

VIDANT CHOWAN
HOSPITAL'S
2016
COMMUNITY
HEALTH NEEDS
ASSESSMENT

Acknowledgements

This report is the culmination of significant work led by Vidant Chowan Hospital and Albemarle Regional Health Services, in conjunction with key stakeholders from the community:

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Introduction

Local public health agencies in North Carolina (NC) are required to conduct a Comprehensive Community Health Assessment (CHA) at least once every four years. The CHA is required of public health departments in the consolidated agreement between the NC Division of Public Health NC DPH) and the local public health agency. Furthermore, a CHA is required for local public health department accreditation through the NC Local Health Department Accreditation Board (G.S. § 130A-34.1). As part of the US Affordable Care Act of 2011, non-profit hospitals are also now required to conduct a community health (needs) assessment at least every three years. Recognizing that duplicate assessment efforts are a poor use of community resources, LHDs and non-profit hospitals across the state are developing models for collaboratively conducting the community health assessment process. This document is the culmination of such a partnership between the Vidant Chowan Hospital, Albemarle Regional Health Services and the Vidant Health system.

The community health assessment, which is both a process and a document, investigates and describes the current health status of the community, what has changed since the last assessment, and what still needs to change to improve the health of the community. The *process* involves the collection and analysis of a large range of data, including demographic, socioeconomic and health statistics, environmental data, and professional and public opinion. The *document* is a summary of all the available evidence and serves as a resource until the next assessment. The completed CHA serves as the basis for prioritizing the community's health needs, and culminates in planning to meet those needs.

The Vidant Health system contracted with Sheila S. Pfaender, Public Health Consultant, to assist in conducting the 2016 Community Health Needs Assessments for Vidant Health's primary service counties, including Chowan County. The assessment process incorporated the guidance provided by the *Community Assessment Guidebook: North Carolina Community Health Assessment Process*, published by the NC Office of Healthy Carolinians/Health Education and the NC State Center for Health Statistics (December 2011). The assessment also adheres to the 2012 standards for community assessment stipulated by the NC Local Health Department Accreditation (NCLHDA) Program and The Internal Revenue Service (IRS) 2014 final ruling implementing requirements for tax-exempt hospitals under Section 501(r) of the Affordable Care Act (ACA).

The CHA coordinators from Vidant Chowan Hospital, Albemarle Regional Health Services and Vidant Health worked with the consultant to develop a multi-phase plan for conducting the assessment. The phases included: (1) a research phase to identify, collect and review demographic, socioeconomic, health and environmental data; (2) a community input phase to receive input from community members utilizing a survey and small group discussions; (3) data synthesis and analysis phase; (3) a period of data reporting and discussion among community partners; and (4) a prioritization and decision-making phase. Upon completion of this work the CHA partners and the community will have the tools they need to develop plans and activities that will improve the health and well-being of the people living in Chowan County.

Assessment Methodology

In order to learn about the specific factors affecting the health and quality of life for Chowan County residents, the consultant accessed numerous readily available secondary data sources, representing data from the local, state and national level. All data sources are listed in Appendix A of this report. The author has made every effort to obtain the most current data available at the time the report was prepared.

It is instructive in any community health assessment to relate local county level data to similar data in other jurisdictions, Chowan County data is compared to “like” data describing the state of NC as a whole, as well as to data from ten counties that comprise the Vidant Health primary service area, referred to as the “Region.” Where Chowan County data is compared to this “Region,” the Regional data includes the compilation of data from Beaufort, Bertie, Chowan, Dare, Duplin, Edgecombe, Greene, Hertford, Hyde and Pitt Counties. In other cases Chowan County data is compared to US-level data, or to Healthy People 2020 goals or other standardized measures. Where appropriate, trend data has been used to show changes in indicators over time, at least since the previous assessment three years ago, but as far back as comparable data is available. A summary of the secondary data and hospital utilization data indicators is included in Appendix B of this report.

In addition to the secondary data collection, Vidant Chowan Hospital, Albemarle Regional Health Services and Vidant Health also reached out to Chowan County residents to gain a better understanding of their health status including health issues/diagnoses, preventative health activities, identified health needs, and barriers to health within the county. Feedback was obtained through small group discussions held in various locations throughout the county.

Ten small group discussions were held in various locations within Chowan County. Participants responded to 10 open-ended questions and shared their feedback. The small group open-ended discussion questions are included in Appendix C of this report.

Chapter One: Demographic Data

General Population Characteristics

The following general population characteristics of Chowan County and its comparator counties were based on 2014 US Census data population estimates presented in Table 1.

- Chowan County has a higher proportion of females than males.
- The median age of the Chowan County population is 7.9 years older than NC and 4.4 years older than the Region. It has the oldest median age among the 10 counties included in the Region assessment.
- Approximately 21% of the county is under the age of 18, which is lower than NC and the Region.
- 22.4% of the county population is over the age of 65, a higher proportion than either the state or the Region

County	2014 Population Estimates												
	Total Population (2014 Estimate)						Under 18 Years			# 18-64 Years	% 18-64 Years	65 Years and Older	
	# Total	# Males	% Males	# Females	% Females	Median Age*	# Under 18 Years	% Under 18 Years	# Total			% Total	
Chowan	14,572	6,931	47.6	7,641	52.4	46.1	3,068	21.1	8,241	56.6	3,263	22.4	
Regional Total	458,613	221,596	48.3	237,017	51.7	41.7	100,240	21.9	287,278	n/a	71,095.0	15.5	
State Total	9,943,964	4,844,593	50.8	5,099,371	53.5	38.2	2,287,549	23.0	6,193,053	62.3	1,463,362	14.7	
State Average	99,440	48,446	n/a	50,994	n/a	n/a	22,875	23.0	61,931	n/a	14,634	n/a	

Table 1. General Demographic Characteristics (2010 US Census data and 2014 Population estimates)

Note: Percentages by gender are calculated. *Metric for Regional Total Median Age calculated as the arithmetic mean of county values
 Source: US Census Bureau, American Fact Finder, 2010 Census, Summary File DP-1, 2010 Demographic Profile Data, Profile of General Population and Housing Characteristics: 2010; 2014 Population Estimates: April 1, 2010 to July 1, 2014 (PEPAGESEX), <http://factfinder2.census.gov>.

Minority Populations

Chowan County has a higher proportion of Black/African American residents compared to the state. Further examination reveals other minority groups comprise smaller proportions of the population compared to other jurisdictions. The county has a lower proportion of Hispanic residents compared to the State and the Region.

- Whites composed 63.2% of the total population; the regional comparable figure was 60.9% and the statewide figure was 71.5%.
- Blacks/African Americans composed 34.2% of the total population; the regional comparable figure was 35.4% and the statewide figure was 22.1%.
- American Indians and Alaskan Natives composed 0.5% of the total population; the regional comparable figure was 0.8% and the statewide figure was 1.6%.
- Asians, Native Hawaiians and Other Pacific Islanders composed 0.9% of the total population; the regional comparable figure was 1.3% and the statewide figure was 2.8%.
- Hispanics/Latinos of any race composed 3.2% of the total population; the regional comparable figure was 8% and the statewide figure was 9%.

Population Growth

Chowan County's population growth is predicted to stop over the coming decades. Between 2000 and 2030, the county population is expected to increase by only 1% overall, while the Region increases by 20% and NC grows by 44% (Table 2).

Decade	Chowan County	Regional Average	State of NC
2000-2010	1.8	14.6	15.6
2010-2020	-0.8	2.8	10.9
2020-2030	0.0	1.8	9.8

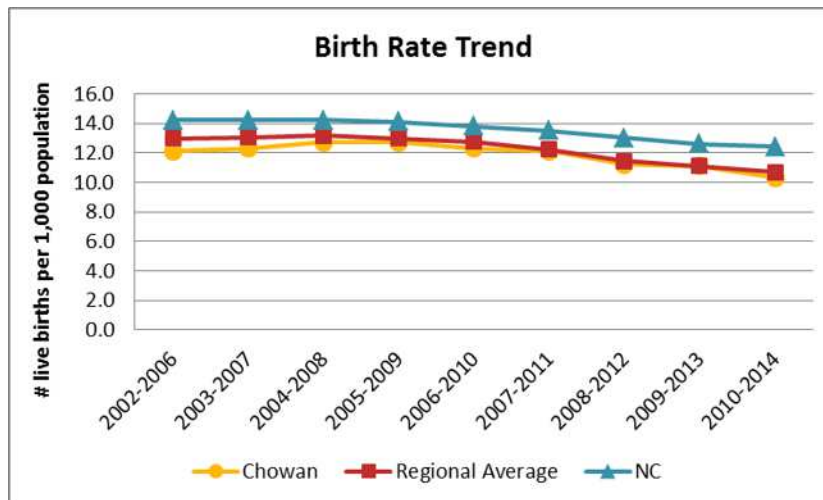
Table 2. Population Growth in Overall Population, by Decade, 2000 through 2030

Note: percentage change is calculated.

Source: Profile of General Demographic Characteristics: 2000 (DP-1), SF1, and Profile of General Population and Housing Characteristics: 2010 (DP-1). U.S. Census Bureau, American FactFinder: <http://factfinder2.census.gov>; Age, Race, and Sex Projections, Age Groups – Total, July 1, 2020 County Total Age Groups – Standard last updated October 7, 2015. North Carolina Office of State Budget and Management County/State Population Projections: https://www.osbm.nc.gov/demog/countytotals_standardagegroups

Birth Rate

Overall population growth is a function both of increase (via immigration and birth) and decrease (via emigration and death). Graph 1 illustrates that the birth rate demonstrated an overall decline over the period presented below, with a similar trend seen in the Region and the State. Birth rates have decreased overall among all racially stratified groups. Over the period cited, the highest birth rate in Chowan County occurred among Hispanics. A similar trend is seen across the Region and the state.

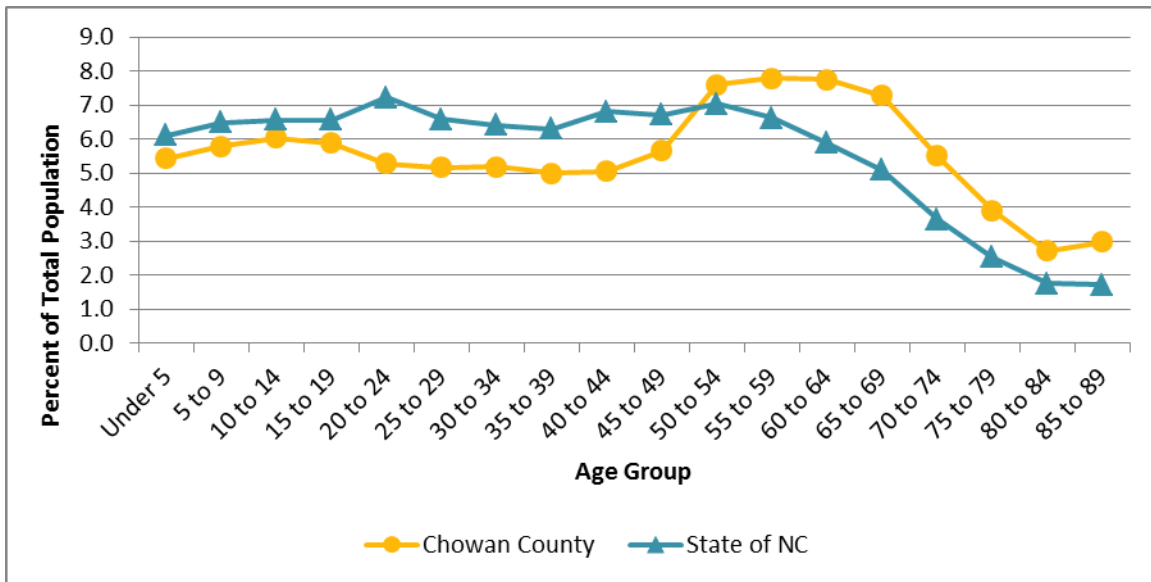


Graph 1. Birth Rate Trend, Live Births per 1,000 Total Population (Nine 5-Year Aggregates, 2002-2006 through 2010-2014)

Source: NC State Center for Health Statistics, Health Data, County Level Data, County Health Databooks 2008, 2009, 2010, 2011, 2012, 2013; 2014; <http://www.schs.state.nc.us/schs/data/databook/>.

