



Brunswick County

State of the County Health Report 2016

Brunswick County Health Services

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The community assessment is conducted by the Health Department every four years in order to determine the community's needs and target programs to address them. In the three interim years, a State of the County's Health (SOTCH) report is produced to provide current insight into progress on current issues as well as identifying any new issues that may arise. The SOTCH contains both quantitative (statistical) and qualitative (survey and focus group) data in order to provide a multidimensional picture of the state of Brunswick County. Previous assessments revealed that the top five challenges for the people of Brunswick County are: diabetes education and support, prostate cancer awareness, access and transportation to care, obesity, and continued support of the infant mortality issues.

North Carolina State Center for Health Statistics provided the top five leading causes of death in Brunswick County for 2014. They are (in order): Cancer, Diseases of the Heart, Chronic Lower Respiratory Disease, Cerebrovascular Diseases, and All Other Unintentional Injuries. Our current programs that focus on our established health priorities address these directly.

Health Priorities

A comprehensive Community Health Assessment was conducted in Brunswick County in 2015, using a combination of state statistics, focus groups run by the Health Department and self-reported surveys distributed throughout the community. Health issues identified as having a higher incidence in Brunswick County than in North Carolina were selected, along with those conditions seen as important by area residents. The four top challenges in Brunswick County are:

1. Accidental Death and Injury
2. Chronic Disease
3. Mental Health
4. Substance Abuse

Demographics

- 122,255** Population as of 2015 (Estimated)
- \$47,799** Median Household Income
- \$26,314** Median Per-capita Income
- 16.1%** Persons below poverty level
- 6.2%** Unemployment Rate as of April 2015
- 27%** Persons 65 years and over
- 4.5%** Persons under 5 years
- 11.2%** Persons of African American origin
- 4.8%** Persons of Hispanic or Latino origin

