Community Health Assessment

2016

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Executive Summary

Every four years, Harnett County Department of Public Health is required to conduct a Community Health Assessment (CHA). Through this assessment process, the local public health department works with other crucial partners and stakeholders in comprehensively reviewing the health status of the community as well as collecting information about perceptions of health and quality of life in the county. The Community Health Assessment document summarized these assessment efforts and provides the foundation for community health improvement planning over the next four years.

The 2015 Harnett County Community Health Assessment includes the following components:

- A community profile providing overall information on community demographics and socioeconomic factors, including context regarding social determinants of health.
- An analysis of leading causes of death in Harnett County and other secondary health outcomes data
- An overview of the survey data collection process and results
- A table outlining key health promotion activities by the local health department
- A description of the health priority determination process, including a summaries of important data related to key community health concerns which were presented to stakeholders in multiple community meetings
- Appendices providing more detailed information regarding county demographics, health behaviors & outcomes, and the results from the Community Health Survey

The Community Health Assessment Process

The CHA process began in January 2016 with the initial meeting of the Community Health Assessment Team (CHAT). In February, the CHAT met with members of the community coalition, Healthy Harnett, to revise and approve the survey to be used in primary data collection. In March 2016, survey data collection began and preliminary reports were shared with stakeholders throughout the summer. Concurrently, members of the CHAT began aggregating and analyzing secondary data. A full version of the report was first made available in the CHNA submitted by Harnett Health in September 2016. Draft versions of the complete CHA document were circulated to key stakeholders—including members of the Healthy Harnett Coalition, members of the Population Health Workgroup at Campbell University, and staff members through Harnett County Department of Public Health. In January 2017 through a series of

meetings, highlights from the report were shared with specific stakeholders and three specific health priorities were identified.

Harnett County Health Priorities: 2017-2020

Harnett County's health priorities are (1) Nutrition & Physical Activity, (2) Maternal & Child Health, and (3) Motor Vehicle Safety. In these priority areas, Harnett County's performance on health indicators differs substantively from peer counties and from the state of North Carolina. In addition, community members have rated these concerns as significant with regard to the urgency, severity, and feasibility of improvement efforts. Two of the three priorities (Nutrition & Physical Activity and Maternal & Child Health) are specifically aligned with the priorities of Healthy North Carolina 2020, while the third (Motor Vehicle Safety) represents a community health concern in which the progress being made statewide with reducing fatal crashes is not being paralleled in local data. The following brief descriptions highlight key findings with regard to each of the three priority areas, including specific data as well as recommendations for planning purposes:

- **Nutrition & Physical Activity** - In Harnett County, respondents to the Community Health Survey indicated the need to improve health education related to nutrition and dietary habits. These community perceptions align with self-reports (on the survey) of physical activity and consumption of fruits and vegetables that are below the recommended levels. In the community health improvement planning process, specific attention should be given to targeted educational activities with priority populations (e.g., low-income families), in addition to broader health promotion and policymaking efforts aimed at increasing utilization of parks and recreation facilities and improving affordable access to fruits and vegetables throughout the county.

- **Maternal & Child Health** - Like many areas of the state and nation, Harnett County has significant concerns with regard to infant mortality—particularly for minority populations. According to the most recent data (2011-2016), Harnett County ranks 21st in overall infant mortality rate among counties in our state. Even more striking, Harnett County has the ninth (9th) highest Black/African-American infant mortality rate in the state of North Carolina. Improving the maternal and child health outcomes in Harnett County will require careful attention to maternal health behaviors and the social determinants of infant death—particularly neonatal deaths. In the community health improvement planning process, specific attention should be given to targeted outreach and intervention with priority populations (e.g., Black/African-American mothers), in addition to broader prevention efforts aimed at improving pregnancy outcomes and reducing neonatal deaths.

- **Motor Vehicle Safety** - In the most recent report from the NC Department of Transportation (2015), Harnett County ranks ninth (9th) among the 100 counties of NC with regard to the fatal crash rate. The three year fatal crash rate for Harnett County (2.14/100 MVMT) is 46% higher than the fatal crash rate for peer counties. Over the last ten years, while the state of NC is reducing the number of crash fatalities by approximately 35 deaths per year, Harnett County remains stagnant over the period (reduction of less than 0.2 deaths per year). In 2015, almost half (45.5%) of fatal crashes in Harnett County were alcohol related and Harnett County ranks 13th highest among counties in NC in the percentage of alcohol-related crashes (5.7% overall). In the community health improvement planning process, specific attention should be given to alcohol use and the prevention of alcohol-related motor vehicle accidents, in addition to broader prevention efforts aimed at increasing seat-belt use and reducing distracted driving.

Next Steps

As this report is now completed, several next steps are needed to move the CHA from assessment to action:

1. Results from the 2016 Community Health Assessment will be disseminated to the community via online access, community organizations, media, and promotion through partnerships.

2. Action plans outlining evidence-based strategies to address the county's health priorities will be developed and submitted to the state in September 2016.

3. An annual State of the County's Health (SOTCH) Report will be compiled and released to provide timely updates on health indicators related to our community and the work surrounding our health priorities.

Introduction

Assessment is one of the core functions of public health. Periodically, local health departments are expected to comprehensively assess the health of the community and make recommendations regarding actions and programs that will prevent diseases and injuries, promote active and healthy living, and develop health-related policies for the greatest benefit to the public. The 2016 Community Health Assessment (CHA) for Harnett County updates information from the previous CHA (2013), presents new primary data that was collected through a systematic survey of citizens throughout the county, and synthesizes the data analysis and perspectives of a variety of stakeholders on the health priorities for Harnett County in the next four years.

The CHA Process

The 2016 Harnett County CHA began with a series of meetings in December 2015. Core members of the Community Health Assessment Team (CHAT)—including representatives from Healthy Harnett (a community coalition), Harnett Health, Harnett County Department of Public Health, Cape Fear Valley Health Systems, and Campbell University Department of Public Health—outlined a series of activities for collecting secondary and primary data throughout 2016. As a result of that planning, more than thirty individuals became involved in survey data collection throughout the county, key leaders in health, government, and the community-at-large provided perspectives on the needs and assets of the county, and preliminary data reports were shared at a variety of meetings throughout the year. Since the local health department and local hospital system aligned the assessment cycles, some of the data was officially reported in the Community Health Needs Assessment (CHNA) by Harnett Health, which was made publicly available in September 2016. In comparison, the CHA provides a more extensive data book (Appendices A-D) than was required for the CHNA, with detailed information regarding demographic and socioeconomic data, health assets, health outcomes and mortality data, and results from the community health survey. Additionally, the CHA is more broadly focused than the CHNA and offers insight into health strategies for Harnett County that go well beyond the clinical care systems.

Data Gathering and Reporting

Starting in February 2016, staff members from Harnett Health and Harnett County Department of Public Health along with faculty and students from Campbell University Department of Public Health began reviewing the available data from US Census, NC State Center for Health Statistics, The Log Into North Carolina (LINC) database, NC Department of Public Instruction, the Bureau of Labor Statistics, and a variety of other sources.

The NC Division of Public Health organizes the counties of North Carolina into groups of five “Health Stats Peer Counties” for comparison during the CHA process. Harnett

County is included with Group C, which also includes Craven, Davidson, Johnston, and Randolph Counties. These counties were grouped together as a result of sharing the following attributes:

- Population size: 103,505-168,878
- Individuals living below poverty level: 16.1%-18.1%
- Population under 18 years: 23%-28%
- Population 65 years and over: 10%-15%
- Population density (people per square mile): 146-295

When collecting data, it was important for the assessment team to gather not only the information for Harnett County, but also data for each of the peer counties and for the state as a whole. In most cases, the assessment team reports the average for peer counties as comparison data for Harnett County. In some cases, specific peer outliers necessitated the reporting of all of the peer counties individually alongside the data from Harnett County. In the appendices of the CHA, nearly 100 tables of data on Harnett County, the peer counties, and the State of NC are presented on topics ranging from educational attainment to pregnancy outcomes to motor vehicle fatalities.

In all cases, the primary sources of information are noted at the bottom of data tables and, where possible, direct hyperlinks are provided to facilitate further investigation of the data.

Community Health Survey

The Community Health Survey for Harnett County was adapted from the model survey provided by the North Carolina Division of Public Health. The survey was initially amended to include specific questions of relevance to the CHNA process for Harnett Health as well as to include specific questions of interest by Harnett County Department of Public Health. Additionally, students from Campbell University Department of Public Health utilized a cognitive interviewing process with more than thirty community volunteers to refine the format and content of the survey. The final version of the survey was approved for distribution by Harnett Health, Harnett County Department of Public Health, and the Healthy Harnett coalition in February 2016.

The distribution of the Community Health Survey for Harnett County was conducted in March 2016. A total of 265 residents were surveyed using Two-Stage Cluster Sampling. Similar methodologies are used by the World Health Organization for rural immunization rate assessments, by NC Regional Surveillance Teams during rapid assessment in disaster response, and other public health contexts. Using two-stage sampling approaches, representative samples can be obtained using minimal resources and with particularly efficient timelines. (For more information on this sampling

approach, please see Appendix F of the guidance document for North Carolina Community Health Assessments.)

In this case, thirty-three (33) of Harnett County's census block groups were selected using simple random sampling. Then, within each census block group selected, eight (8) home addresses were selected using simple random selection. Over a two-week period in March 2016, survey teams visited the addresses selected through the two-stage process and administered the surveys using face-to-face interviewing. The resultant sample is representative of the county as a whole across nearly every demographic category.

County Description

Harnett County is a landlocked county located in central North Carolina. It is bordered by Wake County to the northeast, Johnston County to the east, Sampson County to the southeast, Cumberland County to the south, Moore County to the southwest, Lee County to the northwest, and Chatham County to the north- northwest. Harnett County encompasses a land area of approximately 595 square miles, and a water area of six square miles. The county is divided geopolitically into 13 townships: Anderson Creek, Averasboro, Barbecue, Black River, Buckhorn, Duke, Grove, Hectors Creek, Johnsonville, Lillington, Neills Creek, Stewards Creek, and Upper Little River townships (Figure 1). The Town of Lillington (Lillington Township) is the county seat. Other municipalities recognized as "cities" or "towns" by the US Census Bureau include Angier (Black River Township), Coats (Grove Township), Dunn (Averasboro Township), and Erwin (Duke Township). County geopolitical divisions also include 22 unincorporated communities.

Harnett County is a growing yet still predominately rural county linked by proximity to the economic and cultural opportunities in its more populous surrounding counties, especially Wake County, home to Raleigh, the state's capitol city. Harnett County is not a major tourist destination; it is favored instead by residents seeking the relatively greater affordability of housing and quieter lifestyle possible within striking distance of major employment, healthcare and military centers.

Only one Interstate Highway traverses Harnett County: Interstate 95 runs from the northeast to the southeast along the easternmost edge of the county, through the City of Dunn. Three major US routes serve the county: US 301 parallels I-95 just to its west; US 401 runs north-south through the county and US 421 runs east-west. The southwest corner of the county is served by NC 87 and the north and eastern parts of the county are served by NC 55.

North Carolina Map – Harnett County Highlighted in Dark Blue

Population Growth and Age Distribution

Harnett County has an approximate population of 114,678 persons in 2010 according to the U.S. Census Bureau. The population of Harnett County increased by 10.4% between 2010 and 2014, with a median age decrease from 33.5 years in 2010 to 33.4 years in 2014. Population in 2016 is estimated to be 130,243 residents by the North Carolina Office of State Budget and Management. By 2019, AccessNC data from NC Department of Commerce projects the total population for Harnett County to be 146,067.

Age Distribution, Harnett County (2010 & 2014)

	2010		2014	
Age Range	**Number**	**Percent**	**Number**	**Percent**
< 5 years	9,304	8.1%	9,489	7.5%
5-19 years	26,166	22.8%	28,486	22.5%
20-29 years	16,055	14.0%	18,038	14.2%
30-39 years	16,705	14.6%	18,884	14.9%
40-49 years	15,685	13.7%	16,584	13.1%
50-59 years	13,406	11.7%	15,056	11.9%
60 years and older	17,357	15.1%	20,129	15.9%
Total	114,678	100%	126,666	100%

Source: U.S. Census Bureau, American Fact Finder Based upon 2010 Census

As shown in the previous table, population growth in Harnett County increased at an annual rate of 2.1% from 2010 to 2014.

Gender, Harnett County and North Carolina (2010)

Gender	Harnett	Percent	NC	Percent
Female	58,479	51.0%	4,889,991	51.3%
Male	56,199	49.0%	4,645,492	48.7%
Total	114,678	100%	9,535,483	100%

Source: US Census Bureau, American Fact Finder; North Carolina State Center for Health Statistics ("NCSCHS")

Gender, Harnett County and North Carolina (2014)

Gender	Harnett	Percent	NC	Percent
Female	63,958	50.5%	5,099,371	51.3%
Male	62,708	49.5%	4,844,593	48.7%
Total	126,666	100%	9,943,964	100%

Source: US Census Bureau, American Fact Finder; North Carolina State Center for Health Statistics ("NC SCHS")

In comparison, North Carolina's mean age is 37.8 and Harnett County's population is younger at 33.4. In addition, the population of Harnett County was projected to increase by an additional 2.1%.

