THE OUTER BANKS HOSPITAL'S 2016 COMMUNITY HEALTH NEEDS ASSESSMENT

ACKNOWLEDGMENTS

This report is the culmination of a tremendous effort by the members of Healthy Carolinians of the Outer Banks Partnership, whose dedicated focus on and support for the health and well-being of the residents of Dare County is indeed remarkable:

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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 Dare County Department of Public Health (DCDPH), the Outer Banks Hospital (OBH) and the Vidant Health system.

In communities where there is an active Healthy Carolinians coalition, the CHA partnership also usually includes that entity. Healthy Carolinians is "a network of public-private partnerships across North Carolina that shares the common goal of helping all North Carolinians to be healthy." The members of local coalitions are representatives of the agencies and organizations that serve the health and human service needs of the local population, as well as representatives from businesses, communities of faith, schools and civic groups. In Dare County, the local Healthy Carolinians coalition is Healthy Carolinians of the Outer Banks (HCOB).

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 Dare 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 the DCDPH, OBH 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; (4) a community input phase to elicit opinion and ideas regarding the assessment outcomes among community stakeholders; and (5) 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 Dare County.

Assessment Methodology

In order to learn about the specific factors affecting the health and quality of life for Dare 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, Dare 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 Dare 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 Dare 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, DCDPH, OBH, and Vidant Health also reached out to Dare 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 a survey process, as well as small group discussions.

The survey questions were adapted from the survey questionnaire 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). Surveys were provided in English and Spanish and distributed to residents using an online survey option and a paper survey option. The survey process was conducted over a 4 week period with 806 individuals participating in the survey process. The survey questions are included in Appendix C of this report.

In addition to the survey process, seven small group discussions were held in various locations within Dare County. Participants responded to 7 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 Dare County and its comparator counties were based on 2014 US Census data population estimates presented in Table 1.

- As outlined in the July 1, 2014 US Census data estimates, the population of Dare County is estimated to be 35,104.
- The population of Dare County is evenly divided between males and females, which is the typical pattern. The gender balance in the Region is similar with an average of 48% males and 52% females.
- The overall median age in Dare County was 45.5, approximately 3.8 years older than the median age in the Region, and over seven years older than the median age for NC as a whole.

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
Dare	35,104	17,353	49.4	17,751	50.6	45.5	6,886	19.6	21,668	61.7	6,550	18.7
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

The population of Dare County is not as racially or ethnically diverse as NC as a whole (or as the Region). According to the U.S. Census Bureau 2014 Population Estimates, the non-white population in Dare County is approximately 6% of the overall population. In the Region, the non-white population is approximately 39% of the population, compared to the state at 28.5%.

- Whites composed 94% of the total population; the Regional comparable figure was 60.9% and the statewide figure was 71.5%.
- Blacks/African Americans composed 3% of the total population; the Regional comparable figure was 35.4% and the statewide figure was 22.1%.
- American Indians and Alaskan Natives composed 0.6% 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 0.7% of the total population; the Regional comparable figure was 1.3% and the statewide figure was 2.8%.
- Hispanics/Latinos of any race composed 6.8% of the total population; the Regional comparable figure was 8% and the statewide figure was 9%.

Population Growth

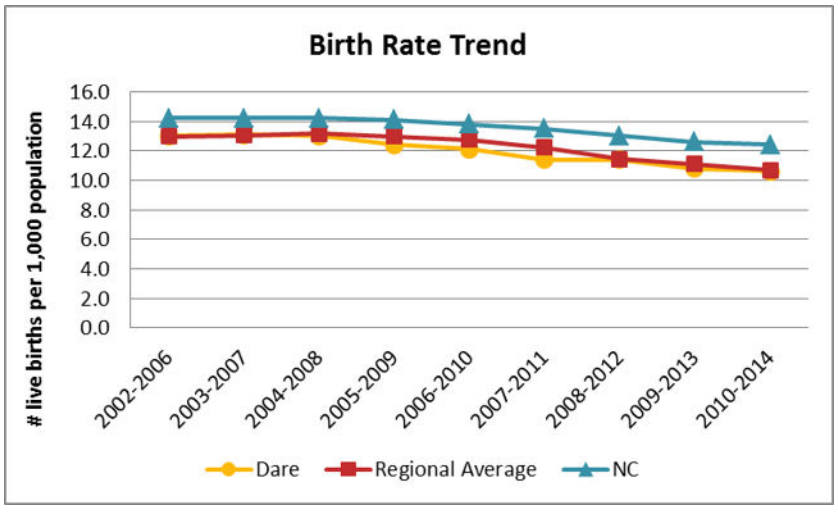
Dare County's population growth is expected to slow over the coming decades. The population in the Region and state is also expected to grow at a slower rate during this same time. Between 2000 and 2030, the county population is expected to increase by 23.3% overall, while the Region increases by 20% and NC grows by 44%. (Table 2).

Decade	Dare County	Regional Average	State of NC
2000-2010	11.7	14.6	15.6
2010-2020	6.0	2.8	10.9
2020-2030	2.0	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 is declining in Dare County, the Region, and the state. A closer examination by racial group reflects that birth rates in Dare County have decreased overall among all racial groups compared for most of the period presented. A similar trend is seen across the Region and the state. The highest birth dare occurred among the Hispanic population.

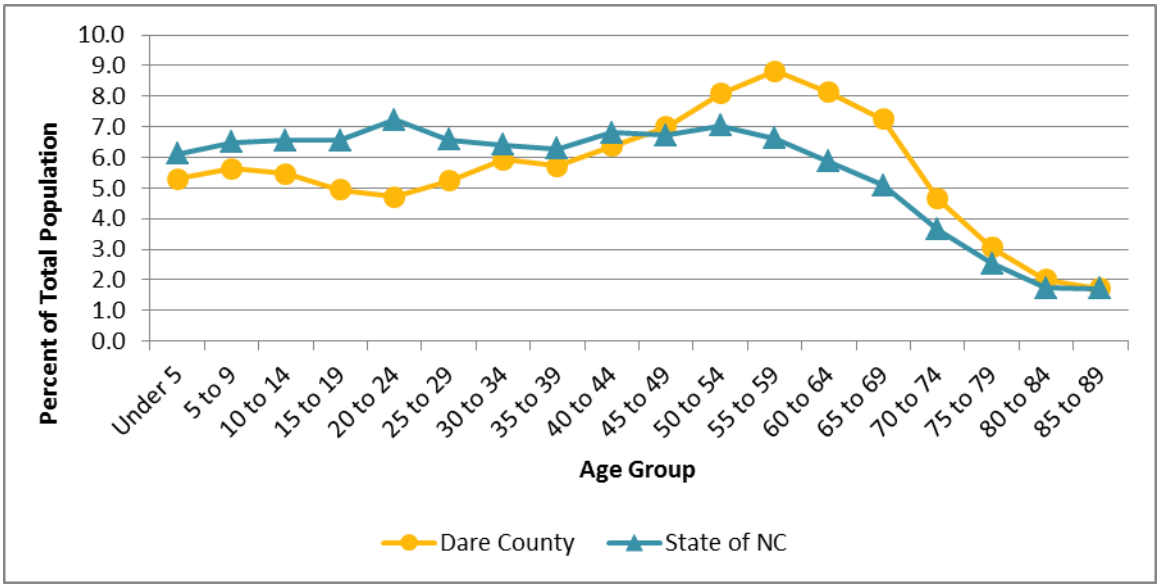


Graph 1. Birth Rate Trend, Live Births per 1,000 Total Population (Nine 5-Year Aggregates, 2002-2006 through 2010-2014)
Source: NC State Center for Health Statistics, Health Data, County Level Data, County Health Databooks 2008, 2009, 2010, 2011, 2012, 2013; 2014; http://www.schs.state.nc.us/schs/data/databook/.

Age

The following information about the age (and gender) distribution of the Dare County population was derived from the US Census Bureau 2014 Population Estimates. Generally, these data demonstrate that Dare County has a population distribution skewed older than the distribution for the state as a whole.

- In terms of both numbers (3,094) and percent (8.8%), the largest segment of the population in Dare County was the age group 55-59. This differed significantly from NC as a whole, where the segment composing the largest number and percent (7.2%) of the state's population was the younger age group, 20-24.
- Persons 65 years of age or older composed 18.7% of the population in Dare County, compared to 14.6% of the population of NC.
- Persons 19 years of age and younger composed 21.3% of the population in Dare County, compared to 25.8% of the population of NC.



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 Dare 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 Dare 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 proportion of every major age group in Dare County age 65 and older will increase through the year 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 220% over that period, from 1.0% to 3.2% 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 146% over that period, from 4.1% to 10.1% of the total county population. In third position is the segment aged 65-74, which is predicted to grow by approximately 61%, from 8.7% to 14.0% 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 Dare 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 Dare County, 27% of the households were family households with children under 18 years of age. Sixty-five 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. Twenty-three percent were headed by a female householder (no husband present) compared to 34% in the Region and 27% in the state. Twelve 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 may 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 43% of the estimated 687 grandparents in Dare 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 Dare County's percentage of grandparents living with and financially responsible for their minor grandchildren is less than the Region (52%) and the state (48%).

Military Veterans

A population group that sometimes needs special health services is military veterans. An analysis of the 2010-2014 population estimates demonstrated that Dare County did not have the largest population of military veterans among the Regional comparisons. Veterans composed 11.1% of Dare County's overall adult civilian population in the period cited, which was consistent with 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, Dare County did have the largest percentage of veterans over the age of 65 among comparator groups: 53.0% of the veterans in Dare County were age 65 or older, compared to 42% in the Region and 41 % of NC.

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.

According to single five-year US Census Bureau estimates (2010-2014), there were 2,269 foreign-born residents residing in Dare County in 2014. Approximately 41% entered the US between 2000 and 2009, while approximately 20% entered between 1990 and 1999

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 1,050 households (7% of all households in Dare County) that speak a language other than English, the most common language is Spanish (82%). Among the Spanish-speaking households, 31% would be considered "limited English speaking". No other non-English speakers are considered linguistically isolated within Dare County.

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, Dare County has been assigned Tier 2 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:

- *Per capita personal income* is the income earned per person 15 years of age or older in the reference population.
- *Median household income* pertains to the incomes of all the people 15 years of age or older living in the same household (i.e., occupying the same housing unit) regardless of relationship. For example, two roommates sharing an apartment would be a household, but not a family.
- *Median family income* pertains to the income of all the people 15 years of age or older living in the same household who are related either through marriage or bloodline. For example, in the case of a married couple who rent out a room in their house to a non-relative, the household would include all three people, but the family would be just the couple.

In Dare County, the 2014 Per capital personal income was $30,958 which was $5,350 above the state average. This figure has only increased slightly since 2010. The 2014 Median household income was $55,520 which is also above the state average by $8,827. This figure has also increased slightly since 2010. The 2014 Median family income was $63,629 which is $6,301 above the NC average. This figure has actually decreased since 2010. It is worth noting that when compared to the Region, Dare County is the only county in the Region with income levels higher than the state average.

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.

