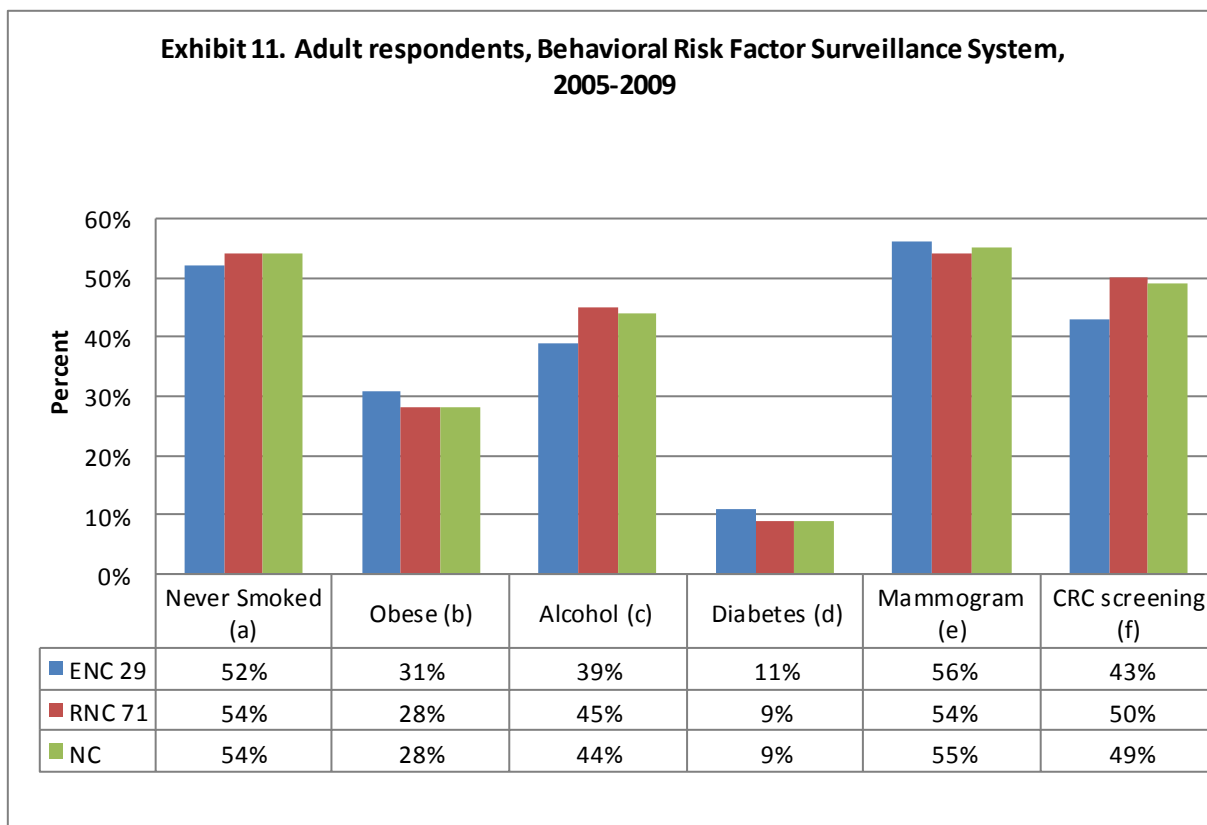
Within Eastern North Carolina, cervical cancer incidence rates were 17% higher (expressed as a ratio) for African American women than for white women (14.0 per 100,000 women compared to 11.8 per 100,000 women) for 2004-2008. Cervical cancer mortality rates were almost 2-times greater among African American women than white women for the same time period (7.1 per 100,000 women compared to 3.7 per 100,000 women).[6]



Source: NC Central Cancer Registry, 2011

## Cancer Risk Factors

Risk factors for cancer include obesity, regular alcohol consumption, and exposure to active and passive tobacco exposure. BRFSS, a population-based, national telephone survey conducted by the CDC, found that persons in ENC were more obese (31% vs 28%) and had a higher prevalence of diabetes (11% vs 9%) than persons in the rest of North Carolina. Eastern North Carolina residents were less likely to have consumed alcohol in the past 30 days (39% vs 45%) and never smoked tobacco products (52% vs 54%). Almost 56% of ENC female residents reported a mammogram within the past two years. Eastern North Carolina residents were less likely than the rest of North Carolina to have received a blood stool test for CRC screening (43% vs. 50%).[7]



<sup>a</sup> Never smoked, 2005-2009

<sup>b</sup> Percent obese, 2005-2009

<sup>c</sup> During the past 30 days, have you had at least one drink of any alcoholic beverage such as beer, wine, a malt beverage, or liquor?, 2005-2009

<sup>d</sup> Even told by doctor to have diabetes, 2005-2009

<sup>e</sup> Mammogram in last two years, woman any age, 2006, 2008

<sup>f</sup> Colorectal Cancer Screening (Age 50+), A blood stool test is a test that may use a special kit at home to determine whether the stool contains blood. Have you ever had this test using a home kit?, 2006, 2008.

Source: Behavioral Risk Factor Surveillance System, Survey Results, 2005-2009

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# County-Level Profiles

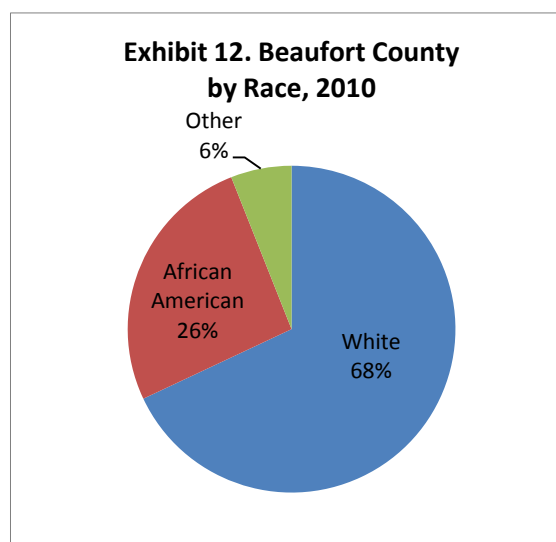
## BEAUFORT COUNTY

### Social and Economic Indicators

Based on number of persons employed, in 2011 the largest industry in Beaufort County was manufacturing.[1] The median household income (2009) was \$38,829 for a family of four, compared to \$43,754 statewide. The percentage of persons living below the poverty level in 2009 was 19%, compared to 16% statewide.[2] Unemployment (civilian, not in labor force, 2009) in Beaufort County was 11%, compared to 10.6% statewide. The estimated high school graduation rate (2010) was 75%, based on the cohort of ninth graders that graduated from high school in four years, compared to 78% in North Carolina. In 2007, the adult uninsured population ( $\geq$  age 18-64) was 19%, compared to 21% statewide. Forty-seven physicians provided primary care in Beaufort County (2008), which was a population to primary care physician ratio of 986 to 1.[3]

### Demographics:

Based on data from the 2010 U.S. Census, Beaufort County had a total population of 47,759 with 58 persons per square mile. The county population was 22% children (<18), 60% adults ages 18-64, and 18% elders. Beaufort County was 26% African American (AA) (22% AA statewide) and 68% white (69% white statewide). Latinos/Hispanics (any race) comprised 7% of the population in Beaufort County (8% statewide) (Exhibit 12). The overall county population was 52% female and 48% male in 2010.[2]



Source: U.S. Census Bureau, State and County Quickfacts: North Carolina

### Cancer Surveillance

#### Colon and Rectal Cancers (CRC)

##### *Incidence*

In Beaufort County, the CRC age-adjusted incidence rate for 2004-2008 was 62.1 (95% CI 53.4, 71.9) per 100,000, which was higher than the overall statewide CRC rate of 46.8 (95% CI 46.1, 47.4). On average, there were 38 new cases of CRC diagnosed in Beaufort County, and 4,720 new cases across the state for 2004-2008. The CRC age-adjusted incidence rates per 100,000 were 67.8 (95% CI 54.0, 84.2) for males and 59.1 (95% CI 47.8, 72.6) for females. By race, the CRC age-adjusted incidence rates per 100,000 were 62.2 (95% CI 52.1, 73.9) for whites, and 62.0 (95% CI 45.2, 83.3) for African Americans.[4]

##### *Mortality*

In Beaufort County, CRC mortality rates for 2003-2007 were stable and were similar to the North Carolina rates (all races, both sexes). The CRC mortality rate (2003-2007) was 16.0 (95% CI 11.7, 21.6) per 100,000, which was lower than the overall statewide CRC mortality rate of 17.3 (95% CI 17.0, 17.7). Beaufort County did not meet the Healthy People 2010 mortality rate goal (13.9 CRC deaths per

100,000).[4][5] The average annual percentage change in death rates declined at -0.1 percent (95% CI -1.3, 1.1) for 2003-2007. The CRC mortality rates (2003-2007) by gender were 14.6 (95% CI 9.2, 22.2) for females and 19.9 (95% CI 12.2, 30.5) for males per 100,000. The CRC mortality rate (2003-2007) per 100,000 by race was 16.2 (95% CI 11.3, 22.9) for whites, and the rate for African Americans was suppressed due to small numbers of deaths.[4]

<b>Exhibit 13. Colorectal Cancer Incidence and Mortality Rates per 100,000 persons</b>		
	Beaufort County	North Carolina
CRC Incidence (2004-2008)*	62.1	46.8
CRC Mortality (2003-2007)	16.0	17.3

\*Age-Adjusted

Source: NCI, State Cancer Profiles

### Female Breast

#### *Incidence*

In Beaufort County, the breast cancer (female, invasive) age-adjusted incidence rate for 2004-2008 was 124.8 (95% CI 107.7, 144.2) per 100,000, which was higher than the overall statewide breast cancer rate of 123.3 (95% CI 121.9-124.7). On average, there were 41 new cases of invasive female breast cancer diagnosed in Beaufort County and 6,189 new cases across the state for 2004-2008. Female breast cancer age-adjusted incidence rates were 123.4 (95% CI 103.9, 146.0) for whites, and 125.5 (95% CI 92.0, 167.5) for African Americans.[4]

#### *Mortality*

In Beaufort County, female breast cancer mortality rates for 2003-2007 increased and were similar to the North Carolina rates (all races). The female breast cancer mortality rate (2003-2007) was 25.8 (95% CI 18.4, 35.4) per 100,000, which was higher than the overall statewide female breast cancer mortality rate of 24.8. Beaufort County did not meet the Healthy People 2010 mortality rate goal (22.3 female breast cancer deaths per 100,000).[4][5] The average annual percentage change in death rates was stable with no percentage change in the county rate over the five year interval (95% CI -1.5, 1.4) for 2003-2007. The female breast cancer mortality rate (2003-2007) per 100,000 by race was 24.4 (95% CI 16.3, 35.7) for whites, and the rate for African Americans was suppressed due to small numbers of deaths.[4]

<b>Exhibit 14. Invasive Female Breast Cancer Incidence and Mortality Rates per 100,000 persons</b>		
	Beaufort County	North Carolina
Breast Cancer Incidence (2004-2008)*	124.8	123.3
Breast Cancer Mortality (2003-2007)	25.8	24.8

\*Age-Adjusted

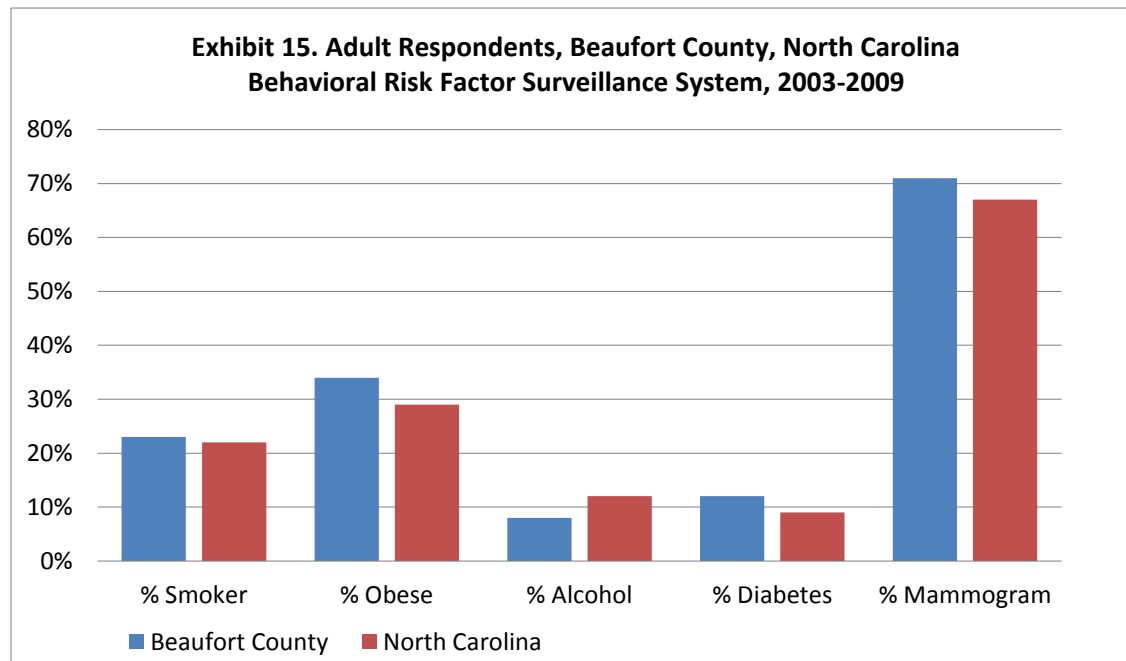
Source: NCI, State Cancer Profiles

## Cervix

See Eastern North Carolina rates. Beaufort County data for cervical cancer incidence and mortality rates were suppressed due to small numbers.

## Risk Factors and Screening

Beaufort county residents reported higher obesity, smoking, and obesity prevalence than NC statewide. Mammography coverage was higher than statewide in Medicare-enrolled women.



Source: County Health Rankings, North Carolina County Health Rankings; North Carolina Data Health Explorer; NC DHHS, SCHS, BRFSS Survey Results, 2005-2009

## Exhibit 16. Adult Respondents, Beaufort County, North Carolina Behavioral Risk Factor Surveillance System, 2003-2009

	Factor				
	% Smoker <sup>a</sup>	% Obese <sup>b</sup>	% Alcohol <sup>c</sup>	% Diabetes <sup>d</sup>	% Mammogram <sup>e</sup>
Beaufort County	23%	34%	8%	12%	71%
North Carolina	22%	29%	12%	9%	67%

a. 2003-2009, Percent of adults that report smoking  $\geq 100$  cigarettes and currently smoking [3]

b. 2008, Percent of adults that report a BMI  $\geq 30$  [3]

c. 2003-2009, Percent of the adult population that reports either binge drinking, defined as consuming more than 4 (women) or 5 (men) alcoholic beverages on a single occasion in the past 30 days, or heavy drinking, defined as drinking more than 1 (women) or 2 (men) drinks per day on average [3]

d. 2005-2009, Percent, Has a doctor told you that you have diabetes, Yes response. [6][7]

e. 2006-2007, Percent of female Medicare enrollees age 67-69 that had at least one mammogram over a two-year period [3]

Source: County Health Rankings, North Carolina County Health Rankings; North Carolina Data Health Explorer; NC DHHS, SCHS, BRFSS Survey Results, 2005-2009



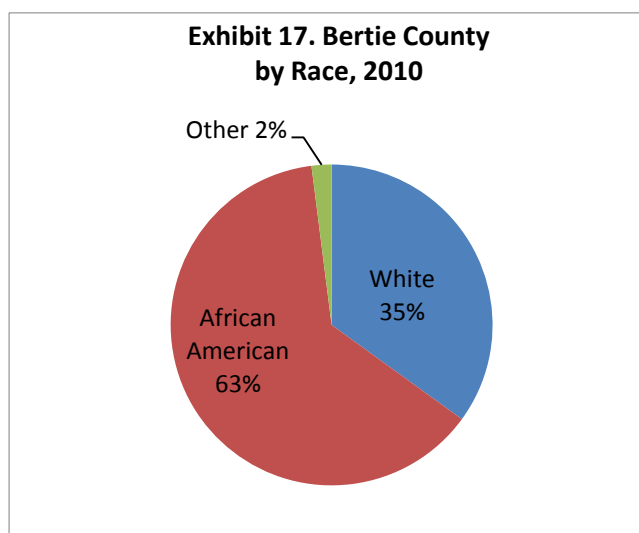
## BERTIE COUNTY

### Social and Economic Indicators

Based on number of persons employed, in 2011 the largest industry in Bertie County was manufacturing.[1] The median household income (2009) was \$29,693 for a family of four, compared to \$43,754 statewide. The percentage of persons living below the poverty level in 2009 was 24%, compared to 16% statewide.[2] Unemployment (civilian, not in labor force, 2009) in Bertie County was 11%, compared to 10.6% statewide. The estimated high school graduation rate (2010) was 74%, based on the cohort of ninth graders that graduated from high school in four years, compared to 78% in North Carolina. In 2007, the adult uninsured population ( $\geq$  age 18-64) was 18%, compared to 21% statewide. Nine physicians provided primary care in Bertie County (2008), which was a population to primary care physician ratio of 2,163 to 1.[3]

### Demographics

Based on data from the 2010 U.S. Census, Bertie County had a total population of 21,282 with 30 persons per square mile. The county population was 21% children (<18), 62% adults ages 18-64, and 17% elders. Bertie County was 63% African American (AA) (22% AA statewide) and 35% white (69% white statewide). Latinos/Hispanics (any race) comprised 1% of the population in Bertie County (8% statewide) (Exhibit 17). The overall county population was 51% female and 49% male.[2]



Source: U.S. Census Bureau, State and County Quickfacts: North Carolina

### Cancer Surveillance

#### Colon and Rectal Cancers (CRC)

##### *Incidence*

In Bertie County, the CRC age-adjusted incidence rate for 2004-2008 was 66.4 (95% CI 52.4, 83.1) per 100,000, which was higher than the overall statewide CRC rate of 46.8 (95% CI 46.1, 47.4). On average, there were 16 new cases of CRC diagnosed in Bertie County, and 4,720 new cases across the state for 2004-2008. The CRC age-adjusted incidence rates per 100,000 were 62.5 (95% CI 42.8, 88.7) for males and 68.8 (95% CI 50.0, 93.0) for females. By race, the CRC age-adjusted incidence rates per 100,000 were 49.4 (95% CI 32.6, 73.7) for whites, and 77.5 (95% CI 57.5, 102.4) for African Americans.[4]

##### *Mortality*

In Bertie County, CRC mortality rates for 2003-2007 were stable and similar to the North Carolina rates (all races, both sexes). The CRC mortality rate (2003-2007) was 26.5 (95% CI 17.9, 37.9) per 100,000,

which was higher than the overall statewide CRC mortality rate of 17.3 (95% CI 17.0, 17.7). Bertie County did not meet the Healthy People 2010 mortality rate goal (13.9 CRC deaths per 100,000).[4][5] The average annual percentage change in death rates increased at 0.2 percent (95% CI, 1.1, 1.6) for 2003-2007. The CRC mortality rate (2003-2007) by gender was 27.1 (95% CI 16.1, 43.5) for females and the rate for males was suppressed due to small numbers of deaths. The CRC mortality rate (2003-2007) per 100,000 by race was suppressed for whites due to a small number of deaths, and the rate for African Americans was 25.3 (95% CI 14.4, 41.3).[4]

<b>Exhibit 18. Colorectal Cancer Incidence and Mortality Rates per 100,000 persons</b>		
	Bertie County	North Carolina
CRC Incidence (2004-2008)*	66.4	46.8
CRC Mortality (2003-2007)	26.5	17.3

\*Age-Adjusted

Source: NCI, State Cancer Profiles

### Female Breast

#### *Incidence*

In Bertie County, the breast cancer (female, invasive) age-adjusted incidence rate for 2004-2008 was 127.0 (95% CI 100.9, 158.2) per 100,000, which was higher than the overall statewide breast cancer rate of 123.3 (95% CI 121.9-124.7). On average, there were 17 new cases of invasive female breast cancer diagnosed in Bertie County and 6,189 new cases across the state for 2004-2008. Female breast cancer age-adjusted incidence rates were 109.4 (95% CI 72.1, 162.3) for whites, and 142.4 (95% CI 106.9, 186.6) for African Americans.[4]

#### *Mortality*

In Bertie County, female breast cancer mortality rates for 2003-2007 increased and were similar to the North Carolina rates (all races). The female breast cancer mortality rate (2003-2007) was 37.4 (95% CI 24.0, 56.0) per 100,000, which was higher than the overall statewide female breast cancer mortality rate of 24.8. Bertie County did not meet the Healthy People 2010 mortality rate goal (22.3 female breast cancer deaths per 100,000).[4][5] The average annual percentage change in death rates increased at 0.3 percent (95% CI -1.5, 2.1) for 2003-2007. The female breast cancer mortality rate (2003-2007) per 100,000 by race was suppressed for whites due to small numbers of deaths, and the rate for African Americans was 40.9 per 100,000 (95% CI 23.2, 67.3).[4]

<b>Exhibit 19. Invasive Female Breast Cancer Incidence and Mortality Rates per 100,000 persons</b>		
	Bertie County	North Carolina
Breast Cancer Incidence (2004-2008)*	127.0	123.3
Breast Cancer Mortality (2003-2007)	37.4	24.8

\*Age-Adjusted

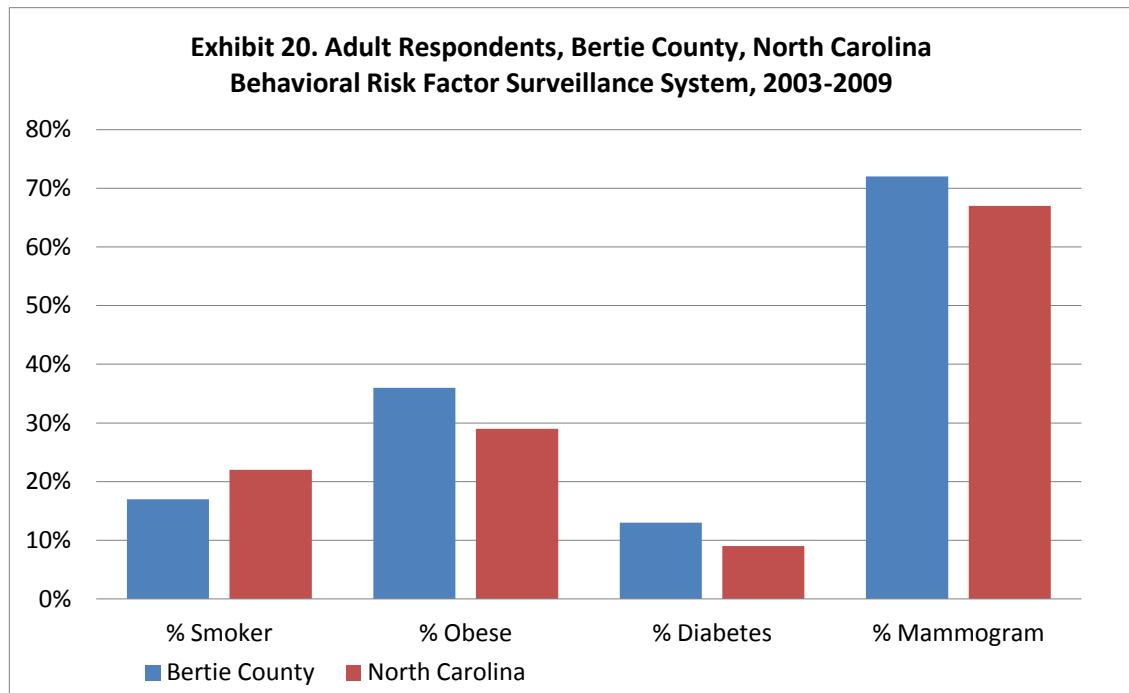
Source: NCI, State Cancer Profiles

## Cervix

See Eastern North Carolina rates. Bertie County data for cervical cancer incidence and mortality rates were suppressed due to small numbers.

## Risk Factors and Screening

Bertie county residents were more obese with more diabetics compared to NC statewide. Medicare eligible Medicare-enrolled women had higher mammography prevalence than statewide.



\*Data were not available for alcohol behavioral factor at the county level.

Source: County Health Rankings, North Carolina County Health Rankings;  
North Carolina Data Health Explorer; NC DHHS, SCHS, BRFSS Survey Results, 2005-2009

## Exhibit 21. Adult Respondents, Bertie County, North Carolina Behavioral Risk Factor Surveillance System, 2003-2009

	Factor				
	% Smoker <sup>a</sup>	% Obese <sup>b</sup>	% Alcohol <sup>c</sup>	% Diabetes <sup>d</sup>	% Mammogram <sup>e</sup>
Bertie County	17%	36%	*	13%	72%
North Carolina	22%	29%	12%	9%	67%

a. 2003-2009, Percent of adults that report smoking  $\geq 100$  cigarettes and currently smoking [3]

b. 2008, Percent of adults that report a BMI  $\geq 30$  [3]

c. 2003-2009, Percent of the adult population that reports either binge drinking, defined as consuming more than 4 (women) or 5 (men) alcoholic beverages on a single occasion in the past 30 days, or heavy drinking, defined as drinking more than 1 (women) or 2 (men) drinks per day on average [3]

d. 2005-2009, Percent, Has a doctor told you that you have diabetes, Yes response. [6][7]

e. 2006-2007, Percent of female Medicare enrollees age 67-69 that had at least one mammogram over a two-year period [3]

\*Data unavailable

Source: County Health Rankings, North Carolina County Health Rankings;  
North Carolina Data Health Explorer; NC DHHS, SCHS, BRFSS Survey Results, 2005-2009

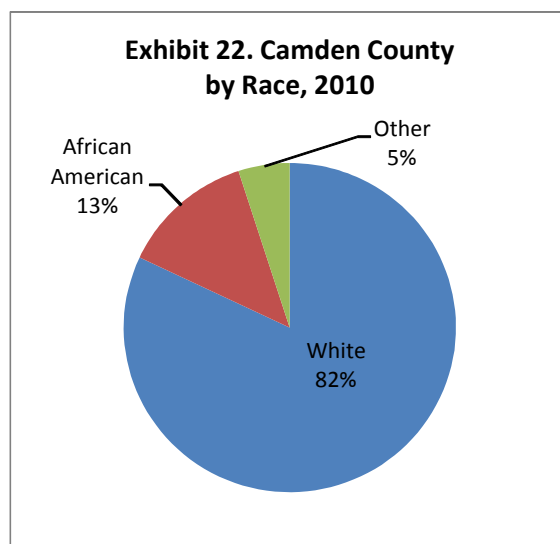
## CAMDEN COUNTY

### Social and Economic Indicators

Based on number of persons employed, in 2011 the largest industry in Camden County was retail trade.[1] The median household income (2009) was \$55,985 for a family of four, compared to \$43,754 statewide. The percentage of persons living below the poverty level in 2009 was 9%, compared to 16% statewide.[2] Unemployment (civilian, not in labor force, 2009) in Camden County was 8%, compared to 10.6% statewide. The estimated high school graduation rate (2010) was 80%, based on the cohort of ninth graders that graduated from high school in four years, compared to 78% in North Carolina. In 2007, the adult uninsured population ( $\geq$  age 18-64) was 26%, compared to 21% statewide. Two physicians provided primary care in Camden County (2008), which was a population to primary care physician ratio of 4,816 to 1.[3]

### Demographics

Based on data from the 2010 U.S. Census, Camden County had a total population of 9,980 with 42 persons per square mile. The county population was 26% children (<18), 61% adults ages 18-64, and 13% elders. Camden County was 13% African American (AA) (22% AA statewide) and 82% white (69% white statewide). Latinos/Hispanics (any race) comprised 2% of the population in Camden County (8% statewide) (Exhibit 22). The overall county population was 50% female and 50% male.[2]



Source: U.S. Census Bureau, State and County Quickfacts: North Carolina

### Cancer Surveillance

#### Colon and Rectal Cancers (CRC)

##### *Incidence*

In Camden County, the CRC age-adjusted incidence rate for 2004-2008 was 55.6 (95% CI 35.7, 82.6) per 100,000, which was higher than the overall statewide CRC rate of 46.8 (95% CI 46.1, 47.4). On average, there were 5 new cases of CRC diagnosed in Camden County, and 4,720 new cases across the state for 2004-2008. The CRC age-adjusted incidence rates per 100,000 for males and females were suppressed due to small numbers of cases. By race, the CRC age-adjusted incidence rate per 100,000 was 48.6 (95% CI 28.6, 77.5) for whites, and the rate for African Americans was suppressed due to small numbers of cases.[4]

### *Mortality*

In Camden County, CRC mortality rates (2003-2007) per 100,000 were suppressed due to small numbers of deaths.[4]

<b>Exhibit 23. Colorectal Cancer Incidence and Mortality Rates per 100,000 persons</b>		
	Camden County	North Carolina
CRC Incidence (2004-2008)*	55.6	46.8
CRC Mortality (2003-2007)	**	17.3

\*Age-Adjusted

\*\*Suppressed due to small numbers

Source: NCI, State Cancer Profiles

### Female Breast

#### *Incidence*

In Camden County, the breast cancer (female, invasive) age-adjusted incidence rate for 2004-2008 was 161.6 (95% CI 116.3, 219.7) per 100,000, which was lower than the overall statewide breast cancer rate of 123.3 (95% CI 121.9-124.7). On average, there were 8 new cases of invasive female breast cancer diagnosed in Camden County and 6,189 new cases across the state for 2004-2008. The female breast cancer age-adjusted incidence rate was 178.1 (95% CI 124.9, 247.2) for whites, and the rate for African Americans was suppressed due to small numbers of cases.[4]

#### *Mortality*

In Camden County, female breast cancer mortality rates (2003-2007) per 100,000 were suppressed due to small numbers of deaths.[4]

<b>Exhibit 24. Invasive Female Breast Cancer Incidence and Mortality Rates per 100,000 persons</b>		
	Camden County	North Carolina
Breast Cancer Incidence (2004-2008)*	161.6	123.3
Breast Cancer Mortality (2003-2007)	**	24.8

\*Age-Adjusted

\*\*Suppressed due to small numbers

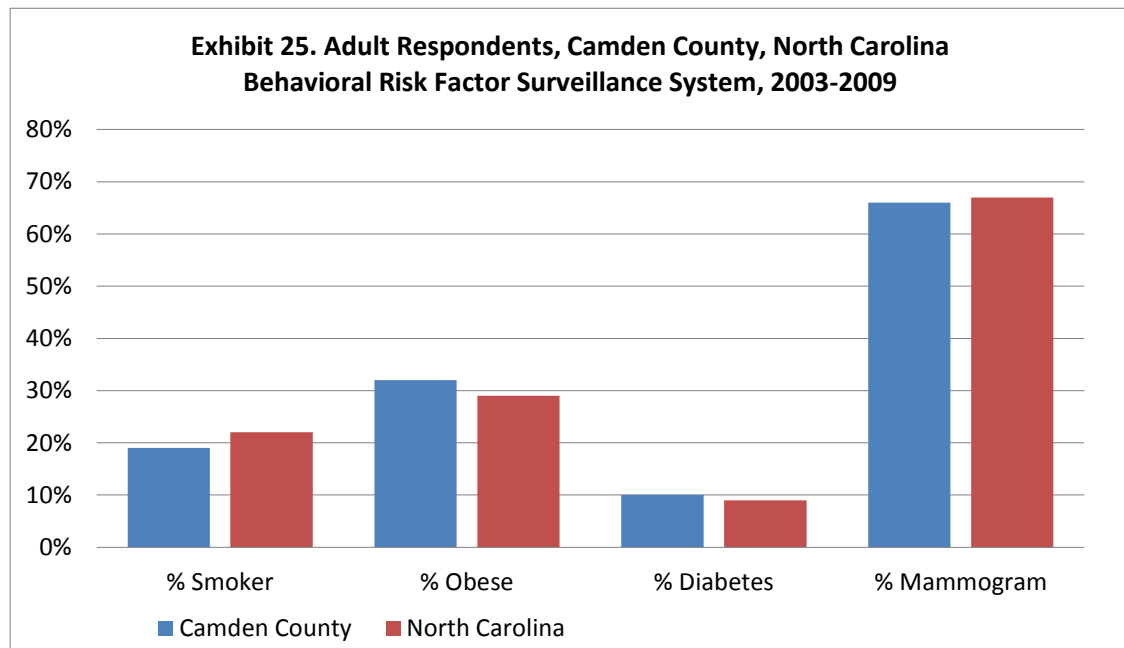
Source: NCI, State Cancer Profiles

### Cervix

See Eastern North Carolina rates. Camden County data for cervical cancer incidence and mortality rates were suppressed due to small numbers.

## Risk Factors and Screening

Camden county residents had a higher prevalence of obesity and diabetes compared to NC statewide, but report less smoking.



\*Data were not available for alcohol behavioral factor at the county level.

Source: County Health Rankings, North Carolina County Health Rankings;  
North Carolina Data Health Explorer; NC DHHS, SCHS, BRFSS Survey Results, 2005-2009

## Exhibit 26. Adult Respondents, Camden County, North Carolina Behavioral Risk Factor Surveillance System, 2003-2009

	Factor				
	% Smoker <sup>a</sup>	% Obese <sup>b</sup>	% Alcohol <sup>c</sup>	% Diabetes <sup>d</sup>	% Mammogram <sup>e</sup>
Camden County	19%	32%	*	10%	66%
North Carolina	22%	29%	12%	9%	67%

a. 2003-2009, Percent of adults that report smoking  $\geq 100$  cigarettes and currently smoking [3]

b. 2008, Percent of adults that report a BMI  $\geq 30$  [3]

c. 2003-2009, Percent of the adult population that reports either binge drinking, defined as consuming more than 4 (women) or 5 (men) alcoholic beverages on a single occasion in the past 30 days, or heavy drinking, defined as drinking more than 1 (women) or 2 (men) drinks per day on average [3]

d. 2005-2009, Percent, Has a doctor told you that you have diabetes, Yes response. [6][7]

e. 2006-2007, Percent of female Medicare enrollees age 67-69 that had at least one mammogram over a two-year period [3]

\*Data unavailable

Source: County Health Rankings, North Carolina County Health Rankings;  
North Carolina Data Health Explorer; NC DHHS, SCHS, BRFSS Survey Results, 2005-2009

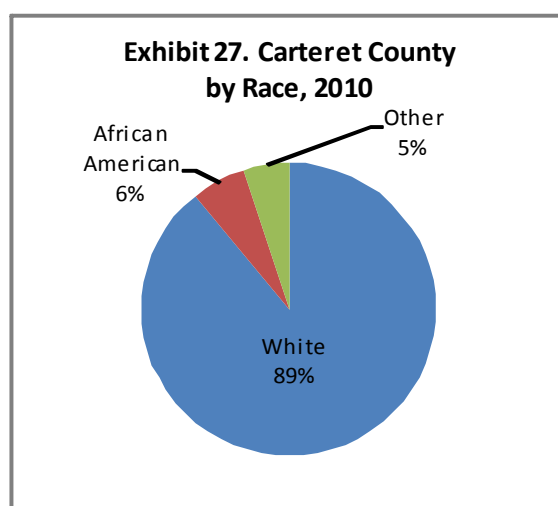
## CARTERET COUNTY

### Social and Economic Indicators

Based on number of persons employed, in 2011 the largest industry in Carteret County was retail trade.[1] The median household income (2009) was \$44,036 for a family of four, compared to \$43,754 statewide. The percentage of persons living below the poverty level in 2009 was 13%, compared to 16% statewide.[2] Unemployment (civilian, not in labor force, 2009) in Carteret County was 8%, compared to 10.6% statewide. The estimated high school graduation rate (2010) was 79%, based on the cohort of ninth graders that graduated from high school in four years, compared to 78% in North Carolina. In 2007, the adult uninsured population ( $\geq$  age 18-64) was 22%, compared to 21% statewide. Seventy-three physicians provided primary care in Carteret County (2008), which was a population to primary care physician ratio of 871 to 1.[3]

### Demographics

Based on data from the 2010 U.S. Census, Carteret County had a total population of 66,469 with 131 persons per square mile. The county population was 19% children (<18), 62% adults ages 18-64, and 19% elders. Carteret County was 6% African American (AA) (22% AA statewide) and 89% white (69% white statewide). Latinos/Hispanics (any race) comprised 3% of the population in Carteret County (8% statewide) (Exhibit 27). The overall county population was 51% female and 49% male.[2]



Source: U.S. Census Bureau, State and County Quickfacts: North Carolina

### Cancer Surveillance

#### Colon and Rectal Cancers (CRC)

##### *Incidence*

In Carteret County, the CRC age-adjusted incidence rate for 2004-2008 was 45.9 (95% CI 39.6, 52.9) per 100,000, which was lower than the overall statewide CRC rate of 46.8 (95% CI 46.1, 47.4). On average, there were 40 new cases of CRC diagnosed in Carteret County, and 4,720 new cases across the state for 2004-2008. The CRC age-adjusted incidence rates per 100,000 were 58.0 (95% CI 47.6, 70.2) for males and 35.2 (95% CI 28.0, 44.0) for females. By race, the CRC age-adjusted incidence rate per 100,000 was 45.0 (95% CI 38.7, 52.2) for whites, and the rate for African Americans was suppressed due to small numbers of cases.[4]

##### *Mortality*

In Carteret County, CRC mortality rates for 2003-2007 declined and were similar to the North Carolina rates (all races, both sexes). The CRC mortality rate (2003-2007) was 18.3 (95% CI 14.4, 23.0) per 100,000, which was higher than the overall statewide CRC mortality rate of 17.3 (95% CI 17.0, 17.7). Carteret County did not meet the Healthy People 2010 mortality rate goal (13.9 CRC deaths per

100,000).[4][5] The average annual percentage change in death rates declined at -1.3 percent (95% CI - 2.4, -0.1) for 2003-2007. The CRC mortality rates (2003-2007) by gender were 14.9 (95% CI 10.3, 21.1) for females and 22.1 (95% CI 15.7, 30.3) for males per 100,000. The CRC mortality rate (2003-2007) per 100,000 by race was 17.4 (95% CI 13.5, 22.2) for whites, and the rate for African Americans was suppressed due to small numbers of deaths.[4]

<b>Exhibit 28. Colorectal Cancer Incidence and Mortality Rates per 100,000 persons</b>		
	Carteret County	North Carolina
CRC Incidence (2004-2008)*	45.9	46.8
CRC Mortality (2003-2007)	18.3	17.3

\*Age-Adjusted

Source: NCI, State Cancer Profiles

### Female Breast

#### *Incidence*

In Carteret County, the breast cancer (female, invasive) age-adjusted incidence rate for 2004-2008 was 129.0 (95% CI 114.0, 145.7) per 100,000, which was higher than the overall statewide breast cancer rate of 123.3 (95% CI 121.9-124.7). On average, there were 57 new cases of invasive female breast cancer diagnosed in Carteret County and 6,189 new cases across the state for 2004-2008. The female breast cancer age-adjusted incidence rate was 131.7 (95% CI 116.0, 149.2) for whites, and the rate for African Americans was suppressed due to small numbers of cases.[4]

#### *Mortality*

In Carteret County, female breast cancer mortality rates for 2003-2007 increased and were similar to the North Carolina rates (all races). The female breast cancer mortality rate (2003-2007) was 24.6 (95% CI 18.4, 32.4) per 100,000, which was lower than the overall statewide female breast cancer mortality rate of 24.8. Carteret County did not meet the Healthy People 2010 mortality rate goal (22.3 female breast cancer deaths per 100,000).[4][5] The average annual percentage change in death rates declined at -0.9 percent (95% CI -2.1, 0.3) for 2003-2007. The female breast cancer mortality rate (2003-2007) per 100,000 was 23.7 (95% CI 17.5, 31.7) for whites, and the rate for African Americans was suppressed due to small numbers of deaths.[4]

<b>Exhibit 29. Invasive Female Breast Cancer Incidence and Mortality Rates per 100,000 persons</b>		
	Carteret County	North Carolina
Breast Cancer Incidence (2004-2008)*	129.0	123.3
Breast Cancer Mortality (2003-2007)	24.6	24.8

\*Age-Adjusted

Source: NCI, State Cancer Profiles

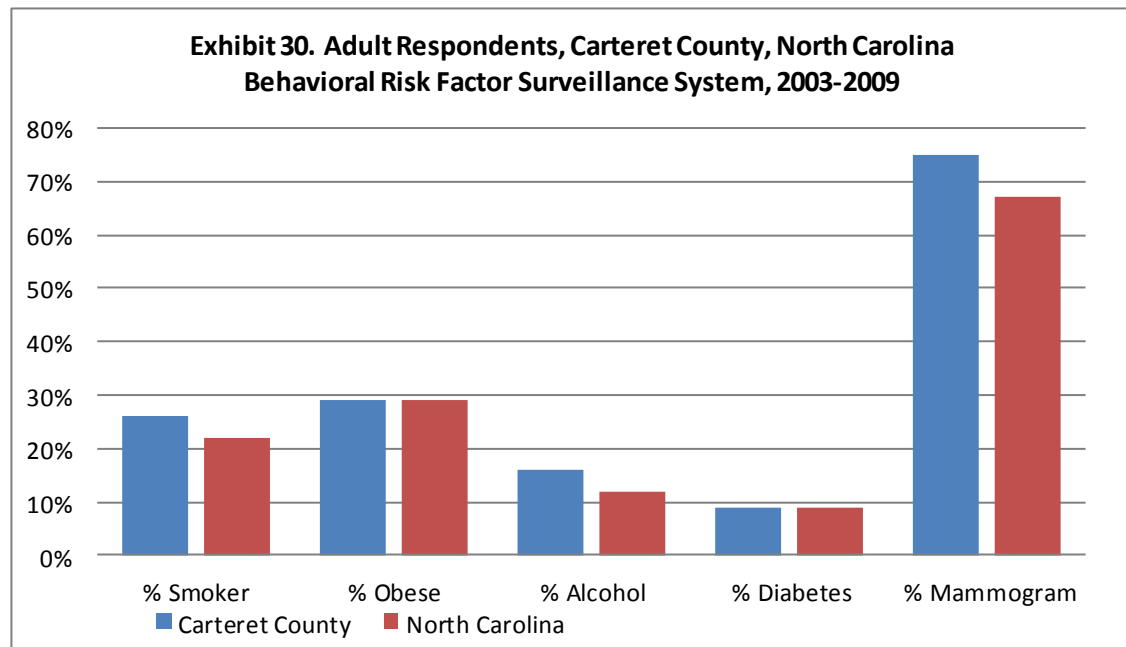
### Cervix

See Eastern North Carolina rates. Carteret County data for cervical cancer incidence and mortality rates were suppressed due to small numbers.



### Risk Factors and Screening

Carteret County residents reported a higher prevalence of smoking and alcohol consumption compared to NC statewide. Mammography completion was higher than statewide in medicare-eligible women.



Source: County Health Rankings, North Carolina County Health Rankings; North Carolina Data Health Explorer; NC DHHS, SCHS, BRFSS Survey Results, 2005-2009

### Exhibit 31. Adult Respondents, Carteret County, North Carolina Behavioral Risk Factor Surveillance System, 2003-2009

	Factor				
	% Smoker <sup>a</sup>	% Obese <sup>b</sup>	% Alcohol <sup>c</sup>	% Diabetes <sup>d</sup>	% Mammogram <sup>e</sup>
Carteret County	26%	29%	16%	9%	75%
North Carolina	22%	29%	12%	9%	67%

a. 2003-2009, Percent of adults that report smoking  $\geq 100$  cigarettes and currently smoking [3]

b. 2008, Percent of adults that report a BMI  $\geq 30$  [3]

c. 2003-2009, Percent of the adult population that reports either binge drinking, defined as consuming more than 4 (women) or 5 (men) alcoholic beverages on a single occasion in the past 30 days, or heavy drinking, defined as drinking more than 1 (women) or 2 (men) drinks per day on average [3]

d. 2005-2009, Percent, Has a doctor told you that you have diabetes, Yes response. [6][7]

e. 2006-2007, Percent of female Medicare enrollees age 67-69 that had at least one mammogram over a two-year period [3]

Sources: County Health Rankings, North Carolina County Health Rankings; North Carolina Data Health Explorer; NC DHHS, SCHS, BRFSS Survey Results, 2005-2009

## CHOWAN COUNTY

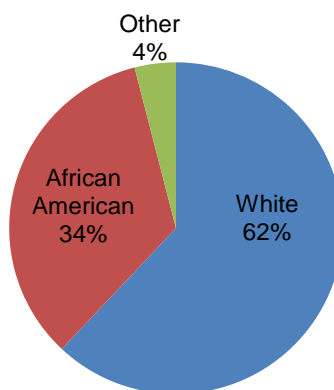
### Social and Economic Indicators

Based on number of persons employed, in 2011 the largest industry in Chowan County was retail trade.[1] The median household income (2009) was \$35,944 for a family of four, compared to \$43,754 statewide.[2] The percentage of persons living below the poverty level in 2009 was 21%, compared to 16% statewide.[2] Unemployment (civilian, not in labor force, 2009) in Chowan County was 11%, compared to 10.6% statewide. The estimated high school graduation rate (2010) was 75%, based on the cohort of ninth graders that graduated from high school in four years, compared to 78% in North Carolina. In 2007, the adult uninsured population ( $\geq$  age 18-64) was 19%, compared to 21% statewide. Twenty physicians provided primary care in Chowan County (2008), which was a population to primary care physician ratio of 734 to 1.[3]

### Demographics

Based on data from the 2010 U.S. Census, Chowan County had a total population of 14,793 with 86 persons per square mile. The county population was 22% children (<18), 58% adults ages 18-64, and 20% elders. Chowan County was 34% African American (AA) (22% AA statewide) and 62% white (69% white statewide). Latinos/Hispanics (any race) comprised 3% of the population in Chowan County (8% statewide) (Exhibit 32). The overall county population was 53% female and 47% male.[2]

**Exhibit 32. Chowan County  
by Race, 2010**



Source: U.S. Census Bureau, State and County Quickfacts: North Carolina

### Cancer Surveillance

#### Colon and Rectal Cancers (CRC)

##### *Incidence*

In Chowan County, the CRC age-adjusted incidence rate for 2004-2008 was 51.7 (95% CI 38.6, 68.4) per 100,000, which was higher than the overall statewide CRC rate of 46.8 (95% CI 46.1, 47.4). On average, there were 11 new cases of CRC diagnosed in Chowan County, and 4,720 new cases across the state for 2004-2008. The CRC age-adjusted incidence rates per 100,000 were 63.6 (95% CI 40.8, 95.2) for males and 44.6 (95% CI 29.4, 66.3) for females. By race, the CRC age-adjusted incidence rates per 100,000 were 45.6 (95% CI 31.0, 65.9) for whites, and 65.6 (95% CI 39.4, 103.2) for African Americans.[4]

##### *Mortality*

In Chowan County, CRC mortality rates for 2003-2007 were stable and were similar to the North Carolina rates (all races, both sexes). The CRC mortality rate (2003-2007) was 22.1 (95% CI 14.0, 33.8) per 100,000 which was higher than the overall statewide CRC mortality rate of 17.3 (95% CI 17.0, 17.7). Chowan County did not meet the Healthy People 2010 mortality rate goal (13.9 CRC deaths per

100,000).[4][5] The average annual percentage change in death rates declined at -1.4 percent (95% CI - 3.2, 0.4) for 2003-2007. The CRC mortality rates by gender were suppressed for males and females due to small numbers of deaths. The CRC mortality rate (2003-2007) per 100,000 by race was 21.0 (95% CI 12.0, 35.8) for whites, and the rate for African Americans was suppressed due to small numbers of deaths.[4]

<b>Exhibit 33. Colorectal Cancer Incidence and Mortality Rates per 100,000 persons</b>		
	Chowan County	North Carolina
CRC Incidence (2004-2008)*	51.7	46.8
CRC Mortality (2003-2007)	22.1	17.3

\*Age-Adjusted

Source: NCI, State Cancer Profiles

### Female Breast

#### *Incidence*

In Chowan County, the breast cancer (female, invasive) age-adjusted incidence rate for 2004-2008 was 109.7 (95% CI 83.0, 143.2) per 100,000, which was lower than the overall statewide breast cancer rate of 123.3 (95% CI 121.9-124.7). On average, there were 12 new cases of invasive female breast cancer diagnosed in Chowan County and 6,189 new cases across the state for 2004-2008. The female breast cancer age-adjusted incidence rate was 117.4 (95% CI 84.6, 161.2) for whites, and the rate for African Americans was suppressed due to small numbers of cases.[4]

#### *Mortality*

In Chowan County, female breast cancer mortality rates (2003-2007) per 100,000 were suppressed due to small numbers of deaths.[4]

<b>Exhibit 34. Invasive Female Breast Cancer Incidence and Mortality Rates per 100,000 persons</b>		
	Chowan County	North Carolina
Breast Cancer Incidence (2004-2008)*	109.7	123.3
Breast Cancer Mortality (2003-2007)	**	24.8

\*Age-Adjusted

\*\*Suppressed due to small numbers

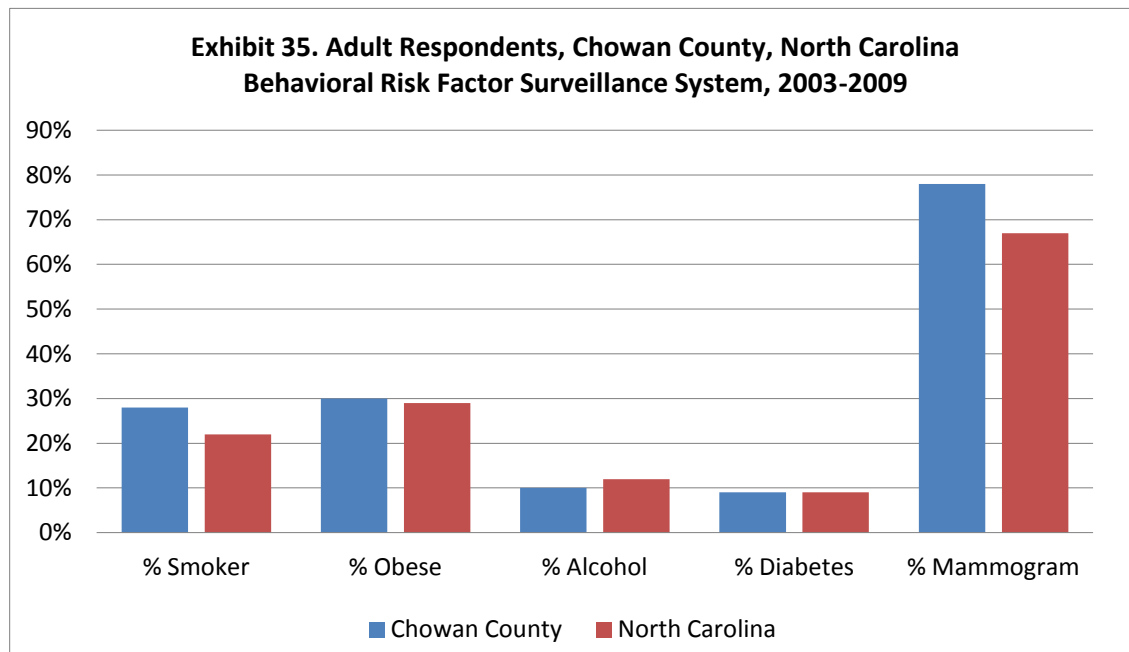
Source: NCI, State Cancer Profiles

### Cervix

See Eastern North Carolina rates. Chowan County data for cervical cancer incidence and mortality rates were suppressed due to small numbers.

