



Novant Health Brunswick Medical Center

Community Benefit Implementation Plan

Brunswick County, North Carolina

2016-2018

Approved by the Novant Health Coastal Region Board of Trustees on July 26, 2016

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I. Introduction

Novant Health Brunswick Medical Center, in partnership with Brunswick County Health Services conducted a community health needs assessment in 2015 to identify the most pressing health needs in our community. Novant Health Brunswick Medical Center will enhance the community's health by offering health and wellness programming, clinical services and financial support in response to the specific health needs identified.

a. Organization Overview

Novant Health Brunswick Medical Center is an integral part of the Novant Health system (collectively known as "Novant Health"). Novant Health is a non-profit integrated health care system of 14 medical centers and a medical group with over 500 clinic locations. Other facilities and programs include outpatient surgery and diagnostic centers, charitable foundations, rehabilitation programs, and community health outreach programs. Novant Health and its affiliates serve their communities with programs including health education, home health care, prenatal clinics, community clinics and immunization services. Novant Health's over 25,000 employees and physician partners care for patients and communities in North Carolina, Virginia, South Carolina and Georgia.

Mission

Novant Health exists to improve the health of our communities, one person at a time.

Our employees and physician partners strive every day to bring our mission, vision and values to life. We demonstrate this commitment to our patients in many different ways. Our organization:

- Maintains an active community health outreach program.
- Demonstrates superior outcomes for many health conditions as indicated by our state and national quality scores.
- Creates innovative programs that address important health issues, with many of our programs and services being recognized nationally.
- Believes in its role as a good corporate citizen, working with community agencies and organizations to make our communities better places to live and work.

Novant Health Brunswick Medical Center (NHBMC), was opened in 1977 as Brunswick Community Hospital, an acute care facility in the heart of Brunswick County. In 2006, Novant Health was selected by Brunswick County Hospital Authority to provide healthcare services to counties in eastern North Carolina. In 2011, our new facility opened its doors to the community. NHBMC is a 74-bed facility that provides maternity care, emergency services, surgery, outpatient diagnostic testing and other community healthcare programs.