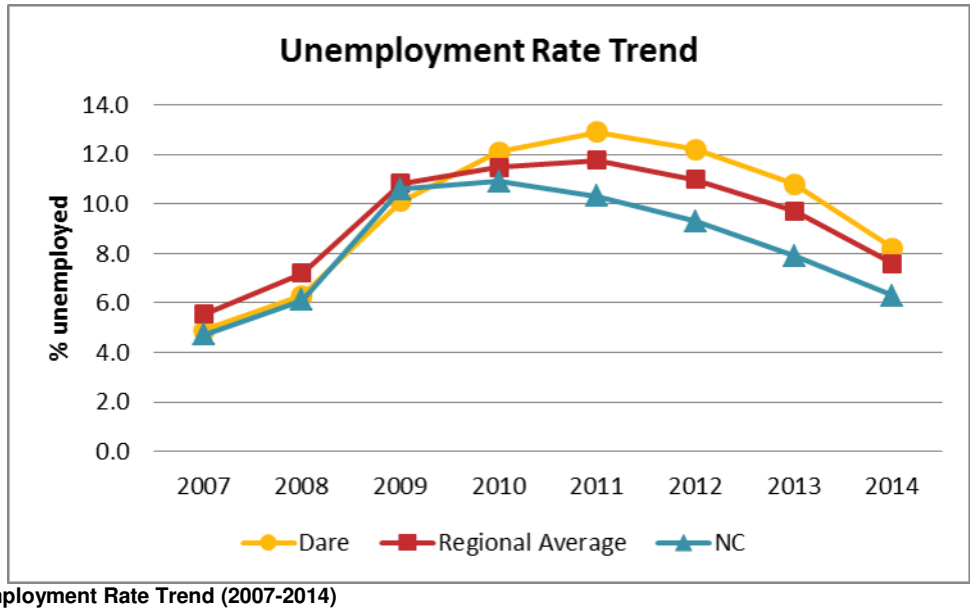
Employment by Sector

An examination of the various categories of industry by sector in Dare County and its three jurisdictional comparators for 2014 was completed. This analysis included 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 industry in Dare County that employed the largest percentage of the workforce (24.3%) was Accommodation & Food Services. This sector earned an average of $379 per week.
- Retail Trade accounted for the second largest percentage of the Dare County workforce, at 19.1%, followed by Real Estate & Rental & Leasing, at 12.66%. No other sector accounted for even 10% of the total workforce in Dare County, clearly illustrating the county's economic roots in—and dependence upon—the travel and tourism industry.
- It is important to note that persons working in the Accommodation and Food Services and the Retail Trade sectors tend to lack employment benefits such as health insurance and retirement programs; many in these sectors work for a low-wage, on a part-time basis, and sometimes work multiple jobs. These are sectors whose relative poverty leaves them vulnerable to emotional stress and poor health outcomes.
- 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 1,623 individuals were unemployed in Dare County, calculating to an unemployment rate of 8.2. Given the tourist industry in Dare County, it is an area clearly impacted by seasonal employment. The monthly average unemployment rate declined each month from 13.8 in January 2015 to a low point of 4.8 in August and then climbed again until it was 9.3 in December 2015 compared to the Region (7.3), 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

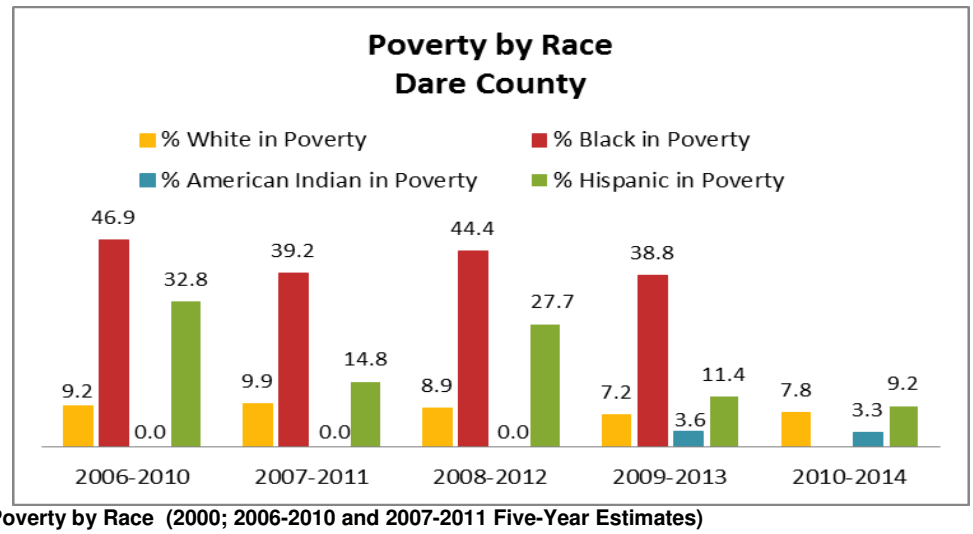
The poverty rate is the percent of the population (both individuals and families) whose money income (which includes job earnings, unemployment compensation, social security income, public assistance, pension/retirement, royalties, child support, etc.) is below a federally established threshold; this is the "100%-level" figure. The overall poverty rate in Dare County was much lower than the comparable state and Regional rate throughout the period of 2006-2010 through 2010-2014. The poverty rate for children under 18 has decreased overall since 2010 and remains lower in Dare County (13.8% in 2010-2014) compared to NC (25.0%) and the Region (35.7%). In 2014, an estimated 3,128 individuals, or 9% of the population, were living below the poverty level in Dare County. It is important to note that poverty may have strong racial and age components that are not discernible in these numbers.

	2006-2010	2007-2011	2008-2012	2009-2013	2010-2014
Dare	10.5	11.1	10.4	8.8	9.1
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 Dare County exceeded the comparable poverty rates for other racial and ethnic groups throughout most of the period cited. In NC as a whole, the highest poverty rate over most of the period cited occurred among Hispanics, followed by African Americans.



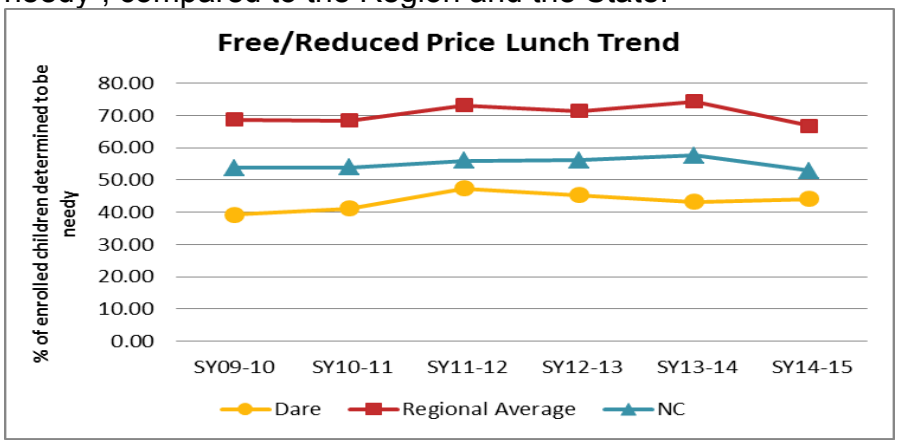
Graph 4. Persons in Poverty by Race (2000; 2006-2010 and 2007-2011 Five-Year Estimates)
Source: US Census Bureau, American Fact Finder, ACS 5-Year Estimates, 2010 through 2014, Table S1701 Poverty Status in the Past 12 Months. http://factfinder.census.gov/

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 Dare County enrolled for free or reduced-price school lunch has increased over time as shown in Graph 5. In Dare County, a lower percentage of students have been identified as "needy", compared to the Region and 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 Dare County homeowners, which has changed little over time, was $1,681 in 2014. This cost is $409 higher than the NC median. The estimated median gross monthly rent among Dare County renters has increased slightly since 2010 and was $1,041 in 2014. This figure is $250 higher 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 Dare County homeowners spending more than 30% of their monthly income on housing has increased from 53% in 2010 to 66% in 2014 (compared to 31% in NC in 2014). The percentage of renters spending more than 30% of their income on housing has decreased from 52% in 2011 to 39% in 2014 (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. Between 2009 and 2015, Dare County participated in only the most recent two years. The data reveals that Dare County reported In Dare County, 12 homeless people in 2014 and 44 in

2015. The majority of the homeless identified were adults (28 in 2015) but children in families are also among the homeless (9 children in 5 households in 2015). Veterans and the chronically homeless are two subpopulations that are important to note. In 2015, 1 veteran was counted and 22 chronically homeless individuals were counted.

Dare County's first homeless shelter initiative, Room in the Inn, opened in Kill Devil Hills in January 2009. This church-based, all-volunteer program was designed to provide temporary food and shelter for homeless people at area churches, primarily during the winter months (15). Host churches provide dinner, overnight accommodations, breakfast, and a bag lunch. Volunteer hosts stay overnight with the guests. The program utilizes a formal intake process off-site from the host church to screen participants; the screening includes a breathalyzer test. The intake worker drives the client to the hosting church and stays for an hour to assure all is well and answer question; the intake worker returns the following morning to return guests to the intake site.

It should be noted that accurate data on the size and nature of the homeless population is elusive at best, especially in a community like Dare County where it is possible to shelter out-of-doors for much of the year. It is likely that Room in the Inn hosted only a fraction of the total homeless population, especially during recent challenging economic times.

Educational Achievement

According to the US Census Bureau and the NC Public Schools data, a comparison of state and county data reveals that Dare County has a lower population who highest attainment was a high school diploma (or equivalent) only (24.4% in 2014) as compared to the Region (31.9%) and the state (26.9%). Dare County also has a higher population who had a bachelor's degree or higher (29.4% in 2014) as compared to the Region (16.4%) and the state (27.8%).

When comparing Dare County to the NC average, the 2014-2015 4-year cohort high school graduation rate was higher in Dare County Schools (93.8%) as compared to the Region (83.5%) and the state (85.6%). High school graduation rates were lowest among students with limited English proficiency (Dare 55.6%, region 47.6%, NC 57.8%).

Educational System

The number of students enrolled in Dare County schools fluctuates by less than a hundred students each year. During the 2014-15 school year, 5,144 students were enrolled in Dare County public schools. Statewide, the number of enrolled students has increased each year from 2009-2010 to 2014-15.

The high school drop out rate has decreased overall since 2011-12 to 2013-14, from 2.66 to 1.21, though it remains lower than in the Region (1.93) and the state (2.28) in 2013-14.

The high school reportable crime rate is variable in Dare County. In SY 2013-14 the county rate of 6.32 was much lower than the Regional average of 11.96 and the state rate of 12.37.

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 Dare County was higher than the comparable NC average, as well as the Regional Average, in every year cited from 2001-2014. However, it is important to note in 2014 the Dare County crime rate was the lowest it had been over the 14 year period with 3,597.7 crimes committed per 100,000 population.

A closer examination of crimes by type reveals that the majority of crimes committed are property crimes. While property crimes are more common, the Dare County property crime rate has decreased from a high of 6,359.6 in 2011 to 3,359.5 in 2014, though it has been consistently higher than the Region (2,705.6 in 2014) and NC (2,954.1 in 2014).

Violent crime rates fluctuate within Dare County. However, the county has seen an overall decrease in violent crimes since 2008 and the violent crime rate remains lower (238.1 in 2014) compared to the state (333.0) and the Region (315.5).

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). Complaints of “undisciplined” youth in Dare County between 2011-2014 did not follow a clear trend. In 2014, 18 youths were undisciplined which calculated to a rate of 3.86. The “rate” equals the number of events per 1,000 youth in the age group.

Over the same period the number and rate of complaints of “delinquent” youth in the county decreased from a high of 186 and 50.12, respectively, in 2011 to 79 and 20.36 in 2014. “Delinquency” refers to acts committed by youths that would be crimes if committed by an adult. Additional information reflects that 8 Dare County youth were sent to secure detention in 2011; 5 were sent in 2014.