## Risk Factors and Screening

Chowan County residents had a higher prevalence of smoking and mammography coverage (in Medicare-enrolled women) compared to NC statewide.



Sources: County Health Rankings, North Carolina County Health Rankings;  
North Carolina Data Health Explorer; NC DHHS, SCHS, BRFSS Survey Results, 2005-2009

## Exhibit 36. Adult Respondents, Chowan County, North Carolina Behavioral Risk Factor Surveillance System, 2003-2009

	Factor				
	% Smoker <sup>a</sup>	% Obese <sup>b</sup>	% Alcohol <sup>c</sup>	% Diabetes <sup>d</sup>	% Mammogram <sup>e</sup>
Chowan County	28%	30%	10%	9%	78%
North Carolina	22%	29%	12%	9%	67%

a. 2003-2009, Percent of adults that report smoking  $\geq 100$  cigarettes and currently smoking [3]

b. 2008, Percent of adults that report a BMI  $\geq 30$  [3]

c. 2003-2009, Percent of the adult population that reports either binge drinking, defined as consuming more than 4 (women) or 5 (men) alcoholic beverages on a single occasion in the past 30 days, or heavy drinking, defined as drinking more than 1 (women) or 2 (men) drinks per day on average [3]

d. 2005-2009, Percent, Has a doctor told you that you have diabetes, Yes response. [6][7]

e. 2006-2007, Percent of female Medicare enrollees age 67-69 that had at least one mammogram over a two-year period [3]

Sources: County Health Rankings, North Carolina County Health Rankings;  
North Carolina Data Health Explorer; NC DHHS, SCHS, BRFSS Survey Results, 2005-2009

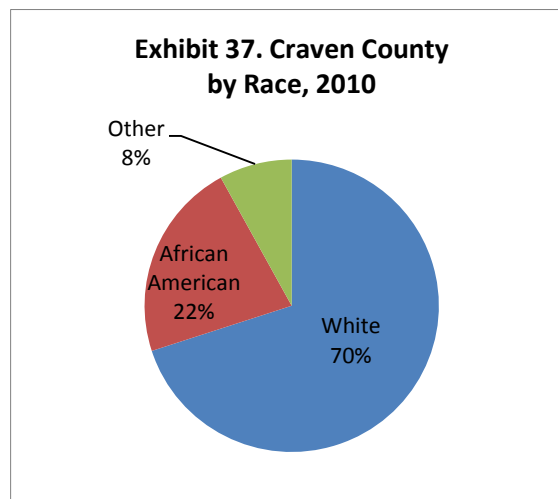
## CRAVEN COUNTY

### Social and Economic Indicators

Based on number of persons employed, in 2011 the largest industry in Craven County was public administration.[1] The median household income (2009) was \$41,021 for a family of four, compared to \$43,754 statewide. The percentage of persons living below the poverty level in 2009 was 16%, compared to 16% statewide.[2] Unemployment (civilian, not in labor force, 2009) in Craven County was 10%, compared to 10.6% statewide. The estimated high school graduation rate (2010) was 77%, based on the cohort of ninth graders that graduated from high school in four years, compared to 78% in North Carolina. In 2007, the adult uninsured population ( $\geq$  age 18-64) was 22%, compared to 21% statewide. One-hundred and seven physicians provided primary care in Craven County (2008), which was a population to primary care physician ratio of 910 to 1.[3]

### Demographics

Based on data from the 2010 U.S. Census, Craven County had a total population of 103,505 with 146 persons per square mile. The county population was 23% children (<18), 62% adults ages 18-64, and 15% elders. Craven County was 22% African American (AA) (22% AA statewide) and 70% white (69% white statewide). Latinos/Hispanics (any race) comprised 6% of the population in Craven County (8% statewide) (Exhibit 37). The overall county population was 50% female and 50% male.[2]



Source: U.S. Census Bureau, State and County Quickfacts: North Carolina

### Cancer Surveillance

#### Colon and Rectal Cancers (CRC)

##### *Incidence*

In Craven County, the CRC age-adjusted incidence rate through 2004-2008 was 49.1 (95% CI 43.4, 55.4) per 100,000, which was higher than the overall statewide CRC rate of 46.8 (95% CI 46.1, 47.4). On average, there were 54 new cases of CRC diagnosed in Craven County, and 4,720 new cases across the state for 2004-2008. The CRC age-adjusted incidence rates per 100,000 were 61.9 (95% CI 52.4, 72.7) for males and 38.7 (95% CI 31.9, 46.6) for females. By race, the CRC age-adjusted incidence rates per 100,000 were 50.5 (95% CI 44.0, 57.9) for whites, and 48.4 (95% CI 35.6, 64.2) for African Americans.[4]

##### *Mortality*

In Craven County, CRC mortality rates for 2003-2007 were stable and were similar to the North Carolina rates (all races, both sexes). The CRC mortality rate (2003-2007) was 20.6 (95% CI 16.8, 24.9) per 100,000 which was higher than the overall statewide CRC mortality rate of 17.3 (95% CI 17.0, 17.7). Craven County did not meet the Healthy People 2010 mortality rate goal (13.9 CRC deaths per 100,000).[4][5] The average annual percentage change in death rates declined at -0.3 percent (95% CI -

1.3-0.6) for 2003-2007. The CRC mortality rates (2003-2007) by gender were 14.9 (95% CI 10.8, 20.2) for females and 28.0 (95% CI 21.4, 35.9) for males per 100,000. CRC mortality rates (2003-2007) per 100,000 by race were 19.3 (95% CI 15.3, 24.2) for whites, and 26.0 (95% CI 16.7, 38.3) for African Americans.[4]

<b>Exhibit 38. Colorectal Cancer Incidence and Mortality Rates per 100,000 persons</b>		
	Craven County	North Carolina
CRC Incidence (2004-2008)*	49.1	46.8
CRC Mortality (2003-2007)	20.6	17.3

\*Age-Adjusted

Source: NCI, State Cancer Profiles

### Female Breast

#### *Incidence*

In Craven County, the breast cancer (female, invasive) age-adjusted incidence rate for 2004-2008 was 125.7 (95% CI 112.9, 139.5) per 100,000, which was higher than the overall statewide breast cancer rate of 123.3 (95% CI 121.9-124.7). On average, there were 74 new cases of invasive female breast cancer diagnosed in Craven County and 6,189 new cases across the state for 2004-2008. Female breast cancer age-adjusted incidence rates were 135.6 (95% CI 120.4, 152.3) for whites, and 88.7 (95% CI 66.7, 115.7) for African Americans.[4]

#### *Mortality*

In Craven County, female breast cancer mortality rates for 2003-2007 were similar to the North Carolina rates (all races). The female breast cancer mortality rate (2003-2007) was 25.8 (95% CI 20.2, 32.6) per 100,000, which was higher than the overall statewide female breast cancer mortality rate of 24.8. Craven County did not meet the Healthy People 2010 mortality rate goal (22.3 female breast cancer deaths per 100,000).[4][5] The average annual percentage change in death rates declined at -0.5 percent (95% CI -1.4, 0.4) for 2003-2007. Female breast cancer mortality rates (2003-2007) per 100,000 by race were 20.0 (95% CI 14.3, 27.2) for whites, and 48.2 (95% CI 32.4, 68.9) for African Americans.[4]

<b>Exhibit 39. Invasive Female Breast Cancer Incidence and Mortality Rates per 100,000 persons</b>		
	Craven County	North Carolina
Breast Cancer Incidence (2004-2008)*	125.7	123.3
Breast Cancer Mortality (2003-2007)	25.8	24.8

\*Age-Adjusted

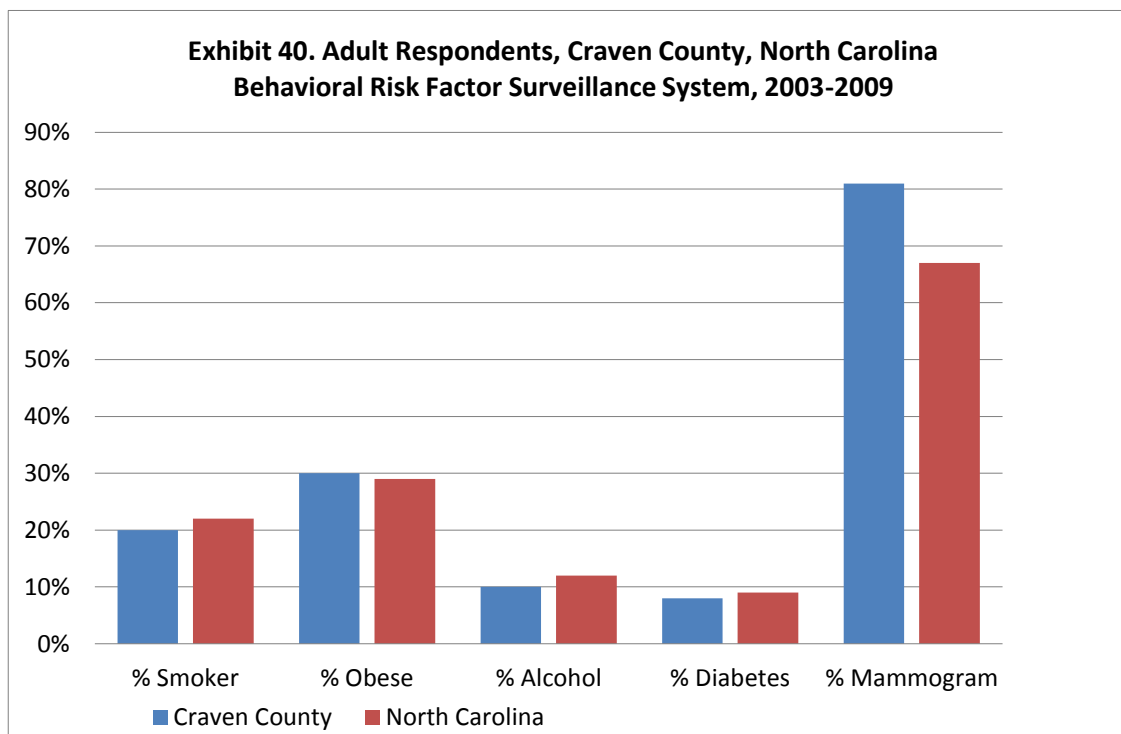
Source: NCI, State Cancer Profiles

### Cervix

See Eastern North Carolina rates. Craven County data for cervical cancer incidence and mortality rates were suppressed due to small numbers.

## Risk Factors and Screening

Craven County residents had a higher prevalence of obesity compared to NC statewide, but report less smoking and alcohol consumption. Mammography coverage in Medicare-enrolled women is higher than statewide.



Sources: County Health Rankings, North Carolina County Health Rankings; North Carolina Data Health Explorer; NC DHHS, SCHS, BRFSS Survey Results, 2005-2009

## Exhibit 41. Adult Respondents, Craven County, North Carolina Behavioral Risk Factor Surveillance System, 2003-2009

	Factor				
	% Smoker <sup>a</sup>	% Obese <sup>b</sup>	% Alcohol <sup>c</sup>	% Diabetes <sup>d</sup>	% Mammogram <sup>e</sup>
Craven County	20%	30%	10%	8%	81%
North Carolina	22%	29%	12%	9%	67%

a. 2003-2009, Percent of adults that report smoking  $\geq 100$  cigarettes and currently smoking [3]

b. 2008, Percent of adults that report a BMI  $\geq 30$  [3]

c. 2003-2009, Percent of the adult population that reports either binge drinking, defined as consuming more than 4 (women) or 5 (men) alcoholic beverages on a single occasion in the past 30 days, or heavy drinking, defined as drinking more than 1 (women) or 2 (men) drinks per day on average [3]

d. 2005-2009, Percent, Has a doctor told you that you have diabetes, Yes response. [6][7]

e. 2006-2007, Percent of female Medicare enrollees age 67-69 that had at least one mammogram over a two-year period [3]

Sources: County Health Rankings, North Carolina County Health Rankings; North Carolina Data Health Explorer; NC DHHS, SCHS, BRFSS Survey Results, 2005-2009

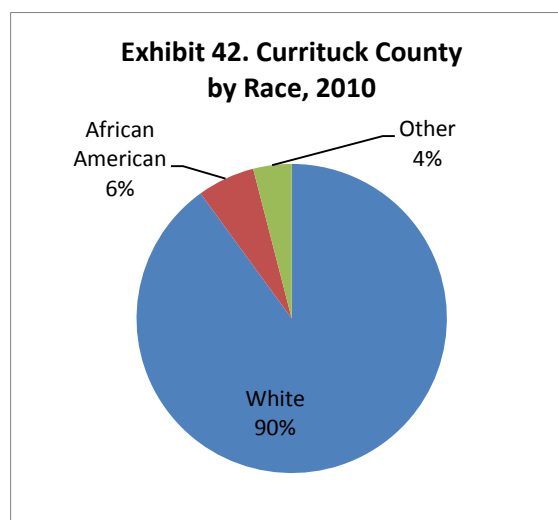
## CURRITUCK COUNTY

### Social and Economic Indicators

Based on number of persons employed, in 2011 the largest industry in Currituck County was retail trade.[1] The median household income (2009) was \$51,997 for a family of four, compared to \$43,754 statewide. The percentage of persons living below the poverty level in 2009 was 10%, compared to 16% statewide.[2] Unemployment (civilian, not in labor force, 2009) in Currituck County was 7%, compared to 10.6% statewide. The estimated high school graduation rate (2010) was 80%, based on the cohort of ninth graders that graduated from high school in four years, compared to 78% in North Carolina. In 2007, the adult uninsured population ( $\geq$  age 18-64) was 26%, compared to 21% statewide. Seven physicians provided primary care in Currituck County (2008), which was a population to primary care physician ratio of 3,451 to 1.[3]

### Demographics

Based on data from the 2010 U.S. Census, Currituck County had a total population of 23,547 with 90 persons per square mile. The county population was 24% children (<18), 63% adults ages 18-64, and 13% elders. Currituck County was 6% African American (AA) (22% AA statewide) and 90% white (69% white statewide). Latinos/Hispanics (any race) comprised 3% of the population in Currituck County (8% statewide) (Exhibit 42). The overall county population was 50% female and 50% male.[2]



Source: U.S. Census Bureau, State and County Quickfacts: North Carolina

### Cancer Surveillance

#### Colon and Rectal Cancers (CRC)

##### *Incidence*

In Currituck County, the CRC age-adjusted incidence rate for 2004-2008 was 52.9 (95% CI 40.1, 68.5) per 100,000, which was higher than the overall statewide CRC rate of 46.8 (95% CI 46.1, 47.4). On average, there were 12 new cases of CRC diagnosed in Currituck County, and 4,720 new cases across the state for 2004-2008. The CRC age-adjusted incidence rates per 100,000 were 51.8 (95% CI 33.6, 76.1) for males and 54.1 (95% CI 36.9, 76.7) for females. By race, the CRC age-adjusted incidence rate per 100,000 was 52.6 (95% CI 39.3, 68.9) for whites, and the rate for African Americans was suppressed due to small numbers of cases.[4]

##### *Mortality*

In Currituck County, the CRC mortality rate (2003-2007) was 15.9 (95% CI 9.0, 25.8) per 100,000 which was lower than the overall statewide CRC mortality rate of 17.3 (95% CI 17.0, 17.7). Currituck County did not meet the Healthy People 2010 mortality rate goal (13.9 CRC deaths per 100,000).[4][5] The average annual percentage change in death rates for 2003-2007 was suppressed due to small numbers



of deaths. The CRC mortality rates (2003-2007) per 100,000 by gender were also suppressed due to small numbers of deaths. The CRC mortality rate (2003-2007) per 100,000 by race was 17.4 (95% CI 9.9, 28.3) for whites, and the rate for African Americans was suppressed due to small numbers of deaths.[4]

<b>Exhibit 43. Colorectal Cancer Incidence and Mortality Rates per 100,000 persons</b>		
	Currituck County	North Carolina
CRC Incidence (2004-2008)*	52.9	46.8
CRC Mortality (2003-2007)	15.9	17.3

\*Age-Adjusted

\*\*Suppressed due to small numbers

Source: NCI, State Cancer Profiles

### Female Breast

#### *Incidence*

In Currituck County, the breast cancer (female, invasive) age-adjusted incidence rate for 2004-2008 was 99.7 (95% CI 76.7, 127.7) per 100,000, which was lower than the overall statewide breast cancer rate of 123.3 (95% CI 121.9-124.7). On average, there were 13 new cases of invasive female breast cancer diagnosed in Currituck County and 6,189 new cases across the state for 2004-2008. The female breast cancer age-adjusted incidence rate was 106.1 (95% CI 81.2, 136.6) for whites, and the rate for African Americans was suppressed due to small numbers of cases.[4]

#### *Mortality*

In Currituck County, female breast cancer mortality rates (2003-2007) per 100,000 were suppressed due to small numbers of deaths.[4]

<b>Exhibit 44. Invasive Female Breast Cancer Incidence and Mortality Rates per 100,000 persons</b>		
	Currituck County	North Carolina
Breast Cancer Incidence (2004-2008)*	99.7	123.3
Breast Cancer Mortality (2003-2007)	**	24.8

\*Age-Adjusted

\*\*Suppressed due to small numbers

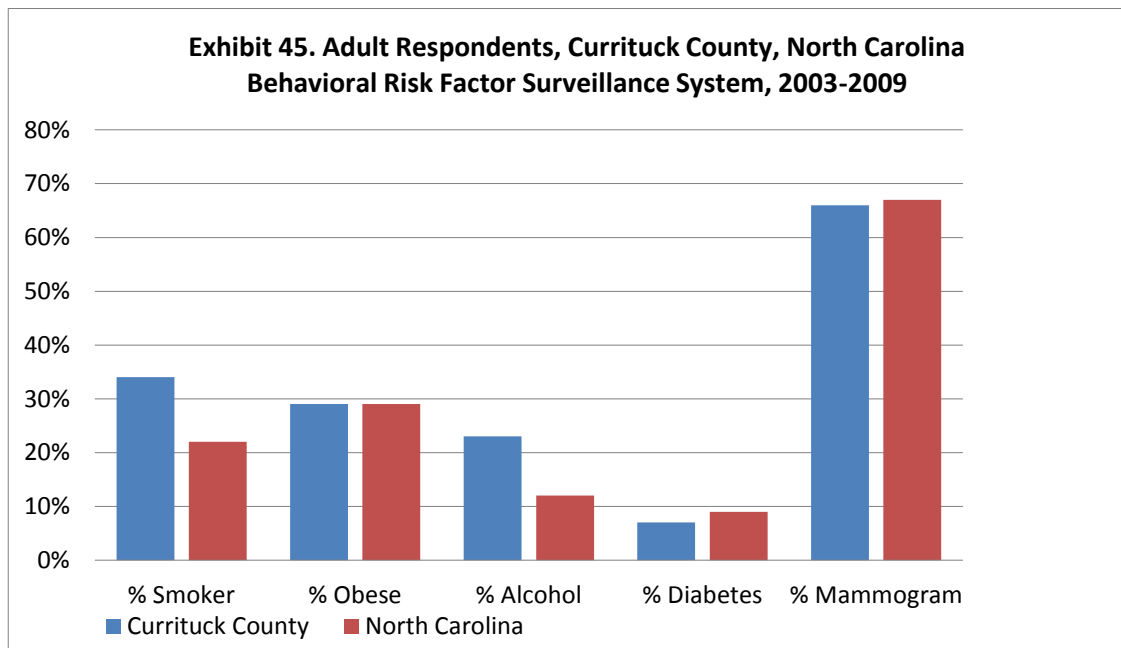
Source: NCI, State Cancer Profiles

### Cervix

See Eastern North Carolina rates. Currituck County data for cervical cancer incidence and mortality rates were suppressed due to small numbers.

## Risk Factors and Screening

Currituck County residents had a higher prevalence of smoking and alcohol consumption compared to NC statewide, but report less diabetes.



Sources: County Health Rankings, North Carolina County Health Rankings;  
North Carolina Data Health Explorer; NC DHHS, SCHS, BRFSS Survey Results, 2005-2009

## Exhibit 46. Adult Respondents, Currituck County, North Carolina Behavioral Risk Factor Surveillance System, 2003-2009

	Factor				
	% Smoker <sup>a</sup>	% Obese <sup>b</sup>	% Alcohol <sup>c</sup>	% Diabetes <sup>d</sup>	% Mammogram <sup>e</sup>
Currituck County	34%	29%	23%	7%	66%
North Carolina	22%	29%	12%	9%	67%

a. 2003-2009, Percent of adults that report smoking  $\geq 100$  cigarettes and currently smoking [3]

b. 2008, Percent of adults that report a BMI  $\geq 30$  [3]

c. 2003-2009, Percent of the adult population that reports either binge drinking, defined as consuming more than 4 (women) or 5 (men) alcoholic beverages on a single occasion in the past 30 days, or heavy drinking, defined as drinking more than 1 (women) or 2 (men) drinks per day on average [3]

d. 2005-2009, Percent, Has a doctor told you that you have diabetes, Yes response. [6][7]

e. 2006-2007, Percent of female Medicare enrollees age 67-69 that had at least one mammogram over a two-year period [3]

Sources: County Health Rankings, North Carolina County Health Rankings;  
North Carolina Data Health Explorer; NC DHHS, SCHS, BRFSS Survey Results, 2005-2009

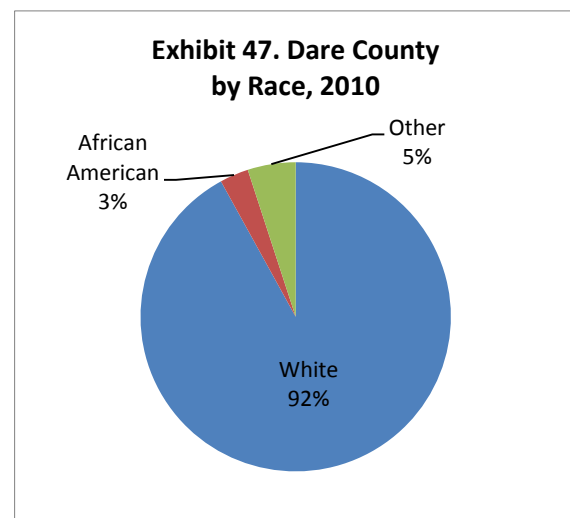
## DARE COUNTY

### Social and Economic Indicators

Based on number of persons employed, in 2011 the largest industry in Dare County was retail trade.[1] The median household income (2009) was \$49,565 for a family of four, compared to \$43,754 statewide. The percentage of persons living below the poverty level in 2009 was 11%, compared to 16% statewide.[2] Unemployment (civilian, not in labor force, 2009) in Dare County was 10%, compared to 10.6% statewide. The estimated high school graduation rate (2010) was 92%, based on the cohort of ninth graders that graduated from high school in four years, compared to 78% in North Carolina. In 2007, the adult uninsured population ( $\geq$  age 18-64) was 27%, compared to 21% statewide. Thirty-two physicians provided primary care in Dare County (2008), which was a population to primary care physician ratio of 1,064 to 1.[3]

### Demographics

Based on data from the 2010 U.S. Census, Dare County had a total population of 33,920 with 89 persons per square mile. The county population was 20% children (<18), 65% adults ages 18-64, and 15% elders. Dare County was 3% African American (AA) (22% AA statewide) and 92% white (69% white statewide). Latinos/Hispanics (any race) comprised 7% of the population in Dare County (8% statewide) (Exhibit 47). The overall county population was 50% female and 50% male.[2]



Source: U.S. Census Bureau, State and County Quickfacts: North Carolina

### Cancer Surveillance

#### Colon and Rectal Cancers (CRC)

##### *Incidence*

In Dare County, the CRC age-adjusted incidence rate for 2004-2008 was 38.9 (95% CI 30.7, 48.7) per 100,000, which was lower than the overall statewide CRC rate of 46.8 (95% CI 46.1, 47.4). On average, there were 17 new cases of CRC diagnosed in Dare County, and 4,720 new cases across the state for 2004-2008. The CRC age-adjusted incidence rates per 100,000 were 41.3 (95% CI 29.6, 56.4) for males and 36.4 (95% CI 25.6, 50.5) for females. By race, the CRC age-adjusted incidence rate per 100,000 was 39.0 (95% CI 30.7, 49.0) for whites, and the rate for African Americans was suppressed due to small numbers of cases.[4]

##### *Mortality*

In Dare County, CRC mortality rates for 2003-2007 declined and were similar to the North Carolina rates (all races, both sexes). The CRC mortality rate (2003-2007) was 12.3 (95% CI 7.8, 18.7) per 100,000 which was lower than the overall statewide CRC mortality rate of 17.3 (95% CI 17.0, 17.7). Dare County met the Healthy People 2010 mortality rate goal (13.9 CRC deaths per 100,000).[4][5] The average

annual percentage change in death rates declined at -2.8 percent (95% CI -4.4, -1.2) for 2003-2007. The CRC mortality rates by gender were suppressed due to small numbers of deaths. The CRC mortality rate (2003-2007) per 100,000 by race was 12.1 (95% CI 7.6, 18.5) for whites, and the rate for African Americans was suppressed due to small numbers of deaths.[4]

<b>Exhibit 48. Colorectal Cancer Incidence and Mortality Rates per 100,000 persons</b>		
	Dare County	North Carolina
CRC Incidence (2004-2008)*	38.9	46.8
CRC Mortality (2003-2007)	12.3	17.3

\*Age-Adjusted

Source: NCI, State Cancer Profiles

### Female Breast

#### *Incidence*

In Dare County, the breast cancer (female, invasive) age-adjusted incidence rate for 2004-2008 was 133.9 (95% CI 112.5, 158.4) per 100,000, which was higher than the overall statewide breast cancer rate of 123.3 (95% CI 121.9-124.7). On average, there were 29 new cases of invasive female breast cancer diagnosed in Dare County and 6,189 new cases across the state for 2004-2008. The female breast cancer age-adjusted incidence rate was 133.1 (95% CI 111.5, 158.0) for whites, and the rate for African Americans was suppressed due to small numbers of cases.[4]

#### *Mortality*

In Dare County, the female breast cancer mortality rate (2003-2007) was 28.3 (95% CI 19.0, 41.1) per 100,000, which was higher than the overall statewide female breast cancer mortality rate of 24.8. Dare County did not meet the Healthy People 2010 mortality rate goal (22.3 female breast cancer deaths per 100,000).[4][5] The average annual percentage change in death rates for 2003-2007 was suppressed due to small numbers of deaths. The female breast cancer mortality rate (2003-2007) per 100,000 by race was 28.1 (95% CI 18.7, 41.0) for whites, and the rate for African Americans was suppressed due to small numbers of deaths.[4]

<b>Exhibit 49. Invasive Female Breast Cancer Incidence and Mortality Rates per 100,000 persons</b>		
	Dare County	North Carolina
Breast Cancer Incidence (2004-2008)*	133.9	123.3
Breast Cancer Mortality (2003-2007)	28.3	24.8

\*Age-Adjusted

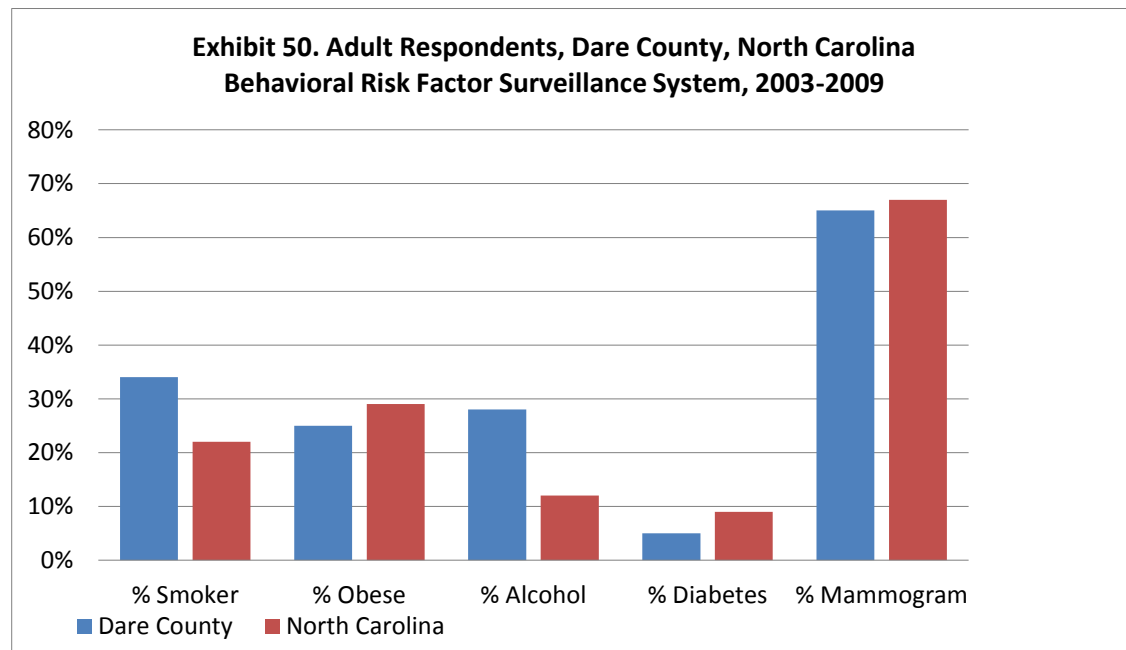
Source: NCI, State Cancer Profiles

### Cervix

See Eastern North Carolina rates. Dare County data for cervical cancer incidence and mortality rates were suppressed due to small numbers.

## Risk Factors and Screening

Dare County residents have a higher prevalence of smoking and alcohol consumption compared to NC statewide, but lower diabetes.



Sources: County Health Rankings, North Carolina County Health Rankings;  
North Carolina Data Health Explorer; NC DHHS, SCHS, BRFSS Survey Results, 2005-2009

## Exhibit 51. Adult Respondents, Dare County, North Carolina Behavioral Risk Factor Surveillance System, 2003-2009

	Factor				
	% Smoker <sup>a</sup>	% Obese <sup>b</sup>	% Alcohol <sup>c</sup>	% Diabetes <sup>d</sup>	% Mammogram <sup>e</sup>
Dare County	34%	25%	28%	5%	65%
North Carolina	22%	29%	12%	9%	67%

a. 2003-2009, Percent of adults that report smoking  $\geq 100$  cigarettes and currently smoking [3]

b. 2008, Percent of adults that report a BMI  $\geq 30$  [3]

c. 2003-2009, Percent of the adult population that reports either binge drinking, defined as consuming more than 4 (women) or 5 (men) alcoholic beverages on a single occasion in the past 30 days, or heavy drinking, defined as drinking more than 1 (women) or 2 (men) drinks per day on average [3]

d. 2005-2009, Percent, Has a doctor told you that you have diabetes, Yes response. [6][7]

e. 2006-2007, Percent of female Medicare enrollees age 67-69 that had at least one mammogram over a two-year period [3]

Sources: County Health Rankings, North Carolina County Health Rankings;  
North Carolina Data Health Explorer; NC DHHS, SCHS, BRFSS Survey Results, 2005-2009

## DUPLIN COUNTY

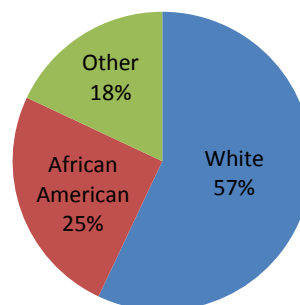
### Social and Economic Indicators

Based on number of persons employed, in 2011 the largest industry in Duplin County was manufacturing.[1] The median household income (2009) was \$31,026 for a family of four, compared to \$43,754 statewide. The percentage of persons living below the poverty level in 2009 was 24%, compared to 16% statewide.[2] Unemployment (civilian, not in labor force, 2009) in Duplin County was 9%, compared to 10.6% statewide. The estimated high school graduation rate (2010) was 72%, based on the cohort of ninth graders that graduated from high school in four years, compared to 78% in North Carolina. In 2007 the adult uninsured population ( $\geq$  age 18-64) was 27%, compared to 21% statewide. Twenty-two physicians provided primary care in Duplin County (2008), which was a population to primary care physician ratio of 2,410 to 1.[3]

### Demographics

Based on data from the 2010 U.S. Census, Duplin County had a total population of 58,505 with 72 persons per square mile. The county population was 25% children (<18), 61% adults ages 18-64, and 14% elders. Duplin County was 25% African American (AA) (22% AA statewide) and 57% white (69% white statewide). Latinos/Hispanics (any race) comprised 21% of the population in Duplin County (8% statewide) (Exhibit 52). The overall county population was 51% female and 49% male.[2]

**Exhibit 52. Duplin County  
by Race, 2010**



Source: U.S. Census Bureau, State and County Quickfacts: North Carolina

### Cancer Surveillance

#### Colon and Rectal Cancers (CRC)

##### *Incidence*

In Duplin County, the CRC age-adjusted incidence rate for 2004-2008 was 35.1 (95% CI 28.4, 42.8) per 100,000, which was lower than the overall statewide CRC rate of 46.8 (95% CI 46.1, 47.4). On average, there were 19 new cases of CRC diagnosed in Duplin County, and 4,720 new cases across the state for 2004-2008. The CRC age-adjusted incidence rates per 100,000 were 44.5 (95% CI 33.3, 58.3) for males and 26.5 (95% CI 19.0, 36.0) for females. By race, the CRC age-adjusted incidence rates per 100,000 were 35.3 (95% CI 27.4, 44.8) for whites, and 33.6 (95% CI 22.1, 49.3) for African Americans.[4]

##### *Mortality*

In Duplin County, CRC mortality rates for 2003-2007 declined and were similar to the North Carolina rates (all races, both sexes). The CRC mortality rate (2003-2007) was 13.9 (95% CI 9.8, 19.2) per 100,000 which was lower than the overall statewide CRC mortality rate of 17.3 (95% CI 17.0, 17.7). Duplin County met the Healthy People 2010 mortality rate goal (13.9 CRC deaths per 100,000).[4][5] The

average annual percentage change in death rates declined at -7.2 percent (95% CI -13.0, -1.0) for 2003-2007. The CRC mortality rate (2003-2007) by gender was suppressed for females due to small numbers of deaths, and the rate for males was 19.5 (95% CI 12.1, 29.6) per 100,000. The CRC mortality rate (2003-2007) per 100,000 by race was 12.2 (95% CI 7.7, 18.4) for whites, and the rate for African Americans was suppressed due to small numbers of deaths.[4]

<b>Exhibit 53. Colorectal Cancer Incidence and Mortality Rates per 100,000 persons</b>		
	Duplin County	North Carolina
CRC Incidence (2004-2008)*	35.1	46.8
CRC Mortality (2003-2007)	13.9	17.3

\*Age-Adjusted

Source: NCI, State Cancer Profiles

### Female Breast

#### *Incidence*

In Duplin County, the breast cancer (female, invasive) age-adjusted incidence rate for 2004-2008 was 95.0 (95% CI 79.8, 112.4) per 100,000, which was lower than the overall statewide breast cancer rate of 123.3 (95% CI 121.9, 124.7). On average, there were 28 new cases of invasive female breast cancer diagnosed in Duplin County and 6,189 new cases across the state for 2004-2008. Female breast cancer age-adjusted incidence rates were 93.1 (95% CI 75.2, 114.1) for whites, and 100.7 (95% CI 73.1, 135.7) for African Americans.[4]

#### *Mortality*

In Duplin County, female breast cancer mortality rates for 2003-2007 increased and were similar to the North Carolina rates (all races). The female breast cancer mortality rate (2003-2007) was 29.4 (95% CI 21.4, 39.6) per 100,000, which was higher than the overall statewide female breast cancer mortality rate of 24.8. Duplin County did not meet the Healthy People 2010 mortality rate goal (22.3 female breast cancer deaths per 100,000).[4][5] The average annual percentage change in death rates increased at 0.3 percent (95% CI -1.4, 0.4) for 2003-2007. Female breast cancer mortality rates (2003-2007) per 100,000 by race were 27.3 (95% CI 18.2, 39.5) for whites, and 34.4 (95% CI 19.4, 57.0) for African Americans.[4]

<b>Exhibit 54. Invasive Female Breast Cancer Incidence and Mortality Rates per 100,000 persons</b>		
	Duplin County	North Carolina
Breast Cancer Incidence (2004-2008)*	95.0	123.3
Breast Cancer Mortality (2003-2007)	29.4	24.8

\*Age-Adjusted

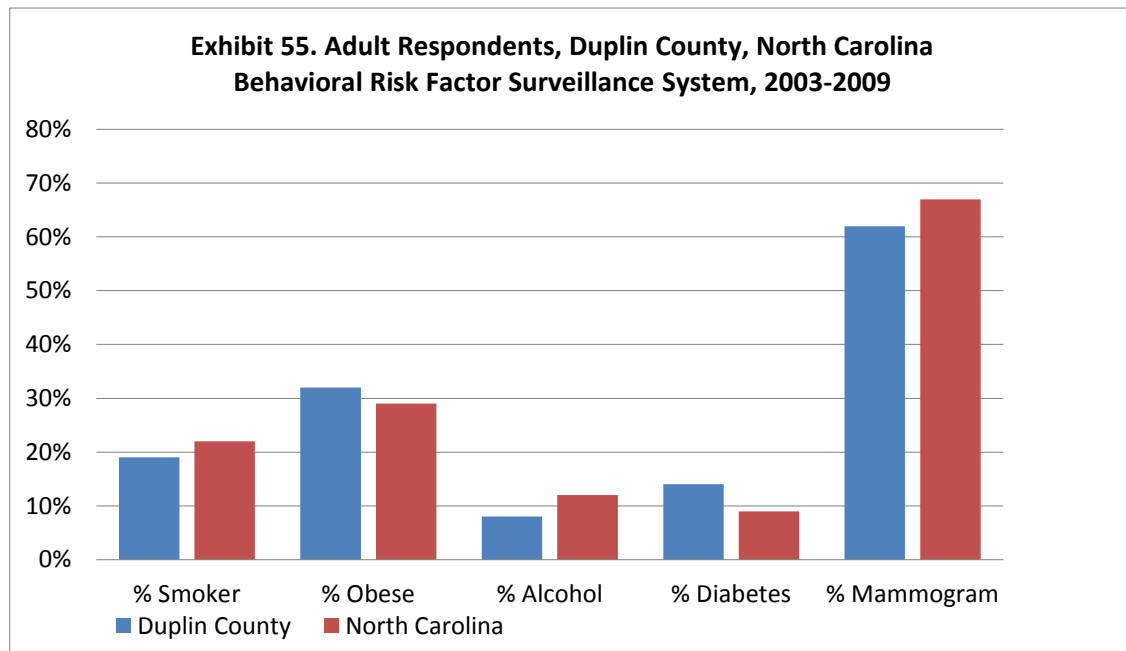
Source: NCI, State Cancer Profiles

### Cervix

See Eastern North Carolina rates. Duplin County data for cervical cancer incidence and mortality rates were suppressed due to small numbers.

### Risk Factors and Screening

Duplin County residents had a higher prevalence of obesity and diabetes compared to NC statewide, but report less smoking.