b. Our Community

Primary and Secondary Service Areas

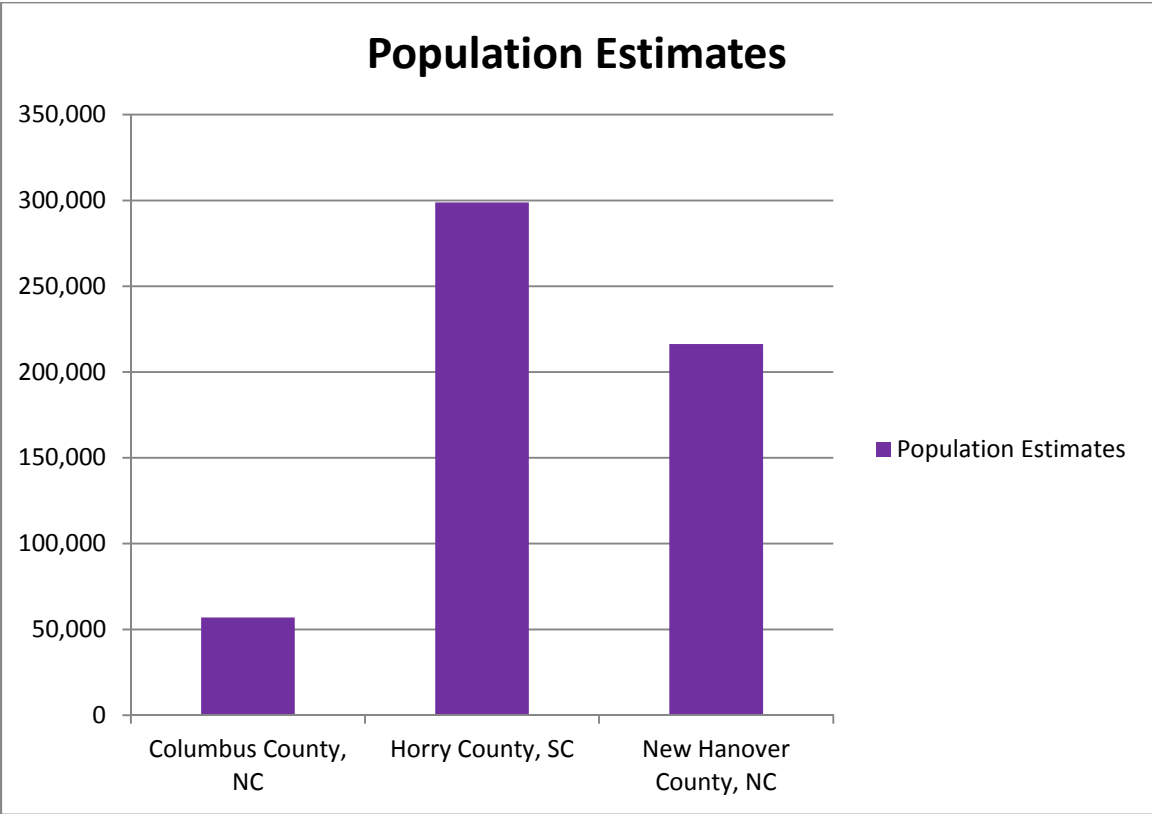
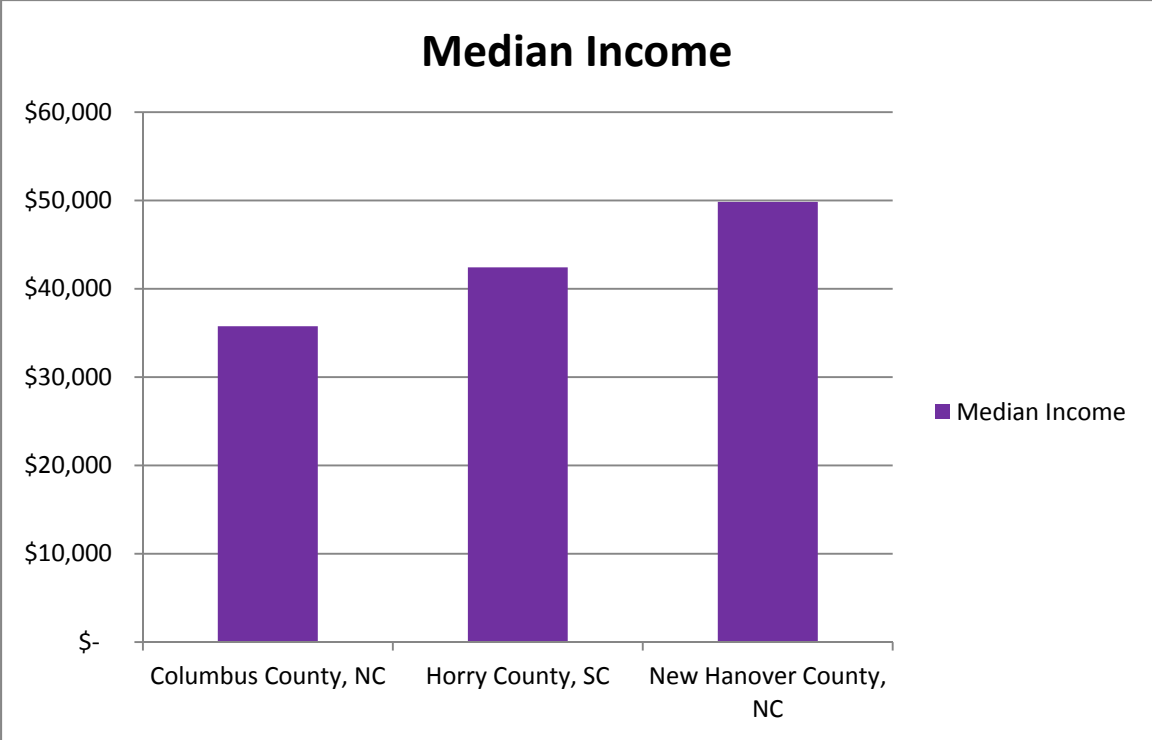
The Primary Service Area for Novant Health Brunswick Medical Center is defined by the zip codes that represent 75% to 85% of the hospital’s in-patient population as outlined below:

