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Division of Public Health

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Background

General Statute 130A.33 requires the State Health Director to submit an annual report on public health at the general session of the annual meeting of the North Carolina Medical Society (NCMS) held conjointly with the Commission for Public Health meeting. This report serves this statutory requirement and is structured around North Carolina's state health improvement plan, Healthy North Carolina 2020.

Healthy North Carolina 2020:
The State's Health Improvement Plan

According to the 2014 edition of *America's Health Rankings*, North Carolina ranked 35th in the nation, which remained unchanged from our 2013 ranking.[1]

The burden of premature morbidity and mortality reflected in our ranking highlighted the need for improvements in population health. More than two-thirds of all deaths annually in North Carolina have been attributable to chronic diseases and injuries.[2] The North Carolina State Center for Health Statistics has listed the top five causes of death in 2013 as cancer, heart disease, chronic lung disease, stroke and (non-motor vehicle-related) unintentional injuries.[3] Based on the latest *America's Health Rankings* report, North Carolina's challenges include a high incidence of chlamydia and salmonella infections, limited availability of dentists, a high infant mortality rate and a high prevalence of low birthweight, while the low prevalence of binge drinking, low incidence of pertussis infections and high immunization rates for children are noted as strengths.[4]

The burden of diseases related to modifiable behaviors in our state has been great. The direct medical cost in North Carolina attributable to these behaviors has been estimated at approximately $7 billion annually, according to Prevention Partners (formerly known as NC Prevention Partners).[5]

A practical approach to address North Carolina's health care challenges has been to attempt to prevent these problems from occurring in the first place. Investing in prevention has been determined to save lives, reduce disability, and, in some cases, reduce health care costs as stated in the *Prevention Action Plan for North Carolina*.[6] This statewide focus on prevention has been reflected in work by North Carolina's public health leaders, who began in 2008 to develop a vision and roadmap for focusing and improving public health efforts. The *Prevention Action Plan for North Carolina* (2009) also recognized evidence-based strategies as an important mechanism to improve population health.

North Carolina used this prevention framework to establish our state's Healthy North Carolina 2020 (Healthy NC 2020) objectives, the most recent iteration of decennial health objectives our state has set beginning in 1990. The primary aim of this objective-setting process is to mobilize the state to achieve a common set of health objectives. Healthy People 2020

(www.healthypeople.gov) is a federal initiative with science-based, 10-year national objectives for improving the health of all Americans. Healthy North Carolina 2020 is a state health improvement plan with state specific, measurable objectives that were developed with the best available data and evidence. North Carolina's objectives are well aligned with federal objectives, though they were developed separately.

Healthy North Carolina 2020: A Better State of Health (2011) identified 40 objectives necessary to improve population health by 2020 and recommended the use of evidence-based strategies.[7] Healthy NC 2020 serves as our state's health improvement plan, which was designed to address and improve our state's most pressing health priorities. These objectives provided a common set of health indicators that organizations and individuals across the state can work to improve, knowing their efforts are designed to lead to a healthier population. Each Healthy NC 2020 objective included a discrete quantifiable target that has enabled us to monitor progress toward achieving our goals. Appendix A provides a list of the 40 objectives, our state's targets and most current measures, and national measures for comparison (when available and applicable).

Steps Taken by State and Non-State Entities to Meet Healthy NC 2020 Goals

The mission of the North Carolina Department of Health and Human Services (DHHS) Division of Public Health (DPH) is to promote and contribute to the highest possible level of health for all North Carolinians. North Carolina's public health system is an integrated network of partnerships among DPH and the state's 85 local health departments, as well as state agencies, universities and non-governmental entities. Programs and services touch all citizens' lives in all 100 counties. Improving the health of our citizens requires a coordinated approach with ownership by and accountability from governmental and non-governmental entities as well as individuals themselves.

Local health departments and their community health partners complete health assessments every three or four years and develop local community health improvement plans to address the health needs of their citizens. Review of the most current community health assessments and improvement plans for local health departments indicated a core of 14 Healthy NC 2020 objectives has been selected by most local health departments as their most pressing health problems.

All DPH programs and services have supported improvements in health as measured by the 40 Healthy NC 2020 objectives. The following is a representative though not exhaustive summary of programs and services addressing the 14 Healthy NC 2020 objectives most frequently selected by local communities as their most pressing health issues. Appendix B provides disaggregated data by county, when available, for selected Healthy NC 2020 objectives.

Healthy NC 2020 Objectives

❖ *Decrease the percentage of adults who are current smokers*

❖ *Decrease the percentage of high school students reporting current use of any tobacco product*

❖ *Decrease the percentage of people exposed to secondhand smoke in the workplace in the past seven days*

DPH's Tobacco Prevention and Control program has made progress on the Healthy NC 2020 Objectives for Tobacco Use by working with organizations and communities to build support for evidence-based policies and programs. Highlights include: 1) QuitlineNC enrollments continue to increase as tobacco users want to quit and providers are increasingly referring to QuitlineNC, which now has recurring funding. In 2012, 18,712 tobacco users enrolled in QuitlineNC. The return on investment (ROI) for the State Health Plan's investment in QuitlineNC services for its members has been $4 for every $1 invested. 2) North Carolina's high school smoking rate decreased from 27.3 percent to 15.5 percent with the investment of Master Settlement Agreement funds for teen tobacco prevention 2003–2011, reversing a trend. The challenge for 2020 is to maintain that downward trend for all tobacco products. 3) Following the successful implementation of the 2010 North Carolina smoke-free restaurants and bars law, North Carolina documented a 21 percent decline in average weekly Emergency Department (ED) visits for heart attacks. Building on the success of smoke-free government buildings and prisons, as well as the smoke-free restaurant and bars law, smoke-free places are increasingly the norm. Smoke-free trends are increasing as local communities are making government buildings, grounds and public places smoke-free. Public Health is working with real estate businesses by assisting affordable housing owners and managers who want to go smoke-free to reduce smoking related costs due to fire, turnover and cleaning. Public Health has assisted DHHS' Division of Mental Health, Developmental Disabilities and Substance Abuse state facilities to successfully implement smoke-free buildings and grounds and is providing tobacco cessation support to patients and staff. Despite the progress, tobacco use remains the number one preventable cause of early death and disease in North Carolina and the state's direct medical costs from smoking are estimated at $3.8 billion each year.

Healthy NC 2020 Objectives

❖ *Increase the percentage of high school students who are neither overweight nor obese*

❖ *Increase the percentage of adults getting the recommended amount of physical activity*

The **Community and Clinical Connections for Prevention and Health Branch** (CCCPH) programs in DPH have helped to make communities, worksites and schools healthier places to live, earn and learn. These services have encouraged changes to policies and environments to help community members eat smart, move more and achieve a healthy weight. Creating walking trails in communities, increasing access to farmers' markets, creating supportive nutrition

environments and quality physical education and physical activity in schools, and creating workplace policies to encourage employees to be more active are some examples of efforts undertaken in our state. DPH has undertaken these activities with many state and local public health partners including the North Carolina Departments of Environmental and Natural Resources, Transportation, Commerce, Agriculture and Public Instruction; North Carolina Cooperative Extension Services, and universities and nonprofit organizations.

Healthy NC 2020 Objectives

❖ *Reduce the infant mortality racial disparity between whites and African Americans*

❖ *Reduce the infant mortality rate*

Division of Public Health programs addressing infant mortality have included:

◆ **Community Focused Infant Mortality**, which has provided services for women and their infants with a specific focus on African American and Native American families. Services have included outreach; case management; health education before, during and after pregnancy to improve the chances of a healthy birth; and supportive services for women and their children after delivery. These programs have included Baby Love Plus and Healthy Beginnings and have been in local health departments and community-based organizations across the state. Additional partners have included UNC-Greensboro and UNC-Chapel Hill.