Age

The following information about the age (and gender) distribution of the Chowan County population was derived from the US Census Bureau 2014 Population Estimates. According to these estimates, compared to NC as a whole, Chowan County has lower proportions of people under the age of 50 and higher proportions of people over the date of 50



Graph 2. Population Distribution by Age and Gender, Number and Percent (US Census July 1, 2014 Estimates)

Source: US Census Bureau, American FactFinder, 2010 Census, 2010 Demographic Profile Data, Summary File DP-1, Profile of General Population and Housing Characteristics: 2010; <http://factfinder2.census.gov>.

Elderly Population

Because the proportion of the Chowan County population age 65 and older is larger than the proportion of that age group statewide, it merits closer examination. The population segment age 65 and older often requires more and different health and social services than the rest of the population, and understanding how that population will change in coming years will be an important consideration in planning to meet future health and human service needs.

The following information regarding the elderly population in Chowan County was extracted from the 2000 and 2010 US Census figures and current projections for the years 2020 and 2030 from the NC Office of State Budget and Management.

- The population in every major age group age 65 and older in Chowan County is projected to increase between 2000 and 2030
- Though all segments of the elderly population will grow, the segment expected to grow by the largest percentage in the 20 years between 2010 and 2030 is the group aged 85 and older, which is predicted to grow by 65% over that period, from 2.3% to 3.8% of the total county population.
- The segment of the population expected to grow by the second largest percentage between 2010 and 2030 is the group aged 75-84, which is predicted to grow by 56% over that period, from 6.2% to 9.7% of the total county population. In third position is the segment aged 65-74, which is predicted to grow by approximately 33%, from 9.4% to 12.5% of the total county population.

Children and Families

According to the U.S. Census Bureau figures for 2010-2014, there were 14,852 households in Chowan County. A household includes all the people who occupy a housing unit, which may be a single family, multiple families, one person living alone, or any other group of unrelated people who share a living space. A family household consists of a householder and one or more people living in the same household who are related by birth, marriage or adoption.

When examining the households in Chowan County, 24% of the households were family households with children under 18 years of age. Fifty-three percent of the family households with children under 18 years were headed by a married couple as compared to 58% in the region, and 65% within the state. Forty percent were headed by a female householder (no husband present) compared to 34% in the region and 27% in the state. Seven percent of these households were headed by a male householder (no wife present) completed to 8% in the region and 8% in the state. The head of household does have implications for the care of children as studies have shown that different genders approach health prevention and maintenance differently.

In addition to this data, a further examination of children and families revealed that 54% of the estimated 408 grandparents in Chowan County are living with their minor grandchildren and also are financially responsible for their care. Grandparents are considered responsible for grandchildren if they are financially responsible for food, shelter, clothing, day care, etc. for any/all grandchildren. This data also has implications for care as the elderly population has its own unique health challenges. It is important to note that Chowan County's percentage of grandparents living with and financially responsible for their minor grandchildren is higher than the region (52%) and the state (48%).

Military Veterans

A population group that sometimes needs special health services is military veterans. Veterans composed 12% of Chowan County's overall adult civilian population in the period cited, which was slightly higher than the regional percentage of 11.2% and higher than the state at 9.6%.

Although it was not home to the largest contingent of veterans, Chowan County did have a higher percentage of veterans over the age of 65 among comparator groups: 46% of the veterans in Chowan County were age 65 or older, compared to 42% in the region and 41 % of NC. Chowan County has a higher proportion of veterans in the 55 to 64 year age group and the 75 years and older age groups than any other jurisdiction presented

Foreign-Born Population

The foreign-born population in a community is one that potentially does not speak English, and so is of concern to service providers. In NC, the greatest proportion of the increase in foreign-born persons is represented by immigrants of Hispanic origin; however, statewide there has also been an influx of foreign-born immigrants from Southeast Asia.

Linguistic Isolation

“Linguistic isolation”, reflected as an inability to communicate because of a lack of language skills, can be a barrier preventing foreign-born residents from accessing needed services. The US Census Bureau tracks linguistically isolated households according to the following definition:

A linguistically isolated household is one in which no member 14 years and over (1) speaks only English, or (2) speaks a non-English language and speaks English "very well". In other words, all members 14 years old and over have at least some difficulty with English.

Among the 282 households (4.7% of all households in Chowan County) that speak a language other than English, the most common languages are Asian and Pacific Island languages (35%) and Spanish (34%). Among the Spanish-speaking households, 31% would be considered “limited English speaking”. Among those speaking Asian/Pacific Island languages, 72% are linguistically isolated.

Chapter Two: Socioeconomic Data

Tier Designation

The NC Department of Commerce annually ranks the state's 100 counties based on economic well-being and assigns a Tier Designation. The 40 most distressed counties are designated as Tier 1, the next 40 as Tier 2, and the 20 least distressed as Tier 3. The Tier system is incorporated into various state programs, including a system of tax credits (Article 3J Tax Credits) that encourage economic activity and business investment in less prosperous areas of NC. From 2011 – 2016, Chowan County has been assigned Tier 1 designation.

Income

While revenue indicators give us some idea of economic health from the community economic development standpoint, income measures tell us about the economic well-being of individuals in the community. Among the more useful income measures are personal income, family income, and household income. For comparison purposes, personal income is calculated on a per capita basis; family income and household income are viewed as a median value for a target population. The following are definitions of each of the three income categories:

In Chowan County, the 2014 per capital personal income was \$21,179 which was \$4,429 below the state average. This figure has increased overall since 2010. The 2014 Median household income was \$37,154 which is also below the state average by \$9,539. This figure has also increased overall since 2010. The 2014 Median family income was \$44,645 which is \$12,683 below the NC average. This figure has actually decreased slightly overall since 2010.

Employment

The following definitions will be useful in understanding the data in this section.

- *Labor force*: includes all persons over the age of 16 who, during the week, are employed, unemployed or in the armed services.
- *Unemployed*: civilians who are not currently employed but are available for work and have actively looked for a job within the four weeks prior to the date of analysis; also, laid-off civilians waiting to be called back to their jobs, as well as those who will be starting new jobs in the next 30 days.
- *Unemployment rate*: calculated by dividing the number of unemployed persons by the number of people in the civilian labor force.

Employment by Sector

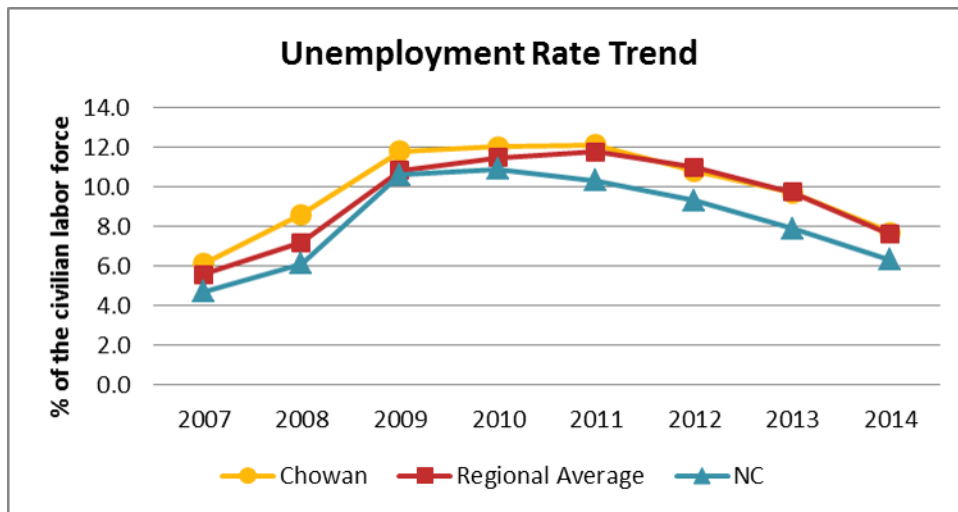
An examination of the various sectors of employment in Chowan County and its jurisdictional comparators for 2014 was completed. This analysis examined the number employed in each sector, the percentage of all employment that the number represents, and the average annual wage for people employed in each sector.

- The sector in Chowan County that employed the largest percentage of the workforce (18.7%) was Healthcare and Social Assistance. This sector earned an average of \$676 per week.

- Retail Trade accounted for the second largest percentage of the Chowan County workforce, at 11.1%, followed by Educational Services, at 10.7%.
- In the Region, the sector employing the largest percentage of the workforce (16.55%) was Health Care and Social Assistance, followed by Retail Trade (12.73%), Manufacturing (11.95%) and Educational Services (11.77%).
- Statewide, the sector employing the largest percentage of the workforce was Health Care & Social Assistance (14.29%), followed by Retail Trade (11.79%) and Manufacturing (11.06%).

Unemployment

According to 2014 data, a calculated annual average of 437 individuals were unemployed in Chowan County, calculating to an unemployment rate of 7.7. While an average unemployment rate was not available for 2015, the monthly average rate was highest in July and August and was lower in December 2015 (6.7) compared to the Region (7.3) and higher than the State (5.3) and the Nation (4.8).



Graph 3. Annual Unemployment Rate Trend (2007-2014)

Source: NC Employment Security Commission, Labor Market Information, Workforce Information, Employed, Unemployed and Unemployment Rates, Labor Force Statistics, Single Areas for All Years; <http://eslmi03.esc.state.nc.us/ThematicLAUS/clfasp/startCLFSAAY.asp>.

Poverty

The poverty rate is the percent of the population (both individuals and families) whose money income (which includes job earnings, unemployment compensation, social security income, public assistance, pension/retirement, royalties, child support, etc.) is below a federally established threshold; this is the “100%-level” figure. The overall poverty rate (describing the percentage of the total population below the Federally-defined 100% poverty level) in Chowan County was higher than the comparable state rate for all of the period cited. In 2010-2014, the poverty rate among children under 18 in Chowan County (47%) was higher than the overall rate and higher than both the state rate (25%) and the Regional rate (36%). This is the typical pattern throughout NC. In 2014, an estimated 3,950 individuals, or approximately 27% of the population, were living below the poverty level in Chowan County.

	2006-2010	2007-2011	2008-2012	2009-2013	2010-2014
Chowan	17.4	23.7	24.7	29.0	27.4
Regional Average	20.1	21.5	22.3	23.3	23.0
State of NC	15.5	16.1	16.8	17.5	17.6

Table 3. Poverty Rate Trend (2006-2010 and 2007-2011 Five-Year Estimates)

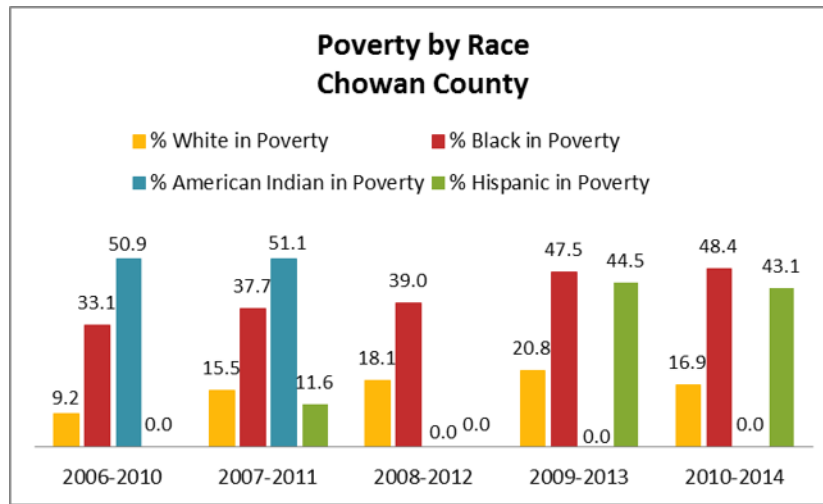
a - Log Into North Carolina (LINC) Database, Topic Group Employment and Income (Data Item 6094); http://data.osbm.state.nc.us/pls/linc/dyn_linc_main.show.

b - US Census Bureau, American Fact Finder, American Community Survey, 2010 American Community Survey 5-Year Estimates, Data Profiles, County, North Carolina (Counties as listed); <http://factfinder2.census.gov>.

c - US Census Bureau, American Fact Finder, American Community Survey, 2011 American Community Survey 5-Year Estimates, Data Profiles, County, North Carolina (Counties as listed); <http://factfinder2.census.gov>.

Poverty & Race

The poverty rate among African Americans in Chowan County increased in every period shown below. In Chowan County and statewide, poverty rates among minority groups are higher compared to white residents.