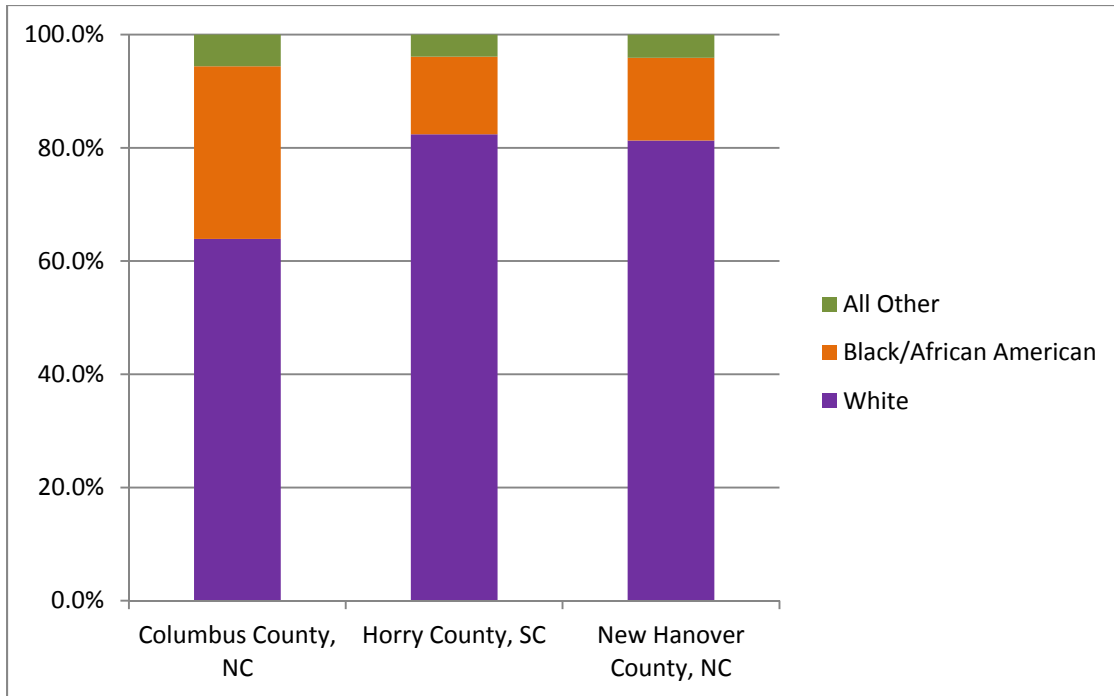
Zip Code	City	County
28420	Ash	Brunswick
28422	Bolivia	Brunswick
28451	Leland	Brunswick
28452	Longwood	Brunswick
28459	Shallotte	Brunswick
28461	Southport	Brunswick
28462	Supply	Brunswick
28465	Oak Island	Brunswick
28467	Calabash	Brunswick
28468	Sunset Beach	Brunswick
28469	Ocean Isle beach	Brunswick
28470	Shallotte	Brunswick
28479	Winnabow	Brunswick

Brunswick County, NHBMC’s primary service area and defined community, includes the county seat of Bolivia. Based on 2014 estimates¹, Brunswick County has a population of 118,836 residents. Estimates indicate that Brunswick County’s population grew 10.6% since the 2010 US Census when there were an estimated 107,431 county residents. The County covers an 846.97 square mile area, with an average of 126.8 persons per square mile.