Sources: County Health Rankings, North Carolina County Health Rankings; North Carolina Data Health Explorer; NC DHHS, SCHS, BRFSS Survey Results, 2005-2009

### Exhibit 56. Adult Respondents, Duplin County, North Carolina Behavioral Risk Factor Surveillance System, 2003-2009

	Factor				
	% Smoker <sup>a</sup>	% Obese <sup>b</sup>	% Alcohol <sup>c</sup>	% Diabetes <sup>d</sup>	% Mammogram <sup>e</sup>
Duplin County	19%	32%	8%	14%	62%
North Carolina	22%	29%	12%	9%	67%

a. 2003-2009, Percent of adults that report smoking  $\geq 100$  cigarettes and currently smoking [3]

b. 2008, Percent of adults that report a BMI  $\geq 30$  [3]

c. 2003-2009, Percent of the adult population that reports either binge drinking, defined as consuming more than 4 (women) or 5 (men) alcoholic beverages on a single occasion in the past 30 days, or heavy drinking, defined as drinking more than 1 (women) or 2 (men) drinks per day on average [3]

d. 2005-2009, Percent, Has a doctor told you that you have diabetes, Yes response. [6][7]

e. 2006-2007, Percent of female Medicare enrollees age 67-69 that had at least one mammogram over a two-year period [3]

Sources: County Health Rankings, North Carolina County Health Rankings; North Carolina Data Health Explorer; NC DHHS, SCHS, BRFSS Survey Results, 2005-2009



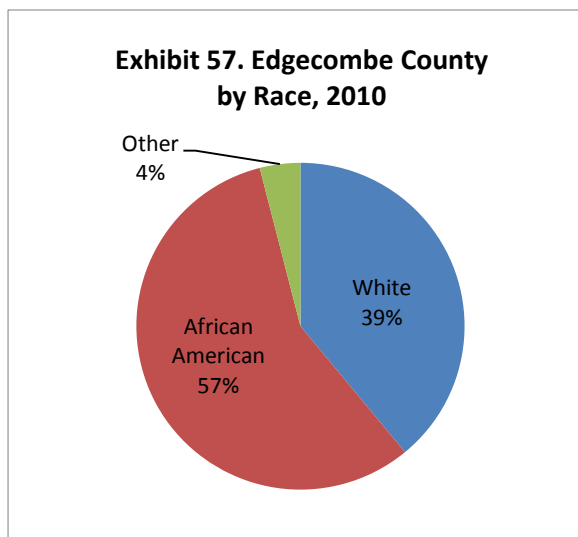
## EDGECOMBE COUNTY

### Social and Economic Indicators

Based on number of persons employed, in 2011 the largest industry in Edgecombe County was manufacturing.[1] The median household income (2009) was \$32,172 for a family of four, compared to \$43,754 statewide. The percentage of persons living below the poverty level in 2009 was 26%, compared to 16% statewide.[2] Unemployment (civilian, not in labor force, 2009) in Edgecombe County was 16%, compared to 10.6% statewide. The estimated high school graduation rate (2010) was 78%, based on the cohort of ninth graders that graduated from high school in four years, compared to 78% in North Carolina. In 2007, the adult uninsured population ( $\geq$  age 18-64) was 14%, compared to 21% statewide. Twenty-one physicians provided primary care in Edgecombe County (2008), which was a population to primary care physician ratio of 2,495 to 1.[3]

### Demographics

Based on data from the 2010 U.S. Census, Edgecombe County had a total population of 56,552 with 112 persons per square mile. The county population was 25% children (<18), 61% adults ages 18-64, and 14% elders. Edgecombe County was 57% African American (AA) (22% AA statewide) and 39% white (69% white statewide). Latinos/Hispanics (any race) comprised 4% of the population in Edgecombe County (8% statewide) (Exhibit 57). The overall county population was 54% female and 46% male.[2]



Source: U.S. Census Bureau, State and County Quickfacts: North Carolina

### Cancer Surveillance

#### Colon and Rectal Cancers (CRC)

##### *Incidence*

In Edgecombe County, the CRC age-adjusted incidence rate for 2004-2008 was 61.5 (95% CI 52.6, 71.6) per 100,000, which was higher than the overall statewide CRC rate of 46.8 (95% CI 46.1, 47.4). On average, there were 35 new cases of CRC diagnosed in Edgecombe County, and 4,720 new cases across the state for 2004-2008. The CRC age-adjusted incidence rates per 100,000 were 71.2 (95% CI 55.4, 89.8) for males and 56.6 (95% CI 45.6, 69.5) for females. By race, the CRC age-adjusted incidence rates per 100,000 were 49.8 (95% CI 38.6, 63.4) for whites, and 73.3 (95% CI 59.5, 89.1) for African Americans.[4]

##### *Mortality*

In Edgecombe County, CRC mortality rates for 2003-2007 were stable and were similar to the North Carolina rates (all races, both sexes). The CRC mortality rate (2003-2007) was 22.1 (95% CI 16.9, 28.5) per 100,000 which was higher than the overall statewide CRC mortality rate of 17.3 (95% CI 17.0, 17.7). Edgecombe County did not meet the Healthy People 2010 mortality rate goal (13.9 CRC deaths per

100,000).[4][5] The average annual percentage change in death rates declined at -0.3 percent (95% CI -1.3, 0.8) for 2003-2007. The CRC mortality rates (2003-2007) by gender were 17.0 (95% CI 11.3, 24.8) for females and 30.6 (95% CI 20.5, 43.6) for males per 100,000. CRC mortality rates (2003-2007) per 100,000 by race were 22.3 (95% CI 15.0, 32.0) for whites, and 22.0 (95% CI 14.8, 31.4) for African Americans.[4]

<b>Exhibit 58. Colorectal Cancer Incidence and Mortality Rates per 100,000 persons</b>		
	Edgecombe County	North Carolina
CRC Incidence (2004-2008)*	61.5	46.8
CRC Mortality (2003-2007)	22.1	17.3

\*Age-Adjusted

Source: NCI, State Cancer Profiles

### Female Breast

#### *Incidence*

In Edgecombe County, the breast cancer (female, invasive) age-adjusted incidence rate for 2004-2008 was 144.0 (95% CI 125.8, 164.2) per 100,000, which was higher than the overall statewide breast cancer rate of 123.3 (95% CI 121.9-124.7). On average, there were 46 new cases of invasive female breast cancer diagnosed in Edgecombe County and 6,189 new cases across the state for 2004-2008. Female breast cancer age-adjusted incidence rates were 154.5 (95% CI 126.5, 187.2) for whites, and 136.8 (95% CI 112.8, 164.4) for African Americans.[4]

#### *Mortality*

In Edgecombe County, female breast cancer mortality rates for 2003-2007 increased and were higher than the North Carolina rates (all races). The female breast cancer mortality rate (2003-2007) was 35.6 (95% CI 27.0, 46.1) per 100,000, which was higher than the overall statewide female breast cancer mortality rate of 24.8. Edgecombe County did not meet the Healthy People 2010 mortality rate goal (22.3 female breast cancer deaths per 100,000).[4][5] The average annual percentage change in death rates increased at 1.0 percent (95% CI -0.2, 2.2) for 2003-2007. Female breast cancer mortality rates (2003-2007) per 100,000 by race were 34.7 (95% CI 22.6, 51.7) for whites, and 35.7 (95% CI 24.3, 50.7) for African Americans.[4]

<b>Exhibit 59. Invasive Female Breast Cancer Incidence and Mortality Rates per 100,000 persons</b>		
	Edgecombe County	North Carolina
Breast Cancer Incidence (2004-2008)*	144.0	123.3
Breast Cancer Mortality (2003-2007)	35.6	24.8

\*Age-Adjusted

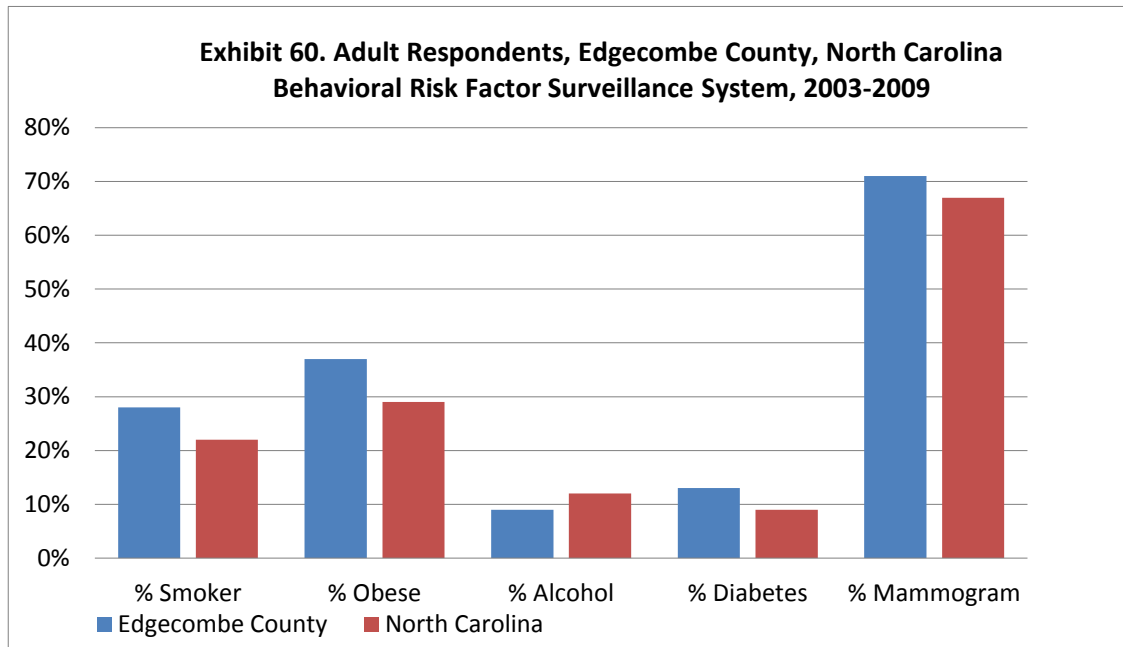
Source: NCI, State Cancer Profiles

## Cervix

See Eastern North Carolina rates. Edgecombe County data for cervical cancer incidence and mortality rates were suppressed due to small numbers.

## Risk Factors and Screening

Edgecombe County residents have a higher prevalence of smoking, obesity and diabetes compared to NC statewide, but report less alcohol consumption. Mammography in Medicare-enrolled females is higher than statewide.



Sources: County Health Rankings, North Carolina County Health Rankings; North Carolina Data Health Explorer; NC DHHS, SCHS, BRFSS Survey Results, 2005-2009

## Exhibit 61. Adult Respondents, Edgecombe County, North Carolina Behavioral Risk Factor Surveillance System, 2005-2009

	Factor				
	% Smoker <sup>a</sup>	% Obese <sup>b</sup>	% Alcohol <sup>c</sup>	% Diabetes <sup>d</sup>	% Mammogram <sup>e</sup>
Edgecombe County	28%	37%	9%	13%	71%
North Carolina	22%	29%	12%	9%	67%

a. 2003-2009, Percent of adults that report smoking  $\geq 100$  cigarettes and currently smoking [3]

b. 2008, Percent of adults that report a BMI  $\geq 30$  [3]

c. 2003-2009, Percent of the adult population that reports either binge drinking, defined as consuming more than 4 (women) or 5 (men) alcoholic beverages on a single occasion in the past 30 days, or heavy drinking, defined as drinking more than 1 (women) or 2 (men) drinks per day on average [3]

d. 2005-2009, Percent, Has a doctor told you that you have diabetes, Yes response. [6][7]

e. 2006-2007, Percent of female Medicare enrollees age 67-69 that had at least one mammogram over a two-year period [3]

Sources: County Health Rankings, North Carolina County Health Rankings; North Carolina Data Health Explorer; NC DHHS, SCHS, BRFSS Survey Results, 2005-2009

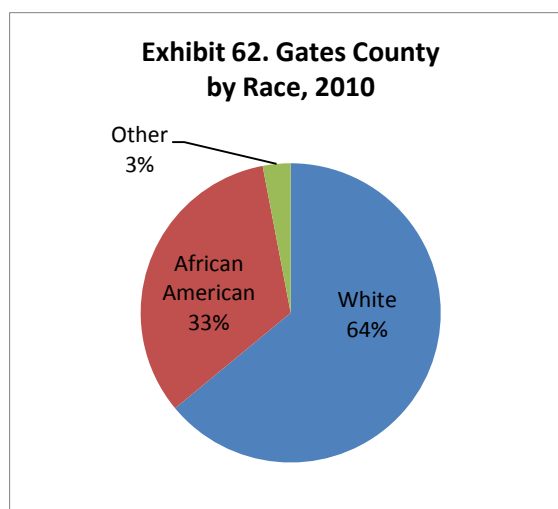
## GATES COUNTY

### Social and Economic Indicators

Based on number of persons employed, in 2011 the largest industry in Gates County was educational services.[1] The median household income (2009) was \$42,742 for a family of four, compared to \$43,754 statewide. The percentage of persons living below the poverty level in 2009 was 18%, compared to 16% statewide.[2] Unemployment (civilian, not in labor force, 2009) in Gates County was 7%, compared to 10.6% statewide. The estimated high school graduation rate (2010) was 80%, based on the cohort of ninth graders that graduated from high school in four years, compared to 78% in North Carolina. In 2007, the adult uninsured population ( $\geq$  age 18-64) was 25%, compared to 21% statewide. One physician provided primary care in Gates County (2008), which was a population to primary care physician ratio of 11,746 to 1.[3]

### Demographics

Based on data from the 2010 U.S. Census, Gates County had a total population of 12,197 with 36 persons per square mile. The county population was 24% children (<18), 61% adults ages 18-64, and 15% elders. Gates County was 33% African American (AA) (22% AA statewide) and 64% white (69% white statewide). Latinos/Hispanics (any race) comprised 1% of the population in Gates County (8% statewide) (Exhibit 62). The overall county population was 51% female and 49% male.[2]



Source: U.S. Census Bureau, State and County Quickfacts: North Carolina

### Cancer Surveillance

#### Colon and Rectal Cancers (CRC)

##### *Incidence*

In Gates County, the CRC age-adjusted incidence rate for 2004-2008 was 60.4 (95% CI 42.8, 83.1) per 100,000, which was higher than the overall statewide CRC rate of 46.8 (95% CI 46.1, 47.4). On average, there were 8 new cases of CRC diagnosed in Gates County, and 4,720 new cases across the state for 2004-2008. The CRC age-adjusted incidence rates per 100,000 were 55.3 (95% CI 32.4, 89.1) for males and 64.5 (95% CI 39.8, 99.5) for females. By race, the CRC age-adjusted incidence rate per 100,000 was 61.9 (95% CI 39.9, 92.4) for whites, and the rate for African Americans was suppressed due to small numbers of cases.[4]

### *Mortality*

In Gates County, CRC mortality rates (2003-2007) per 100,000 were suppressed due to small numbers of deaths.[4]

<b>Exhibit 63. Colorectal Cancer Incidence and Mortality Rates per 100,000 persons</b>		
	Gates County	North Carolina
CRC Incidence (2004-2008)*	60.4	46.8
CRC Mortality (2003-2007)	**	17.3

\*Age-Adjusted

\*\*Suppressed due to small numbers

Source: NCI, State Cancer Profiles

### Female Breast

#### *Incidence*

In Gates County, the breast cancer (female, invasive) age-adjusted incidence rate for 2004-2008 was 173.4 (95% CI 132.3, 224.0) per 100,000, which was higher than the overall statewide breast cancer rate of 123.3 (95% CI 121.9-124.7). On average, there were 12 new cases of invasive female breast cancer diagnosed in Gates County and 6,189 new cases across the state for 2004-2008. Female breast cancer age-adjusted incidence rates were 186.8 (95% CI 133.0, 256.7) for whites, and 157.5 (95% CI 97.3, 244.1) for African Americans.[4]

#### *Mortality*

In Gates County, female breast cancer mortality rates (2003-2007) per 100,000 were suppressed due to small numbers of deaths.[4]

<b>Exhibit 64. Invasive Female Breast Cancer Incidence and Mortality Rates per 100,000 persons</b>		
	Gates County	North Carolina
Breast Cancer Incidence (2004-2008)*	173.4	123.3
Breast Cancer Mortality (2003-2007)	**	24.8

\*Age-Adjusted

\*\*Suppressed due to small numbers

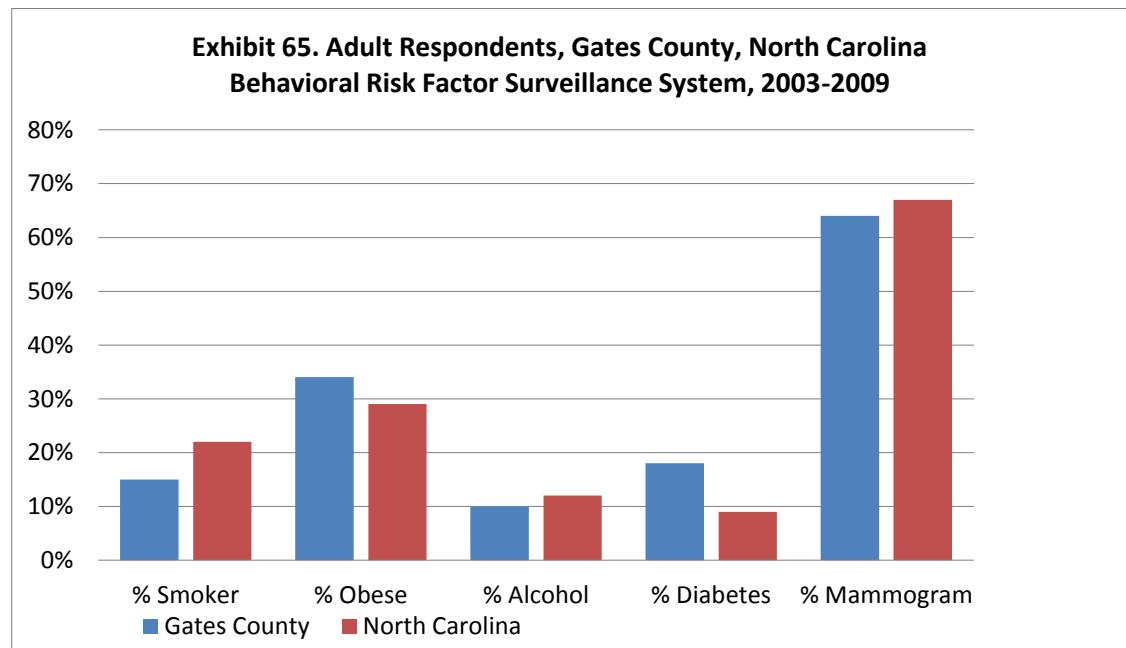
Source: NCI, State Cancer Profiles

### Cervix

See Eastern North Carolina rates. Gates County data for cervical cancer incidence and mortality rates were suppressed due to small numbers.

## Risk Factors and Screening

Gates County residents have a higher prevalence of obesity and diabetes compared to NC statewide, but report less smoking and alcohol consumption.



Sources: County Health Rankings, North Carolina County Health Rankings; North Carolina Data Health Explorer; NC DHHS, SCHS, BRFSS Survey Results, 2005-2009

## Exhibit 66. Adult Respondents, Gates County, North Carolina Behavioral Risk Factor Surveillance System, 2005-2009

	Factor				
	% Smoker <sup>a</sup>	% Obese <sup>b</sup>	% Alcohol <sup>c</sup>	% Diabetes <sup>d</sup>	% Mammogram <sup>e</sup>
Gates County	15%	34%	10%	18%	64%
North Carolina	22%	29%	12%	9%	67%

a. 2003-2009, Percent of adults that report smoking  $\geq 100$  cigarettes and currently smoking [3]

b. 2008, Percent of adults that report a BMI  $\geq 30$  [3]

c. 2003-2009, Percent of the adult population that reports either binge drinking, defined as consuming more than 4 (women) or 5 (men) alcoholic beverages on a single occasion in the past 30 days, or heavy drinking, defined as drinking more than 1 (women) or 2 (men) drinks per day on average [3]

d. 2005-2009, Percent, Has a doctor told you that you have diabetes, Yes response. [6][7]

e. 2006-2007, Percent of female Medicare enrollees age 67-69 that had at least one mammogram over a two-year period [3]

Sources: County Health Rankings, North Carolina County Health Rankings; North Carolina Data Health Explorer; NC DHHS, SCHS, BRFSS Survey Results, 2005-2009

## GREENE COUNTY

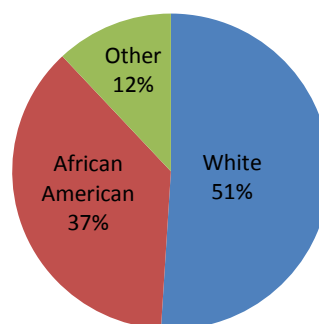
### Social and Economic Indicators

Based on number of persons employed, in 2011 the largest industry in Greene County was healthcare and social assistance.[1] The median household income (2009) was \$38,733 for a family of four, compared to \$43,754 statewide. The percentage of persons living below the poverty level in 2009 was 23%, compared to 16% statewide.[2] Unemployment (civilian, not in labor force, 2009) in Greene County was 11%, compared to 10.6% statewide. The estimated high school graduation rate (2010) was 63%, based on the cohort of ninth graders that graduated from high school in four years, compared to 78% in North Carolina. In 2007, the adult uninsured population ( $\geq$  age 18-64) was 30%, compared to 21% statewide. Five physicians provided primary care in Greene County (2008), which was a population to primary care physician ratio of 4,131 to 1.[3]

### Demographics

Based on data from the 2010 U.S. Census, Greene County had a total population of 21,362 with 80 persons per square mile. The county population was 23% children (<18), 64% adults ages 18-64, and 13% elders. Greene County was 37% African American (AA) (22% AA statewide) and 51% white (69% white statewide). Latinos/Hispanics (any race) comprised 14% of the population in Greene County (8% statewide) (Exhibit 67). The overall county population was 46% female and 54% male.[2]

**Exhibit 67. Greene County  
by Race, 2010**



Source: U.S. Census Bureau, State and County Quickfacts: North Carolina

### Cancer Surveillance

#### Colon and Rectal Cancers (CRC)

##### *Incidence*

In Greene County, the CRC age-adjusted incidence rate through 2004-2008 was 46.6 (95% CI 34.3, 62.0) per 100,000, which was lower than the overall statewide CRC rate of 46.8 (95% CI 46.1, 47.4). On average, there were 10 new cases of CRC diagnosed in Greene County, and 4,720 new cases across the state for 2004-2008. The CRC age-adjusted incidence rates per 100,000 were 51.9 (95% CI 30.7, 81.4) for males and 44.0 (95% CI 28.6, 65.3) for females. By race, the CRC age-adjusted incidence rates per 100,000 were 46.5 (95% CI 31.3, 66.7) for whites, and 46.7 (95% CI 27.4, 74.2) for African Americans.[4]

##### *Mortality*

In Greene County, the CRC mortality rate (2003-2007) was 28.3 (95% CI 18.6, 41.2) per 100,000 which was higher than the overall statewide CRC mortality rate of 17.3 (95% CI 17.0, 17.7). Greene County did not meet the Healthy People 2010 mortality rate goal (13.9 CRC deaths per 100,000).[4][5] The average annual percentage change in death rates for 2003-2007 was suppressed due to small numbers of deaths. The CRC mortality rate (2003-2007) by gender was 28.9 (95% CI 16.9-46.6) for females and the

rate for males was suppressed due to the small number of deaths. The CRC mortality rate (2003-2007) per 100,000 by race was 28.3 (95% CI 16.5, 45.5) for whites, and the rate for African Americans was suppressed due to small numbers of deaths.[4]

<b>Exhibit 68. Colorectal Cancer Incidence and Mortality Rates per 100,000 persons</b>		
	Greene County	North Carolina
CRC Incidence (2004-2008)*	46.6	46.8
CRC Mortality (2003-2007)	28.3	17.3

\*Age-Adjusted

Source: NCI, State Cancer Profiles

### Female Breast

#### *Incidence*

In Greene County, the breast cancer (female, invasive) age-adjusted incidence rate for 2004-2008 was 98.9 (95% CI 74.0, 129.9) per 100,000, which was lower than the overall statewide breast cancer rate of 123.3 (95% CI 121.9-124.7). On average, there were 11 new cases of invasive female breast cancer diagnosed in Greene County and 6,189 new cases across the state for 2004-2008. Female breast cancer age-adjusted incidence rates were 95.6 (95% CI 65.1, 135.9) for whites, and 109.2 (95% CI 67.3, 167.6) for African Americans.[4]

#### *Mortality*

In Greene County, female breast cancer mortality rates (2003-2007) per 100,000 were suppressed due to small numbers of deaths.[4]

<b>Exhibit 69. Invasive Female Breast Cancer Incidence and Mortality Rates per 100,000 persons</b>		
	Greene County	North Carolina
Breast Cancer Incidence (2004-2008)*	98.9	123.3
Breast Cancer Mortality (2003-2007)	**	24.8

\*Age-Adjusted

\*\*Suppressed due to small numbers

Source: NCI, State Cancer Profiles

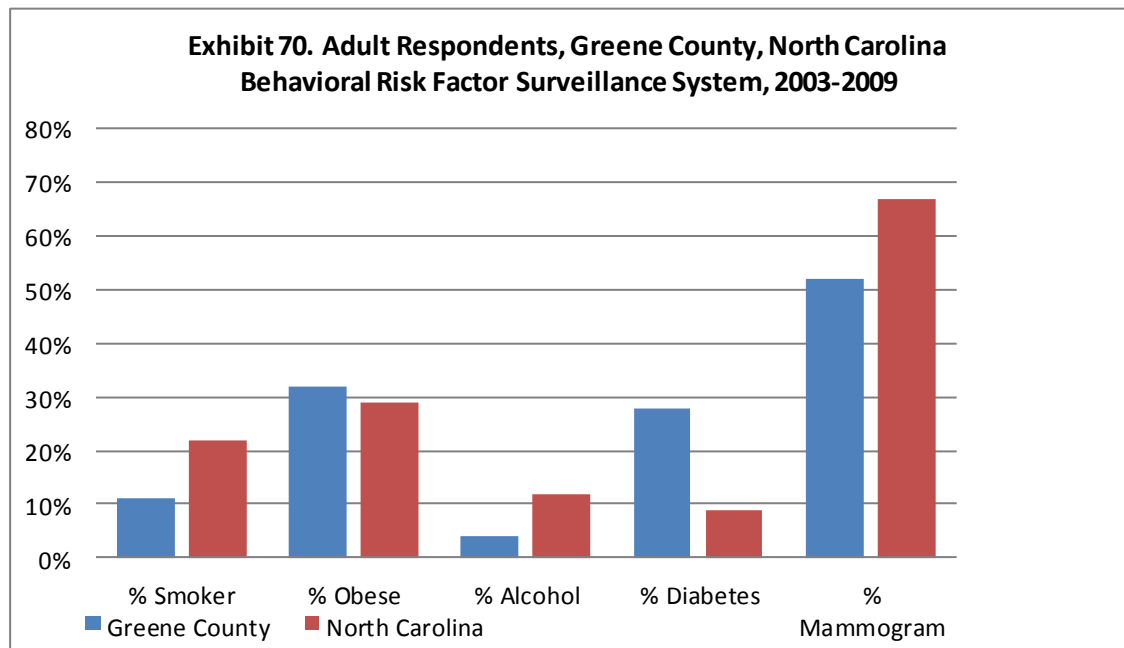
### Cervix

See Eastern North Carolina rates. Greene County data for cervical cancer incidence and mortality rates were suppressed due to small numbers.



### Risk Factors and Screening

Green County residents have a higher prevalence of obesity and diabetes compared to NC statewide, but report less smoking and alcohol consumption.



Sources: County Health Rankings, North Carolina County Health Rankings;  
North Carolina Data Health Explorer; NC DHHS, SCHS, BRFSS Survey Results, 2005-2009

### Exhibit 71. Adult Respondents, Greene County, North Carolina Behavioral Risk Factor Surveillance System, 2003-2009

	Factor				
	% Smoker <sup>a</sup>	% Obese <sup>b</sup>	% Alcohol <sup>c</sup>	% Diabetes <sup>d</sup>	% Mammogram <sup>e</sup>
Greene County	11%	32%	4%	28%	52%
North Carolina	22%	29%	12%	9%	67%

a. 2003-2009, Percent of adults that report smoking  $\geq 100$  cigarettes and currently smoking [3]

b. 2008, Percent of adults that report a BMI  $\geq 30$  [3]

c. 2003-2009, Percent of the adult population that reports either binge drinking, defined as consuming more than 4 (women) or 5 (men) alcoholic beverages on a single occasion in the past 30 days, or heavy drinking, defined as drinking more than 1 (women) or 2 (men) drinks per day on average [3]

d. 2005-2009, Percent, Has a doctor told you that you have diabetes, Yes response. [6][7]

e. 2006-2007, Percent of female Medicare enrollees age 67-69 that had at least one mammogram over a two-year period [3]

Sources: County Health Rankings, North Carolina County Health Rankings;  
North Carolina Data Health Explorer; NC DHHS, SCHS, BRFSS Survey Results, 2005-2009

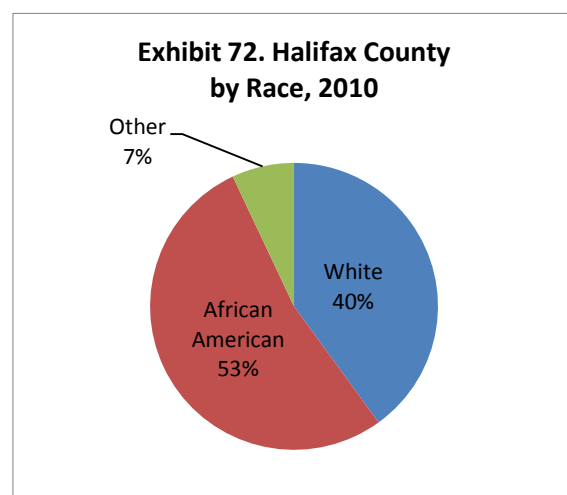
## HALIFAX COUNTY

### Social and Economic Indicators

Based on number of persons employed, in 2011 the largest industry in Halifax County was retail trade.[1] The median household income (2009) was \$29,966 for a family of four, compared to \$43,754 statewide. The percentage of persons living below the poverty level in 2009 was 27%, compared to 16% statewide.[2] Unemployment (civilian, not in labor force, 2009) in Halifax County was 13%, compared to 10.6% statewide. The estimated high school graduation rate (2010) was 75%, based on the cohort of ninth graders that graduated from high school in four years, compared to 78% in North Carolina. In 2007, the adult uninsured population ( $\geq$  age 18-64) was 14%, compared to 21% statewide. Forty-six physicians provided primary care in Halifax County (2008), which was a population to primary care physician ratio of 1,198 to 1.[3]

### Demographics

Based on data from the 2010 U.S. Census, Halifax County had a total population of 54,691 with 76 persons per square mile. The county population was 23% children (<18), 61% adults ages 18-64, and 16% elders. Halifax County was 53% African American (AA) (22% AA statewide) and 40% white (69% white statewide). Latinos/Hispanics (any race) comprised 2% of the population in Halifax County (8% statewide) (Exhibit 72). The overall county population was 52% female and 48% male.[2]



Source: U.S. Census Bureau, State and County Quickfacts: North Carolina

### Cancer Surveillance

#### Colon and Rectal Cancers (CRC)

##### *Incidence*

In Halifax County, the CRC age-adjusted incidence rate for 2004-2008 was 51.8 (95% CI 44.4, 60.3) per 100,000, which was higher than the overall statewide CRC rate of 46.8 (95% CI 46.1, 47.4). On average, there were 35 new cases of CRC diagnosed in Halifax County, and 4,720 new cases across the state for 2004-2008. The CRC age-adjusted incidence rates per 100,000 were 64.9 (95% CI 52.1, 79.9) for males and 42.9 (95% CI 34.0, 53.6) for females. By race, the CRC age-adjusted incidence rates per 100,000 were 55.6 (95% CI 44.9, 68.4) for whites, and 49.6 (95% CI 39.0, 62.2) for African Americans.[4]

##### *Mortality*

In Halifax County, CRC mortality rates for 2003-2007 were stable and were similar to the North Carolina rates (all races, both sexes). The CRC mortality rate (2003-2007) was 21.1 (95% CI 16.4, 26.7) per 100,000 which was higher than the overall statewide CRC mortality rate of 17.3 (95% CI 17.0, 17.7). Halifax County did not meet the Healthy People 2010 mortality rate goal (13.9 CRC deaths per 100,000).[4][5] The average annual percentage change in death rates declined at -0.5 percent (95% CI -

1.4, 0.5) for 2003-2007. The CRC mortality rates (2003-2007) by gender were 18.0 (95% CI 12.6, 25.3) for females and 25.5 (95% CI 17.4, 35.9) for males per 100,000. CRC mortality rates (2003-2007) per 100,000 by race were 16.9 (95% CI 11.3, 24.7) for whites, and 25.4 (95% CI 17.9, 35.0) for African Americans.[4]

<b>Exhibit 73. Colorectal Cancer Incidence and Mortality Rates per 100,000 persons</b>		
	Halifax County	North Carolina
CRC Incidence (2004-2008)*	51.8	46.8
CRC Mortality (2003-2007)	21.1	17.3

\*Age-Adjusted

Source: NCI, State Cancer Profiles

### Female Breast

#### *Incidence*

In Halifax County, the breast cancer (female, invasive) age-adjusted incidence rate for 2004-2008 was 137.5 (95% CI 120.7, 156.2) per 100,000, which was higher than the overall statewide breast cancer rate of 123.3 (95% CI 121.9-124.7). On average, there were 50 new cases of invasive female breast cancer diagnosed in Halifax County and 6,189 new cases across the state for 2004-2008. Female breast cancer age-adjusted incidence rates were 152.2 (95% CI 126.7, 182.0) for whites, and 123.9 (95% CI 101.3, 150.0) for African Americans.[4]

#### *Mortality*

In Halifax County, female breast cancer mortality rates for 2003-2007 increased and were higher than the North Carolina rates (all races). The female breast cancer mortality rate (2003-2007) was 34.7 (95% CI 26.5, 44.7) per 100,000, which was higher than the overall statewide female breast cancer mortality rate of 24.8. Halifax County did not meet the Healthy People 2010 mortality rate goal (22.3 female breast cancer deaths per 100,000).[4][5] The average annual percentage change in death rates increased at 0.4 percent (95% CI -0.8, 1.5) for 2003-2007. Female breast cancer mortality rates (2003-2007) per 100,000 by race were 34.2 (95% CI 22.2, 50.9) for whites, and 37.3 (95% CI 25.6, 52.6) for African Americans.[4]

<b>Exhibit 74. Invasive Female Breast Cancer Incidence and Mortality Rates per 100,000 persons</b>		
	Halifax County	North Carolina
Breast Cancer Incidence (2004-2008)*	137.5	123.3
Breast Cancer Mortality (2003-2007)	34.7	24.8

\*Age-Adjusted

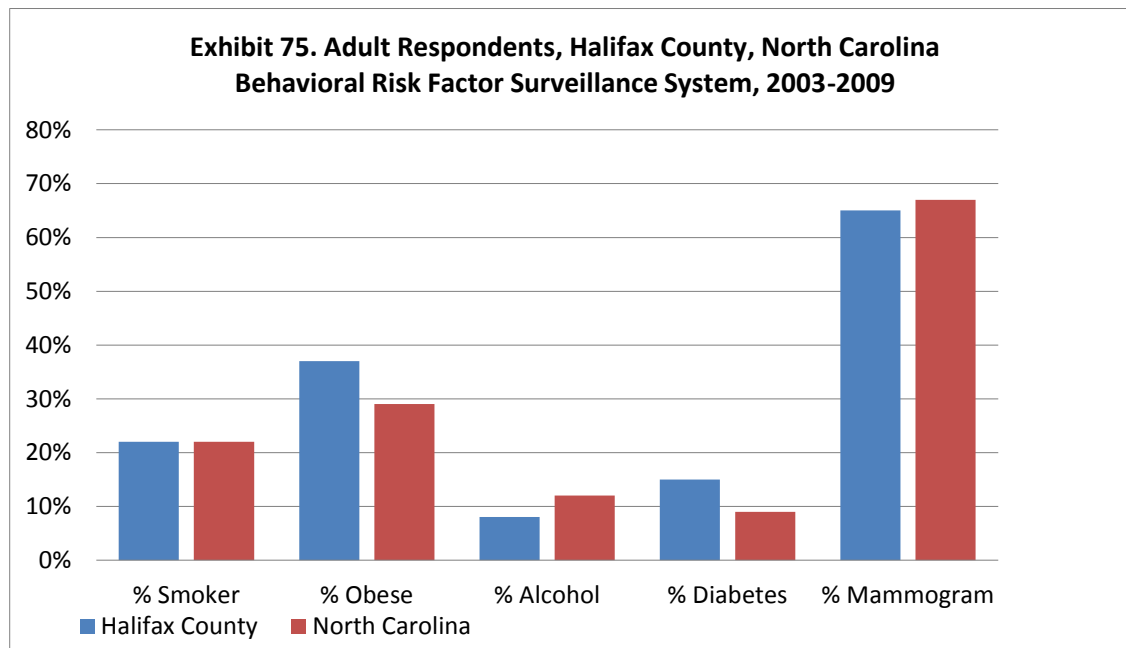
Source: NCI, State Cancer Profiles

### Cervix

See Eastern North Carolina rates. Halifax County data for cervical cancer incidence and mortality rates were suppressed due to small numbers.

## Risk Factors and Screening

Halifax County residents had a higher prevalence of obesity and diabetes compared to NC statewide, but report less alcohol consumption.



Sources: County Health Rankings, North Carolina County Health Rankings;  
North Carolina Data Health Explorer; NC DHHS, SCHS, BRFSS Survey Results, 2005-2009

## Exhibit 76. Adult Respondents, Halifax County, North Carolina Behavioral Risk Factor Surveillance System, 2005-2009

	Factor				
	% Smoker <sup>a</sup>	% Obese <sup>b</sup>	% Alcohol <sup>c</sup>	% Diabetes <sup>d</sup>	% Mammogram <sup>e</sup>
Halifax County	22%	37%	8%	15%	65%
North Carolina	22%	29%	12%	9%	67%

a. 2003-2009, Percent of adults that report smoking  $\geq 100$  cigarettes and currently smoking [3]

b. 2008, Percent of adults that report a BMI  $\geq 30$  [3]

c. 2003-2009, Percent of the adult population that reports either binge drinking, defined as consuming more than 4 (women) or 5 (men) alcoholic beverages on a single occasion in the past 30 days, or heavy drinking, defined as drinking more than 1 (women) or 2 (men) drinks per day on average [3]

d. 2005-2009, Percent, Has a doctor told you that you have diabetes, Yes response. [6][7]

e. 2006-2007, Percent of female Medicare enrollees age 67-69 that had at least one mammogram over a two-year period [3]

Sources: County Health Rankings, North Carolina County Health Rankings;  
North Carolina Data Health Explorer; NC DHHS, SCHS, BRFSS Survey Results, 2005-2009

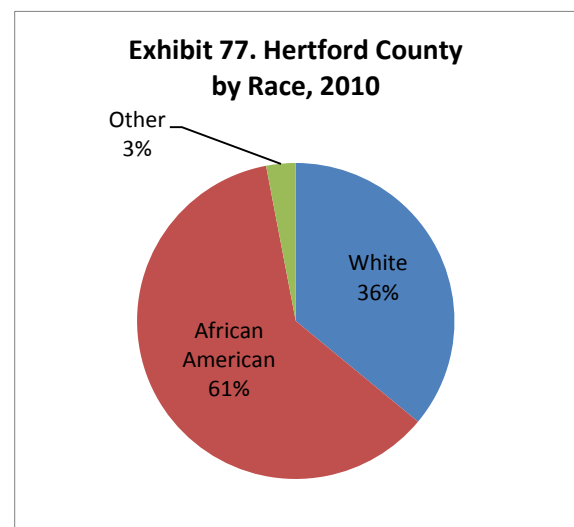
## HERTFORD COUNTY

### Social and Economic Indicators

Based on number of persons employed, in 2011 the largest industry in Hertford County was manufacturing.[1] The median household income (2009) was \$31,879 for a family of four, compared to \$43,754 statewide. The percentage of persons living below the poverty level in 2009 was 25%, compared to 16% statewide.[2] Unemployment (civilian, not in labor force, 2009) in Hertford County was 9%, compared to 10.6% statewide. The estimated high school graduation rate (2010) was 68%, based on the cohort of ninth graders that graduated from high school in four years, compared to 78% in North Carolina. In 2007, the adult uninsured population ( $\geq$  age 18-64) was 16%, compared to 21% statewide. Twenty-eight physicians provided primary care in Hertford County (2008), which was a population to primary care physician ratio of 834 to 1.[3]

### Demographics

Based on data from the 2010 U.S. Census, Hertford County had a total population of 24,669 with 70 persons per square mile. The county population was 21% children (<18), 63% adults ages 18-64, and 16% elders. Hertford County was 61% African American (AA) (22% AA statewide) and 36% white (69% white statewide). Latinos/Hispanics (any race) comprised 3% of the population in Hertford County (8% statewide) (Exhibit 77). The overall county population was 51% female and 49% male.[2]



Source: U.S. Census Bureau, State and County Quickfacts: North Carolina

### Cancer Surveillance

#### Colon and Rectal Cancers (CRC)

##### *Incidence*

In Hertford County, the CRC age-adjusted incidence rate for 2004-2008 was 64.4 (95% CI 51.8, 79.4) per 100,000, which was higher than the overall statewide CRC rate of 46.8 (95% CI 46.1, 47.4). On average, there were 18 new cases of CRC diagnosed in Hertford County, and 4,720 new cases across the state for 2004-2008. The CRC age-adjusted incidence rates per 100,000 were 64.6 (95% CI 44.5, 90.5) for males and 67.7 (95% CI 50.9, 88.8) for females. By race, the CRC age-adjusted incidence rates per 100,000 were 70.4 (95% CI 51.2, 95.7) for whites, and 61.5 (95% CI 44.8, 82.4) for African Americans.[4]

##### *Mortality*

In Hertford County, CRC mortality rates for 2003-2007 increased and were higher than the North Carolina rates (all races, both sexes). The CRC mortality rate (2003-2007) was 29.9 (95% CI 21.4, 40.9) per 100,000 which was higher than the overall statewide CRC mortality rate of 17.3 (95% CI 17.0, 17.7). Hertford County did not meet the Healthy People 2010 mortality rate goal (13.9 CRC deaths per 100,000).[4][5] The average annual percentage change in death rates increased at 0.1 percent (95% CI -

1.0, 1.2) for 2003-2007. The CRC mortality rates (2003-2007) by gender were 26.9 (95% CI 17.0, 41.2) for females and 35.4 (95% CI 20.7, 56.4) for males per 100,000. The CRC mortality rate (2003-2007) per 100,000 by race was suppressed for whites due to small numbers of deaths, and the rate for African Americans was 36.8 (95% CI 24.0, 54.0).[4]

<b>Exhibit 78. Colorectal Cancer Incidence and Mortality Rates per 100,000 persons</b>		
	Hertford County	North Carolina
CRC Incidence (2004-2008)*	64.4	46.8
CRC Mortality (2003-2007)	29.9	17.3

\*Age-Adjusted

Source: NCI, State Cancer Profiles

### Female Breast

#### *Incidence*

In Hertford County, the breast cancer (female, invasive) age-adjusted incidence rate for 2004-2008 was 113.3 (95% CI 90.1, 141.0) per 100,000, which was lower than the overall statewide breast cancer rate of 123.3 (95% CI 121.9-124.7). On average, there were 17 new cases of invasive female breast cancer diagnosed in Hertford County and 6,189 new cases across the state for 2004-2008. Female breast cancer age-adjusted incidence rates were 134.4 (95% CI 94.4, 187.5) for whites, and 100.9 (95% CI 72.8, 136.5) for African Americans.[4]

#### *Mortality*

In Hertford County, female breast cancer mortality rates for 2003-2007 increased and were similar to the North Carolina rates (all races). The female breast cancer mortality rate (2003-2007) was 38.7 (95% CI 25.9, 56.1) per 100,000, which was higher than the overall statewide female breast cancer mortality rate of 24.8. Hertford County did not meet the Healthy People 2010 mortality rate goal (22.3 female breast cancer deaths per 100,000).[4][5] The average annual percentage change in death rates increased at 0.6 percent (95% CI -1.3, 2.5) for 2003-2007. The female breast cancer mortality rate (2003-2007) per 100,000 by race was suppressed for whites due to small numbers of deaths, and the rate for African Americans was 43.8 (95% CI 25.9, 69.7).[4]

<b>Exhibit 79. Invasive Female Breast Cancer Incidence and Mortality Rates per 100,000 persons</b>		
	Hertford County	North Carolina
Breast Cancer Incidence (2004-2008)*	113.3	123.3
Breast Cancer Mortality (2003-2007)	38.7	24.8

\*Age-Adjusted

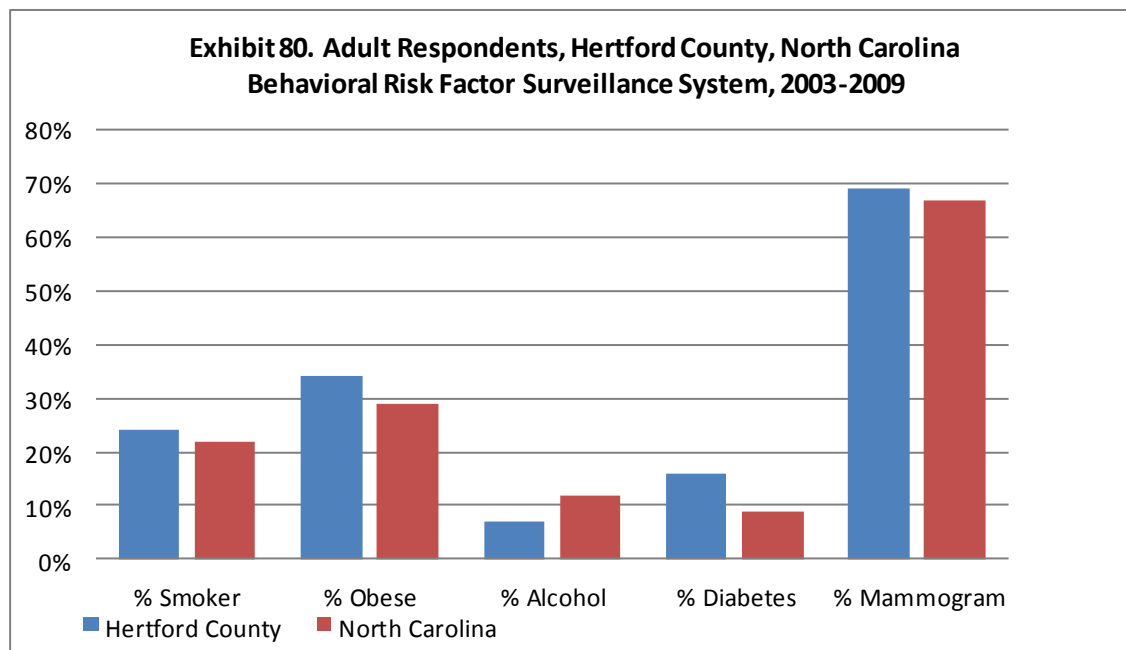
Source: NCI, State Cancer Profiles

## Cervix

See Eastern North Carolina rates. Hertford County data for cervical cancer incidence and mortality rates were suppressed due to small numbers.

## Risk Factors and Screening

Hertford County residents had a higher prevalence of smoking, obesity, and diabetes compared to NC statewide. Mammography in medicare-enrolled women was higher than statewide.



Sources: County Health Rankings, North Carolina County Health Rankings; North Carolina Data Health Explorer; NC DHHS, SCHS, BRFSS Survey Results, 2005-2009

## Exhibit 81. Adult Respondents, Hertford County, North Carolina Behavioral Risk Factor Surveillance System, 2003-2009

	Factor				
	% Smoker <sup>a</sup>	% Obese <sup>b</sup>	% Alcohol <sup>c</sup>	% Diabetes <sup>d</sup>	% Mammogram <sup>e</sup>
Hertford County	24%	34%	7%	16%	69%
North Carolina	22%	29%	12%	9%	67%

a. 2003-2009, Percent of adults that report smoking  $\geq 100$  cigarettes and currently smoking [3]

b. 2008, Percent of adults that report a BMI  $\geq 30$  [3]

c. 2003-2009, Percent of the adult population that reports either binge drinking, defined as consuming more than 4 (women) or 5 (men) alcoholic beverages on a single occasion in the past 30 days, or heavy drinking, defined as drinking more than 1 (women) or 2 (men) drinks per day on average [3]

d. 2005-2009, Percent, Has a doctor told you that you have diabetes, Yes response. [6][7]

e. 2006-2007, Percent of female Medicare enrollees age 67-69 that had at least one mammogram over a two-year period [3]

Sources: County Health Rankings, North Carolina County Health Rankings; North Carolina Data Health Explorer; NC DHHS, SCHS, BRFSS Survey Results, 2005-2009

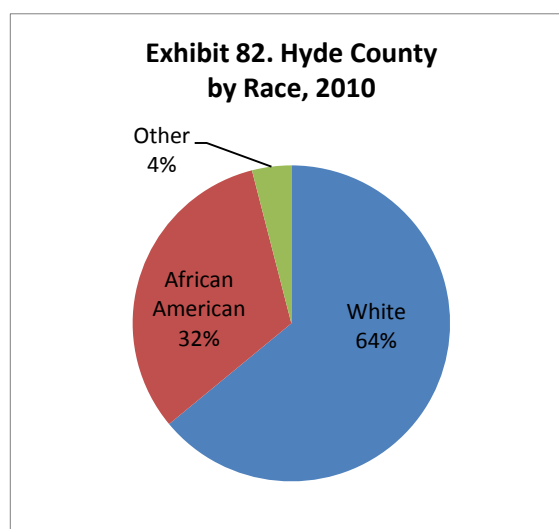
## HYDE COUNTY

### Social and Economic Indicators

Based on number of persons employed, in 2011 the largest industry in Hyde County was public administration.[1] The median household income (2009) was \$33,097 for a family of four, compared to \$43,754 statewide. The percentage of persons living below the poverty level in 2009 was 24%, compared to 16% statewide.[2] Unemployment (civilian, not in labor force, 2009) in Hyde County was 8%, compared to 10.6% statewide. The estimated high school graduation rate (2010) was 66%, based on the cohort of ninth graders that graduated from high school in four years, compared to 78% in North Carolina. In 2007, the adult uninsured population ( $\geq$  age 18-64) was 20%, compared to 21% statewide. There are 0 physicians in primary care in Hyde County (2008), which was a population to primary care physician ratio of 5,260 to 0.\*[3] \*Data unreliable

### Demographics

Based on data from the 2010 U.S. Census, Hyde County had a total population of 5,810 with 10 persons per square mile. The county population was 19% children (<18), 66% adults ages 18-64, and 15% elders. Hyde County was 32% African American (AA) (22% AA statewide) and 64% white (69% white statewide). Latinos/Hispanics (any race) comprised 7% of the population in Hyde County (8% statewide) (Exhibit 82). The overall county population was 45% female and 55% male.[2]



Source: U.S. Census Bureau, State and County Quickfacts: North Carolina

### Cancer Surveillance

#### Colon and Rectal Cancers (CRC)

##### *Incidence*

In Hyde County, the CRC age-adjusted incidence rate for 2004-2008 was 56.3 (95% CI 34.3, 88.7) per 100,000, which was higher than the overall statewide CRC rate of 46.8 (95% CI 46.1, 47.4). On average, there were 4 new cases of CRC diagnosed in Hyde County, and 4,720 new cases across the state for 2004-2008. The CRC age-adjusted incidence rates per 100,000 for males and females were suppressed due to small numbers of cases. By race, the CRC age-adjusted incidence rate per 100,000 was 69.8 (95% CI 40.5, 115.0) for whites, and the rate for African Americans was suppressed due to small numbers of cases.[4]



### *Mortality*

In Hyde County, CRC mortality rates (2003-2007) per 100,000 were suppressed due to small numbers of deaths.[4]

<b>Exhibit 83. Colorectal Cancer Incidence and Mortality Rates per 100,000 persons</b>		
	Hyde County	North Carolina
Colorectal Incidence (2004-2008)*	56.3	46.8
Colorectal Mortality (2003-2007)	**	17.3

\*Age-Adjusted

\*\*Suppressed due to small numbers

Source: NCI, State Cancer Profiles

### Female Breast

#### *Incidence*

In Hyde County, the breast cancer (female, invasive) age-adjusted incidence rate for 2004-2008 was 141.8 (95% CI 86.5, 221.4) per 100,000, which was higher than the overall statewide breast cancer rate of 123.3 (95% CI 121.9-124.7). On average, there were 4 new cases of invasive female breast cancer diagnosed in Hyde County and 6,189 new cases across the state for 2004-2008. Incidence rates by race were suppressed due to small numbers of cases.[4]

### *Mortality*

In Hyde County, female breast cancer mortality rates (2003-2007) per 100,000 were suppressed due to small numbers of deaths.[4]

<b>Exhibit 84. Invasive Female Breast Cancer Incidence and Mortality Rates per 100,000 persons</b>		
	Hyde County	North Carolina
Breast Cancer Incidence (2004-2008)*	141.8	123.3
Breast Cancer Mortality (2003-2007)	**	24.8

\*Age-Adjusted

\*\*Suppressed due to small numbers

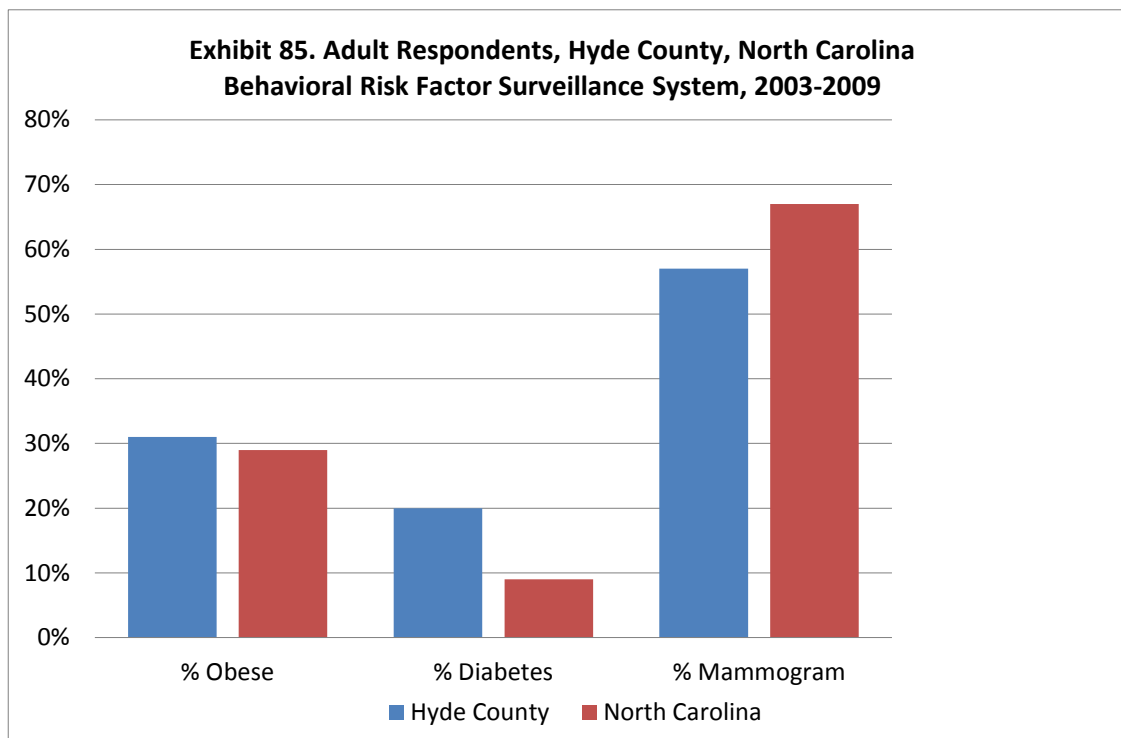
Source: NCI, State Cancer Profiles

### Cervix

See Eastern North Carolina rates. Hyde County data for cervical cancer incidence and mortality rates were suppressed due to small numbers.