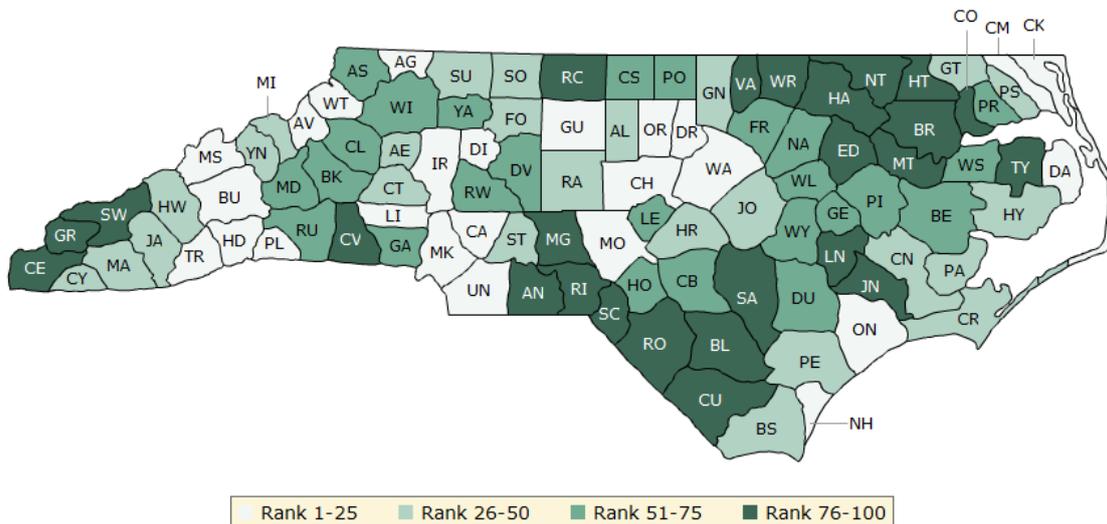
Source: U.S. Census Bureau

BRUNSWICK COUNTY HEALTH RANKINGS 2016

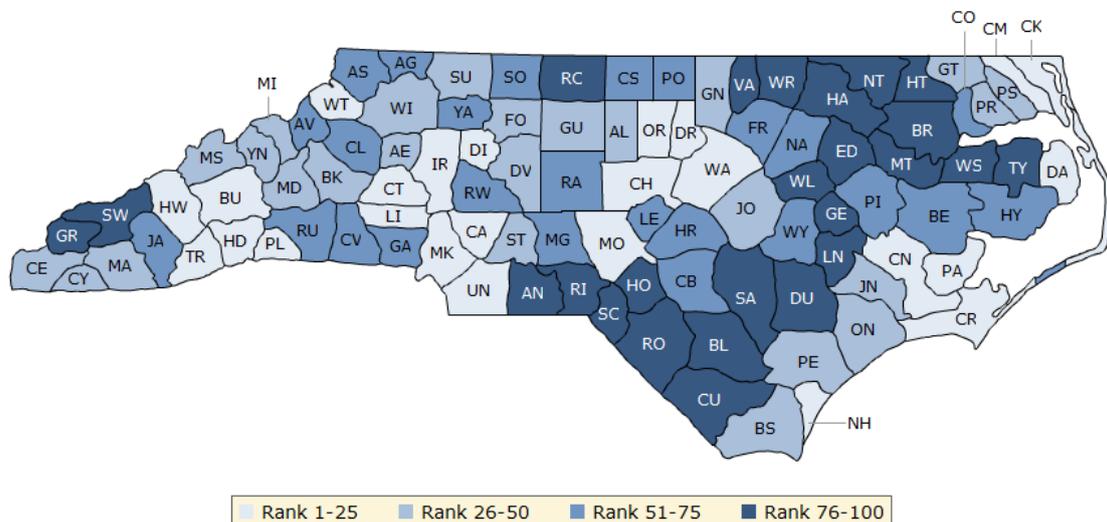
Each year the Robert Wood Johnson Foundation, along with the University of Wisconsin Population of Health Institute, develop county rankings of health outcomes and health factors. The Health Outcome Ranking is based on an equal weighting of mortality (length of life) and morbidity (quality of life) measures. The Health Factors Ranking is based on weighted scores of four types of factors: behavioral, clinical, social and economic, and environmental. Each county in the state is ranked with one (1) being the highest rank, or the “healthiest.”

In 2016, Brunswick County ranked 45 (out of 100 counties) for Health Outcomes and ranked 31 for Health Factors. The Health Outcomes Ranking has declined from 36 in 2015. However, there was a slight decrease from 32 in Health Factors from 2015.

2016 Health Outcomes—North Carolina



2016 Health Factors—North Carolina



HEALTH PRIORITIES UPDATE

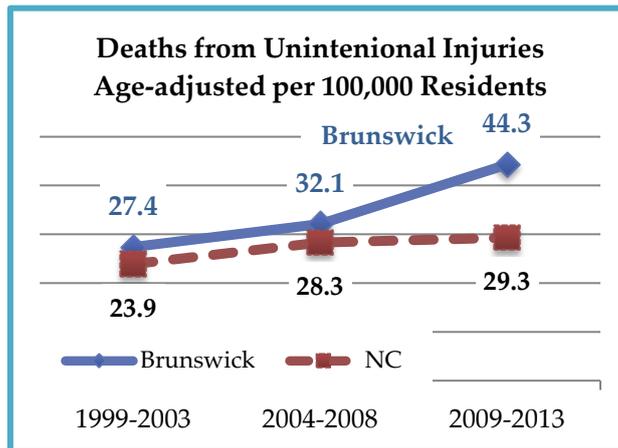
Accidental Death and Injury

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

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

*Rate per 100,000 residents ED=Emergency departments

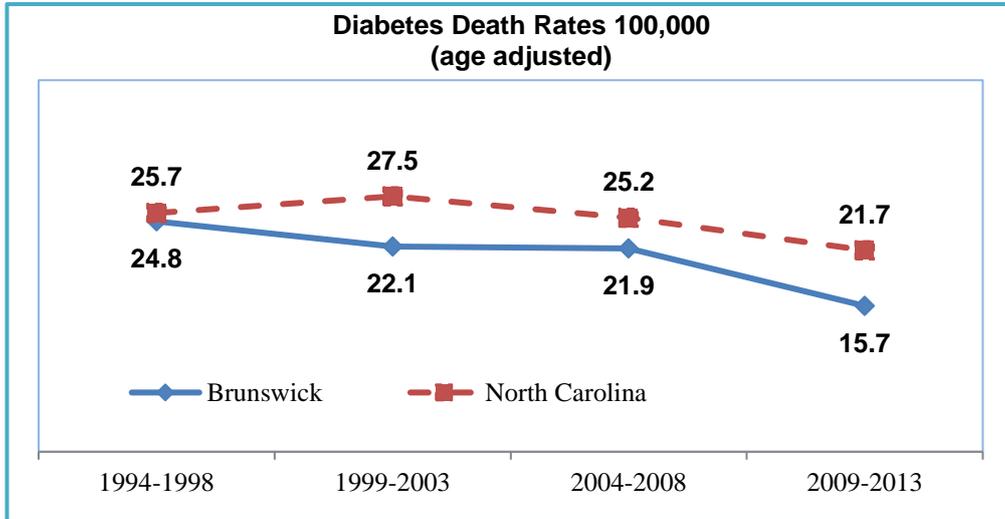
Source: NC Detect, vital data.