The Primary Service Area includes the Cities of Ash, Bolivia, Leland, Longwood, Shallotte, Southport Supply, Oak Island, Calabash, Sunset Beach, Ocean Isle Beach and Winnabow, which are all located in Brunswick County. The Secondary Service Area for Novant Health Brunswick Medical Center covers a three county radius, including: Columbus and New Hanover Counties, North Carolina and Horry County, South Carolina. According to the 2014 U.S. Census estimates, the aforementioned counties include the following demographic profiles:

¹ Us Census Bureau. State and County QuickFacts. <http://quickfacts.census.gov/qfd/states/37/37019.html>





Population

Brunswick County is more rural in nature, with only 43%² of the population living in rural areas. The county is home to 45 miles of south-facing beaches, which has opened the door to immense population growth since 2010. Demographic data for Brunswick County is outlined below:

Forsyth County Population by Race & Ethnicity (2014)

	Brunswick County	North Carolina
Population Estimate	118,836	9,943,964
Persons Under 5 Years, percent 2014	4.5%	6.1%
Persons Under 18 Years, percent 2014	17.2%	23.0%
Person 65 Years & Over, percent 2014	27.0%	14.7%
Female Persons, percent 2014	51.4%	51.3%
White Alone, percent 2014	85.4%	71.5%
Black/African-American Alone, percent 2014	11.2%	22.1%
American Indian & Alaska Native Alone, percent 2014	0.9%	1.6%
Asian Alone, percent 2014	0.7%	2.7%
Native Hawaiian & Other Pacific Islander Alone, percent 2014	0.1%	0.1%
Two or More Races, percent 2014	1.7%	2.1%
Hispanic or Latino, percent 2014	4.8%	9.0%

Source: U.S. Census Bureau (2014).

²NC Economic Data and Site Information, 2015, <http://accessnc.commerce.state.nc.us/docs/countyProfile/NC/37019.pdf>

Children and adolescents make up just over one quarter (21.7%) of the population in Brunswick County, while seniors make up 27.0% of the population. Non-white minorities currently make up 19.4 % of the racial demographic in Brunswick County.

Brunswick County residents earn a median income that is similar to the North Carolina state average. According to the U.S. Census 2014 American Community Survey, about one quarter (25.1%) of Brunswick County residents aged 25+ have attained a bachelor’s degree or higher³. A key indicator to evaluate economic condition of Brunswick County is the poverty rate. The poverty rate for Brunswick County residents aged 25+ based on educational attainment indicates that the higher educational attainment, the lower the rate of poverty for those educational groups. US Census data also indicates that the number of persons and children living in poverty in Brunswick County is similar to North Carolina state averages (16% and 17%; and 28% and 25%, respectively).

Median Household Income		Population Educational Attainment (25+ yrs old)		Poverty Rate based on Educational Attainment (25+ yrs old)	
Brunswick County	\$46,438	HS diploma/GED or higher	86.3%	< HS diploma/GED	27.4%
				HS diploma/GED	14.6%
North Carolina	\$46,596	Bachelor’s degree or higher	25.1%	Some college or associate’s degree	12.6%
				Bachelor’s degree or higher	4.0%

II. Prioritized Health Needs

Identified Significant Health Needs

From participant responses, several social, behavioral, and clinical health needs were identified based on highest rank in responses after analyzing and interpreting Brunswick County’s primary and secondary data. Overall findings included the following:

- Results from the Community Health Opinion Survey suggest that Brunswick County residents are concerned about chronic disease, drug and alcohol abuse, and obesity.
- The top seven leading causes of death among Brunswick County residents in 2014 include cancer, heart disease, chronic lower respiratory disease, cerebrovascular disease, unintentional injury, diabetes and Alzheimer’s disease.
- Smoking during pregnancy continues to be problematic in Brunswick County with the percentage of pregnant women who smoked during pregnancy being 15.1%, which is considerably higher than the NC State average.