Domestic Violence

Data from the NC Council for Women indicates the number of domestic violence clients seen by local agencies is variable in Dare County, ranging from a high of 571 in 2010-11 to a low of 324 in 2014-15. The number of services provided (advocacy, counseling, legal help, transportation, etc.) is similarly variable. In 2014-15, 1,755 services were provided to domestic violence clients. The domestic violence shelter serving Dare County did not reach full capacity on any day 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 Dare County have fluctuated without pattern over the period cited. A decreasing proportion of reports are eventually substantiated. Neglect-only cases composed the most common type of child maltreatment. In Dare County in 2014-15, 80% of the substantiated cases of abuse, neglect, or dependency (n=5) were white children [NC=57%]. 60% of the victims were male [NC=52%] and 80% were under the age of 5 [NC=52%]

Chapter Three: Health Resources

Health Insurance

The percent of uninsured adults aged 19-64 in Dare County changed very little over the three years shown. Compared to NC, Dare County tends to demonstrate higher 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, 11% of Dare 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 Dare County eligible for Medicaid increased annually in most years from 2009 through 2013. The Medicaid programs with the largest proportion of eligibles in 2013 were Infants & Children (49%), Medicaid Aid to Families with Dependent Children (AFDC) (19%) and Disabled (13%). In each month of 2013, an average of 201 aged individuals were eligible for both Medicaid and Medicare, significantly lower than the NC County average of 1,195 and a 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 Dare 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 health professional ratios in Dare County for MDs and RNs were higher than the Region but lower than state ratios.
- The Dare County ratio for primary care MDs exceeded the comparable Region and state ratios.
- The Dare County ratio for dentists and pharmacists exceeded the comparable Region and state ratios.

Although the health professional ratio for dentists in Dare County appears to be higher than state or national ratios, accessing dental care may still be a problem for Medicaid enrollees as there are limited dental practices which accept Medicaid and/or NC Health Choice clients.

Hospital - The Outer Banks Hospital

The Outer Banks Hospital (OBH), which is located in Nags Head, NC, opened in 2002. It is a full-service critical access hospital offering a wide range of inpatient and outpatient services, and is fully accredited by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO). OBH is a partnership between Vidant Health and Chesapeake Regional Medical Center.

The hospital has 21 private rooms. Two of the hospital's beds are designed as labor/delivery/recovery/postpartum rooms, and one is a Level 1 nursery bed. More than 400 babies are born at OBH every year. The Emergency Department employs physicians who are board certified in emergency medicine, and trauma-trained RNs. A Minor Care section helps accommodate

the increased volume of patients seen during the tourist season. Dare County Emergency Medical Services provides medical air transports out of the community utilizing the helipad adjacent to the hospital Emergency Department. The hospital has two operating rooms used for general surgery and a third designated for Cesarean sections.
OBH has a comprehensive, film-less diagnostic imaging department that offers X-rays, digital mammograms, 64-slice CT, fixed MRI, nuclear medicine, ultrasound, and PET/CT scan services. It also operates a CAP-accredited laboratory (25).

Dare County Department of Public Health

The mission of the Dare County Department of Public Health (DCDPH) is to serve to assure healthy people and healthy communities. The agency is working towards their vision of establishing Dare County as the healthiest county in North Carolina through trusted innovative leadership and community collaboration. The DCDPH operates agency facilities in Manteo, Frisco, and Kill Devil Hills. The agency's primary areas of service are described below, as summarized from the Dare County Department of Public Health Year End Report for FY2012 (27).

Community and Clinical Services Division

This division provides surveillance, prevention and education, and assures community and clinical services that assist in reducing health risks to county residents and visitors. The division's work focuses on clinical services, school health programs, public health emergency preparedness, and communicable disease control and surveillance services.

Community and Clinical Services Section

- **Adult Health** – provides screening and preventive services including physicals, immunizations, (limited) laboratory testing, and education on minimizing health risks.
- **Primary Care Management (PCM)** – provides nursing assessments and care management to Medicaid recipients with chronic or sustained illnesses.
- **Child Health** – provides preventive health services (e.g., well child health screenings and immunizations) and physical and developmental assessments to identify and minimize potential health risks for infants and children.
- **Community Alternative Program for Children (CAP-C)** – a care management program that provides direct services, connections to resources, and interdisciplinary care coordination so families can care for medically complex infants and children at home.
- **Community Care for Children (CC4C)** – a Medicaid program responsive to the needs of families with children up to age five at risk for medical or developmental delays or disabilities.
- **Health Check Coordination (HCC)** – a Medicaid program that helps families access health insurance coverage, periodic well child checkups, specialized medical services, dental care, age-appropriate immunizations, and transportation for their eligible children through age 19.
- **Baby LINKS** – provides skilled nursing assessments for postpartum mothers and newborns, provides new parents with parenting education, and links new mothers to indicated support services.
- **Family Planning** – provides both information and options so clients can exercise personal choice in determining the number and spacing of their children and improve health practices that will reduce long-term health risks.
- **Maternal Health** – provides early and consistent access to prenatal and postpartum care to uninsured and underinsured pregnant women.

- **Obstetrical Care Case Management (OBCM)** – a Medicaid program focused providing access to health care, and social service and community support systems to high-risk pregnant women and their families.
- **Breast and Cervical Cancer Control Services** – provides free or low-cost breast and cervical screening and follow-up services to uninsured and underinsured women.
- **Women, Infants and Children (WIC)** – a food supplement (food and infant formula) and nutrition education program for pregnant and post-partum women, infants, and children under age 5; also provides breastfeeding education and support and loans breast pumps.
- **Breast Feeding Peer Counseling** – provides education and support to pregnant and breastfeeding women in the WIC program.
- **Immunization Services** – offers immunizations for vaccine-preventable diseases and provides education to raise awareness of the importance of immunizations.
- **Diabetes Education and Management Program** – an American Diabetes Association-recognized program that offers individual and group education to people with diabetes.
- **Medical Nutrition Therapy (MNT)** – provides nutrition assessment, counseling, and education to improve individual and community health.
- **Telemedicine** - the DCDPH is working in partnership with the Engelhard Rural Health Clinic to identify opportunities to better support the health and health outcomes for the community through the use of Telehealth technology. One of the opportunities being explored is the expansion of current services/support to home health, hospice and substance abuse/mental health clients on Hatteras Island (particularly since access via customary transportation is often interrupted due to weather and/or road conditions). Another opportunity being explored is the availability of palliative care consults for primary care physicians in our community to enhance the quality of symptom management for patients at the end of life.

Health Services

Dialysis

There is one dialysis facility with 9 hemodialysis stations in Dare County, located in Manteo. No shifts are offered after 5pm.

Health Facilities

There is one licensed ambulatory surgical center in Kitty Hawk, no cardiac rehabilitation facility, and no licensed nursing pools in the county.

Mental Health Services

There are 3 mental health facilities: 1 offering day activity, 1 an intensive outpatient substance abuse program, and 1 supervised living facility for developmentally disabled adults.

Home Health/Hospice

Dare County has 4 facilities providing home care services, located in Kitty Hawk, Manteo and Southern Shores. One facility, in Manteo, offers home care, home care with hospice, and home health with hospice services. This provider was also accredited. One hospice-only facility is located in Nags Head.

School Nurses

The student to school nurse ratio has increased slightly since 2009-10 from 477:1 to 488:1 in 2012-13 but is still significantly lower than the recommended ratio of 750:1 and the state average of 1,177:1.

Long-Term Care Facilities

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

- Adult Care Homes/Homes for the Aged (1 facility): 102 beds
- Family Care Homes: no facilities
- Nursing Homes/Homes for the Aged (1 facility): 126 beds
- This facility also had 18 adult care home beds.

The long-term care facilities in the county are located in Kill Devil Hills and Nags Head. There are a total of 228 long-term care beds, or 1 bed for every 29 persons age 65 and older in Dare County (6,550 persons > 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 Dare County. This data does not include visitors to this area.

Hospital Utilization – Emergency Department - Gender and Age

Emergency Department utilization by gender was consistent with the demographics of Dare County. Females accounted for 54% of all ED discharges over the three year period reviewed (51% of Dare County population) and males accounted for 46% all ED discharges over the same period (49% of Dare County population).

An analysis of Emergency Department utilization by age reflects that Adult (age 18-64) patients accounted for 62% of all ED visits. This figure is consistent with the proportion of persons in this age group in the overall Dare County population, 62%. Pediatric (age 0-17) patients accounted for 15% of all ED visits. This figure is slightly lower than the proportion of persons in this age group in the overall Dare County population, 19% Senior (age 65+) patients accounted for 24% of all ED visits. This figure is higher than the proportion of persons in this age group in the overall Dare County population, 19%.

Hospital Utilization – Emergency Department - Racial and Ethnic Profile

An analysis of Emergency Department utilization by race and ethnic profile shows that Whites accounted for 88% of all ED visits. This figure is less than the proportion of persons in this racial group in the overall Dare County population (94%). Blacks/African Americans accounted for 6% of all ED discharges, which is higher than the proportion of persons in this racial group in the overall Dare County population (3%). Hispanics accounted for 5% of all ED discharges over the same period, which is less than the overall proportion in Dare County (7%). 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:

- Medicare (26.4%)
- Self-Pay (22.3%)
- Medicaid (20.9%)
- BCBS Managed Care (18.9%)

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 Dare County.

Hospital Utilization – Inpatient Admissions - Gender and Age

Females accounted 62% of all inpatient hospitalizations which is higher than the proportion of females within the total Dare County population (51%). Males accounted for 38% of inpatient hospitalizations which is lower than the proportion of males within the total Dare County population (49%). 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 48% of all inpatient hospitalizations. While this is the largest percentage group based on age, it is important to note that this percentage is significantly lower than the population of 18-64 year old individuals within the total Dare County population (62%). Pediatric patients (under the age of 18 years) accounted for 21% of inpatient hospitalizations which is slightly higher than the overall population of children under the age of 18 years within Dare County (19%). The Senior population (age 65+) accounted for 31% of all inpatient hospitalizations over the three year period examined. This is an important finding as this utilization is more than 1.5 times the proportion of the total county population represented by this age group (19%).

Hospital Utilization – Inpatient Admissions - Racial and Ethnic Profile

Examining the inpatient hospitalization data based on race and ethnicity, Blacks/African Americans accounted for 3% of all inpatient hospitalizations which is consistent with the proportion of the total county population represented by this racial/ethnic group. Whites accounted for 88% of all inpatient hospitalizations which is less than the composition within the total county population (94%). Hispanics accounted for 8% of all inpatient hospitalizations which is slightly higher than their representation within the overall Dare County population (7%).

Hospital Utilization – Inpatient Admissions - Payor Mix

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

- Medicare (32.7%)
- Medicaid (27.3%)
- BCBS Managed Care (21.7%)
- Self-Pay (5.2%)

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 Dare 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 Dare 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:

(number of new cases/population) x 100,000 = 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:

(number of deaths due to a cause/population) X 100,000 = 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, Dare County was ranked:

- 15th overall out of 100 (where 1 is best) for health outcomes
- 10th in length of life
- 30th for quality of life
- 24th overall out of 100 for health factors
- 73rd for health behaviors
- 42nd for clinical care
- 13th for social and economic factors
- 6th 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.

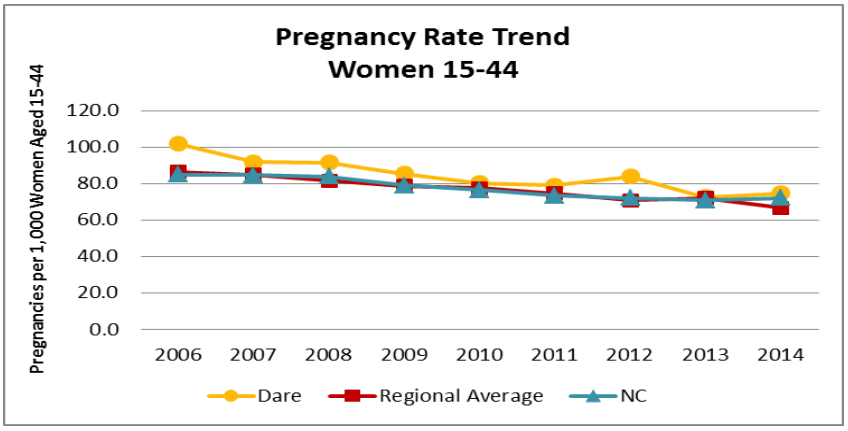
Maternal and Infant Health

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 Dare County, the region and the state have decreased overall since 2007. The 2014 pregnancy rate was 74.6 in Dare County, compared to 66.8 in the Region and 72.1 in NC.