Race and Ethnicity

According to the U.S. Census Bureau, the racial composition of Harnett County residents is predominately White (40.8%) and African American (32.8%), with 26.4% representing racial or ethnic minority groups. As shown in the following table, the race distribution in Harnett County is more diverse than that of North Carolina as a whole.

Race and Ethnicity, Harnett County and North Carolina (2010)

Race and Ethnicity	Harnett County		North Carolina	
White	73,707	64.3%	6,223,99	65.3%
Black or African American	23,591	20.6%	2,019,85	21.2%
American Indian and Alaska Native	991	0.9%	108,829	1.1%
Asian	983	0.9%	206,579	2.2%
Native Hawaiian and Other Pacific Islander	126	0.1%	5,259	0.1%
Two or More Races	2,719	2.4%	155,759	1.6%
Hispanic or Latino Origin	12,359	10.8%	800,120	8.4%
Other	202	0.2%	15,088	0.2%
Total	114,678	100%	9,535,48	100%

Source: U.S. Census Bureau, American FactFinder

Family Configuration

As evidenced by the population age distribution, there are more households with one or more members under the age of 18 years in Harnett County (39.7%), compared to North Carolina (33.0%). Additionally, there are fewer households with one or more-person age 65 and over in Harnett County (21.3%), compared to North Carolina (23.9%). With the average North Carolina household size of 2.48 persons, Harnett County households are slightly larger at 2.68, with a mean size of 3.16 persons per family.

Education

Harnett County School's mission is for all students to graduate college and be career ready, globally competitive and prepared for life in the 21st century. However, as compared with North Carolina, Harnett County has fewer people who have obtained either a bachelor's degree or graduate or professional degree as illustrated in the table below.

Education Breakdown, Harnett County and North Carolina (2014)

Factor	Harnett County	North Carolina
Less than 9th Grade	5.5%	5.6%
High School, No Diploma	9.8%	9.1%
High School Graduate *(includes equivalency)*	30.7%	26.9%
Some College, No Degree	25.2%	21.9%
Associate's Degree	10.0%	8.8%
Bachelor's Degree	12.9%	18.2%
Graduate or Professional Degree	6.0%	9.5%
Total	100.0%	100.0%

Source: U.S. Census Bureau, American Fact Finder

About 423 (38.8%) of Harnett County students took the SAT test with an average SAT score of 1,374. Approximately 58,022 (59.0%) of students across North Carolina took the SAT test with an average SAT score of 1,478. The North Carolina SAT scores are approximately 7.5% higher than Harnett County, as shown in the following table.

SAT Scores, Harnett County and North Carolina (2015)

Harnett County	North Carolina
1,374	1,478

Source: ncpublicschools.org

Employment, Household Income, and Poverty

Harnett County has a heritage of agriculture but began the transition to manufacturing in the early 1920s. Some of the areas' major private employers include Harnett Health System, Food Lion, Campbell University, Edwards Brothers, Wal-Mart, and Rooms To Go. Public employers include Harnett County Public Schools and Harnett County Government.

The U.S. Census Bureau reports Harnett County's mean income of $56,723, which is $7,832 less than the mean household income in North Carolina. The per capita income is $20,274 for Harnett County and $25,608 for North Carolina. Harnett County's lower mean and per capita income can be attributed to a high unemployment rate 6.7% in

Harnett County compared to 5.7% for the state of North Carolina according to Bureau of Labor Statistics (October 2015).

Household Income and Benefit Dollars, Harnett County and North Carolina (2014)

Income Level	Harnett County	North Carolina
Below $10,000	7.6%	8.2%
$10,000 - $24,999	18.9%	18.2%
$25,000 - $49,999	28.2%	26.7%
$50,000 - $99,999	31.1%	29.5%
$100,000 - $199,999	12.7%	14.2%
$200,000 and Above	1.5%	3.4%
Median Household Income	$44,417	$46,693
Mean Household Income	$56,723	$64,555
Per Capita Income	$20,274	$25,608

Source: U.S. Census Bureau, American Fact Finder

As shown in the previous table, over half (54.7%) Harnett County households report an annual income (including benefit dollars) of under $50,000. In 2014, 18.2 percent of Harnett County residents lived below the poverty level compared to 17.6 percent of state residents. Harnett County had a lower percentage (24.5%) of children in poverty compared to North Carolina's percentage of 25.0%, as shown in the following table.

Poverty Rates, Harnett County and North Carolina (2014)

County / State	% of Residents living in Poverty	% of Children living in Poverty
Harnett County	18.2%	24.5%
North Carolina	17.6%	25.0%

Source: countyhealthrankings.org & quickfactcensus.gov

The number of Harnett County residents living in poverty is 0.6% higher than the North Carolina average.

Housing and Cost of Living

Historically, one of the greatest wealth-building opportunities for families living in America was home ownership. Home equity was by far one of the most effective means of obtaining wealth for middle class Americans. Recession and foreclosures have caused a negative impact on financial institutions, home-owners and the community as a whole.

The table below shows the values of owner occupied homes in Harnett County and the state. Median home values in Harnett County ($133,400) are approximately 13.2% less

than the median home value for North Carolina ($153,600). Only 24.7% of homes in the Harnett County are valued at or above $200,000, while 34.0% of homes in North Carolina are valued at or above the same price point, as shown in the following table.

Values of Owner Occupied Homes Harnett County and North Carolina (2014)

Factor	Harnett County	North Carolina
Less than $50,000	13.0%	10.2%
$50,000 to $99,999	21.8%	18.0%
$100,000 to $149,999	22.1%	20.3%
$150,000 to $199,999	18.4%	17.5%
$200,000 to $299,999	16.2%	17.5%
$300,000 to $499,999	6.4%	11.3%
$500,000 to $999,999	1.7%	4.3%
$1,000,000 or more	0.4%	0.9%
Median	$133,400	$153,600

Source: U.S. Census Bureau, American Fact Finder

In 2014, Harnett County had 41,601 occupied housing units. 66.1 percent (27,488) of the units were owner-occupied and 33.9 percent (14,113) of the units were renter occupied.

Prevention and Health Promotion Activities

There is an array of community-based health promotion resources in Harnett County. The resources below highlight partnerships and programs that address the Community Health Assessment (CHA) topic areas, identified.

Community Action Plans will be developed and within the action plans, strategies will be developed that can create change at multiple levels and in alignment with the Healthy North Carolina 2020 focus areas.

Nutrition and Physical Activity:

The Harnett County Health Department Health Promotion Division works to collaborate with partners throughout the community, such as worksites, schools, faith communities, businesses, families, and individuals to promote healthy lifestyles. The goal is to encourage changes that will support increased physical activity, healthy eating, disease prevention, injury prevention, and tobacco cessation in the community.

Living Healthy is a skill-building workshop series that helps people with one or more chronic conditions (e.g. diabetes, chronic pain, hypertension, cancer, arthritis) learn to manage their condition and their life. *Living Healthy* sessions address action planning, nutrition, fitness, medication management, communication with health care providers, dealing with fatigue and pain, fall prevention, etc. as strategies for self-managing chronic conditions. This evidence-based program was developed by Stanford University.

Maternal and Child Health:

The Harnett County Health Department along with community partners will be developing a community action plan focusing on maternal health and child health (infant mortality) using the collective impact model. The Maternal Health program at the Health Department provides care of pregnant women, including regular check-ups, prenatal education, laboratory tests, nutrition counseling, and breastfeeding support. Special programs also include postpartum home visits.

WIC is available to pregnant, breast feeding and postpartum women, infants and children up to age five. WIC helps families by providing vouchers for buying healthy supplemental foods from WIC-authorized vendors, nutrition education, and help finding healthcare and other community services.

Care Coordination for Children (CC4C) a voluntary program designed to help families improve health outcomes of their children from birth to age 5 who qualify for services.

Pregnancy Care Management (PCM) this program provides care management services for high risk women during pregnancy and for two months after delivery by a care manager.

The Teens as Parents program which is an Adolescent Parenting Programs (APP) secondary pregnancy prevention program.

Motor Vehicle Safety:

The mission of Safe Kids Harnett County is to reduce death and injury to children ages 0-19 years in Harnett County through prevention, intervention, and education.

Harnett County Child Fatality Prevention Team (CFPT) works to promote the development of a community wide approach to understanding the causes of childhood fatalities, identify the deficiencies in public services to children and families, and to make and carry out recommendations for change to prevent future childhood deaths.

Harnett County Sheriff's Office along with local Police Departments.

For a more comprehensive listing of prevention and health promotion resources refer to the Harnett County Health Department's web site, Community Resource Guide, located at www.harnett.org/health.

Collecting Primary Data

Secondary data analysis and expert opinion both provide important information for assessing the health of the community. However, additional assessment effort must be directed at the collection of data regarding the perspectives, knowledge, and opinions of community members about health, health behaviors, and the opportunities for wellness in the county. The primary way in which community members' data was collected for the 2016 CHA is through the Community Health Survey.

The survey was based largely from the model survey published by the NC Division of Public Health and adapted for local use by members of the Community Health Assessment Team. The final version of the survey contained 52 questions. The survey questions were organized into the following areas:

- Quality of Life Statements
- Community Improvement Priorities
- Health Information
- Personal Health
- Access to Care
- Emergency Preparedness
- Demographics

The sampling methodology was a Two-Stage Cluster Sampling approach. Using a simple random sample, thirty-three (33) of Harnett County's census block groups were selected. Working from a sampling frame of 9-1-1 Emergency Services residential addresses by census block group, eight (8) residential addresses were randomly selected for survey distribution (again, using a simple random selection).

Over a two-week period, surveys were conducted using face-to-face interviewing. Teams of public health graduate students from Campbell University travelled to the selected residences and administered the survey.

Demographic Comparison of Survey Respondents & Population

The resultant sample of 265 residents approximates the 2014 Census projections very closely. While many public health jurisdictions elect to survey many more people, the representativeness of the sample can be more important than the quantity of surveys collected. In the 2016 Community Health Survey for Harnett County, the demographic profile for survey respondents is within a few percentage points of the population estimates in almost every case (see examples in the table below).

2016 Community Health Survey Demographic Comparisons

Demographic Category	Survey	Population[1]
Male	49%	49%
Female	50%	51%
15-24 years	13%	19%
25-34 years	22%	19%
35-44 years	18%	18%
45-54 years	15%	17%
55-64 years	14%	13%
65-74 years	13%	8%
75-84 years	4%	4%
85 years and over	1%	1%
White	64%	68%
Black or African American	26%	21%
Other Racial Categories	9%	10%
Hispanic/Latino	10%	11%
Not Hispanic/Latino	90%	89%

[1] = 2014 Projections, American Community Survey FactFinder, US Census Bureau.

For instance, the representativeness of gender was much improved in the 2016 Community Health Survey as compared with the two previous Harnett County CHA surveys. While Harnett County is essentially gender balanced (with 51% of the population female), the 2010 survey sample was 64% female. In 2013, the overrepresentation of women was even more pronounced, with 78% of the respondents being female.

Similarly, in the 2013 Community Health Survey, only 22% of respondents were 35 years or younger, while the census projections suggested the actual percentage of adults in that age bracket to be 36%. In the current survey sample, the age-group demographics closely reflect the actual population projections.

Additionally, with respect to race and ethnicity, percentages of survey respondents largely match the population estimates. In fact, ordinarily the challenge in survey collection is to adequately sample from minority populations. In the 2016 Community Health Survey, White residents are slightly underrepresented and African-American residents are slightly overrepresented. Additionally, responses to the ethnicity question indicate that the 10% of survey respondents who identified as Hispanic/Latino very nearly approximates the projected 11% of Harnett County residents who are Hispanic/Latino.

For more detailed information regarding the representativeness of the survey sample, please refer to the detailed tables in Appendix D.

Perceptions of Limited Economic Opportunity

As a group, survey respondents expressed general agreement (using “strongly agree,” “agree,” or “neutral”) with the following statements:

- There is good healthcare in Harnett County. (81%)
- Harnett County is a good place to raise children. (92%)
- Harnett County is a good place to grow old. (90%)
- Harnett County is a safe place to live. (88%)
- There is plenty of help for people during times of need in Harnett County. (87%)

However, forty-one percent (41%) of respondents disagreed or strongly disagreed with the statement that “There is plenty of economic opportunity in Harnett County.” Responses to this quality of life statement were substantially across demographic categories. However, responses to this statement also demonstrated significant comparisons between groups.

In the table below, the mean rating (on a five-point Likert scale) is provided for three comparison groups of respondents. As the table demonstrates, female and Black/African-American residents were less likely to respond that there is adequate economic opportunity, as compared to male and White residents. In contrast, Hispanic/Latino residents rated economic opportunity much higher than residents who did not identify as Hispanic/Latino. These differences are statistically significant and deserve careful attention.

Differences in Perceptions of Economic Opportunity

Demographic Group	Mean Rating
Female	2.630*
Male	2.913
Black/African-American	2.406*
White	2.835
Hispanic/Latino	3.077**
Not Hispanic Latino	2.689

* significant at alpha = .05; ** significant at alpha = .10

Community Priorities

In an effort to assess the community's perceptions of the greatest health needs, a series of questions were asked in which respondents were required to provide a single highest priority response to the question. Rather than rating each possible item (as had been done in the 2013 Community Health Survey), the forced choice better clarifies the priorities of the respondents. The following table presents the most popular responses to these questions. (Note: Response frequencies that were lower than a natural breakpoint are omitted in this table; however, complete tables are included in Appendix D).