³ Us Census Bureau. State and County QuickFacts <http://quickfacts.census.gov/qfd/states/37/37019.html>

- Brunswick County had the highest percentage of current adult smokers among peer counties; estimates from 2012 suggest that the current percentage of adult smokers in Brunswick County is higher than 20%
- Regarding access to care/family health responses, when sick, barriers cited related to the factor that most affects the quality of health care in the Brunswick County community included economic factors such as low income and no insurance as the most frequent response (67.8%).
- The top social issues for community residents impacting their ability to pay for specific needs included lack of food, shelter, health insurance, transportation, medicine and utilities. The most frequent response was health insurance (71.3%) followed by medicine (57.2%).

a) County Prioritization

Upon completion of the primary and secondary analyses, a series of community meetings were held to review the analysis and discuss priority areas. In addition, the data books were distributed to community partners for review and comment. The identified health needs were ranked according to years of potential life lost and magnitude of these issues.

The weighted scores were used to identify the top priorities with the following results:

- 1) Smoking while pregnant
- 2) Chronic diseases, including diabetes, cancer and hypertension
- 3) Substance Abuse/Mental health broadly to include drugs, alcohol, smoking, access to mental health services.

Recommended Prioritized Health Outcomes

Based on these prioritized health needs, health and wellness priority areas were identified through an analysis of health indicators identified through the CHA as part of a combined weighted overlay analysis based on 2010 Census data, built environment amenities, and proximity to facilities that support healthy lifestyles. Below is a summary of those recommendations:

1. *Smoking While Pregnant:* develop an approach to increase social cohesion and provide health education, increase access to healthcare providers, increase access to active transportation facilities
2. *Chronic Diseases. Including diabetes, cancer and hypertension:* increase access to healthcare providers, increase access to dental facilities, increase social cohesion and provide health education, increase access to full-service grocery stores, increase access to active transportation facilities, increase elderly transit access, and increase access to physical activity facilities
3. *Substance Abuse/Mental Health broadly to include drugs, alcohol, smoking, access to mental health services:* increase social cohesion and provide health education, increase access to physical activity facilities, and increase access to healthcare providers

b) Facility prioritization

In addition to the community rankings, Novant Health Brunswick Medical Center reviewed the top five diagnosis codes for inpatient and outpatient hospital emergency room visits year-to-date January to July 2015.

Novant Health Brunswick Medical Center Emergency Department
Top 5 Diagnoses YTD Jan-July 2015

Inpatient		Outpatient	
Diagnosis	Volume	Diagnosis	Volume
Pneumonia, organism NOS	91	Acute urinary tract infection NOS	310
Urinary tract infection NOS	49	Urinary tract infection NOS	295
Chest pain NEC	17	Chest pain NEC	280
Chest pain, NOS	14	Bronchitis	257
Flu w resp manifest NEC	5	Chest pain NOS	228
		Lumbago	228

A review of the hospital emergency room visits indicated that many of the top inpatient diagnosis codes are correlated with the chronic diseases identified in the CHA. Upon analysis of the outpatient diagnosis codes, it was apparent that many of the patients seen had symptoms that could be related to a number of chronic conditions, including (but not limited to) heart disease, chronic lower respiratory disease, and chronic issues related to aging.

Upon a comprehensive review of the community’s recommended prioritized outcomes and NHBMC’s ED top 5 diagnosis codes, the Novant Health Brunswick Medical Center leadership team and Board of Trustees evaluated this information based on the scope, severity, health disparities associated with the need, and the estimated feasibility and effectiveness of possible interventions. Through this thorough evaluation, the team agreed on the following three top significant health priorities for Novant Health Brunswick Medical Center:

1. Chronic Disease, including diabetes
2. Maternal and infant health, specifically smoking while pregnant
3. Mental health

III. Issues identified for remediation

In the following section Novant Health Brunswick Medical Center will address each of the top three prioritized needs. Each need includes actions that must be taken to achieve improved community health. Outlined within each need, Novant Health Brunswick Medical Center will identify the description of need, programs, resources and intended actions, anticipated impact, priority populations, evaluation plan, intervention strategies, tactics for achievement, growth targets, and community partners.