◆ **Maternal Health Services**, which has provided a wide range of maternal health services to encourage low-income pregnant women to begin early prenatal care and follow recommended perinatal care guidelines before and after giving birth. State and local public health partners in this effort have included DHHS' Division of Medical Assistance, East Carolina University, UNC-Chapel Hill, private universities and hospitals.

◆ **Women's Health Public Education,** which has educated North Carolina residents through maternal and child public education/information campaigns. Campaigns have included information about preventing birth defects by encouraging women to consume folic acid before pregnancy, preventing teen pregnancy, preparing for a healthy pregnancy, prenatal care, infant care, and appropriate parenting and family planning skills. State and local public health partners in this effort have included DHHS' Division of Medical Assistance and non-profit health organizations.

◆ The **North Carolina Child Fatality Task Force,** which continues to work to promote a package of programs to promote healthy births and first years of life to reduce infant mortality. Efforts include promotion of preconception health, use of a drug to prevent second (or other) subsequent preterm pregnancies, reduction in tobacco use among

pregnant women, education in best safe sleep practices and improvements in hospital practice.

♦ **Genetics and Newborn Screening,** which has provided services for diverse infants and families with specific focus on early detection of birth defects; including Congenital Heart Disorders, Cystic Fibrosis, metabolic and other genetic disorders that put infants at risk for poor physical, emotional, social and educational health; and increased birth fatalities. Genetic and hearing screening, diagnosis and intervention improve the life chances for children before and after delivery. State and local public health partners in this effort have included public and private hospitals, medical centers, medical specialists, local health departments and private audiologists across the state.

♦ The North Carolina General Assembly expanded the **DHHS Newborn Screening program** in Session Law 2013-45. to include screening for critical congenital heart defects (CCHD) utilizing pulse oximetry. As a result of this legislation, temporary public health rules requiring CCHD screening of every neonate and required reporting of data related to CCHD screening went into effect on July 25, 2014. State and local public health partners in this effort have included nonprofit agencies, hospitals and universities across the state.

♦ **Evidence-Based Home Visiting programs,** which have provided services to strengthen family parenting skills by developing common practice across providers working with children and families, helped develop a framework for a prevention partnership, helped establish an understanding of what constitutes viable family support activities and provided a framework to measure progress in addressing family needs and providing proven tools for building family strengths.

Healthy NC 2020 Objective

❖ *Decrease the percentage of pregnancies that are unintended*

Division of Public Health programs addressing unintended pregnancies have included:

♦ **Teen Pregnancy Prevention Initiatives,** which have worked to prevent teen pregnancies by providing educational and health care services to reduce pregnancies among teenage girls and helping teenage parents prevent another unintended pregnancy. Services have been provided by local health departments, community-based organizations, schools and local departments of social services. Other Teen Pregnancy Prevention Initiatives partners have included DHHS' Division of Social Services, Adolescent Pregnancy Prevention Campaign of North Carolina and Appalachian State University.

♦ **Family Planning** has provided family planning services and preventive care to low-income women and men by funding clinics in local health departments and other

community-based providers. The aim has been to decrease the number of unplanned pregnancies and decrease the health problems associated with unplanned pregnancies. The service has benefitted the general population with an emphasis on low-income North Carolinians. State and local public health partners in this effort have included DHHS' Division of Social Services and local social services offices.

Healthy NC 2020 Objective

❖ *Reduce the percentage of positive results among individuals aged 15 to 24 tested for chlamydia*

Sexually Transmitted Diseases Prevention Activities have prevented the spread of sexually transmitted diseases through testing at the State Laboratory of Public Health, counseling and education and treatment. This has been achieved by:

◆ Supporting two local health departments to conduct gonorrhea and chlamydia testing and treatment among high risk populations;

◆ Promoting the "Get Real Get Tested Get Treatment" campaign conducting screenings for gonorrhea and chlamydia at college campuses across North Carolina;

◆ Providing to local health departments free chlamydia laboratory testing for all women under 25 years of age, all pregnant women and women with symptoms of chlamydia and

◆ Purchasing funds for all 85 local health departments in North Carolina to obtain medications used to treat sexually transmitted diseases.

Healthy NC 2020 Objectives

❖ *Reduce the percentage of high school students using alcohol in the last 30 days*
❖ *Reduce the number of traffic crashes that are alcohol-related*
❖ *Reduce the percentage of individuals aged 12 years and older reporting any illicit drug use in the past 30 days*

Some programs addressing these Healthy NC 2020 Objectives are:

◆ The **DPH Forensic Tests for Alcohol Branch** has worked to reduce deaths, injuries and health care costs related to impaired driving in North Carolina. Services have included delivering comprehensive alcohol and drug training for law enforcement officers to improve their ability to detect and apprehend impaired drivers; procuring funding for four Breath Alcohol Testing (BAT) Mobile Units (two additional and two replacements) and two full-time positions to staff additional BAT Mobile Units. BAT Mobile Units are used at Driving While Impaired (DWI) checking stations to deter impaired driving and promote the belief that DWI enforcement is likely to occur anywhere in the state at any

time. The program provides and maintains 369 evidential breath alcohol testing instruments statewide located at 203 breath testing sites and used in training law enforcement officers. Additional state and local public health partners in this effort have included the North Carolina Department of Public Safety/State Highway Patrol, North Carolina Department of Transportation Division of Motor Vehicles/Governors Highway Safety Program and local law enforcement agencies across the state.

♦ The **DPH Injury and Violence Prevention Branch** monitors injury and violence trends in the state, including events associated with underage alcohol use and illicit drug use.

♦ The **North Carolina Child Fatality Task Force** supported Good Samaritan legislation that provides limited immunity from prosecution for reporting drug and alcohol overdoses and for the use of rescue drugs for opioid overdoses. A model standing order was developed to authorize the distribution of Narcan (naloxone) by public health nurses at local health departments that adopt the standing order. The state **Emergency Medical Services** (EMS) Medical Director issued policy guidance for county EMS medical directors to authorize local EMS and law enforcement agencies to use and distribute naloxone. Over the past year, 125 overdose reversals have been documented with the expanded availability of naloxone.

♦ The **North Carolina Department of Transportation** revised its five year state highway safety plan. The plan includes updated Impaired Driving goals. The DPH Injury and Violence Prevention Branch was an active participant in the development of the plan and impaired driving goals.

Healthy NC 2020 Objective

❖ *Reduce the cardiovascular disease mortality rate*

Some programs addressing this Healthy NC 2020 Objective are:

♦ The **Community and Clinical Connections for Prevention and Health Branch** (CCCPH) utilizes a multipronged approach to address heart disease and stroke that encompasses policy, system and environmental changes. This approach has been guided by several programs including the legislatively appointed Justus-Warren Heart Disease and Stroke Prevention Task Force (JWTF); the Centers for Disease Control and Prevention's (CDC) funded State Public Health Actions to Prevent and Control Diabetes, Heart Disease, Obesity and Associated Risk Factors and Promote School Health; and the CDC-funded North Carolina Stroke Care Collaborative (NCSCC) in partnership with the UNC Gillings School of Global Public Health.