Top Community Priorities

Question	Response	Frequency
Which health behavior do you think the community needs more information about?	Eating Well/Nutrition	43
	Substance Abuse Prevention	41
Which one issue most affects the quality of life for the people who live in Harnett County?	Low Income/Poverty	75
	Dropping Out of School	31
Which one of the following services needs the most improvement in your neighborhood or community?	Better/More Recreational Facilities (parks, trails, community centers)	30
	Animal Control	23
	Positive Teen Activities	22
	Availability of Employment	22
	Higher Paying employment	20
	More Affordable Health Services	19

In the priorities that emerged from these questions, there are clear socioeconomic concerns with regard to income, employment, and poverty as well as concern about adolescents and school completion. In addition, key areas of relevance to public health programming were also highlighted—including nutrition, substance abuse prevention, safe places to be active, and animal control.

Interestingly, between the subgroups of respondents, different priorities emerged in response to the aforementioned questions. The table below presents the top two

responses to the questions for the subgroups for which there were significant contrasts in the quality of life ratings—Female and Male, Black/African-American and White

Comparisons of Community Priorities, by Subgroup

Question	Female	Male	Black/African-American	White
Which health behavior do you think the community needs more information about?	1. Eating Well/Nutrition	1. Substance Abuse Prevention	1. Substance Abuse Prevention	1. Eating Well/Nutrition
	2. Substance Abuse Prevention	2. Eating Well/Nutrition	2. Preventing Pregnancy & Sexually Transmitted Diseases	2. Substance Abuse Prevention
Which one issue most affects the quality of life for the people who live in Harnett County?	1. Low Income/Poverty	1. Low Income/Poverty	1. Low Income/Poverty	1. Low Income/Poverty
	2. Dropping Out of School	2. Dropping Out of School	2. Violent Crime	2. Dropping Out of School
Which one of the following services needs the most improvement in your neighborhood or community?	1. Better/More Recreational Facilities	1. Better/More Recreational Facilities	1. Higher Paying Employment	1. Better/More Recreational Facilities
	2. Animal Control (Tie) 2. Positive Teen Activities (Tie) 2. More Affordable Health Services (Tie)	2. Availability of Employment	2. Better/More Recreational Facilities	2. Animal Control (Tie) 2. Positive Teen Activities (Tie)

As the table above demonstrates, there is widespread consensus on the need to address concerns about income/poverty, substance abuse prevention, and access to recreational facilities. However, women prioritized availability of affordable health services more than men; while, men prioritized the availability of employment more than women. Additionally, Black/African-American respondents identified sexual health and violent crime as higher priorities than White respondents. Interestingly, White respondents did not rate the need for information about sexual health among the top ten priorities.

Health Care Utilization

A series of questions in the survey asked respondents about their preferences and capabilities with regard to seeking health care. On the whole, most respondents indicated that they had not experienced difficulties getting health care (88%), that they regularly seek sick care at a doctor's office (63.3%), and that they have health insurance coverage (94%).

Mental Health

When asked about mental health and/or substance abuse problems, twenty-seven percent (27%) of respondents reported that they would recommend that a friend or family member seek the assistance of a physician. However, nearly one in five respondents (19.7%) indicated that they would recommend a friend or family member primarily consult a minister/religious official. This percentage is striking because it is almost equivalent to the percentage of respondents who indicated they would first recommend a private counselor or therapist (20.5%). While some members of the clergy receive training in behavioral health, many religious leaders do not have specific mental health or substance abuse expertise.

Also, nineteen percent (19%) of survey respondents reported that they had been diagnosed with depression or anxiety. More than seventeen percent (17%) of respondents indicated that in the last 30 days there had been days when "feeling sad or worried" had kept them from their daily activities. These percentages are particularly important given that the survey methodology involved face-to-face interviewing and some degree of social desirability response bias might be expected. That is, it would not be surprising if these percentages are underestimating the actual prevalence due to respondents' discomfort with sharing this information with the survey team.

Health Status & Health Behaviors

Respondents tended to rate their own health as "Good" to "Very Good." In fact, more than twice as many respondents rated their health as "Excellent" as compared with those who rated their health as "Poor."

Still, more than a quarter (26%) of survey respondents indicated that, at some point in the last 30 days, physical health problems had prevented them from doing usual activities. Twenty-four percent (24%) of respondents reported having been told by a health professional that they have high cholesterol and thirty-seven percent (37%) of respondents had been told they have high blood pressure. Nearly a third of respondents (29.7%) reported that they had been told by a health professional that they were obese and fourteen percent (14%) had been diagnosed with diabetes.

Most survey respondents (63%) reported exercising at least once a week for 30 minutes; however, few respondents (25%) reported exercising daily. While there are some differences between subgroups of respondents with regard to exercise, none of the differences were significant.

With regard to nutrition, most respondents reported underconsuming fruit and vegetables, relative to daily recommendations of 2-3 cups of each per day for adults. In this case, there are important differences between groups. While the majority (52%) of Black/African-

American respondents reported consuming at least two cups of fruit a day, only 36% of White respondents consumed that much fruit. Even more specifically, 63% of Black/African-American female respondents reported consuming at least two cups of fruit. With regard to vegetable consumption, female respondents were more likely than male respondents to report consuming at least two cups of vegetables each day. While only 44% of men reported eating at least two cups of vegetables, 58% of women consumed vegetables at that level. Black/African-American men even less likely to adequately consume vegetables—with only 38% reporting consuming two or more cups per day. All of the differences in fruit and vegetable consumption discussed in this paragraph were statistically significant (with an alpha level of 0.05).

Smoking is a key factor in preventable disease. Survey respondents were also asked to report smoking behavior. Twenty-two percent (22%) of respondents categorized themselves as "currently smoking." However, a much larger percentage (51.3%) of respondents indicated that they had been exposed to secondhand smoke—with a third (33.8%) of those respondents reporting being most often exposed to secondhand smoke in their homes. There were important differences between groups on these questions as well. The percentage of male respondents who identified as current smokers (29.5%) is almost twice the percentage of female respondents who reported smoking (15.9%). Also, the percentage of Black/African-American respondents who reported smoking (34.7%) was much higher than the percentage for White respondents (18%). Almost half (47%) of Black men who responded to the survey identified as current smokers. These gender and racial differences in smoking are statistically significant (with an alpha level of 0.05).

Influenza is a significant illness and a leading cause of death in Harnett County and across North Carolina. Most cases of influenza can be prevented with the seasonal flu vaccine. Only 53% of survey respondents indicated that they had received the seasonal flu vaccine. While this rate—if true of the Harnett County population as a whole—is not surprisingly low compared to other districts, the seasonal flu vaccine is a low-cost, widely accessible long-lasting protective intervention that offers benefit to many people who reported not availing themselves of the vaccine.

Preparedness

The final section of the survey addressed aspects of personal preparedness. Respondents were asked about willingness to evacuate, presence of smoke and carbon monoxide detectors, and possession of emergency supply kits. Most respondents (89%) reported having smoke detectors, while only 57% reported having carbon monoxide detectors. Sixty percent (60%) of respondents indicated that they have an emergency supply kit, with supplies for approximately seven days (median value). Most (79%) also report that they would evacuate if a mandatory evacuation order was given. Interestingly, the only statistically significant difference between subgroups in this section of the survey is that

Black/African-American respondents reported overwhelmingly (98%) that they would evacuate, while only 79% of White respondents would evacuate.

Secondary Health Data

North Carolina Statewide and Harnett County Trends in Key Health Indicators

The following section reviews a broad range of Harnett County specific data that provide insight into the health status and health-related behavior of residents. Publicly reported data is based on statistics of actual occurrences, such as the incidence of certain diseases, as well statistics based on interviews of individuals about their personal health condition and health concerns from the Behavioral Risk Factor Surveillance System (BRFSS) consolidated through www.countyhealthrankings.com website.

As shown in the following table, Harnett County ranks 49th out of 100 for health outcomes in 2016 up from 53rd in 2013 and 74th out of 100 for health factors in 2016 up one notch from 75th in 2013, among North Carolina counties. Harnett County rankings reflect mortality and morbidity greater than the state average. The county has negative rankings for health behaviors (smoking, exercise, binge drinking, and teen births), clinical care (uninsured population, preventable hospital stays, diabetic and mammography screening), and physical environment (access to healthy foods). Social and economic factors were in line with the North Carolina average due to performing better in some areas and worse in others (24% of children live in poverty, 32% of children live in single parent household were positive, and 75% high school graduation rate and 8.2 social associations were negative) . Access to care in Harnett County is poor with only 1 primary care physician for 3,053 people.

HEALTH OUTCOMES						
Focus Area	**Measure**	**Weight**	**Harnett County**	**North Carolina**	**Top U.S. Performers**	**Harnett Rank**
Mortality	Premature Death (years of potential life lost before age 75 per 100,000 population, age-adjusted)	50%	7,700	7,200	5,200	41
Morbidity	Poor or fair health (percent of adults reporting fair or poor health, age-adjusted)	10%	21%	19%	12%	65
	Poor physical health days (avg number of unhealthy days in past 30 days, age-adjusted)	10%	4.1	3.9	2.9	
	Poor mental health days (avg number in past 30 days, age- adjusted)	10%	4.0	3.7	2.9	
	Low birthweight (percent of live births with birthweight <2500 grams)	20%	9.0%	9.0%	6%	

Source: www.countyhealthrankings.org

HEALTH FACTORS/HEALTH BEHAVIORS						
Focus Area	**Measure**	**Weight**	**Harnett County**	**North Carolina**	**Top U.S. Performers**	**Harnett Rank**
Tobacco Use	Adult smoking (percent of adults who report smoking >= 100 cigarettes and currently	10%	20%	19%	14%	72
Diet and Exercise	Adult obesity (percent of adults that report a BMI	5%	33%	29%	25%	
	Physical inactivity (percent of adults who report no leisure time physical activity)	2%	28%	25%	20%	
Alcohol Use	Excessive drinking (percent of adults who report heavy or binge drinking)	2.5%	16%	15%	12%	
	Alcohol-impaired driving deaths (percentage of driving deaths with alcohol involvement)	2.5%	36%	33%	14%	
Sexual Activity	Sexually transmitted infections (Number of newly diagnosed chlamydia cases per 100,000 population)	2.5%	383.2	496.5	134.1	
	Teen birth rate (per 1,000 females ages 15-19)	2.5%	40	39	19	
HEALTH FACTORS/CLINICAL CARE						
Focus Area	**Measure**	**Weight**	**Harnett County**	**North Carolina**	**Top U.S. Performers**	**Harnett Rank**
Access to Care	Uninsured (percent of population <65 without health insurance)	5.0%	19%	18%	11%	86
	Primary Care (ratio of population to primary care	3.0%	3,050:1	1,410:1	1,040:1	
Quality of Care	Preventable hospital stays (rate for ambulatory sensitive conditions per 1,000 Medicare	5.0%	79	51	38	
	Diabetic screening (percent of diabetic Medicare enrollees that receive HbA1c	2.5%	87%	89%	90%	
	Mammography screening (percent of female Medicare	2.5%	65%	68%	71%	

Source: www.countyhealthrankings.org

HEALTH FACTORS/SOCIAL AND ECONOMIC FACTORS						
Focus Area	**Measure**	**Weight**	**Harnett County**	**North Carolina**	**Top U.S. Performers**	**Harnett Rank**
Education	High school graduation (percent of ninth grade cohort that graduates in four years)	5.0%	77%	83%	93%	63
	Some college (percent of adults aged 25-44 years with some post- secondary education)	5.0%	63%	65%	72%	
Employment	Unemployment rate (percent of population age 16+ unemployed)	10%	7.2%	6.1%	3.5%	
Income	Children in poverty (percent of children under 18 in poverty)	7.5%	27%	24%	13%	
Family and Social Support	Social associations (number of membership associations per 10,000 population)	2.5%	8.5	11.7	22.1	
	Percent of children that live in single-parent households	2.5%	33%	36%	21%	
Community Safety	Violent crime rate per 100,000 population	5.0%	301	355	59	

HEALTH FACTORS / PHYSICAL ENVIRONMENT						
Focus Area	**Measure**	**Weight**	**Harnett County**	**North Carolina**	**Top U.S. Performers**	**Harnett Rank**
Environmental Quality	Air pollution (Avg daily density of fine particulate matter in micrograms per cubic meter (PM2.5))	2.50%	12.2	12.3	9.5	41
Housing and Transit	Severe housing problems (percentage of households with at least 1 of 4 housing problems: overcrowding, high housing costs, or lack of kitchen or plumbing facilities)	2.00%	17%	17%	9%	
	Driving to work alone (percentage of the workforce that drives alone to work)	2.00%	84%	81%	71%	

Source: www.countyhealthrankings.org

North Carolina and Harnett County Birth Rates

The birth rate in Harnett County is higher than the North Carolina average, which is consistent with the growing, younger population in the County.