Graph 4. Persons in Poverty by Race (2000; 2006-2010 and 2007-2011 Five-Year Estimates)

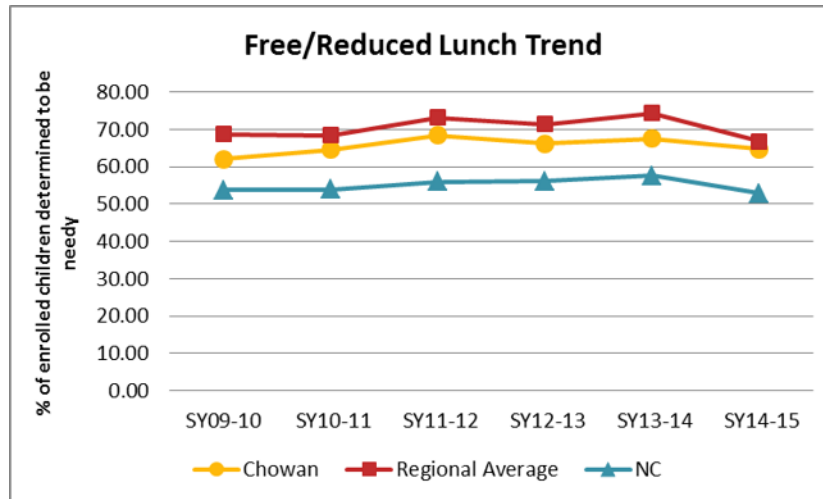
Source: US Census Bureau, American Fact Finder, ACS 5-Year Estimates, 2010 through 2014, Table S1701 Poverty Status in the Past 12 Months. <http://factfinder.census.gov/>

Children Receiving Free or Reduced-price School Lunch

Other data corroborate the impression that children, especially the very young, bear a disproportionate burden of poverty, and that their burden is increasing. One measure of poverty among children is the number and/or percent of school-age children who are eligible for and receive free or reduced-price school lunch.

Students have to be eligible to receive meals; not everyone who is eligible will choose to enroll in the program and receive meals. To be eligible for *free* lunch under the National School Lunch Act students must live in households earning at or below 130 percent of the Federal poverty guidelines. To be eligible for *reduced-price* lunch students must live in households earning at or below 185 percent of the Federal poverty guidelines.

The percentage of students in Chowan County enrolled for free or reduced-price school lunch has increased over time. In Chowan County, a higher percentage of students have been identified as “needy”, compared to the State. For the 2014-15 school year, approximately 65% of Chowan County students were identified as needy, compared to 67% in the Region and 53% across the state.



Graph 5. Percent of Students Enrolled for Free or Reduced-Price School Lunch (SY2009-2010 through SY2014-15)
 Source: *Free and Reduced Student Data by Site, Public School Year-to-Date Data 2009-2010 [and other years as noted]*. Public Schools of North Carolina, Public Schools of North Carolina, Financial and Business Services: <http://www.ncpublicschools.org/fbs/resources/data/>

Housing Costs

The estimated median monthly mortgage cost among Chowan County homeowners, which has increased each year since 2010, was \$1,312 in 2014. This cost is \$40 higher than the NC median. The estimated median gross monthly rent among Chowan County renters, which has increased overall since 2010, was \$725 in 2014. This figure is \$65 less than the NC median.

A closer examination of housing costs as related to percentage of monthly income reflects potential challenges individuals face with regard to balancing cost of housing with other expenditures. The percentage of Chowan County homeowners spending more than 30% of their monthly income on housing has decreased after 2008-2012 to 37% compared to 31% in NC. More than half (55%) of Chowan County renters spend more than 30% of their income on housing compared to 46% in NC in 2014.

Homelessness

Every January, the NC Coalition to End Homelessness conducts a point-in-time count of homeless individuals. Chowan County was not among the areas participating in the count in 2009 through 2015. This population can be difficult to track due to their transient living arrangements.

Educational Achievement

According to the US Census Bureau and the NC Public Schools data, a comparison of state and county data reveals that Chowan County has a higher population whose highest

attainment was a high school diploma (or equivalent) (32.7% in 2014)) as compared to the Region (31.9%) and the state (26.9%). Chowan County also has a lower population who had a bachelor's degree or higher (20.9% in 2014) as compared to the region (16.4%) and the state (25.8%).

When comparing Chowan County to the NC average, the 2014-2015 4-year cohort high school graduation rate was lower in Chowan County Schools (82.2%) as compared to the state (85.6%) and the Region (83.5%). High school graduation rates were lowest among males (Chowan 76.3%, Region 79.5%, NC 82.2%).

Educational System

The number of students enrolled in Chowan County schools has decreased almost every year since 2006-07. In the 2014-15 school year, 2,247 students were enrolled in Edenton/Chowan County public schools.

The high school drop out rate has decreased overall from 5.66 in 2010-11 to 3.08 in 2013-14 but was higher than the state for most of the period presented.

The high school reportable crime rate in Chowan County is variable and has increased recently, from 5.70 in 2011-12 to 13.95 in 2013-14.

Crime and Safety

Two types of crime are generally examined to understand more about a county's crime and safety – violent and property crimes. Violent crimes include offenses of murder, rape, robbery, and aggravated assault. Property crime includes the offenses of burglary, larceny, and motor vehicle theft. For the purposes of this assessment, data was examined by individual type and combined as an “index crime rate.”

The “index crime rate” is the rate of the sum of violent crime and property crime. Examining trends over time and comparing those to the state and region reveals the index crime rate in Chowan County was lower than the comparable NC average in every year cited and demonstrated an overall decline. In 2014, the Chowan County crime rate was 2,268.0 crimes committed per 100,000 population, compared to 3,021.5 in the Region and 3,287.2 in NC.

A closer examination of crimes by type reveals that the majority of crimes committed are property crimes. While property crimes are more common, The Chowan County property crime rate seems variable, though it has been consistently lower than the State. The 2014 property crime rate was 1,957.5 in Chowan County compared to 2,705.6 for the Region and 2,954.1 in NC.

The violent crime rate in Chowan County has demonstrated variability but was lower than the comparable state rate for the entire period shown. In 2014, the Chowan County rate was 310.5 compared to a state rate of 333.0 and a Regional rate of 315.8.

Juvenile Crime

In reviewing data from the NC Department of Public Safety with a specific focus on crimes committed by juveniles (ages 6-17), the crimes are reported as “Complaints.” The term

“Complaint” is defined as a formal allegation that a juvenile committed an offense, which will be reviewed by a counselor who decides whether to approve or not approve the complaint. If approved, it will be heard in juvenile court. Complaints are divided into two categories: “Undisciplined” and “Delinquent.”

The term “Undisciplined” refers to disobedience beyond disciplinary control of parent/guardian (e.g., truancy, vagrancy, running away from home for more than 24 hours). Between 2011 and 2014 the *number* of individuals who were subjects of complaints of **undisciplined** youth (ages 6-17) was variable in Chowan County. A total of 35 children were determined to be undisciplined over the four year period.

Over the same period the number and rate of complaints of “delinquent” youth in the county fluctuated from a low of 45 and 24.51 in 2012 to a high of 87 and 48.23 in 2014. “Delinquency” refers to acts committed by youths that would be crimes if committed by an adult. Additional information reflects that 11 Chowan County youths were sent to secure detention in 2011; 7 were sent in 2014.

Domestic Violence

Data from the NC Council for Women indicates the number of domestic violence clients seen by local agencies increased recently in Chowan County, from 74 in 2011-12 to 293 in 2014-15. The number of services provided (advocacy, counseling, legal help, transportation, etc.) is variable from year to year; 1,727 services were provided in 2014-15. The domestic violence shelter serving Chowan County was full on 32 days in FY2014-2015.

Child Maltreatment

The responsibility for identifying and reporting cases of child abuse, neglect and exploitation falls to the child protective services program within a county’s department of social services. Generally speaking, such a unit will have sufficient staff to handle intake of all reports. However, an agency’s ability to investigate and monitor reported cases may vary from year to year, depending on the number of properly trained staff available to it; hence, follow-up on reports may vary independently of the number of reports.

Child welfare data from the NC Social Services Data Warehouse at UNC indicates the numbers of children subject to abuse, neglect, or abuse and neglect in Chowan County fluctuates yearly. A small proportion of reports are eventually substantiated. Neglect-only cases composed the most common type of child maltreatment in most years. In 2014-15, 5 of the 6 substantiated cases involved only neglect. In Chowan County in 2014-15, 100% of the substantiated cases of neglect (n=5) were white children (NC=57%). One hundred percent of the victims were male (NC=48%).

Chapter Three: Health Resources

Health Insurance

The percent of uninsured adults aged 19-64 in Chowan County was lower than the state and the Region in all years reviewed. Compared to NC, Chowan County tends to demonstrate lower percentages of uninsured residents in all age groups. The age group 0-18 tends to have a lower percentage of uninsured than the 19-64 age group, due partly at least to NC Health Choice.

Medicaid Eligibility

According to data obtained from the NC Division of Medical Assistance, 20.9% of Chowan County residents were eligible for Medicaid in 2013, compared to 16.5% in NC and 19.6% in the Region. The total number of people in Chowan County eligible for Medicaid decreased slightly in the two most recent periods cited. The Medicaid programs with the largest proportion of eligibles in 2013 were Infants & Children (40%), Disabled (21%) and AFDC (20%). In each month of 2013, an average of 338 aged individuals were eligible for both Medicaid and Medicare, much lower than the NC County average of 1,195 and the Regional average of 828.

Health Care Practitioners

One way to judge the supply of health professionals in a jurisdiction is to calculate the ratio of the number of health care providers to the number of persons in the population of that jurisdiction. In NC, there is data on the ratio of active health professionals per 10,000 population calculated at the county level. This data was examined for Chowan County, the Region, the state of NC and the US for five key categories of health care professionals: physicians, primary care physicians, registered nurses, dentists and pharmacists. The period covered is through 2012.

The 2012 ratios of active health professionals per 10,000 population were **lower** in Chowan County than in NC for physicians, dentists and pharmacists. The ratios were **higher** in Chowan County than in NC for primary care physicians and registered nurses. It is important to remember that these ratios do not take into consideration medical practitioners in neighboring counties accessible to Chowan County residents.

Vidant Chowan Hospital

Vidant Chowan Hospital is a 25-bed hospital in Edenton, NC that provides surgical, emergency, medical/surgical, intensive care, family birthing, laboratory and radiology services, as well as a specialty clinic. The hospital also offers cardiopulmonary rehabilitation, diabetes self-management, outpatient behavioral health services and physical, speech and occupational therapy.

Albemarle Regional Health Services

ARHS is the district health department serving seven counties in the northeast to include Pasquotank, Perquimans, Bertie, Camden, Chowan, Currituck, and Gates. The department offers traditional Public Health services and environmental health in these counties. In addition, the department also operates programs including the Inter County Public

Transportation Authority (ICPTA), Children's Developmental Service Agency (CDSA), the PCG Landfill and Convenience Sites, and the Albemarle Regional Solid Waste Management Authority (ARSWMA).

Health Services

Dialysis

There is one dialysis facility in Chowan County, located in Edenton, with a total of 17 hemodialysis stations. This facility does not offer shifts after 5pm.

Health Facilities

There are no licensed ambulatory care facilities and no licensed nursing pool in the county. One cardiac rehabilitation facility is located in Edenton.

Mental Health Services

There are 8 mental health facilities; 5 of them offer supervised living for developmentally disabled adults.

Home Health/Hospice

Chowan County has 4 facilities providing home care services. One facility also offers home health care. One facility is listed as providing hospice services.

School Nurses

The student to school nurse ratio has decreased in Chowan County from 578:1 in 2009-10 to 555:1 in 2012-13. The recommended ratio is 750:1 and the state average is 1,177:1.

Long-Term Care Facilities

The number of beds in NC-licensed long-term care facilities in Chowan County are:

- Adult Care Homes/Homes for the Aged (2 facilities): 120 beds
- Family Care Homes (1 facility): 6 beds
- Nursing Homes/Homes for the Aged (1 facility): 130 beds

Most long-term care facilities in the county are located in Edenton; one is in Tyner. There are a total of 256 beds, or 1 bed for every 13 persons age 65 and older in Chowan County (3,263 persons \geq 65 in 2014). Because of the predicted growth of the elderly population over the next 15-20 years, these services would be expected to grow in demand.

Hospital Utilization – Emergency Department

Vidant Health made available extensive utilization data, some of which will be examined in conjunction with health statistics in a later section of this report. Presented here are demographic summaries of the populations that were admitted to the emergency department in recent years. This data includes all individuals who received services within the Vidant Health system, who also had a home address located within Chowan County. This data does not include visitors to this area.

Hospital Utilization – Emergency Department - Gender and Age

Emergency Department utilization by gender indicated higher utilization by females. Females accounted for 57% of all ED discharges over the three year period reviewed (52% of Chowan County population) and males accounted for 43% all ED discharges over the same period (48% of Chowan County population).