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 Dare County have trended downward since 2008; however, increased rates in 2009 and 2012 have brought the County rate closer to the rates in the Region and state. The 2014 teen pregnancy rate was 30.0 in Dare County, compared to 39.0 for the Region and 32.3 for the state.

Among Dare County women age 15-44 the highest pregnancy rates appear to occur among Hispanics although they have demonstrated an overall decline from 2006-2014. The rate among Hispanic women is higher in Dare County compared to NC. Among Dare County teens, the rates over time appear quite variable and are unstable for most other racial groups. Dare County teen pregnancy rates for minorities tend to be higher than the State.

Pregnancy Risk Factors

Smoking During Pregnancy

The percentage of Dare County women who smoked during pregnancy increased between 2011 and 2014. When compared to Region and state data, the highest percentage of mothers who smoked while pregnant were in Dare County in 2014.

Inadequate Prenatal Care

The percentage of women receiving early prenatal care was lower in Dare County, compared to the Region and the State for most of the period below, but it rose to surpass both in 2014. Among racial groups, a slightly higher proportion of white women got prenatal care in the first trimester (77%) compared to African American women (60%) and Hispanic women (76%) in 2014.

Pre-Term, Low Weight and Very Low Weight Births

In Dare County from 2010-2014, there percentage of Pre-Term Births (babies born at less than 37 weeks) was 8.8%, 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 5.8% of live births in Dare County, compared to the Region (9.9%) and the state (9.0%).

The rate of low weight births has declined in Dare County since 2004-2008 and has remained lower than the state. The highest rate of low weight births, although unstable, is among African American mothers (18%).

Very Low Weight Births (babies weighing less than or equal to 1500 grams or 3.3 pounds at birth) occurred in 1.6% of live births in Dare County, compared to the Region (2.3%) and the state (1.7%). The rate has increased slightly overall since 2002-2006 but continues to remain lower than the state. The highest rate of very low weight births, although unstable, is among African American mothers (10%).

Infant Mortality

The total infant mortality rate in Dare County has decreased overall from a high of 7.1 in 2003-2007, but recent years have demonstrated an increase: from 4.1 in 2008-2012 to 5.5 in 2010-2014. It should be noted that all rates are technically unstable and should be interpreted cautiously.

The Dare County infant mortality rate has been consistently lower than the state (7.1 in 2010-2014) and the Regional (9.8 in 2010-2014) averages. According to the CDC, the 2013 infant mortality rate in NC was the 10th highest in the nation.

When infant mortality data was examined by race, none of the stratified rates were stable and therefore, were suppressed after 2008-2012. Although NC SCHS changed the categories used for racial stratifications in 2006-2010, the infant mortality rate tends to be higher among minority women in Dare County. When looking at the number of infant deaths, more infant deaths in Dare County occur among white women: 60% (6 of 10) in 2010-2014.

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 Dare County is 79.6. When compared to the Regional Mean (77.7) and the state (78.3), Dare County had the longest life expectancies in all categories (Male, Female, White, Black/African American).

County	Overall	Sex		Race	
		Male	Female	White	African-American
Dare	79.6	77.1	82.2	79.7	78.0
Regional Total	n/a	n/a	n/a	n/a	n/a
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 Dare County to the state. The causes of death are listed in descending order of rank in Dare County. Differences between Dare County and NC mortality rates are discussed below.

Age-Adjusted Rates (2010-2014)	Dare County No. of Deaths	Dare County Mortality Rate	Dare Rate Difference from NC
1. Diseases of Heart	353	174.0	+4.9%
2. Cancer	348	156.7	-8.8%
3. Pneumonia and Influenza	111	59.8	+239.8%
4. Chronic Lower Respiratory Diseases	87	42.0	-8.7%
5. All Other Unintentional Injuries	72	39.0	+31.8%
6. Cerebrovascular Disease	55	28.2	-34.4%
7. Alzheimer's disease	40	22.1	-24.3%
8. Suicide	30	16.8	+35.5%
9. Unintentional Motor Vehicle Injuries	21	13.4	-0.7%
10. Chronic Liver Disease and Cirrhosis	32	13.1	+35.1%
11. Nephritis, Nephrotic Syndrome, and Nephrosis	22	11.4	-32.9%
12. Septicemia	24	10.8	-16.9%
13. Diabetes Mellitus	15	7.5	-66.1%
14. Homicide	3	1.8	-68.4%
15. Acquired Immune Deficiency Syndrome	4	1.7	-34.6%

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, Dare County experienced a higher mortality rate than the state of NC for the following causes of death:

- Pneumonia and Influenza
- Suicide
- Chronic Liver Disease and Cirrhosis
- All Other Unintentional Injuries
- Diseases of Heart

In NC, the top three leading causes of death 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

Further examination of the leading causes of death by age reveal the top 3 causes of death in Dare County

Age Group	Rank	Cause of Death in Dare County (2010-2014)
00-19	1 2 3	Congenital anomalies (birth defects) Conditions originating in the perinatal period Motor vehicle injuries
20-39	1 2 3	Other Unintentional injuries Suicide Motor vehicle injuries
40-64	1 2 3	Cancer - All Sites Diseases of the heart Other Unintentional injuries
65-84	1 2 3	Cancer - All Sites Diseases of the heart Chronic lower respiratory diseases
85+	1 2 3	Diseases of the heart Pneumonia & influenza Cancer - All Sites

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 Dare 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:

- Heart disease
- Pneumonia and Influenza
- All Other Unintentional Injuries
- Suicide
- Liver Disease

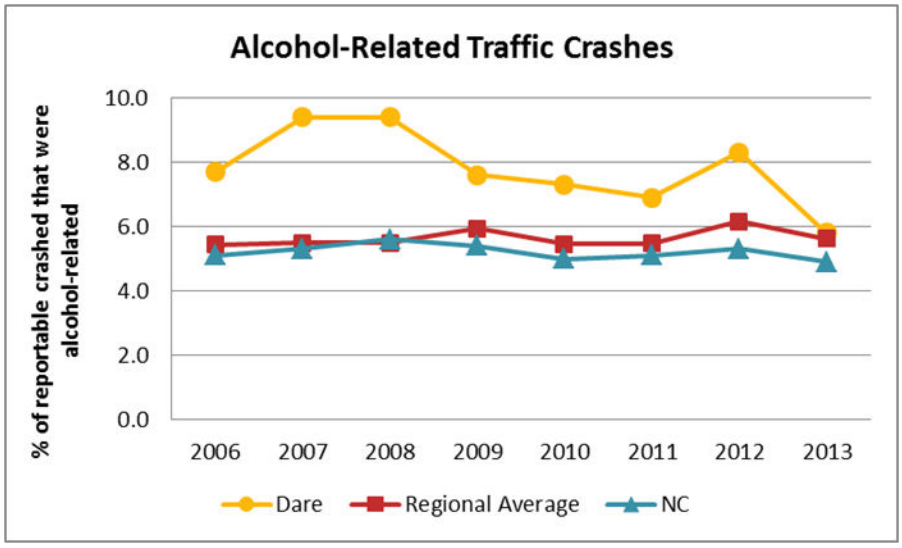
Dare County Rank by Descending Overall Age-Adjusted Rate (2010-2014)	Rate in 2002-2006	Rate in 2010-2014	% Change 2002-2006 to 2010-2014
1. Diseases of Heart	156.0	174.0	+11.5%
2. Cancer	195.7	156.7	-20.0%
3. Pneumonia and Influenza	60.6	59.8	-1.3%
4. Chronic Lower Respiratory Diseases	28.8	42.0	+45.8%
5. All Other Unintentional Injuries	40.1	39.0	-2.7%
6. Cerebrovascular Disease	44.9	28.2	-37.2%
7. Alzheimer's disease	18.4	22.1	+20.1%
8. Suicide	10.1	16.8	+66.3%
9. Unintentional Motor Vehicle Injuries	24.0	13.4	-44.2%
10. Chronic Liver Disease and Cirrhosis	9.6	13.1	+36.5%
11. Nephritis, Nephrotic Syndrome, and Nephrosis	10.5	11.4	+8.6%
12. Septicemia	13.6	10.8	-20.6%
13. Diabetes Mellitus	16.2	7.5	-53.7%
14. Homicide	3.1	1.8	-41.9%
15. Acquired Immune Deficiency Syndrome	1.7	1.7	No change

Table 7. 2002-2014 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

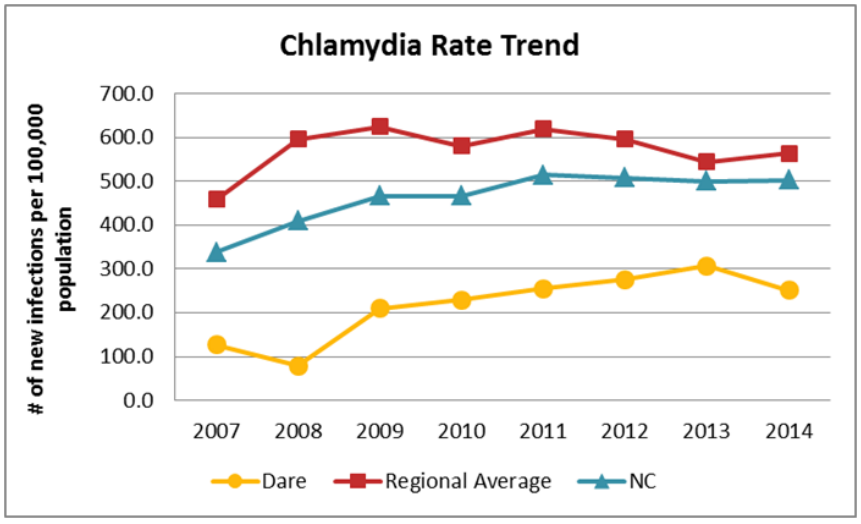
Dare County has a higher incidence of alcohol-related vehicular crashes than the state and region. According to the NC Highway Safety Research Center, over the period from 2006 through 2013, an average of 7.8% of all traffic crashes in Dare County were alcohol-related. Statewide, the comparable figure was 5.2% and it was 6% 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.hsrc.unc.edu/ncaf/crashes.cfm

Sexually Transmitted Infections – Chlamydia

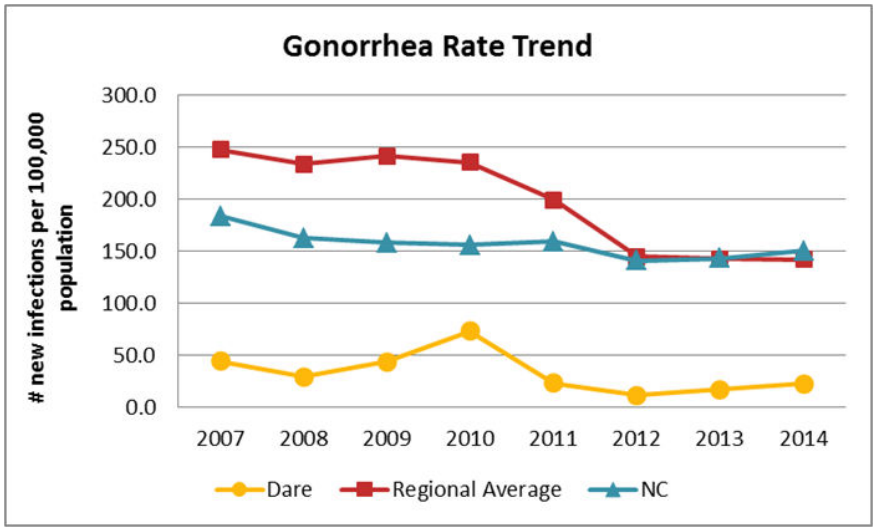
The chlamydia infection rate in Dare County has increased since 2008, though it remains lower compared to the state and the Region. In 2014, there were 88 new cases of chlamydia in Dare County, calculating to a rate of 250.7, compared to 501.9 statewide. Of the 15-24 year olds who were tested for chlamydia in 2011, 3.5% tested positive, compared to 10.9% in NC.