The CCCPH also continues to partner with other stakeholders on shared cardiovascular goals and objectives. Many of the strategies are reflected in the national Millions Hearts Campaign to prevent one million heart attacks and strokes nationwide by 2017. The focus

is on evidence-based practices to address the ABCS of cardiovascular prevention (**A**spirin therapy when appropriate; **B**lood pressure control [including sodium reduction]; **C**holesterol control; and **S**moking cessation). This work recognizes the important role of community (including lifestyle modification) and clinical based programs and the need to link these programs in addressing population health. One of the main areas of focus has been the prevention and management of hypertension, a leading risk factor for heart disease and stroke.

♦ Quality improvement is also a focus of **North Carolina Stroke Care Collaborative** (NCSCC), which is part of a national effort to reduce the incidence of death and disability caused by stroke. The NCSCC assesses, and makes recommendations for, the use of best practice guidelines for stroke treatment in participating North Carolina hospitals as well as by linking Emergency Medical Services (EMS) data with in-hospital care and outcomes.

Healthy NC 2020 Objective

❖ *Decrease the percentage of adults with diabetes*

The **Community and Clinical Connections for Prevention and Health Branch** (CCCPH) facilitates diabetes prevention and management using a systematic approach that increases access to behavior management education, and supports quality care for people who are at risk of and who have diabetes. Diabetes self-management education is a recognized strategy to improve quality of life, reduce diabetes complications and reduce costs associated with diabetes care. The CCCPH Branch and the North Carolina Public Health Foundation support Local Health Departments to offer North Carolinians with diabetes self-management education recognized by the American Diabetes Association and reimbursed by Medicare, Medicaid and private insurance.

While secondary prevention is important, primary diabetes prevention is vital to reducing the incidence of diabetes. The CCCPH Branch, along with a statewide group of stakeholders, has developed a diabetes prevention plan that includes activities to promote the awareness of pre-diabetes, to strategically locate diabetes prevention lifestyle programs, to facilitate referrals to such programs and to prepare for diabetes prevention program sustainability. Promotion of quality diabetes care, particularly for the uninsured and underinsured, is another focus of the CCCPH Branch. In conjunction with partners, CCCPH distributes nationally accepted clinical guidelines and promotes team-based care and electronic health record use to meet meaningful use and quality standards. CCCPH will also develop trainings for providers about referral to evidenced-based self-management programs.

Proposed or Planned Steps

North Carolina has prepared to take additional steps toward continuing to improve the health of our citizens. As part of its five-year strategic planning initiated in 2011, the DHHS Division of Public Health identified the need for a Healthy NC 2020 Implementation Team to track and report the state's progress in meeting these health improvement goals. This team has consisted of representatives across multiple sections and branches of the Division of Public Health, as well as representation from DPH partner agencies such as local health departments; the Center for Public Health Quality; the Center for Healthy North Carolina; the DHHS Office of Rural Health and Community Care and DHHS' Division of Mental Health, Developmental Disabilities and Substance Abuse Services. This team has been charged with making recommendations to the State Health Director on priority areas to focus Healthy NC 2020 efforts statewide, including state and local efforts to increase the use of evidence-based strategies to address Healthy NC 2020 objectives.

An additional ongoing effort designed to contribute to the work of reaching the Healthy NC 2020 goals is the Community Transformation Grant (CTG) Program funded by the Centers for Disease Control and Prevention. The CTG Program targeted Healthy NC 2020 focus areas around Tobacco Use, Physical Activity and Nutrition and Chronic Disease. The CTG Program funding to 10 multi-county regions supported public health efforts to reduce chronic diseases, promote healthier lifestyles, reduce health disparities and control health care spending through policy and environmental change. The program also recognized the importance of evidence-based strategies to maximize both outcomes and efficient use of resources and the need to encourage communities' use of evidence-based strategies. Funding for the CTG Program ended in 2014.

References

1. United Health Foundation. America's Health Rankings 2014—North Carolina. Available at: www.americashealthrankings.org/NC. Accessed Sept. 19, 2014.

2. North Carolina Department of Health and Human Services, Division of Public Health, State Center for Health Statistics. North Carolina Detailed Mortality Statistics, 2013. Chronic disease deaths include: cancer, heart disease, stroke, hypertension, atherosclerosis, chronic lower respiratory disease, diabetes and nephrosis/nephrotic syndrome. Injury deaths include: suicide, homicide, motor vehicle accidents and all other unintentional injuries. Forthcoming at: www.schs.state.nc.us/schs/deaths/dms/2013.

3. North Carolina Department of Health and Human Services, Division of Public Health, State Center for Health Statistics. North Carolina Health Data Query System, Mortality Data: Leading Causes of Death, 2013 – all ages. Forthcoming at: www.schs.state.nc.us/schs//data/lcd/lcd.cfm.

4. United Health Foundation. America's Health Rankings 2014—North Carolina. Available at: www.americashealthrankings.org/NC. Accessed Sept. 19, 2014.

5. Prevention Partners. Be Active North Carolina. *Tipping the Scales: The High Cost of Unhealthy Behavior in North Carolina.* Available at: www.forprevention.org/prevention/Document/Download.

6. North Carolina Institute of Medicine, Task Force on Prevention. *Prevention for the Health of North Carolina: Prevention Action Plan*. Morrisville, NC: North Carolina Institute of Medicine; 2009. Available at: www.nciom.org/wp-content/uploads/NCIOM/projects/prevention/finalreport/PreventionReport-July2010.pdf.

7. North Carolina Institute of Medicine. *Healthy North Carolina 2020: A Better State of Health*. Morrisville, NC: North Carolina Institute of Medicine; 2011. Available at: http://publichealth.nc.gov/hnc2020/docs/HNC2020-FINAL-March-revised.pdf.

Appendix A:
Healthy North Carolina 2020 Objectives Compared to North Carolina Goals* and the United States

*The State Goal is the Healthy North Carolina 2020 target as established in 2011.

	North Carolina	State Goal	United States
Tobacco Use			
Decrease the percentage of adults who are current smokers[1]	20.2% (2013)	Not comparable	19.6% (2012)
Decrease the percentage of high school students reporting current use of any tobacco product	22.5% (2011)	15.0%	23.4% (2011)
Decrease the percentage of people exposed to secondhand smoke in the workplace in the past seven days[1]	9.9% (2013)	0%	Not available
Physical Activity and Nutrition			
Increase the percentage of high school students who are neither overweight nor obese	72.3% (2013)	79.2%	69.7% (2013)
Increase the percentage of adults getting the recommended amount of physical activity[2]	46.4% (2009)	60.6%	51.0% (2009)
Increase the percentage of adults who consume five or more servings of fruits and vegetables per day[2]	20.6% (2009)	29.3%	23.4% (2009)
Injury and Violence			
Reduce the unintentional poisoning mortality rate (per 100,000 population)	11.3 (2013)	9.9	10.7 (2011)
Reduce the unintentional falls mortality rate (per 100,000 population)	9.4 (2013)	5.3	7.8 (2011)
Reduce the homicide rate (per 100,000 population)	5.8 (2013)	6.7	5.2 (2011)
Maternal and Infant Health			
Reduce the infant mortality racial disparity between whites and African Americans	2.27 (2013)	1.92	2.26 (2011)
Reduce the infant mortality rate (per 1,000 live births)	7.0 (2013)	6.3	6.05 (2011)
Reduce the percentage of women who smoke during pregnancy[3]	10.3% (2013)	Not comparable	Not available
Sexually Transmitted Disease and Unintended Pregnancy			
Decrease the percentage of pregnancies that are unintended	42.7% (2011)	30.9%	Not available
Reduce the percentage of positive results among individuals aged 15 to 24 tested for chlamydia	10.6% (2013)	8.7%	Not available
Reduce the rate of new HIV infection diagnoses (per 100,000 population)	17.3 (2011)	22.2	15.9 (2011)
Substance Abuse			
Reduce the percentage of high school students who had alcohol on one or more of the past 30 days	32.2% (2013)	26.4%	34.9% (2013)
Reduce the percentage of traffic crashes that are alcohol-related	5.3% (2012)	4.7%	Not available
Reduce the percentage of individuals aged 12 years and older reporting any illicit drug use in the past 30 days	7.9% (2011–12)	6.6%	9.0% (2011–12)
Mental Health			
Reduce the suicide rate (per 100,000 population)	12.5 (2013)	8.3	12.0 (2011)
Decrease the average number of poor mental health days among adults in the past 30 days[1]	3.6 (2013)	Not comparable	Not available
Reduce the rate of mental health-related visits to emergency departments (per 10,000 population)	104.5 (2012)	82.8	Not available
Oral Health			
Increase the percentage of children aged 1–5 years enrolled in Medicaid who received any dental service during the previous 12 months	58.0% (2013)	56.4%	42.5% (2013)