An analysis of Emergency Department utilization by age reflects that Adult (age 18-64) patients accounted for 59% of all ED visits. This figure is slightly lower than the proportion of persons in this age group in the overall Chowan County population, 57%. Pediatric (age 0-17) patients accounted for 19% of all ED visits. This figure is slightly lower than the proportion of persons in this age group in the overall Chowan County population, 21%. Senior (age 65+) patients accounted for 22% of all ED visits. This figure is consistent with the proportion of persons in this age group in the overall Chowan County population, 22%.

Hospital Utilization – Emergency Department - Racial and Ethnic Profile

An analysis of Emergency Department utilization by race and ethnic profile shows that Blacks/African Americans accounted for 54% of all ED discharges, which is substantially higher than the proportion of persons in this racial group in the overall Chowan County population (34%). Whites accounted for 43% of all ED visits. This figure is significantly less than the proportion of persons in this racial group in the overall Chowan County population (63%). Hispanics accounted for 2% of all ED discharges over the same period, which is slightly less than the overall proportion in Chowan County (3%). It is important to note that in US Census terms, persons of Hispanic/Latino ethnicity may also be of any race. The hospitals do tend to consider Hispanic ethnicity to be a separate racial category.

Hospital Utilization – Emergency Department - Payor Mix

The most common payor groups, in descending order, were:

- Medicaid (31.4%)
- Medicare (28.1%)
- Self-Pay (18.9%)
- BCBS Managed Care (10.9%)

Hospital Utilization – Inpatient Admissions

Hospital inpatient admissions were also reviewed for those individuals who experienced an inpatient admission within the Vidant Health system, who also had a home address located within Chowan County.

Hospital Utilization – Inpatient Admissions - Gender and Age

Females accounted 56% of all inpatient hospitalizations which is higher than the proportion of females within the total Chowan County population (52%). Males accounted for 47% of inpatient hospitalizations which is slightly lower than the proportion of males within the total Chowan County population (48%). One reason for this significant difference may be attributed to age.

Upon closer examination of age as related to inpatient hospitalizations, it is noted that Adult patients (age 18-64 years) accounted for 44% of all inpatient hospitalizations. While this is the largest percentage group based on age, it is important to note that this percentage is lower than the population of 18-64 year old individuals within the total Chowan County population (57%). Pediatric patients (under the age of 18 years) accounted for 12% of inpatient hospitalizations which is significantly lower than the overall population of children under the age of 18 years within Chowan County (21%). The Senior population (age 65+) accounted for 44% of all inpatient hospitalizations over the three year period examined. This is an important finding as this utilization is double the proportion of the total county population represented by this age group (22%).

Hospital Utilization – Inpatient Admissions - Racial and Ethnic Profile

Examining the inpatient hospitalization data based on race and ethnicity, Whites accounted for 60% of all inpatient hospitalizations which is less than the composition within the total county population (63%). Blacks/African Americans accounted for 37% of all inpatient hospitalizations which is higher than the proportion of the total county population represented by this racial/ethnic group (34%). Hispanics accounted for 1.6% of all inpatient hospitalizations which is approximately half of their representation within the overall Chowan County population (3%).

Hospital Utilization – Inpatient Admissions - Payor Mix

The most common payor groups, in descending order, were:

- Medicare (49.3%)
- Medicaid (22.3%)
- BCBS Managed Care (10.4%)
- Self Pay (4.8%)

Chapter Four: Health Statistics

Methodology

Routinely collected mortality and morbidity surveillance data and behavior survey data can be used to describe the health status of Chowan County residents. These data, which are readily available in the public domain, typically use standardized definitions, thus allowing comparisons among county, state and national figures. There is, however, some error associated with each of these data sources. Surveillance systems for communicable diseases and cancer diagnoses, for instance, rely on reports submitted by health care facilities across the state and are likely to miss a number of cases, and mortality statistics are dependent on the primary cause of death listed on death certificates without consideration of co-occurring conditions.

Understanding Health Statistics

Age-adjustment

Mortality rates, or death rates, are often used as measures of the health status of a community. Many factors can affect the risk of death, including race, gender, occupation, education and income. The most significant factor is age, because the risk of death inevitably increases with age; that is, as a population ages, its collective risk of death increases. Therefore, an older population will automatically have a higher overall death rate just because of its age distribution. At any one time some communities have higher proportions of “young” people, and others have a higher proportion of “old” people. In order to compare mortality data from one community with the same kind of data from another, it is necessary first to control for differences in the age composition of the communities being compared. This is accomplished by *age-adjusting* the data. Age-adjustment is a statistical manipulation usually performed by the professionals responsible for collecting and cataloging health data, such as the staff of the NC State Center for Health Statistics (NC SCHS). It is not necessary to understand the nuances of age-adjustment to use this report. Suffice it to know that age-adjusted data are preferred for comparing health data from one population or community to another and have been used in this report whenever available.

Aggregate Data

Another convention typically used in the presentation of health statistics is *aggregate data*, which combines annual data gathered over a multi-year period, usually three or five years. The practice of presenting data that are aggregated avoids the instability typically associated with using highly variable year-by-year data consisting of relatively few cases or deaths. It is particularly important to aggregate data for smaller jurisdictions like Chowan County. The calculation is performed by dividing the number of cases or deaths due to a particular disease over a period of years by the sum of the population size for each of the years in the same period.

Incidence

Incidence is the population-based rate at which new cases of a disease occur and are diagnosed. It is calculated by dividing the number of newly diagnosed cases of a disease or condition during a given period by the population size during that period. Typically, the

resultant value is multiplied by 100,000 and is expressed as cases per 100,000; sometimes the multiplier is a smaller number, such as 10,000.

Incidence rate is calculated according to the following formula:

$$\text{(number of new cases/population)} \times 100,000 = \text{new cases per 100,000 people}$$

The incidence rates for certain diseases, such as cancer, are simple to obtain, since data on newly discovered cases is routinely collected by the NC Central Cancer Registry. However, diagnoses of other conditions, such as diabetes or heart disease, are not normally reported to central data-collecting agencies, so accurate incidence data on these conditions is rare.

Mortality

Mortality is calculated by dividing the number of deaths due to a specific disease in a given period by the population size in the same period. Like incidence, mortality is a rate, usually presented as number of deaths per 100,000 residents. Mortality rates are easier to obtain than incidence rates since the underlying (or primary) cause of death is routinely reported on death certificates. However, some error can be associated with cause-of-death classification, since it is sometimes difficult to choose a single underlying cause of death from potentially many co-occurring conditions.

Mortality rate by cause is calculated according to the following formula:

$$\text{(number of deaths due to a cause/population)} \times 100,000 = \text{deaths per 100,000 people}$$

Morbidity

Morbidity as used in this report refers generally to the presence of injury, sickness or disease (and sometimes the symptoms and/or disability resulting from those conditions) in the population. Morbidity data usually is presented as a prevalence percentage, or a count, but not a rate.

Prevalence

Prevalence, which describes the extent of a problem, refers to the number of existing cases of a disease or health condition in a population at a defined point in time or during a period. Prevalence expresses a proportion, not a rate. Prevalence is often estimated by consulting hospital records; for instance, hospital discharge records available from NC SCHS show the number of residents within a county who use hospital in-patient services for given diseases during a specific period. Typically, these data underestimate the true prevalence of the given disease in the population, since individuals who do not seek medical care or who are diagnosed outside of the hospital in-patient setting are not captured by the measure. Note also that decreasing hospital discharge rates do not necessarily indicate decreasing prevalence; rather they may be a result of a lack of access to hospital care.

Trends

Data for multiple years is included in this report wherever possible. Since comparing data on a year-by-year basis can yield very unstable trends due to the often small number of cases, events or deaths per year (see below), the preferred method for reporting incidence and

mortality data is long-term trends using the age-adjusted, multi-year aggregate format. Most trend data used in this report is of that type.

Small Numbers

Year-to-year variance in small numbers of events can make dramatic differences in rates that can be misleading. For instance, an increase from two events one year to four the next could be statistically insignificant but result in a calculated rate increase of 100%. Aggregating annual counts over a five year period before calculating a rate is one method used to ameliorate the effect of small numbers. Sometimes even aggregating data is not sufficient, so the NC State Center for Health Statistics recommends that all rates based on fewer than 20 events—whether covering an aggregate period or not—be considered “unstable”, and interpreted only with caution. In recent years, the NC SCHS has suppressed mortality rates based on fewer than 20 events in a five-year aggregate period. Other state entities that report health statistics may use their own minimum reporting thresholds. To be sure that unstable health data do not become the basis for local decision-making, this report will highlight and discuss primarily rates based on 20 or more events in a five-year aggregate period and on 10 or more events in a single year. Where exceptions occur, the narrative will highlight the potential instability of the rate being discussed.

Describing Difference and Change

In describing differences in data of the same type from two populations or locations, or changes over time in the same kind of data from one population or location—both of which appear frequently in this report—it is useful to apply the concept of percent difference or change. While it is always possible to describe difference or change by the simple subtraction of a smaller number from a larger number, the result often is inadequate for describing and understanding the scope or significance of the difference or change. Converting the amount of difference or change to a *percent* takes into account the relative size of the numbers that are changing in a way that simple subtraction does not, and makes it easier to grasp the meaning of the change.

For example, there may be a rate for a type of event (e.g., death) that is one number one year and another number five years later. Suppose the earlier figure is 12.0 and the latter figure is 18.0. The simple mathematical difference between these rates is 6.0. Suppose also there is another set of rates that are 212.0 in one year and 218.0 five years later. The simple mathematical difference between these rates also is 6.0. Although the same, these simple numerical differences are not of the same significance in both instances. In the first example, converting the 6 point difference to a percent yields a relative change factor of 50%; that is, the smaller number increased by half, a large fraction. In the second example, converting the 6 point difference to a percent yields a relative change factor of 2.8%; that is, the smaller number in the comparison increased by a relatively small fraction. In these examples the application of percent makes it very clear that the difference in the first example is of far greater degree than the difference in the second example. This document uses percentage almost exclusively to describe and highlight degrees of difference and change, both positive (e.g., increase, larger than, etc.) and negative (e.g., decrease, smaller than, etc.)

Final Health Data Caveat

Some data that is used in this report may have inherent limitations, due to sample size, or its age, for example, but is used nevertheless because there is no better alternative. Whenever this kind of data is used, it will be accompanied by a warning about its limitations.

Health Rankings

America's Health Rankings

Each year for more than 20 years, America's Health Rankings™, a project of United Health Foundation, has tracked the health of the nation and provided a comprehensive perspective on how the nation—and each state—measures up. America's Health Rankings is the longest running state-by-state analysis of health in the US.

America's Health Rankings are based on several kinds of measures, including *determinants* (socioeconomic and behavioral factors and standards of care that underlie health and well-being) and *outcomes* (measures of morbidity, mortality, and other health conditions). Together the determinants and outcomes help calculate an overall rank.

According to the 2015 America's Health Rankings, North Carolina ranked 31st overall out of 50 states where 1st is considered best.

County Health Rankings

Building on the work of *America's Health Rankings*, the Robert Wood Johnson Foundation, collaborating with the University of Wisconsin Population Health Institute, undertook a project to develop health rankings for the counties in all 50 states. In this project, each state's counties are ranked according to health outcomes and the multiple health factors that determine a county's health. Each county receives a summary rank for its health outcomes and health factors and also for the four different types of health factors: health behaviors, clinical care, social and economic factors, and the physical environment.

According to the 2015 County Health Rankings for NC, Chowan County was ranked:

- 61st overall out of 100 (where 1 is best) for **health outcomes**
- 36th in length of life
- 86th for quality of life
- 83rd overall out of 100 for **health factors**
- 92nd for health behaviors
- 27th for clinical care
- 59th for social and economic factors
- 83rd for physical environment

It should be noted that the County Health Rankings serve a limited purpose, since the data on which they are based in some cases is very old and different parameters are measured in different time periods.