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

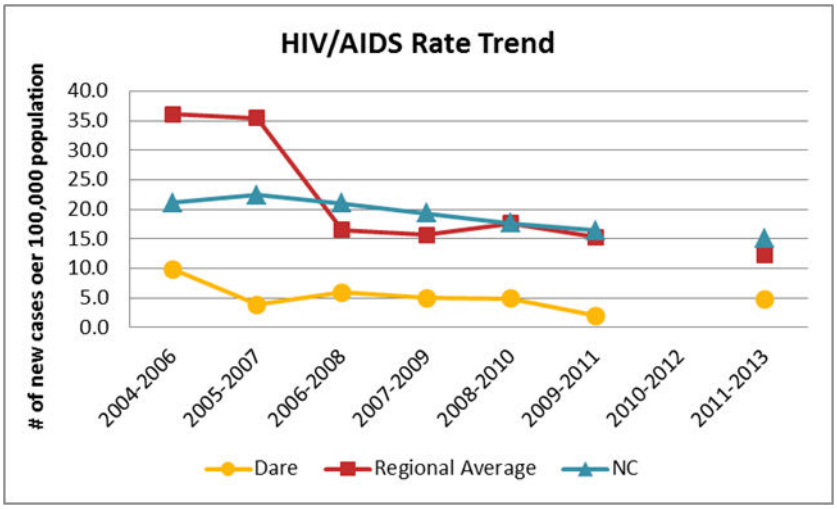
The gonorrhea infection rate in Dare County has increased recently but was lower than both the state and the Region throughout the period cited. Most of the recent rates are based on low numbers and should be interpreted with caution. In 2014, there were 8 new cases of gonorrhea in Dare County, calculating to a rate of 22.8, significantly lower than the state rate of 150.4. The gonorrhea rate was highest among African Americans in 2006-2010 (the last year for which stratified data is available): 406.9 compared to 48.2 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

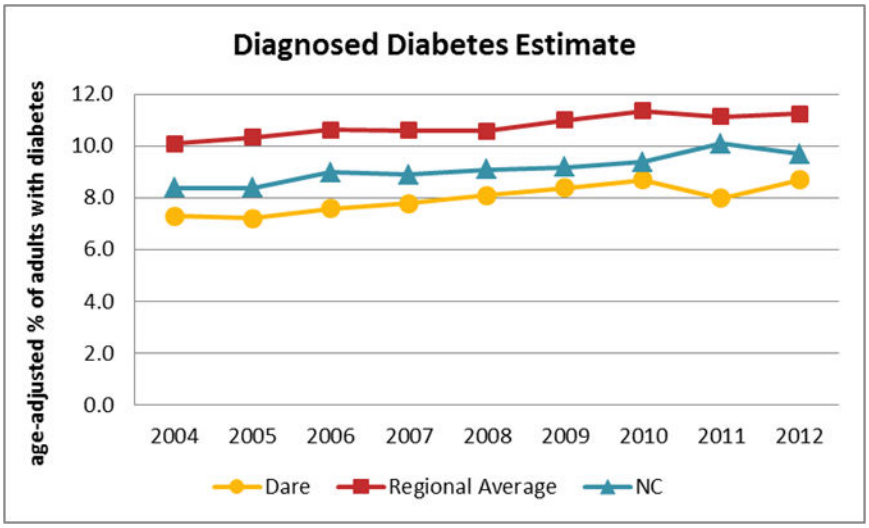
Although the numbers are too low to yield stable rates, the rate of newly diagnosed HIV infections in Dare County (an average of 5.7 between 2012-2014) was less than half the comparable state rate (13.4). When numbers are aggregated over three-year periods to stabilize them, the Dare County rates are still consistently and significantly lower compared to NC and the Region. Thirty-nine people in Dare 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 Dare County adults has increased overall since 2008 but was lower than the state and the Region for the entire period shown.
Over the 9-year period presented, the Dare County average was 8.0%, compared to 10.8% Region-wide and 9.1% across the state. Approximately 11.6% of respondents to the Dare County Community Health Survey reported having received a diagnosis of diabetes.



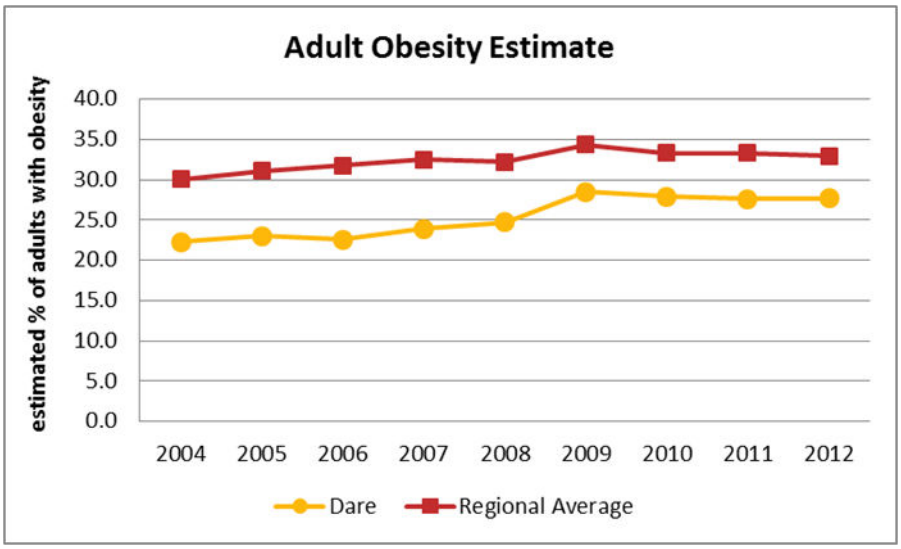
Graph 11. County-Level Data, Diagnosed Diabetes Prevalences, North Carolina, 2004 through 2012. Source: Centers for Disease Control and Prevention, National Diabetes Surveillance System: http://www.cdc.gov/diabetes/data/index.html

Because the prevalence of diabetes in Dare County may be increasing, it may be illustrative to examine hospital discharges among Dare County residents for diabetes (ICD-9 Code 250xx). These data are from TOBH only. Eight percent of all ED discharges under this code was composed of blacks; 85% was composed of whites.
There were no IP discharges under this code for blacks over the period cited. Ninety-four percent of all IP discharges were among whites.

The percentages of ED discharges among Dare County residents under this code for both females and males were rather static, but the total number and percentage for males were higher. The total number and percentages of IP discharges among females and males were similar.

Obesity in Adults

The average prevalence of obesity in Dare County was 25.4% in the period from 2004 through 2012, compared to 32.4% in the Region. [State data is not available]. The Dare County percentage was lower than the Region for the entire period presented and increased overall. Approximately 32.8% of respondents to the Dare County Community Health Survey reported having received a diagnosis of overweight or obesity.



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 Dare 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 Dare 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 20.6% of the participating children in Dare County age 2-4 were deemed "overweight", and an additional 15.1% were deemed "obese" (total = 35.7%). 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%. Among the 5-11 year olds, 24.6% were deemed overweight and an additional 17.5% were obese (total =42.1%), Statewide, 17.1% were overweight and 25.8% were obese, for a total of 42.9%. In the Region, an average of 20.4% were overweight and another 23.3% were obese (total = 43.7%).

Asthma

The Dare County rate of hospital discharges with a primary diagnoses of asthma was a fraction of the state rate (11.4 vs. 90.9 in 2014), and has decreased slightly over time (from 17.7 in 2010). Between 2010 and 2014 very few children (4 total over the 5 years) were discharged from NC hospitals with a primary diagnosis of asthma. Corresponding rates are unstable and significantly lower than NC and the Region. 14.5% of Dare County Community Survey respondents reported that they had received a medical diagnosis of asthma.

Mental Health

Between 2006 and 2014, the number of Dare County residents served by the Area Mental Health Program *decreased* overall by 41%. In 2014 940 Dare County residents were served, down from 1,327 the year before. Over the same 9-year period the number of Dare County residents served by State Psychiatric Hospitals *decreased* by 85%. In 2014, 10 persons were served, compared to a high of 69 in 2006. During the same 9-year period, a total of 557 Dare County residents were

served by NC State Alcohol and Drug Abuse Treatment Centers (ADATCs), with the number varying from year to year. 42 were served in 2014. 25.5% of Dare County Community Survey respondents reported having received a diagnosis of depression or anxiety.

The LME/MCO serving Dare 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 Dare 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.

Dare 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; long-term care options in Dare County seem particularly sparse

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 Dare County:

- **Pneumonia and influenza** – county mortality rates remain unaccountably high, especially since these conditions are at least partially vaccine-preventable.

- **Heart disease** – county mortality rate exceeds the NC rate and is increasing among both males and females.

- **CLRD** – although currently lower than the NC rate, the county mortality rate is increasing, especially among females.

- **Unintentional injuries** – county mortality rate is higher than NC rate, and although currently higher among males than females, the mortality rate among females is increasing faster than the rate among males.

- **Suicide** – county mortality rate significantly exceeds the NC rate and is increasing, especially among males.

- **Chronic liver disease** – county mortality rate significantly exceeds the NC rate and is increasing, especially among males.

- **Mental health** – utilization of the hospital ED for mental health problems is high, and a high proportion of survey respondents seem not to know where to seek treatment for a mental health problem.

Chapter Six: Community Feedback

Community Survey Methodology

Dare County Department of Public Health (DCDPH), the Outer Banks Hospital (OBH) and the Vidant Health system partnered to create a community survey designed to receive feedback from community members regarding health. The survey questions were adapted from the survey questionnaire 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 survey was implemented online and in paper copies and in English and Spanish. A total of 806 community members responded to the survey. The survey questions were designed to obtain feedback regarding health issues within the community, as well as to better understanding health behaviors and issues experienced by survey participants and their family members. The survey responses have been incorporated throughout this document.

Community Small Group Discussions Methodology

In addition to the survey questionnaire, The Dare County Department of Public Health partnered with the Outer Banks Hospital and the community to assemble and complete Community Small Group Discussions. Community Health Assessment coordinators served as Group Moderators and completed 7 small group discussions throughout Dare County.

Community Feedback Results

Key Feedback Received from all Community Feedback (survey and small group discussions):

- Participants valued a strong sense of community and the physical environment as valued benefits of living in Dare County.
- Access to healthcare is an ongoing concern of many participants.
- Community members noted concerns about individuals with Medicare/Medicaid not being able to obtain a primary care provider if they did not already have one, due to the fact that many physicians/providers are not accepting new patients with these payors and wait times for new patients to see a provider is long.
- The economy and financial concerns were identified as key barriers to being healthy.
- The uninsured, underinsured, and individuals who cannot afford services were consistently identified as groups not receiving necessary healthcare.
- Substance Abuse and Mental Health related concerns were frequently identified a health problems within Dare County.
- There were also concerns identified with regard to the elderly and Alzheimer's care.