	North Carolina	State Goal	United States
Decrease the average number of decayed, missing or filled teeth among kindergartners	1.5 (2009–10)	1.1	Not available
Decrease the percentage of adults who have had permanent teeth removed due to tooth decay or gum disease	48.3% (2012)	Not comparable	44.5% (2012)

Environmental Health

	North Carolina	State Goal	United States
Increase the percentage of air monitor sites meeting the current ozone standard of 0.075 ppm	80.5% (2010–12)	100.0%	Not available
Increase the percentage of the population being served by community water systems (CWS) with no maximum contaminant level violations (among persons on CWS)	97.9% (2013)	95.0%	2.0% (2013)
Reduce the mortality rate from work-related injuries (per 100,000 equivalent full-time workers)	3.5 (2012)	3.5	3.4 (2012)

Infectious Disease and Foodborne Illness

	North Carolina	State Goal	United States
Increase the percentage of children aged 19–35 months who receive the recommended vaccines	76.6% (2013)	91.3%	74.0% (2013)
Reduce the pneumonia and influenza mortality rate (per 100,000 population)	18.3 (2013)	13.5	15.7 (2011)
Decrease the average number of critical violations per restaurant/food stand	6.5 (2011)	5.5	Not available

Social Determinants of Health

	North Carolina	State Goal	United States
Decrease the percentage of individuals living in poverty	18.6% (2013)	12.5%	14.5% (2013)
Increase the four-year high school graduation rate	83.8% (2013–14)	94.6%	Not available
Decrease the percentage of people spending more than 30 percent of their income on rental housing	44.8% (2012)	36.1%	48.1% (2012)

Chronic Disease

	North Carolina	State Goal	United States
Reduce the cardiovascular disease mortality rate (per 100,000 population)	222.3 (2013)	161.5	227.1 (2011)
Decrease the percentage of adults with diabetes[1]	11.4% (2013)	Not comparable	9.7% (2012)
Reduce the colorectal cancer mortality rate (per 100,000 population)	13.1 (2013)	10.1	15.1 (2011)

Cross-cutting

	North Carolina	State Goal	United States
Increase average life expectancy (years)	78.3 (2013)	79.5	78.7 (2011)
Increase the percentage of adults reporting good, very good or excellent health[1]	80.8% (2013)	Not comparable	83.1% (2012)
Reduce the percentage of non-elderly uninsured individuals (aged less than 65 years)	19.0% (2012)	8.0%	17.7% (2012)
Increase the percentage of adults who are neither overweight nor obese[1]	33.9% (2013)	Not comparable	36.0% (2012)

[1] In 2011, the Behavioral Risk Factor Surveillance System methodology changed, so results are not directly comparable to the previously established target.

[2] In 2011, the definition for recommended amount of physical activity and fruit and vegetable consumption changed. Therefore, comparable data for these measures are not available at this time.

[3] The methodology for collecting smoking data on the birth certificate was modified in 2011, so results are not directly comparable to the previously established target.

Appendix B: Additional County/Regional Data for Selected Healthy North Carolina 2020 Objectives

Note: All data tables in Appendix B are the most recent available as of September 19, 2014.

North Carolina Adults Who Are Current Smokers for Available Counties and Area Health Education Center (AHEC) Regions, 2013

Residence	Percent	C.I. (95%)*
North Carolina	**20.2**	**19.1–21.4**
Buncombe	25.4	18.3–34.2
Cumberland	18.6	13.8–24.5
Durham	14.6	9.8–21.1
Forsyth	23.6	17.6–30.8
Gaston	31.6	23.8–40.6
Guilford	18.3	13.4–24.4
Mecklenburg	16.6	13.0–21.0
New Hanover	20.1	13.7–28.4
Union	19.4	12.2–29.3
Wake	14.0	10.8–18.1

AHEC Region	Percent	C.I. (95%)*
Mountain AHEC	23.9	19.6–28.9
Northwest	25.5	22.5–28.9
Charlotte	19.2	16.5–22.3
Greensboro	20.1	16.9–23.8
Southern Regional	21.7	18.2–25.7
Southeast	17.9	13.7–23.1
Wake	14.9	12.5–17.6
Area L and Eastern	21.2	18.1–24.7

Current smoking prevalence represents the percent of survey respondents who report that they currently smoke "every day" or "most days" and have smoked at least 100 cigarettes in their lifetime.

* C.I. (95%) = Confidence Interval (at 95% probability level).

PLEASE NOTE: Due to changes in the weighting methodology and other factors, results from 2013 are NOT comparable to results before 2011.

Data are presented for the 10 counties for which sufficient sample sizes allow for county level estimates.

AHEC Regions:

Mountain: Buncombe, Cherokee, Clay, Graham, Haywood, Henderson, Jackson, Macon, Madison, McDowell, Mitchell, Polk, Rutherford, Swain, Transylvania, Yancey

Northwest: Alexander, Alleghany, Ashe, Avery, Burke, Caldwell, Catawba, Davidson, Davie, Forsyth, Iredell, Rowan, Stokes, Surry, Watauga, Wilkes, Yadkin

Charlotte: Anson, Cabarrus, Cleveland, Gaston, Lincoln, Mecklenburg, Stanly, Union

Greensboro: Alamance, Caswell, Chatham, Guilford, Montgomery, Orange, Randolph, Rockingham

Southern Regional: Bladen, Cumberland, Harnett, Hoke, Moore, Richmond, Robeson, Sampson, Scotland

Southeast: Brunswick, Columbus, Duplin, Pender, New Hanover

Wake: Durham, Franklin, Granville, Johnston, Lee, Person, Vance, Wake, Warren

Area L and Eastern: Edgecombe, Halifax, Nash, Northampton, Wilson, Beaufort, Bertie, Camden, Carteret, Chowan, Craven, Currituck, Dare, Gates, Greene, Hertford, Hyde, Jones, Lenoir, Martin, Onslow, Pamlico, Pasquotank, Perquimans, Pitt, Tyrrell, Washington, Wayne

Data Source: Behavioral Risk Factor Surveillance System, State Center for Health Statistics. Available at: www.schs.state.nc.us/data/brfss/2013/nc/nccr/_rfsmok3.html.

Percentage of North Carolina High School Students
Reporting Current Use of Any Tobacco Product, 2011

	Eastern/ Coastal Region	Central/ Piedmont Region	Western/ Mountain Region
Percentage of high school students reporting current use of any tobacco product, 2011	24.5%	20.4%	28.8%

Eastern/Coastal Region includes the following counties—Beaufort, Bertie, Bladen, Brunswick, Camden, Carteret, Chowan, Columbus, Craven, Currituck, Dare, Duplin, Edgecombe, Gates, Greene, Halifax, Hertford, Hyde, Johnston, Jones, Lenoir, Martin, Nash, New Hanover, Northampton, Onslow, Pamlico, Pasquotank, Pender, Perquimans, Pitt, Sampson, Tyrrell, Warren, Washington, Wayne and Wilson counties.