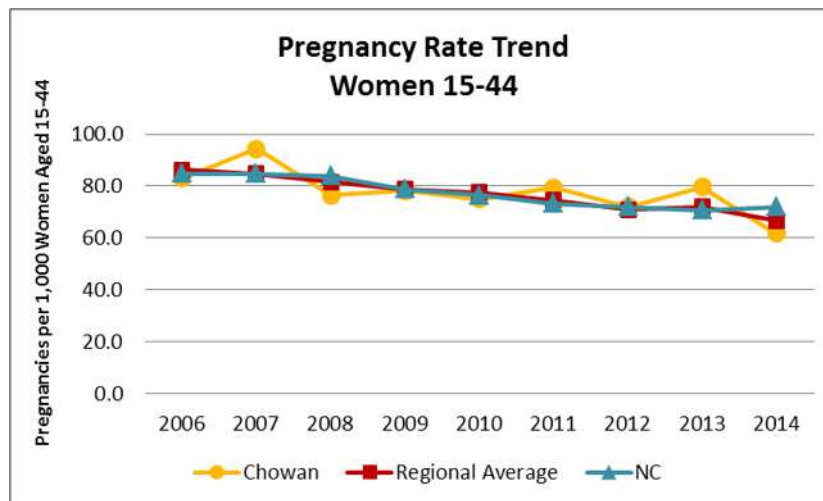
Maternal and Infant Health

Pregnancy

The following definitions and statistical conventions will be helpful in understanding the data on pregnancy:

- Reproductive age = 15-44
- Total pregnancies = live births + induced abortions + fetal death at 20+ weeks gestation
- Pregnancy rate = number of pregnancies per 1,000 women of reproductive age
- Fertility rate = number of live births per 1,000 women of reproductive age
- Abortion rate = number of induced abortions per 1,000 women of reproductive age
- Birth rate = number of live births per 1,000 *population* (Note that in the birth rate calculation the denominator includes the entire population, both men and women, not just women of reproductive age.) Since the birth rate is a measure of population growth, it was presented among the demographic data in Chapter One of this report.

The NC State Center for Health Statistics data indicates the total pregnancy rates for Chowan County fluctuates on a yearly basis but has demonstrated a general decline over the period presented. The total pregnancy rates in the Region and NC have fallen overall since 2007. The 2014 total pregnancy rate was 61.7 in Chowan County, compared to 66.8 in the Region and 72.1 in NC. Among Chowan County women age 15-44 the highest pregnancy rates tend to occur among Hispanics and African Americans.



Graph 6. 2006-2014 Pregnancy Rate Trend for Females 15-44. Source: North Carolina State Center for Health Statistics (NC SCHS), 2008 [and other years as noted] County Health Data Books: <http://www.schs.state.nc.us/data/databook/>

Overall teen pregnancy rates in Chowan County are variable and tend to be higher compared to NC. In 2012 (the last year in which a stable rate is available) the teen pregnancy rate was 64.6 in Chowan County, compared to 49.5 for the Region and 39.6 for the state.

Pregnancy Risk Factors

Smoking During Pregnancy

The percentage of Chowan County women who smoked during pregnancy increased from 15.0% in 2013 to 17.7% in 2014 and was higher than the state and the Region for the entire period presented below. Comparable percentages for the Region did not change significantly over the same period and statewide percentages decreased.

Inadequate Prenatal Care

The percentage of women receiving early prenatal care was lower in Chowan County, compared to the Region and the State in the first two periods examined. In 2011 and 2012, Chowan County demonstrated the lowest percentages of first trimester care among any county included in the Region. The percentage of Chowan County women receiving prenatal care in the first trimester did increase from 52.1% in 2012 to 70.2% in 2014. Among racial groups, a higher proportion of white women received prenatal care in the first trimester (76%) compared to African American women (60%) in 2014. Percentage for other racial groups are unstable.

Pre-Term, Low Weight and Very Low Weight Births

In Chowan County from 2010-2014, the percentage of Pre-Term Births (babies born at less than 37 weeks) was 13.6%, compared to the Region at 13.4% and the state at 11.8%. Low Weight Births (babies weighing less than or equal to 2500 grams or 5.5 pounds at birth) occurred in 10.9% of live births in Chowan County, compared to the Region (9.9%) and the state (9.0%). The rate of low weight births has declined slightly in Chowan County since 2003-2007. The highest stable rate of low weight births is among African American mothers (14.8%).

Very Low Weight Births (babies weighing less than or equal to 1500 grams or 3.3 pounds at birth) occurred in 1.7% of live births in Chowan County, compared to the Region (2.3%) and the state (1.7%). The variable rate has decreased overall since 2002-2006. Rates are very similar among all racial groups.

Infant Mortality

The total infant mortality rate in Chowan County has increased from a low of 4.4 in 2006-2010 to 7.9 in 2010-2014, compared to the state (7.1) and the Region (9.8). The Chowan County infant mortality rate has been higher than the state for much of the period shown. However, it is important to note that none of the Chowan County infant mortality rates are stable, so the trend presented should be interpreted with caution. According to the CDC, the 2013 infant mortality rate in NC was the 10th highest in the nation. Chowan County's rates are similar to the Region.

An examination of infant mortality rates by race found that no stable minority infant mortality rates are available for any racial group in Chowan County; all minority rates were suppressed after 2008-2012. In 2008-2012, the infant mortality rate among African Americans was 13.1 compared to 13.9 in the Region and 14.0 in NC. Of the 7 infant deaths that occurred in 2008-2012, 5 of them were among African Americans.

Life Expectancy

Life expectancy is the average number of additional years that someone at a given age would be expected to live if he/she were to experience throughout life the age-specific death rates observed in a specified reference period. Life expectancies in terms of years of life remaining can be calculated for any age. Because life expectancy is an average, however, a particular person may well die many years before or many years after their "expected" survival, due to life experiences, environment, and personal genetic characteristics.

Life expectancy from birth is a frequently utilized and analyzed component of demographic data. It represents the average life span of a newborn and is considered an indicator of the overall health of a population or community.

Life expectancy rose rapidly in the twentieth century due to improvements in public health, nutrition and medicine, and continued progress in these areas can be expected to have further positive impact on life expectancy in the future. Decreases in life expectancy are also possible, influenced mostly by epidemic disease (e.g. plagues of history and AIDS in the modern era), and natural and man-made disasters. One of the most significant influences on life expectancy in populations is infant mortality, since life expectancy at birth is highly sensitive to the rate of death in the first few years of life.

The overall life expectancy in Chowan County is 78.7. Comparisons between Chowan County and the the Regional Mean (77.7) and the state (78.3) reveal that Chowan County had the longest life expectancies in every group except males.

County	Overall	Sex		Race	
		Male	Female	White	African-American
Chowan	78.7	75.1	82.2	79.5	76.3
Regional Arithmetic Mean	77.7	75.0	80.3	78.4	76.5
State Total	78.3	75.8	80.7	78.9	75.9

Table 4. 2012-2014 State-Level Life Expectancies by Age, Sex, Race and Race by Sex. Source: North Carolina Center for Health Statistics, Life Expectancy - State & County Estimates: <http://www.schs.state.nc.us/data/lifexpectancy/>

Mortality

Leading Causes of Death

This section describes mortality for the 15 leading causes of death, as well as mortality due to five major site-specific cancers. The list of topics and the accompanying data was retrieved from the NC SCHS County Health Databook. Unless otherwise noted, the numerical data are age-adjusted and represent five-year aggregate periods.

Table 5 compares the number of deaths and mortality rates for the 15 leading causes of death in Chowan County to the state. The causes of death are listed in descending order of rank in Chowan County. Differences between Chowan County and NC mortality rates are discussed below.

Age-Adjusted Rates (2010-2014)	Chowan County No. of Deaths	Chowan County Mortality Rate	Chowan Rate Difference from NC
1. Cancer	215	182.8	+6.4%
2. Diseases of the Heart	190	167.3	+0.8%
3. Cerebrovascular Disease	61	51.5	+19.8%
4. Chronic Lower Respiratory Diseases	39	33.7	-26.7%
5. All Other Unintentional Injuries	31	33.3	+12.5%
6. Diabetes Mellitus	33	28.2	+27.6%
7. Alzheimer's disease	25	19.6	-32.9%
8. Nephritis, Nephrotic Syndrome, and Nephrosis	18	15.8	-7.1%
9. Unintentional Motor Vehicle Injuries	11	15.6	+15.6%
10. Pneumonia and Influenza	14	12.1	-31.3%
11. Septicemia	13	10.8	-16.9%
12. Suicide	6	6.7	-46.0%
13. Chronic Liver Disease and Cirrhosis	6	5.3	-45.4%
14. Homicide	3	5.2	-8.8%
15. Acquired Immune Deficiency Syndrome	1	1.3	-50.0%

Table 5. 2010-2014 Race-Specific and Sex-Specific Age-Adjusted Death Rates by County (CD21B). Source: North Carolina State Center for Health Statistics (NC SCHS), 2016 County Health Data Book website: <http://www.schs.state.nc.us/data/databook/>

During the time period 2010-2014, Chowan County experienced a higher mortality rate than the state of NC for the following causes of death:

- Cancer
- Disease of the Heart
- Cerebrovascular Disease
- All Other Unintentional Injuries
- Diabetes Mellitus
- Unintentional Motor Vehicle Injuries

An examination of the leading causes of death according to age group reveals that the top three leading causes of death in NC for each age group are:

- Age 0-19: Conditions originating in the perinatal period; Congenital anomalies; Motor vehicle injuries
- Age 20-39: Other unintentional injuries; Motor vehicle injuries; Suicide
- Age 40-64: Cancer (all sites); Diseases of the heart; Other unintentional injuries

- Age 65-84: Cancer (all sites); Diseases of the heart; Chronic lower respiratory diseases
- Age 85+: Diseases of the heart; Cancer (all sites); Alzheimer’s disease

An examination of the leading causes of death by age reveal the top 3 causes of death in Chowan County for each age group are as follows:

Age Group	Rank	Cause of Death in Chowan County (2010-2014)
00-19	1	Conditions originating in the perinatal period
	2	Diseases of the heart
	3	Motor vehicle injuries
		Other Unintentional injuries
20-39	1	Diseases of the heart
	2	Motor vehicle injuries
	3	Homicide
40-64	1	Cancer (all sites)
	2	Diseases of the heart
	3	Other Unintentional injuries
65-84	1	Cancer (all sites)
	2	Diseases of the heart
	3	Cerebrovascular disease
85+	1	Diseases of the heart
	2	Cancer - All Sites
	3	Cerebrovascular disease

Table 6. 2010-2014 Ten Leading Causes of Death by County of Residence and Age Group: Ranking, Number of Deaths, and Unadjusted Death Rates per 100,000 Population. Source: North Carolina Center for Health Statistics (NC SCHS), 2016 County Health Data Book website: <http://www.schs.state.nc.us/data/databook/>

It is important to note that many of the leading causes of death in Chowan County have decreased over time. A comparison of the mortality rates for leading causes of death from 2002-2006 to 2010-2014 shows the following causes of death remain higher than the state rates for:

- Cancer
- Heart Diseases
- Cerebrovascular disease
- All Other Unintentional Injuries
- Unintentional Motor Vehicle Injuries

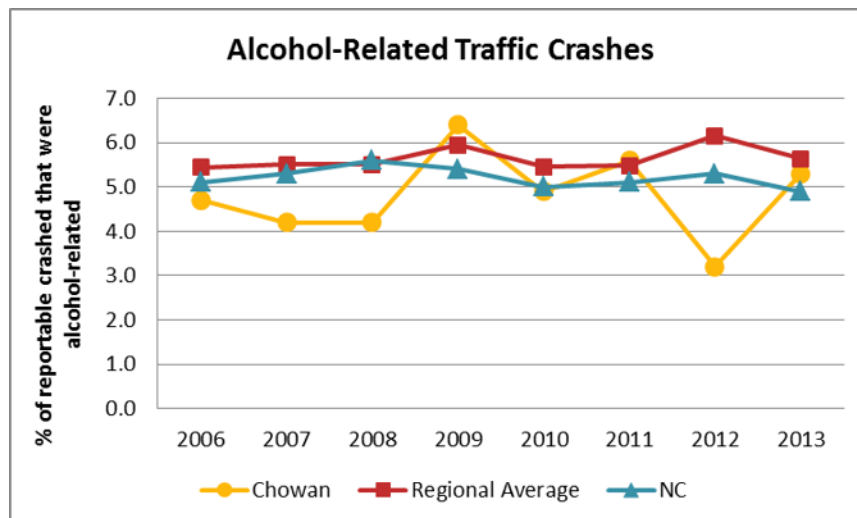
Chowan County Rank by Descending Overall Age-Adjusted Rate (2010-2014)	Rate in 2002-2006	Rate in 2010-2014	% Change 2002-2006 to 2010-2014
1. Cancer	199.1	182.8	-8.2%
2. Diseases of the Heart	225.3	167.3	-25.7%
3. Cerebrovascular Disease	82.3	51.5	-37.4%
4. Chronic Lower Respiratory Diseases	34.8	33.7	-3.2%
5. All Other Unintentional Injuries	26.1	33.3	+27.6%
6. Diabetes Mellitus	39.4	28.2	-28.4%
7. Alzheimer's disease	15.2	19.6	+28.9%
8. Nephritis, Nephrotic Syndrome, and Nephrosis	14.6	15.8	+8.2%
9. Unintentional Motor Vehicle Injuries	32.0	15.6	-51.3%
10. Pneumonia and Influenza	20.7	12.1	-41.6%
11. Septicemia	19.4	10.8	-44.3%
12. Suicide	8.4	6.7	-20.2%
13. Chronic Liver Disease and Cirrhosis	7.8	5.3	-32.1%
14. Homicide	10.6	5.2	-50.9%
15. Acquired Immune Deficiency Syndrome	4.3	1.3	-69.8%