Chapter Seven: Issue Prioritization

As information was gathered, it was presented to the Dare County Department of Public Health, Outer Banks Hospital, and The Healthy Carolinians of the Outer Banks Partnership, at the monthly HCOB meetings in 2016. In June of 2016, HCOB used a formal process to determine its community health priorities. Each member was given a list of the watch list items as identified through the 2016 Community Health Assessment then evaluated each according to a set of criteria. A score was assigned to each community health indicator. Average scores were calculated and each indicator was ranked in descending order.

The following criteria were used to evaluate the health indicators:

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?

As a result of this process, the HCOB will develop action plans addressing the top community health issues. This will guide the work of the Healthy Carolinians of the Outer Banks for the next three years.

Prioritization Process

Based on findings from the 2016 Community Health Assessment, members of HCOB Partnership identified the following health or social concerns for the county. The issues identified by consensus and are listed in no particular order below:

1. Older Adult Population Issues
2. Substance Abuse
3. Mental Health
4. Chronic Diseases
5. Unintentional Injuries

Members participated in and evaluated the inventory of services, discussed these issues, asked questions and then came to a consensus on the list. Then they participated in a formal prioritization process. Each participant was asked to evaluate each of the issues according to three criteria: (1) magnitude of the problem; (2) seriousness of the consequences; and (3) feasibility of correcting the problem. The scores are listed below:

<u>Magnitude of the Problem</u> (ranked 1-5 with 1 being the issue with the largest magnitude)

Ranked Issues Average

1. Older Adult Population Issues 2.85

2. Substance Abuse 2.35
3. Mental Health 2.85
4. Chronic Diseases 2.73
5. Unintentional Injuries 4.37

Seriousness of the Consequences (ranked 1-5 with 1 being the issue with the largest consequences)

Ranked Issues Average
1. Older Adult Population Issues 3.36
2. Substance Abuse 1.95
3. Mental Health 2.55
4. Chronic Diseases 3.30
5. Unintentional Injuries 3.89

Feasibility of Correcting the Problem (ranked 1-13 with 1 being the issue being the most feasible to correct)

Ranked Issues Average
1. Older Adult Population Issues 2.45
2. Substance Abuse 3.05
3. Mental Health 3.65
4. Chronic Diseases 2.55
5. Unintentional Injuries 3.30

Overall Average of all three questions (ranked 1-13 with 1 being the issues with average of the largest magnitude, most serious consequences and most feasible to correct)

Ranked Issues Average
1. Older Adult Population Issues 2.88
2. Substance Abuse 2.45
3. Mental Health 3.02
4. Chronic Diseases 2.86
5. Unintentional Injuries 3.84

Next, the Healthy Carolinians of the Outer Banks Partnership discussed the averages of each category and noted that several of the same health concerns were present in the top five throughout.

The Partnership discussed potential taskforce opportunities. Members noted that some of the health concerns could be grouped together. Based on the rankings and following discussion, the partnership elected to move forward with the following:

1. Continue *Healthy Weight* Taskforce- the group was requested to continue in their quest to address healthy weight/obesity concerns and look into opportunities to educate/prevent diabetes prevalence. This group is also expanding to reach families with a focus on healthy lifestyles (the group was originally tasked in 2010 with just reaching children).

2. Continue *Access to Healthcare* Taskforce- the group will look into ALL priority/watch list areas, while specifically looking into Older Adults's health with a focus on Dementia and Alzheimer's Concerns.
3. Continue Chronic Disease Taskforce – the group will examine opportunities to address diabetes, heart disease, and chronic lower respiratory disease
4. Invite the existing community based *Substance Abuse/Mental Health* task force to join HCOB and share information on a regular reporting cycle with HCOB members

Dare County Health Priorities for 2016-2019

- **Healthy Living / Chronic Disease**
- **Access to Care**
- **Older Adults, specifically focused on Dementia and Alzheimer's**
- **Substance Abuse / Mental Health**

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
Demographic Data	
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
Socioeconomic Data	
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
Sexual Assault	Number of complaints; types of perpetrators, by percent
Domestic Violence	Number of complaints
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	
Stoke 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
Communicable Disease	Counts by causative organism or disease; must be obtained from local health department
Inpatient Hospitalization Rate Trend	For state-defined list of health conditions
Dental Service Utilization by Medicaid Recipients	Stratified by age group (i.e., adults and children)
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

Health Resource Data

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 Survey and Small Group Discussion Questions

2016 Dare County Community Health Survey (English)

Welcome to My Survey

Thank you for participating in our survey. Your feedback is important.

2016 Dare County Community Health Survey (English)

* Do you live in Dare County?

- ◯ Yes - What town do you live in? (please choose "Next")
- ◯ No - We appreciate your time but need to ask that you do not complete the survey (please choose "Next")

2016 Dare County Community Health Survey (English)

* If you answered "Yes," what town do you live

2016 Dare County Community Health Survey (English)

Part 1: Quality of Life Statements

Please tell us whether you "strongly disagree", "disagree", "neutral", "agree" or "strongly agree" with each of the next 6 statements

* Q1. How do you feel about this statement, “There is good healthcare in Dare
Consider the cost and quality, number of options, and availability of healthcare in the

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
◯	◯	◯	◯	◯

* Q2: How do you feel about this statement, “Dare County is a good place to raise
Consider the quality and safety of schools and child care programs, after school programs, and places to play in this county.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
○	○	○	○	○

* Q3. How do you feel about this statement, “Dare County is a good place to grow
Consider the county’s elder-friendly housing, transportation to medical services, recreation, and services for

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
○	○	○	○	○

* Q4. How do you feel about this statement, “There is plenty of economic opportunity in Dare
Consider the number and quality of jobs, job training/higher education opportunities, and availability of

Strongly Disagree	Disagree	Neutral	Agree	Strongly agree
○	○	○	○	○

* Q5. How do you feel about this statement, “Dare County is a safe place to live”?
Consider how safe you feel at home, in the workplace, in schools, at playgrounds, parks, and shopping centers in the county.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
○	○	○	○	○

* Q6. How do you feel about this statement, “There is plenty of help for people during times of need in County”? Consider social support in this county: neighbors, support groups, faith community outreach,

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
○	○	○	○	○

2016 Dare County Community Health Survey (English)

Part 2: Community Improvement

Q7: The next set of questions will ask about community problems, issues, and services that are important to you. Remember your choices will not be linked to you in any way.

* **Please look at this list of community issues. <u>In your opinion, which one issue most affects the quality of life in Dare County?</u> (Please choose only one.)**

- ◯ Pollution (air, water, land)
- ◯ Dropping out of school
- ◯ Low income/poverty
- ◯ Homelessness
- ◯ Lack of/inadequate health insurance
- ◯ Hopelessnes
- ◯ Discrimination/racisim
- ◯ Other (please specify)
- ◯ Lack of community support
- ◯ Elder abuse
- ◯ Child Abuse
- ◯ Domestic Violence
- ◯ Violent crime (murder, assault)
- ◯ Theft
- ◯ Rape/sexual assualt

2016 Dare County Community Health Survey (English)

* Q8. a) In your opinion, which one of the following services needs the most improvement in neighborhood or community? (Please choose only one.)

- ◯ Animal control
- ◯ Child care options
- ◯ Elder care options
- ◯ Services for disabled people
- ◯ More affordable health services
- ◯ More affordable/better housing
- ◯ Number of health care providers (please provide what kind in
- ◯ Culturally appropriate health services/ interpreters
- ◯ Counseling/mental health/support groups
- ◯ Better/more recreational facilities (parks, trails, community
- ◯ Other (please specify)
- ◯ Healthy family activities
- ◯ Education / Schools
- ◯ Positive teen activities
- ◯ Transportation options
- ◯ Availability of employment
- ◯ Higher paying employment
- ◯ Road maintenance
- ◯ Road safety
- ◯ None

Q8. b) If your answer to Q8. a) is "number of health care providers," what kind?

- [ ] Addictionology (alcohol and drug abuse)
- [ ] Rheumatologist (arthritis)
- [ ] Urology (bladder, prostate, urinary)
- [ ] Hematology (blood vessels)
- [ ] Orthopedic (bones, joints, muscles and spine)
- [ ] Oncology (cancer and malignant diseases)
- [ ] Thoracic (chest)
- [ ] Obstetrics (childbirth / pregnancy)
- [ ] Pediatric (children)
- [ ] Proctology (colon and rectal)
- [ ] Gastroenterologist (digestive system)
- [ ] Otology (ear)
- [ ] Otolaryngology (ear, nose, throat)
- [ ] Geriatrics (elders)
- [ ] Gynecology (female reproductive)
- [ ] Endocrinology (glands)
- [ ] Cardiac, Cardiovascular (heart and blood vessels)
- [ ] Hypertension (high blood pressure)
- [ ] Maxillofacial (jaws, mouth and face)
- [ ] Nephrology (kidneys)
- [ ] Pulmonology (lungs / respiration)
- [ ] Psychiatry (mental health)
- [ ] Neurology (nervous system)
- [ ] Neonatology (newborn / infants)
- [ ] Rinology (nose)
- [ ] Bariatric (obesity)
- [ ] Dermatology (skin)
- [ ] Laryngology (throat)
- [ ] Radiology (x-ray / imaging)

2016 Dare County Community Health Survey (English)

Part 3: Health Information

* Q9. In your opinion, which one health behavior do people in your own community need more about? (Please suggest only one.)

- ◯ Eating well/nutrition
- ◯ Exercising/fitness
- ◯ Managing weight
- ◯ Going to a dentist for check-
- ◯ Going to the doctor for yearly check-
- ◯ Getting prenatal care during pregnancy
- ◯ Getting flu shots and other vaccines
- ◯ Preparing for an emergency disaster
- ◯ Using child safety seats
- ◯ Using seat belts
- ◯ Driving safely
- ◯ Quitting smoking/tobacco use
- ◯ Child care/parenting
- ◯ Elder care
- ◯ Caring for family members with special
- ◯ Preventing pregnancy and sexually
- ◯ Substance abuse prevention (ex: drugs
- ◯ Suicide prevention
- ◯ Stress management
- ◯ Anger management
- ◯ Domestic violence prevention
- ◯ None
- ◯ Other (please specify)

* Q10. Where do you get most of your health-related (Please choose only one.)

- ◯ Friends and family
- ◯ Doctor/nurse
- ◯ Pharmacist
- ◯ Church
- ◯ Internet
- ◯ My child's school
- ◯ Hospital
- ◯ Health department
- ◯ Help lines
- ◯ Books/magazines
- ◯ Other (please specify)

Q11. What health topic(s) / disease(s) would you like to learn more about?

* Q12. Which of the following health topics do you think your child/children need(s) more information (Check all that apply.)