Central/Piedmont Region includes the following counties—Alamance, Anson, Cabarrus, Caswell, Chatham, Cumberland, Davidson, Davie, Durham, Forsyth, Franklin, Gaston, Granville, Guilford, Harnett, Hoke, Iredell, Lee, Lincoln, Mecklenburg, Montgomery, Moore, Orange, Person, Randolph, Richmond, Robeson, Rockingham, Rowan, Scotland, Stanly, Stokes, Surry, Union, Vance, Wake and Yadkin counties.

Western/Mountain Region includes the following counties—Alexander, Alleghany, Ashe, Avery, Buncombe, Burke, Caldwell, Catawba, Cherokee, Clay, Cleveland, Graham, Haywood, Henderson, Jackson, McDowell, Macon, Madison, Mitchell, Polk, Rutherford, Swain, Transylvania, Watauga, Wilkes and Yancey counties.

Data Source: North Carolina Youth Tobacco Survey.

Note: This table is the same as reported in the October 2013 report, as this survey is conducted every other year and comparable data from the 2013 survey are not available.

Percentage of North Carolina Adults are neither Overweight nor Obese for Available Counties and Area Health Education Center (AHEC) Regions, 2013

Residence	Percent	C.I. (95%)*
North Carolina	**33.9**	**32.5–35.3**
Buncombe	48.2	39.8–56.6
Cumberland	32.0	24.8–40.1
Durham	40.4	33.1–48.1
Forsyth	36.8	29.8–44.5
Gaston	32.0	24.3–40.8
Guilford	32.1	26.1–38.8
Mecklenburg	39.4	34.3–44.8
New Hanover	41.0	32.8–49.7
Union	40.6	31.1–50.8
Wake	40.3	35.2–45.7

AHEC Region	Percent	C.I. (95%)*
Mountain AHEC	35.7	30.8–40.9
Northwest	32.8	29.6–36.2
Charlotte	37.4	33.9–41.1
Greensboro	31.9	28.2–35.8
Southern Regional	27.3	23.3–31.7
Southeast	35.8	30.2–41.7
Wake	38.4	34.8–42.1
Area L and Eastern	30.5	26.7–34.5

Body mass index is computed as weight in kilograms divided by height in meters squared:(kg/m2). Underweight=BMI less than 18.5, Recommended Range=BMI 18.5 to 24.9, Overweight=BMI 25.0 to 29.9 and Obese=BMI 30 or greater.

* C.I. (95%) = Confidence Interval (at 95% probability level).

PLEASE NOTE: Due to changes in the weighting methodology and other factors, results from 2013 are NOT comparable to results before 2011.

Data are presented for the 10 counties for which sufficient sample sizes allow for county level estimates.

AHEC Regions:

Mountain: Buncombe, Cherokee, Clay, Graham, Haywood, Henderson, Jackson, Macon, Madison, McDowell, Mitchell, Polk, Rutherford, Swain, Transylvania, Yancey

Northwest: Alexander, Alleghany, Ashe, Avery, Burke, Caldwell, Catawba, Davidson, Davie, Forsyth, Iredell, Rowan, Stokes, Surry, Watauga, Wilkes, Yadkin

Charlotte: Anson, Cabarrus, Cleveland, Gaston, Lincoln, Mecklenburg, Stanly, Union

Greensboro: Alamance, Caswell, Chatham, Guilford, Montgomery, Orange, Randolph, Rockingham

Southern Regional: Bladen, Cumberland, Harnett, Hoke, Moore, Richmond, Robeson, Sampson, Scotland

Southeast: Brunswick, Columbus, Duplin, Pender, New Hanover

Wake: Durham, Franklin, Granville, Johnston, Lee, Person, Vance, Wake, Warren

Area L and Eastern: Edgecombe, Halifax, Nash, Northampton, Wilson, Beaufort, Bertie, Camden, Carteret, Chowan, Craven, Currituck, Dare, Gates, Greene, Hertford, Hyde, Jones, Lenoir, Martin, Onslow, Pamlico, Pasquotank, Perquimans, Pitt, Tyrrell, Washington, Wayne

Data Source: Behavioral Risk Factor Surveillance System, State Center for Health Statistics. Available at: www.schs.state.nc.us/data/brfss/2013/nc/nccr/_rfsmok3.html.

Percentage of North Carolina Adults Reporting Good, Very Good or Excellent Health for Available Counties and Area Health Education Center (AHEC) Regions, 2013

Residence	Percent	C.I. (95%)*
North Carolina	**80.8**	**79.7–81.9**
Buncombe	80.0	72.9–85.6
Cumberland	82.6	77.1–86.9
Durham	82.2	75.7–87.2
Forsyth	82.3	76.5–87.0
Gaston	72.6	64.5–79.4
Guilford	86.1	81.1–89.9
Mecklenburg	86.4	82.7–89.4
New Hanover	88.7	82.9–92.6
Union	80.8	71.1–87.8
Wake	86.9	83.1–89.9

AHEC Region	Percent	C.I. (95%)*
Mountain AHEC	78.4	74.0–82.2
Northwest	77.7	74.7–80.4
Charlotte	82.5	79.9–84.9
Greensboro	82.3	79.3–85.0
Southern Regional	79.9	76.3–83.1
Southeast	81.6	77.0–85.5
Wake	83.9	81.3–86.2
Area L and Eastern	79.7	76.3–82.7

* C.I. (95%) = Confidence Interval (at 95% probability level).

PLEASE NOTE: Due to changes in the weighting methodology and other factors, results from 2013 are NOT comparable to results before 2011.

Data are presented for the 10 counties for which sufficient sample sizes allow for county level estimates.

AHEC Regions:

Mountain: Buncombe, Cherokee, Clay, Graham, Haywood, Henderson, Jackson, Macon, Madison, McDowell, Mitchell, Polk, Rutherford, Swain, Transylvania, Yancey

Northwest: Alexander, Alleghany, Ashe, Avery, Burke, Caldwell, Catawba, Davidson, Davie, Forsyth, Iredell, Rowan, Stokes, Surry, Watauga, Wilkes, Yadkin

Charlotte: Anson, Cabarrus, Cleveland, Gaston, Lincoln, Mecklenburg, Stanly, Union

Greensboro: Alamance, Caswell, Chatham, Guilford, Montgomery, Orange, Randolph, Rockingham

Southern Regional: Bladen, Cumberland, Harnett, Hoke, Moore, Richmond, Robeson, Sampson, Scotland

Southeast: Brunswick, Columbus, Duplin, Pender, New Hanover

Wake: Durham, Franklin, Granville, Johnston, Lee, Person, Vance, Wake, Warren

Area L and Eastern: Edgecombe, Halifax, Nash, Northampton, Wilson, Beaufort, Bertie, Camden, Carteret, Chowan, Craven, Currituck, Dare, Gates, Greene, Hertford, Hyde, Jones, Lenoir, Martin, Onslow, Pamlico, Pasquotank, Perquimans, Pitt, Tyrrell, Washington, Wayne

Data Source: Behavioral Risk Factor Surveillance System, State Center for Health Statistics. Available at: www.schs.state.nc.us/data/brfss/2013/nc/nccr/_rfsmok3.html.