Table 7. 2010-2014 Race-Specific and Sex-Specific Age-Adjusted Death Rates by County (CD21B). Source: North Carolina State Center for Health Statistics (NC SCHS), 2016 County Health Data Book website: <http://www.schs.state.nc.us/data/databook/>

Morbidity

Vehicular and Alcohol-Related Motor Vehicle Crashes

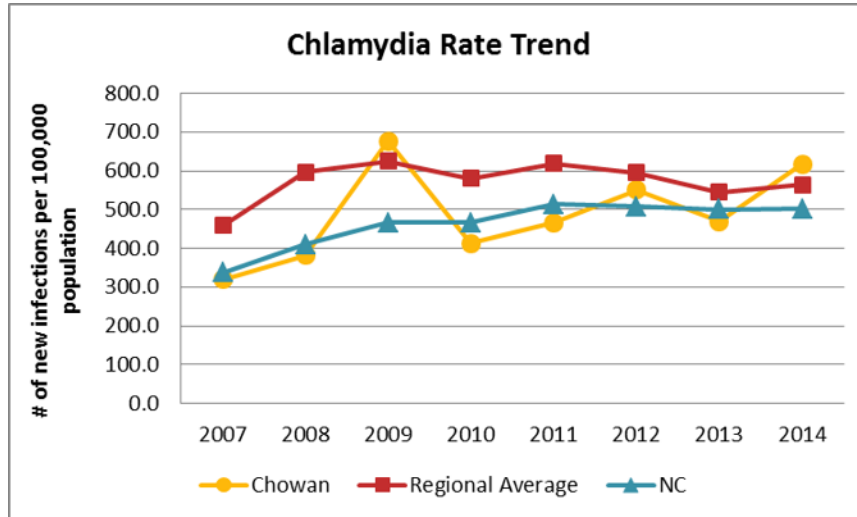
According to the NC Highway Safety Research Center, over the period from 2006 through 2013, an annual average of 4.8% of all traffic crashes in Chowan County were alcohol-related. Statewide the comparable figure was 5.2% and it was 6.0% across the Region.



Graph 7. Alcohol Related Traffic Crashes 2006-2013. Source: North Carolina Alcohol Facts. Highway Safety Research Center at the University of North Carolina at Chapel Hill: <http://www.hsrx.unc.edu/ncaf/crashes.cfm>

Sexually Transmitted Infections – Chlamydia

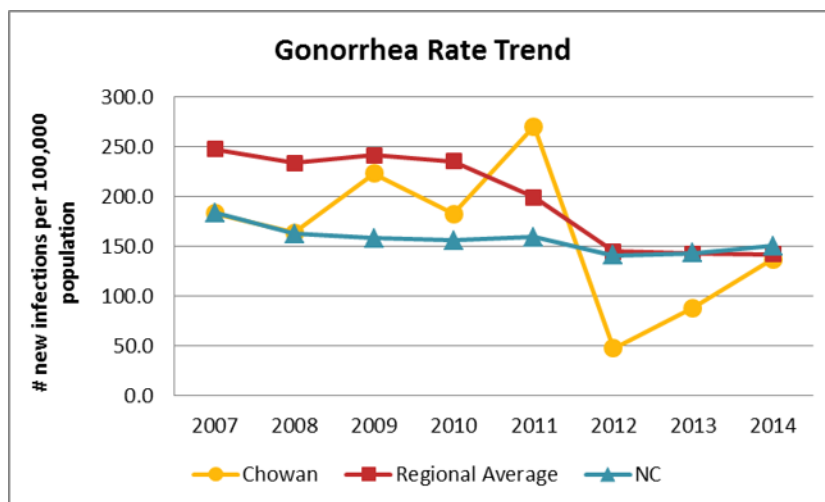
The chlamydia infection rate in Chowan County has increased overall, despite fluctuating on a yearly basis. In 2014, there were 90 new cases of chlamydia in Chowan County, calculating to a rate of 617.6 compared to 501.9 statewide. Of the 15-24 year olds who were tested for chlamydia in 2011, 8.6% tested positive, compared to 10.9% statewide.



Graph 8. North Carolina Newly Diagnosed Chlamydia Rates by County of Diagnosis and Year of Diagnosis, 2010-2014
Source: 2014 North Carolina HIV/STD Surveillance Report.

Sexually Transmitted Infections – Gonorrhea

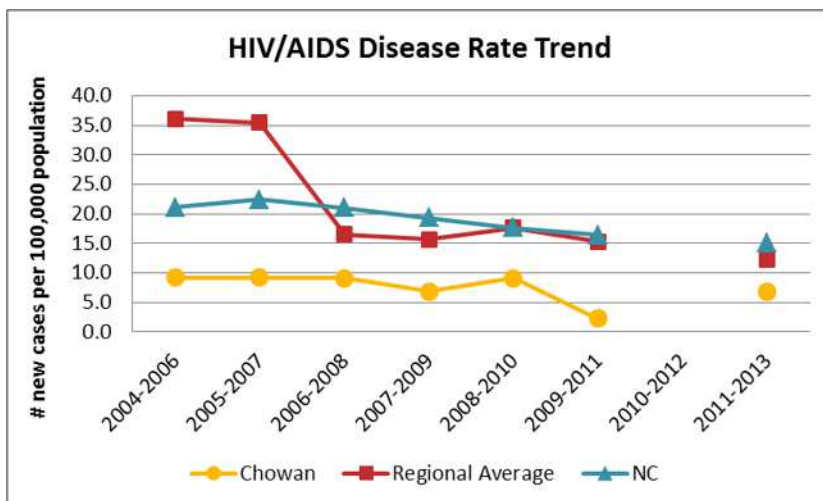
The gonorrhea infection rate in Chowan County had increased significantly between 2008 and 2011 before falling significantly to below the comparable state rate in 2012. In 2014, there were 20 new cases of gonorrhea in Chowan County, calculating to a rate of 137.2, compared to the state rate of 150.4. The gonorrhea rate was highest among African American in 2006-2010 (the last year for which stratified data is available): 528.6 compared to 222.9 overall.



Graph 9. N.C. Newly Diagnosed Gonorrhea Rates by County of Diagnosis and Year of Diagnosis 2010-2014. Source: 2014 HIV/STD Surveillance Report. Communicable Disease

Sexually Transmitted Infections – HIV/AIDs

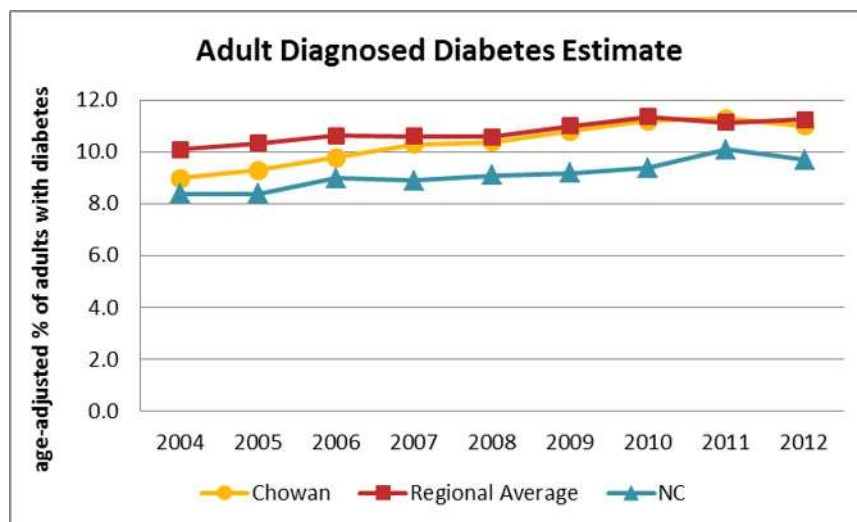
Although the numbers are too low to yield stable rates, the rate of newly diagnosed HIV infections in Chowan County (an average of 9.1 between 2012-2014) was lower than the comparable state rate (13.4). When numbers are aggregated over three-year periods to stabilize them, the Chowan County rates have decreased and remain lower than the comparable state and regional rates, as shown below. Twenty-four people in Chowan County were living with HIV as of the end of 2014.



Graph 10. HIV Disease includes all newly reported HIV infected individuals by the date of first report (HIV or AIDS). Source: North Carolina Epidemiologic Profile for HIV/STD Prevention & Care Planning, Division of Public Health, NC Department of Health & Human Services, Communicable Disease Surveillance Unit, North Carolina Communicable Disease Branch: <http://epi.publichealth.nc.gov/cd/stds/epiprofile.html>

Adult Diabetes

The average prevalence of diabetes among Chowan County adults has risen over time and was higher than the state for the entire period shown. Over the 9-year period presented, the Chowan County average was 10.3%, compared to 10.8% Region-wide and 9.1% across the state.

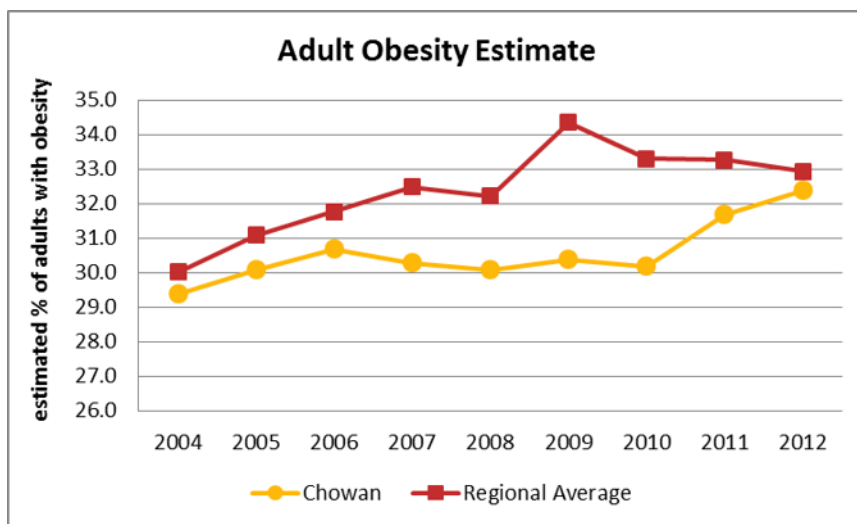


Graph 11. County-Level Data, Diagnosed Diabetes Prevalences, North Carolina, 2004 through 2012. Source: Centers for Disease Control and Prevention, National Diabetes Surveillance System: <http://www.cdc.gov/diabetes/data/index.html>

Because the prevalence of diabetes in Chowan County appears to be increasing, it may be illustrative to examine hospital discharges for diabetes (ICD-9 Code 250xx). These data are from VCHO only. The total number of ED discharges under this code for blacks was more than twice the comparable figure for whites. The total number of IP discharges for blacks was almost three times the comparable figure for whites. These data for ICD-9 Code 250xx are from VCHO only. The total number of ED discharges under this code for females was higher than the comparable figures for males. The total number of IP discharges for females and males were the same.

Obesity in Adults

The average prevalence of obesity in Chowan County was 30.6% in the period from 2004 through 2012, compared to 32.4% in the Region (state data is not available). The Chowan County percentage has increased over the period cited, but was lower than the Region for the entire period.



Graph 12. Obesity Prevalence 2004-2012. Source: Centers for Disease Control and Prevention, National Diabetes Surveillance System: <http://www.cdc.gov/diabetes/data/index.html>

Obesity in Children (Ages 2-4)

There is limited data on the prevalence of childhood obesity in Chowan County. Data is collected for three age groups (2-4, 5-11, 12-18), but only the youngest two age groups yielded stable rates in Chowan County. The data is also not particularly current. The data available covers only children seen in health department WIC and child health clinics and certain other facilities and programs. According to this NC-NPASS data, in 2010 an annual average of 15.2% of the participating children in Chowan County age 2-4 were deemed “overweight”, and an additional 18.9% were deemed “obese” (total 34.1%). Statewide, 16.1% were overweight and 15.6% were obese, for a total of 31.7%. Across the Region, an average of 16% were overweight and another 16.8% were considered obese, for a total of 32.8%.