Harnett County and North Carolina Resident Live Birth Rates per 1,000 Population (2014)

County/State	Total Births	Total Rate	White Births	Minority Births
North Carolina	120,948	12.2	67,387	53,561
Harnett County	1,985	15.7	1,195	720

Source: North Carolina Center of Health Statistics

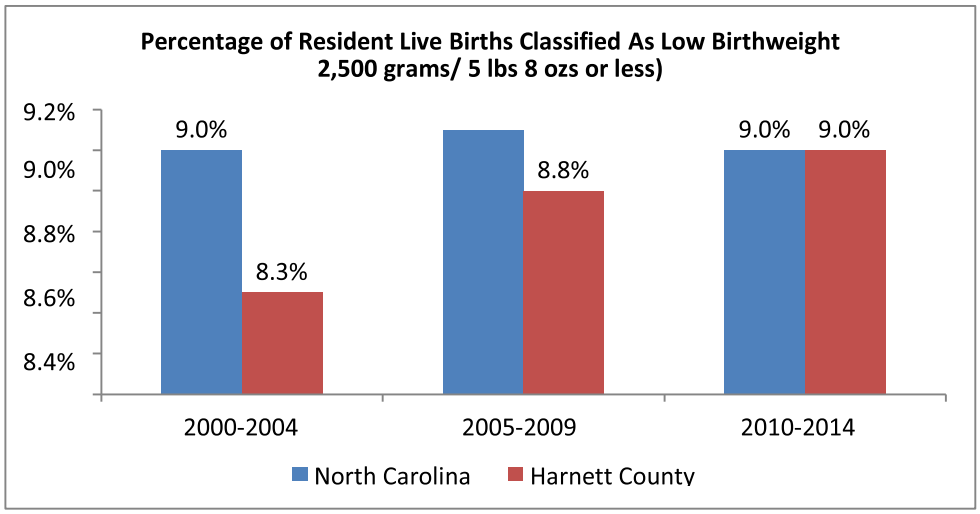
However, as shown in the following table, the percentage of low birth weight babies in Harnett County is higher than the North Carolina average. There is room for improvement when compared to NC at 8.9 percent, as well as the national benchmark of 6.0 percent. Factors influencing low birth weight are included in the Harnett County Health Rankings. Those rankings reflect a higher than normal percentage of clinical and socio economic risks to include smoking, obesity, diabetes, and shortage of primary care physicians.

Harnett County and North Carolina Resident Low Birth Weight by Race Rates per 1,000 Population (2014)

County/State	Total		White		Minority	
	Number	Percent	Number	Percent	Number	Percent
North Carolina	10,808	8.9%	5,041	7.5%	5,767	10.7%
Harnett County	190	9.6%	100	8.4%	84	11.7%

Source: North Carolina Center of Health Statistics;countyhealthrankings.com

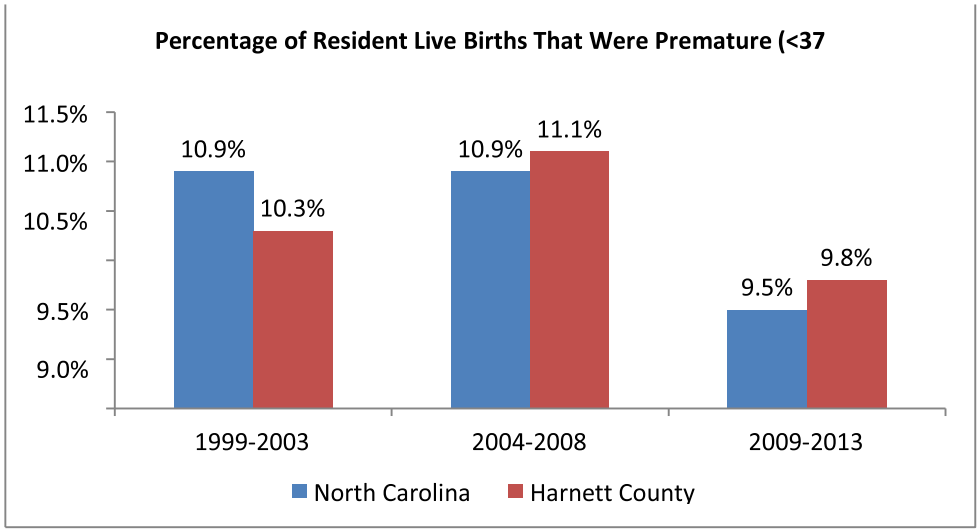
The following chart shows the percentage of live births classified as low birthweight (2,500 grams/5 lbs) for Harnett County and North Carolina, respectively, in four year increments from 2000 through 2014.



Source: North Carolina State Center of Health Statistics

As shown in the previous chart, Harnett County's percentage of live births classified as low birthweight has increased since 2000, while North Carolina's percentage has remained constant. One factor that could contribute to the growth could be the lack of access to prenatal primary care.

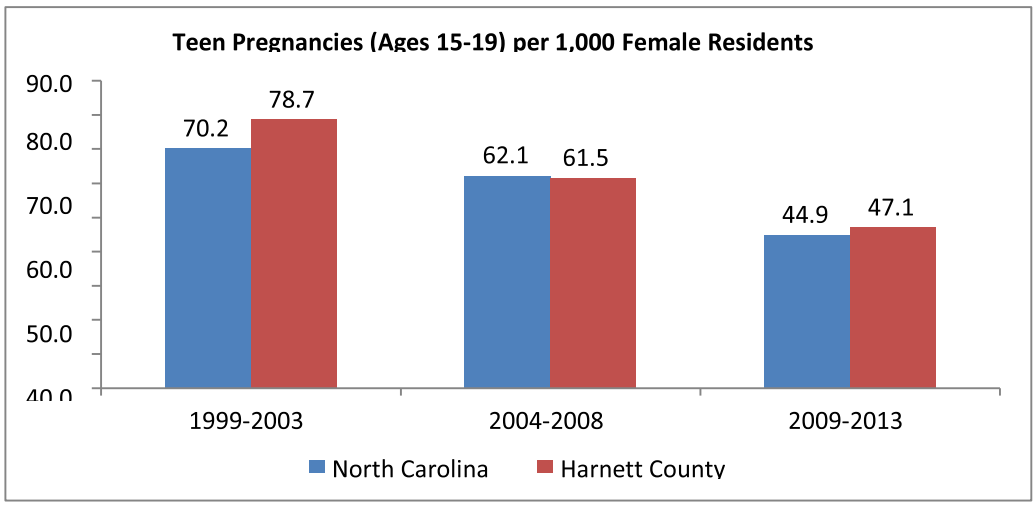
The following chart shows the percentage of residents with live birth that were premature (less than 37 weeks gestation) for Harnett County and North Carolina.



Source: North Carolina State Center of Health Statistics

As shown in the previous table, Harnett County's percentage of live births classified as premature has decreased since 2003. Harnett County's percentage remains higher than North Carolina.

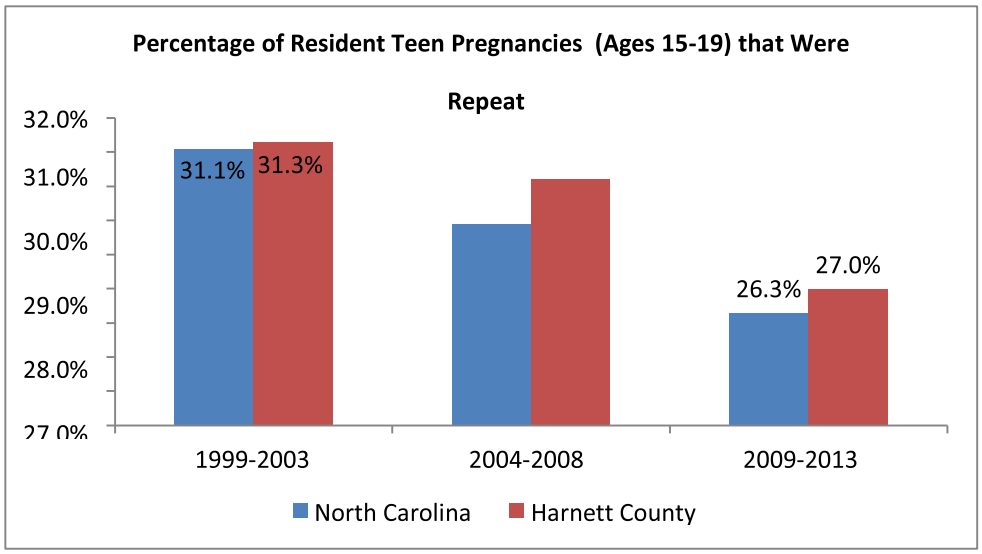
The following chart compares rate of teen pregnancy per 1,000 female residents of Harnett County to North Carolina between 1999 and 2013 in four-year increments.



Source: North Carolina State Center of Health Statistics

As shown in the previous table, Harnett County's rate of teen pregnancies decreased considerably since 1999-2013. Harnett County's rate has decreased 23.4% since 2008, compared to the NC rate of 27.6%.

The following chart compares rate of repeat teen pregnancies per 1,000 female residents of Harnett County to North Carolina between 1999 and 2013 in four-year increments.



Source: North Carolina State Center of Health Statistics

As shown in the previous chart, Harnett County's rate of repeat teen pregnancies decreased since 1999-2003, and is higher than North Carolina's rate throughout the increments. Harnett County's rate decreased 13.7% from 2003 compared to 15.4% for the state of North Carolina.

Mortality and Morbidity

The following charts reflect the ten leading causes of death for Harnett County and North Carolina, respectively. As shown in the first chart, cancer and heart disease rank as the two leading causes of death in the County and North Carolina.

Harnett County and North Carolina

2010-2014 Age-Adjusted Death Rates per 100,000 Population

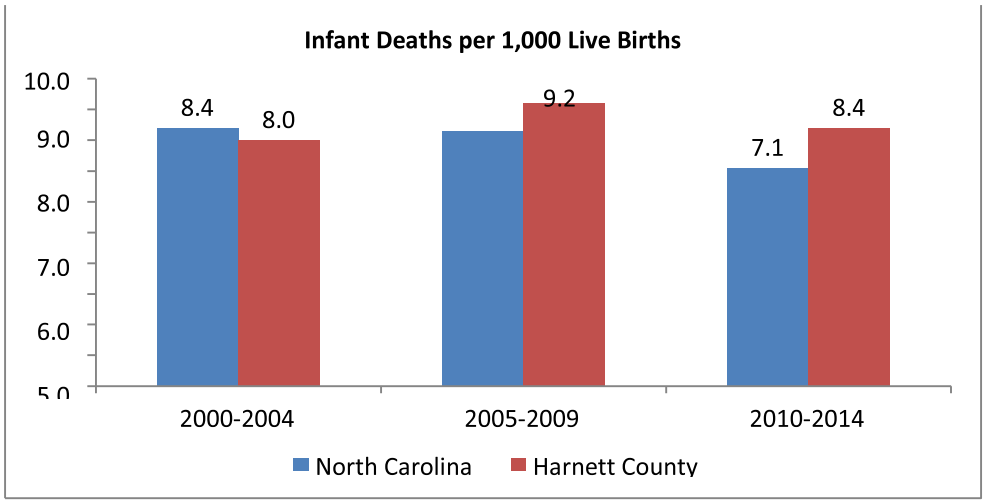
Cause of Death	Harnett County	North Carolina
Overall	852.3	785.2
Heart Disease	194.4	165.9
Cancer	182.3	171.8
Chronic Lower Respiratory Diseases	52.3	46.0
Cerebrovascular Disease	48.4	43.0
Other Unintentional Injuries	30.1	29.6
Diabetes	24.9	22.1
Alzheimer's Disease	24.2	29.2
Unintentional Motor Vehicle Injuries	18.6	13.5
Nephritis, Nephrotic Syndrome and Nephrosis	17.3	17.0
Pneumonia and Influenza	14.6	17.6

Source: North Carolina Center of Health Statistics

Infant Death Rates

As shown in the following chart, according to the State Center for Health Statistics, Harnett County's infant mortality rates have increased by 5.0% between 2000 and 2014, compared to a 15.4% decrease for the state. The following trends have been observed:

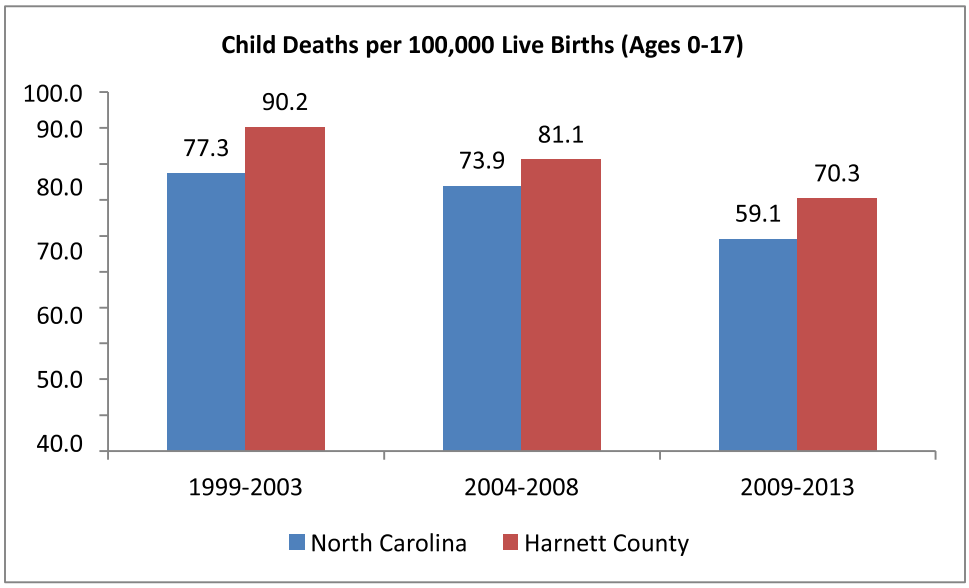
- From 2000-2004, the Harnett County infant death rate bested the North Carolina rate by 4.7%
- From 2005-2009, the Harnett County infant death rate exceeded the North Carolina rate by 10.8%.
- From 2010-2014, the Harnett County infant death rate was greater than the North Carolina rate by 18.3%.
- From 2000 to 2014, the North Carolina infant death rate decreased from 8.4 to 7.1 deaths per 1,000 live births, which equates to a 15.4% decrease in the death rate; the Harnett County infant death rate increased from 8.0 to 8.4 deaths per 1,000 live births which equates to a 5% increase in the infant death rate.