## Risk Factors and Screening

Hyde County residents had a higher prevalence of obesity and diabetes compared to NC statewide. Mammography in Medicare-enrolled women was lower than the statewide prevalence.



\*Data were not available for smoker and alcohol behavioral factors at the county level.

Sources: County Health Rankings, North Carolina County Health Rankings;  
North Carolina Data Health Explorer; NC DHHS, SCHS, BRFSS Survey Results, 2005-2009

## Exhibit 86. Adult Respondents, Hyde County, North Carolina Behavioral Risk Factor Surveillance System, 2003-2009

	Factor				
	% Smoker <sup>a</sup>	% Obese <sup>b</sup>	% Alcohol <sup>c</sup>	% Diabetes <sup>d</sup>	% Mammogram <sup>e</sup>
Hyde County	*	31%	*	20%	57%
North Carolina	22%	29%	12%	9%	67%

a. 2003-2009, Percent of adults that report smoking  $\geq 100$  cigarettes and currently smoking [3]

b. 2008, Percent of adults that report a BMI  $\geq 30$  [3]

c. 2003-2009, Percent of the adult population that reports either binge drinking, defined as consuming more than 4 (women) or 5 (men) alcoholic beverages on a single occasion in the past 30 days, or heavy drinking, defined as drinking more than 1 (women) or 2 (men) drinks per day on average [3]

d. 2005-2009, Percent, Has a doctor told you that you have diabetes, Yes response. [6][7]

e. 2006-2007, Percent of female Medicare enrollees age 67-69 that had at least one mammogram over a two-year period [3]

\*Data unavailable

Sources: County Health Rankings, North Carolina County Health Rankings;  
North Carolina Data Health Explorer; NC DHHS, SCHS, BRFSS Survey Results, 2005-2009

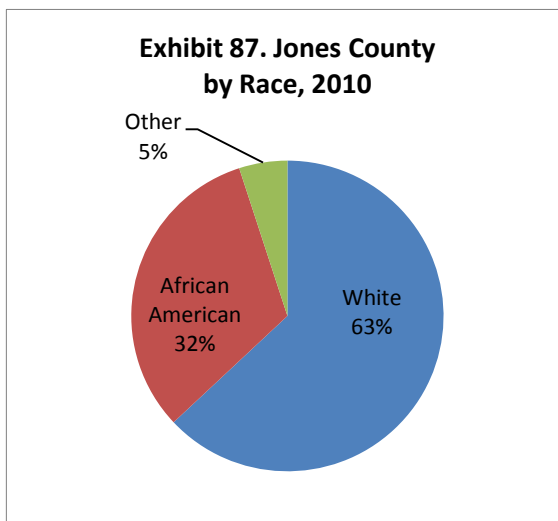
## JONES COUNTY

### Social and Economic Indicators

Based on number of persons employed, in 2011 the largest industry in Jones County was transportation and warehousing.[1] The median household income (2009) was \$35,079 for a family of four, compared to \$43,754 statewide. The percentage of persons living below the poverty level in 2009 was 18%, compared to 16% statewide.[2] Unemployment (civilian, not in labor force, 2009) in Jones County was 10%, compared to 10.6% statewide. The estimated high school graduation rate (2010) was 70%, based on the cohort of ninth graders that graduated from high school in four years, compared to 78% in North Carolina. In 2007, the adult uninsured population ( $\geq$  age 18-64) was 24%, compared to 21% statewide. Seven physicians provided primary care in Jones County (2008), which was a population to primary care physician ratio of 1,423 to 1.[3]

### Demographics

Based on data from the 2010 U.S. Census, Jones County had a total population of 10,153 with 22 persons per square mile. The county population was 22% children (<18), 61% adults ages 18-64, and 17% elders. Jones County was 32% African American (AA) (22% AA statewide) and 63% white (69% white statewide). Latinos/Hispanics (any race) comprised 4% of the population in Jones County (8% statewide) (Exhibit 87). The overall county population was 52% female and 48% male.[2]



Source: U.S. Census Bureau, State and County Quickfacts: North Carolina

### Cancer Surveillance

#### Colon and Rectal Cancers (CRC)

##### *Incidence*

In Jones County, the CRC age-adjusted incidence rate for 2004-2008 was 40.7 (95% CI 26.7, 60.1) per 100,000, which was lower than the overall statewide CRC rate of 46.8 (95% CI 46.1, 47.4). On average, there were 5 new cases of CRC diagnosed in Jones County, and 4,720 new cases across the state for 2004-2008. The CRC incidence rates by gender and race were suppressed due to small numbers of cases.[4]

### *Mortality*

In Jones County, CRC mortality rates (2003-2007) per 100,000 were suppressed due to small numbers of deaths.[4]

<b>Exhibit 88. Colorectal Cancer Incidence and Mortality Rates per 100,000 persons</b>		
	Jones County	North Carolina
CRC Incidence (2004-2008)*	40.7	46.8
CRC Mortality (2003-2007)	**	17.3

\*Age-Adjusted

\*\*Suppressed due to small numbers

Source: NCI, State Cancer Profiles

### Female Breast

#### *Incidence*

In Jones County, the breast cancer (female, invasive) age-adjusted incidence rate for 2004-2008 was 94.7 (95% CI 64.1, 136.2) per 100,000, which was lower than the overall statewide breast cancer rate of 123.3 (95% CI 121.9-124.7). On average, there were 6 new cases of invasive female breast cancer diagnosed in Jones County and 6,189 new cases across the state for 2004-2008. The female breast cancer age-adjusted incidence rate was 95.4 (95% CI 57.6, 150.7) for whites, and the rate for African Americans was suppressed due to small numbers of cases.[4]

#### *Mortality*

In Jones County, female breast cancer mortality rates (2003-2007) per 100,000 were suppressed due to small numbers of deaths.[4]

<b>Exhibit 89. Invasive Female Breast Cancer Incidence and Mortality Rates per 100,000 persons</b>		
	Jones County	North Carolina
Breast Cancer Incidence (2004-2008)*	94.7	123.3
Breast Cancer Mortality (2003-2007)	**	24.8

\*Age-Adjusted

\*\*Suppressed due to small numbers

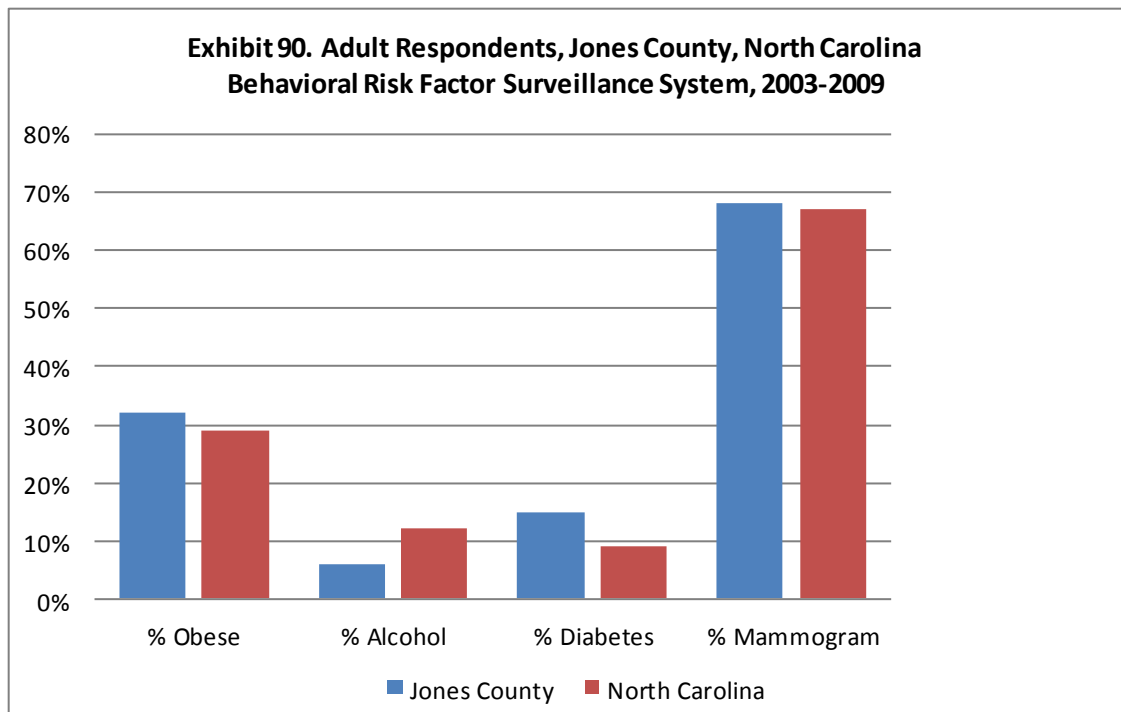
Source: NCI, State Cancer Profiles

### Cervix

See Eastern North Carolina rates. Jones County data for cervical cancer incidence and mortality rates were suppressed due to small numbers.

## Risk Factors and Screening

Jones County residents had a higher prevalence of obesity and diabetes compared to NC statewide. Mammography in medicare-enrolled women was slightly higher than statewide prevalence.



\*Data were not available for smoker behavioral factor at the county level.

Sources: County Health Rankings, North Carolina County Health Rankings;  
North Carolina Data Health Explorer; NC DHHS, SCHS, BRFSS Survey Results, 2005-2009

## Exhibit 91. Adult Respondents, Jones County, North Carolina Behavioral Risk Factor Surveillance System, 2003-2009

	Factor				
	% Smoker <sup>a</sup>	% Obese <sup>b</sup>	% Alcohol <sup>c</sup>	% Diabetes <sup>d</sup>	% Mammogram <sup>e</sup>
Jones County	*	32%	6%	15%	68%
North Carolina	22%	29%	12%	9%	67%

a. 2003-2009, Percent of adults that report smoking  $\geq 100$  cigarettes and currently smoking [3]

b. 2008, Percent of adults that report a BMI  $\geq 30$  [3]

c. 2003-2009, Percent of the adult population that reports either binge drinking, defined as consuming more than 4 (women) or 5 (men) alcoholic beverages on a single occasion in the past 30 days, or heavy drinking, defined as drinking more than 1 (women) or 2 (men) drinks per day on average [3]

d. 2005-2009, Percent, Has a doctor told you that you have diabetes, Yes response. [6][7]

e. 2006-2007, Percent of female Medicare enrollees age 67-69 that had at least one mammogram over a two-year period [3]

\*Data unavailable

Sources: County Health Rankings, North Carolina County Health Rankings;  
North Carolina Data Health Explorer; NC DHHS, SCHS, BRFSS Survey Results, 2005-2009

## LENOIR COUNTY

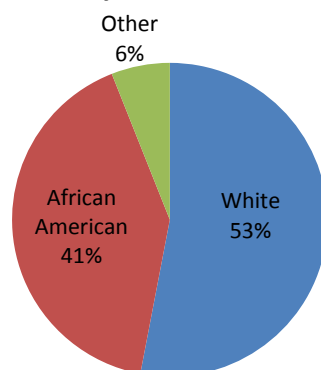
### Social and Economic Indicators

Based on number of persons employed, in 2011 the largest industry in Lenoir County was manufacturing.[1] The median household income (2009) was \$34,213 for a family of four, compared to \$43,754 statewide. The percentage of persons living below the poverty level in 2009 was 21%, compared to 16% statewide.[2] Unemployment (civilian, not in labor force, 2009) in Lenoir County was 11%, compared to 10.6% statewide. The estimated high school graduation rate (2010) was 74%, based on the cohort of ninth graders that graduated from high school in four years, compared to 78% in North Carolina. In 2007, the adult uninsured population ( $\geq$  age 18-64) was 17%, compared to 21% statewide. Forty-eight physicians provided primary care in Lenoir County (2008), which was a population to primary care physician ratio of 1,181 to 1.[3]

### Demographics

Based on data from the 2010 U.S. Census, Lenoir County had a total population of 59,495 with 149 persons per square mile. The county population was 24% children (<18), 60% adults ages 18-64, and 16% elders. Lenoir County was 41% African American (AA) (22% AA statewide) and 53% white (69% white statewide). Latinos/Hispanics (any race) comprised 7% of the population in Lenoir County (8% statewide) (Exhibit 92). The overall county population was 53% female and 47% male.[2]

**Exhibit 92. Lenoir County  
by Race, 2010**



Source: U.S. Census Bureau, State and County Quickfacts: North Carolina

### Cancer Surveillance

#### Colon and Rectal Cancers (CRC)

##### *Incidence*

In Lenoir County, the CRC age-adjusted incidence rate for 2004-2008 was 66.3 (95% CI 58.0, 75.5) per 100,000, which was higher than the overall statewide CRC rate of 46.8 (95% CI 46.1, 47.4). On average, there were 47 new cases of CRC diagnosed in Lenoir County, and 4,720 new cases across the state for 2004-2008. The CRC age-adjusted incidence rates per 100,000 were 81.4 (95% CI 66.4, 98.8) for males and 58.8 (95% CI 48.7, 70.5) for females. By race, the CRC age-adjusted incidence rates per 100,000 were 59.7 (95% CI 50.8, 70.8) for whites, and 76.3 (95% CI 61.5, 93.7) for African Americans.[4]

##### *Mortality*

In Lenoir County, CRC mortality rates for 2003-2007 were stable and were similar to the North Carolina rates (all races, both sexes). The CRC mortality rate (2003-2007) was 21.4 (95% CI 16.8, 26.9) per 100,000 which was higher than the overall statewide CRC mortality rate of 17.3 (95% CI 17.0, 17.7). Lenoir County did not meet the Healthy People 2010 mortality rate goal (13.9 CRC deaths per

100,000).[4][5] The average annual percentage change in death rates declined at -0.4 percent (95% CI -1.4, 0.6) through 2003-2007. The CRC mortality rates (2003-2007) by gender were 19.1 (95% CI 13.8, 26.2) for females and 23.1 (95% CI 15.7, 32.7) for males per 100,000. CRC mortality rates (2003-2007) per 100,000 by race were 21.3 (95% CI 15.6, 28.5) for whites, and 22.5 (95% CI 14.8, 32.8) for African Americans.[4]

<b>Exhibit 93. Colorectal Cancer Incidence and Mortality Rates per 100,000 persons</b>		
	Lenoir County	North Carolina
CRC Incidence (2004-2008)*	66.3	46.8
CRC Mortality (2003-2007)	21.4	17.3

\*Age-Adjusted

Source: NCI, State Cancer Profiles

### Female Breast

#### *Incidence*

In Lenoir County, the breast cancer (female, invasive) age-adjusted incidence rate for 2004-2008 was 148.1 (95% CI 131.3, 166.7) per 100,000, which was higher than the overall statewide breast cancer rate of 123.3 (95% CI 121.9-124.7). On average, there were 58 new cases of invasive female breast cancer diagnosed in Lenoir County and 6,189 new cases across the state for 2004-2008. Female breast cancer age-adjusted incidence rates were 151.8 (95% CI 130.0, 176.6) for whites, and 142.5 (95% CI 116.4, 173.0) for African Americans.[4]

#### *Mortality*

In Lenoir County, female breast cancer mortality rates for 2003-2007 increased and were similar to the North Carolina rates (all races). The female breast cancer mortality rate (2003-2007) was 30.5 (95% CI 23.2, 39.5) per 100,000, which was higher than the overall statewide female breast cancer mortality rate of 24.8. Lenoir County did not meet the Healthy People 2010 mortality rate goal (22.3 female breast cancer deaths per 100,000).[4][5] The average annual percentage change in death rates declined at -0.4 percent (95% CI -1.4, 0.6) for 2003-2007. Female breast cancer mortality rates (2003-2007) per 100,000 by race were 23.5 (95% CI 15.7, 34.4) for whites, and 41.1 (95% CI 27.8, 58.7) for African Americans.[4]

<b>Exhibit 94. Invasive Female Breast Cancer Incidence and Mortality Rates per 100,000 persons</b>		
	Lenoir County	North Carolina
Breast Cancer Incidence (2004-2008)*	148.1	123.3
Breast Cancer Mortality (2003-2007)	30.5	24.8

\*Age-Adjusted

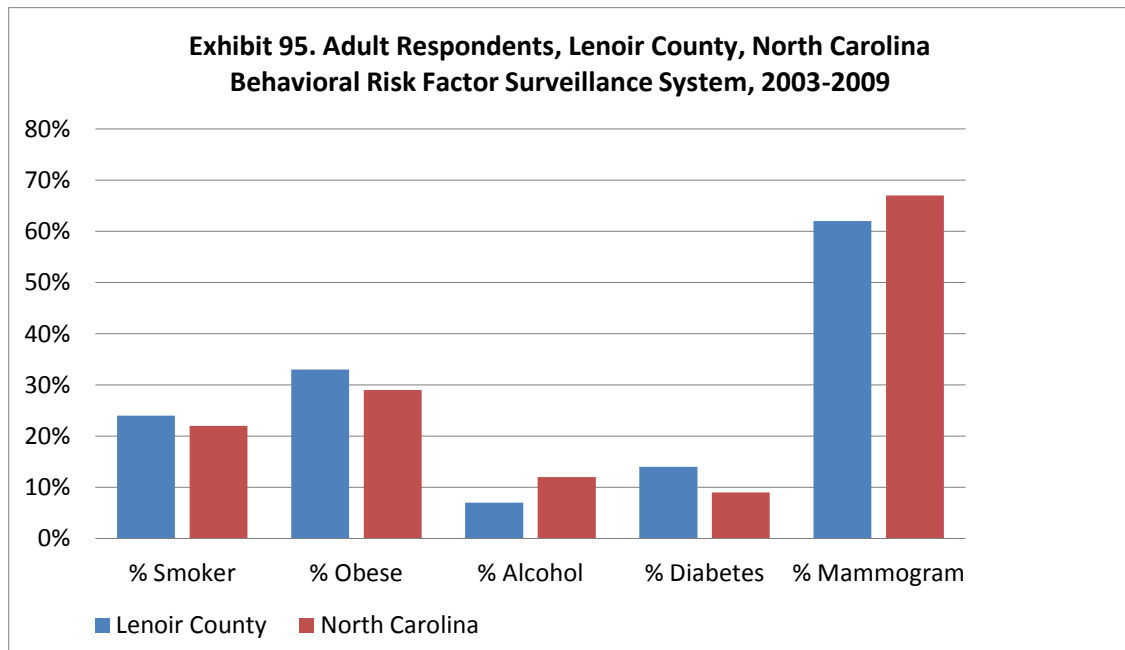
Source: NCI, State Cancer Profiles

## Cervix

See Eastern North Carolina rates. Lenoir County data for cervical cancer incidence and mortality rates were suppressed due to small numbers.

## Risk Factors and Screening

Lenoir County residents had a higher prevalence of smoking, obesity and diabetes compared to NC statewide, but report less mammography in medicare-enrolled women.



Sources: County Health Rankings, North Carolina County Health Rankings;  
North Carolina Data Health Explorer; NC DHHS, SCHS, BRFSS Survey Results, 2005-2009

## Exhibit 96. Adult Respondents, Lenoir County, North Carolina Behavioral Risk Factor Surveillance System, 2003-2009

	Factor				
	% Smoker <sup>a</sup>	% Obese <sup>b</sup>	% Alcohol <sup>c</sup>	% Diabetes <sup>d</sup>	% Mammogram <sup>e</sup>
Lenoir County	24%	33%	7%	14%	62%
North Carolina	22%	29%	12%	9%	67%

a. 2003-2009, Percent of adults that report smoking  $\geq 100$  cigarettes and currently smoking [3]

b. 2008, Percent of adults that report a BMI  $\geq 30$  [3]

c. 2003-2009, Percent of the adult population that reports either binge drinking, defined as consuming more than 4 (women) or 5 (men) alcoholic beverages on a single occasion in the past 30 days, or heavy drinking, defined as drinking more than 1 (women) or 2 (men) drinks per day on average [3]

d. 2005-2009, Percent, Has a doctor told you that you have diabetes, Yes response. [6][7]

e. 2006-2007, Percent of female Medicare enrollees age 67-69 that had at least one mammogram over a two-year period [3]

Sources: County Health Rankings, North Carolina County Health Rankings;  
North Carolina Data Health Explorer; NC DHHS, SCHS, BRFSS Survey Results, 2005-2009



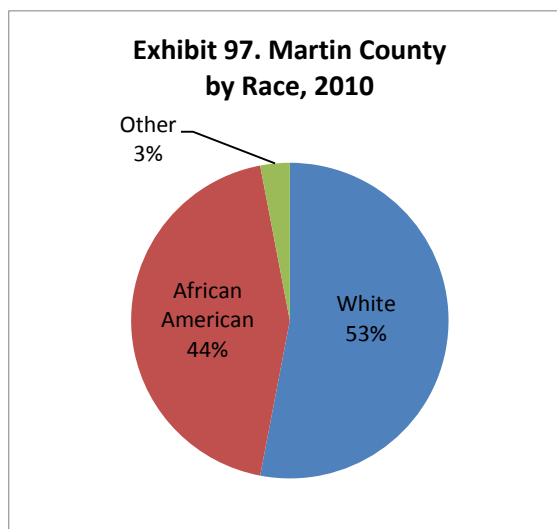
## MARTIN COUNTY

### Social and Economic Indicators

Based on number of persons employed, in 2011 the largest industry in Martin County was manufacturing.[1] The median household income (2009) was \$31,514 for a family of four, compared to \$43,754 statewide. The percentage of persons living below the poverty level in 2009 was 21%, compared to 16% statewide.[2] Unemployment (civilian, not in labor force, 2009) in Martin County was 10%, compared to 10.6% statewide. The estimated high school graduation rate (2010) was 77%, based on the cohort of ninth graders that graduated from high school in four years, compared to 78% in North Carolina. In 2007, the adult uninsured population ( $\geq$  age 18-64) was 16%, compared to 21% statewide. Fifteen physicians provided primary care in Martin County (2008), which was a population to primary care physician ratio of 1,566 to 1.[3]

### Demographics

Based on data from the 2010 U.S. Census, Martin County had a total population of 24,505 with 53 persons per square mile. The county population was 22% children (<18), 60% adults ages 18-64, and 18% elders. Martin County was 44% African American (AA) (22% AA statewide) and 53% white (69% white statewide). Latinos/Hispanics (any race) comprised 3% of the population in Martin County (8% statewide) (Exhibit 97). The overall county population was 53% female and 47% male.[2]



### Cancer Surveillance

#### Colon and Rectal Cancers (CRC)

##### *Incidence*

In Martin County, the CRC age-adjusted incidence rate for 2004-2008 was 50.8 (95% CI 40.0, 63.8) per 100,000, which was higher than the overall statewide CRC rate of 46.8 (95% CI 46.1, 47.4). On average, there were 16 new cases of CRC diagnosed in Martin County, and 4,720 new cases across the state for 2004-2008. The CRC age-adjusted incidence rates per 100,000 were 80.8 (95% CI 59.5, 107.6) for males and 31.4 (95% CI 20.6, 46.4) for females. By race, the CRC age-adjusted incidence rates per 100,000 were 54.4 (95% CI 40.1, 72.6) for whites, and 44.8 (95% CI 29.7, 65.3) for African Americans.[4]

##### *Mortality*

In Martin County, the CRC mortality rate (2003-2007) was 26.3 (95% CI 18.8, 36.1) per 100,000 which was higher than the overall statewide CRC mortality rate of 17.3 (95% CI 17.0, 17.7). Martin County did not meet the Healthy People 2010 mortality rate goal (13.9 CRC deaths per 100,000).[4][5] The average annual percentage change in death rates for 2003-2007 was suppressed due to small numbers of

Source: U.S. Census Bureau, State and County Quickfacts: North Carolina

deaths. The CRC mortality rates (2003-2007) by gender were 19.7 (95% CI 11.7, 31.7) for females and 35.1 (95% CI 21.4, 54.2) for males per 100,000. CRC mortality rates (2003-2007) per 100,000 by race were 19.6 (95% CI 11.5, 31.7) for whites, and 34.5 (95% CI 21.3, 53.2) for African Americans.[4]

<b>Exhibit 98. Colorectal Cancer Incidence and Mortality Rates per 100,000 persons</b>		
	Martin County	North Carolina
CRC Incidence (2004-2008)*	50.8	46.8
CRC Mortality (2003-2007)	26.3	17.3

\*Age-Adjusted

Source: NCI, State Cancer Profiles

### Female Breast

#### *Incidence*

In Martin County, the breast cancer (female, invasive) age-adjusted incidence rate for 2004-2008 was 114.4 (95% CI 91.8, 141.1) per 100,000, which was lower than the overall statewide breast cancer rate of 123.3 (95% CI 121.9-124.7). On average, there were 19 new cases of invasive female breast cancer diagnosed in Martin County and 6,189 new cases across the state for 2004-2008. Female breast cancer age-adjusted incidence rates were 125.9 (95% CI 95.5, 164.0) for whites, and 97.5 (95% CI 66.2, 138.8) for African Americans.[4]

#### *Mortality*

In Martin County, the female breast cancer mortality rate (2003-2007) was 29.7 (95% CI 18.7, 45.1) per 100,000, which was higher than the overall statewide female breast cancer mortality rate of 24.8. Martin County did not meet the Healthy People 2010 mortality rate goal (22.3 female breast cancer deaths per 100,000).[4][5] The average annual percentage change in death rates for 2003-2007 was suppressed due to small numbers of deaths. The female breast cancer mortality rate (2003-2007) per 100,000 by race was suppressed for whites due to small numbers of deaths, and the rate for African Americans was 50.7 (95% CI 29.1, 82.4).[4]

<b>Exhibit 99. Invasive Female Breast Cancer Incidence and Mortality Rates per 100,000 persons</b>		
	Martin County	North Carolina
Breast Cancer Incidence (2004-2008)*	114.4	123.3
Breast Cancer Mortality (2003-2007)	29.7	24.8

\*Age-Adjusted

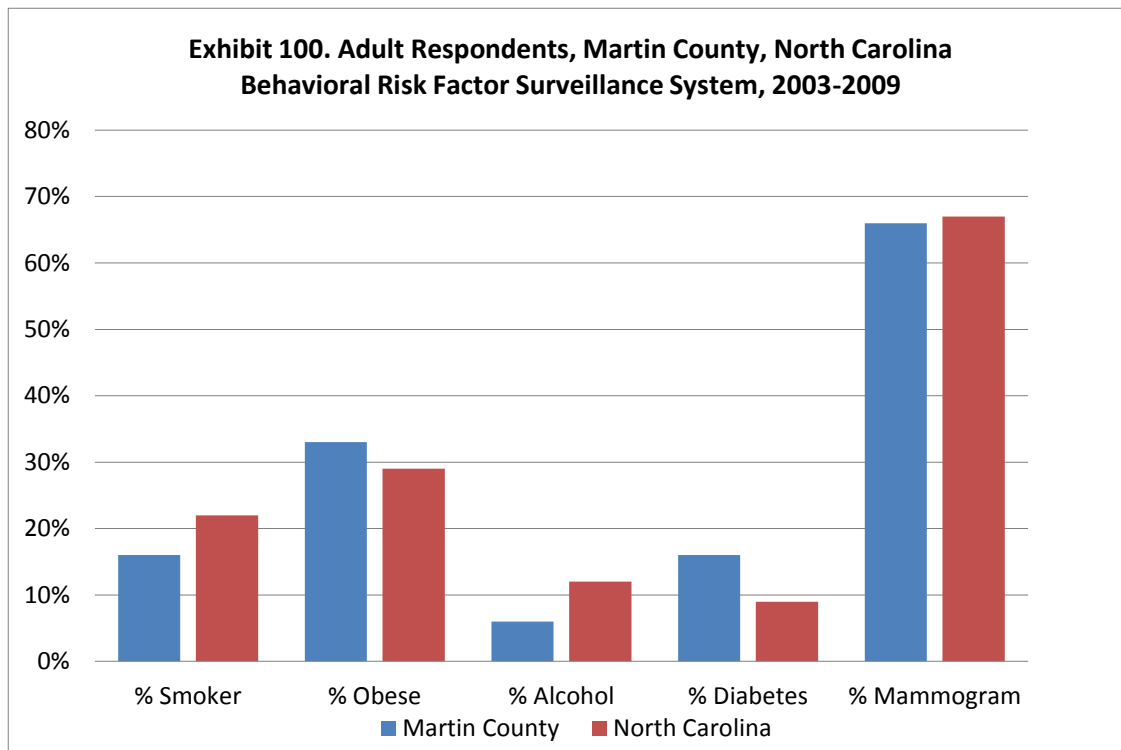
Source: NCI, State Cancer Profiles

### Cervix

See Eastern North Carolina rates. Martin County data for cervical cancer incidence and mortality rates were suppressed due to small numbers.

## Risk Factors and Screening

Martin County residents had a higher prevalence of obesity and diabetes compared to NC statewide, but report less smoking.



Sources: County Health Rankings, North Carolina County Health Rankings; North Carolina Data Health Explorer; NC DHHS, SCHS, BRFSS Survey Results, 2005-2009

## Exhibit 101. Adult Respondents, Martin County, North Carolina Behavioral Risk Factor Surveillance System, 2003-2009

	Factor				
	% Smoker <sup>a</sup>	% Obese <sup>b</sup>	% Alcohol <sup>c</sup>	% Diabetes <sup>d</sup>	% Mammogram <sup>e</sup>
Martin County	16%	33%	6%	16%	66%
North Carolina	22%	29%	12%	9%	67%

a. 2003-2009, Percent of adults that report smoking  $\geq 100$  cigarettes and currently smoking [3]

b. 2008, Percent of adults that report a BMI  $\geq 30$  [3]

c. 2003-2009, Percent of the adult population that reports either binge drinking, defined as consuming more than 4 (women) or 5 (men) alcoholic beverages on a single occasion in the past 30 days, or heavy drinking, defined as drinking more than 1 (women) or 2 (men) drinks per day on average [3]

d. 2005-2009, Percent, Has a doctor told you that you have diabetes, Yes response. [6][7]

e. 2006-2007, Percent of female Medicare enrollees age 67-69 that had at least one mammogram over a two-year period [3]

Sources: County Health Rankings, North Carolina County Health Rankings; North Carolina Data Health Explorer; NC DHHS, SCHS, BRFSS Survey Results, 2005-2009

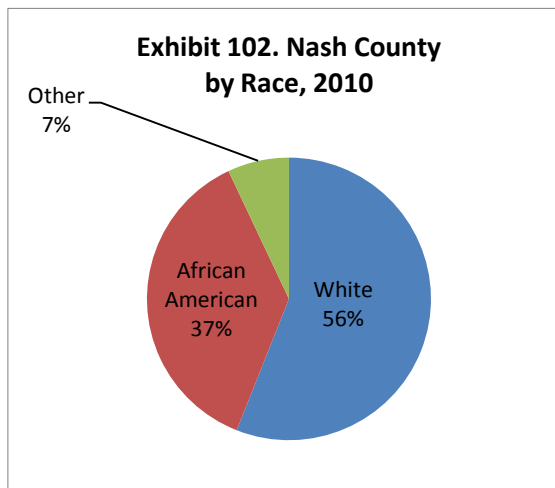
## NASH COUNTY

### Social and Economic Indicators

Based on number of persons employed, in 2011 the largest industry in Nash County was manufacturing.[1] The median household income (2009) was \$39,770 for a family of four, compared to \$43,754 statewide. The percentage of persons living below the poverty level in 2009 was 16%, compared to 16% statewide.[2] Unemployment (civilian, not in labor force, 2009) in Nash County was 13%, compared to 10.6% statewide. The estimated high school graduation rate (2010) was 72%, based on the cohort of ninth graders that graduated from high school in four years, compared to 78% in North Carolina. In 2007, the adult uninsured population ( $\geq$  age 18-64) was 19%, compared to 21% statewide. Ninety-three physicians provided primary care in Nash County (2008), which was a population to primary care physician ratio of 1,566 to 1.[3]

### Demographics

Based on data from the 2010 U.S. Census, Nash County had a total population of 95,840 with 177 persons per square mile. The county population was 24% children (<18), 62% adults ages 18-64, and 14% elders. Nash County was 37% African American (AA) (22% AA statewide) and 56% white (69% white statewide). Latinos/Hispanics (any race) comprised 6% of the population in Nash County (8% statewide) (Exhibit 102). The overall county population was 52% female and 48% male.[2]



Source: U.S. Census Bureau, State and County Quickfacts: North Carolina

### Cancer Surveillance

#### Colon and Rectal Cancers (CRC)

##### *Incidence*

In Nash County, the CRC age-adjusted incidence rate for 2004-2008 was 55.1 (95% CI 48.9, 62.0) per 100,000, which was higher than the overall statewide CRC rate of 46.8 (95% CI 46.1, 47.4). On average, there were 58 new cases of CRC diagnosed in Nash County, and 4,720 new cases across the state for 2004-2008. The CRC age-adjusted incidence rates per 100,000 were 72.6 (95% CI 61.7, 84.9) for males and 41.6 (95% CI 34.5, 49.7) for females. By race, the CRC age-adjusted incidence rates per 100,000 were 55.0 (95% CI 47.7, 63.1) for whites, and 54.9 (95% CI 43.4, 68.5) for African Americans.[4]

##### *Mortality*

In Nash County, CRC mortality rates for 2003-2007 were stable and were similar to the North Carolina rates (all races, both sexes). The CRC mortality rate (2003-2007) was 20.4 (95% CI 16.6, 24.8) per 100,000 which was higher than the overall statewide CRC mortality rate of 17.3 (95% CI 17.0, 17.7). Nash County did not meet the Healthy People 2010 mortality rate goal (13.9 CRC deaths per

100,000).[4][5] The average annual percentage change in death rates declined at -0.2 percent (95% CI - 1.2, 0.8) for 2003-2007. The CRC mortality rates (2003-2007) by gender were 16.5 (95% CI 12.2, 22.1) for females and 25.5 (95% CI 19.0, 33.5) for males per 100,000. CRC mortality rates (2003-2007) per 100,000 by race were 18.4 (95% CI 14.3, 23.4) for whites, and 25.6 (95% CI 17.7, 35.8) for African Americans.[4]

<b>Exhibit 103. Colorectal Cancer Incidence and Mortality Rates per 100,000 persons</b>		
	Nash County	North Carolina
CRC Incidence (2004-2008)*	55.1	46.8
CRC Mortality (2003-2007)	20.4	17.3

\*Age-Adjusted

Source: NCI, State Cancer Profiles

### Female Breast

#### *Incidence*

In Nash County, the breast cancer (female, invasive) age-adjusted incidence rate for 2004-2008 was 132.7 (95% CI 119.5, 147.1) per 100,000, which was higher than the overall statewide breast cancer rate of 123.3 (95% CI 121.9-124.7). On average, there were 75 new cases of invasive female breast cancer diagnosed in Nash County and 6,189 new cases across the state for 2004-2008. Female breast cancer age-adjusted incidence rates were 133.6 (95% CI 117.4, 151.6) for whites, and 130.5 (95% CI 107.6, 156.8) for African Americans.[4]

#### *Mortality*

In Nash County, female breast cancer mortality rates for 2003-2007 declined and were similar to the North Carolina rates (all races). The female breast cancer mortality rate (2003-2007) was 27.9 (95% CI 22.0, 34.9) per 100,000, which was higher than the overall statewide female breast cancer mortality rate of 24.8. Nash County did not meet the Healthy People 2010 mortality rate goal (22.3 female breast cancer deaths per 100,000).[4][5] The average annual percentage change in death rates declined at -2.0 percent (95% CI -3.9, -0.1) for 2003-2007. Female breast cancer mortality rates (2003-2007) per 100,000 by race were 23.9 (95% CI 17.4, 32.2) for whites, and 36.1 (95% CI 24.3, 51.6) for African Americans.[4]

<b>Exhibit 104. Invasive Female Breast Cancer Incidence and Mortality Rates per 100,000 persons</b>		
	Nash County	North Carolina
Breast Cancer Incidence (2004-2008)*	132.7	123.3
Breast Cancer Mortality (2003-2007)	27.9	24.8

\*Age-Adjusted

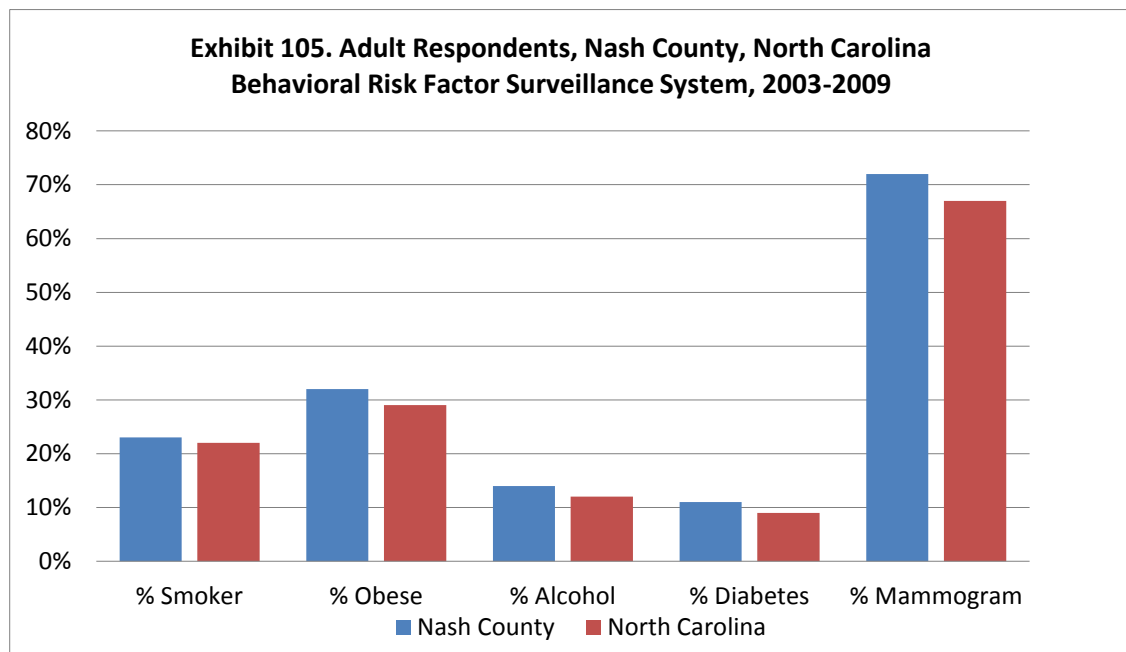
Source: NCI, State Cancer Profiles

## Cervix

See Eastern North Carolina rates. Nash County data for cervical cancer incidence and mortality rates were suppressed due to small numbers.

## Risk Factors and Screening

Nash County residents had a higher prevalence of smoking, obesity and diabetes compared to NC statewide, but reported greater mammography in the Medicare-enrolled females than statewide.



Sources: County Health Rankings, North Carolina County Health Rankings;  
North Carolina Data Health Explorer; NC DHHS, SCHS, BRFSS Survey Results, 2005-2009

## Exhibit 106. Adult Respondents, Nash County, North Carolina Behavioral Risk Factor Surveillance System, 2003-2009

	Factor				
	% Smoker <sup>a</sup>	% Obese <sup>b</sup>	% Alcohol <sup>c</sup>	% Diabetes <sup>d</sup>	% Mammogram <sup>e</sup>
Nash County	23%	32%	14%	11%	72%
North Carolina	22%	29%	12%	9%	67%

a. 2003-2009, Percent of adults that report smoking  $\geq 100$  cigarettes and currently smoking [3]

b. 2008, Percent of adults that report a BMI  $\geq 30$  [3]

c. 2003-2009, Percent of the adult population that reports either binge drinking, defined as consuming more than 4 (women) or 5 (men) alcoholic beverages on a single occasion in the past 30 days, or heavy drinking, defined as drinking more than 1 (women) or 2 (men) drinks per day on average [3]

d. 2005-2009, Percent, Has a doctor told you that you have diabetes, Yes response. [6][7]

e. 2006-2007, Percent of female Medicare enrollees age 67-69 that had at least one mammogram over a two-year period [3]

Sources: County Health Rankings, North Carolina County Health Rankings;  
North Carolina Data Health Explorer; NC DHHS, SCHS, BRFSS Survey Results, 2005-2009

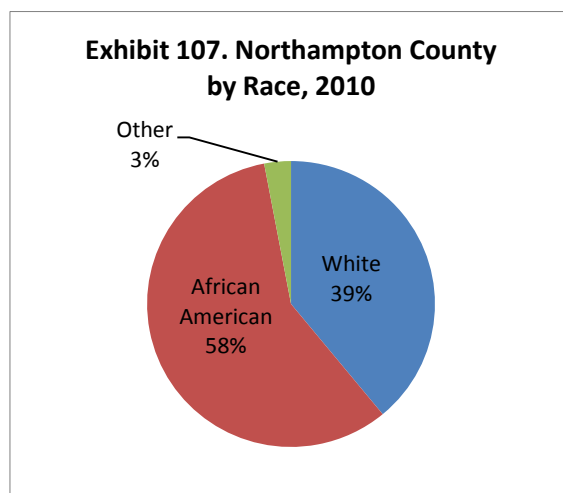
## NORTHAMPTON COUNTY

### Social and Economic Indicators

Based on number of persons employed, in 2011 the largest industry in Northampton County was retail trade.[1] The median household income (2009) was \$31,355 for a family of four, compared to \$43,754 statewide. The percentage of persons living below the poverty level in 2009 was 25%, compared to 16% statewide.[2] Unemployment (civilian, not in labor force, 2009) in Northampton County was 11%, compared to 10.6% statewide. The estimated high school graduation rate was 83%, based on the cohort of ninth graders that graduated from high school in four years, compared to 78% in North Carolina. In 2007, the adult uninsured population ( $\geq$  age 18-64) was 15%, compared to 21% statewide. Four physicians provided primary care in Northampton County (2008), which was a population to primary care physician ratio of 5,155 to 1.[3]

### Demographics

Based on data from the 2010 U.S. Census, Northampton County had a total population of 22,099 with 41 persons per square mile. The county population was 21% children (<18), 59% adults ages 18-64, and 20% elders. Northampton County was 58% African American (AA) (22% AA statewide) and 39% white (69% white statewide). Latinos/Hispanics (any race) comprised 1% of the population in Northampton County (8% statewide) (Exhibit 107). The overall county population was 52% female and 48% male.[2]



Source: U.S. Census Bureau, State and County Quickfacts: North Carolina

### Cancer Surveillance

#### Colon and Rectal Cancers (CRC)

##### *Incidence*

In Northampton County, the CRC age-adjusted incidence rate for 2004-2008 was 43.9 (95% CI 33.7, 56.5) per 100,000, which was lower than the overall statewide CRC rate of 46.8 (95% CI 46.1, 47.4). On average, there were 13 new cases of CRC diagnosed in Northampton County, and 4,720 new cases across the state for 2004-2008. The CRC age-adjusted incidence rates per 100,000 were 58.6 (95% CI 40.5, 82.4) for males and 32.0 (95% CI 21.2, 47.5) for females. By race, the CRC age-adjusted incidence rates per 100,000 were 36.3 (95% CI 23.6, 55.3) for whites, and 48.7 (95% CI 34.1, 67.9) for African Americans.[4]

##### *Mortality*

In Northampton County, CRC mortality rates for 2003-2007 were stable and were similar to the North Carolina rates (all races, both sexes). The CRC mortality rate (2003-2007) was 18.9 (95% CI 12.6, 27.5) per 100,000 which was higher than the overall statewide CRC mortality rate of 17.3 (95% CI 17.0, 17.7).