Asthma

The Chowan County rate of hospital discharges with a primary diagnosis of asthma (61.8) had fallen below the state rate (90.9) in 2014, and has decreased over time from a high point of 196.0 in 2010. Among children aged 0-14, the hospital discharge rate has decreased from a high of 269.0 in 2012 to 0.0 in 2014. Because, according to NC SCHS, the hospital discharge rate for asthma in Chowan County sometimes has been higher than the comparable state rate, it may be illustrative to examine hospital discharges for asthma (ICD-9 Code 493xx). These data are from VCHO only. The total number of ED discharges under this code for blacks was over 2½ times the comparable figures for whites; the total number of IP discharges among blacks was about the same as the comparable figure among whites.

Mental Health

Between 2006 and 2014, the number of Chowan County residents served by the Area Mental Health Program has remained relatively steady, averaging 526 individuals a year since 2006.

Over the same 9-year period the number of Chowan County residents served by State Psychiatric Hospitals *decreased* by 74%. In 2014, 6 persons were served. During the same 9-year period, a total of 82 Chowan County residents were served by NC State Alcohol and Drug Abuse Treatment Centers (ADATCs), with the number varying from year to year. A high of 16 were served in 2009; 6 were served in 2014.

The LME/MCO serving Chowan County is Trillium Health Resources, located in Greenville (in Pitt County). Trillium also serves the following counties: Brunswick, Carteret, New Hanover, Onslow, Pender, Beaufort, Camden, Chowan, Craven, Currituck, Gates, Hertford, Hyde, Jones, Martin, Northampton, Pamlico, Pasquotank, Perquimans, Pitt, Tyrrell, Washington. Trillium is a consolidation of East Carolina Behavioral Health and CoastalCare.

Trillium partners “with agencies and licensed therapists in our Provider Network to offer services and supports to people in need in or near their own communities. We ensure the delivery of the right services, in the right amount, at the right time. We also work collaboratively with local non-profits, other governmental agencies, medical providers, and hospitals to create a holistic system of total patient care that recognizes all needs of an individual” (<http://www.trilliumhealthresources.org/en/About-Us/>).

According to data from VIDANT Region hospitals seeing 30 or more Chowan County patients over three years ED discharges related to all Mental, Behavioral and Neurological Disorder diagnoses composed 3.7% of all ED discharges over the three-year period cited; IP discharges for mental health diagnoses composed 7.2% of all IP discharges. These diagnoses (ICD-9 290-319xx) include psychotic and non-psychotic disorders, and conditions associated with alcohol and drug abuse.

Chowan County Populations At-Risk for Poor Health Outcomes

Primary and Secondary data gathered identifies the following groups as at-risk or populations with health disparities:

- The uninsured and under-insured
- Persons living in poverty
- Minorities
- Males, who generally have poorer health outcomes than females
- Persons with poor access to transportation, because travel may be necessary to reach certain healthcare providers
- The elderly, because healthcare services may not be sufficient to accommodate their needs as their population grows
- Pregnant women and the children they carry, since frequency of smoking during pregnancy is significantly higher in county than statewide; frequency of pre-term and low-weight births exceed frequencies statewide; 20% of infants in county are born with some sort of problem; teen pregnancy in Chowan County is not falling as it is in NC and the Region.

Chapter Five: Community Watch List

After Secondary data was compiled, a watch list of noteworthy Health Problems was developed. The following items were identified as health problems in Chowan County:

- **Cancer** – although it has fallen over time, the Chowan County mortality rate currently is higher than the NC rate; the incidence rates for total cancer and lung and breast cancers are increasing; the total cancer mortality rates among males and African Americans are higher than the rates for females and whites, respectively.
- **Stroke** – county mortality rate is higher than the NC rate and high among African Americans.
- **Unintentional injuries** – county mortality rate is higher than the NC rate and is increasing.
- **Alzheimer’s disease** – county mortality rate, although lower than NC rate, is increasing and may continue to do so as the population ages
- **Diabetes** – although the county mortality rate has decreased, the current rate is higher than the NC rate; number of hospital discharges among African Americans are several times the comparable figure for whites

Chapter Six: Community Feedback

Community Small Group Discussions Methodology

Vidant Chowan Hospital worked in conjunction with Albemarle Regional Health Services and the community to assemble and complete Community Small Group Discussions. Community Health Assessment coordinators served as Group Moderators and completed 10 small group discussions throughout Chowan County.

Community Feedback Results

There were many common, identifiable themes among the Chowan County small-group discussions. When asked to report on **health-related strengths of the community**, the most common responses indicated that the availability of **fresh produce** and a **favorable climate** were community strengths. Moreover, because of the county's climate, many community members walk in the morning and evening to stay healthy. Others suggested that the **nature of work** in Chowan County positively influences community health and is considered a health-related strength. In particular, participants indicated that manual labor, such as farming, is common in the area and contributes to the overall health of the community.

When asked about **health-related weaknesses of the community**, most of the weaknesses were rooted in **socioeconomic issues**. For example, participants indicated that many community members struggle to pay for healthy foods that are more expensive than unhealthy food options. Moreover, discussion participants identified a **lack of transportation, education, and recreation facilities** as contributors toward the **serious health problems in the community** – cancer and obesity.

Chapter Seven: Issue Prioritization

In June of 2016, key stakeholders in Chowan County were convened. Assessment results were shared and a formal process was utilized to determine Vidant Chowan's county health priorities.

Assessment data (primary and secondary) were shared with key stakeholders. Stakeholders reviewed the information, asked questions, and shared additional data from their respective organizations. Following a comprehensive review of all data provided, each participant was asked to identify key trends for further evaluation. A list was developed which included 15 potential priorities for further discussion and consideration.

The following criteria were used to evaluate the potential health priorities:

1. **The Magnitude of the Problem** – How many persons does the problem affect?
2. **Seriousness of the Consequences** – What degree of disability or premature death occurs because of the problem? What are the potential burdens to the community such as social or economic burdens?
3. **Feasibility of Correcting the Problem** – Is the problem amenable to interventions? Is the problem preventable? Is the community concerned about the problem? Is the intervention feasible scientifically as well as acceptable to the community?

Prioritization Process

Following additional discussion, participants were then guided through a nominal group technique (NGT) where decision-making could be finalized. The nominal group technique was utilized to assure everyone's feedback and opinions were considered (as opposed to traditional voting, where the majority rules). During this process, some priorities were combined as appropriate to finalize the top health priorities for Chowan County. As a result of this process, Vidant Chowan Hospital will work to develop action plans addressing these top community health issues.

Chowan County Health Priorities for 2016-2019

- **Prevention / Healthy Lifestyles**
- **Heart Disease**
- **Cancer**
- **Substance Abuse**

Appendices

Appendix A: Secondary Data Sources

Sheila S. Pfaender, Public Health Consultant, accessed data from the following sources to obtain and analyze secondary data:

- 2014 North Carolina HIV/STD Surveillance Report
- 2015 County Health Rankings & Roadmaps. County Health Rankings and Roadmaps website.
- America's Health Rankings: <http://www.americashealthrankings.org/>
- Authorized Medicaid and Health Choice Enrollment Reports
- Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System & National Diabetes Surveillance System
- Child Welfare, Reports of Abuse and Neglect section
- Dialysis Facility Compare, <http://www.Medicare.gov/Dialysis/Include/DataSection/Questions>
- Duncan, D.F., Kum, H.C., Flair, K.A., and Stewart, C.J. (2013). Management Assistance for Child Welfare, Work First, and Food & Nutrition Services in North Carolina. Special data request, March 2011. Also available online through the University of North Carolina at Chapel Hill Jordan Institute for Families website at <http://ssw.unc.edu/ma/>. Footnotes: Last updated September 2014.
- KIDS COUNT Data Center, a Project of the Annie E. Casey Foundation website: <http://datacenter.kidscount.org/>
- Highway Safety Research Center at the University of North Carolina at Chapel Hill
- National Center for Health Statistics
- North Carolina Administrative Office of the Courts (AOC)
- North Carolina Coalition to End Homelessness
- North Carolina Department of Administration, Council for Women
- North Carolina Department of Commerce
- North Carolina Department of Health and Human Services
- North Carolina Department of Justice, State Bureau of Investigation
- North Carolina Department of Public Instruction, Data and Statistics
- North Carolina Department of Public Safety, Juvenile Justice
- North Carolina Department of Revenue
- North Carolina Division of Motor Vehicles (DMV)
- North Carolina Electronic Disease Surveillance System (NC EDSS)
- North Carolina Employment Security Commission
- North Carolina Nutrition and Physical Activity Surveillance System (NC-NPASS)
- North Carolina Office of State Budget and Management
- North Carolina State Center for Health Statistics (NC SCHS)
- North Carolina Vital Statistics
- Public Schools of North Carolina
- Sheps Center for Health Services Research, North Carolina Health Professions Data System: <http://www.shepscenter.unc.edu/hp/publications.htm>
- State Laboratory of Public Health (SLPH). The SLPH provides testing for the Infertility Prevention Project (IPP), which includes testing for chlamydia.
- U.S. Census Bureau, American FactFinder
- Vidant Health Hospital Utilization Data

Appendix B: Secondary Data and Hospital Utilization Data Indicators

2016 CHNA Process Secondary Data Indicators

TOPIC	NOTES
<i>Demographic Data</i>	
Population by Sex, Age	Counts and percentages
Population by Race, Ethnicity	Counts and percentages
Population Growth Trend	Percent growth by decade; projected to 2030
Birth Rate Trend	Birth rate over several years
Population by Age Group	Point-in-time profile of proportion of population by age group
Elderly Population Growth Trend	Population age 65 and older, by 10-year age groups
Family Composition	Grandparents responsible for grandchildren; single-parent families
Military Veterans	By age group
Household Language	Reveals proportion not facile in English
Foreign Born Population	Date of entry of foreign-born population, by decade
Voting Trend	Registered voters and voter turnout per election
Urban and Rural Population	Number and proportion in both groups over time
School Enrollment Trend	Number enrolled plotted over time
Educational Attainment	Proportion HS and College graduates; SAT scores; End of grade test results
Educational Investment	Federal, state and local investment, by school district
High School Drop Out Trend	By school district
High School Graduation Rate	By school district
High School Graduation Rate by Race	Stratification offered where valid
<i>Socioeconomic Data</i>	
Income	Per capita, median family and median household income
Poverty	100% level, overall and stratified by age group (i.e., adult and child) and race
Housing Cost	Median monthly cost for mortgage and for rent, multiple time periods
Housing Cost	Percent spending more than 30% of household income on housing
Homeless Population Trend	Point-in-time counts, by age group and military status
Free and Reduced Lunch Trend	Percent students eligible OR receiving F&R, by several school years
Sector Employment	Point-in-time proportional employment by sector; average weekly wage by sector
Unemployment Rate Trend	Annual unemployment rate, plotted for at least 10 years
County Tier Designation	From NC Department of Commerce

County Revenue Indicators	Receipts, gross and sales tax-related
Crime Trend (Homicide and Index)	Rate, over time for several years
Crime Trend (Violent)	Rate, over time for several years
Crime Trend (Property)	Rate, over time for several years
Juvenile Crime	Rates of undisciplined and delinquent youth
High School Reportable Crimes	Counts and rates Number of complaints; types of perpetrators, by percent
Sexual Assault	Number of complaints
Domestic Violence	Number of reports and substantiated cases
Child Abuse	Number of reports and substantiated cases
Adult Abuse	Number of reports and substantiated cases