Source: North Carolina Center of Health Statistics

Child Death Rates

According to the State Center for Health Statistics, from 1999-2013, Harnett County's child death rates (ages 0-17) decreased 22.0%, shown in the following chart.



Source: North Carolina Center of Health Statistics

The Child Death rate for the state of North Carolina decreased by 23.5% from 2000-2013.

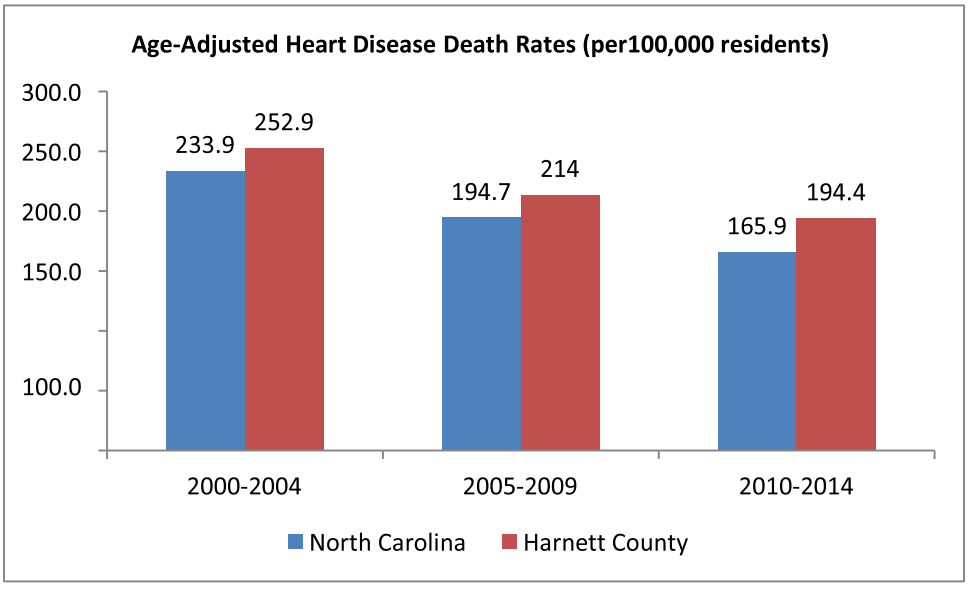
Harnett County Leading Causes of Death

Data regarding the leading causes of death in Harnett County are provided in the following charts and graphs in the order of severity, and are trended over the past eight years. Information sources include is:

- NC State Center for Health Statistics
- Behaviorial Risk Factor Surveillance System ("BRFSS")
- NC Cancer Central Cancer Registry
- Other databases as noted.

Heart Disease

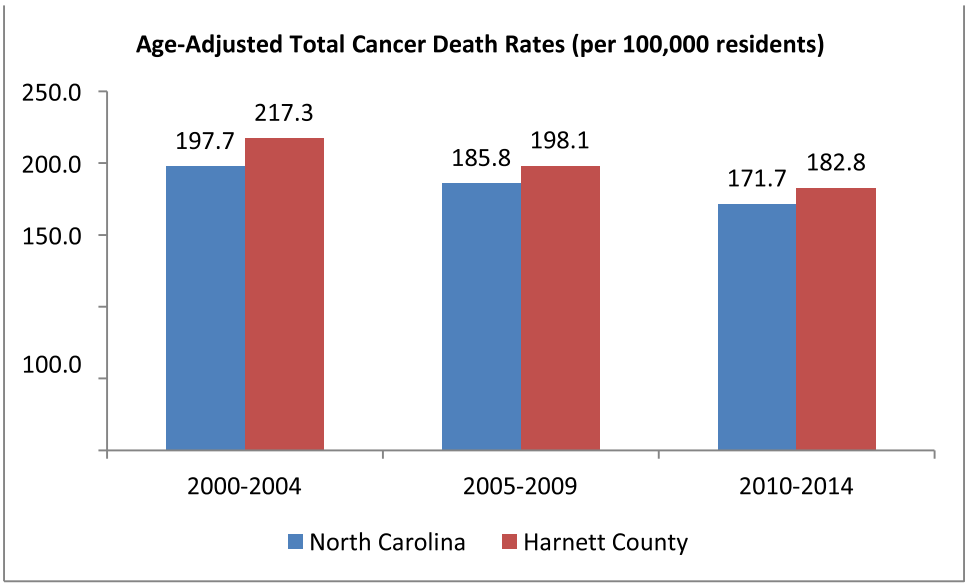
Heart Disease is the leading cause of death (age-adjusted) in Harnett County. The number of deaths from heart disease continues to be consistently higher than North Carolina. Between 2000 and 2014, Harnett's heart disease age-adjusted death rate decreased from 252.9 to 194.4, a 23.1% decrease. The heart disease age-adjusted death rate for the state also decreased 29% during that same timeframe.



Source: North Carolina Center of Health Statistics

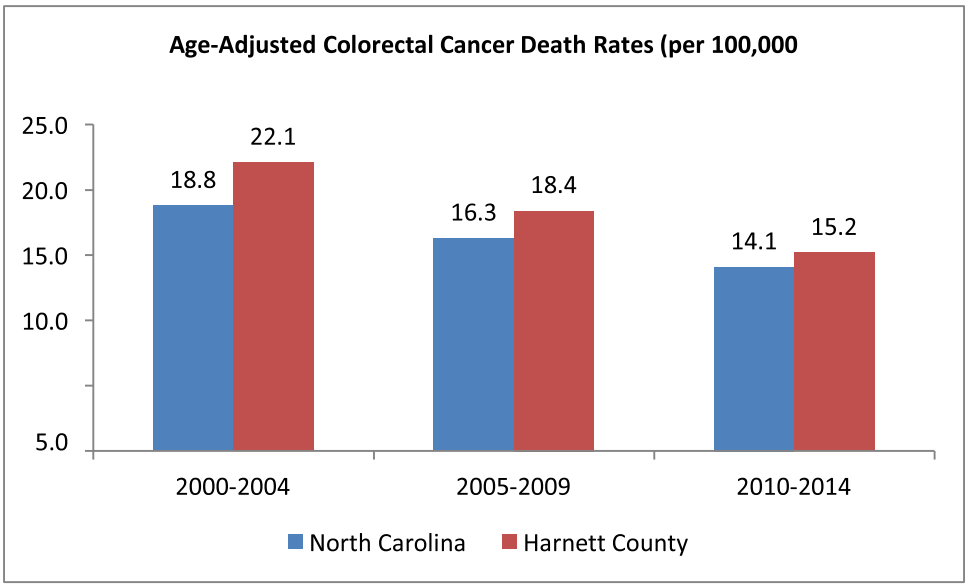
Cancer

Cancer is the second leading cause of death (age-adjusted) in Harnett County. The number of deaths from cancer is slightly larger than North Carolina's rate. Between 2000 and 2014, Harnett's rate has decreased from 217.3 to 182.8 or 15.8%. The state rate has also decreased 197.7 to 171.7 or 13.2%. Harnett County's rate decreased due to advances in screening combined with an increase in physician access.



Source: North Carolina Center of Health Statistics

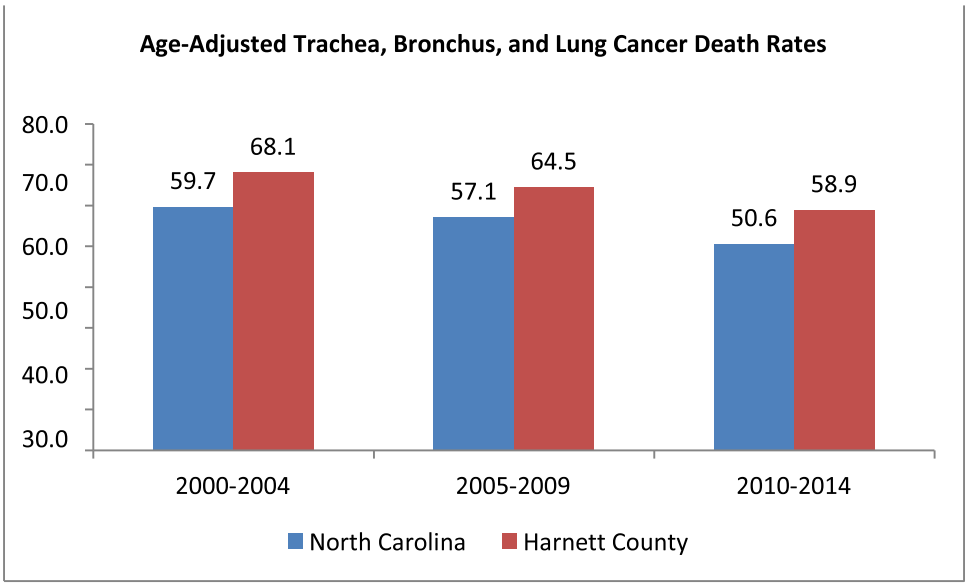
The number of deaths from Colon, Rectum, Anus Cancer for Harnett County is currently lower than the North Carolina age adjusted death rate. Between 2000 and 2014, Harnett's death rate for Colon, Rectum, Anus Cancer decreased from 22.1 to 15.2 or 31.2% and the North Carolina death rate decreased from 18.8 to 14.1 or 25.0%.



Source: North Carolina Center of Health Statistics

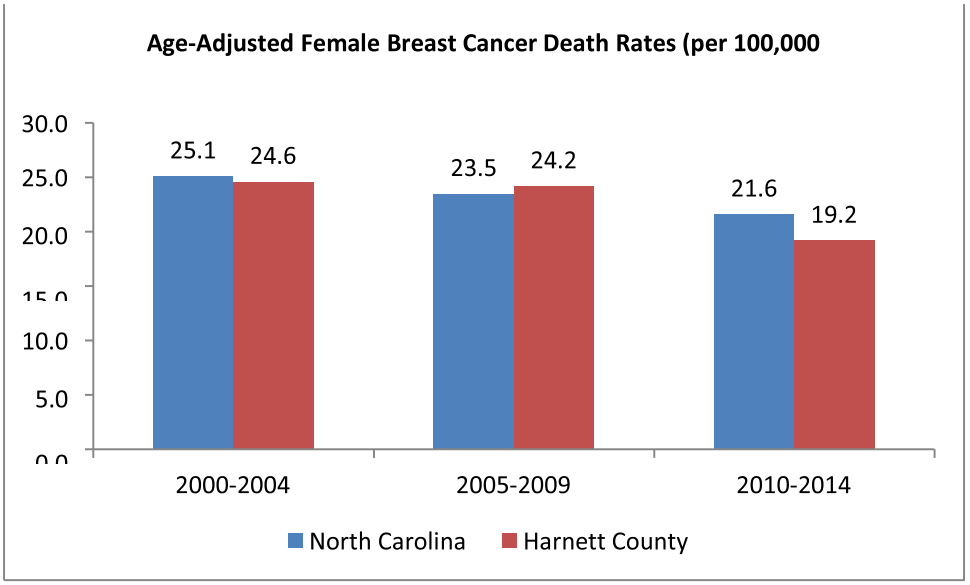
The number of deaths from Trachea, Bronchus, & Lung Cancer is consistently higher than the North Carolina mortality rate. Between 2000 and 2014, Harnett's death rate for

Trachea, Bronchus, & Lung Cancer decreased from 68.1 to 58.9 or 13.5% and the North Carolina death rate decreased from 59.7 to 50.6 or 15.2%.



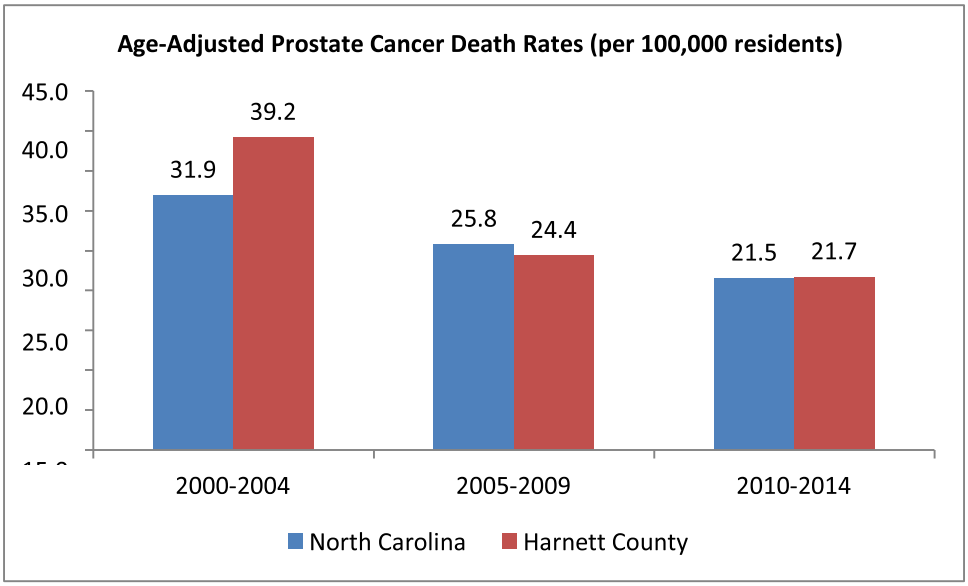
Source: North Carolina Center of Health Statistics

The mortality rate for Female Breast Cancer has decreased since 2000. Early detection and testing has improved over the last decade which has increased awareness and incidence. Evidence indicates early detection increases survival and improves quality of life. Harnett's mortality rate for Female Breast Cancer decreased since 2000 by 21.9% and the North Carolina rate has decreased by almost 14% over the same time frame. Harnett County's rate was lower than the state rate from 2010-2014.