- [ ] Dental hygiene
- [ ] Nutrition
- [ ] Tobacco
- [ ] STDs
- [ ] Drug Abuse
- [ ] Other (please specify)
- [ ] Reckless driving/speeding
- [ ] Eating Disorders
- [ ] Asthma management
- [ ] Diabetes management
- [ ] Sexual intercourse
- [ ] Alcohol
- [ ] Mental health issues
- [ ] Suicide prevention

2016 Dare County Community Health Survey (English)

Part 4: Personal Health

* Q13. Would you say that, in general, your health is…

- ◯ Excellent
- ◯ Very good
- ◯ Good
- ◯ Fair
- ◯ Poor
- ◯ Don't know/Not sure

* Q14. Have you ever been told by a doctor, nurse, or other health professional that you have any of following health conditions? (DK= Don't know/ Not

	Yes	No	DK
Asthma	◯	◯	◯
Depression or anxiety	◯	◯	◯
High blood pressure	◯	◯	◯
High cholesterol	◯	◯	◯
Diabetes (not during	◯	◯	◯
Osteoporosis	◯	◯	◯
Overweight/Obesity	◯	◯	◯
Angina/heart disease	◯	◯	◯
Cancer	◯	◯	◯

* Q15. Which of the following preventive procedures have you had in the past 12

- [ ] Mammogram (if woman)
- [ ] Bone density test
- [ ] Vision screening
- [ ] Prostate cancer screening (if man)
- [ ] Physical exam
- [ ] Cardiovascular screening
- [ ] Colon/rectal exam
- [ ] Pap smear (if woman)
- [ ] Dental cleaning/X-rays
- [ ] Blood sugar check
- [ ] Flu shot
- [ ] None of the above
- [ ] Cholesterol screening
- [ ] Blood pressure check
- [ ] Hearing screening
- [ ] Skin cancer screening

* Q16. In the past 30 days, have there been any days when feeling sad or worried kept you from going about your normal business?

Yes	No	Don't know/Not sure
○	○	○

Q17. During a normal week, other than in your regular job, do you engage in any physical activity or exercise that lasts at least a half an hour?

Yes	No (skip to question #20)	Don't know/Not sure
○	○	○

2016 Dare County Community Health Survey (English)

Q18. Since you said yes, how many times do you exercise or engage in physical activity during a normal week? (Write number)

Q19. Where do you go to exercise or engage in physical activity? Check all that apply.

- [ ] YMCA/Wellness Center
- [ ] Public Recreation Center
- [ ] Home
- [ ] Park
- [ ] Private gym
- [ ] Other (please specify)

Q20. Since you said "no", what are the reasons you do not exercise for at least a half hour during a normal week? You can give as many of these reasons as you need to.

- [ ] My job is physical or hard labor
- [ ] Exercise is not important to me
- [ ] I don't have access to a facility that has the things I need, like
- [ ] I don't have enough time to exercise
- [ ] I would need child care and I don't have it
- [ ] I don't know how to find exercise partners
- [ ] Other (please specify)
- [ ] I don't like to exercise
- [ ] It costs too much to exercise
- [ ] There is no safe place to exercise
- [ ] I'm too tired to exercise
- [ ] I'm physically disabled
- [ ] I don't know

Q21. How many times each week do you eat a meal outside the home (restaurants, fast food, sporting event. etc.)?

- ◯ 2-3 times each day
- ◯ once each day
- ◯ 1-2 times per week
- ◯ 3-5 times per week
- ◯ 2-3 times per month
- ◯ rarely/never

* Q22. In the previous 12 months, were you ever worried about whether your family's food would run before you got money to buy

- ◯ Yes
- ◯ No

* Q23. Have you been exposed to secondhand smoke in the past year?

- ◯ Yes
- ◯ No (Skip to question #25)
- ◯ Don't know/Not sure (Skip to question

* Q24. If yes, where do you think you are exposed to secondhand smoke most often? (Check only one place)

- ◯ Home
- ◯ Hospitals
- ◯ School
- ◯ Workplace
- ◯ Restaurants
- ◯ I am not exposed to second hand
- ◯ Other (please specify)

* Q25. Do you currently smoke? (Include regular smoking in social settings.)

- ◯ Yes
- ◯ No (If no, skip to question #27)

2016 Dare County Community Health Survey (English)

* Q26. If yes, where would you go for help if you wanted to

- ◯ Quit Line NC
- ◯ Pharmacy
- ◯ I don't know
- ◯ Doctor
- ◯ Private counselor/therapist
- ◯ Not applicable; I don't want to quit
- ◯ Church
- ◯ Health Department
- ◯ Other (please specify)

* Q27. Have you had a flu vaccine in the past year?

- ◯ Yes
- ◯ No
- ◯ Don't know/not sure

2016 Dare County Community Health Survey (English)

Part 5: Access to Care/Family Health

* Q28. Where do you go most often when you are sick? (Choose only one please.)

- ◯ Doctor's office
- ◯ Hospital
- ◯ Urgent Care Center
- ◯ Health department
- ◯ Medical Clinic
- ◯ Other (please specify)

* Q29. Do you currently have any of the following forms of health insurance or health care Please choose all that apply.

- ☐ Health insurance my employer
- ☐ Health insurance my spouse's employer
- ☐ Health insurance my school
- ☐ Health insurance my parent or my parent's employer provides
- ☐ Health insurance I bought
- ☐ Health insurance through Health Insurance Marketplace
- ☐
- ☐ Medicar
- ☐ Veteran's Administration
- ☐ No health insurance plan of any
- ☐ Other (please specify)

* Q30. In the past 12 months, did you have a problem getting the health care you needed for you or for a family member from any type of health care provider, dentist, pharmacy, or other

- ◯ Yes
- ◯ No (Skip to question #33)
- ◯ Don't know/Not sure

2016 Dare County Community Health Survey (English)

Q31. a) Since you said "yes," what type of provider or facility did you or your family member have getting health care from? You can choose as many of these as you need to.

- [ ] Dentis
- [ ] General
- [ ] Eye care/ optometrist/
- [ ] Pharmacy/
- [ ] Pediatricia
- [ ] OB/GY
- [ ] Health
- [ ] Hospita
- [ ] Urgent Care
- [ ] Medical
- [ ] Specialist (What
- [ ] Other (please specify)

Q31. b) If your answered "Specialist" in Q31. a) please provide what type of specialist(s)

- [ ] Addictionology (alcohol and drug abuse)
- [ ] Rheumatologist (arthritis)
- [ ] Urology (bladder, prostate, urinary)
- [ ] Hematology (blood vessels)
- [ ] Orthopedic (bones, joints, muscles and spine)
- [ ] Oncology (cancer and malignant diseases)
- [ ] Thoracic (chest)
- [ ] Obstetrics (childbirth / pregnancy)
- [ ] Pediatric (children)
- [ ] Proctology (colon and rectal)
- [ ] Gastroenterologist (digestive system)
- [ ] Otology (ear)
- [ ] Otolaryngology (ear, nose, throat)
- [ ] Geriatrics (elders)
- [ ] Gynecology (female reproductive
- [ ] Endocrinology (glands)
- [ ] Cardiac, Cardiovascular (heart and blood vessels)
- [ ] Hypertension (high blood pressure)
- [ ] Maxillofacial (jaws, mouth and face)
- [ ] Nephrology (kidneys)
- [ ] Pulmonology (lungs / respiration)
- [ ] Psychiatry (mental health)
- [ ] Neurology (nervous system)
- [ ] Neonatology (newborn / infants)
- [ ] Rinology (nose)
- [ ] Bariatric (obesity)
- [ ] Dermatology (skin)
- [ ] Laryngology (throat)
- [ ] Radiology (x-ray / imaging)

* Q32. Which of these problems prevented you or your family member from getting the necessary care? You can choose as many of these as you need to.

- [ ] No health
- [ ] Insurance didn't cover what I/we
- [ ] My/our share of the cost (deductible/co-pay) was too high.
- [ ]
- [ ] Hospital would not take my/our
- [ ] Pharmacy would not take my/our insurance or Medicaid.
- [ ] Dentist would not take my/our insurance or
- [ ] No way to get
- [ ] Medical office not open when
- [ ] Didn't know where to
- [ ] Couldn't get an
- [ ] The wait was too
- [ ] Other (please specify)

* Q33. If a friend or family member needed counseling for a mental health or a drug/alcohol abuse who is the first person you would tell them to talk

- ◯ Private counselor or
- ◯ School
- ◯ Doctor
- ◯ Support group (e.g., AA. Al-
- ◯ Don't
- ◯ Minister/religious
- ◯ Other (please specify)

Part 6: Emergency Preparedness

* Q34. Does your household have working smoke and carbon monoxide detectors? (Mark only one.)

- ◯ Yes, smoke detectors
- ◯ No
- ◯ Don't know/ Not
- ◯ Yes,
- ◯ Yes, carbon monoxide detectors only

* Q35. Does your family have a basic emergency supply kit?
(These kits include water, non-perishable food, any necessary prescriptions, first aid supplies, flashlight and batteries, non-electric can opener, blanket, etc.)

- ◯ Yes
- ◯ No (Skip to question
- ◯ Don't know/Not sure (Skip to question 37)

* Q36. If yes, how many days do you have supplies for? (Write number of days)

Q37. What would be your main way of getting information from authorities in a large-scale disaster or

- Televisio
- Internet
- Social networking site
- Other (please specify)
- Text message (emergency alert
- Radio
- Print media (ex: (newspaper)
- Neighbors
- Don't know/Not sure

* Q38. If public authorities announced a mandatory evacuation from your neighborhood or community due a large-scale disaster or emergency, would you evacuate?

- Yes (Skip to question #40)
- No (go to question #39)
- Don't know/Not sure (go to question

2016 Dare County Community Health Survey (English)

* Q39. What would be the main reason you might not evacuate if asked to do so? Check only one.)

- Lack of
- Concern about leaving property behind
- Other (please describe)
- Concern about traffic jams and inability to get out
- Health problems (could not be moved)
- Concern about personal
- Concern about leaving
- Don't know/ Not

2016 Dare County Community Health Survey (English)

Part 7: Demographic Questions

Q40. How old are you? (Mark age category.)

- ◯ 15 - 19
- ◯ 20 - 24
- ◯ 25 - 29
- ◯ 30 - 34
- ◯ 35 - 39
- ◯ 40 - 44
- ◯ 45 - 49
- ◯ 50 - 54
- ◯ 55 - 59
- ◯ 60 - 64
- ◯ 65 - 69
- ◯ 70 - 74
- ◯ 75 - 79
- ◯ 80 - 84
- ◯ 85 or older

Q41. Are you Male or Female?

- ◯ Male
- ◯ Female

Q42 .a) Are you Hispanic, Latino, or Spanish origin?

- ◯ Yes
- ◯ No (If no, skip to #43)

2016 Dare County Community Health Survey (English)

Q42. b) If yes, are you?

- ◯ Mexican, Mexican American, or
- ◯ Puerto Rican
- ◯ Cuban

Other Hispanic or Latino (please specify)

Q43. What is your race? (Please check all that apply.) (If other, please write in the person's race.)

- ◯ White
- ◯ Black or African
- ◯ American Indian or Alaska Native (List tribe(s) including
- ◯ Asian
- ◯ Other Asian including Japanese, Chinese, Korean, Vietnamese, and
- ◯ Pacific Islander including Native Hawaiian, Samoan, Guamanian/
- ◯ Other race not listed above (please write in race)

Q44. a) Do you speak a language other than English at home?

◯ Yes ◯ No (If no, skip to #45)

Q44. b) If yes, what language do you speak at home?

Q45. What is your marital status?

◯ Never Married/Single ◯ Unmarried partner ◯ Widowed

◯ Married ◯ Divorced ◯ Separated

Other (please specify)

Q46. What is the highest level of school, college or vocational training that you have finished? (Mark only one.)

- ◯ Less than 9th grade
- ◯ 9 - 12th grade, no diploma
- ◯ High school graduate (or GED/ equivalent)
- ◯ Associate's Degree or Vocational
- ◯ Some college (no degree)
- ◯ Bachelor's degree
- ◯ Graduate or professional degree
- ◯ Other (please specify)

Q47. What was your total household income last year, before taxes? Please select which category you fall into.

- ◯ Less than $10,000 to $15,000 to
- ◯ $25,000 to $35,000 to $50,000 to
- ◯ $75,000 to $100,000 or

Q48. How many people does this income support?

(Note: If you are paying child support but your child is not living with you, this still counts as someone living on your income.)