The following action plans were developed through evaluation of Novant Health Brunswick Medical Center programs and the U.S. Department of Health and Human Services “Healthy People 2020” topics. To determine anticipated impact, Healthy People 2020 objectives were reviewed and integrated into

each priority area. As a leader committed to improving the nation’s health, it is imperative to Novant Health Brunswick Medical Center that our guiding principles in defining our role in community health outreach and advocacy be well aligned with the Healthy People’s goal of achieving health equity and eliminating disparities. (See Appendix A for Healthy People 2020 objectives that were evaluated.)

a) Priority 1: Chronic Disease, including diabetes

Cancer and heart disease are ranked the first and second leading causes of death, respectively, in Brunswick County and in the state of North Carolina. These two leading causes of death account for 50% of all deaths in Brunswick County in 2014. In addition, since 2010, Diabetes has moved up as a leading cause of death in Brunswick County and disproportionately affected African-Americans. Based on the same statistics, diabetes ranked as the sixth most common cause of death in Brunswick County.

Programs, resources and intended actions to address chronic disease, including diabetes: Novant Health Brunswick Medical Center offers community based services including education for chronic disease prevention, as well as glucose and A1C screenings. All of these programs are intended to increase awareness of diabetes, promote healthy lifestyles that prevent disease, provide education around management and monitoring techniques and support patients through the initial stages of diagnosis and treatment.

SIGNIFICANT HEALTH NEED		
CHRONIC DISEASE, INCLUDING DIABETES		
COMMUNITY BENEFIT ACTIONS	PROGRAM	INTENDED OUTCOME
Community Screenings	Remarkable You community screening initiative including BMI, blood pressure, & diabetes	Early detection of undiagnosed prediabetic and diabetic participants will increase
Community health education	Community education lectures on chronic disease prevention and general health education	Knowledge level of participants will increase and participants will learn new skills to change unhealthy behaviors

b) Priority 2: Maternal and Infant Health, specifically smoking while pregnant

In Brunswick County, from 2010-2014, there was an infant mortality rate of 6.5 overall, and 9.2 in African Americans and 6.8 in whites. Over time, the 4-year rate has ranged from 6.1-7.2. The 2010-2014 disparity ratio is 1.35 which is the lowest ratio across Brunswick’s peer counties (2.61-3.76) and North Carolina overall (2.39). However, in Brunswick County the percentage of women who smoked during pregnancy was 15.1%, which is considerably higher than peer counties (3.6%-7.9%).

Programs, resources and intended actions to address maternal and infant health, smoking while pregnant: Novant Health Brunswick Medical Center offers community education on healthy pregnancy

and breastfeeding basics, along with courses in prepared childbirth, sibling preparation and infant care. Smoking cessation resources are also offered to encourage smoking cessation, especially while pregnant. All services are intended to increase knowledge of healthy pregnancy, risk factors related to low birth weight babies and provide parents-to-be with education and resources related to raising a healthy infant.

SIGNIFICANT HEALTH NEED		
MATERNAL AND INFANT HEALTH – SMOKING WHILE PREGNANT		
COMMUNITY BENEFIT ACTIONS	PROGRAM	INTENDED OUTCOME
Community pledge initiative and community education	Community education on healthy pregnancy, smoking cessation, reducing risk factors and infant care	Knowledge level of participants will increase and participants will learn new skills and decrease risk factors

c) Priority 3: Mental Health

Suicide ranked as the 10th leading cause of death in Brunswick County in 2014. In the Community Health Assessment, the number of reported poor mental health days was ranked higher in Brunswick County (3.5) in comparison to three out of four peer counties. There is also an issue concerning access to a mental health care provider in Brunswick County, with the person to provider ratio being 1,267:1 in 2014.