Source: North Carolina Center of Health Statistics

The age-adjusted death rate for Prostate Cancer in Harnett County has had much more variation when compared to the North Carolina rate since 2000. Early detection and testing has improved over the last decade which has increased awareness and incidence. Evidence indicates early detection increases survival and improves quality of life. While Harnett's death rate for Prostate Cancer has favorably decreased since 2000 by 44.6%, North Carolina rate has improved by 32.6% since 2000.



Source: North Carolina Center of Health Statistics

The following table compares percent of cancer deaths for Harnett County, North Carolina, and counties of similar size to Harnett County in 2013.

Percent of Cancer Deaths North Carolina, Harnett and Peer Counties (2013)

Harnett County	North Carolina	Craven County	Davidson County	Johnston County	Randolph County
22.3%	22.3%	22.4%	22.1%	24.6%	20.9%

Source: North Carolina Center of Health Statistics; NC Central Cancer Registry Report for Harnett County 2013;

Harnett County's percent of cancer deaths in 2013 was in the middle of the pack when compared to its peer counties and in line with the state average.

The following table compares projected cancer cases per 100,000 population by site for Harnett County and North Carolina in 2015.

Projected Cancer Cases per 100,000 Population (Harnett & North Carolina – 2015)

Site	Harnett County	North Carolina
Lung/Bronchus	91	8,669
Colon/Rectum	49	4,633
Female Breast	106	9,772
Prostate	85	7,998
Pancreas	15	1,391
All Cancers	619	57,624

Source: North Carolina Center of Health Statistics; NC Central Cancer Registry Report for Harnett County

Harnett County projected a greater total number of cancer cases in 2015 than the average number of cases among North Carolina's 100 counties (576.24), as shown in the previous table.

The following table compares cancer case incidence rates per 100,000 population by site for Harnett County and North Carolina.

2009-2013 Cancer Cases Incidence Rates per 100,000 Population Harnett and North Carolina – 2013

County/ State	Colon/Rectum		Lung/Bronchus		Female Breast		Prostate		All Cancers	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
North Carolina	20,240	38.5	37,831	70.9	45,146	157.9	33,115	130.6	256,989	483.4
Harnett County	213	40.4	466	86.9	464	154.7	297	115.7	2,719	496.0

Source: North Carolina Center of Health Statistics; NC Central Cancer Registry Report for Harnett County 2013

As shown in the previous table, Harnett County projected a higher incidence rate for colon/rectum, lung/bronchus and all cancers, but lower female breast and prostate cancer incidence rates than North Carolina.

The following table compares cancer case incidence rates per 100,000 population by site for Harnett County, North Carolina, and other roughly comparably-sized counties from 2009-2013.

2009-2013 Cancer Cases Incidence Rates per 100,000 Population By County for Selected Sites – 2009-2013

County/State	Colon/Rectum		Lung/Bronchus		Female Breast		Prostate		All Cancers	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
North Carolina	20,240	38.5	37,831	70.9	45,146	157.9	33,115	130.6	256,989	483.4
Harnett County	213	40.4	466	86.9	464	154.7	297	115.7	2,719	496.0

Craven County	209	34.6	516	81.7	455	144.1	391	132.0	2,971	485.7
Davidson County	417	42.3	849	84.6	805	155.2	597	126.6	4,912	500.4
Johnston County	286	35.9	579	70.7	656	139.2	460	117.6	3,808	453.4
Randolph County	330	40.0	737	86.3	698	156.1	561	140.4	4,412	527.2

Source: North Carolina Center of Health Statistics; NC Central Cancer Registry Report for Harnett County 2013

As shown in the previous table, Harnett County projected the lowest incidence rate for prostate cancer than all comparable counties and North Carolina. Harnett County's incidence rate for lung/bronchus cancers is the highest among all comparable counties. It is around average for colon/rectum, female breast and all cancers.

The following table compares cancer case mortality rates per 100,000 population by site for Harnett County, North Carolina, and other roughly comparably-sized counties in 2009.

2010-2014 Cancer Cases Mortality Rates per 100,000 Population By County for Selected Sites – 2014

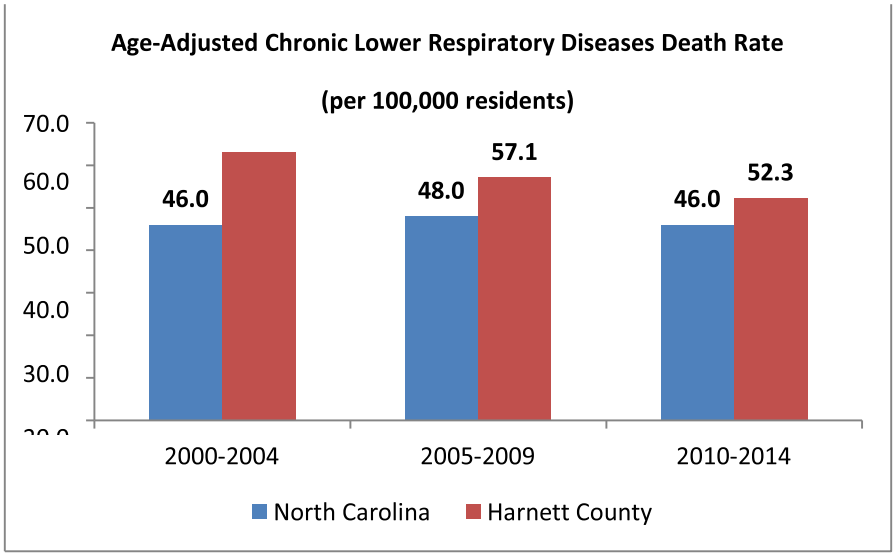
County/ State	Colon/Rectum		Lung/Bronchus		Female Breast		Prostate		All Cancers	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
North Carolina	7,529	14.1	27,581	50.6	6,491	21.6	4,338	21.5	92,542	171.7
Harnett County	81	15.2	321	58.9	59	19.2	43	21.7	985	182.8
Craven County	69	10.9	368	56.5	83	24.0	58	22.0	1,162	181.2
Davidson County	153	15.2	630	61.7	118	21.9	69	17.7	1,828	182.9
Johnston County	121	15.1	470	56.4	103	21.5	54	19.5	1,480	182.2
Randolph County	120	14.5	508	58.0	94	20.2	62	18.8	1,478	174.8

Source: North Carolina Center of Health Statistics; NC Central Cancer Registry Report for Harnett County 2014

As shown in the previous table, Harnett County projected the lowest mortality rates for female breast than North Carolina and comparable counties. As it relates to its peers, overall Harnett is on the high side for mortality rates.

Chronic Lower Respiratory Disease

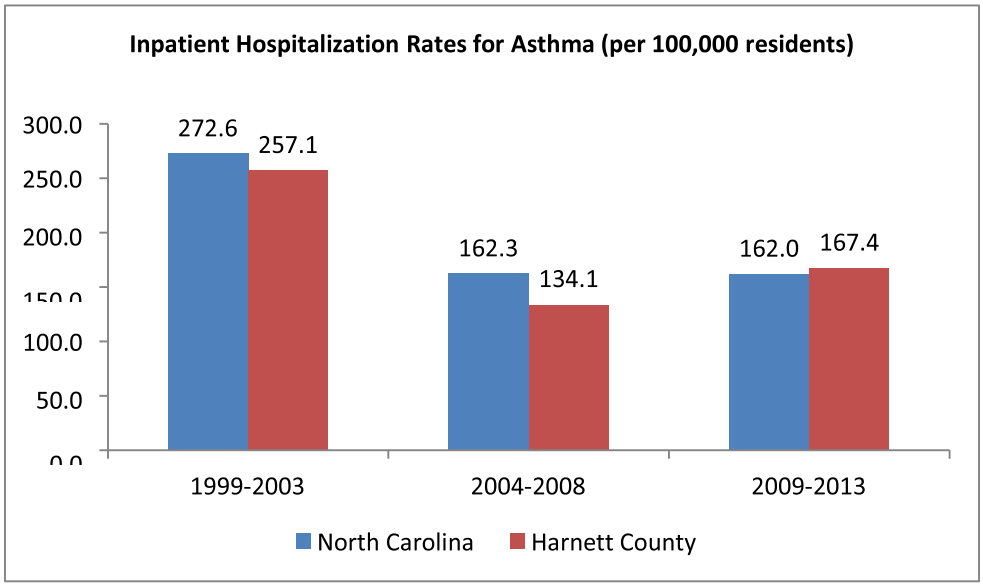
Chronic Lower Respiratory Disease is the 3rd leading cause of death (age-adjusted) in Harnett County and North Carolina, respectively.

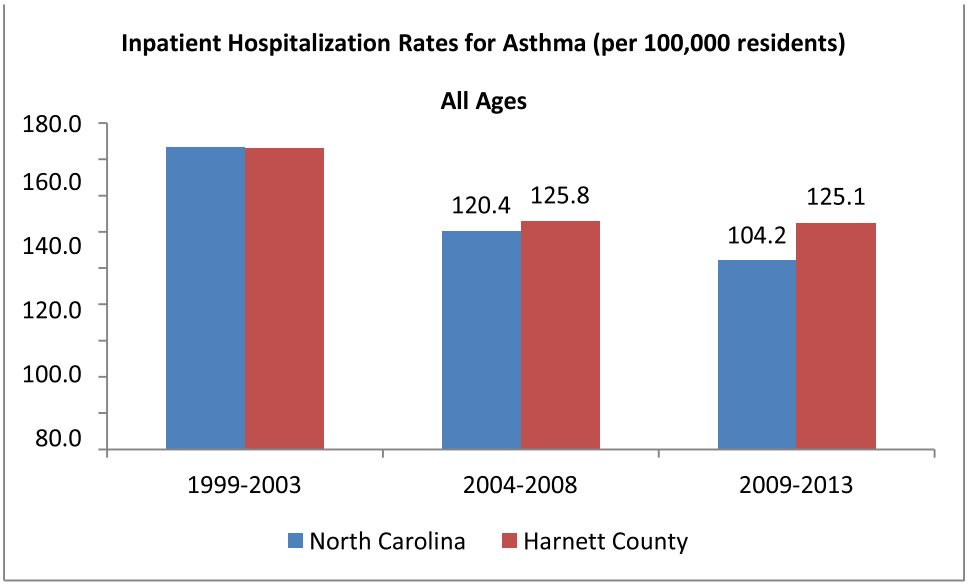


Source: North Carolina Center of Health Statistics

When adjusted for age the Harnett mortality rate for Chronic Lower Respiratory Disease is greater than the NC rate, 52.3 versus 46.0. The rate for Harnett County has decreased 16.9% since 2004 versus the state rate which has remained constant.

Harnett County Asthma related hospital discharges is 3.3% higher than the North Carolina average for children 14 years and younger. Harnett County Asthma related hospital discharges is 20.1% higher than North Carolina average for all patients of all ages.



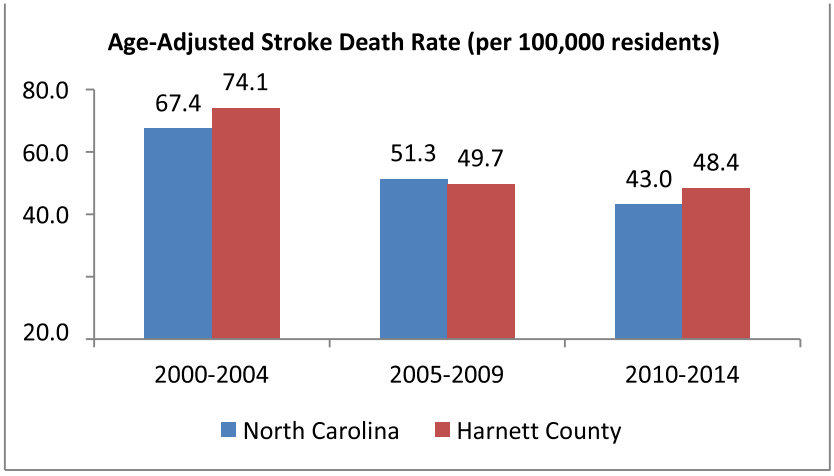


Source: http://www.schs.state.nc.us/data/keyindicators/reports/ Harnett.pdf

In addition, asthma admissions for children have increased during the last four-year time-frame reported above.

Cerebrovascular Disease

Cerebrovascular Disease (stroke) is the 4th leading cause of death (age-adjusted) in Harnett County.