Health Data

America's Health Rankings	Ranking of NC among 50 states
County Health Rankings	Ranking of target county among 100 NC counties
Pregnancy Trend (Ages 15-44)	Counts and rates reported over time
Pregnancy Rate by Race (Ages 15-44)	For most recently reported period only
Abortion Trend (Ages 15-44)	Counts and rates reported over time
Pregnancy Trend (Ages 15-19)	Counts and rates reported over time
Pregnancy by Race (Ages 15-19)	For most recently reported period only
Abortion Trend (Ages 15-19)	Counts and rates reported over time
Prenatal Smoking Trend	Proportion of births to mothers who smoked when pregnant; plotted over time
Prenatal Care Trend	Proportion of births to mothers who got prenatal care in first three months of pregnancy; plotted over time
Prenatal Care Trend by Race	Where stratification is valid
Low Birth Weight Trend	Proportion of births at less than 5.5 pounds
Very Low Birth Weight Trend	Proportion of births at less than 3.3 pounds
Infant Mortality Trend	Death rate among infants under the age of one year
Infant Mortality by Race	Where stratification is valid
Life Expectancy	Years of expected life for individual born in a defined period
Cause of Death	Tracks mortality rates for 15 Leading Causes of Death
Death by Age Group	Mortality rate for top three causes of death, by major age groups
Heart Disease Mortality Trend	
Heart Disease Mortality by Race	Where stratification is valid
Total Cancer Mortality Trend	
Total Cancer Mortality by Race	Where stratification is valid
Total Cancer Incidence Trend	New cases per defined time periods
Cancer Mortality by Site	For four major site-specific cancers: lung, breast, prostate and colorectal
Cancer Incidence by Site	New cases per defined time periods for four major site-specific cancers sited above
Lung Cancer Mortality Trend	

Lung Cancer Mortality by Race	Where stratification is valid
Lung Cancer Incidence Trend	New cases per defined time periods
Breast Cancer Mortality Trend	
Breast Cancer Mortality by Race	Where stratification is valid
Breast Cancer Incidence Trend	New cases per defined time periods
Prostate Cancer Mortality Trend	
Prostate Cancer Mortality by Race	Where stratification is valid
Prostate Cancer Incidence Trend	New cases per defined time periods
Colorectal Cancer Mortality Trend	
Colorectal Cancer Mortality by Race	Where stratification is valid
Colorectal Cancer Incidence Trend	New cases per defined time periods
CLRD Mortality Trend	
CLRD Mortality by Race	Where stratification is valid
Stroke Mortality Trend	
Stroke Mortality by Race	Where stratification is valid
Other Injury Mortality Trend	
Other Injury Mortality by Race	Where stratification is valid
Alzheimer's Mortality Trend	
Alzheimer's Mortality by Race	Where stratification is valid
Diabetes Mortality Trend	
Diabetes Mortality by Race	Where stratification is valid
Pneumonia and Influenza Mortality Trend	
Pneumonia and Influenza Mortality by Race	Where stratification is valid
Unintentional Motor Vehicle Injury (UMVI) Mortality Trend	
Unintentional Motor Vehicle Injury (UMVI) Mortality by Race	Where stratification is valid
Suicide Mortality Trend	
Suicide Mortality by Race	Where stratification is valid
Kidney Disease Mortality Trend	
Kidney Disease Mortality by Race	Where stratification is valid
Septicemia Mortality Trend	
Septicemia Mortality by Race	Where stratification is valid
Liver Disease Mortality Trend	
Liver Disease Mortality by Race	Where stratification is valid
Homicide Mortality Trend	
Homicide Mortality by Race	Where stratification is valid
AIDS Mortality Trend	
AIDS Mortality by Race	Where stratification is valid
Adult Diabetes Prevalence Trend	
Child Obesity Prevalence (2-4 years)	
Injury Mortality - Unintentional Falls	Number of unintentional fatal falls, by age group
Motor Vehicle (MV) Crashes, Alcohol, Trend	Number of percent of crashed related to alcohol, plotted over time

Motor Vehicle (MV) Crashes, Alcohol, Detail	Number and percent of crashes by type (e.g., fatal, non-fatal, property only) related to alcohol
Injury Mortality - Poisoning	Number of cases and rates
Chlamydia Infection Rate Trend	
Gonorrhea Infection Rate Trend	
HIV Incidence Trend	New cases identified annually, plotted over time
	Counts by causative organism or disease; must be obtained from local health department
Communicable Disease	For state-defined list of health conditions
Inpatient Hospitalization Rate Trend	Stratified by age group (i.e., adults and children)
Dental Service Utilization by Medicaid Recipients	Number using the service, plotted over several years
Area Mental Health Program Utilization Trend	Number using the service, plotted over several years
Alcohol and Drug Treatment Center Utilization Trend	Number using the service, plotted over several years
Psychiatric Hospital Utilization Trend	Number using the service, plotted over several years
 <i>Health Resource Data</i>	
Health Professional Ratios	Number of providers per 100,000 population for MDs, Primary Care MDs, RNs, Dentists, and Pharmacists
Health Professionals by Type	Number of active providers in major categories of health care specialties
Health Insurance Coverage Estimates Trend	Percent uninsured, by age group
Medicaid Eligibles Trend	By Department of Social Services Program Areas
Long-Term Care Facilities	Counts of beds, by type of facility (e.g., nursing homes, homes for the aged, family care homes, etc.)
Home Health Providers	Counts of providers, by category (e.g., home health, hospice, etc.)
School Nurses	Nurse to student ratio
Hospitals	List; counts of beds and loose description (list) of major services
Other Health Care Facilities	Census of dialysis centers, ambulatory surgery centers, urgent care centers, cardiac rehab centers, etc.

Hospital Utilization Data Fields

Hospital Code (to identify specific Vidant Hospital – ie. VMC, VEDG, etc)

Encounter # (to serve as unique identifier)

Admit FY

Discharge FY

LOS

Gender

Race/Ethnic Group

Age

Age Group (Pediatric, Adult, Geriatric)

County

City

Numerical Zip Code

Payor Category

DRG Code / DRG Description

ICD9 Diagnosis Code / ICD9 Diagnosis Description

ICD9 Procedure Code / ICD9 Procedure Description

Appendix C: Primary Data Small Group Discussion Questions

QUESTIONS:

1. Introduce yourself and tell us what you think is the best thing about living in this community.
2. What do people in this community do to stay healthy?
3. In your opinion, what are the serious health-related problems in your community?
4. What keeps people in your community from being healthy?
5. What could be done to solve these problems?
6. Have you or someone close to you ever experienced any challenges in trying to get healthcare services? If so, what happened?
7. Are there any home remedies you use in place of traditional healthcare and/or medicine?
8. What are the strengths related to health in your community?
9. Cancer and heart disease are the leading causes of death in your county. In your opinion, what makes these the leading causes of death in your county?
10. How does living in a rural area affect health?

Appendix D: Evaluation of 2013 Vidant Chowan Implementation Plan

2013 Implementation Plan Evaluation

Priority health need: Diabetes

Goal: *To reduce the rate of diabetes in Chowan County and improve quality of life for people living with diabetes.*

Strategies:

- **Continue offering free blood sugar screenings throughout the community.** – Vidant Chowan continues to offer free community health screenings where BMI, Blood pressure, Blood sugar, Cholesterol, and Triglyceride checks are performed. Following the screenings, participants receive health coaching and follow up if their values are abnormal.
- **Continue supporting the diabetes support group and Diabetes Day program.** – The Diabetes Day program no longer continues due to additional services which have been added to provide education and support throughout the year. The Diabetes Support Group meets on the 4th Tuesday of every month and has an Outpatient Diabetes Clinic. The outpatient program is credentialed and follows an American Diabetes Association curriculum. Patients receive a referral from primary care provider and are set up to meet with our Diabetes Educator. She provides 1 individual assessment session, 4 group sessions, and an individual follow up. Session focus on how to check sugar, normal ranges, signs and symptoms of both high and low blood sugar, medication control, sick day management, diet and exercise, foot care, and acute and chronic complications. The program is very thorough. Our Diabetes Educator also attends all health fairs and events (Men's Health, etc.) with information.
- **Continue offering diabetes education through Diabetes Self-Management program.** – See above – Diabetes Self-Management is taught through the Diabetes Support Group and Outpatient Diabetes Clinic
- **Develop plan to offer additional foot and eye screenings throughout the community.** – Diabetes foot and eye screenings are incorporated into the Outpatient Diabetes Clinic. In addition, Vidant Chowan partners with the Lions Club to offer an annual eye screening event.
- **Improve medication education for diabetes patients.** – See above – Diabetes Medication Education is provided through Diabetes Support Group and Outpatient Diabetes Clinic.

Priority health need: Cancer

Goal: *To increase prevention and early detection of cancer (breast, colon, prostate, lung, cervical, skin).*

Strategies:

- **Expand oncology and chemotherapy services in conjunction with outpatient services expansion.** Vidant Chowan Hospital currently has two oncologists providing medical coverage 3 days a week within the expanded outpatient services area. Plans are to expand coverage to 4 days per week in fall 2016. There is a chemotherapy suite in the outpatient services area where chemotherapy is provided on days that the oncologists are present.

- **Continue providing early detection services including mammography, FOBT screening and colonoscopies as well as surgical interventions.** - Screenings provided through providers at this time.
- **Continue supporting American Cancer Society through Relay for Life and other partnerships.** – Vidant Chowan continues to support community events to raise awareness about prevention and cancer screenings to promote early detection.
- **Continue supporting local breast and cervical cancer control program through ARHS.** Vidant Chowan continues to various cancer programs offered through ARHS
- **Continue hosting annual breast cancer event.** Vidant Chowan continues to offer the Pink Power breast cancer event every October
- **Offer additional education and screening opportunities for prostate, skin and colon cancer.** – Vidant Chowan offers annual prostate cancer education and screenings throughout the community. Plans are to implement skin cancer screenings in the community in 2017. Vidant Chowan is also participating in the “80 by 2018” national program to promote colorectal cancer screenings.
- **Support efforts of Community Transformation Grant to promote tobacco-free living to prevent lung cancer.** Vidant Chowan participates with Partners to Improve Community Health (PITCH) program which implements many tobacco-free living initiatives in Chowan County. Vidant Chowan also recently replaced all campus “No Smoking” signs with “Tobacco Free campus” signs and continues to promote Tobacco Free areas in all of the hospital’s service areas.

Priority health need: cardiovascular disease

Goal: *To reduce the rate of cardiovascular disease in Chowan counties and improve quality of life for people living with cardiovascular disease.*

Strategies:

- **Continue providing cardiopulmonary rehabilitation and cardiology specialty clinic and diagnostics.** – Vidant Chowan’s Cardiopulmonary Rehabilitation program is an accredited program which serves the surrounding community. Vidant Chowan also has a cardiologist in the clinic two days each week to see patients.
- **Continue offering free blood pressure and cholesterol screenings throughout the community.** – Community health screenings continue to be provided free of charge to community members throughout the year
- **Continue hosting the annual heart health event for women.** – Vidant Chowan hosts a Heart Health event annually for community members.
- **Optimize the use of health coaching services at Vidant Medical Group practices.** – Health coaching within Vidant Medical Group practices continues to serve patients.

Priority health need: lifestyle (smoking, inactivity, nutrition, substance abuse)

Goals: *To improve the health status of the community by encouraging healthy behaviors and discouraging unhealthy behaviors*

Strategies:

- **Continue offering Healthy Living Support Group to promote healthy behaviors.** - This program has been replaced by other healthy living offerings within the community.
- **Expand congregational health program to include additional churches.** – Vidant Health has worked with faith leaders throughout eastern NC to implement the HealThy Neighbors partnership. This partnership of faith leaders works closely with Vidant Health to provide healthy living education to their members and the surrounding communities. Faith organizations within Chowan County participate in this partnership with 2 Chowan County faith leaders serving on the Advisory Board for the partnership.
- **Continue supporting the Eat Smart, Move More, Weigh Less program.** – The Eat Smart Move More Weigh Less program is offered to the community through Albemarle Regional Health Services. Vidant Chowan contributes monies through their community benefits grants to support this program each year.
- **Continue supporting the Expanded Foods and Nutrition Education Program.** – This program is offered through the Cooperative Extension Office in Chowan County. Vidant Chowan contributes monies through their community benefits grants to support this program each year.
- **Continue providing health fairs.** – Vidant Chowan continues to offer health fairs with their community health screening program.
- **Identify opportunities to offer the Chronic Disease Self-Management Program through partnerships.** – This program is offered to the community through the Commission on Aging. Vidant Chowan contributes monies through their community benefits grants to support this program each year.

Priority health need: lack of medical home (lack of knowledge among community and providers regarding available services)

Goals: *To improve community and provider knowledge of the health and human services and support structures available in Chowan and Perquimans counties.*

Strategies:

- **Continue marketing initiatives to promote screenings and immunizations.** – Continues through Vidant Chowan
- **Continue offering transitional care services to connect patients with chronic conditions to community services.** – This continues through Vidant Chowan's inpatient case management program.
- **Continue flu awareness and prevention activities.** – Continues through Vidant Chowan in addition to the annual flu clinic offered to community members.
- **Inform providers and communities about local services through education and awareness activities.** – Continues throughout the year through Vidant Chowan
- **Ensure patients transferred back from other hospitals reconnect with local health providers and resources.** – This continues through Vidant Chowan's inpatient case management program.