Northampton County did not meet the Healthy People 2010 mortality rate goal (13.9 CRC deaths per 100,000).[4][5] The average annual percentage change in death rates declined at -1.2 percent (95% CI - 2.5, 0.2) for 2003-2007. The CRC mortality rates (2003-2007) by gender were suppressed due to small numbers of deaths. The CRC mortality rate (2003-2007) per 100,000 by race was suppressed for whites due to small numbers of deaths, and the rate for African Americans was 22.3 (95% CI 13.0, 36.2).[4]

<b>Exhibit 108. Colorectal Cancer Incidence and Mortality Rates per 100,000 persons</b>		
	Northampton County	North Carolina
CRC Incidence (2004-2008)*	43.9	46.8
CRC Mortality (2003-2007)	18.9	17.3

\*Age-Adjusted

Source: NCI, State Cancer Profiles

### Female Breast

#### *Incidence*

In Northampton County, the breast cancer (female, invasive) age-adjusted incidence rate for 2004-2008 was 122.2 (95% CI 97.4, 152.0) per 100,000, which was lower than the overall statewide breast cancer rate of 123.3 (95% CI 121.9-124.7). On average, there were 19 new cases of invasive female breast cancer diagnosed in Northampton County and 6,189 new cases across the state for 2004-2008. Female breast cancer age-adjusted incidence rates were 134.0 (95% CI 93.7, 187.9) for whites, and 113.6 (95% CI 82.9, 152.9) for African Americans.[4]

#### *Mortality*

In Northampton County, female breast cancer mortality rates for 2003-2007 increased and were similar to the North Carolina rates (all races). The female breast cancer mortality rate (2003-2007) was 35.1 (95% CI 22.8, 52.4) per 100,000, which was higher than the overall statewide female breast cancer mortality rate of 24.8. Northampton County did not meet the Healthy People 2010 mortality rate goal (22.3 female breast cancer deaths per 100,000).[4][5] The average annual percentage change in death rates increased at 0.3 percent (95% CI -1.5, 2.1) for 2003-2007. The female breast cancer mortality rate (2003-2007) per 100,000 by race was suppressed for whites due to small numbers of deaths, and the rate for African Americans was 39.5 (95% CI 23.1, 64.2).[4]

<b>Exhibit 109. Invasive Female Breast Cancer Incidence and Mortality Rates per 100,000 persons</b>		
	Northampton County	North Carolina
Breast Cancer Incidence (2004-2008)*	122.2	123.3
Breast Cancer Mortality (2003-2007)	35.1	24.8

\*Age-Adjusted

Source: NCI, State Cancer Profiles

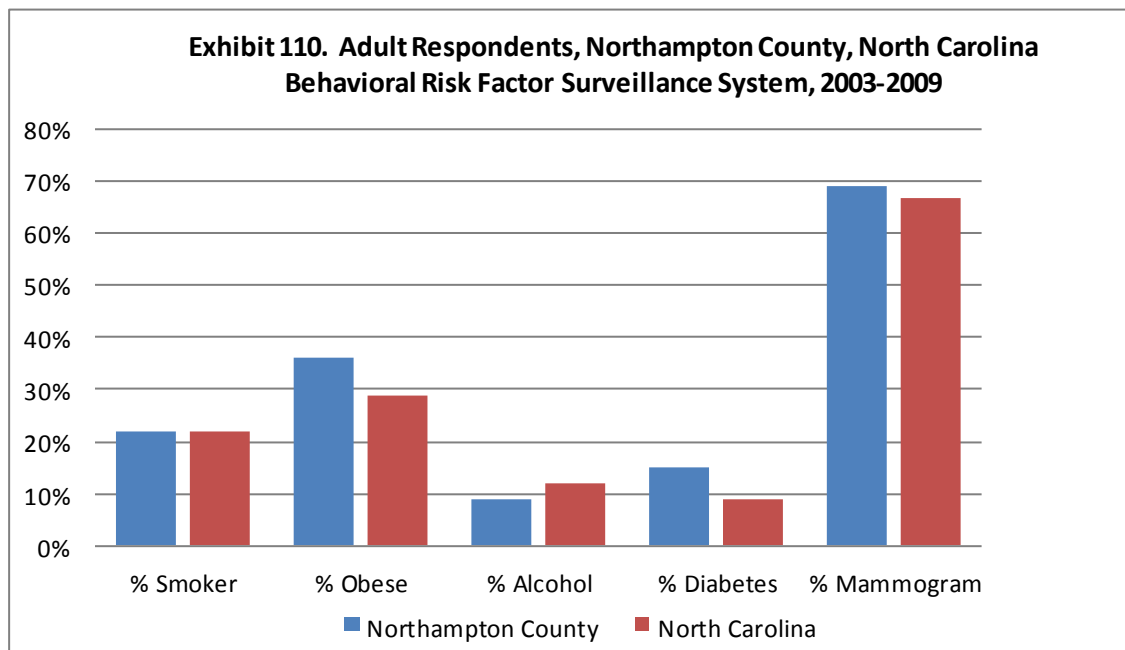


## Cervix

See Eastern North Carolina rates. Northhampton County data for cervical cancer incidence and mortality rates were suppressed due to small numbers.

## Risk Factors and Screening

Northhampton County residents had a higher prevalence of obesity and diabetes compared to NC statewide.



Sources: County Health Rankings, North Carolina County Health Rankings; North Carolina Data Health Explorer; NC DHHS, SCHS, BRFSS Survey Results, 2005-2009

## Exhibit 111. Adult Respondents, Northhampton County, North Carolina Behavioral Risk Factor Surveillance System, 2005-2009

	Factor				
	% Smoker <sup>a</sup>	% Obese <sup>b</sup>	% Alcohol <sup>c</sup>	% Diabetes <sup>d</sup>	% Mammogram <sup>e</sup>
Northhampton County	22%	36%	9%	15%	69%
North Carolina	22%	29%	12%	9%	67%

a. 2003-2009, Percent of adults that report smoking  $\geq 100$  cigarettes and currently smoking [3]

b. 2008, Percent of adults that report a BMI  $\geq 30$  [3]

c. 2003-2009, Percent of the adult population that reports either binge drinking, defined as consuming more than 4 (women) or 5 (men) alcoholic beverages on a single occasion in the past 30 days, or heavy drinking, defined as drinking more than 1 (women) or 2 (men) drinks per day on average [3]

d. 2005-2009, Percent, Has a doctor told you that you have diabetes, Yes response. [6][7]

e. 2006-2007, Percent of female Medicare enrollees age 67-69 that had at least one mammogram over a two-year period [3]

Sources: County Health Rankings, North Carolina County Health Rankings; North Carolina Data Health Explorer; NC DHHS, SCHS, BRFSS Survey Results, 2005-2009

## ONslow COUNTY

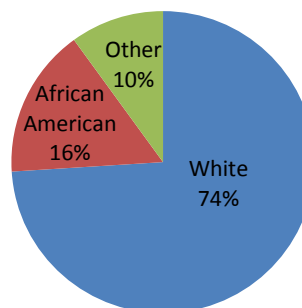
### Social and Economic Indicators

Based on number of persons employed, in 2011 the largest industry in Onslow County was retail trade.[1] Camp Lejeune, a Marine military base, is located within Onslow County. The median household income (2009) was \$41,161 for a family of four, compared to \$43,754 statewide. The percentage of persons living below the poverty level in 2009 was 15%, compared to 16% statewide.[2] Unemployment (civilian, not in labor force, 2009) in Onslow County was 8%, compared to 10.6% statewide. The estimated high school graduation rate (2010) was 85%, based on the cohort of ninth graders that graduated from high school in four years, compared to 78% in North Carolina. In 2007, the adult uninsured population ( $\geq$  age 18-64) was 25%, compared to 21% statewide. One-Hundred and eight physicians provided primary care in Onslow County (2008), which was a population to primary care physician ratio of 1,567 to 1.[3]

### Demographics

Based on data from the 2010 U.S. Census, Onslow County had a total population of 177,772 with 233 persons per square mile. The county population was 25% children (<18), 67% adults ages 18-64, and 8% elders. Onslow County was 16% African American (AA) (22% AA statewide) and 74% white (69% white statewide). Latinos/Hispanics (any race) comprised 10% of the population in Onslow County (8% statewide) (Exhibit 112). The overall county population was 46% female and 54% male.[2]

**Exhibit 112. Onslow County  
by Race, 2010**



Source: U.S. Census Bureau, State and County Quickfacts: North Carolina

### Cancer Surveillance

#### Colon and Rectal Cancers (CRC)

##### *Incidence*

In Onslow County, the CRC age-adjusted incidence rate for 2004-2008 was 47.0 (95% CI 40.9, 53.7) per 100,000, which was higher than the overall statewide CRC rate of 46.8 (95% CI 46.1, 47.4). On average, there were 46 new cases of CRC diagnosed in Onslow County, and 4,720 new cases across the state for 2004-2008. The CRC age-adjusted incidence rates per 100,000 were 60.4 (95% CI 50.0, 72.1) for males and 35.0 (95% CI 28.2, 42.9) for females. By race, the CRC age-adjusted incidence rates per 100,000 were 49.9 (95% CI 42.9, 57.7) for whites, and 35.8 (95% CI 24.0, 51.0) for African Americans.[4]

##### *Mortality*

In Onslow County, CRC mortality rates for 2003-2007 declined and were similar to the North Carolina rates (all races, both sexes). The CRC mortality rate (2003-2007) was 15.7 (95% CI 12.2, 19.8) per

100,000 which was lower than the overall statewide CRC mortality rate of 17.3 (95% CI 17.0, 17.7). Onslow County did not meet the Healthy People 2010 mortality rate goal (13.9 CRC deaths per 100,000).[4][5] The average annual percentage change in death rates declined at -1.5 percent (95% CI -2.9, -0.2) for 2003-2007. The CRC mortality rates (2003-2007) by gender were 12.8 (95% CI 8.8, 17.9) for females and 18.7 (95% CI 13.0, 25.9) for males per 100,000. The CRC mortality rate (2003-2007) per 100,000 by race was 15.7 (95% CI 11.8, 20.3) for whites, and the rate for African Americans was suppressed due to small numbers of deaths.[4]

<b>Exhibit 113. Colorectal Cancer Incidence and Mortality Rates per 100,000 persons</b>		
	Onslow County	North Carolina
CRC Incidence (2004-2008)*	47.0	46.8
CRC Mortality (2003-2007)	15.7	17.3

\*Age-Adjusted

Source: NCI, State Cancer Profiles

### Female Breast

#### *Incidence*

In Onslow County, the breast cancer (female, invasive) age-adjusted incidence rate for 2004-2008 was 128.8 (95% CI 116.0, 142.7) per 100,000, which was higher than the overall statewide breast cancer rate of 123.3 (95% CI 121.9-124.7). On average, there were 75 new cases of invasive female breast cancer diagnosed in Onslow County and 6,189 new cases across the state for 2004-2008. Female breast cancer age-adjusted incidence rates were 127.9 (95% CI 113.4, 143.7) for whites, and 138.6 (95% CI 107.7, 175.2) for African Americans.[4]

#### *Mortality*

In Onslow County, female breast cancer mortality rates for 2003-2007 increased and were similar to the North Carolina rates (all races). The female breast cancer mortality rate (2003-2007) was 24.3 (95% CI 18.9, 30.8) per 100,000, which was lower than the overall statewide female breast cancer mortality rate of 24.8. Onslow County did not meet the Healthy People 2010 mortality rate goal (22.3 female breast cancer deaths per 100,000).[4][5] The average annual percentage change in death rates declined at -1.0 percent (95% CI -2.4, 0.5) for 2003-2007. Female breast cancer mortality rates (2003-2007) per 100,000 by race were 21.6 (95% CI 15.8, 28.8) for whites, and 35.4 (95% CI 21.3, 55.1) for African Americans.[4]

<b>Exhibit 114. Invasive Female Breast Cancer Incidence and Mortality Rates per 100,000 persons</b>		
	Onslow County	North Carolina
Breast Cancer Incidence (2004-2008)*	128.8	123.3
Breast Cancer Mortality (2003-2007)	24.3	24.8

\*Age-Adjusted

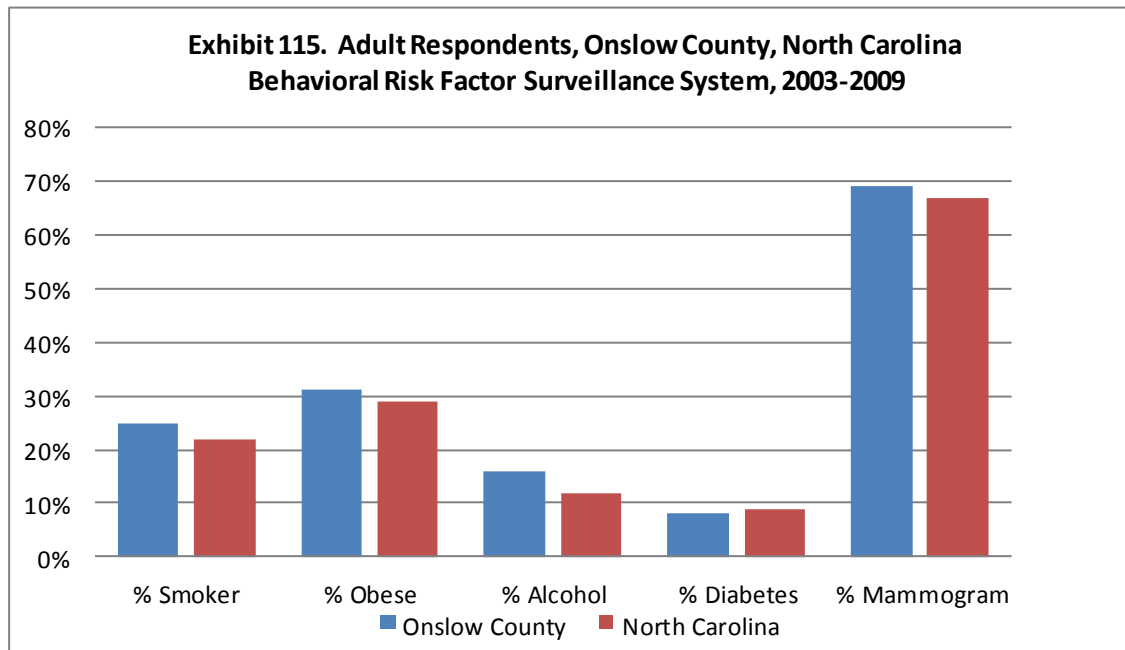
Source: NCI, State Cancer Profiles

## Cervix

See Eastern North Carolina rates. Onslow County data for cervical cancer incidence and mortality rates were suppressed due to small numbers.

## Risk Factors and Screening

Onslow County residents had a higher prevalence of smoking, obesity and alcohol consumption compared to NC statewide.



Sources: County Health Rankings, North Carolina County Health Rankings;  
North Carolina Data Health Explorer; NC DHHS, SCHS, BRFSS Survey Results, 2005-2009

## Exhibit 116. Adult Respondents, Onslow County, North Carolina Behavioral Risk Factor Surveillance System, 2003-2009

	Factor				
	% Smoker <sup>a</sup>	% Obese <sup>b</sup>	% Alcohol <sup>c</sup>	% Diabetes <sup>d</sup>	% Mammogram <sup>e</sup>
Onslow County	25%	31%	16%	8%	69%
North Carolina	22%	29%	12%	9%	67%

a. 2003-2009, Percent of adults that report smoking  $\geq 100$  cigarettes and currently smoking [3]

b. 2008, Percent of adults that report a BMI  $\geq 30$  [3]

c. 2003-2009, Percent of the adult population that reports either binge drinking, defined as consuming more than 4 (women) or 5 (men) alcoholic beverages on a single occasion in the past 30 days, or heavy drinking, defined as drinking more than 1 (women) or 2 (men) drinks per day on average [3]

d. 2005-2009, Percent, Has a doctor told you that you have diabetes, Yes response. [6][7]

e. 2006-2007, Percent of female Medicare enrollees age 67-69 that had at least one mammogram over a two-year period [3]

Sources: County Health Rankings, North Carolina County Health Rankings;  
North Carolina Data Health Explorer; NC DHHS, SCHS, BRFSS Survey Results, 2005-2009

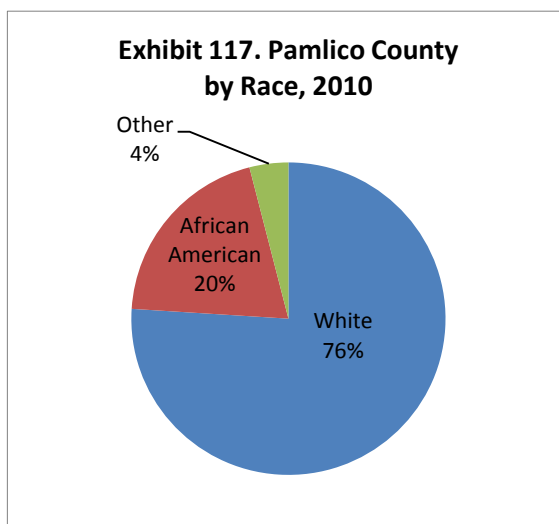
## PAMLICO COUNTY

### Social and Economic Indicators

Based on number of persons employed, in 2011 the largest industry in Pamlico County was retail trade.[1] The median household income (2009) was \$39,918 for a family of four, compared to \$43,754 statewide. The percentage of persons living below the poverty level in 2009 was 19%, compared to 16% statewide.[2] Unemployment (civilian, not in labor force, 2009) in Pamlico County was 9%, compared to 10.6% statewide. The estimated high school graduation rate (2010) was 85%, based on the cohort of ninth graders that graduated from high school in four years, compared to 78% in North Carolina. In 2007, the adult uninsured population ( $\geq$  age 18-64) was 25%, compared to 21% statewide. Eight physicians provided primary care in Pamlico County (2008), which was a population to primary care physician ratio of 1,555 to 1.[3]

### Demographics

Based on data from the 2010 U.S. Census, Pamlico County had a total population of 13,144 with 39 persons per square mile. The county population was 18% children (<18), 60% adults ages 18-64, and 22% elders. Pamlico County was 20% African American (AA) (22% AA statewide) and 76% white (69% white statewide). Latinos/Hispanics (any race) comprised 3% of the population in Pamlico County (8% statewide) (Exhibit 117). The overall county population was 49% female and 51% male.[2]



Source: U.S. Census Bureau, State and County Quickfacts: North Carolina

### Cancer Surveillance

#### Colon and Rectal Cancers (CRC)

##### *Incidence*

In Pamlico County, the CRC age-adjusted incidence rate for 2004-2008 was 32.9 (95% CI 22.3, 47.9) per 100,000, which was lower than the overall statewide CRC rate of 46.8 (95% CI 46.1, 47.4). On average, there were 7 new cases of CRC diagnosed in Pamlico County, and 4,720 new cases across the state for 2004-2008. The CRC age-adjusted incidence rate per 100,000 was 50.5 (95% CI 31.9, 78.1) for males and the rate for females was suppressed due to small numbers of cases. By race, the CRC age-adjusted incidence rate per 100,000 was 34.0 (95% CI 21.7, 52.2) for whites, and the rate for African Americans was suppressed due to small numbers of cases.[4]

### *Mortality*

In Pamlico County, CRC mortality rates (2003-2007) per 100,000 were suppressed due to small numbers of deaths.[4]

<b>Exhibit 118. Colorectal Cancer Incidence and Mortality Rates per 100,000 persons</b>		
	Pamlico County	North Carolina
CRC Incidence (2004-2008)*	32.9	46.8
CRC Mortality (2003-2007)	**	17.3

\*Age-Adjusted

\*\*Suppressed due to small numbers

Source: NCI, State Cancer Profiles

### Female Breast

#### *Incidence*

In Pamlico County, the breast cancer (female, invasive) age-adjusted incidence rate for 2004-2008 was 113.0 (95% CI 83.7, 151.1) per 100,000, which was lower than the overall statewide breast cancer rate of 123.3 (95% CI 121.9-124.7). On average, there were 11 new cases of invasive female breast cancer diagnosed in Pamlico County and 6,189 new cases across the state for 2004-2008. Female breast cancer age-adjusted incidence rates were 86.5 (95% CI 59.5, 124.8) for whites, and 207.8 (95% CI 122.7, 337.6) for African Americans.[4]

#### *Mortality*

In Pamlico County, the female breast cancer mortality rate in (2003-2007) was 35.0 (95% CI 19.2, 60.2) per 100,000, which was higher than the overall statewide female breast cancer mortality rate of 24.8. Pamlico County did not meet the Healthy People 2010 mortality rate goal (22.3 female breast cancer deaths per 100,000).[3][4] The average annual percentage change in death rates, as well as the female breast cancer mortality rates (2003-2007) per 100,000 by race, were suppressed due to small numbers of deaths.

<b>Exhibit 119. Invasive Female Breast Cancer Incidence and Mortality Rates per 100,000 persons</b>		
	Pamlico County	North Carolina
Breast Cancer Incidence (2004-2008)*	113.0	123.3
Breast Cancer Mortality (2003-2007)	35.0	24.8

\*Age-Adjusted

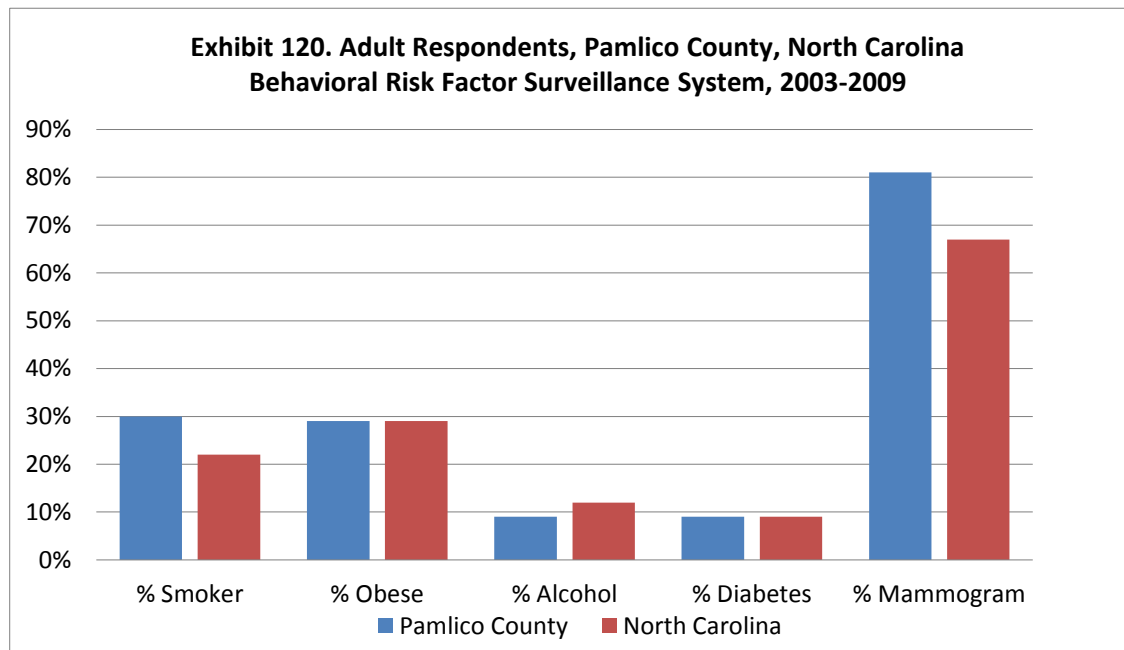
Source: NCI, State Cancer Profiles

### Cervix

See Eastern North Carolina rates. Pamlico County data for cervical cancer incidence and mortality rates were suppressed due to small numbers.

### Risk Factors and Screening

Pamlico County residents had a higher prevalence of smoking and Medicare-enrolled mammography compared to NC statewide.



Sources: County Health Rankings, North Carolina County Health Rankings; North Carolina Data Health Explorer; NC DHHS, SCHS, BRFSS Survey Results, 2005-2009

### Exhibit 121. Adult Respondents, Pamlico County, North Carolina Behavioral Risk Factor Surveillance System, 2003-2009

	Factor				
	% Smoker <sup>a</sup>	% Obese <sup>b</sup>	% Alcohol <sup>c</sup>	% Diabetes <sup>d</sup>	% Mammogram <sup>e</sup>
Pamlico County	30%	29%	9%	9%	81%
North Carolina	22%	29%	12%	9%	67%

a. 2003-2009, Percent of adults that report smoking  $\geq 100$  cigarettes and currently smoking [3]

b. 2008, Percent of adults that report a BMI  $\geq 30$  [3]

c. 2003-2009, Percent of the adult population that reports either binge drinking, defined as consuming more than 4 (women) or 5 (men) alcoholic beverages on a single occasion in the past 30 days, or heavy drinking, defined as drinking more than 1 (women) or 2 (men) drinks per day on average [3]

d. 2005-2009, Percent, Has a doctor told you that you have diabetes, Yes response. [6][7]

e. 2006-2007, Percent of female Medicare enrollees age 67-69 that had at least one mammogram over a two-year period [3]

Sources: County Health Rankings, North Carolina County Health Rankings; North Carolina Data Health Explorer; NC DHHS, SCHS, BRFSS Survey Results, 2005-2009

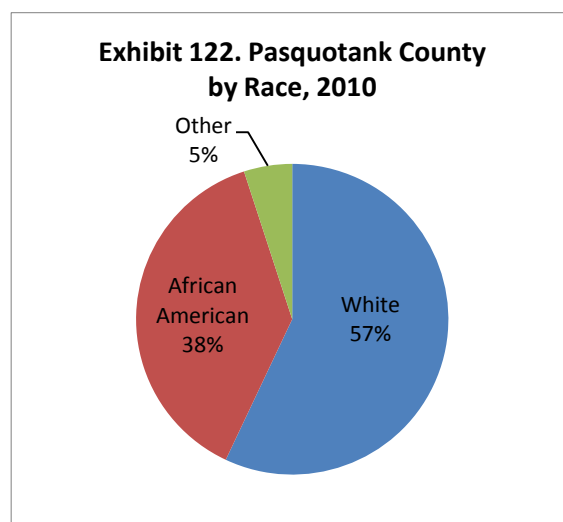
## PASQUOTANK COUNTY

### Social and Economic Indicators

Based on number of persons employed, in 2011 the largest industry in Pasquotank County was retail trade.[1] The median household income (2009) was \$39,370 for a family of four, compared to \$43,754 statewide. The percentage of persons living below the poverty level in 2009 was 18%, compared to 16% statewide.[2] Unemployment (civilian, not in labor force, 2009) in Pasquotank County was 10%, compared to 10.6% statewide. The estimated high school graduation rate (2010) was 76%, based on the cohort of ninth graders that graduated from high school in four years, compared to 78% in North Carolina. In 2007, the adult uninsured population ( $\geq$  age 18-64) was 21%, compared to 21% statewide. Forty physicians provided primary care in Pasquotank County (2008), which was a population to primary care physician ratio of 1,036 to 1.[3]

### Demographics

Based on data from the 2010 U.S. Census, Pasquotank County had a total population of 40,661 with 179 persons per square mile. The county population was 23% children (<18), 63% adults ages 18-64, and 14% elders. Pasquotank County was 38% African American (AA) (22% AA statewide) and 57% white (69% white statewide). Latinos/Hispanics (any race) comprised 4% of the population in Pasquotank County (8% statewide) (Exhibit 122). The overall county population was 51% female and 49% male.[2]



Source: U.S. Census Bureau, State and County Quickfacts: North Carolina

### Cancer Surveillance

#### Colon and Rectal Cancers (CRC)

##### *Incidence*

In Pasquotank County, the CRC age-adjusted incidence rate for 2004-2008 was 49.3 (95% CI 40.1, 59.9) per 100,000, which was higher than the overall statewide CRC rate of 46.8 (95% CI 46.1, 47.4). On average, there were 20 new cases of CRC diagnosed in Pasquotank County, and 4,720 new cases across the state for 2004-2008. The CRC age-adjusted incidence rates per 100,000 were 55.3 (95% CI 40.7, 73.4) for males and 42.8 (95% CI 31.8, 56.4) for females. By race, the CRC age-adjusted incidence rates per 100,000 were 44.4 (95% CI 33.9, 57.3) for whites, and 61.6 (95% CI 44.1, 83.5) for African Americans.[4]

##### *Mortality*

In Pasquotank County, CRC mortality rates for 2003-2007 declined and were similar to the North Carolina rates (all races, both sexes). The CRC mortality rate (2003-2007) was 17.7 (95% CI 12.3, 24.5) per 100,000 which was higher than the overall statewide CRC mortality rate of 17.3 (95% CI 17.0, 17.7). Pasquotank County did not meet the Healthy People 2010 mortality rate goal (13.9 CRC deaths per



100,000).[4][5] The average annual percentage change in death rates declined at -1.5 percent (95% CI -2.9, 0.0) for 2003-2007. The CRC mortality rate (2003-2007) by gender was 17.9 (95% CI 11.1, 27.6) for females and the rate for males was suppressed due to small numbers of deaths. The CRC mortality rate (2003-2007) per 100,000 by race was 19.0 (95% CI 12.4, 28.2) for whites, and the rate for African Americans was suppressed due to small numbers of deaths.[4]

<b>Exhibit 123. Colorectal Cancer Incidence and Mortality Rates per 100,000 persons</b>		
	Pasquotank County	North Carolina
CRC Incidence (2004-2008)*	49.3	46.8
CRC Mortality (2003-2007)	17.7	17.3

\*Age-Adjusted

Source: NCI, State Cancer Profiles

### Female Breast

#### *Incidence*

In Pasquotank County, the breast cancer (female, invasive) age-adjusted incidence rate for 2004-2008 was 123.3 (95% CI 103.6, 145.8) per 100,000, which was the same as the overall statewide breast cancer rate of 123.3 (95% CI 121.9-124.7). On average, there were 29 new cases of invasive female breast cancer diagnosed in Pasquotank County and 6,189 new cases across the state for 2004-2008. Female breast cancer age-adjusted incidence rates were 110.5 (95% CI 87.4, 138.2) for whites, and 146.7 (95% CI 111.1, 190.0) for African Americans.[4]

#### *Mortality*

In Pasquotank County, female breast cancer mortality rates for 2003-2007 increased and were similar to the North Carolina rates (all races). The female breast cancer mortality rate (2003-2007) was 32.1 (95% CI 22.5, 44.7) per 100,000, which was higher than the overall statewide female breast cancer mortality rate of 24.8. Pasquotank County did not meet the Healthy People 2010 mortality rate goal (22.3 female breast cancer deaths per 100,000).[4][5] The average annual percentage change in death rates declined at -0.3 percent (95% CI -1.4, 0.9) for 2003-2007. The female breast cancer mortality rate (2003-2007) per 100,000 by race was 30.3 (95% CI 19.0, 46.2) for whites, and the rate for African Americans was suppressed due to small numbers of deaths.[4]

<b>Exhibit 124. Invasive Female Breast Cancer Incidence and Mortality Rates per 100,000 persons</b>		
	Pasquotank County	North Carolina
Breast Cancer Incidence (2004-2008)*	123.3	123.3
Breast Cancer Mortality (2003-2007)	32.1	24.8

\*Age-Adjusted

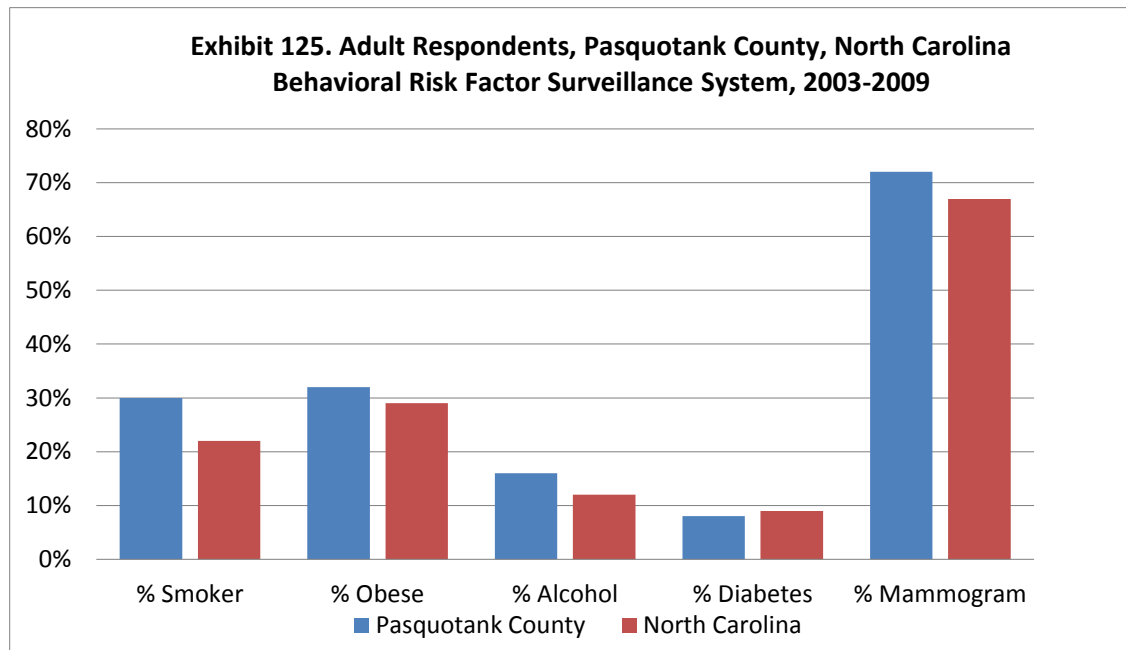
Source: NCI, State Cancer Profiles

## Cervix

See Eastern North Carolina rates. Pasquotank County data for cervical cancer incidence and mortality rates were suppressed due to small numbers.

## Risk Factors and Screening

Pasquotank County residents had a higher prevalence of smoking, obesity, and alcohol consumption compared to NC statewide. Mammography in Medicare-enrolled women is higher than statewide.



Sources: County Health Rankings, North Carolina County Health Rankings; North Carolina Data Health Explorer; NC DHHS, SCHS, BRFSS Survey Results, 2005-2009

## Exhibit 126. Adult Respondents, Pasquotank County, North Carolina Behavioral Risk Factor Surveillance System, 2003-2009

	Factor				
	% Smoker <sup>a</sup>	% Obese <sup>b</sup>	% Alcohol <sup>c</sup>	% Diabetes <sup>d</sup>	% Mammogram <sup>e</sup>
Pasquotank County	30%	32%	16%	8%	72%
North Carolina	22%	29%	12%	9%	67%

a. 2003-2009, Percent of adults that report smoking  $\geq 100$  cigarettes and currently smoking [3]

b. 2008, Percent of adults that report a BMI  $\geq 30$  [3]

c. 2003-2009, Percent of the adult population that reports either binge drinking, defined as consuming more than 4 (women) or 5 (men) alcoholic beverages on a single occasion in the past 30 days, or heavy drinking, defined as drinking more than 1 (women) or 2 (men) drinks per day on average [3]

d. 2005-2009, Percent, Has a doctor told you that you have diabetes, Yes response. [6][7]

e. 2006-2007, Percent of female Medicare enrollees age 67-69 that had at least one mammogram over a two-year period [3]

Sources: County Health Rankings, North Carolina County Health Rankings; North Carolina Data Health Explorer; NC DHHS, SCHS, BRFSS Survey Results, 2005-2009

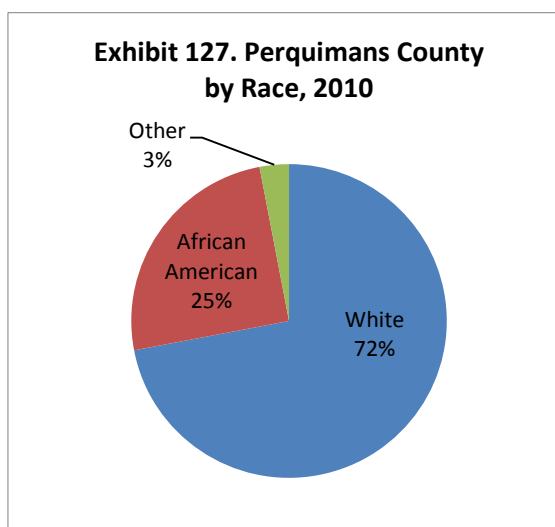
## PERQUIMANS COUNTY

### Social and Economic Indicators

Based on number of persons employed, in 2011 the largest industry in Perquimans County was educational services.[1] The median household income (2009) was \$37,284 for a family of four, compared to \$43,754 statewide. The percentage of persons living below the poverty level in 2009 was 17%, compared to 16% statewide.[2] Unemployment (civilian, not in labor force, 2009) in Perquimans County was 10%, compared to 10.6% statewide. The estimated high school graduation rate (2010) was 83%, based on the cohort of ninth graders that graduated from high school in four years, compared to 78% in North Carolina. In 2007, the adult uninsured population ( $\geq$  age 18-64) was 23%, compared to 21% statewide. Four physicians provided primary care in Perquimans County (2008), which was a population to primary care physician ratio of 3,193 to 1.[3]

### Demographics

Based on data from the 2010 U.S. Census, Perquimans County had a total population of 13,453 with 54 persons per square mile. The county population was 21% children (<18), 57% adults ages 18-64, and 22% elders. Perquimans County was 25% African American (AA) (22% AA statewide) and 72% white (69% white statewide). Latinos/Hispanics (any race) comprised 2% of the population in Perquimans County (8% statewide) (Exhibit 127). The overall county population was 52% female and 48% male.[2]



Source: U.S. Census Bureau, State and County Quickfacts: North Carolina

### Cancer Surveillance

#### Colon and Rectal Cancers (CRC)

##### *Incidence*

In Perquimans County, the CRC age-adjusted incidence rate for 2004-2008 was 52.7 (95% CI 39.1, 70.5) per 100,000, which was higher than the overall statewide CRC rate of 46.8 (95% CI 46.1, 47.4). On average, there were 10 new cases of CRC diagnosed in Perquimans County, and 4,720 new cases across the state for 2004-2008. The CRC age-adjusted incidence rates per 100,000 were 82.3 (95% CI 56.8, 117.1) for males and 29.8 (95% CI 16.9, 51.1) for females. By race, the CRC age-adjusted incidence rate per 100,000 was 53.6 (95% CI 38.0, 75.0) for whites, and the rate for African Americans was suppressed due to small numbers of cases.[4]

##### *Mortality*

In Perquimans County, the CRC mortality rate (2003-2007) was 23.1 (95% CI 13.3, 37.7) per 100,000 which was higher than the overall statewide CRC mortality rate of 17.3 (95% CI 17.0, 17.7). Perquimans County did not meet the Healthy People 2010 mortality rate goal (13.9 CRC deaths per 100,000).[4][5]

The average annual percentage change in death rates was suppressed due to small numbers of deaths for 2003-2007. The CRC mortality rates by gender and race were suppressed due to small numbers of deaths.[4]

<b>Exhibit 128. Colorectal Cancer Incidence and Mortality Rates per 100,000 persons</b>		
	Perquimans County	North Carolina
CRC Incidence (2004-2008)*	52.7	46.8
CRC Mortality (2003-2007)	23.1	17.3

\*Age-Adjusted

Source: NCI, State Cancer Profiles

### Female Breast

#### *Incidence*

In Perquimans County, the breast cancer (female, invasive) age-adjusted incidence rate for 2004-2008 was 113.9 (95% CI 83.5, 152.8) per 100,000, which was lower than the overall statewide breast cancer rate of 123.3 (95% CI 121.9-124.7). On average, there were 11 new cases of invasive female breast cancer diagnosed in Perquimans County and 6,189 new cases across the state for 2004-2008. The female breast cancer age-adjusted incidence rate was 126.8 (95% CI 88.6, 177.4) for whites, and the rate for African Americans was suppressed due to small numbers of cases.[4]

#### *Mortality*

In Perquimans County, female breast cancer mortality rates (2003-2007) per 100,000 were suppressed due to small numbers of deaths.[4]

<b>Exhibit 129. Invasive Female Breast Cancer Incidence and Mortality Rates per 100,000 persons</b>		
	Perquimans County	North Carolina
Breast Cancer Incidence (2004-2008)*	113.9	123.3
Breast Cancer Mortality (2003-2007)	**	24.8

\*Age-Adjusted

\*\*Suppressed due to small numbers

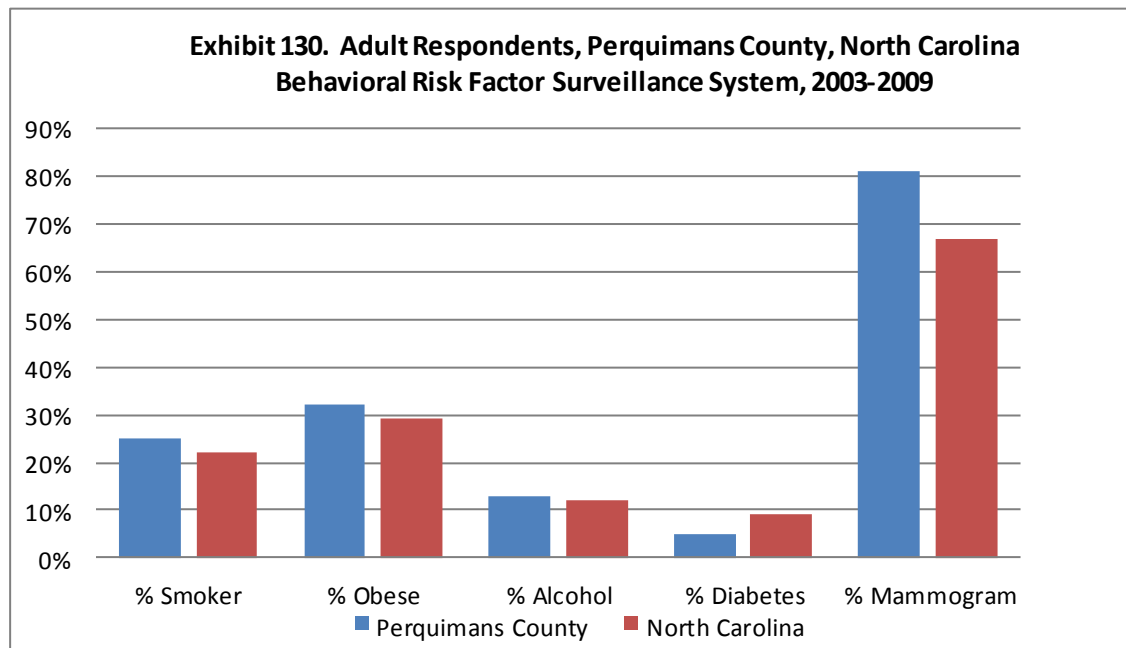
Source: NCI, State Cancer Profiles

### Cervix

See Eastern North Carolina rates. Perquimans County data for cervical cancer incidence and mortality rates were suppressed due to small numbers.

## Risk Factors and Screening

Perquimans County residents had a higher prevalence of smoking and obesity compared to NC statewide. Mammography is higher in Medicare-enrolled women than statewide.



Sources: County Health Rankings, North Carolina County Health Rankings;  
North Carolina Data Health Explorer; NC DHHS, SCHS, BRFSS Survey Results, 2005-2009

## Exhibit 131. Adult Respondents, Perquimans County, North Carolina Behavioral Risk Factor Surveillance System, 2003-2009

	Factor				
	% Smoker <sup>a</sup>	% Obese <sup>b</sup>	% Alcohol <sup>c</sup>	% Diabetes <sup>d</sup>	% Mammogram <sup>e</sup>
Perquimans County	25%	32%	13%	5%	81%
North Carolina	22%	29%	12%	9%	67%

a. 2003-2009, Percent of adults that report smoking  $\geq 100$  cigarettes and currently smoking [3]

b. 2008, Percent of adults that report a BMI  $\geq 30$  [3]

c. 2003-2009, Percent of the adult population that reports either binge drinking, defined as consuming more than 4 (women) or 5 (men) alcoholic beverages on a single occasion in the past 30 days, or heavy drinking, defined as drinking more than 1 (women) or 2 (men) drinks per day on average [3]

d. 2005-2009, Percent, Has a doctor told you that you have diabetes, Yes response. [6][7]

e. 2006-2007, Percent of female Medicare enrollees age 67-69 that had at least one mammogram over a two-year period [3]

Sources: County Health Rankings, North Carolina County Health Rankings;  
North Carolina Data Health Explorer; NC DHHS, SCHS, BRFSS Survey Results, 2005-2009

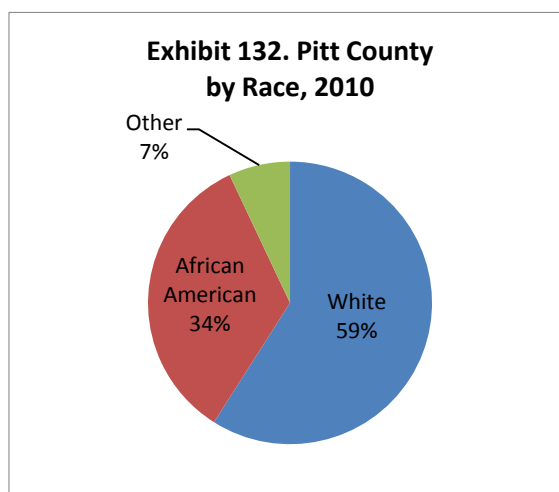
## PITT COUNTY

### Social and Economic Indicators

Based on number of persons employed, in 2011 the largest industry in Pitt County was health care and social assistance.[1] The median household income (2009) was \$36,339 for a family of four, compared to \$43,754 statewide. The percentage of persons living below the poverty level in 2009 was 26%, compared to 16% statewide.[2] Unemployment (civilian, not in labor force, 2009) in Pitt County was 10%, compared to 10.6% statewide. The estimated high school graduation rate (2010) was 66%, based on the cohort of ninth graders that graduated from high school in four years, compared to 78% in North Carolina. In 2007, the adult uninsured population ( $\geq$  age 18-64) was 22%, compared to 21% statewide. There were 364 physicians in primary care in Pitt County (2008), which was a population to primary care physician ratio of 428 to 1.[3] The ECU Brody School of Medicine and affiliated teaching hospital, Vidant County Medical Center are located in Pitt County.