Q49. What is your employment status? (please check all that apply)

- ☐ Employed full-time
- ☐ Employed part-time
- ☐ Retired
- ☐ Armed forces
- ☐ Unemployed for more than 1 year
- ☐ Disabled
- ☐ Student
- ☐ Homemaker
- ☐ Self-employed
- ☐ Unemployed for 1 year or less

Q50. Do you have access to the Internet?

- ◯ Yes
- ◯ No
- ◯ Don't know/Not sure

Primary Data – Small Group Discussion 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?**
   Prompt: What do you 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?**
   Prompt: What challenges do you face that keep you from being healthy?

5. **What could be done to solve these problems?**
   Prompt: What could be done to make your community healthier?

6. **Have you or someone close to you ever experienced any challenges in trying to get healthcare services? If so, what happened?**
   Prompt: Is there any group not receiving enough health care? (If, so why?)

7. **What are the strengths related to health in your community?**
   Prompt: Specific strengths to healthcare?
   Prompt: Specific strengths to a healthy lifestyle?

Appendix D: Evaluation of 2013 Outer Banks Hospital's Implementation Plan

2013 Implementation Plan Evaluation

Priority: Access to Healthcare

Supporting Data

- 15.7% of Dare County Residents age 0-64 are uninsured (2010-2011).
- High utilization of the TOBH Emergency Department for "routine" care indicates that many residents do not have a medical home.
- High utilization for dental services indicates a need for resources for adult dental care.

Community Health Improvement Objective/Outcome

Objective: Increase access to healthcare for Dare County residents.

Outer Banks Hospital Strategies/Results to Increase Access to Healthcare

- TOBH Director of Community Outreach (DCO) served on the HCOB Access to Healthcare Task Force from 2013-2016. The Task Force developed a coordinated plan to educate uninsured individuals about insurance options available through the new PPACA legislation. As a result of the plan, an outreach worked was deployed within the community to sign people up for insurance.
- TOBH awarded Community Benefit Grants totaling more than $325,000 for projects that increased access to healthcare. See specific examples below.
- TOBH DCO served on the Dare County Transportation Advisory Board; participation resulted in grants awarded annually from TOBH to Dare County Transportation for medical transportation in or out of county. A total of $40,570 was awarded during the three year time period; these funds provided 679 rides/34,518 miles medical appointments.
- TOBH continued to support the Community Care Clinic of Dare (free clinic for the uninsured/indigent) by employing their Executive Director (full salary and benefits). TOBH also awarded a total of $116,075 in grant funds to the Community Care Clinic. The funds provided 4184 tests/procedures for 685 patients and supplied nearly $60,000 in prescription assistance for chronic disease maintenance and other medications.
- TOBH President serves on the Board of Directors for the Community Care Clinic of Dare.
- TOBH Department of Community Outreach operationalized a mobile health unit to provide free health screenings for individuals in our service area. Approximately 2,187 free wellness screenings were provided on the Health Coach from January 15, 2014 – September 30, 2016.
- TOBH Department of Community Outreach developed a health screen follow-up and referral system to assist participants who need additional care following the free health screenings. Patients were referred for hypertension, undiagnosed diabetes, suspected skin cancer, dental care, substance abuse counseling, and domestic

violence assistance just to name a few. Referral policies are in accordance with Stark Law, with the Community Care Clinic of Dare, ACA and Social Services and local non-profits being among some of the more common referrals.

Priority: Alzheimer's Disease / Aging Population

Supporting Data

- Alzheimer's is the 7th leading cause of mortality in Dare County.
- Dare's mortality rate has dramatically increased by 43.1% to 19.6/100,000.
- The median age in Dare County is 43.6; 6.2 years older than the median age in North Carolina.
- The proportion of all age groups 65+ in Dare County will increase accordingly by 2020:
  -65+ (61.7% to 8355)

  -65-74 (60.1% to 5078)

  -75-84 (55.3% to 2429)

  -85+ (96.3% to 848)

Community Health Improvement Objective

- Explore opportunities to enhance medical care for individuals with Alzheimer's.
- Develop a strategic plan to accommodate the aging population in our community.

Outer Banks Hospital Strategies/Results

- TOBH Chief Nursing Office and Volunteer Coordinator participated on the HCOB Dementia/Aging Task Force. Participation resulted in implementation of a plan for TOBH to become a *Dementia Friendly Hospital*. In-patient staff and leadership has been trained re: the special care needs for dementia patients and signage is now on the outside of the door of all patients with dementia. In additional, an *All About Me* form is in place for families to fill out with detailed information about the patient, should the patient not recall this information when the family is not there.
- TOBH now sponsors and participates in the planning of the annual Dare County Alzheimer's Walk. Sponsorship totals $15,000 in support during the three year time period.

- TOBH Strategic Plan adopted in 2015 includes the following objective: *Develop and expanded multispecialty nurse navigation program specifically designed to coordinate care across the continuum for targeted populations including older adults and seniors.* During 2016, a Chronic Disease Nurse Navigator position was approved in the FY 2017 budget. This will be a nurse who helps seniors coordinate care for chronic disease. There will be no charge for this service.

Priority: Colon Cancer

Supporting Data

- Mortality rates have decreased for all major site specific cancers *except colon cancer.*
- The colon cancer mortality rate has increased 72%, to an all time high of 16.2/100,000 – while the state rate saw an 18% decline.

Community Health Improvement Objective

- Increase adherence to colon cancer screening guidelines.

Outer Banks Hospital Strategy

- TOBH's Director of Cancer Services served on the HCOB Chronic Disease Task Force. Participation on this Task Force, as well as American College of Surgeons CoC Accreditation Standards, resulted in TOBH making a commitment to join the National 80 By 18 Initiative. During 2016, the initiative kicked-off with an effort to increase TOBH employee adherence to screening guidelines. Successful strategies will be deployed to the community during 2017; Wellness screenings on the Health Coach will also include FOBT beginning in 2017.

Priority: Chronic Lower Respiratory Diseases

Supporting Data

- The mortality rate for CLRD has risen 52% to 43.9/100,000, with CLRD now the 4th leading cause of death for Dare County residents.

Community Health Improvement Objective

- Increase access to supportive services for CLRD.

Outer Banks Hospital Strategy

- During 2015, TOBH began offering a Better Breather's Club; the club meets monthly and is free of charge to participants. The Club has met (11) times with an average of (10) participants each time.
- During 2016, TOBH sent our Oncology Social worker to a (5) day certification course for tobacco cessation counseling. She attended the Certified Tobacco Treatment Specialist Program administered by the University of Florida, accredited by the Association of Treatment of Tobacco Use Dependence. Since completing the training, TOBH Oncology Social Worker has been providing tobacco cessation counselling free of charge for inpatients and outpatients.

- During 2015, TOBH launched a lung cancer screening program in accordance with new Medicare guidelines approving Low Dose CT as an effective screening tool for lung cancer. Since January 1, 2015, we have provided 189 lung cancer screenings. The screenings are available to all who qualify regardless of ability to pay. Funds from the TOBH Development Council are used to pay for the screening for patients without insurance to pay for the LDCT.

Priority: Diabetes

Supporting Data

- The prevalence of diagnosed diabetes among adults has increased steadily from 7.9% in 2005 to 9.8% in 2009.

Community Health Improvement Objective

- Increase access to screening for diabetes.

Outer Banks Hospital Strategies

- TOBH Department of Community Outreach operationalized a mobile health unit to provide free health screenings for individuals in our service area. Approximately 2,187 free wellness screenings were provided on the Health Coach from January 15, 2014 – September 30, 2016. *Sample diabetes screening data* - During 2013-2014, OBH provided free glucose screening for 581 individuals. 63.2% had a normal reading, 36.8% had a reading between 100 and 399. Referrals were made for individuals with abnormal readings.

Priority: Heart Disease

Supporting Data

- Heart Disease is the #1 cause of mortality in Dare County.
- Dare's mortality rate has increased 12.3% to 182.4/100,000.
- Dare's mortality rate is 2% higher than the state rate.

Community Health Improvement Objective

- Increase access to screening for cardiovascular disease.

Outer Banks Hospital Strategies

- TOBH Department of Community Outreach operationalized a mobile health unit to provide free health screenings for individuals in our service area. Approximately 2,187 free

wellness screenings were provided on the Health Coach from January 15, 2014 – September 30, 2016. *Sample cardiovascular screening data* - During 2013-2014, OBH provided 592 BMI screenings, 624 Blood Pressure screenings, 580 Cholesterol screenings, and 580 Triglyceride screenings. Referrals were made for individuals with abnormal screenings.

Priority: Obesity

Supporting Data

- 28.6% of adults are obese (2009); this is an increase from 23.4% in 2005.
- 37.5% of elementary school students are overweight or obese (2011-2012).
- 37% of middle school students are overweight or obese (2011-2012).

Community Health Improvement Objective

- Decrease the percentage of elementary and middle school youth who are overweight or obese.

Outer Banks Hospital Strategies

- The TOBH DCO Chaired the HCOB Healthy Weight Task Force. The Task Force was able to collect primary level BMI data for all 3rd and 6th grade students in Dare County Schools. The data was used to develop strategies to reduce childhood obesity. The BMI data analysis resulted in a school nurse newsletter and calendar of healthy activities and nutrition information for children and families. TOBH also developed a Safe Routes to School Summer Camp to encourage students to be more physically activity. To date, the camp has been held at Nags Head Elementary School and Manteo Elementary School. The weeklong camp is free to participants.

Priority: Pneumonia/Flu

Supporting Data

- Pneumonia and Flu were reported as the 3rd leading cause of death for Dare County residents.
- Although the mortality rate has declined slightly to 49/100,000 (2011), it remains reported a full 31.1% higher than the state rate.

Community Health Improvement Objective

- Increase access to the influenza vaccine.

Outer Banks Hospital Strategies

- TOBH partnered with the DCDPH to implement free flu vaccination clinics. TOBH provided 2339 free flu vaccines during the three year period.

Other Community Benefit Initiatives

The Outer Banks Hospital, Inc. previously established the following initiatives based on results of the 2010 Dare County Community Health Assessment conducted by the Dare County Department of Public Health. These initiatives will continue and are part of TOBH's 2013-2016 Community Health Improvement Plan.

Priority: Substance Abuse

Supporting Data (2010 Dare County Community Health Assessment)

- 804 TOBH Emergency Department admissions specifically related to drugs were reported over a three year period (2010-2012).
- 45% of assessed Dare County Youth report substance abuse (2011-2012).
- Unintentional poisoning deaths (usually Rx drug) have recently risen in Dare County.

Community Health Improvement Objective

- Reduce substance abuse and its negative effects among Dare County residents.

Outer Banks Hospital Strategies

- TOBH coordinates and sponsors the Physicians' Council on Prescription Drug Abuse. A TOBH Hospitalist chairs the Council. TOBH DCO coordinates council activities which include Physician training re: prescription drug abuse and substance abuse counseling; use of the Controlled Substance Reporting System (CSRS) and signage in all of our clinical areas re: use of the CSRS.
- TOBH routinely hosts "medicine drop" events where community residents safely dispose of their unused /unwanted medications, including narcotics.

Priority: Breast Cancer

Supporting Data (2010 Dare County Community Health Assessment)

- Dare County's mortality rate was 5% higher than the state rate during the time period of 2004-2008 (30.4/100,00)

Community Health Improvement Objective

- Increase access to breast cancer screening.

Outer Banks Hospital Strategy

- TOBH provides free screening mammograms to uninsured individuals who live and work in Dare County. This program is funded by the TOBH Development Council's Get Pinked! Program. Since the program's inception on October 17, 2011, The Outer Banks Hospital, Inc. has provided more than 1200 free screening mammograms and diagnosed (5) invasive breast cancers.