After completion of the analysis of data during the latest Community Health Assessment, it was determined that Brunswick County is getting worse in the area of accidental deaths/injury which is largely attributed to medication and drug overdose. Unintentional injury, including poisonings but excluding motor vehicle accidents, was the 5th leading cause of death in Brunswick County in 2014. From 2009-2013, the death rate from unintentional injuries (age-adjusted per 100,000 residents) was 44.3 in Brunswick County compared to the statewide rate of 29.3 (NC SCHS Key Indicators). In 2014, the death rate per 100,000 residents for unintentional medication and drug overdose was 16.8, compared to the NC rate of 9.7 (NC DETECT). In 2014, controlled substances were dispensed at a rate of 263.2 prescriptions per 200 residents, compared the statewide rate of 201. Opioids were dispensed at a rate of 109.1 prescriptions per 100 residents, compared to the statewide rate of 79.7 (CSRS registration data, Division of Mental Health, Developmental Disability and Substance Abuse Services).

Brunswick County Health Services is committed to reducing the rate of unintentional medication and drug overdoses and are working with area organizations to combat the issue. BCHS is partnered with the Brunswick County Sheriff's Department to place medication collection boxes throughout the county for individuals to drop off unused medication. In addition, BCHS promotes the Controlled Substance Reporting System, which is a database for prescription providers to share patient information to assist in identifying and preventing misuse of controlled substances. In addition, community members are partnered with the North Carolina Harm Reduction Commission, as well as local EMS and law enforcement to promote overdose reversal kits, known as Naloxone Kit Distributions. Finally, our Care Coordination for Children (CC4C) program is distributing medication lock boxes for families to store medication to reduce the risk of accidental medication overdose in children.

Chronic Disease



Source: NC SCHS Statistics and Reports

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

Source: NC SCHS. Trends in Key Health Indicators.

Individuals who are diagnosed with diabetes in North Carolina are more likely to be overweight or obese and are more likely to have two or more chronic diseases (NC SCHS Behavioral Risk Factor Surveillance System, 2014). Minority and low-income individuals are at an increased risk of being overweight or obese (NC SCHS BRFSS, 2010). Of Brunswick County's 118,836 estimated residents in 2014 (US Census), 11.4% or approximately 13,500 have diabetes.

In 2014, there were 42 deaths from diabetes in Brunswick County and 25 deaths in 2013. It was the county's 6th leading cause of death and the 7th in North Carolina overall, accounting for 3.3% of all deaths (NC SCHS). Between 2009 and 2013, the age-adjusted diabetes death rate was 15.7, which is below the state-wide rate of 21.7 (NC SCHS Statistics and Reports). In the 2015 CHA Community Health Opinion Survey, when asked, "What health screenings or education/ information services are needed in your community?" 55% responded with "Cholesterol/Blood Pressure/Diabetes."

The percentage of adults who are obese in Brunswick County (29%) is

consistent with the statewide range of 21%-40%. This finding is also consistent with low levels of leisure time physical activity (20.5%) in Brunswick County. Since 2004 when it was 22.7%, Brunswick County's obesity rate has been steadily rising (Brunswick County 2015 Community Health Assessment).