North Carolina Infant Mortality Rate (per 1,000 Live Births)
by County of Residence, 2009–2013

Residence	Infant Deaths	Infant Mortality Rate	Residence	Infant Deaths	Infant Mortality Rate
State Total	4,441	7.3	Johnston	74	6.5
Alamance	73	8.2	Jones	9	18.1
Alexander	9	4.9	Lee	41	9.9
Alleghany	2	4.2	Lenoir	26	7.6
Anson	14	10.4	Lincoln	25	6.3
Ashe	6	4.8	McDowell	9	3.9
Avery	8	10.4	Macon	11	6.6
Beaufort	20	7.6	Madison	6	6.5
Bertie	12	12.1	Martin	10	7.9
Bladen	18	9.9	Mecklenburg	406	5.8
Brunswick	38	7.2	Mitchell	1	1.4
Buncombe	81	6.2	Montgomery	21	12.9
Burke	32	7.3	Moore	24	5.0
Cabarrus	57	4.8	Nash	46	8.0
Caldwell	38	9.4	New Hanover	52	4.6
Camden	3	6.6	Northampton	9	9.1
Carteret	25	8.1	Onslow	141	6.6
Caswell	8	7.7	Orange	29	4.6
Catawba	55	6.1	Pamlico	7	14.6
Chatham	21	6.6	Pasquotank	20	8.0
Cherokee	10	8.7	Pender	22	7.4
Chowan	5	6.1	Perquimans	9	13.5
Clay	3	7.1	Person	15	7.1
Cleveland	55	9.9	Pitt	111	10.2
Columbus	33	10.0	Polk	2	2.9
Craven	65	8.0	Randolph	53	6.5
Cumberland	237	8.1	Richmond	24	8.3
Currituck	7	6.0	Robeson	117	11.8
Dare	9	4.9	Rockingham	51	10.7
Davidson	69	7.9	Rowan	53	6.7
Davie	11	5.5	Rutherford	26	7.5
Duplin	31	8.0	Sampson	45	10.4
Durham	145	6.8	Scotland	25	10.6
Edgecombe	29	8.5	Stanly	19	5.7
Forsyth	214	9.2	Stokes	16	7.8
Franklin	23	6.9	Surry	28	7.1
Gaston	108	8.4	Swain	7	7.4
Gates	2	3.8	Transylvania	10	7.3
Graham	2	4.4	Tyrrell	3	13.8
Granville	18	6.2	Union	66	5.5
Greene	9	7.7	Vance	28	9.5
Guilford	268	8.8	Wake	410	6.5
Halifax	32	10.7	Warren	8	8.5
Harnett	69	7.8	Washington	8	11.3
Haywood	11	4.0	Watauga	4	2.3
Henderson	28	5.2	Wayne	79	9.3
Hertford	17	13.4	Wilkes	30	8.8
Hoke	25	5.3	Wilson	44	8.8
Hyde	4	15.3	Yadkin	14	6.8
Iredell	66	7.4	Yancey	6	7.0
Jackson	16	7.9			

Note: Rates based on less than 10 deaths are unreliable and should be interpreted with caution.

Data Source: Vital Statistics, State Center for Health Statistics.

North Carolina Infant Mortality Racial Disparity between Whites and African Americans by County of Residence, 2009–2013

Residence	White, Non-Hispanic		African American, Non-Hispanic		Disparity Ratio
	Infant Deaths	Infant Mortality Rate	Infant Deaths	Infant Mortality Rate	
State	**1,850**	**5.4**	**1,967**	**13.6**	**2.52**
Alamance	35	7.1	29	15.5	2.18
Alexander	6	3.8	2	26.0	6.84
Alleghany	2	5.3	0	0.0	0.00
Anson	3	5.9	11	14.6	2.47
Ashe	6	5.2	0	0.0	0.00
Avery	8	11.6	0	0.0	0.00
Beaufort	10	7.3	10	11.9	1.63
Bertie	0	0.0	11	15.9	*
Bladen	6	6.9	10	15.7	2.28
Brunswick	28	7.1	7	10.5	1.48
Buncombe	64	6.3	11	10.1	1.60
Burke	25	7.5	2	9.6	1.28
Cabarrus	30	4.1	19	9.6	2.34
Caldwell	29	8.4	5	24.2	2.88
Camden	3	7.9	0	0.0	0.00
Carteret	20	7.8	1	5.2	0.67
Caswell	3	4.5	4	13.7	3.04
Catawba	29	4.8	17	19.2	4.00
Chatham	14	7.7	2	6.0	0.78
Cherokee	8	7.8	0	0.0	0.00
Chowan	1	2.6	3	8.1	3.12
Clay	3	8.0	0	0.0	0.00
Cleveland	28	7.5	26	17.6	2.35
Columbus	10	5.9	19	16.8	2.85
Craven	43	8.2	19	11.1	1.35
Cumberland	89	6.3	124	12.3	1.95
Currituck	7	6.7	0	0.0	0.00
Dare	5	3.4	0	0.0	0.00
Davidson	43	6.6	16	18.7	2.83
Davie	10	6.2	1	8.8	1.42
Duplin	13	8.7	13	14.9	1.71
Durham	34	4.3	92	12.6	2.93
Edgecombe	8	8.6	20	9.0	1.05
Forsyth	70	6.6	106	15.9	2.41
Franklin	11	5.6	10	11.2	2.00
Gaston	51	5.8	52	21.5	3.71
Gates	1	2.8	1	6.5	2.32
Graham	2	5.3	0	0.0	0.00
Granville	10	6.1	5	5.7	0.93
Greene	2	4.3	7	17.7	4.12
Guilford	71	5.7	164	13.6	2.39
Halifax	6	6.8	24	13.0	1.91
Harnett	31	5.7	31	17.3	3.04
Haywood	9	3.6	1	27.0	7.50
Henderson	22	5.5	1	4.5	0.82
Hertford	4	11.0	13	15.3	1.39
Hoke	9	3.9	10	8.9	2.28
Hyde	3	16.9	1	18.5	1.09
Iredell	29	4.6	30	22.7	4.93
Jackson	13	9.0	0	0.0	0.00
Johnston	37	5.3	22	12.8	2.42
Jones	1	3.0	7	52.6	17.50
Lee	14	7.2	16	18.9	2.62

North Carolina Infant Mortality Racial Disparity between Whites and African Americans by County of Residence, 2009–2013