### Demographics:

Based on data from the 2010 U.S. Census, Pitt County had a total population of 168,148 with 258 persons per square mile. The county population was 23% children (<18), 67% adults ages 18-64, and 10% elders. Pitt County was 34% African American (AA) (22% AA statewide) and 59% white (69% white statewide). Latinos/Hispanics (any race) comprised 6% of the population in Pitt County (8% statewide) (Exhibit 132). The overall county population was 53% female and 47% male.[2]



Source: U.S. Census Bureau, State and County Quickfacts: North Carolina

### Cancer Surveillance

#### Colon and Rectal Cancers (CRC)

##### *Incidence*

In Pitt County, the CRC age-adjusted incidence rate for 2004-2008 was 49.0 (95% CI 43.6, 54.7) per 100,000, which was higher than the overall statewide CRC rate of 46.8 (95% CI 46.1, 47.4). On average, there were 62 new cases of CRC diagnosed in Pitt County, and 4,720 new cases across the state for 2004-2008. The CRC age-adjusted incidence rates per 100,000 were 57.7 (95% CI 48.6, 68.0) for males and 44.0 (95% CI 37.3, 51.4) for females. By race, the CRC age-adjusted incidence rates per 100,000 were 44.2 (95% CI 38.1, 51.0) for whites, and 58.8 (95% CI 48.4, 70.6) for African Americans.[4]

##### *Mortality*

In Pitt County, CRC mortality rates for 2003-2007 declined and were similar to the North Carolina rates (all races, both sexes). The CRC mortality rate (2003-2007) was 18.3 (95% CI 15.0, 22.1) per 100,000 which was higher than the overall statewide CRC mortality rate of 17.3 (95% CI 17.0, 17.7). Pitt County

did not meet the Healthy People 2010 mortality rate goal (13.9 CRC deaths per 100,000).[4][5] The average annual percentage change in death rates declined at -7.2 percent (95% CI -12.5, -1.6) for 2003-2007. The CRC mortality rates (2003-2007) by gender were 14.7 (95% CI 11.0, 19.3) for females and 25.0 (95% CI 18.7, 32.7) for males per 100,000. CRC mortality rates (2003-2007) per 100,000 by race were 14.6 (95% CI 11.1, 18.8) for whites, and 26.6 (95% CI 19.6, 35.2) for African Americans.[4]

<b>Exhibit 133. Colorectal Cancer Incidence and Mortality Rates per 100,000 persons</b>		
	Pitt County	North Carolina
CRC Incidence (2004-2008)*	49.0	46.8
CRC Mortality (2003-2007)	18.3	17.3

\*Age-Adjusted

Source: NCI, State Cancer Profiles

### Female Breast

#### *Incidence*

In Pitt County, the breast cancer (female, invasive) age-adjusted incidence rate for 2004-2008 was 145.2 (95% CI 133.0, 158.3) per 100,000, which was higher than the overall statewide breast cancer rate of 123.3 (95% CI 121.9-124.7). On average, there were 104 new cases of invasive female breast cancer diagnosed in Pitt County and 6,189 new cases across the state for 2004-2008. Female breast cancer age-adjusted incidence rates were 143.9 (95% CI 128.9, 160.2) for whites, and 144.8 (95% CI 124.0, 168.0) for African Americans.[4]

#### *Mortality*

In Pitt County, female breast cancer mortality rates for 2003-2007 declined and were similar to the North Carolina rates (all races). The female breast cancer mortality rate (2003-2007) was 26.3 (95% CI 21.2, 32.3) per 100,000, which was higher than the overall statewide female breast cancer mortality rate of 24.8. Pitt County did not meet the Healthy People 2010 mortality rate goal (22.3 female breast cancer deaths per 100,000).[4][5] The average annual percentage change in death rates declined at -1.1 percent (95% CI -2.1, 0.0) for 2003-2007. Female breast cancer mortality rates (2003-2007) per 100,000 by race were 20.4 (95% CI 14.9, 27.1) for whites, and 38.3 (95% CI 27.8, 51.3) for African Americans.[4]

<b>Exhibit 134. Invasive Female Breast Cancer Incidence and Mortality Rates per 100,000 persons</b>		
	Pitt County	North Carolina
Breast Cancer Incidence (2004-2008)*	145.2	123.3
Breast Cancer Mortality (2003-2007)	26.3	24.8

\*Age-Adjusted

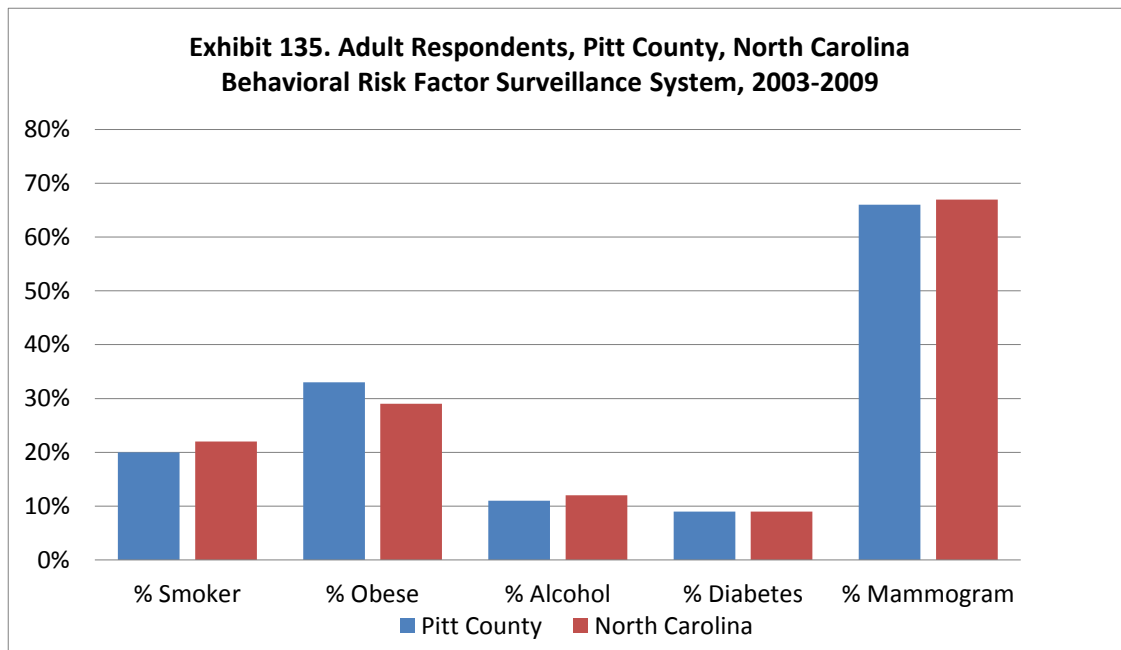
Source: NCI, State Cancer Profiles

### Cervix

See Eastern North Carolina rates. Pitt County data for cervical cancer incidence and mortality rates were suppressed due to small numbers.

## Risk Factors and Screening

Pitt County residents had a higher prevalence of obesity compared to NC statewide, but reported less smoking.



Sources: County Health Rankings, North Carolina County Health Rankings;  
North Carolina Data Health Explorer; NC DHHS, SCHS, BRFSS Survey Results, 2005-2009

## Exhibit 136. Adult Respondents, Pitt County, North Carolina Behavioral Risk Factor Surveillance System, 2003-2009

	Factor				
	% Smoker <sup>a</sup>	% Obese <sup>b</sup>	% Alcohol <sup>c</sup>	% Diabetes <sup>d</sup>	% Mammogram <sup>e</sup>
Pitt County	20%	33%	11%	9%	66%
North Carolina	22%	29%	12%	9%	67%

a. 2003-2009, Percent of adults that report smoking  $\geq 100$  cigarettes and currently smoking [3]

b. 2008, Percent of adults that report a BMI  $\geq 30$  [3]

c. 2003-2009, Percent of the adult population that reports either binge drinking, defined as consuming more than 4 (women) or 5 (men) alcoholic beverages on a single occasion in the past 30 days, or heavy drinking, defined as drinking more than 1 (women) or 2 (men) drinks per day on average [3]

d. 2005-2009, Percent, Has a doctor told you that you have diabetes, Yes response. [6][7]

e. 2006-2007, Percent of female Medicare enrollees age 67-69 that had at least one mammogram over a two-year period [3]

Sources: County Health Rankings, North Carolina County Health Rankings;  
North Carolina Data Health Explorer; NC DHHS, SCHS, BRFSS Survey Results, 2005-2009



## TYRRELL COUNTY

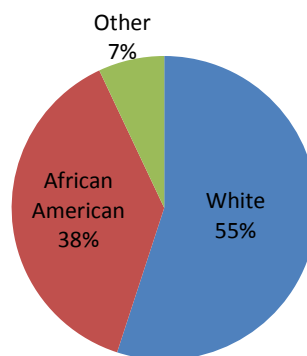
### Social and Economic Indicators

Based on number of persons employed, in 2011 the largest industry in Tyrrell County was public administration.[1] The median household income (2009) was \$30,058 for a family of four, compared to \$43,754 statewide. The percentage of persons living below the poverty level in 2009 was 29%, compared to 16% statewide.[2] Unemployment (civilian, not in labor force, 2009) in Tyrrell County was 10%, compared to 10.6% statewide. The estimated high school graduation rate (2010) was 59%, based on the cohort of ninth graders that graduated from high school in four years, compared to 78% in North Carolina. In 2007, the adult uninsured population ( $\geq$  age 18-64) was 29%, compared to 21% statewide. There are 0 physicians in primary care in Tyrrell County (2008), which was a population to primary care physician ratio of 4,104 to 1.\*[3] \*Data unreliable.

### Demographics:

Based on data from the 2010 U.S. Census, Tyrrell County had a total population of 4,407 with 11 persons per square mile. The county population was 18% children (<18), 65% adults ages 18-64, and 17% elders. Tyrrell County was 38% African American (AA) (22% AA statewide) and 55% white (69% white statewide). Latinos/Hispanics (any race) comprised 5% of the population in Tyrrell County (8% statewide) (Exhibit 137). The overall county population was 45% female and 55% male.[2]

**Exhibit 137. Tyrrell County  
by Race, 2010**



Source: U.S. Census Bureau, State and County Quickfacts: North Carolina

### Cancer Surveillance

#### Colon and Rectal Cancers (CRC)

##### *Incidence*

In Tyrrell County, the CRC age-adjusted incidence rate for 2004-2008 was suppressed due to small numbers of cases. On average, there were 3 or fewer new cases of CRC diagnosed in Tyrrell County, and 4,720 new cases across the state for 2004-2008. The CRC incidence rates by gender and race were suppressed due to small numbers of cases.[4]

##### *Mortality*

In Tyrrell County, CRC mortality rates (2003-2007) per 100,000 were suppressed due to small numbers of deaths.[4]

#### Female Breast

##### *Incidence*

In Tyrrell County, the breast cancer (female, invasive) age-adjusted incidence rate for 2004-2008 was 139.8 (95% CI 77.8, 234.3) per 100,000, which was higher than the overall statewide breast cancer rate

of 123.3 (95% CI 121.9-124.7). On average, there were 3 new cases of invasive female breast cancer diagnosed in Tyrrell County and 6,189 new cases across the state for 2004-2008. Incidence rates by race were suppressed due to small numbers of cases.[4]

#### *Mortality*

In Tyrrell County, female breast cancer mortality rates (2003-2007) per 100,000 were suppressed due to small numbers of deaths.[4]

<b>Exhibit 138. Invasive Female Breast Cancer Incidence and Mortality Rates per 100,000 persons</b>		
	Tyrrell County	North Carolina
Breast Cancer Incidence (2004-2008)*	139.8	123.3
Breast Cancer Mortality (2003-2007)	**	24.8

\*Age-Adjusted

\*\*Suppressed due to small numbers

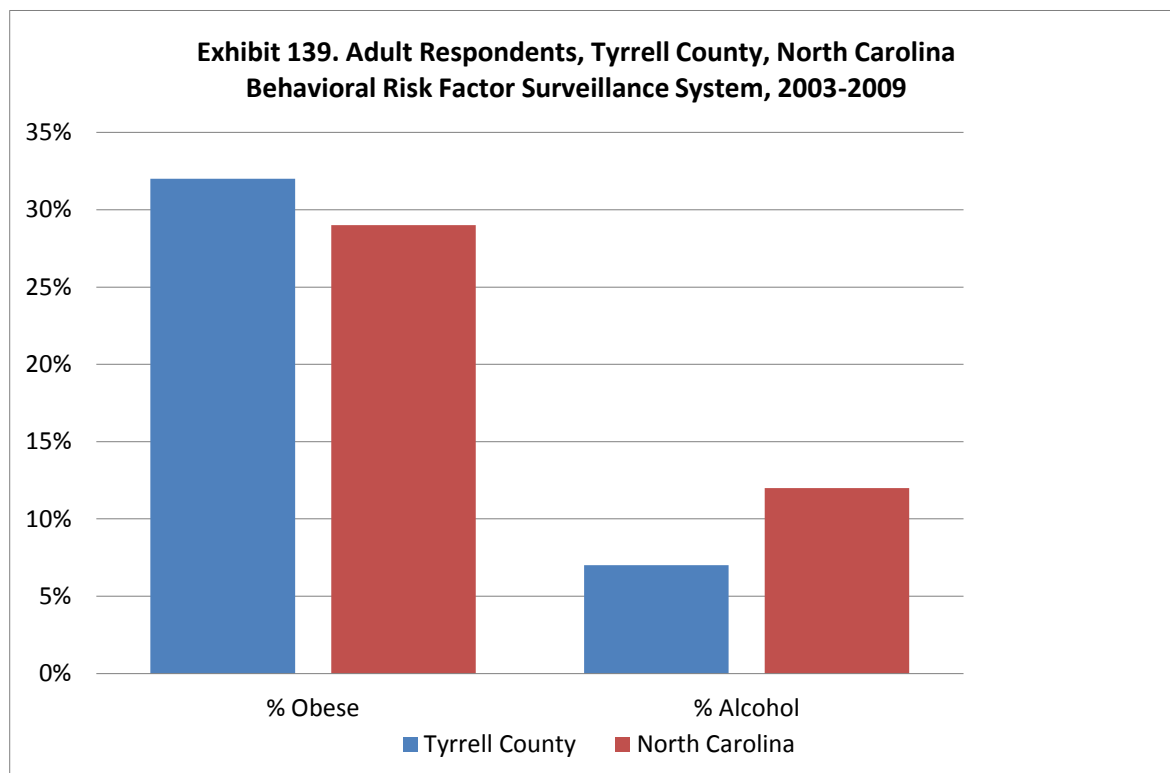
Source: NCI, State Cancer Profiles

#### Cervix

See Eastern North Carolina rates. Tyrrell County data for cervical cancer incidence and mortality rates were suppressed due to small numbers.

## Risk Factors and Screening

Tyrrell County residents had a higher prevalence of obesity compared to NC statewide. Data on other behavioral factors were not available through BRFSS.



\*Data were not available for smoker, diabetes, or mammogram behavioral factors at the county level.

Sources: County Health Rankings, North Carolina County Health Rankings; North Carolina Data Health Explorer; NC DHHS, SCHS, BRFSS Survey Results, 2005-2009

## Exhibit 140. Adult Respondents, Tyrrell County, North Carolina Behavioral Risk Factor Surveillance System, 2003-2009

	Factor				
	% Smoker <sup>a</sup>	% Obese <sup>b</sup>	% Alcohol <sup>c</sup>	% Diabetes <sup>d</sup>	% Mammogram <sup>e</sup>
Tyrrell County	*	32%	7%	*	*
North Carolina	22%	29%	12%	9%	67%

a. 2003-2009, Percent of adults that report smoking  $\geq 100$  cigarettes and currently smoking [3]

b. 2008, Percent of adults that report a BMI  $\geq 30$  [3]

c. 2003-2009, Percent of the adult population that reports either binge drinking, defined as consuming more than 4 (women) or 5 (men) alcoholic beverages on a single occasion in the past 30 days, or heavy drinking, defined as drinking more than 1 (women) or 2 (men) drinks per day on average [3]

d. 2005-2009, Percent, Has a doctor told you that you have diabetes, Yes response. [6][7]

e. 2006-2007, Percent of female Medicare enrollees age 67-69 that had at least one mammogram over a two-year period [3]

\*Data unavailable

Sources: County Health Rankings, North Carolina County Health Rankings; North Carolina Data Health Explorer; NC DHHS, SCHS, BRFSS Survey Results, 2005-2009

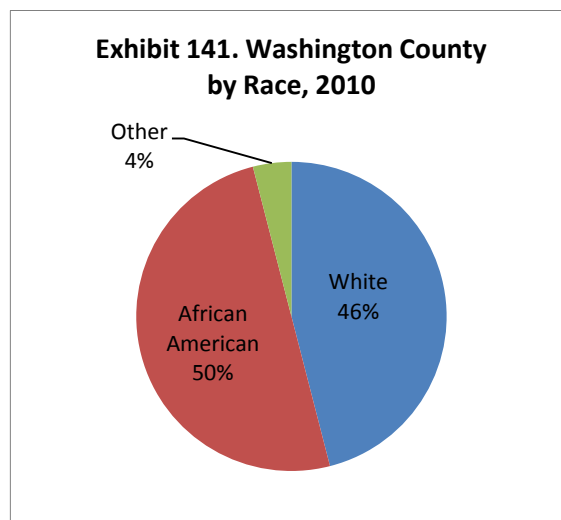
## WASHINGTON COUNTY

### Social and Economic Indicators

Based on number of persons employed, in 2011 the largest industry in Washington County was health care and social assistance.[1] The median household income (2009) was \$33,190 for a family of four, compared to \$43,754 statewide. The percentage of persons living below the poverty level in 2009 was 23%, compared to 16% statewide.[2] Unemployment (civilian, not in labor force, 2009) in Washington County was 11%, compared to 10.6% statewide. The estimated high school graduation rate (2010) was 81%, based on the cohort of ninth graders that graduated from high school in four years, compared to 78% in North Carolina. In 2007, the adult uninsured population ( $\geq$  age 18-64) was 16%, compared to 21% statewide. Five physicians provided primary care in Washington County (2008), which was a population to primary care physician ratio of 2,592 to 1.[3]

### Demographics

Based on data from the 2010 U.S. Census, Washington County had a total population of 13,228 with 38 persons per square mile. The county population was 23% children (<18), 59% adults ages 18-64, and 18% elders. Washington County was 50% African American (AA) (22% AA statewide) and 46% white (69% white statewide). Latinos/Hispanics (any race) comprised 4% of the population in Washington County (8% statewide) (Exhibit 141). The overall county population was 53% female and 47% male.[2]



Source: U.S. Census Bureau, State and County Quickfacts: North Carolina

### Cancer Surveillance

#### Colon and Rectal Cancers (CRC)

##### *Incidence*

In Washington County, the CRC age-adjusted incidence rate for 2004-2008 was 50.6 (95% CI 35.9, 69.5) per 100,000, which was higher than the overall statewide CRC rate of 46.8 (95% CI 46.1, 47.4). On average, there were 8 new cases of CRC diagnosed in Washington County, and 4,720 new cases across the state for 2004-2008. The CRC age-adjusted incidence rates per 100,000 were 65.4 (95% CI 40.5, 100.2) for males and 40.3 (95% CI 23.9, 64.8) for females. By race, the CRC age-adjusted incidence rates per 100,000 were 47.1 (95% CI 29.4, 73.3) for whites, and 52.1 (95% CI 30.3, 83.6) for African Americans.[4]

##### *Mortality*

In Washington County, CRC mortality rates for 2003-2007 were stable and were similar to the North Carolina rates (all races, both sexes). The CRC mortality rate (2003-2007) was 24.0 (95% CI 14.7, 37.4) per 100,000 which was higher than the overall statewide CRC mortality rate of 17.3 (95% CI 17.0, 17.7).

Washington County did not meet the Healthy People 2010 mortality rate goal (13.9 CRC deaths per 100,000).[4][5] The average annual percentage change in death rates declined at -0.8 percent (95% CI - 2.7, 1.1) for 2003-2007. The CRC mortality rates by gender and race were suppressed due to small numbers of deaths.[4]

<b>Exhibit 142. Colorectal Cancer Incidence and Mortality Rates per 100,000 persons</b>		
	Washington County	North Carolina
CRC Incidence (2004-2008)*	50.6	46.8
CRC Mortality (2003-2007)	24.0	17.3

\*Age-Adjusted

Source: NCI, State Cancer Profiles

### Female Breast

#### *Incidence*

In Washington County, the breast cancer (female, invasive) age-adjusted incidence rate for 2004-2008 was 136.9 (95% CI 104.2, 177.4) per 100,000, which was higher than the overall statewide breast cancer rate of 123.3 (95% CI 121.9-124.7). On average, there were 12 new cases of invasive female breast cancer diagnosed in Washington County and 6,189 new cases across the state for 2004-2008. Female breast cancer age-adjusted incidence rates were 146.7 (95% CI 103.6, 205.8) for whites, and 110.5 (95% CI 67.8, 170.4) for African Americans.[4]

#### *Mortality*

In Washington County, female breast cancer mortality rates (2003-2007) per 100,000 were suppressed due to small numbers of deaths.[4]

<b>Exhibit 143. Invasive Female Breast Cancer Incidence and Mortality Rates per 100,000 persons</b>		
	Washington County	North Carolina
Breast Cancer Incidence (2004-2008)*	136.9	123.3
Breast Cancer Mortality (2003-2007)	**	24.8

\*Age-Adjusted

\*\*Suppressed due to small numbers

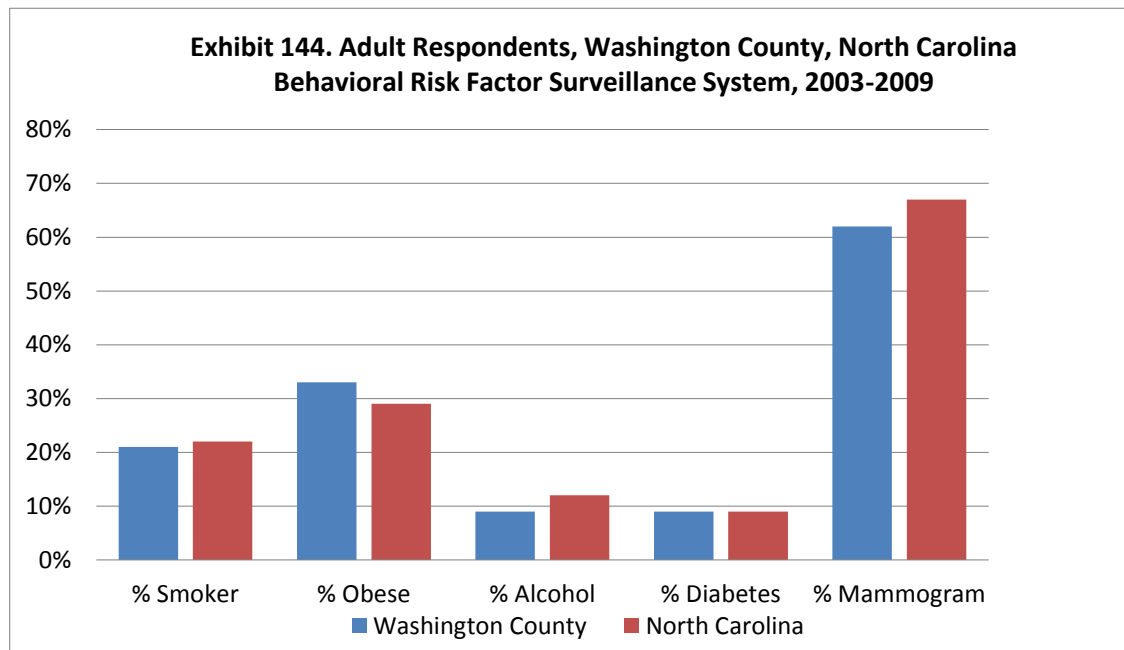
Source: NCI, State Cancer Profiles

### Cervix

See Eastern North Carolina rates. Washington County data for cervical cancer incidence and mortality rates were suppressed due to small numbers.

## Risk Factors and Screening

Washington County residents had a higher prevalence of obesity compared to NC statewide, but reported less mammography among medicare-enrolled women.



Sources: County Health Rankings, North Carolina County Health Rankings; North Carolina Data Health Explorer; NC DHHS, SCHS, BRFSS Survey Results, 2005-2009

## Exhibit 145. Adult Respondents, Washington County, North Carolina Behavioral Risk Factor Surveillance System, 2003-2009

	Factor				
	% Smoker <sup>a</sup>	% Obese <sup>b</sup>	% Alcohol <sup>c</sup>	% Diabetes <sup>d</sup>	% Mammogram <sup>e</sup>
Washington County	21%	33%	9%	9%	62%
North Carolina	22%	29%	12%	9%	67%

a. 2003-2009, Percent of adults that report smoking  $\geq 100$  cigarettes and currently smoking [3]

b. 2008, Percent of adults that report a BMI  $\geq 30$  [3]

c. 2003-2009, Percent of the adult population that reports either binge drinking, defined as consuming more than 4 (women) or 5 (men) alcoholic beverages on a single occasion in the past 30 days, or heavy drinking, defined as drinking more than 1 (women) or 2 (men) drinks per day on average [3]

d. 2005-2009, Percent, Has a doctor told you that you have diabetes, Yes response. [6][7]

e. 2006-2007, Percent of female Medicare enrollees age 67-69 that had at least one mammogram over a two-year period [3]

Sources: County Health Rankings, North Carolina County Health Rankings; North Carolina Data Health Explorer; NC DHHS, SCHS, BRFSS Survey Results, 2005-2009

## WAYNE COUNTY

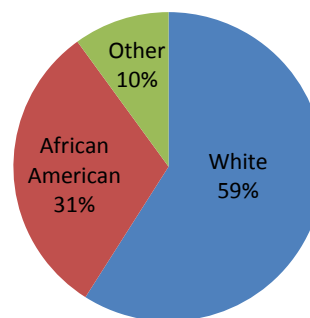
### Social and Economic Indicators

Based on number of persons employed, in 2011 the largest industry in Wayne County was health care and social assistance.[1] The median household income (2009) was \$40,291 for a family of four, compared to \$43,754 statewide. The percentage of persons living below the poverty level in 2009 was 20%, compared to 16% statewide.[2] Unemployment (civilian, not in labor force, 2009) in Wayne County was 9%, compared to 10.6% statewide. The estimated high school graduation rate (2010) was 76%, based on the cohort of ninth graders that graduated from high school in four years, compared to 78% in North Carolina. In 2007, the adult uninsured population ( $\geq$  age 18-64) was 20%, compared to 21% statewide. Ninety-nine physicians provided primary care in Wayne County (2008), which was a population to primary care physician ratio of 1,146 to 1.[3]

### Demographics

Based on data from the 2010 U.S. Census, Wayne County had a total population of 122,623 with 222 persons per square mile. The county population was 25% children (<18), 62% adults ages 18-64, and 13% elders. Wayne County was 31% African American (AA) (22% AA statewide) and 59% white (69% white statewide). Latinos/Hispanics (any race) comprised 10% of the population in Wayne County (8% statewide) (Exhibit 146). The overall county population was 51% female and 49% male.[2]

**Exhibit 146. Wayne County  
by Race, 2010**



### Cancer Surveillance

#### Colon and Rectal Cancers (CRC)

##### *Incidence*

In Wayne County, the CRC age-adjusted incidence rate for 2004-2008 was 53.8 (95% CI 47.9, 60.2) per 100,000, which was higher than the overall statewide CRC rate of 46.8 (95% CI 46.1, 47.4). On average, there were 62 new cases of CRC diagnosed in Wayne County, and 4,720 new cases across the state for 2004-2008. The CRC age-adjusted incidence rates per 100,000 were 67.2 (95% CI 57.1, 78.6) for males and 42.7 (95% CI 35.7, 50.5) for females. By race, the CRC age-adjusted incidence rates per 100,000 were 52.0 (95% CI 45.1, 59.7) for whites, and 59.0 (95% CI 47.9, 71.9) for African Americans.[4]

##### *Mortality*

In Wayne County, CRC mortality rates for 2003-2007 declined and were similar to the North Carolina rates (all races, both sexes). The CRC mortality rate (2003-2007) was 20.1 (95% CI 16.5, 24.3) per 100,000 which was higher than the overall statewide CRC mortality rate of 17.3 (95% CI 17.0, 17.7). Wayne County did not meet the Healthy People 2010 mortality rate goal (13.9 CRC deaths per

Source: U.S. Census Bureau, State and County Quickfacts: North Carolina

100,000).[4][5] The average annual percentage change in death rates declined at -1.0 percent (95% CI -1.9, -0.2) for 2003-2007. The CRC mortality rates (2003-2007) by gender were 15.4 (95% CI 8.6, 18.9) for females and 26.3 (95% CI 19.8, 34.1) for males per 100,000. CRC mortality rates (2003-2007) per 100,000 by race were 19.5 (95% CI 15.3, 24.6) for whites, and 21.9 (95% CI 15.2, 30.4) for African Americans.[4]

<b>Exhibit 147. Colorectal Cancer Incidence and Mortality Rates per 100,000 persons</b>		
	Wayne County	North Carolina
CRC Incidence (2004-2008)*	53.8	46.8
CRC Mortality (2003-2007)	20.1	17.3

\*Age-Adjusted

Source: NCI, State Cancer Profiles

### Female Breast

#### *Incidence*

In Wayne County, the breast cancer (female, invasive) age-adjusted incidence rate for 2004-2008 was 135.1 (95% CI 122.6, 148.5) per 100,000, which was higher than the overall statewide breast cancer rate of 123.3 (95% CI 121.9-124.7). On average, there were 87 new cases of invasive female breast cancer diagnosed in Wayne County and 6,189 new cases across the state for 2004-2008. Female breast cancer age-adjusted incidence rates were 136.1 (95% CI 120.7, 153.0) for whites, and 133.2 (95% CI 111.6, 157.8) for African Americans.[4]

#### *Mortality*

In Wayne County, female breast cancer mortality rates for 2003-2007 increased and were higher than the North Carolina rates (all races). The female breast cancer mortality rate (2003-2007) was 31.7 (95% CI 25.8, 38.6) per 100,000, which was higher than the overall statewide female breast cancer mortality rate of 24.8. Wayne County did not meet the Healthy People 2010 mortality rate goal (22.3 female breast cancer deaths per 100,000).[4][5] The average annual percentage change in death rates was stable with no percentage change in the county rate over the five year interval (95% CI -1.2, 1.2) for 2003-2007. Female breast cancer mortality rates (2003-2007) per 100,000 by race were 26.9 (95% CI 20.4, 34.9) for whites, and 42.8 (95% CI 30.9, 57.8) for African Americans.[4]

<b>Exhibit 148. Invasive Female Breast Cancer Incidence and Mortality Rates per 100,000 persons</b>		
	Wayne County	North Carolina
Breast Cancer Incidence (2004-2008)*	135.1	123.3
Breast Cancer Mortality (2003-2007)	31.7	24.8

\*Age-Adjusted

Source: NCI, State Cancer Profiles

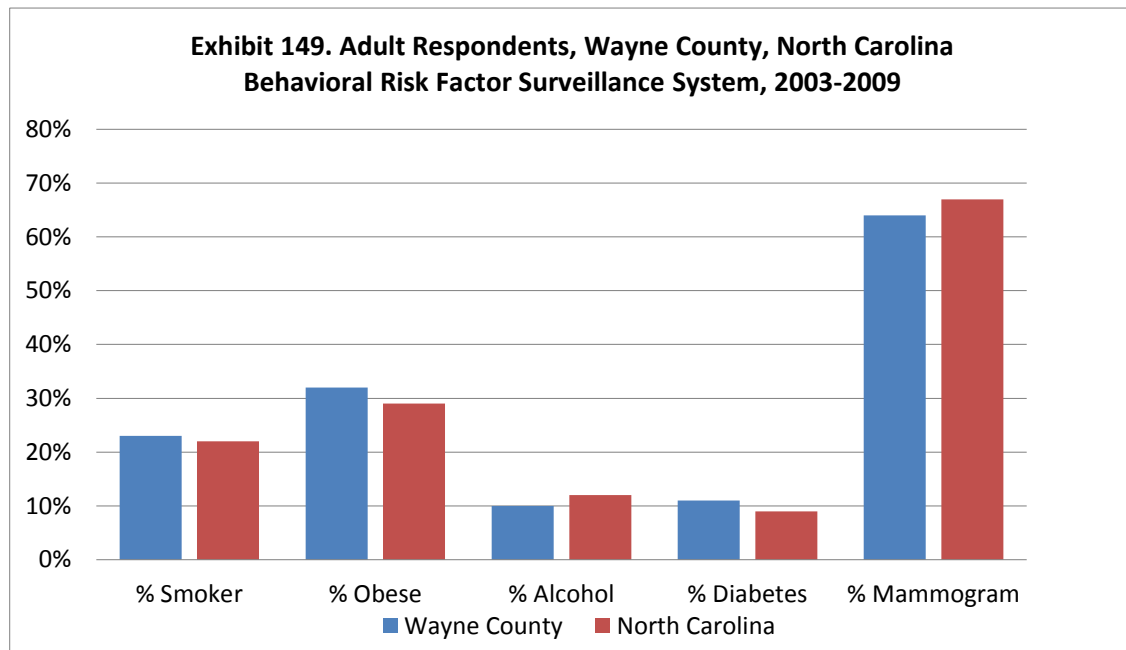


## Cervix

See Eastern North Carolina rates. Wayne County data for cervical cancer incidence and mortality rates were suppressed due to small numbers.

## Risk Factors and Screening

Wayne County residents had a higher prevalence of obesity and diabetes compared to NC statewide, but reported less mammography in Medicare-enrolled women.



Sources: County Health Rankings, North Carolina County Health Rankings; North Carolina Data Health Explorer; NC DHHS, SCHS, BRFSS Survey Results, 2005-2009

## Exhibit 150. Adult Respondents, Wayne County, North Carolina Behavioral Risk Factor Surveillance System, 2003-2009

	Factor				
	% Smoker <sup>a</sup>	% Obese <sup>b</sup>	% Alcohol <sup>c</sup>	% Diabetes <sup>d</sup>	% Mammogram <sup>e</sup>
Wayne County	23%	32%	10%	11%	64%
North Carolina	22%	29%	12%	9%	67%

a. 2003-2009, Percent of adults that report smoking  $\geq 100$  cigarettes and currently smoking [3]

b. 2008, Percent of adults that report a BMI  $\geq 30$  [3]

c. 2003-2009, Percent of the adult population that reports either binge drinking, defined as consuming more than 4 (women) or 5 (men) alcoholic beverages on a single occasion in the past 30 days, or heavy drinking, defined as drinking more than 1 (women) or 2 (men) drinks per day on average [3]

d. 2005-2009, Percent, Has a doctor told you that you have diabetes, Yes response. [6][7]

e. 2006-2007, Percent of female Medicare enrollees age 67-69 that had at least one mammogram over a two-year period [3]

Sources: County Health Rankings, North Carolina County Health Rankings; North Carolina Data Health Explorer; NC DHHS, SCHS, BRFSS Survey Results, 2005-2009

## WILSON COUNTY

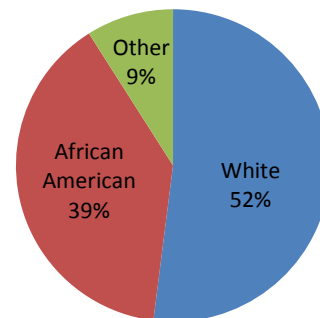
### Social and Economic Indicators

Based on number of persons employed, in 2011 the largest industry in Wilson County was manufacturing.[1] The median household income (2009) was \$39,511 for a family of four, compared to \$43,754 statewide. The percentage of persons living below the poverty level in 2009 was 20%, compared to 16% statewide.[2] Unemployment (civilian, not in labor force, 2009) in Wilson County was 12%, compared to 10.6% statewide. The estimated high school graduation rate (2010) was 67%, based on the cohort of ninth graders that graduated from high school in four years, compared to 78% in North Carolina. In 2007, the adult uninsured population ( $\geq$  age 18-64) was 20%, compared to 21% statewide. Forty-nine physicians provided primary care in Wilson County (2008), which was a population to primary care physician ratio of 1,586 to 1.[3]

### Demographics

Based on data from the 2010 U.S. Census, Wilson County had a total population of 81,234 with 220.6 persons per square mile. The county population was 25% children (<18), 61% adults ages 18-64, and 14% elders. Wilson County was 39% African American (AA) (22% AA statewide) and 52% white (69% white statewide). Latinos/Hispanics (any race) comprised 10% of the population in Wilson County (8% statewide) (Exhibit 151). The overall county population was 52% female and 48% male.[2]

**Exhibit 151. Wilson County  
by Race, 2010**



Source: U.S. Census Bureau, State and County Quickfacts: North Carolina

### Cancer Surveillance

#### Colon and Rectal Cancers (CRC)

##### *Incidence*

In Wilson County, the CRC age-adjusted incidence rate for 2004-2008 was 55.9 (95% CI 48.9, 63.6) per 100,000, which was higher than the overall statewide CRC rate of 46.8 (95% CI 46.1, 47.4). On average, there were 47 new cases of CRC diagnosed in Wilson County, and 4,720 new cases across the state for 2004-2008. The CRC age-adjusted incidence rates per 100,000 were 75.1 (95% CI 62.5, 89.5) for males and 42.1 (95% CI 34.3, 51.3) for females. By race, the CRC age-adjusted incidence rates per 100,000 were 53.5 (95% CI 45.2, 62.9) for whites, and 62.6 (95% CI 49.7, 77.9) for African Americans.[4]

##### *Mortality*

In Wilson County, CRC mortality rates for 2003-2007 were stable and were similar to the North Carolina rates (all races, both sexes). The CRC mortality rate (2003-2007) was 18.1 (95% CI 14.2, 22.7) per 100,000 which was higher than the overall statewide CRC mortality rate of 17.3 (95% CI 17.0, 17.7). Wilson County did not meet the Healthy People 2010 mortality rate goal (13.9 CRC deaths per

100,000).[4][5] The average annual percentage change in death rates declined at -0.6 percent (95% CI -1.6, 0.4) for 2003-2007. The CRC mortality rates (2003-2007) by gender were 14.3 (95% CI 10.0, 19.9) for females and 22.5 (95% CI 15.9, 31.0) for males per 100,000. CRC mortality rates (2003-2007) per 100,000 by race were 15.0 (95% CI 10.8, 20.4) for whites, and 25.4 (95% CI 17.3, 35.8) for African Americans.[4]

<b>Exhibit 152. Colorectal Cancer Incidence and Mortality Rates per 100,000 persons</b>		
	Wilson County	North Carolina
CRC Incidence (2004-2008)*	55.9	46.8
CRC Mortality (2003-2007)	18.1	17.3

\*Age-Adjusted

Source: NCI, State Cancer Profiles

### Female Breast

#### *Incidence*

In Wilson County, the breast cancer (female, invasive) age-adjusted incidence rate for 2004-2008 was 137.4 (95% CI 122.6, 153.5) per 100,000, which was higher than the overall statewide breast cancer rate of 123.3 (95% CI 121.9-124.7). On average, there were 64 new cases of invasive female breast cancer diagnosed in Wilson County and 6,189 new cases across the state for 2004-2008. Female breast cancer age-adjusted incidence rates were 145.9 (95% CI 126.6, 167.5) for whites, and 124.9 (95% CI 101.9, 151.5) for African Americans.[4]

#### *Mortality*

In Wilson County, female breast cancer mortality rates for 2003-2007 increased and were higher than the North Carolina rates (all races). The female breast cancer mortality rate (2003-2007) was 33.2 (95% CI 26.2, 41.6) per 100,000, which was higher than the overall statewide female breast cancer mortality rate of 24.8. Wilson County did not meet the Healthy People 2010 mortality rate goal (22.3 female breast cancer deaths per 100,000).[4][5] The average annual percentage change in death rates increased at 0.2 percent (95% CI -0.8, 1.3) for 2003-2007. Female breast cancer mortality rates (2003-2007) per 100,000 by race were 23.7 (95% CI 16.4, 33.3) for whites, and 51.1 (95% CI 36.8, 69.2) for African Americans.[4]

<b>Exhibit 153. Invasive Female Breast Cancer Incidence and Mortality Rates per 100,000 persons</b>		
	Wilson County	North Carolina
Breast Cancer Incidence (2004-2008)*	137.4	123.3
Breast Cancer Mortality (2003-2007)	33.2	24.8

\*Age-Adjusted

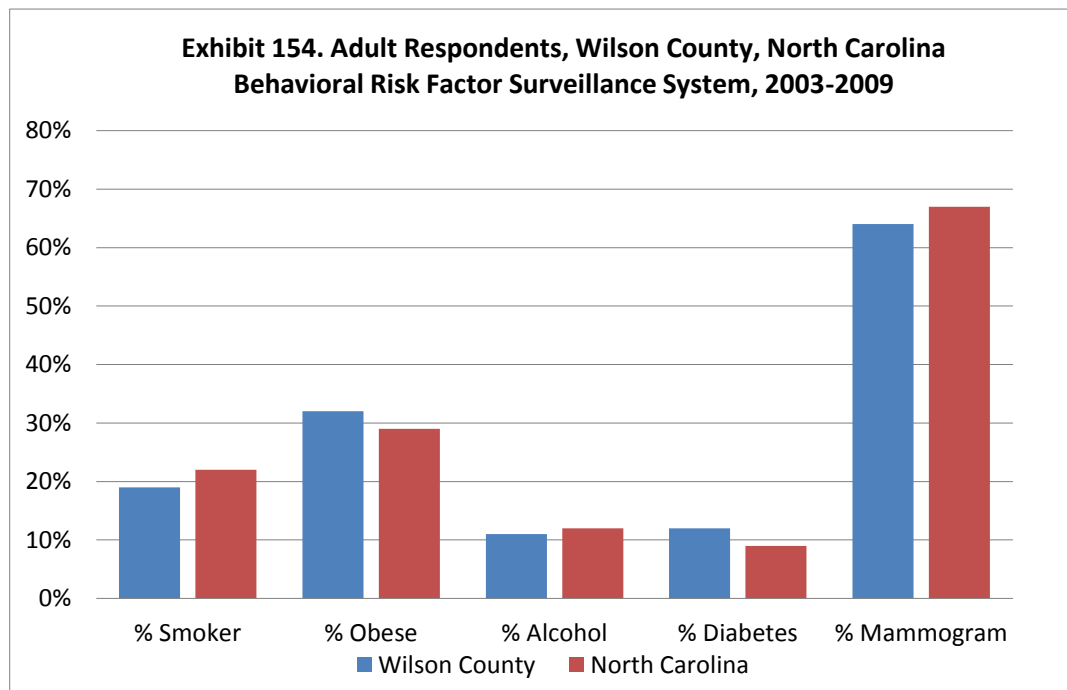
Source: NCI, State Cancer Profiles

### Cervix

See Eastern North Carolina rates. Wilson County data for cervical cancer incidence and mortality rates were suppressed due to small numbers.

## Risk Factors and Screening

Wilson County residents had a higher prevalence of obesity and diabetes compared to NC statewide, but reported less mammography in Medicare-enrolled women.



Sources: County Health Rankings, North Carolina County Health Rankings; North Carolina Data Health Explorer; NC DHHS, SCHS, BRFSS Survey Results, 2005-2009

## Exhibit 155. Adult Respondents, Wilson County, North Carolina Behavioral Risk Factor Surveillance System, 2003-2009

	Factor				
	% Smoker <sup>a</sup>	% Obese <sup>b</sup>	% Alcohol <sup>c</sup>	% Diabetes <sup>d</sup>	% Mammogram <sup>e</sup>
Wilson County	19%	32%	11%	12%	64%
North Carolina	22%	29%	12%	9%	67%

a. 2003-2009, Percent of adults that report smoking  $\geq 100$  cigarettes and currently smoking [3]

b. 2008, Percent of adults that report a BMI  $\geq 30$  [3]

c. 2003-2009, Percent of the adult population that reports either binge drinking, defined as consuming more than 4 (women) or 5 (men) alcoholic beverages on a single occasion in the past 30 days, or heavy drinking, defined as drinking more than 1 (women) or 2 (men) drinks per day on average [3]

d. 2005-2009, Percent, Has a doctor told you that you have diabetes, Yes response. [6][7]

e. 2006-2007, Percent of female Medicare enrollees age 67-69 that had at least one mammogram over a two-year period [3]

Sources: County Health Rankings, North Carolina County Health Rankings; North Carolina Data Health Explorer; NC DHHS, SCHS, BRFSS Survey Results, 2005-2009

## County-Level Profile References

1. North Carolina Department of Commerce. (2011, Dec 6). AccessNC/EDIS. NC counties with employment and wages by industry and by occupation. Personal communication, Tammy Lester.
2. U.S. Census Bureau. (2011, Nov 23). State and County Quickfacts: North Carolina. Retrieved from <http://quickfacts.census.gov/qfd/states/37/37013.html>.
3. County Health Rankings (2009). (2011, Dec 7). North Carolina County Health Rankings. Retrieved from <http://www.countyhealthrankings.org>.

\*Data on access to primary care are considered unreliable for the following reasons. Although the relationship between primary care providers and improved health outcomes is supported in the literature, this measure has a number of limitations. First, primary care providers are classified by county, but providers living on the edge of counties or who practice in multiple locations may see patient populations that reside in surrounding counties. Therefore, this measure may either over- or underestimate patient access to primary care in some situations since patient-provider interaction is not restricted by county boundaries.

4. National Cancer Institute (NCI). (2011, Nov 23). State Cancer Profiles: North Carolina counties. Death rates and Incidence Rates. Retrieved from <http://statecancerprofiles.cancer.gov>.
5. Centers for Disease Control and Prevention. (2011, Nov 9). Healthy People 2010. Retrieved from <http://www.healthypeople.gov/2010/document/html/volume1/03cancer.htm>.
6. North Carolina Health Data Explorer. (2011, Nov 9). Center for Health Systems Research and Development, East Carolina University, Greenville, NC. Retrieved from <http://www.ecu.edu/chsrd/>.
7. NC DHHS, State Center for Health Statistics. (2011, Dec 16). Behavioral Risk Factor Surveillance System, Survey Results, 2005-2009. Retrieved from <http://www.schs.state.nc.us/SCHS/brfss/results.html>.

# Access to Care

## Mammography

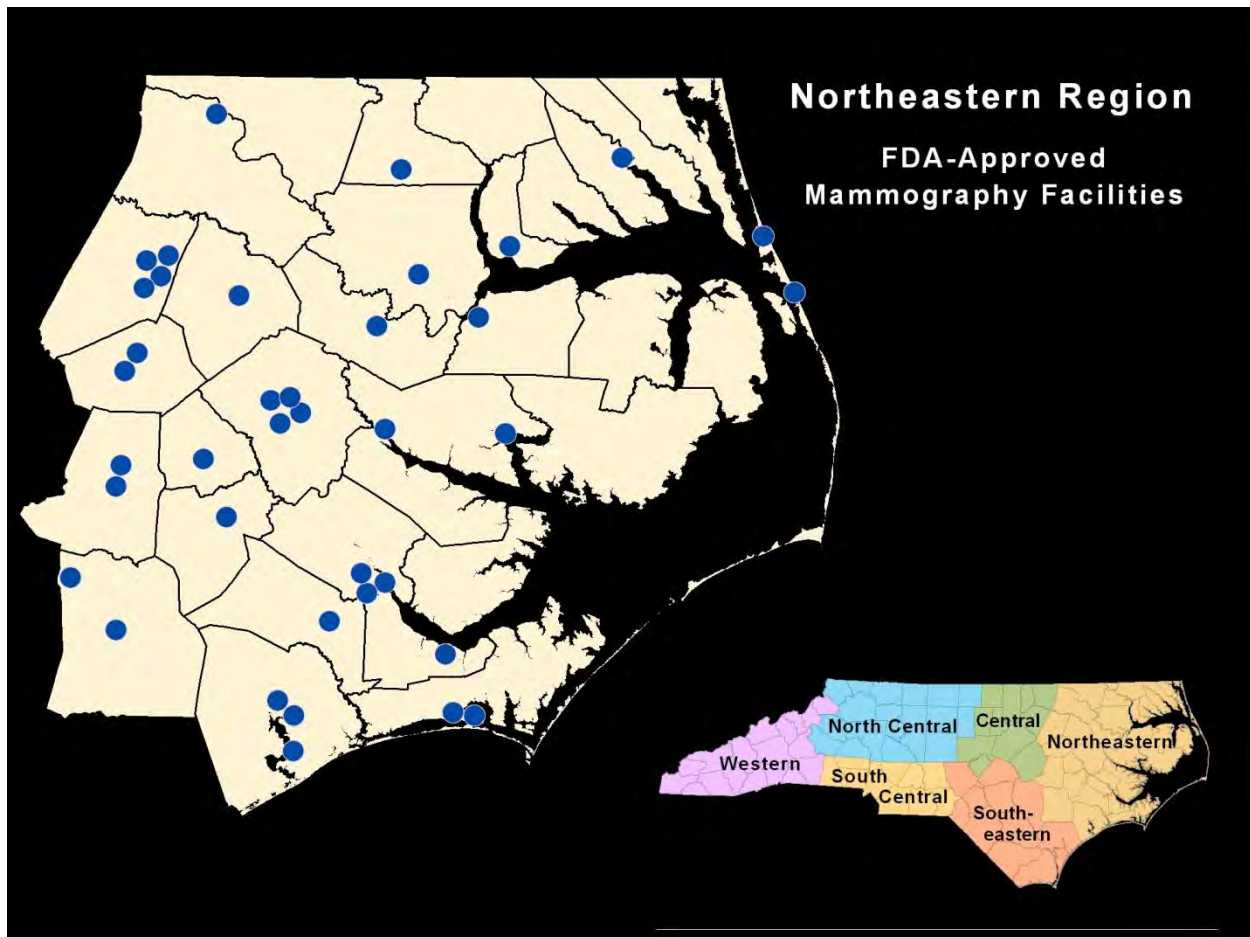
### Methods

Number and distribution of mammography facilities was used a surrogate measure of access to breast cancer screening. Mammography facility data were collected between November and December 2011. Licensed mammography facilities in the region were identified by utilizing the search function for the Mammography Facility Database on the U.S. Food and Drug Administration (FDA) website. [1] The Mammography Facility Database is updated weekly based on information received from the four FDA-approved accreditation bodies: the American College of Radiology (ACR), and the States of Arkansas, Iowa, and Texas. The data base includes mammography facilities meeting baseline quality standards for equipment, personnel and practices under the Mammography Quality Standards Act of 1992 (MQSA). Mammography facilities that were located in the 29-county region of Eastern North Carolina were included in a Microsoft Excel spreadsheet. Some FDA-approved facilities may not be listed at the time the data were obtained. Addresses of each facility were input into an online longitude and latitude locator. [2] Longitude and latitude coordinates were added to the Microsoft Excel spreadsheet. Staff from the Department of Geography at East Carolina University geocoded the points and these locations were added to the North Carolina map in order to create a visual depiction of mammography access in Eastern North Carolina. See Exhibit 156 for the Northeastern Region FDA-Approved Mammography Facilities map.