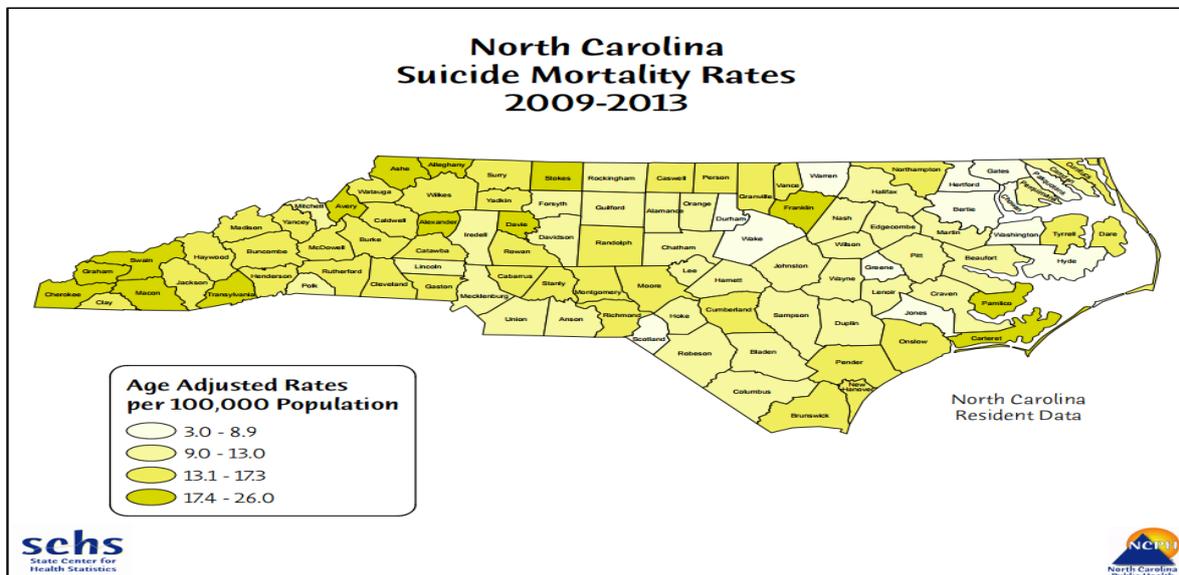
In 2012, 11.4% of Brunswick County residents had a diagnosis of diabetes, which is well above the Healthy NC 2020 goal of 8.6% but similar to peer counties (which ranged from 8.4% to 12.8%).

Brunswick County Health Services has implemented weight-related interventions as preventative measures targeting overweight and the at-risk for diabetes population. Our goal is to decrease the number of adults with diabetes and improve the dietary habits of residents. BCHS hosts the Diabetes Education Recognition Program (DERP), which is approved by the American Diabetes Association as a diabetes self-management program. Cooperative Extension uses several community-based programs such as Faithful Families and Expanded Food and Nutrition Education Program (EFNEP) to teach individuals about smart shopping, healthy eating, and the benefits of physical activity. BCHS is partnered with Novant Health who currently utilizes the *Remarkable You* program, which provides, height, weight, BMI, and hemoglobin A1C screenings. The annual Brunswick County Health Fair provides free health screenings, resources, and information about maintaining a healthy lifestyle. It also increases community awareness of health services provided throughout Brunswick County. Finally, several community partners including YMCA, Brunswick Senior Resources, Doshier Memorial Hospital, New Hope Clinic, and CommWell Health provide community outreach, diabetes education programs and support groups.

Mental Health

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

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



North Carolina State Center for Health Statistics. Vital Statistics.

(<http://www.schs.state.nc.us/data/hsa/vital.htm>)

Although, not all areas that were evaluated in the most recent Community Health Assessment correspond with Healthy NC 2020 goals, several related measures emerged as needing improvement including, mental health, suicide, and poor mental health days.

Healthy NC 2020 Goals Mental Health

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

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

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

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

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

Through several interventions, the objective of Brunswick County Health Services is to improve the overall mental health of its citizens as well as reduce the suicide rate. BC DHHS is currently partnered with Trillium Health to place an Access Point or resource center in the Department of Social Services that provides customized mental health information, available treatment options, and further recommendations. In another partnership with Trillium, Brunswick County Health and Human Services staff will learn how to assist someone experience a mental health crisis through a program called Mental Health First Aid. Trillium Health Resources will facilitate Mental Health First Aid training at Brunswick County DHHS to employees who may have direct patient or community contact. This training will provide employees with the tools needed to assist patients and community members with mental health needs and create another resource in DHHS staff for those

struggling with their mental health. Finally, Brunswick County Health Services will partner with other community organizations to recruit Mental Health providers to the area in an attempt to decrease the mental health provider to county population ratio.