| Residence | White, Non-Hispanic | | African American, Non-Hispanic | | Disparity Ratio |
	Infant Deaths	Infant Mortality Rate	Infant Deaths	Infant Mortality Rate	
Lenoir	7	5.0	18	11.6	2.32
Lincoln	17	5.2	7	31.4	6.04
McDowell	7	3.5	1	14.7	4.20
Macon	10	7.6	0	0.0	0.00
Madison	6	6.9	0	0.0	0.00
Martin	2	3.6	8	12.8	3.56
Mecklenburg	87	3.0	237	10.8	3.60
Mitchell	1	1.7	0	0.0	0.00
Montgomery	5	6.3	8	24.5	3.89
Moore	12	3.6	9	11.0	3.06
Nash	8	3.4	34	13.1	3.85
New Hanover	25	3.3	23	10.6	3.21
Northampton	0	0.0	9	13.8	*
Onslow	82	5.3	38	14.3	2.70
Orange	12	3.2	12	13.7	4.28
Pamlico	6	16.9	1	11.9	0.70
Pasquotank	6	4.5	14	14.9	3.31
Pender	6	2.9	12	25.9	8.93
Perquimans	4	8.4	4	25.5	3.04
Person	3	2.2	12	19.8	9.00
Pitt	30	5.9	76	17.1	2.90
Polk	2	3.5	0	0.0	0.00
Randolph	39	6.6	6	12.0	1.82
Richmond	7	4.7	15	15.4	3.28
Robeson	22	11.6	32	14.2	1.22
Rockingham	28	8.5	22	23.9	2.81
Rowan	31	6.0	15	10.6	1.77
Rutherford	16	5.7	6	14.5	2.54
Sampson	17	10.5	14	13.1	1.25
Scotland	9	10.9	14	13.3	1.22
Stanly	8	3.2	10	21.6	6.75
Stokes	15	7.9	1	14.1	1.78
Surry	25	8.3	1	6.7	0.81
Swain	3	5.8	0	0.0	0.00
Transylvania	9	7.6	1	18.2	2.39
Tyrrell	2	17.4	0	0.0	0.00
Union	23	3.0	28	15.8	5.27
Vance	6	6.9	20	11.9	1.72
Wake	148	4.4	194	13.7	3.11
Warren	2	7.5	6	10.4	1.39
Washington	2	8.6	6	14.5	1.69
Watauga	2	1.3	1	32.3	24.80
Wayne	27	6.9	47	16.7	2.42
Wilkes	22	7.9	3	23.1	2.92
Wilson	13	7.1	26	12.1	1.70
Yadkin	11	7.2	1	15.6	2.17
Yancey	6	8.1	0	0.0	0.00

*Disparity exists, however ratio cannot be calculated because there were zero infant deaths to non-Hispanic whites.

Note: Rates based on less than 10 deaths are unreliable and should be interpreted with caution.

Data Source: Vital Statistics, State Center for Health Statistics.

Positive Results among Individuals Aged 15 to 24
Tested for Chlamydia by County, 2013

County	Percentage	County	Percentage
Alamance	11.6	Johnston	11.3
Alexander	6.3	Jones	14.7
Alleghany	7.4	Lee	12.6
Anson	12.8	Lenoir	15.1
Ashe	1.7	Lincoln	8.9
Avery	5.3	McDowell	7.2
Beaufort	12.5	Macon	7.2
Bertie	12.2	Madison	2.1
Bladen	10.6	Martin	11.1
Brunswick	7.5	Mecklenburg	n/a
Buncombe	9.8	Mitchell	2.0
Burke	10.3	Montgomery	7.6
Cabarrus	11.2	Moore	9.8
Caldwell	7.5	Nash	12.2
Camden	11.3	New	11.5
Carteret	11.3	Northampton	11.2
Caswell	6.4	Onslow	11.3
Catawba	9.1	Orange	9.3
Chatham	9.7	Pamlico	12.5
Cherokee	4.1	Pasquotank	11.9
Chowan	15.3	Pender	9.9
Clay	5.6	Perquimans	11.5
Cleveland	9.5	Person	9.1
Columbus	11.4	Pitt	12.3
Craven	9.5	Polk	11.4
Cumberland	14.5	Randolph	9.9
Currituck	10.0	Richmond	13.2
Dare	7.6	Robeson	9.6
Davidson	12.6	Rockingham	9.5
Davie	8.6	Rowan	n/a
Duplin	13.0	Rutherford	6.8
Durham	n/a	Sampson	9.8
Edgecombe	12.3	Scotland	10.5
Forsyth	n/a	Stanly	9.6
Franklin	10.9	Stokes	9.7
Gaston	10.3	Surry	8.6
Gates	8.6	Swain	2.2
Graham	5.7	Transylvania	6.4
Granville	8.2	Tyrrell	10.2
Greene	9.6	Union	8.8
Guilford	n/a	Vance	12.3
Halifax	13.9	Wake	n/a
Harnett	11.5	Warren	8.3
Haywood	4.9	Washington	12.4
Henderson	10.0	Watauga	4.2
Hertford	12.3	Wayne	14.4
Hoke	11.7	Wilkes	0.0
Hyde	9.5	Wilson	11.3
Iredell	12.5	Yadkin	6.3
Jackson	6.0	Yancey	3.9

The data come from the Infertility Prevention Program, which screens young women ages 15–24 in public family planning, obstetrical and sexually transmitted disease clinics. The data cover 94 N.C. counties (all except Durham, Forsyth, Guilford, Mecklenburg, Rowan and Wake) and are supplied directly from the State Laboratory of Public Health. The other six do have the same testing scheme in their local health departments, but they use outside laboratories so N.C. DPH does not have their testing data. At this point, there is no requirement for the six non-Infertility Prevention Program local health departments to report these data to N.C. DPH.

Data Source: Infertility Prevention Program, Communicable Disease Branch.

North Carolina Traffic Crashes That Are Alcohol-Related
By County of Crash, 2012

County	Percentage		County	Percentage
State Total	**5.30**		Johnston	6.51
Alamance	4.87		Jones	5.07
Alexander	9.23		Lee	4.89
Alleghany	10.00		Lenoir	5.63
Anson	5.29		Lincoln	7.57
Ashe	6.76		McDowell	4.44
Avery	5.30		Macon	7.50
Beaufort	4.70		Madison	4.68
Bertie	6.91		Martin	7.39
Bladen	3.53		Mecklenburg	4.39
Brunswick	6.08		Mitchell	5.28
Buncombe	5.72		Montgomery	3.94
Burke	6.53		Moore	4.92
Cabarrus	4.62		Nash	5.72
Caldwell	5.12		New Hanover	5.03
Camden	6.57		Northampton	3.97
Carteret	7.50		Onslow	7.23
Caswell	8.29		Orange	6.44
Catawba	5.36		Pamlico	11.24
Chatham	5.37		Pasquotank	6.11
Cherokee	7.65		Pender	5.86
Chowan	3.16		Perquimans	3.96
Clay	8.94		Person	5.08
Cleveland	5.44		Pitt	4.57
Columbus	4.70		Polk	6.53
Craven	4.99		Randolph	5.35
Cumberland	5.35		Richmond	6.05
Currituck	9.12		Robeson	7.10
Dare	8.29		Rockingham	6.33
Davidson	5.79		Rowan	5.19
Davie	6.29		Rutherford	5.27
Duplin	5.68		Sampson	7.41
Durham	3.42		Scotland	6.23
Edgecombe	6.40		Stanly	3.99
Forsyth	5.09		Stokes	6.46
Franklin	7.50		Surry	7.27
Gaston	5.44		Swain	11.67
Gates	5.98		Transylvania	5.15
Graham	6.67		Tyrrell	5.32
Granville	6.84		Union	5.55
Greene	6.05		Vance	4.41
Guilford	5.29		Wake	4.20
Halifax	7.11		Warren	7.34
Harnett	7.47		Washington	6.10
Haywood	5.94		Watauga	4.41
Henderson	5.04		Wayne	6.04
Hertford	3.98		Wilkes	5.66
Hoke	5.77		Wilson	5.15
Hyde	9.73		Yadkin	7.23
Iredell	4.69		Yancey	7.11
Jackson	7.54			

Data Source: Highway Safety Research Center, University of North Carolina at Chapel Hill.