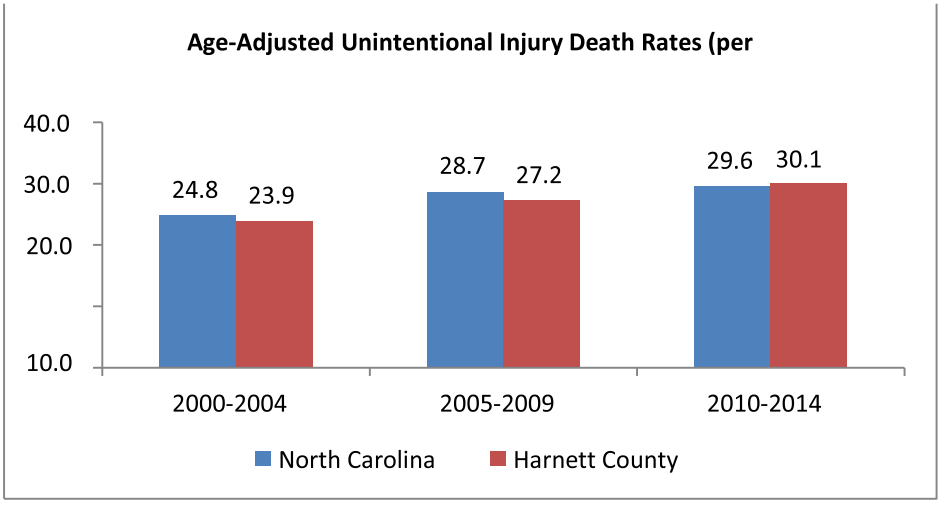


Source: North Carolina Center of Health Statistics

As shown in the previous chart, Harnett County's number of deaths from cerebrovascular disease is greater than the North Carolina average. Over the past 15 years, Harnett County's rate decreased from 74.1 to 48.4 (or 34.6%). North Carolina also decreased from 67.4 to 43.0 (or 36.2%). Significant improvement has been made in preventing, diagnosing, and treating cerebrovascular disease.

Other Unintentional Injuries

Other Unintentional Injuries is the 5th leading cause of death (age-adjusted) in Harnett County.

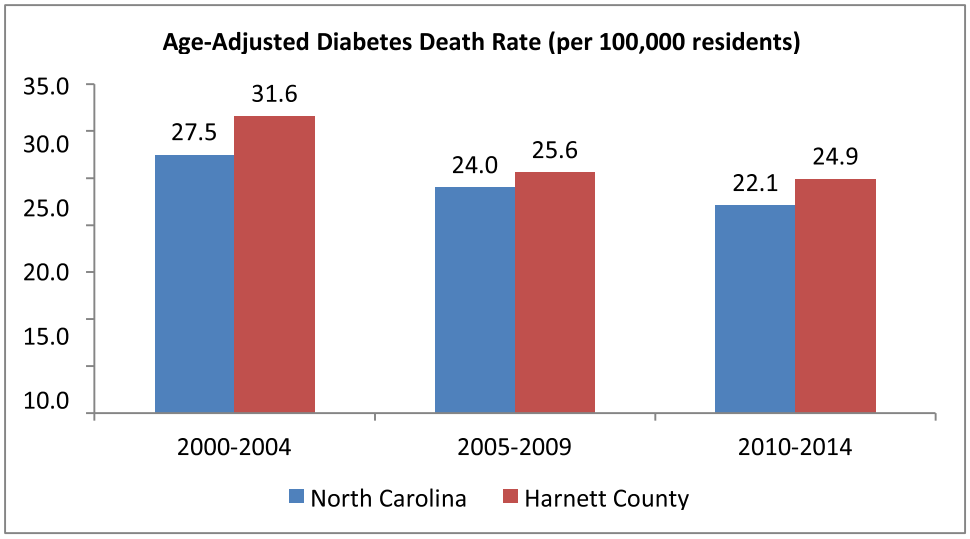


Source: North Carolina Center of Health Statistics

As shown in the previous chart, the number of deaths from unintentional injuries in Harnett County was historically lower than the North Carolina average from 2000-2009. However, from 2010-2014 the rates for Harnett County have surpassed North Carolina's. Over the past 15 years, Harnett County's rate increased from 23.9 to 30.1 (or 25.9%). North Carolina increased from 24.8 to 29.6 (or 19.4%.) Both Harnett County and North Carolina experience significant increases in unintentional injury deaths.

Diabetes

Diabetes is the 6th leading cause of death (age-adjusted) in Harnett County.

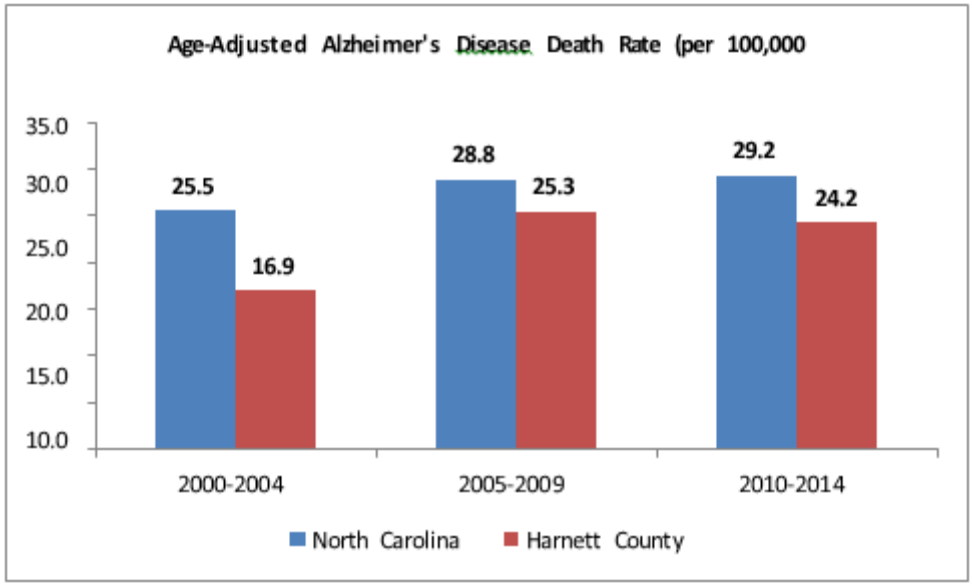


Source: North Carolina Center of Health Statistics

As shown in the previous chart, the number of deaths from diabetes in Harnett County has been consistently higher than North Carolina. Over the past 15 years, Harnett County's rate decreased from 31.6 to 24.9 (or 21.2%). North Carolina's death rate decreased from 27.5 to 22.1 (or 19.6%). While diabetes is reflected as the 5th leading cause for death, it is often a secondary and a complicating factor that co-exists with heart disease, renal disease, and obesity.

Alzheimer's Disease

Alzheimer's is the 7th leading cause of death (age-adjusted) in Harnett County.

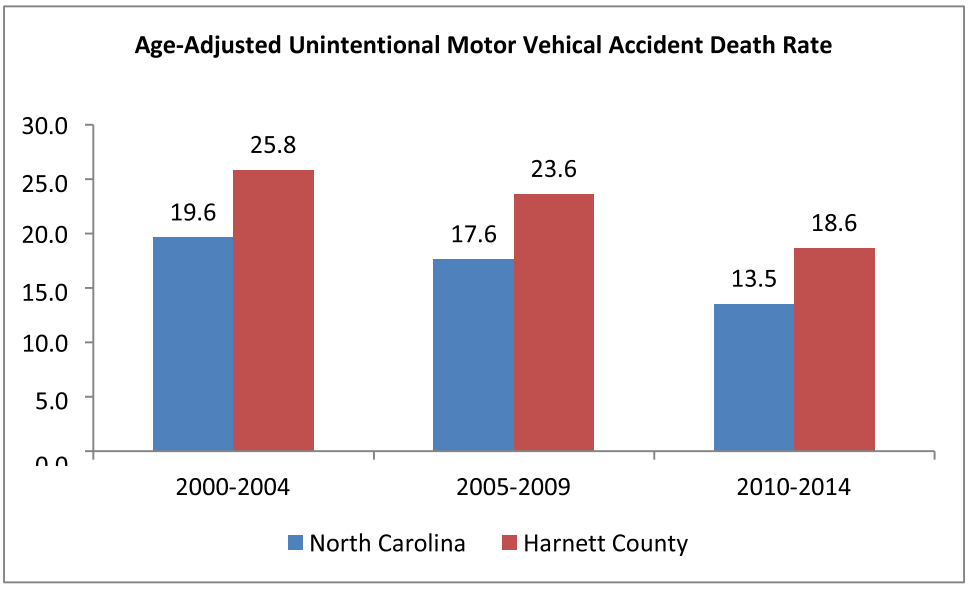


Source: North Carolina Center of Health Statistics

As shown in the previous map, Harnett County's deaths from Alzheimer's is near the North Carolina median. Over the fifteen year period, Harnett County's age adjusted death rate is consistently lower than the state of North Carolina. However, the Harnett County rate has increased 43.2%(16.9 vs 24.2 deaths per 100,000 population) from 2000 to 2014 versus only 14.5%(25.5 vs 29.2) for the state.

Unintentional Motor Vehicle Injuries

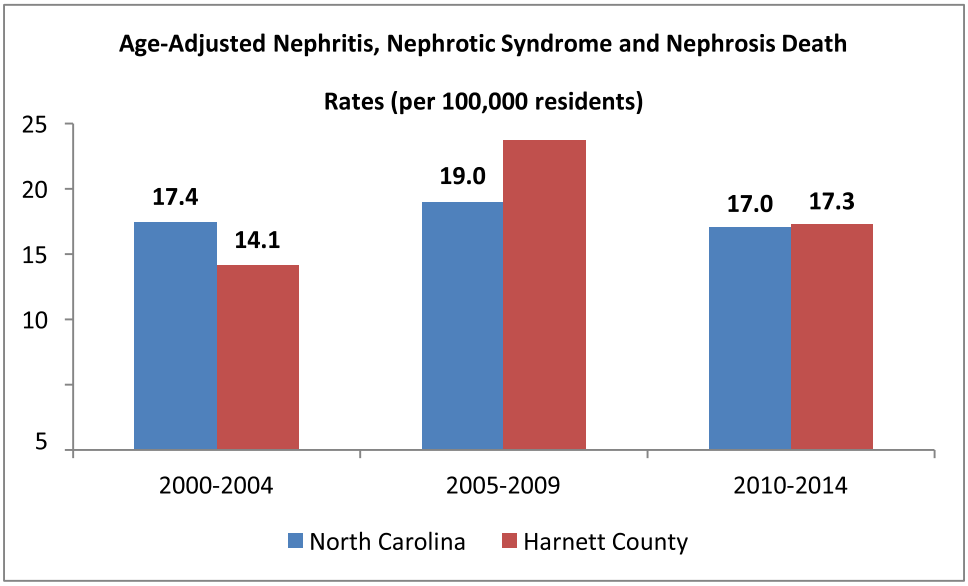
Unintentional Motor Vehicle Injuries are the 8th leading cause of death (age-adjusted) in Harnett County.



The number of deaths from unintentional motor vehicle injuries has historically been greater than the North Carolina average, as shown in the previous graph. Over the past 15 years, Harnett County's rate decreased from 25.8 to 18.6 per 100,000 population (or 27.9%). North Carolina's rate also decreased from 19.6 to 13.5 per 100,000 population (or 31.1%). The decrease in unintentional motor vehicle accident death rates in Harnett County are similar to the decrease experienced in North Carolina.

Nephritis, Nephrotic Syndrome and Nephrosis

Nephritis, Nephrotic Syndrome and Nephrosis is the 9th leading cause of death (age-adjusted) in Harnett County.

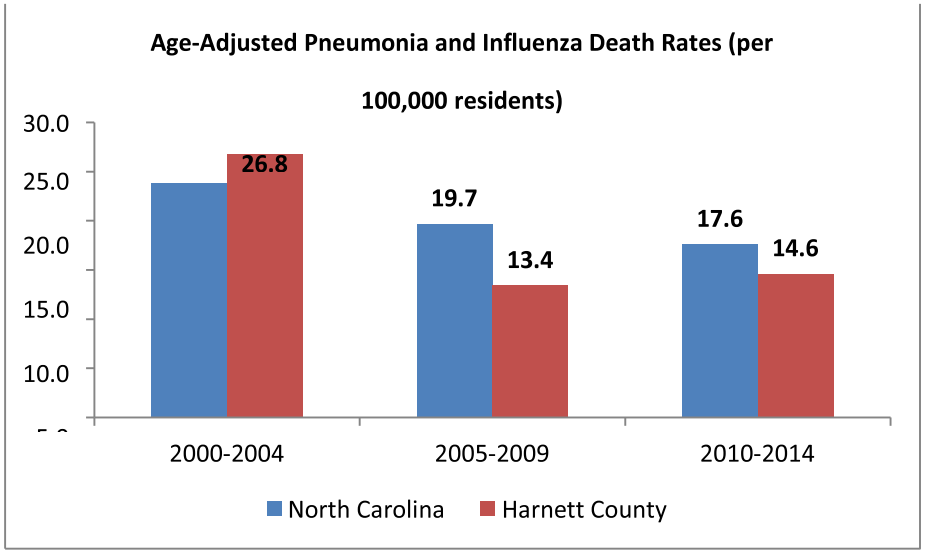


Source: North Carolina Center of Health Statistics

As shown in the previous graph, the number of deaths from Nephritis, Nephrotic Syndrome, and Nephrosis fluctuates in Harnett County when compared with the North Carolina average. The 2010-2014 rate for Harnett County is 17.3 compared to 17.0 for North Carolina. Harnett County's rate has decreased 27%(17.3 vs 23.7 deaths per 100,000 population) since 2005-2009 compared to a 10.5%(17.0 vs. 19.0) decrease for the state. This disease state is often a secondary and a complicating factor that co-exists with diabetes, heart disease, cancer and renal disease.