Substance Abuse

Deaths from MVA Injury, 2010-2014

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

Source: NC SCHS

From 2010-2014, 600 traffic crashes occurred in Brunswick County involving alcohol, accounting for 5.8% of all traffic crashes during this time period (NC SCHS Statistics and Reports). Traffic crashes involving alcohol have decreased from 6.8% in 2010 to 5.5% in 2014, which is comparable to the statewide average rate of 5% from 2010-2014. However, the percentage of alcohol-related driving deaths in Brunswick County was 38% from 2009-2013, which is much higher than in peer counties (ranging from 29% to 35%) and statewide (33%). These statistics indicate that although the number of crashes are decreasing, the number of deaths are increasing (Brunswick County 2015 Community Health Assessment).

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

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

Brunswick County Health Services is partnering with several different organizations in an effort to reduce the percentage of traffic crashes involving alcohol as well as improving overall driving safety. A strong partnership with law enforcement, Coastal Horizons, Trillium Health, Brunswick County Schools, consolidated Department of Health and Human Services, and the Brunswick County Juvenile Crime Prevention Council will all help in these efforts. Substance abuse education programs provided in schools and throughout the community promote responsible decision making and provide education about substance use. Law enforcement safety initiatives such as *Booze It and Lose It*, as well as *Click It or Ticket* aim to improve the safety of our roadways. *Street Safe* is a driving safety education program for teens that provides an alternative to traffic school. In addition, BCHS promotes server intervention training programs such as *BARS* or an equivalent program. These programs teach businesses and employees how to responsibly serve alcohol to consumers.

The following charts include the most recent morbidity and mortality data for Brunswick County compared to North Carolina data.

MORTALITY DATA FOR BRUNSWICK COUNTY*

Age-Adjusted All Cancer Death Rates 2009-2013

Year	Brunswick County	Rate	North Carolina	Rate
2009-2013	1440	167.9	90,717	173.5

Source: NC SCHS Statistics and Reports

Cancer is the number one cause of death in Brunswick County. Rates are decreasing from years past and continue to be lower than the North Carolina rate.

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

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

Source: NC SCHS Statistics and Reports

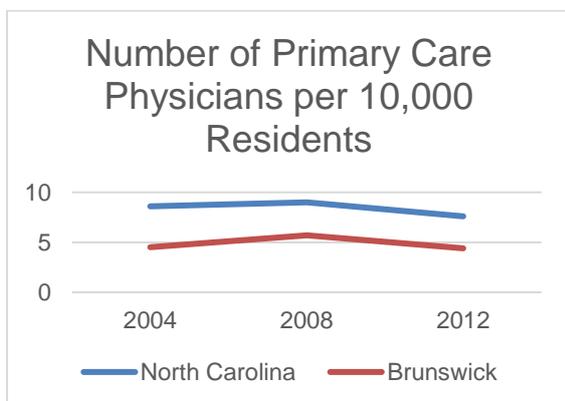
Heart Disease is the second leading cause of death in Brunswick County. The Brunswick County rate is slightly higher than that of North Carolina.

MORBIDITY DATA FOR BRUNSWICK COUNTY*

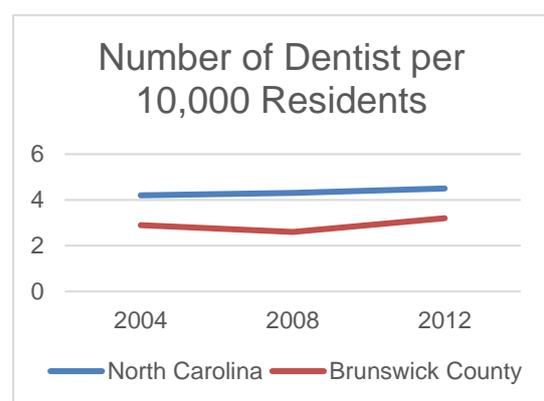
Age-Adjusted Cancer Incidence Rates For Selected Sites Per 100,000 Population, 2009-2013

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

HEALTHCARE PROVIDERS FOR BRUNSWICK COUNTY*



	2004	2008	2012
NC	8.6	9	7.6
Brunswick	4.5	5.7	4.4



	2004	2008	2012
NC	4.2	4.3	4.5
Brunswick	2.9	2.6	3.2

EMERGING ISSUE 2016

Preparedness for Health

The year 2016 brought Brunswick County Health Services many opportunities to improve preparation for health related emergencies in the county, when Zika was introduced to the United States. Brunswick County Health Services became proactive in planning for the possibility of it spreading to North Carolina and/or Brunswick County. The EPI team, which consists of the preparedness coordinator, public health nurses, administration, clinical and environmental health staff, was activated.