North Carolina Cardiovascular Disease Mortality Rate
(per 100,000 Population) by County of Residence, 2009–2013

Residence	Age-Adjusted Death Rate	Residence	Age-Adjusted Death Rate
State Total	**229.6**	Johnston	277.9
Alamance	226.4	Jones	297.2
Alexander	217.7	Lee	249.8
Alleghany	203.5	Lenoir	308.9
Anson	315.3	Lincoln	273.4
Ashe	221.3	McDowell	222.5
Avery	224.6	Macon	247.6
Beaufort	275.6	Madison	358.9
Bertie	267.2	Martin	252.6
Bladen	299.2	Mecklenburg	187.3
Brunswick	219.8	Mitchell	276.3
Buncombe	205.1	Montgomery	201.6
Burke	254.1	Moore	179.0
Cabarrus	228.1	Nash	258.2
Caldwell	265.7	New Hanover	220.1
Camden	208.7	Northampton	243.9
Carteret	236.0	Onslow	210.8
Caswell	237.6	Orange	167.2
Catawba	242.9	Pamlico	219.3
Chatham	180.0	Pasquotank	278.9
Cherokee	245.3	Pender	211.4
Chowan	248.1	Perquimans	247.6
Clay	217.7	Person	260.9
Cleveland	280.7	Pitt	241.2
Columbus	325.0	Polk	180.8
Craven	229.5	Randolph	236.3
Cumberland	263.9	Richmond	338.1
Currituck	246.3	Robeson	281.0
Dare	224.9	Rockingham	266.9
Davidson	261.8	Rowan	260.9
Davie	195.1	Rutherford	296.3
Duplin	235.5	Sampson	246.5
Durham	190.6	Scotland	293.3
Edgecombe	309.7	Stanly	287.1
Forsyth	205.0	Stokes	247.5
Franklin	213.1	Surry	240.7
Gaston	265.6	Swain	327.6
Gates	238.8	Transylvania	188.4
Graham	254.0	Tyrrell	289.4
Granville	215.3	Union	218.1
Greene	272.3	Vance	263.8
Guilford	203.5	Wake	186.9
Halifax	291.9	Warren	216.1
Harnett	259.6	Washington	339.7
Haywood	241.3	Watauga	197.9
Henderson	195.6	Wayne	242.1
Hertford	249.0	Wilkes	221.2
Hoke	263.9	Wilson	253.6
Hyde	265.2	Yadkin	260.8
Iredell	261.5	Yancey	232.8
Jackson	204.8		

*An age-adjusted death rate is a death rate that controls for the effects of differences in population age distributions.

Data Source: Vital Statistics, State Center for Health Statistics.

Percentage of North Carolina Adults with Diabetes for Available Counties and Area Health Education Center (AHEC) Regions, 2013

Residence	Percent	C.I. (95%)*
North Carolina	**11.4**	**10.6–12.2**
Buncombe	9.5	5.9–14.9
Cumberland	10.7	7.6–14.9
Durham	5.7	3.7–8.8
Forsyth	12.0	8.6–16.5
Gaston	13.5	9.6–18.7
Guilford	10.3	7.2–14.5
Mecklenburg	8.4	6.1–11.5
New Hanover	6.9	4.3–10.8
Union	12.7	7.9–19.7
Wake	9.5	7.1–12.8

AHEC Region	Percent	C.I. (95%)*
Mountain AHEC	11.9	9.1–15.4
Northwest	13.5	11.4–16.0
Charlotte	9.9	8.3–11.9
Greensboro	10.6	8.6–13.0
Southern Regional	13.2	10.7–16.1
Southeast	9.3	6.9–12.4
Wake	10.5	8.8–12.6
Area L and Eastern	11.5	9.3–14.0

* C.I. (95%) = Confidence Interval (at 95% probability level).

PLEASE NOTE: Due to changes in the weighting methodology and other factors, results from 2013 are NOT comparable to results before 2011.

Data are presented for the 10 counties for which sufficient sample sizes allow for county level estimates.

AHEC Regions:

Mountain: Buncombe, Cherokee, Clay, Graham, Haywood, Henderson, Jackson, Macon, Madison, McDowell, Mitchell, Polk, Rutherford, Swain, Transylvania, Yancey

Northwest: Alexander, Alleghany, Ashe, Avery, Burke, Caldwell, Catawba, Davidson, Davie, Forsyth, Iredell, Rowan, Stokes, Surry, Watauga, Wilkes, Yadkin

Charlotte: Anson, Cabarrus, Cleveland, Gaston, Lincoln, Mecklenburg, Stanly, Union

Greensboro: Alamance, Caswell, Chatham, Guilford, Montgomery, Orange, Randolph, Rockingham

Southern Regional: Bladen, Cumberland, Harnett, Hoke, Moore, Richmond, Robeson, Sampson, Scotland

Southeast: Brunswick, Columbus, Duplin, Pender, New Hanover

Wake: Durham, Franklin, Granville, Johnston, Lee, Person, Vance, Wake, Warren

Area L and Eastern: Edgecombe, Halifax, Nash, Northampton, Wilson, Beaufort, Bertie, Camden, Carteret, Chowan, Craven, Currituck, Dare, Gates, Greene, Hertford, Hyde, Jones, Lenoir, Martin, Onslow, Pamlico, Pasquotank, Perquimans, Pitt, Tyrrell, Washington, Wayne

Data Source: Behavioral Risk Factor Surveillance System, State Center for Health Statistics. Available at: www.schs.state.nc.us/data/brfss/2013/nc/nccr/_rfsmok3.html.

North Carolina Life Expectancies at Birth by County of Residence, 2011–2013

Residence	Life Expectancy at Birth	Residence	Life Expectancy at Birth
State Total	**78.2**	Johnston	77.7
Alamance	77.5	Jones	76.2
Alexander	77.8	Lee	77.1
Alleghany	80.0	Lenoir	75.7
Anson	75.3	Lincoln	77.4
Ashe	77.7	McDowell	76.8
Avery	78.7	Macon	78.0
Beaufort	76.7	Madison	79.1
Bertie	77.0	Martin	75.8
Bladen	75.8	Mecklenburg	80.4
Brunswick	78.2	Mitchell	77.6
Buncombe	79.2	Montgomery	77.1
Burke	76.7	Moore	79.9
Cabarrus	78.2	Nash	76.5
Caldwell	76.1	New Hanover	79.6
Camden	80.6	Northampton	76.6
Carteret	78.2	Onslow	78.5
Caswell	76.3	Orange	81.7
Catawba	77.0	Pamlico	79.8
Chatham	81.6	Pasquotank	77.1
Cherokee	76.2	Pender	78.4
Chowan	77.9	Perquimans	78.3
Clay	78.0	Person	77.2
Cleveland	75.0	Pitt	78.0
Columbus	74.0	Polk	80.2
Craven	77.8	Randolph	77.1
Cumberland	76.2	Richmond	74.3
Currituck	76.8	Robeson	74.2
Dare	78.9	Rockingham	75.7
Davidson	76.6	Rowan	75.6
Davie	78.8	Rutherford	75.8
Duplin	78.4	Sampson	76.8
Durham	79.9	Scotland	74.7
Edgecombe	75.6	Stanly	77.0
Forsyth	78.1	Stokes	77.6
Franklin	77.6	Surry	77.1
Gaston	75.7	Swain	73.1
Gates	79.6	Transylvania	80.2
Graham	75.5	Tyrrell	77.3
Granville	78.3	Union	79.5
Greene	78.0	Vance	74.8
Guilford	79.1	Wake	81.4
Halifax	74.3	Warren	78.8
Harnett	77.1	Washington	78.7
Haywood	78.5	Watauga	81.6
Henderson	79.3	Wayne	76.9
Hertford	76.8	Wilkes	77.2
Hoke	76.4	Wilson	77.0
Hyde	78.0	Yadkin	77.2
Iredell	77.3	Yancey	77.0
Jackson	78.6		

Life expectancy is the average number of additional years that an infant born between 2011–2013 would be expected to live if current mortality conditions remained constant throughout their lifetime.

Data Source: Vital Statistics, State Center for Health Statistics.