Programs, resources and intended actions to address mental health: Novant Health Brunswick Medical Center provides community education focused on mental wellness and is committed to increasing mental health services in the community by recruiting a licensed mental health professional to provide mental health treatment to Brunswick County residents. All programs and services are intended to assist the community with varying needs of mental health support at times when they are needed most.

SIGNIFICANT HEALTH NEED		
MENTAL HEALTH		
COMMUNITY BENEFIT ACTIONS	PROGRAM	INTENDED OUTCOME
Recruit a licensed mental health professional to provide mental health treatment	Mental health social and environmental improvement	Increase the number of underserved community members receiving mental health treatment and decrease barriers of access to mental health services.

IV. Unaddressed health needs

Although Novant Health Brunswick Medical Center is working to address several significant needs in the community, we are unable to impact all identified county priorities, but will support community partners as appropriate with the following known issues:

Identified Significant Health Need	Local Community Resources Addressing Needs
<ul style="list-style-type: none"> - <i>Access to Care</i> - <i>Chronic disease</i> - <i>Drug and alcohol abuse</i> - <i>Quality of care</i> 	<p>Brunswick County Health Services:</p> <ul style="list-style-type: none"> • General Health Clinic • Women, Infant and Children (WIC) • Care Coordination for Children (CC4C) • Child Screening Clinic • Pediatric Primary Care • Pregnancy Care Management • Maternity Clinic • Postpartum & Newborn Home Visits • Women’s Preventative Health (Family Planning) • Breast and Cervical Cancer Control Program (BCCCP) • Environmental Health • Health Education – Health Promotion • Diabetes Education • Laboratory Services • Mobile Health Unit Outreach services • Vital Records • Communicable Disease – confidential testing clinic • Tuberculosis Clinic • Brunswick Adult Medical Clinic • Cape Fear Clinic • Cape Fear HealthNet • The Cape Fear Walk-In Crisis Clinic • CommWell Health of Shallotte & Supply • Good Shepherd Clinic • The Harbor • Little River Medical Center • MedNorth Health Center • New Hope Clinic • Trillium Health Resources (formerly Coastal Care) • Vocational Rehabilitation <p>Senior Services</p> <ul style="list-style-type: none"> • AssistedCare

	<ul style="list-style-type: none"> • BrightStar Care • Coastal Companion Care • Elderhaus • Liberty Home Health • Well Care Home Health
<p>Family related resources addressing:</p> <ul style="list-style-type: none"> - <i>Access to care</i> - <i>Behavioral health</i> - <i>Homelessness and housing</i> - <i>Smoking during pregnancy</i> 	<ul style="list-style-type: none"> • Bridge Builders • Cape Fear Psychological Association • Carolina Counseling Center • Children’s Developmental Services Agency • Clinic for Special Children • Community Alternative Program for Children • Cooperative Extension Parenting Educator • East Coast Migrant Head Start • ECAC Parent Center • First in Families • Goodwill • Smart Start of Brunswick County • Teen Family Resource Center • Sharing our Bounty
<ul style="list-style-type: none"> - <i>Poverty</i> 	<ul style="list-style-type: none"> • Bread for Life Ministries • Brigade • Brunswick Senior Resources, Inc. • CIS – Wire Program • Community Boys & Girls Club • Habitat for Humanity ReStore • Hope Chest Thrift Store • Houston Moore Afterschool • Kids Making It • Matthew’s Ministry • Nourish NC • Pleasant Grove Missionary • Supply Elementary • Wilmington Family YMCA • Wings • World of Life Outreach • WRAAP • Ambassadors for Christ • Bethany Presbyterian Church • Brunswick Family Assistance Center • Brunswick Island Baptist Church