The team had weekly conference calls with local Emergency Management and the local Sheriff's Office along with meetings with first responders. A NC DHHS Zika Provider Memo was faxed to all Brunswick County providers. Information provided awareness of:

- Disease and clinical features
- Surveillance recommendations (recent travel questions)
- Case management and testing recommendations
- Prevention measures
- Reporting requirements to local health department

Brunswick County Health Services provided a number of opportunities for public education about mosquito transmitted diseases through:

- Press releases concerning Zika awareness
- Presentations to civic organizations, school boards, and Board of Health
- Personal Protection and Preventive Educational materials were distributed to all students and staff of Brunswick County Schools
- BCHS provided a contact number to the public in helping to answer their questions about Zika virus, Dengue Fever or Chikungunya virus.

Brunswick County Health Services is continuing to improve and adjust their preparedness plans for future issues that may emerge.

EXECUTIVE SUMMARY

Our Community Health Assessment helps us identify health priorities in Brunswick County. Along with our Strategic Plan, these health priorities support us in developing and implementing best practices to serve our community.

The Opioid/Opiate epidemic is a concern that Brunswick County Health Services will partner with other local organizations to best address. BCHS is committed to reducing the rate of unintentional medication and drug overdoses. Some of the services that we are providing or will provide are medication collection boxes throughout the county, as well as distributing medication lock boxes for families to store medication.

Alcohol related motor vehicle accidents have decreased in Brunswick County, but alcohol-related driving deaths are much higher than peer counties. This indicates that although the number of crashes are decreasing, the number of deaths are increasing. Brunswick County Health Services views this as a two-part problem, substance abuse and driver safety. Through coordinated efforts with partners in the community, educational and outreach programs will aim to tackle both through programs such as *Booze It and Lose It* and driver safety programs such as *Street Safe*.

Chronic diseases, in particular diabetes and obesity, continue to be a problem in Brunswick County and eastern NC. BCHS will continue educational and outreach programs in an effort to help people understand and manage their weight and diabetes. BCHS believes that if we can tackle some of the root causes of diabetes, by encouraging healthy eating and physical activity, that we will have better outcomes. A new community health and wellness initiative has currently been established with Doshier Memorial Hospital in Southport, NC. The Duke Endowment has awarded a three year, \$450,000 grant to Doshier Memorial Hospital. This health and wellness initiative will offer educational and other programs to address chronic health problems and encourage healthy lifestyles. Brunswick County Community Health Coalition, is a partnership between Doshier, Brunswick County Health Services, New Hope Clinic, Wilmington Family YMCA and other community health and business leaders.

Mental health, suicide, and poor mental health days were recently identified as areas that needed improvement in Brunswick County. Suicide was the 10th leading cause of death in Brunswick County in 2014. Brunswick County's age-adjusted suicide rate was 14.7 per 100,000 population, which is almost double the Healthy NC 2020 goal of 8.32. Compared to peer counties, Brunswick County has considerable worse ratios of population to mental health providers. BCHS will partner with several organizations including Trillium and Novant Health to facilitate an increase in providers in the area in an effort to provide better mental health services to our community.

Brunswick County Health Services offers a variety of educational, prevention and outreach services each month in an effort to reach more of the county's residents. In

addition, BCHS offers an annual Health Fair that has become popular to county residents. A mobile health unit is used to take services directly to the people, rather than requiring the people to visit on-site clinics. A dental care van, owned in partnership with New Hanover County, affords dental care to those who may otherwise not receive it. Together, Brunswick County Health Services, Novant Health Brunswick Medical Center, Doshier Memorial Hospital, CommWell and private medical practices throughout the county work to eliminate health disparities and promote and enhance health for each and every resident in our county.