### Results

Thirty-eight licensed mammography facilities operate in Eastern North Carolina; 21 of the 29 ENC counties have at least 1 facility, 8 ENC counties have no mammography facilities.[1]

**Exhibit 156. FDA-Approved Mammography Facilities**



Source: DHHS, U.S. Food and Drug Administration. Mammography Facilities Database, Nov 2011



## Colposcopy Service

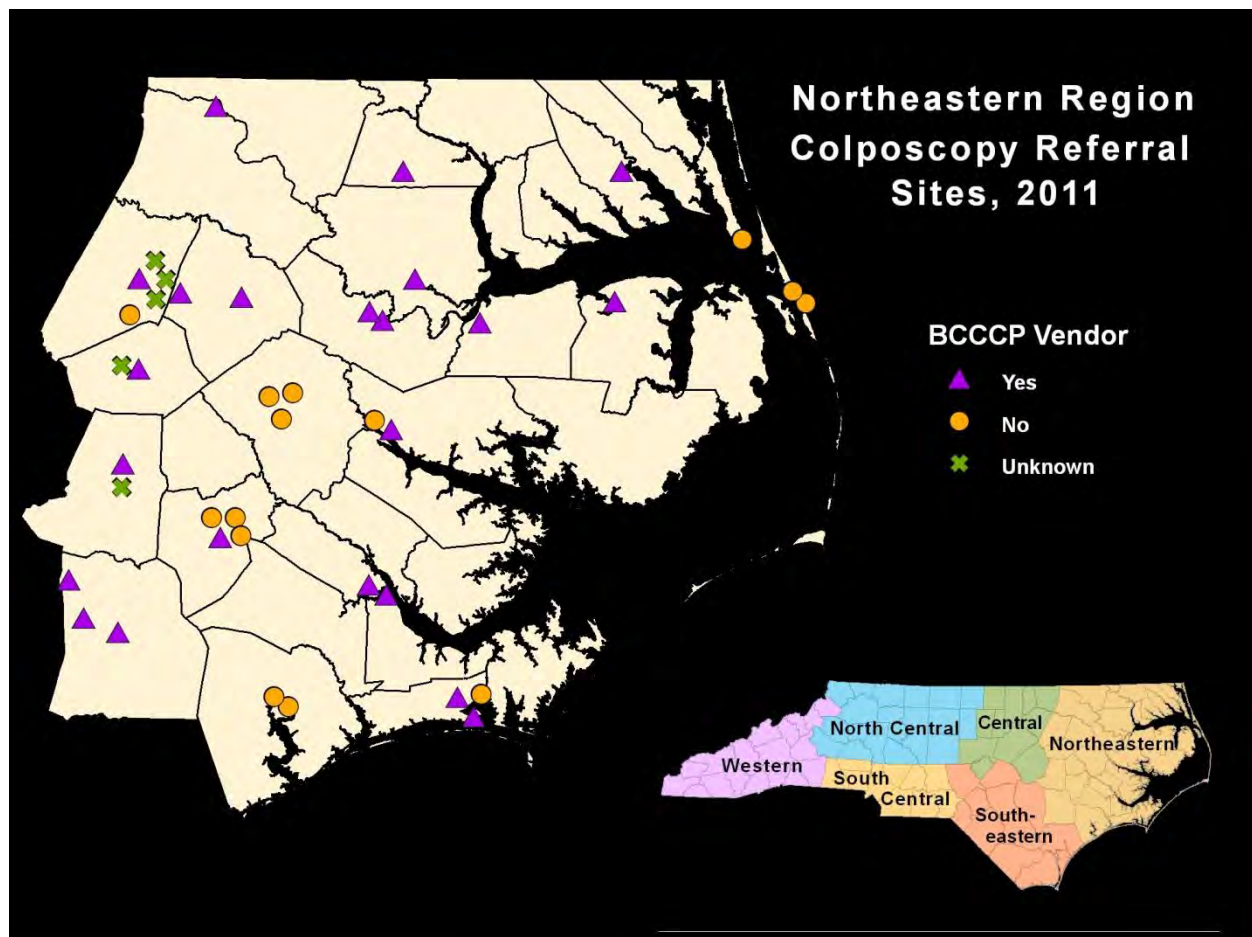
### Methods

Number and distribution of providers (serving BCCCP eligible or uninsured patients) for colposcopy was used as a surrogate for measuring cervical cancer prevention and care. There is no database of facilities that provide colposcopies in North Carolina. Colposcopy provider data was collected between November and December 2011. Locations were identified by contacting North Carolina Breast Cervical Cancer Control Program (BCCCP) providers directly through email or telephone call. About half of the Eastern North Carolina BCCCP providers were located using the search function of the NC BCCCP website and contacted by telephone.[3] Other BCCCP providers were contacted through an email sent by the state BCCCP coordinators in charge of the region that included the county. BCCCP providers were asked if they provide on-site colposcopy services and if they refer out to other providers, which provider specifically. If not indicated by the BCCCP provider, referral facilities were called by ECU staff and asked if they accept BCCCP as a form of payment for colposcopies (i.e. Is the facility a BCCCP vendor?). Addresses of each facility were input into an online longitude and latitude locator.[2] Longitude and latitude coordinates were added to the Microsoft Excel spreadsheet. Staff from the Department of Geography at East Carolina University geocoded the points and these locations were added to the North Carolina map in order to create a visual depiction of colposcopy access in Eastern North Carolina. See Exhibit 157 for the Northeastern Region Colposcopy Referral Sites map. Exclusion criteria for the colposcopy map were colposcopy locations existing outside the eastern region (2 locations excluded) and/or incomplete location contact information (2 locations excluded).

### Results

There are 22 colposcopy providers that participate in the BCCCP program in Eastern North Carolina. Fourteen colposcopy providers in the region do not participate in the BCCCP program.[3] Colposcopy locations that did not respond to telephone calls about BCCCP acceptance as a payment option were marked as “unknown BCCCP status.” BCCCP participation was unknown at five colposcopy provider sites in Eastern North Carolina. Two counties that did not report were Hyde and Jones. Onslow does not participate in the BCCCP program [3], although Onslow County Health Department reported colposcopy providers.

Exhibit 157. Northeastern Region Colposcopy Referral Sites



Source: DHHS, Breast and Cervical Cancer Control Program (BCCCP). (2011, Nov 21). Eligibility and Enrollment.

# Colonoscopy

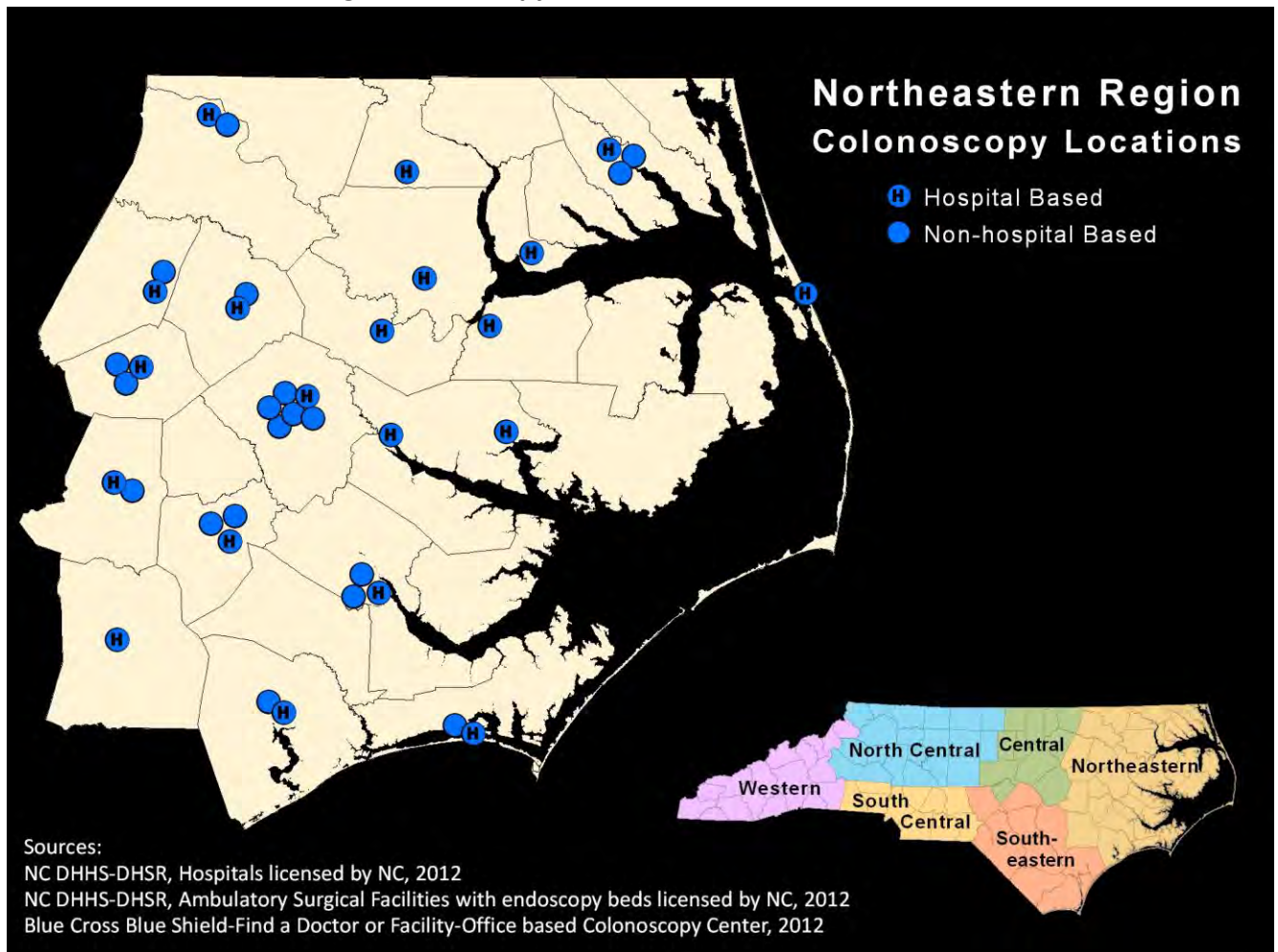
## Methods

Number and distribution of providers of endoscopy services were included as surrogates for access to colorectal cancer screening, early detection, and diagnosis. Endoscopy center data were collected from the Division of Health Service Regulation website in late January 2012 (database last updated January 2012) [4]; hospitals that provide ambulatory surgery (endoscopy allowed) and/or endoscopy (only endoscopy can be performed in this surgical bed) were collected from the Division of Health Service Regulation website in early February 2012 (database last updated February 2012) [5]; and office based colonoscopy providers were collected through the BlueCross BlueShield of North Carolina website, “Find a doctor or facility” function with the search “Office Based Colonoscopy Providers” [6] Fifteen of the free standing endoscopy facilities were identified through the Department of Health and Human Services, Division of Health Service Regulation database, “Ambulatory Surgical Facilities, Licensed by the State of North Carolina.” Facilities with at least one endoscopy bed located in an ENC county were included.[4] Sixteen hospitals had both endoscopy beds (dedicated) and ambulatory surgery beds (endoscopy allowed) and 4 hospitals had ambulatory surgery beds (endoscopy allowed) but no dedicated endoscopy beds.[5] Four office-based endoscopy facilities were identified through the BlueCross BlueShield of North Carolina website, “Find a doctor or facility” function with the search “Office Based Colonoscopy Provider.”[6] Locations within the 29-county area were included. Addresses of each facility were entered into an online longitude and latitude locator.[2] Longitude and latitude coordinates were added to the Microsoft Excel spreadsheet. Staff from the Department of Geography at East Carolina University geocoded the points and these locations were added to the North Carolina map in order to create a visual depiction of colonoscopy access in Eastern North Carolina. See Exhibit 158 for the Northeastern Region Colonoscopy Locations map.

## Results

There are 39 facilities in Eastern North Carolina that have the capability to provide endoscopy services. Thirty-one licensed endoscopy facilities (hospitals and free-standing Ambulatory Surgery Facilities that offer endoscopy) operate in Eastern North Carolina. [4-5] Four hospitals have ambulatory surgery beds (endoscopy allowed) but do not have dedicated endoscopy beds. [5] There are 4 office-based colonoscopy providers in the ENC region.[6] Nineteen of the 29 ENC counties have the capability to provide endoscopy services.

Exhibit 158. Northeastern Region Colonoscopy Locations



## Hospitals

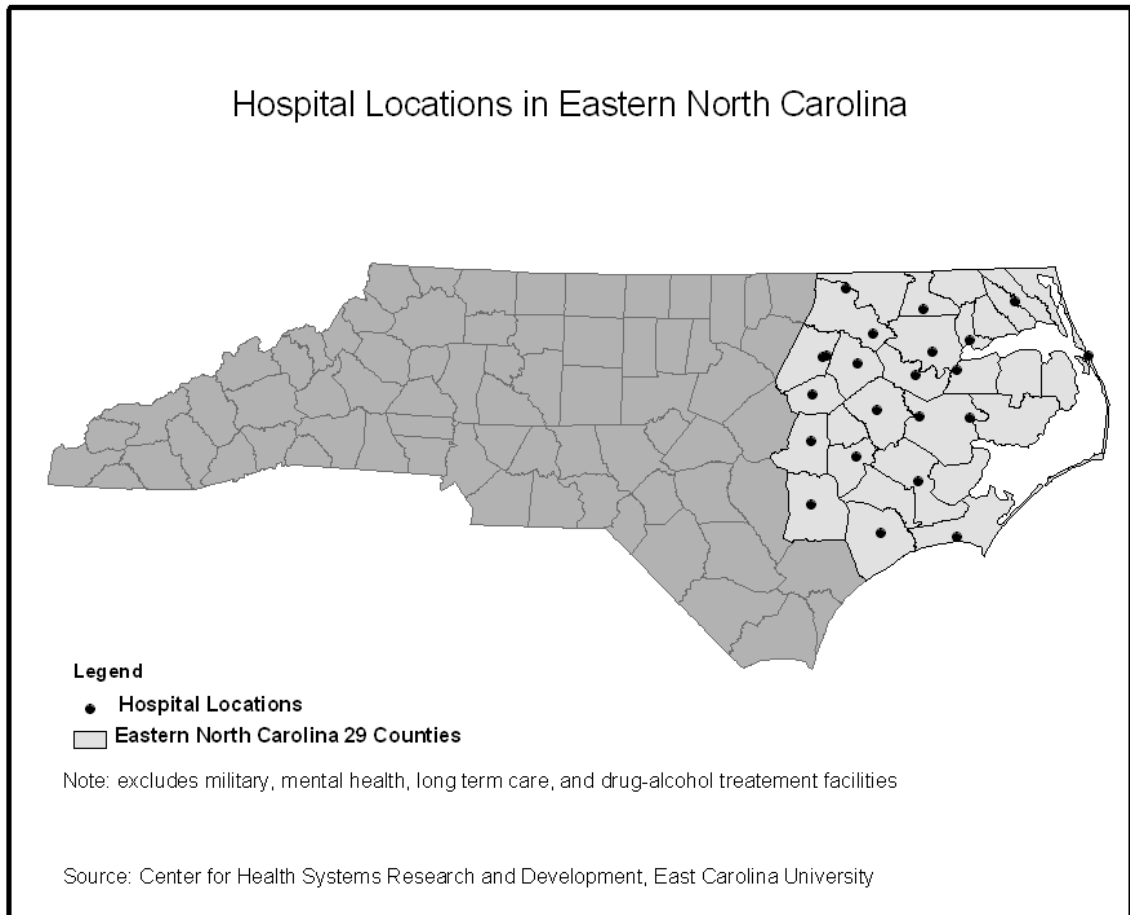
### Methods

The number and distribution of hospitals in the region were indicated on the map to show access to acute care.[7] Hospital locations were obtained from the North Carolina Hospital Association website (Accessed January 2012). [8] Hospitals providing acute care were included; military hospitals, long-term care facilities, mental health facilities, and drug/alcohol treatment centers were excluded. See Exhibit 159 for the Hospital Locations in Eastern North Carolina map.

### Results

Twenty-two hospitals provide acute care in the ENC region. Nineteen of the 29 ENC counties have at least 1 hospital, 10 counties have no hospital. Vidant Medical Center (formerly Pitt County Memorial Hospital) located in Greenville, NC is the largest hospital in the region (745 beds), with the only trauma center east of Raleigh. Many of the hospitals in Eastern North Carolina are small, rural hospitals (median number of beds, 131 beds). [8]

**Exhibit 159. Hospital Locations in Eastern North Carolina**



## Federally Qualified Health Centers and Look-Alike Sites

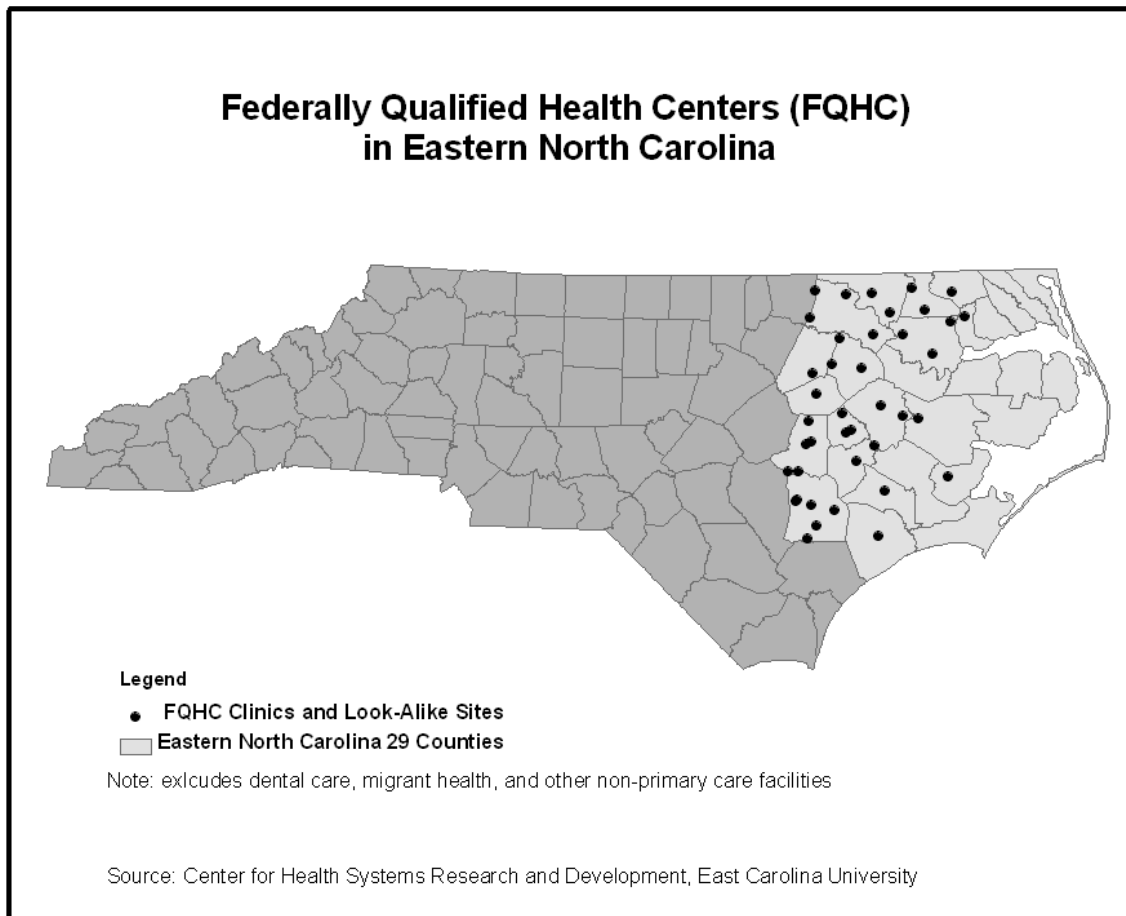
### Methods

Number and distribution of Federally Qualified Health Centers and Look-Alike sites are indicated on the map as a surrogate measure for access to primary care and screening for medically-underserved populations.[7] Federally Qualified Health Center and Look-Alike site locations were obtained from the Health Resources and Services Administration (HRSA) Data Warehouse- Health Centers and Look-alike Sites Site Directory (Accessed January 2012).[9] HRSA extracts the most recent Federally Qualified Health Center and Look-Alike data available for download on a daily basis and uploads it to the website. HRSA-supported health centers are often referred to as “Community Health Centers” or “Federally Qualified Health Centers (FQHCs)” and are considered “330” or “Section 330” sites. Sites in this category receive funding from HRSA’s Health Center Cluster grant program or a related program. Also included are sites that qualify for HRSA grant funding under the Health Center Cluster program group, but that do not currently receive any funding from those programs; these sites are often called a “Look-Alike” site or sometimes “FQHC Look-Alike.”[9] Both Federally Qualified Health Centers and Look-Alike sites were included in the map. Excluded from the map were dental care facilities, migrant health centers, and other types of non-primary care facilities. See Exhibit 160 for the Federally Qualified Health Centers (FQHC) in Eastern North Carolina map.

### Results

Forty Federally Qualified Health Centers and Look-Alike sites provide primary care in the region. Eighteen of the 29 ENC counties have at least 1 Community Health Center, 11 counties have no federally qualified health centers and look-alike sites. [9]

**Exhibit 160. Federally Qualified Health Centers (FQHC) in Eastern North Carolina**





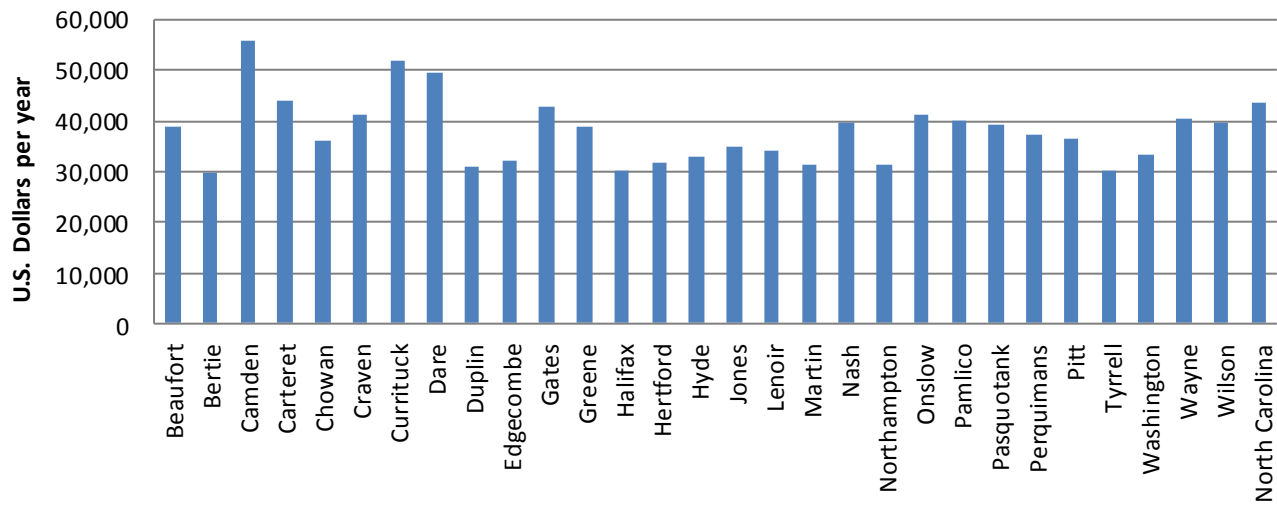
## Access to Care References

1. DHHS, U.S. Food and Drug Administration. (2011, Nov 21). Mammography Facilities Database, Nov 2011. Retrieved from <http://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfmqsa/mqsa.cfm>.
2. itouchmap.com. (2011, Nov 1). Latitude and Longitude of a Point. Retrieved from <http://itouchmap.com/latlong.html>.
3. DHHS, Breast and Cervical Cancer Control Program (BCCCP). (2011, Nov 21). Eligibility and Enrollment. Retrieved from <http://bcccp.ncdhhs.gov/Eligibility.asp>.
4. Department of Health and Human Services, DHHS, Division of Health Service Regulation. (2012, Jan 24). Ambulatory Surgical Facilities with endoscopy beds, Licensed by the State of North Carolina, Updated 1/2012. Retrieved from <http://www.ncdhhs.gov/dhsr/data/aslist.pdf>.
5. Department of Health and Human Services, DHHS, Division of Health Services Regulation. (2012, Feb 6). Hospitals by County-Hospitals licensed by the State of North Carolina, Updated Feb 1, 2012. Retrieved from <http://www.ncdhhs.gov/dhsr/data/hllistco.pdf>.
6. BlueCross BlueShield of North Carolina. (2012, Feb 3). Find a Doctor or Facility-Office Based Colonoscopy Center. Updated Jan 31, 2012. Retrieved from <http://www.bcbsnc.com/content/providersearch/index.htm>.
7. Center for Health Systems Research and Development, East Carolina University, Greenville, NC. (<http://www.ecu.edu/chsrd/>). 2012
8. North Carolina Hospital Association. (2012, Jan 20). NCHA Member Hospitals. Retrieved from <https://www.ncha.org/nc-hospitals>.
9. HRSA, Health Resources and Services Administration Data Warehouse. (2012, Jan 24). Health Centers and Look-alike Sites Site Directory. Retrieved from, [http://findahealthcenter.hrsa.gov/Search\\_HCC.aspx?byCounty=1](http://findahealthcenter.hrsa.gov/Search_HCC.aspx?byCounty=1)

# Appendices

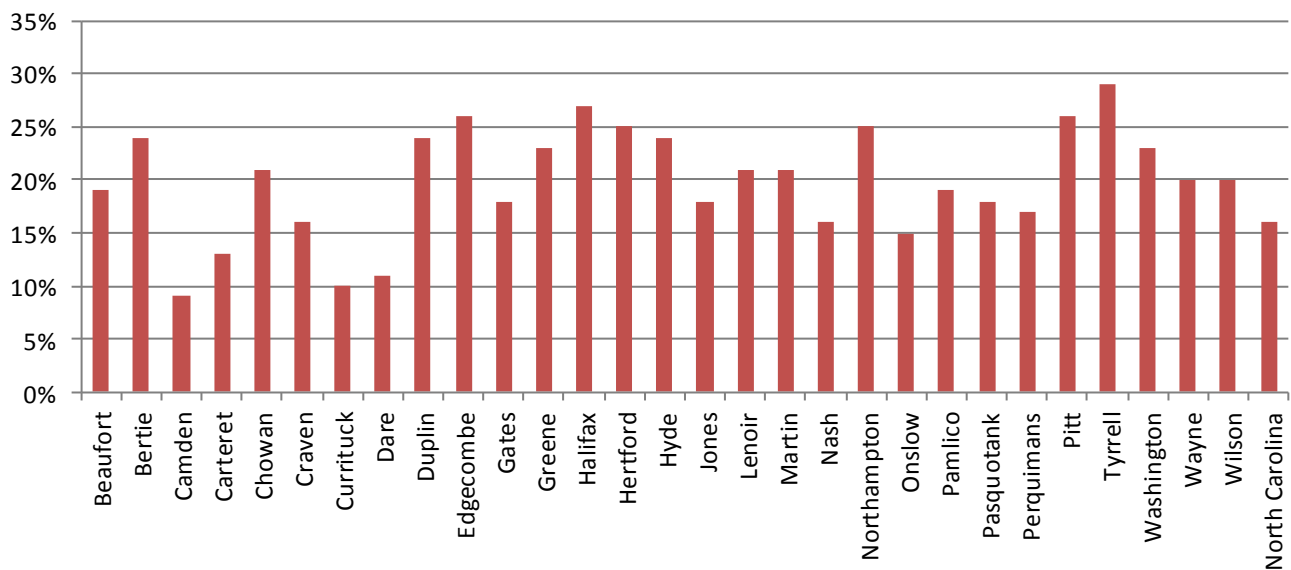
## Demographic Data by County

**Exhibit 161. Median Household Income, by County, 2010**



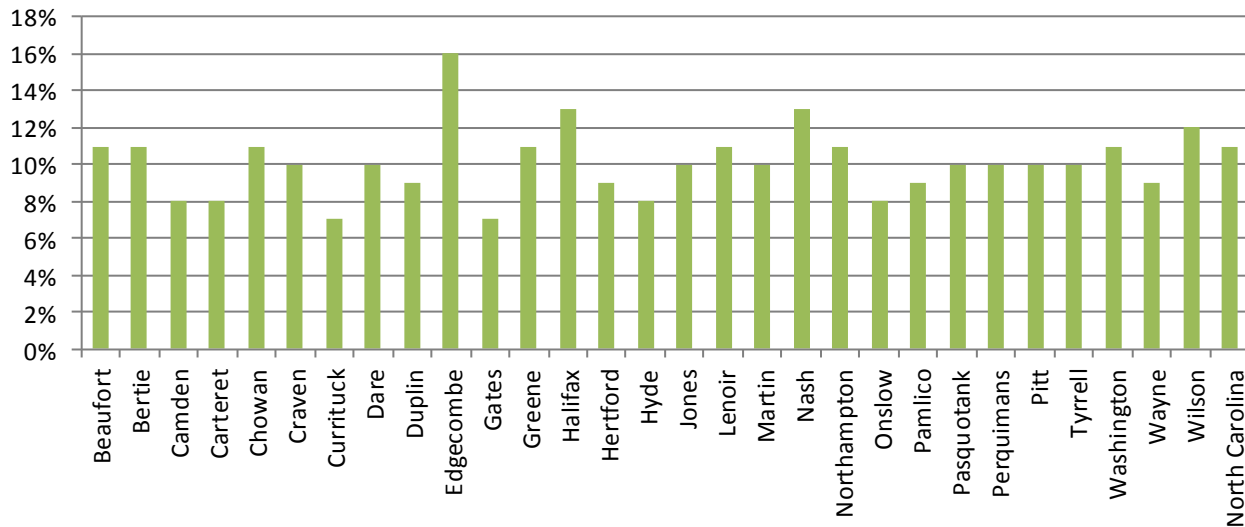
Source: U.S. Census, 2010

**Exhibit 162. Percent Persons Below Poverty Level, by County, 2009**



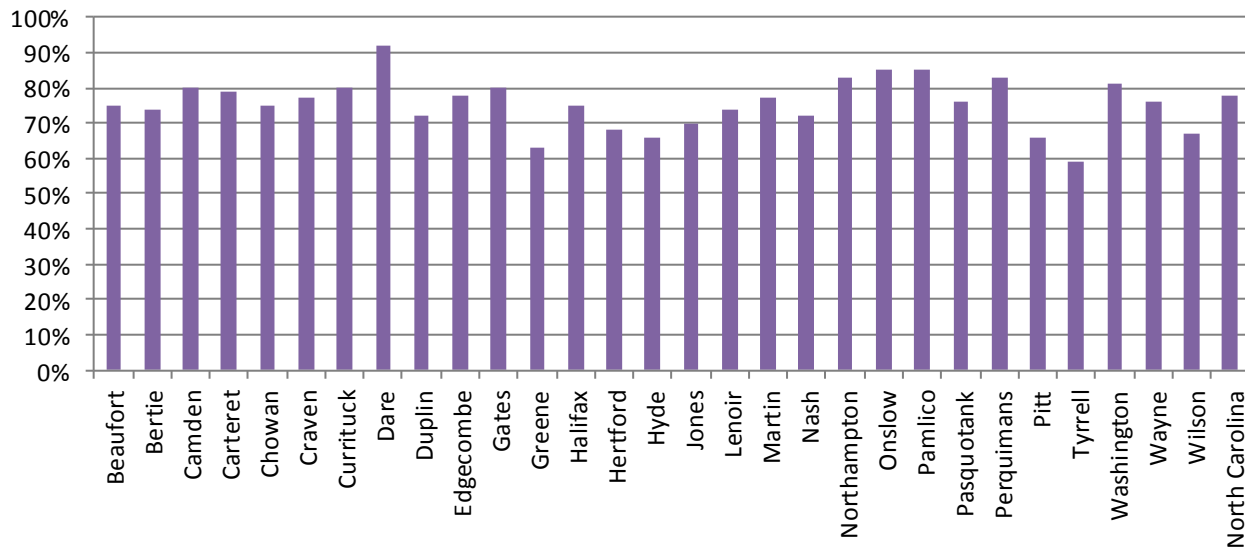
Source: U.S. Census, 2010

**Exhibit 163. Percent Unemployment (Age 16+ Unemployed but Seeking Work), by County, 2009**



Source: County Health Rankings, 2011

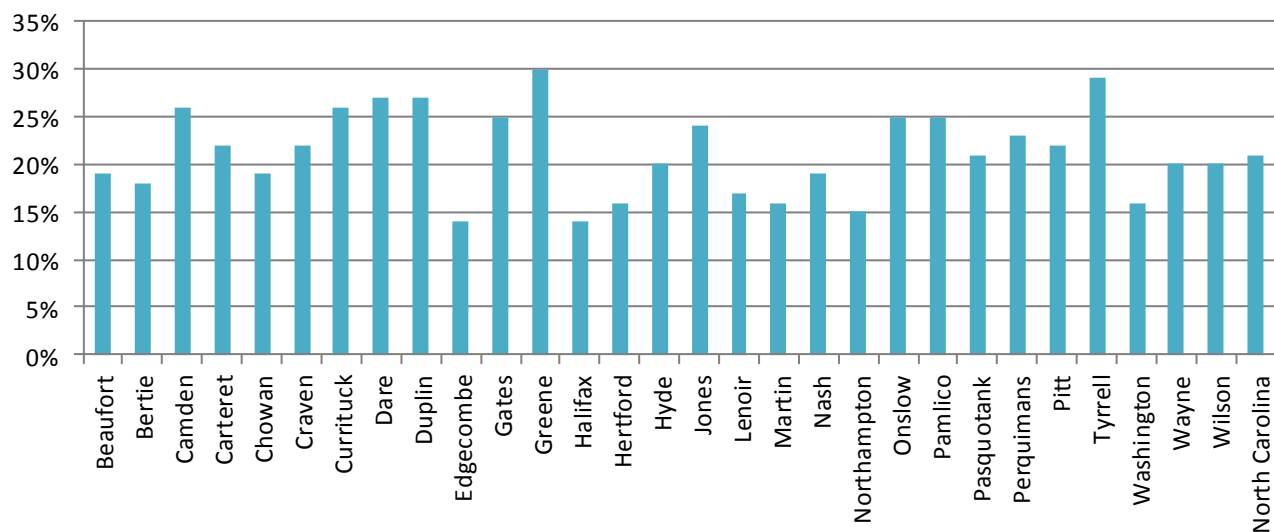
**Exhibit 164. Percent High School Graduation (Ninth Grade Cohort that Graduates in 4 Years), by County, 2008-2009**



Source: County Health Rankings website, 2011

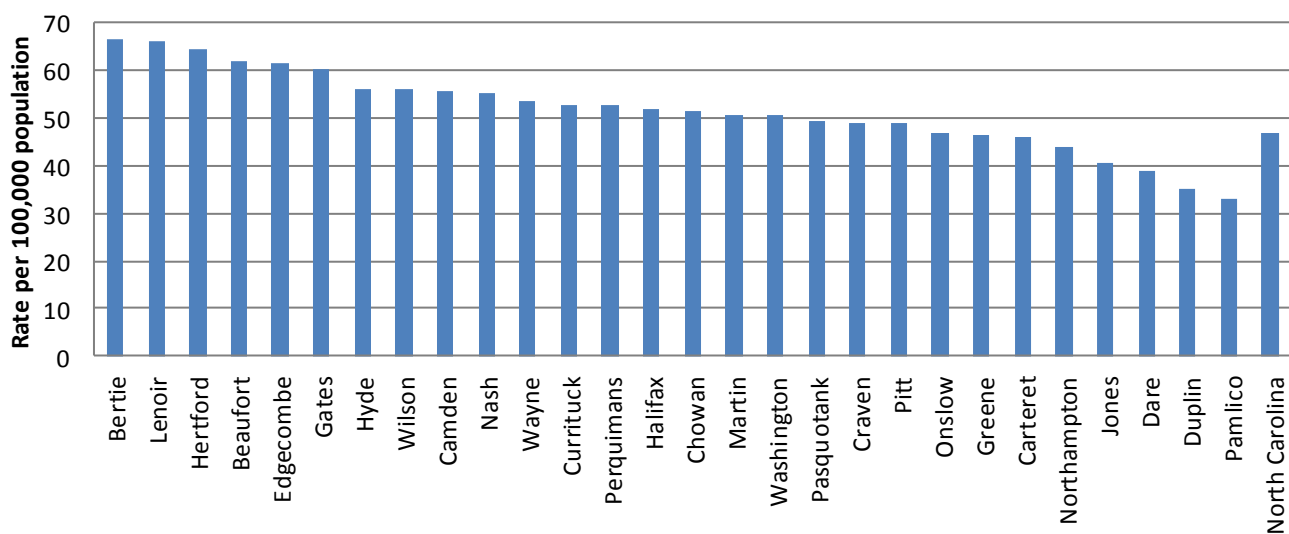
## Cancer Incidence and Mortality Rates by county

**Exhibit 165. Percent Uninsured Adults (Population Under Age 65 without Health Insurance), by County, 2007**



Source: County Health Rankings website, 2011

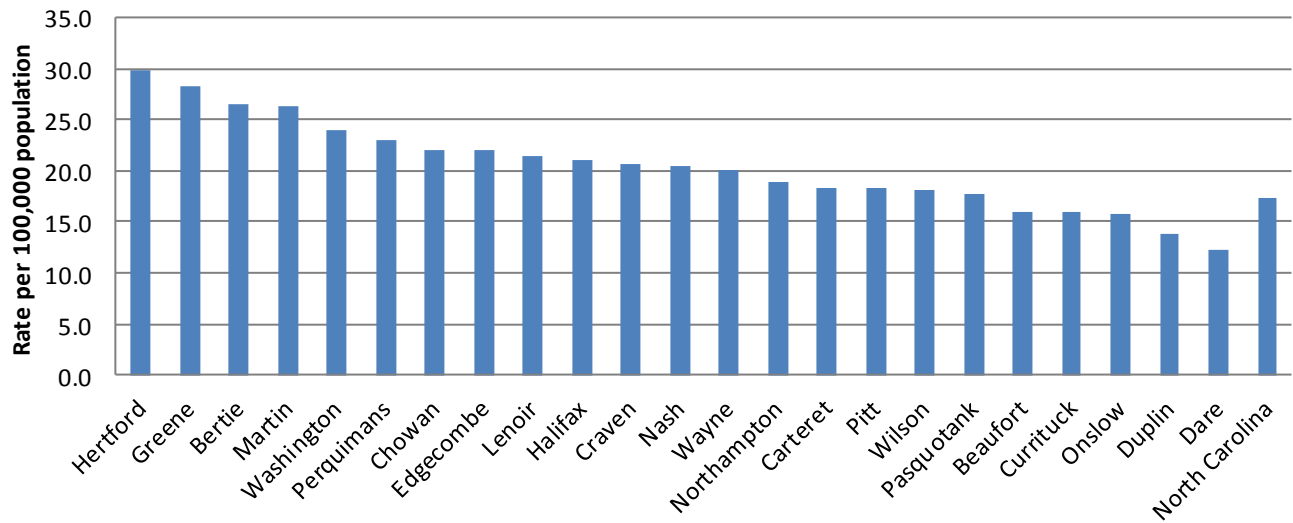
**Exhibit 166. 2004-2008 Colorectal Cancer Incidence Rates per 100,000 persons, by County**



\*Incidence rate from Tyrrell County suppressed due to small counts

Source: Cancer Control Planet, State Cancer Profiles, 2011

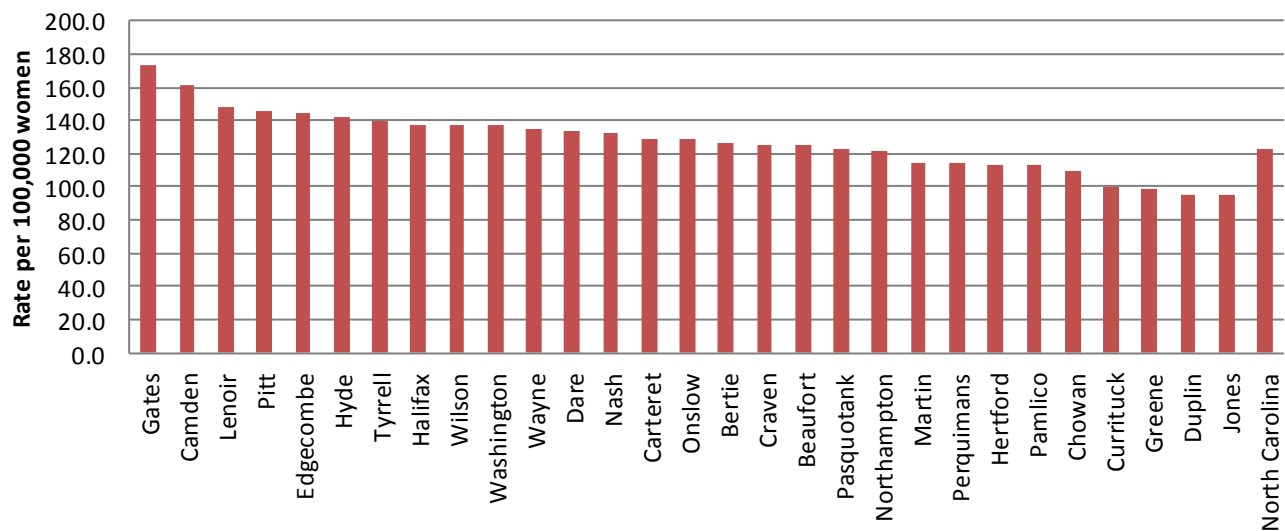
**Exhibit 167. 2003-2007 Colorectal Cancer Mortality rates per 100,000 persons, by County**



\*CRC Mortality rates suppressed for Camden, Gates, Hyde, Jones, Pamlico, and Tyrrell counties due to small number of deaths

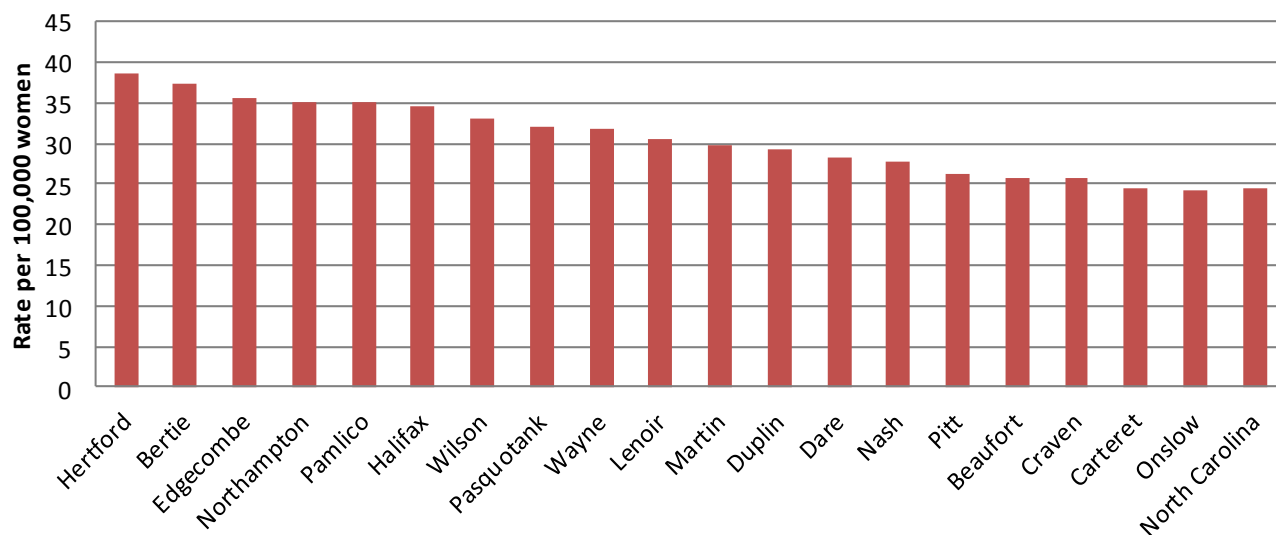
Source: Cancer Control Planet, State Cancer Profiles, 2011

**Exhibit 168. 2003-2007 Female Breast Cancer Incidence rates per 100,000 women, by County**



Source: Cancer Control Planet, State Cancer Profiles, 2011

**Exhibit 169. 2004-2008 Female Breast Cancer Mortality rates per 100,000 women, by County**



\*Female Breast Cancer mortality rates suppressed for Camden, Chowan, Currituck, Gates, Greene, Hyde, Jones, Perquimans, Tyrrell and Washington counties due to small number of deaths.