	<ul style="list-style-type: none"> • Camp United Methodist • Cape Fear Christian Church • Catholic Charities • Countywide CDC • Dixon Chapel UMC • First Fruit Ministries • First in Families • Full Circle Ministry • Helping Hands/St. Stanislaus Church • Mother Hubbard’s Cupboard • Inspiration House of Praise • Love of Christ Church • Myrtle Grove • Ocean View United Methodist • Pleasant Grove Missionary Baptist • Salvation & Deliverance • Salvation Army • Seaside United Methodist • Shoreline Baptist Church • Son-rise Independent Baptist Church • Southport Interfaith Pantry • St. Jude’s Metropolitan Community Church • St. Brendan’s Catholic Church • St. Mary • The Lord’s Church • The Rock Church • Towncreek Vision • Trinity Mission Baptist • Trinity Tabernacle • Upper Room Praise & Worship • Victory Independent Baptist Church • Wrightsboro United Methodist Church • Faith Building Missions • First Fruit Ministries • Good Shepherd Center • Martha’s Kitchen • Salvation Army • St. Peter the Fisherman Church • Food Bank of Central and Eastern NC
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<ul style="list-style-type: none"> - <i>Drug and alcohol abuse</i> 	<ul style="list-style-type: none"> • Coastal Horizons Center, Inc. • Delta Behavioral Health • Learning Perspectives • NC Mentor • Trillium Health Resources • Physician Alliance for Mental Health • The Harbor • Wilmington Health Access for Teens
<p>Social Issues addressing:</p> <ul style="list-style-type: none"> - <i>Affordability of insurance, healthcare and utilities</i> - <i>Homelessness and housing</i> - <i>Poverty</i> - <i>Transportation</i> 	<ul style="list-style-type: none"> • Catholic Social Ministries • Family Support Network of Southeastern NCF • St. Mary’s Social Ministries • Wilmington Baptist Association • Helping Hand Counseling Center • Amez Housing • Cape Fear Housing • Volunteers of America at Willow Pool • WARM (Wilmington Area Rebuilding Ministry) • Coastal Horizons Shelter • Domestic Violence Shelter & Services Inc • First Fruit Ministries Shelter • Good Shepherd Center Shelter • Hope Harbor Shelter • Mercy House Shelter • Salvation Army Wilmington • Brunswick County Medicaid Transportation Services • Brunswick Transit System • WAVE – Public Transit

V. Role of the board and administration

The Novant Health Coastal Region Board of Trustees and Novant Health Brunswick Medical Center administration are active participants in the community benefit process. Through strategic planning initiatives focused on chronic disease, community health outreach, and access to care, leadership provides direction on actions and intended impact, and serves as the approving body for the community health needs assessment and community benefit implementation plan. Administrative leaders serve on the County assessment process teams, priority setting committee and action planning team and hospital board members participate and provide influence to the community benefit plans. All members are actively involved in the priority setting discussion and outreach planning process. Additionally,

community benefit reports are provided to the board and facility leadership teams throughout the calendar year for ongoing education.

Appendix A: Healthy People 2020 Indicators

Diabetes

- Increase the proportion of persons with diabetes whose condition has been diagnosed (Healthy People 2020; D-15).
- Increase the proportion of persons with diagnosed diabetes who receive formal education (Healthy People 2020; D-14).

Obesity

- Increase the proportion of adults who are at a healthy weight (Healthy People 2020; NWS-8).
- Reduce the number of children and adolescents who are considered obese (Healthy People 2020; NWS-10).

Heart Disease and Stroke

- Increase the proportion of adults who have had their blood pressure measured within the preceding 2 years and can state whether their blood pressure was normal or high (Healthy People 2020; HDS-4)
- Reduce the proportion of persons in the population with hypertension (Healthy People 2020; HDS-5)

Cancer

- Increase the proportion of women who receive a breast cancer screening based on the most recent guidelines (Healthy People 2020; C-17).

Infant Mortality

- Increase the proportion of pregnant women who attend a series of prepared childbirth classes (Healthy People 2020; MICH-12)