Source: Cancer Control Planet, State Cancer Profiles, 2011

<b>Exhibit 170. 2004-2008 Colorectal Cancer Age-Adjusted Incidence Rates per 100,000 persons, by County</b>			
Bertie	66.4	Martin	50.8
Lenoir	66.3	Washington	50.6
Hertford	64.4	Pasquotank	49.3
Beaufort	62.1	Craven	49.1
Edgecombe	61.5	Pitt	49.0
Gates	60.4	Onslow	47.0
Hyde	56.3	Greene	46.6
Wilson	55.9	Carteret	45.9
Camden	55.6	Northampton	43.9
Nash	55.1	Jones	40.7
Wayne	53.8	Dare	38.9
Currituck	52.9	Duplin	35.1
Perquimans	52.7	Pamlico	32.9
Halifax	51.8	North Carolina	46.8
Chowan	51.7		

\*Incidence rate from Tyrrell County suppressed due to small counts

Source: Cancer Control Planet, State Cancer Profiles, 2011

<b>Exhibit 171. 2003-2007 Colorectal Cancer Age-Adjusted Mortality Rates per 100,000 persons, by County</b>			
Hertford	29.9	Wayne	20.1
Greene	28.3	Northampton	18.9
Bertie	26.5	Carteret	18.3
Martin	26.3	Pitt	18.3
Washington	24	Wilson	18.1
Perquimans	23.1	Pasquotank	17.7
Chowan	22.1	Beaufort	16
Edgecombe	22.1	Currituck	15.9
Lenoir	21.4	Onslow	15.7
Halifax	21.1	Duplin	13.9
Craven	20.6	Dare	12.3
Nash	20.4	North Carolina	17.3

\*CRC Mortality rates suppressed for Camden, Gates, Hyde, Jones, Pamlico, and Tyrrell counties due to small number of deaths

Source: Cancer Control Planet, State Cancer Profiles



<b>Exhibit 172. 2004-2008 Female Breast Cancer Age-Adjusted Incidence Rates per 100,000 women, by County</b>			
Gates	173.4	Bertie	127.0
Camden	161.6	Craven	125.7
Lenoir	148.1	Beaufort	124.8
Pitt	145.2	Pasquotank	123.3
Edgecombe	144.0	Northampton	122.2
Hyde	141.8	Martin	114.4
Tyrrell	139.8	Perquimans	113.9
Halifax	137.5	Hertford	113.3
Wilson	137.4	Pamlico	113.0
Washington	136.9	Chowan	109.7
Wayne	135.1	Currituck	99.7
Dare	133.9	Greene	98.9
Nash	132.7	Duplin	95.0
Carteret	129.0	Jones	94.7
Onslow	128.8	North Carolina	123.3

Source: Cancer Control Planet, State Cancer Profiles, 2011

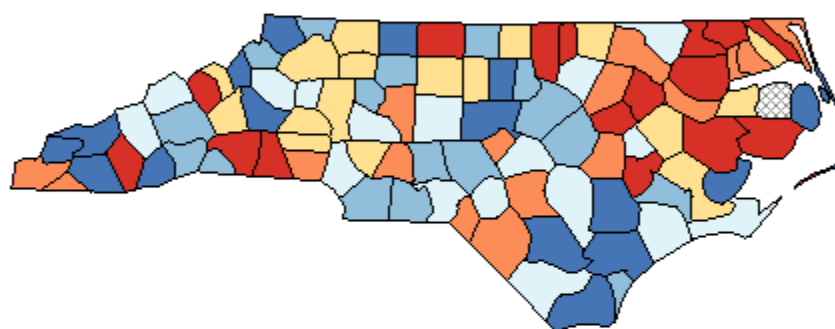
<b>Exhibit 173. 2003-2007 Female Breast Cancer Age-Adjusted Mortality Rates per 100,000 persons, by County</b>			
Hertford	38.7	Martin	29.7
Bertie	37.4	Duplin	29.4
Edgecombe	35.6	Dare	28.3
Northampton	35.1	Nash	27.9
Pamlico	35.0	Pitt	26.3
Halifax	34.7	Beaufort	25.8
Wilson	33.2	Craven	25.8
Pasquotank	32.1	Carteret	24.6
Wayne	31.7	Onslow	24.3
Lenoir	30.5	North Carolina	24.4

\*Female Breast Cancer mortality rates suppressed for Camden, Chowan, Currituck, Gates, Greene, Hyde, Jones, Perquimans, Tyrrell and Washington counties due to small number of deaths.

Source: Cancer Control Planet, State Cancer Profiles, 2011

Exhibit 174. Incidence Rates for North Carolina, 2004-2008, Colon & Rectum

**Incidence Rates<sup>†</sup> for North Carolina, 2004 - 2008**  
**Colon & Rectum**  
**All Races (includes Hispanic), Both Sexes, All Ages**



Age-Adjusted  
 Annual Incidence Rate  
 (Cases per 100,000)

[Quantile Interval](#)

- 55.6 to 70.8
- 50.7 to 55.5
- 47.1 to 50.6
- 43.0 to 47.0
- 39.8 to 42.9
- 30.0 to 39.7

Suppressed \* / \*\*

US (SEER + NPCR)  
 Rate (95% C.I.)  
 47.6 (47.5 - 47.7)

North Carolina  
 Rate (95% C.I.)  
 46.8 (46.1 - 47.4)

Created by statecancerprofiles.cancer.gov on 04/04/2012 9:41 am.

State Cancer Registries may provide more current or more local data.

Data presented on the State Cancer Profiles Web Site may differ from statistics reported by the State Cancer Registries (for more information).

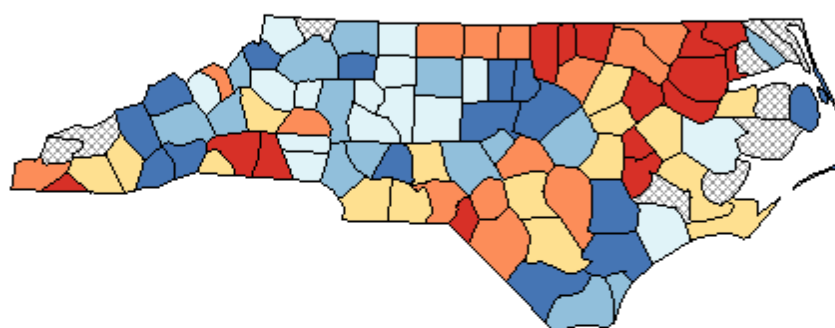
<sup>†</sup> Incidence rates (cases per 100,000 population per year) are age-adjusted to the 2000 US standard population (19 age groups: <1, 1-4, 5-9, ..., 80-84, 85+). Rates are for invasive cancer only (except for bladder which is invasive and in situ) or unless otherwise specified. Rates calculated using SEER\*Stat. Population counts for denominators are based on Census populations as modified by NCI. The US populations included with the data release have been adjusted for the population shifts due to hurricanes Katrina and Rita for 62 counties and parishes in Alabama, Mississippi, Louisiana, and Texas. The 1969-2008 US Population Data File is used with SEER November 2010 data. The 1969-2008 US Population Data File is used with NPCR January 2011 data.

\* Data have been suppressed to ensure confidentiality and stability of rate estimates. Counts are suppressed if fewer than 16 cases were reported in a specific area-sex-race category.

\*\* Data have been suppressed for states with a population below 50,000 per sex for American Indian/Alaska Native or Asian/Pacific Islanders because of concerns regarding the relatively small size of these populations in some states.

Exhibit 175. Age-Adjusted Death Rates for North Carolina, 2004-2008, Colon & Rectum

**Age-Adjusted Death Rates for North Carolina, 2004 - 2008**  
**Colon & Rectum**  
**All Races (includes Hispanic), Both Sexes, All Ages**



Age-Adjusted  
Annual Death Rate  
(Deaths per 100,000)

[Quantile Interval](#)

21.6 to 34.6  
 19.6 to 21.5  
 17.6 to 19.5  
 16.3 to 17.5  
 14.3 to 16.2  
 8.3 to 14.2

Suppressed\*

United States  
Rate (95% C.I.)  
17.1 (17.1 - 17.2)

North Carolina  
Rate (95% C.I.)  
16.8 (16.4 - 17.2)

Healthy People 2010  
Goal 03-05  
13.9

Created by statecancerprofiles.cancer.gov on 04/04/2012 9:40 am.

State Cancer Registries may provide more current or more local data.

Data presented on the State Cancer Profiles Web Site may differ from statistics reported by the State Cancer Registries (for more information).

Source: Death data provided by the National Vital Statistics System public use data file. Death rates calculated by the National Cancer Institute using SEER\*Stat. Death rates (deaths per 100,000 population per year) are age-adjusted to the 2000 US standard population (19 age groups: <1, 1-4, 5-9, ... , 80-84, 85+). The Healthy People 2010 goals are based on rates adjusted using different methods but the differences should be minimal. Population counts for denominators are based on the Census 1969-2008 US Population Data File as modified by NCI. The US populations included with the data release have been adjusted for the population shifts due to hurricanes Katrina and Rita for 62 counties and parishes in Alabama, Mississippi, Louisiana, and Texas.

\* Data have been suppressed to ensure confidentiality and stability of rate estimates. Counts are suppressed if fewer than 16 cases were reported in a specific area-sex-race category.

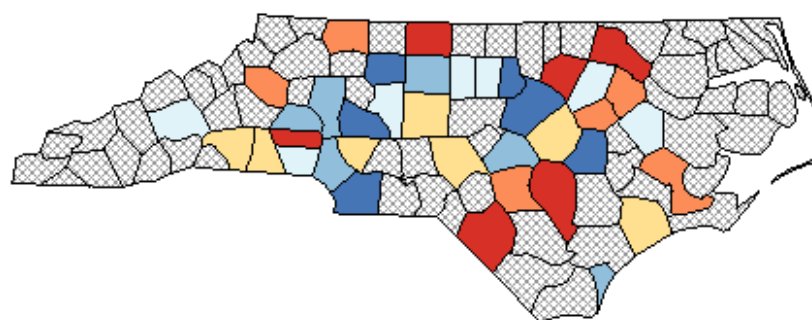
\*\* Data have been suppressed for states with a population below 50,000 per sex for American Indian/Alaska Native or Asian/Pacific Islanders because of concerns regarding the relatively small size of these populations in some states.

Healthy People 2010 Goal 03-05: Reduce the colorectal cancer death rate to 13.9.

Healthy People 2010 Objectives provided by the Centers for Disease Control and Prevention.

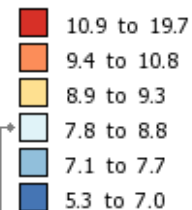
Exhibit 176. Incidence Rates for North Carolina, 2004-2008, Cervix

**Incidence Rates<sup>†</sup> for North Carolina, 2004 - 2008**  
**Cervix**  
**All Races (includes Hispanic), Female, All Ages**



Age-Adjusted  
Annual Incidence Rate  
(Cases per 100,000)

[Quantile Interval](#)



Suppressed \* / \*\*

US (SEER + NPCR)  
Rate (95% C.I.)  
8.1 (8.0 - 8.1)

North Carolina  
Rate (95% C.I.)  
7.9 (7.5 - 8.3)

Created by statecancerprofiles.cancer.gov on 04/04/2012 9:36 am.

State Cancer Registries may provide more current or more local data.

Data presented on the State Cancer Profiles Web Site may differ from statistics reported by the State Cancer Registries (for more information).

<sup>†</sup> Incidence rates (cases per 100,000 population per year) are age-adjusted to the 2000 US standard population (19 age groups: <1, 1-4, 5-9, ... , 80-84, 85+). Rates are for invasive cancer only (except for bladder which is invasive and in situ) or unless otherwise specified. Rates calculated using SEER\*Stat. Population counts for denominators are based on Census populations as modified by NCI. The US populations included with the data release have been adjusted for the population shifts due to hurricanes Katrina and Rita for 62 counties and parishes in Alabama, Mississippi, Louisiana, and Texas. The 1969-2008 US Population Data File is used with SEER November 2010 data. The 1969-2008 US Population Data File is used with NPCR January 2011 data.

\* Data have been suppressed to ensure confidentiality and stability of rate estimates. Counts are suppressed if fewer than 16 cases were reported in a specific area-sex-race category.

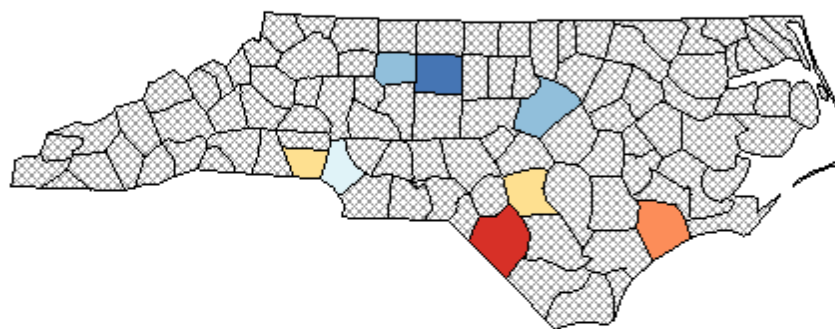
\*\* Data have been suppressed for states with a population below 50,000 per sex for American Indian/Alaska Native or Asian/Pacific Islanders because of concerns regarding the relatively small size of these populations in some states.

Exhibit 177. Age-Adjusted Death Rates for North Carolina, 2004-2008, Cervix

## Age-Adjusted Death Rates for North Carolina, 2004 - 2008

### Cervix

All Races (includes Hispanic), Female, All Ages



Age-Adjusted  
Annual Death Rate  
(Deaths per 100,000)

[Quantile Interval](#)

5.4 to 5.6  
4.1 to 5.3  
2.0 to 4.0  
1.8 to 1.9  
1.7  
1.6

Suppressed\*

United States  
Rate (95% C.I.)  
2.4 (2.4 - 2.4)

North Carolina  
Rate (95% C.I.)  
2.4 (2.2 - 2.6)

Healthy People 2010  
Goal 03-04  
2.0

Created by statecancerprofiles.cancer.gov on 04/04/2012 9:35 am.

State Cancer Registries may provide more current or more local data.

Data presented on the State Cancer Profiles Web Site may differ from statistics reported by the State Cancer Registries (for more information).

Source: Death data provided by the National Vital Statistics System public use data file. Death rates calculated by the National Cancer Institute using SEER\*Stat. Death rates (deaths per 100,000 population per year) are age-adjusted to the 2000 US standard population (19 age groups: <1, 1-4, 5-9, ..., 80-84, 85+). The Healthy People 2010 goals are based on rates adjusted using different methods but the differences should be minimal. Population counts for denominators are based on the Census 1969-2008 US Population Data File as modified by NCI. The US populations included with the data release have been adjusted for the population shifts due to hurricanes Katrina and Rita for 62 counties and parishes in Alabama, Mississippi, Louisiana, and Texas.

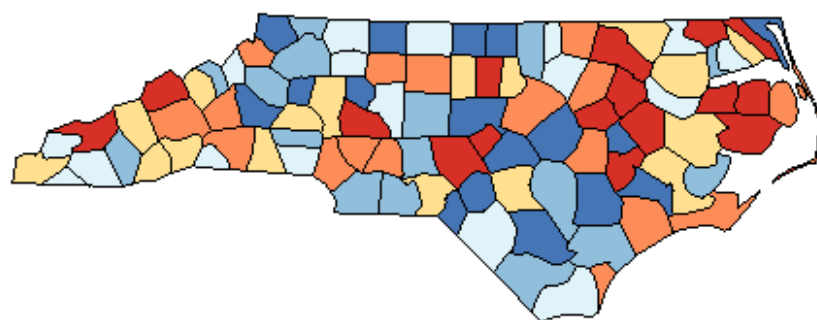
\* Data have been suppressed to ensure confidentiality and stability of rate estimates. Counts are suppressed if fewer than 16 cases were reported in a specific area-sex-race category.

\*\* Data have been suppressed for states with a population below 50,000 per sex for American Indian/Alaska Native or Asian/Pacific Islanders because of concerns regarding the relatively small size of these populations in some states. Healthy People 2010 Goal 03-04: Reduce the death rate from cancer of the uterine cervix to 2.0.

Healthy People 2010 Objectives provided by the Centers for Disease Control and Prevention.

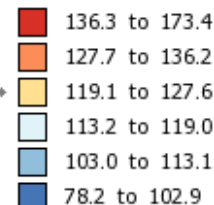
Exhibit 178. Incidence Rates for North Carolina, 2004-2008, Breast

**Incidence Rates<sup>†</sup> for North Carolina, 2004 - 2008**  
**Breast**  
**All Races (includes Hispanic), Female, All Ages**



Age-Adjusted  
 Annual Incidence Rate  
 (Cases per 100,000)

[Quantile Interval](#)



US (SEER + NPCR)  
 Rate (95% C.I.)  
 121.0 (120.8 - 121.3)

North Carolina  
 Rate (95% C.I.)  
 123.3 (121.9 - 124.7)

Created by statecancerprofiles.cancer.gov on 04/04/2012 9:32 am.

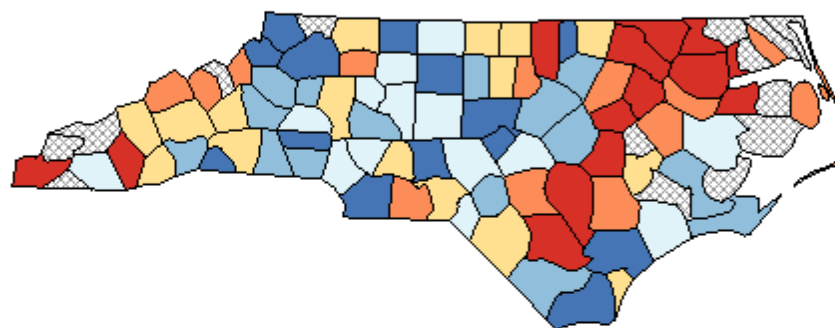
State Cancer Registries may provide more current or more local data.

Data presented on the State Cancer Profiles Web Site may differ from statistics reported by the State Cancer Registries (for more information).

<sup>†</sup> Incidence rates (cases per 100,000 population per year) are age-adjusted to the 2000 US standard population (19 age groups: <1, 1-4, 5-9, ... , 80-84, 85+). Rates are for invasive cancer only (except for bladder which is invasive and in situ) or unless otherwise specified. Rates calculated using SEER\*Stat. Population counts for denominators are based on Census populations as modified by NCI. The US populations included with the data release have been adjusted for the population shifts due to hurricanes Katrina and Rita for 62 counties and parishes in Alabama, Mississippi, Louisiana, and Texas. The 1969-2008 US Population Data File is used with SEER November 2010 data. The 1969-2008 US Population Data File is used with NPCR January 2011 data.

Exhibit 179. Age-Adjusted Death Rates for North Carolina, 2004-2008, Breast

# **Age-Adjusted Death Rates for North Carolina, 2004 - 2008** **Breast** **All Races (includes Hispanic), Female, All Ages**



Age-Adjusted  
Annual Death Rate  
(Deaths per 100,000)

[Quantile Interval](#)

29.5 to 38.6  
26.8 to 29.4  
25.0 to 26.7  
23.3 to 24.9  
21.2 to 23.2  
13.5 to 21.1

Suppressed\*

United States  
Rate (95% C.I.)  
23.5 (23.4 - 23.6)

North Carolina  
Rate (95% C.I.)  
24.4 (23.8 - 25.0)

Healthy People 2010  
Goal 03-03  
22.3

Created by statecancerprofiles.cancer.gov on 04/04/2012 9:29 am.

State Cancer Registries may provide more current or more local data.

Data presented on the State Cancer Profiles Web Site may differ from statistics reported by the State Cancer Registries (for more information).

Source: Death data provided by the National Vital Statistics System public use data file. Death rates calculated by the National Cancer Institute using SEER\*Stat. Death rates (deaths per 100,000 population per year) are age-adjusted to the 2000 US standard population (19 age groups: <1, 1-4, 5-9, ..., 80-84, 85+). The Healthy People 2010 goals are based on rates adjusted using different methods but the differences should be minimal. Population counts for denominators are based on the Census 1969-2008 US Population Data File as modified by NCI.

The US populations included with the data release have been adjusted for the population shifts due to hurricanes Katrina and Rita for 62 counties and parishes in Alabama, Mississippi, Louisiana, and Texas.

\* Data have been suppressed to ensure confidentiality and stability of rate estimates. Counts are suppressed if fewer than 16 cases were reported in a specific area-sex-race category.

\*\* Data have been suppressed for states with a population below 50,000 per sex for American Indian/Alaska Native or Asian/Pacific Islanders because of concerns regarding the relatively small size of these populations in some states.

Healthy People 2010 Goal 03-03 : Reduce the breast cancer death rate to 22.3.

Healthy People 2010 Objectives provided by the Centers for Disease Control and Prevention.

# **Cancer Resource Directory for Eastern North Carolina**

**April 16, 2012**



This document contains the following information about cancer diagnosis, treatment or support in Eastern North Carolina:

- Colonoscopy Locations in Eastern North Carolina, 2011
- Colposcopy Referral Sites in Eastern North Carolina, 2011
- FDA Approved Mammography Facilities in Eastern North Carolina, 2011
- Hospital Locations in Eastern North Carolina, 2012
- Federally Qualified Health Centers and Look-Alike Sites in Eastern North Carolina, 2012

Disclaimer: The information in this resource guide does not fully reflect cancer services for screening preventable cancers in eastern North Carolina.

## Colonoscopy Locations in Eastern North Carolina, 2011

### Beaufort County

Vidant Beaufort Hospital  
*Endoscopy and Ambulatory Surgery Beds*  
628 East 12<sup>th</sup> Street  
Washington, NC 27889  
(252)975-4100

Vidant Pungo Hospital  
*Ambulatory Surgery beds*  
202 East Water Street  
Belhaven, NC 27810  
(252)943-2111

### Bertie County

Vidant Bertie Hospital  
*Ambulatory Surgery beds*  
1403 S. King Street  
Windsor, NC 27983  
(252)794-6600

### Carteret County

The Surgical Center of Morehead City  
*NC Licensed Ambulatory Surgical Facility-  
offers endoscopy*  
3714 Guardian Avenue  
Morehead City, NC 28557  
(252)247-0314

Carteret County General Hospital  
*Endoscopy and Ambulatory Surgery beds*  
3500 Arendell St.  
Morehead City, NC 28557  
(252)808-6000

### Chowan County

Vidant Chowan Hospital  
*Endoscopy and Ambulatory Surgery Beds*  
211 Virginia Rd.  
Edenton, NC 27932  
(252)482-8451

### Craven County

CCHC Endoscopy Center  
*Office-Based Colonoscopy Facility*  
975 Newman Road  
New Bern, NC 28562  
(252)514-6685

CarolinaEast Internal Medicine  
*Office-based Colonoscopy Facility*  
2604 Martin Luther King Jr Blvd  
New Bern, NC 28562  
(252)638-4023

CarolinaEast Health System  
*Endoscopy and Ambulatory Surgery Beds*  
2000 Neuse Blvd  
New Bern, NC 28561  
(252)633-8640

### Dare County

The Outer Banks Hospital  
*Endoscopy and Ambulatory Surgery Beds*  
4800 S Croatan Highway  
Nags Head, NC 27959  
(252)449-4500

### Duplin County

Vidant Duplin Hospital  
*Endoscopy and Ambulatory Surgery Beds*  
401 N. Main St.  
Kenansville, NC 28349  
(910)296-0941

### Edgecombe County

Tarboro Endoscopy Center  
*NC Licensed Ambulatory Surgical Facility-  
offers endoscopy*  
201 Clinic Drive  
Tarboro, NC 27886  
(252)823-2105

Vidant Edgecombe Hospital  
*Endoscopy and Ambulatory Surgery beds*  
111 Hospital Drive  
Tarboro, NC 27886  
(252)641-7740

#### **Halifax County**

Halifax Regional Medical Center  
*Endoscopy and Ambulatory Surgery beds*  
250 Smith Church Rd  
Roanoke Rapids, NC 27870  
(252)535-8011

Halifax Gastroenterology P.C.  
*Office-Based Colonoscopy Facility*  
1007 Gregory Drive  
Roanoke Rapids, NC 27870  
(252)535-6478

#### **Hertford County**

Vidant Roanoke-Chowan Hospital  
*Endoscopy and Ambulatory Surgery beds*  
500 South Academy St.  
Ahoskie, NC 27910  
(252)209-3000

#### **Lenoir County**

Kinston Medical Specialists  
*NC Licensed Ambulatory Surgical Facility-  
offers endoscopy*  
701 Doctors Dr., Suite NC  
Kinston, NC 28501  
(252)233-3231

Park Endoscopy Center, LLC  
*NC Licensed Ambulatory Surgical Facility-  
offers endoscopy*  
2602 N. Heritage St.  
Kinston, NC 28501  
(252)527-6565

Lenoir Memorial Hospital  
*Endoscopy and Ambulatory Surgery beds*  
100 Airport Rd  
Kinston, NC 28501  
(252)522-7797

#### **Martin County**

Martin General Hospital  
*Endoscopy and Ambulatory Surgery beds*  
310 S. McCaskey Rd  
Williamston, NC 27892  
(252)809-6179

#### **Nash County**

Boice-Willis Clinic Endoscopy Center  
*NC Licensed Ambulatory Surgical Facility-  
offers endoscopy*  
Rocky Mount Medical Park  
901 N. Winstead Ave  
Rocky Mount, 27804  
(252)937-0220

#### **Onslow County**

Onslow Memorial Hospital  
*Endoscopy and Ambulatory Surgery beds*  
317 Western Blvd.  
Jacksonville, NC 28546  
(252)557-2345

East Carolina Gastroenterology  
Endoscopy Center  
*NC Licensed Ambulatory Surgical Facility-  
offers endoscopy*  
4, Office Park Dr.  
Jacksonville, NC 28546  
(910)353-6158

#### **Pasquotank County**

Albemarle Gastro Associates  
*Office-Based Colonoscopy Facility*  
405 Hastings Lane  
Elizabeth City, NC 27909  
(252)335-5588

Northside Park Gastroenterology  
*Office-Based Colonoscopy Facility*  
102 Northside Park Drive  
Elizabeth City, NC 27909  
(252)335-4619

Albemarle Hospital  
*Endoscopy and Ambulatory Surgery beds*  
1144 North Road Street  
Elizabeth City, NC 27906  
(252)335-0531

### **Pitt County**

Vidant Medical Center  
*Endoscopy and Ambulatory Surgery beds*  
2100 Stantonsburg Rd  
Greenville, NC 27835  
(252)847-4451

Atlantic Gastroenterology Endoscopy  
Center, PA  
*NC Licensed Ambulatory Surgical Facility-  
offers endoscopy*  
2465 Emerald Place  
Greenville, NC 27834-578  
(252)758-2424

Carolina Digestive Diseases  
*NC Licensed Ambulatory Surgical Facility-  
offers endoscopy*  
704 W.H. Smith Blvd  
Greenville, NC 27834  
(252)758-8181

East Carolina Endoscopy Center  
*NC Licensed Ambulatory Surgical Facility-  
offers endoscopy*  
2100 Stantonsburg Road  
Greenville, NC 27834  
(252)744-6600

Gastroenterology East, PA  
*NC Licensed Ambulatory Surgical Facility-  
offers endoscopy*  
2210 Hemby Lane  
Greenville, NC 27834  
(252)551-3000

Quadrangle Endoscopy Center  
*NC Licensed Ambulatory Surgical Facility-  
offers endoscopy*  
1850 W. Arlington Blvd  
Greenville, NC 27834  
(252)757-3636

### **Washington County**

Washington County  
*Ambulatory Surgery beds*  
958 US Hwy 64 East  
Plymouth, NC 27962  
(252)793-4135

### **Wayne County**

Wayne Memorial Hospital  
*Endoscopy and Ambulatory Surgery beds*  
2700 Wayne Memorial Drive  
Goldsboro, NC 27534-9459  
(919)736-1110

Goldsboro Endoscopy Center, Inc  
*NC Licensed Ambulatory Surgical Facility-  
offers endoscopy*  
2705 Medical Office Place  
Goldsboro, NC 27534  
(919)580-9111

### **Wilson County**

Wilson Medical Center  
*Endoscopy and Ambulatory Surgery beds*  
1705 Tarboro Street SW  
Wilson, NC 27893  
(252)399-8040

CGS Endoscopy Center  
*NC Licensed Ambulatory Surgical Facility-  
offers endoscopy*  
2520 Airport Blvd., Suite F  
Wilson, NC 27896  
(252)206-5622

Wilson Digestive Diseases Center, P.A.  
*NC Licensed Ambulatory Surgical Facility-  
offers endoscopy*  
2402 Camden Street  
Wilson, NC 27892  
(252)237-5060

## Colposcopy Referral Sites in Eastern North Carolina, 2011

### Beaufort County

Washington Women's Care  
*Accepts BCCCP? No*  
1204 Brown Street  
Washington, NC 27889  
(252)946-6544

OBGYN of Washington- A subsidiary of  
Beaufort Regional Health System  
*Accepts BCCCP? Yes*  
2010 N. Brown Street  
Washington, NC 27889  
(252)975-1188

### Bertie County

Bertie County Rural Health  
Dr. Ricky Brookes  
*Accepts BCCCP? Yes*  
222 County Farm Road  
Windsor, NC 27983  
(252)794-3042

### Carteret County

Carteret Ob-Gyn  
*Accepts BCCCP? Yes*  
3511 John Platt Drive  
Morehead City, NC 28557  
(252)247-4297

Southside Healthcare for Women  
Dr. William Rawls  
*Accepts BCCCP? Yes*  
3106 Arendell St.  
Morehead City, NC 28557  
(252)808-2500

Dr. Darryl L. Falls  
*Accepts BCCCP? No*  
1508 Arendell St.  
Morehead City, NC 28557  
(252)726-7374

### Craven County

Craven County Health Department  
*Accepts BCCCP? Yes*  
2818 Neuse Boulevard  
New Bern, NC 28561  
(252)636-4920

East Carolina Women's Center, P.A.  
*Accepts BCCCP? Yes*  
200 Stonebridge Square  
Havelock, NC 28532  
(252)633-3942

### Currituck County

Family Practice & Ob-Gyn  
Dr. Norman Dahm  
*Accepts BCCCP? No*  
8845 Caratoke Highway  
Harbinger, NC 27941  
(252)491-8550

### Dare County

Coastal Women's Clinic  
*Accepts BCCCP? No*  
4810 S. Croatan Hwy  
Nags Head, 27959  
(252)261-4885

Outer Banks Center for Women  
*Accepts BCCCP? No*  
4917 South Croatan Highway  
Nags Head, 27959  
(252)449-2100

### Duplin County

Goshen Medical Center-Faison  
*Accepts BCCCP? Yes*  
444 S. West Center St.  
Faison, NC 28341  
(910)267-0421

Goshen Medical Center-Women's Health  
*Accepts BCCCP? Yes*  
212 Duplin St.  
Keenansville, NC 28349  
(910)296-0790

Goshen Medical Center-Warsaw  
*Accepts BCCCP? Yes*  
603 E. College St.  
Warsaw, NC 28398  
(910)293-3900

### **Edgecombe County**

Tarboro Women's Care  
*Accepts BCCCP? Yes*  
2704 N. Main St.  
Tarboro, NC 27886  
(252)823-6333

### **Halifax County**

Women's Health Specialists, P.A.  
*Accepts BCCCP? Yes*  
1381 Medical Center Drive  
Roanoke Rapids, NC 27870  
(252) 535-1414

### **Hertford County**

OB-GYN Women's Care of Ahoskie  
*Accepts BCCCP? Yes*  
700 Academy St. S  
Ahoskie, NC 27910  
(252)862-4054

### **Lenoir County**

Lenoir County Health Department  
*Accepts BCCCP? Yes*  
130 South Queen Street  
Kinston, NC 28502  
(252)559-6450

Kinston Community Health Center  
*Accepts BCCCP? No*  
324 N. Queen Street  
Kinston, NC 28501  
(252)208-1485

Lenoir Women's Care (Kinston)  
*Accepts BCCCP? No*  
103 Airport Rd  
Kinston, NC 28501  
(252)527-7208

Dr. Joan Baker  
*Accepts BCCCP? No*  
608 Airport Road Suite B  
Kinston, NC 28504  
(252)520-0020

### **Martin County**

Martin County Health Department  
*Accepts BCCCP? Yes*  
210 West Liberty Street  
Williamson, NC 27892  
(252) 793-1619

Roanoke Women's Healthcare  
Melissa Greene, CNM  
*Accepts BCCCP? Yes*  
104 Medical Drive  
Williamston, NC 27892  
(252) 809-6341

### **Nash County**

Nash OB/GYN Associates  
*Accepts BCCCP? Yes*  
200 Nash Medical Arts Mall  
Rocky Mount, NC 27804  
(252)443-5941

Englewood OB/GYN Associates  
*Accepts BCCCP? Not indicated*  
140 N. Englewood Dr.  
Rocky Mount, NC 27804  
(252)937-6611

Rocky Mount GYN and Women's Health  
*Accepts BCCCP? Not indicated*  
132 Foy Dr.  
Rocky Mount, NC 27804  
(252)443-6622

Women's Health of Rocky Mount  
*Accepts BCCCP? Not indicated*  
804 English Rd, Suite 2010  
Rocky Mount, NC 27804  
(252)451-7060

Rocky Mount-OIC Medical Center  
*Accepts BCCCP? Yes*  
111 Fairview Road  
Rocky Mount, NC 27803  
(252)446-3333

#### **Onslow County**

Crist Clinic for Women  
*Accepts BCCCP? No*  
250 Memorial Drive  
Jacksonville, NC 28540  
(910)353-2115

Women's Healthcare Associates  
*Accepts BCCCP? No*  
245 Memorial Drive  
Jacksonville, NC 28540  
(910)353-4333

#### **Pasquotank County**

Albemarle Regional Health Services-  
Pasquotank  
*Accepts BCCCP? Yes*  
711 Roanoke Avenue,  
Elizabeth City, NC 27909  
252-338-4400

#### **Pitt County**

East Carolina Brody Outpatient Clinic  
*Accepts BCCCP? No*  
Emergency Road  
Greenville, NC 27834  
(252)744-2350

ECU Physicians-Family Medicine Center  
*Accepts BCCCP? No*  
101 Heart Drive  
Greenville, NC 27834  
(252) 744-4611

James D. Bernstein Community Health  
Center  
*Accepts BCCCP? No*  
261 Belvoir Hwy  
Greenville, NC 27834-8661  
(252) 695-6352

#### **Tyrrell County**

Tyrrell County Health Department  
*Accepts BCCCP? Yes*  
408 Bridge Street  
Columbia, NC 27925  
(252) 793-3023

#### **Washington County**

Washington County Health Department  
*Accepts BCCCP? Yes*  
198 NC Hwy 45 North  
Plymouth, NC 27962  
(252) 793-3023

#### **Wayne County**

Wayne Women's Clinic  
*Accepts BCCCP? Not indicated*  
102 Handley Park Court  
Goldsboro, NC 27534  
(919) 734-3344

Goldsboro OBGYN, Associates, PLLC  
*Accepts BCCCP? Yes*  
2608 Hospital Rd  
Goldsboro, NC 27534  
(919)735-3464

## **Wilson County**

### **Wilson County Health Department**

*Accepts BCCCP? Yes*

1801 Glendale Drive

Wilson, NC 27893

(252)237-3141

### **Harvest Family Health Center**

*Accepts BCCCP? No*

8282 NC 58 S

Elm City, NC 27822

(252) 443-7744

### **Wilson OB/GYN**

*Accepts BCCCP? Not indicated*

2500 Horton Boulevard Southwest

Wilson, NC 27893

(252) 206-1000



## **FDA Approved Mammography Facilities in Eastern North Carolina, 2011**

### **Beaufort County**

Vidant Pungo Hospital  
202 East Water Street  
Belhaven, NC 27810  
(252)944-2210

Eastern Radiologist Inc-Washington, NC  
630 East Eleventh St.  
Washington, NC 27889  
(252)946-2137

### **Bertie County**

Vidant Bertie Hospital  
1403 S. King Street  
Windsor, NC 27983  
(252)794-6626

### **Carteret County**

CGH Imaging Center  
3402 Arendell Street  
Morehead City, NC 28557  
(252)808-6551

Carteret OBGYN Associates  
3511 John Platt Dr.  
Morehead City, NC 28557  
(252)247-4197

### **Chowan County**

East Carolina Health-Chowan, Inc DBA  
Chowan Hospital  
211 Virginia Rd.  
Edenton, NC 27932  
(252)482-6245

### **Craven County**

Naval Health Clinic-Cherry Point Building  
4389 Beaufort Rd PSC Box 8023  
Cherry Point, NC 28533  
(252)466-0250

CCHC Imaging  
1030 Medical Park Ave  
New Bern, NC 28562  
(252)637-5480

Carolina Diagnostic Center  
640 McCarthy Blvd  
New Bern, NC 28562  
(252)634-6440

Eastern Carolina Internal Medicine PA  
2604 Dr. Martin Luther King Jr Blvd  
New Bern, NC 28562  
(252)633-1010

### **Dare County**

Regional Medical Services, Inc  
5200 N Croatan Hwy  
Kitty Hawk, NC 27949  
(252)255-6040

The Outer Banks Hospital  
4800 S. Croatan Hwy  
Nags Head, NC 27959  
(252)449-5918

### **Duplin County**

Goshen Medical Center, Inc  
444 SW Center St.  
Faison, NC 28341  
(910)267-0421

Vidant Duplin Hospital  
401 N. Main St.  
Kenansville, NC 28349  
(910)296-2665

### **Edgecombe County**

Vidant Edgecombe Hospital  
111 Hospital Dr.  
Tarboro, NC 27886  
(252)641-7795

**Greene County**

Greene County Health Care-Snow Hill  
Medical Center  
302 N. Greene Street  
Snow Hill, NC 28580  
(252)747-2921

**Halifax County**

Mammography Center  
210 Smith Church Rd, Ste  
Roanoke Rapids, NC 27870  
(252)535-3417

**Hertford County**

Roanoke-Chowan Hospital  
500 S Academy St.  
Ahoskie, NC 27910  
(252)209-3401

**Jones County**

Carolina East Internal Medicine  
137 Medical Lane  
Pollocksville, NC 28573  
(252)633-1010

**Lenoir County**

Eastern Radiologists, Inc  
701 Doctors Dr., Ste M  
Kinston, NC 28501  
(252)507-7077

**Martin County**

Martin General Hospital  
310 S McCaskey Rd  
Williamston, NC 27892  
(252)809-6332

**Nash County**

Nash Breast Care Center  
250 Nash Medical Arts Mall, Ste B  
Rocky Mount, NC 27804  
(252)962-6100

Rocky Mount Family Medical Center  
804 English Rd., Suite 100  
Rocky Mount, NC 27804  
(252)443-3133 x243

Rocky Mount Gynecology and Women's  
Health, P.A.  
132 Foy Drive  
Rocky Mount, NC 27804  
(252)433-6622

Boice Willis Clinic, P.A.  
901 North Winstead Ave  
Rocky Mount, NC 27804  
(252)937-0482

**Onslow**

Naval Hospital  
100 Brewster Blvd. Radiology Department  
Camp LeJeune, NC 28547  
(910)450-4455

Onslow Imaging Center for Women-  
Onslow Memorial Hosp., Inc  
121 Memorial Drive  
Jacksonville, NC 28546  
(910)577-2690

Onslow Radiology Center  
299 Doctor's Drive  
Jacksonville, NC 28546  
(910)577-1171

**Pasquotank County**

Albemarle Hospital  
1144 North Road Street  
Elizabeth City, NC 27909  
(252)384-4128

**Pitt County**

Physicians East P.A. Greenville Women's  
Clinic  
2251 Stantonsburg Rd  
Greenville, NC 27834  
(252)757-3131

Physicians East-Greenville Obstetrics and  
Gynecology  
101 Bethesda Dr.  
Greenville, NC 27834  
(252)758-4181

Physicians East Diagnostic Center  
1850 West Arlington Blvd  
Greenville, NC 27834  
(252)413-6601

Eastern Radiologists, Inc Breast Imaging  
Center  
2101 West Arlington Blvd. Suite 100  
Greenville, NC 27834  
(252)752-5000

**Washington County**

Washington County Hospital  
958 US Highway 64  
East Plymouth, NC 27962  
(252)793-7706

**Wayne County**

Wayne Memorial Hospital  
2700 Wayne Memorial Drive  
Goldsboro, NC 27530  
(919)731-6013

Wayne Radiologist, P.A.  
2700 Medical Office Place  
Goldsboro, NC 27534  
(919)734-1866 x5310

**Wilson County**

Wilson Medical Center Outpatient  
Imaging  
1711 Medical Park Dr.  
Wilson, NC 27893  
(252)399-8900

Family Medicine  
2546 Ward Blvd.  
Wilson, NC 27893  
(252)399-0707

## Hospital Locations in Eastern North Carolina, 2012

### **Beaufort County**

Vidant Beaufort Hospital  
628 East 12<sup>th</sup> Street  
Washington, NC 27889  
(252)975-4100

Vidant Pungo Hospital  
202 E. Water St.  
Belhaven, NC 27810  
(252)943-2111

### **Bertie County**

Vidant Bertie Hospital  
1403 S. King Street  
Windsor, NC 27983  
(252)794-6626

### **Carteret County**

Carteret County General Hospital  
3500 Arendell St.  
Morehead City, NC 28557  
(252)808-6000

### **Chowan County**

Vidant Chowan Hospital  
211 Virginia Rd.  
Edenton, NC 27932  
(252)482-8451

### **Craven County**

CarolinaEast Health System  
2000 Neuse Blvd  
New Bern, NC 28561  
(252)633-8640

### **Dare County**

The Outer Banks Hospital  
4800 S Croatan Highway  
Nags Head, NC 27959  
(252)449-4500

### **Duplin County**

Vidant Duplin Hospital  
401 N. Main St.  
Kenansville, NC 28349  
(910)296-0941

### **Edgecombe County**

Vidant Edgecombe Hospital  
111 Hospital Drive  
Tarboro, NC 27886  
(252)641-7740

### **Halifax County**

Halifax Regional Medical Center  
250 Smith Church Rd  
Roanoke Rapids, NC 27870  
(252)535-8011

Our Community Hospital  
Bruce Medical Plaza  
921 Junior High Rd  
Scotland Neck, NC 27874  
(252)826-4144

### **Hertford County**

Vidant Roanoke-Chowan Hospital  
500 South Academy St.  
Ahoskie, NC 27910  
(252)209-3000

**Lenoir County**

Lenoir Memorial Hospital, Inc  
100 Airport Rd  
Kinston, NC 28501  
(252)522-7797

**Martin County**

Martin General Hospital  
310 S. McCaskey Rd  
Williamston, NC 27892  
(252)809-6179

**Nash County**

Nash Health Care Systems  
2460 Curtis Ellis Dr.  
Rocky Mount, NC 27804  
(252)962-8000

**Onslow County**

Onslow Memorial Hospital  
317 Western Blvd.  
Jacksonville, NC 28546  
(252)557-2345

**Pasquotank County**

Albemarle Health  
1144 North Road Street  
Elizabeth City, NC 27909  
(252)335-0531

**Pitt County**

Vidant Medical Center  
2100 Stantonsburg Rd  
Greenville, NC 27835  
(252)847-4451

**Washington County**

Washington County Hospital  
958 US Hwy 64 East  
Plymouth, NC 27962  
(252)793-4135

**Wayne County**

Wayne Memorial Hospital  
2700 Wayne Memorial Drive  
Goldsboro, NC 27534-9459  
(919)736-1110

**Wilson County**

Wilson Medical Center  
1705 Tarboro Street SW  
Wilson, NC 27893  
(252)399-8040

## **Federally Qualified Health Centers and Look-Alike Sites in Eastern North Carolina, 2012**

### **Beaufort County**

Agape Community Health Center  
120 W. Martin Luther King Jr. Dr.  
Washington, NC 27889-4906  
(252)940-0602

### **Bertie County**

Lewiston Community Health Center  
307 S. Main St.  
Lewiston, NC 27849-9656  
(252)348-2545

Windsor Community Health Center  
104 Rhodes Ave  
Windsor, NC 27983-9656  
(252)794-1835x226

Colerain Primary Care  
109 W River St.  
Colerain, NC 27924-9006  
(252)356-2404

### **Chowan County**

Gateway Community Health Centers-  
Tyner  
2896 Virginia Rd  
Tyner, NC 27980-9777  
(252)384-4805

### **Duplin County**

Community Health Services  
325 North Carolina 55 Wes  
Mount Olive, NC 28365  
(919)658-5900

Goshen Medical Center-Beulaville  
119 Crossover Rd  
Beulaville, NC 28518-8801  
(910)298-3125

Goshen Medical Center-Women's Health  
212 Duplin St.  
Kenansville, NC 28349-9024  
(910)296-0790

Plainview Health Services  
360 E Charity Rd  
Rose Hill, NC 28458-8303  
(910)289-3086

Goshen Medical Center-Wallace Medical  
Services  
112 Medical Village Dr.  
Wallace, NC 28466  
(910)285-2330

Goshen Medical Center-Warsaw Wellness  
Center  
113 S Pine St  
Warsaw, NC 28398-1924  
(910)293-7246

Goshen Medical Center-Warsaw  
603 E College St  
Warsaw, NC 28398-2104  
(910)293-3900

### **Edgecombe County**

Freedom Hill Community Health Center  
162 NC Highway 33 E  
Tarboro, NC 27886-8582  
(252)641-0514

Rocky Mount OIC Family Medical Center  
111 S Fairview Rd  
Rocky Mount, NC 27801-6971  
(252)446-3333

### **Gates County**

Gateway Community Health Centers-  
Gatesville  
501 Main St.  
Gatesville, NC 27938-9424  
(252)357-2167

### **Greene County**

Greene County Health Care/Snow Hill  
Medical Center  
302 N Greene St  
Snow Hill, NC 28580-1412  
(252)747-8162

Kate B. Reynolds Medical Center  
205 Martin Luther King Jr. Pkwy  
Snow Hill, NC 28580-1320  
(252)747-4199

Walstonburg Medical Center  
204 S Main St  
Walstonburg, NC 27888-8900  
(252)753-3771

### **Halifax County**

Rural Health Group at Lake Gaston  
108 Mosby Ave  
Littleton, NC 27850-9411  
(252)586-5411

Rural Health Group at Roanoke Rapids  
2066 NC Highway 125  
Roanoke Rapids, NC 27870-9436  
(252)586-5000

Rural Health Group at Scotland Neck  
919 Jr High School Rd  
Scotland Neck, NC 27874-1219  
(252)826-3143

Rural Health Group at Twin County  
204 Evans Rd.  
Hollister, NC 27844  
(252)586-5151

### **Hertford County**

Roanoke Chowan Community Health  
Center Ahoskie  
240 S. Academy St.  
Ahoskie, NC 27910-2451  
(252)332-3548

Murfreesboro Primary Care  
305 Beechwood Blvd  
Murfreesboro, NC 27855-1134  
(252)398-3638

### **Jones County**

Goshen Medical Center-Trenton  
104 E Lakeview Dr.  
Trenton, NC 28585-8893  
(252)448-4321

### **Lenoir County**

Kinston Community Health Center  
324 N Queen St  
Kinston, NC 28501-4932  
(252)522-9485

### **Nash County**

Rural Health Group at Whitakers  
105 SE Railroad St.  
Whitakers, NC 27891  
(252)437-2171

### **Northampton County**

Rural Health Group at Jackson  
9425 NC Highway 305  
Jackson, NC 27845-9679  
(252)534-1661

Rural Health Group at Rich Square  
200 S Main St  
Rich Square, NC 27869  
(252)539-2082

**Onslow County**

Goshen Medical Center-New River  
1200 Hargett St  
Jacksonville, NC 28540-5933  
(910)219-1082

**Pamlico County**

Pamlico Community Health Center  
13531 Highway 55 E  
Alliance, NC 28509  
(252)745-2070

**Pitt County**

Grimesland Community Resource Center  
550 River St  
Grimesland, NC 27837  
(252)752-1857

James D. Bernstein Community Health  
Center  
261 Belvoir Rd  
Greenville, NC 27834-8661  
(252)695-6352

JR Harvey Health Resources Center  
540 Queen St  
Grifton, NC 28530-7338  
(252)524-3475

**Wayne County**

Goshen Medical Center-East Pointe  
200 W Ash St Ste 202  
Goldsboro, NC 27530-3679  
(919)587-0364

Goshen Medical Center-Fremont  
109 S Sycamore St  
Fremont, NC 27830-8710  
(919)242-4382

Goshen Medical Center-Goldsboro  
2701 Medical Office Pl  
Goldsboro, NC 27534-9458  
(919)739-8680

Goshen Medical Center-Lambert  
130 NE Center St  
Mount Olive, NC 28365-1701  
(919)658-2505

**Wilson County**

Harvest Family Health Center  
8282 S NC Highway 58  
Elm City, NC 27822-8079  
(252)433-7744

Wilson Community Health Center  
303 Green St E  
Wilson, NC 27893-4105  
(252)243-9800

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