Pneumonia and Influenza

Pneumonia is the 10th leading cause of death (age-adjusted) in Harnett County.



Source: North Carolina Center of Health Statistics

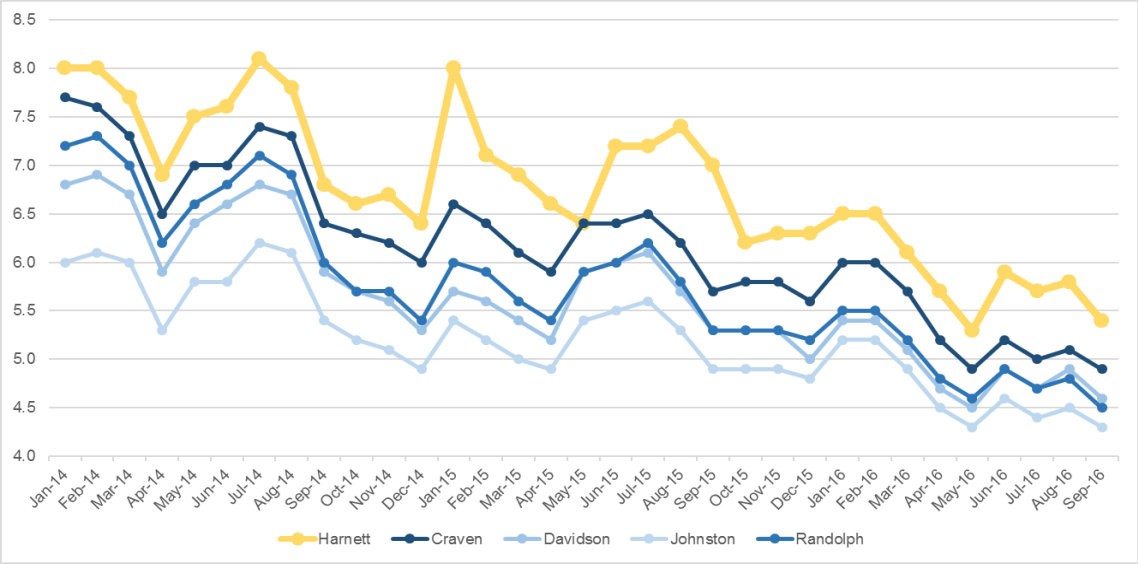
As shown in the graph above, the number of deaths from pneumonia and influenza are decreasing in Harnett County as well as the state of North Carolina. Harnett County has 45.5% reduction from 26.8 to 14.6 deaths per 100,000 population from 2000 to 2014. During the same time frame the state of North Carolina has experienced a 26.1% reduction from 23.8 to 17.6 pneumonia and influenza deaths per 100,000 residents.

Key Community Health Concerns

At the conclusion of drafting reports that outline the secondary data analysis and the survey data for the county, the community health assessment process concluded with a series of presentations to community members regarding prominent issues that emerged from the preliminary data analysis. Presentations took place at a meeting of the community health coalition, Healthy Harnett, at a meeting of the Board of Health, and at a meeting of the management team from the Harnett County Department of Public Health. The groups reviewed the draft documents and focused on the following data with regard to key issues:

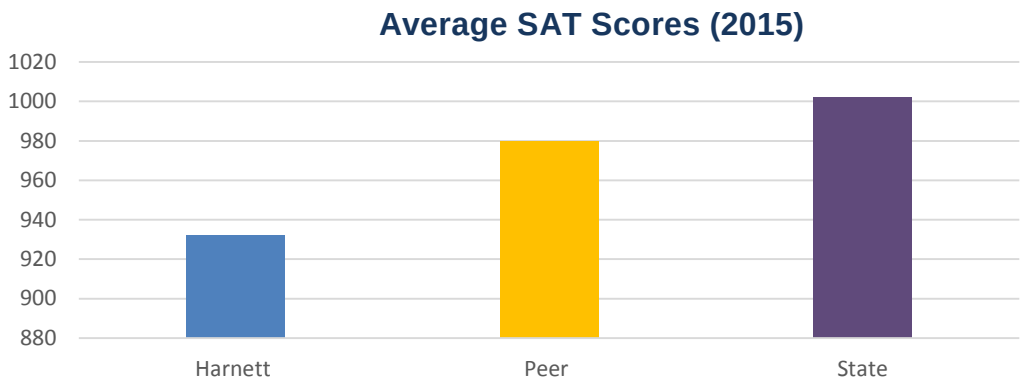
- **Economic Opportunity** – While growing at a rate faster than the average for peer counties or the State of NC, Harnett County's unemployment rate was higher than any of the peer counties nearly every month since 2014.

Unemployment Rates for Harnett County and Peer Counties (Jan 2014-Sept 2016)

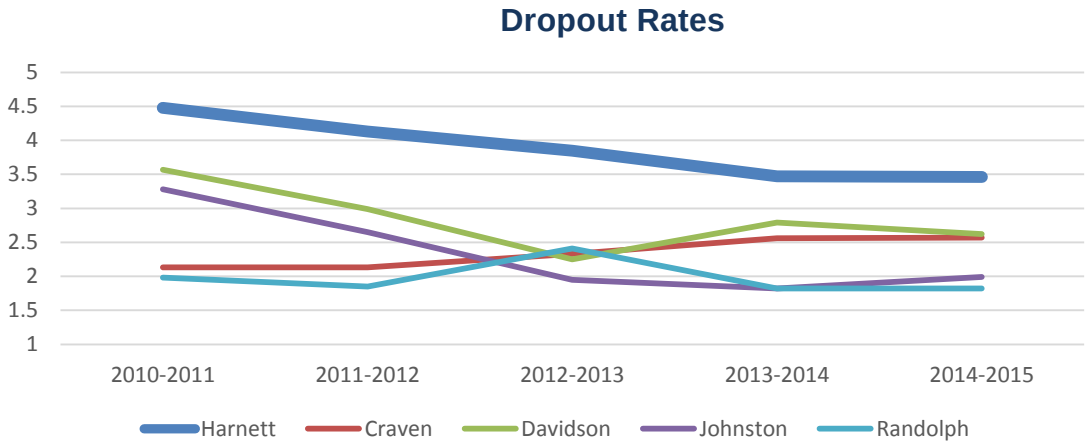


Additionally, in the Community Health Survey, the highest rated community problem affecting the quality of life in the county was "Low Income/Poverty."

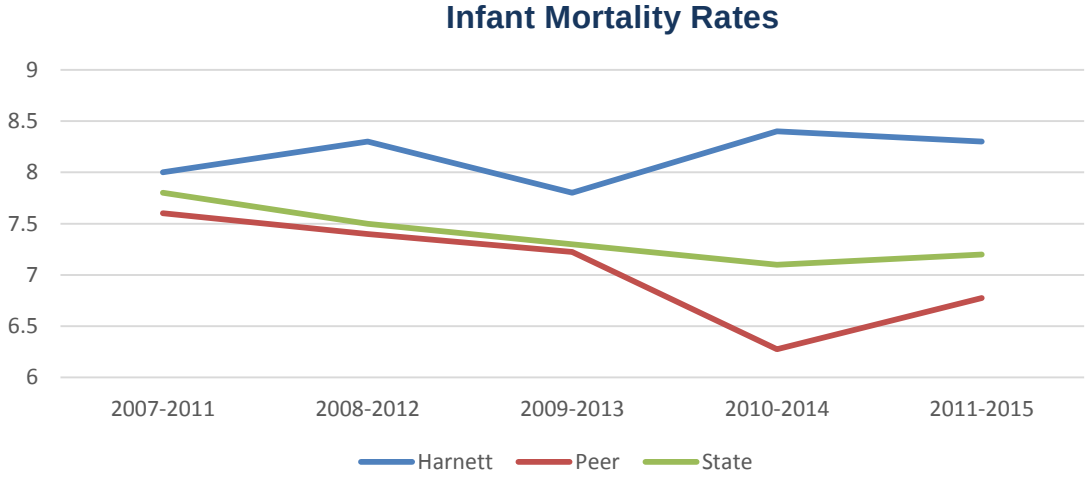
- **Educational Opportunity** – With regard to school achievement, students in Harnett County Schools perform (on average) much lower than their counterparts in peer counties and the state as a whole. While the chart below provides the contrasts in achievement on the SAT, similar trends can be established in End-of-Grade test scores and other measures of proficiency.



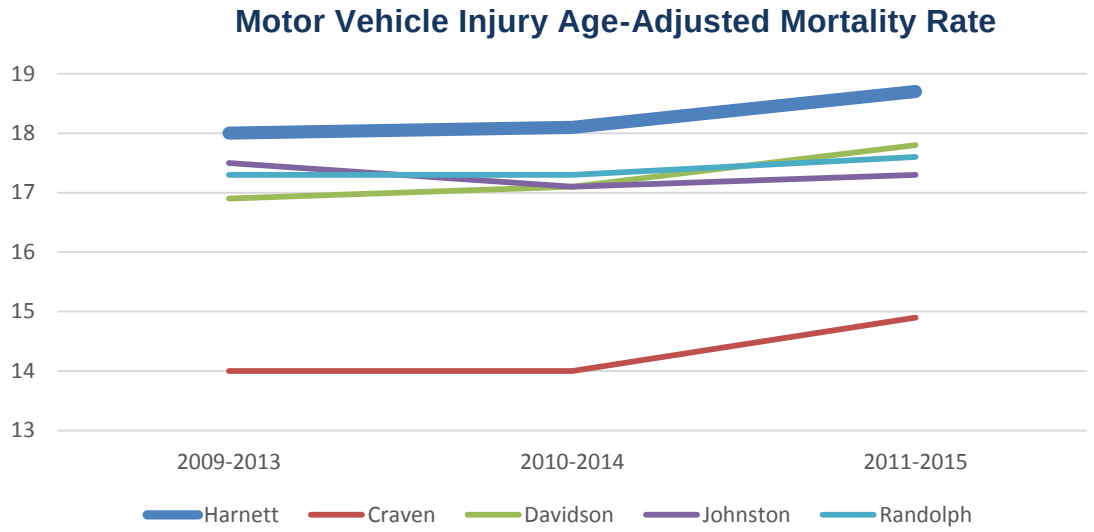
In addition, the high school dropout rate over the last five years for Harnett County Schools is 63% higher than the average for peer counties. Even more, on the Community Health Survey, respondents identified "Dropping Out of School" as the second most influential community problem, which affects the quality of life in Harnett County.



- **<u>Maternal & Child Health</u>** – Over the last five years, the infant mortality rate for Harnett County is 22% higher than the average for peer counties and 19% higher than the state as a whole.



- **Motor Vehicle Safety** – Mortality rates from unintentional motor vehicle injuries is the eighth leading cause of death in Harnett County. Rates of death from motor vehicle injuries in Harnett County is 14% higher than the average for peer counties and 37% higher than the rate for the state as a whole.

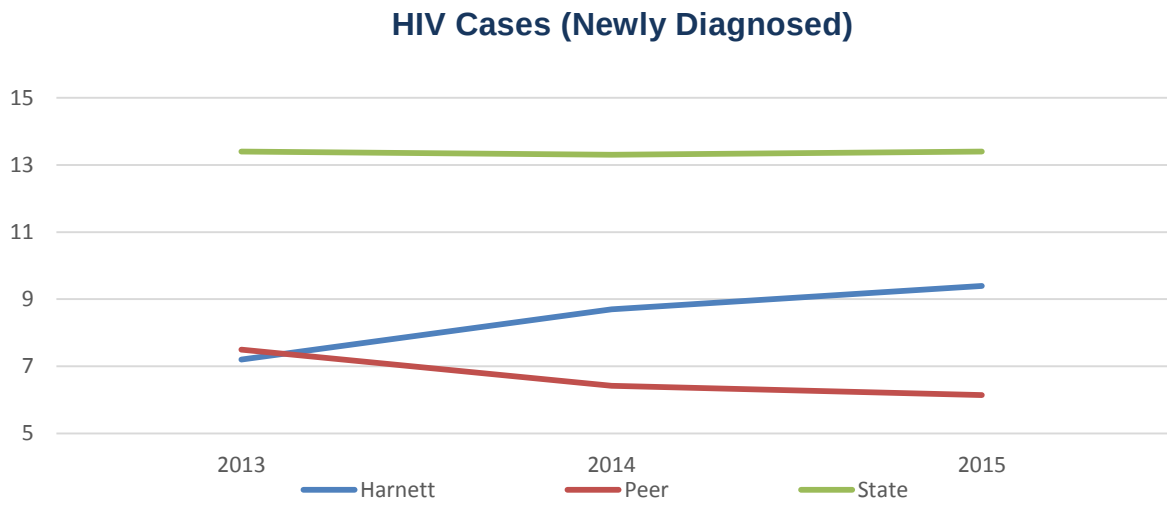


- **Substance Abuse Prevention** – Respondents to the Community Health Survey named Substance Abuse Prevention one of the top "health behaviors that the community needs more information about." Male respondents and Black/African-American respondents identified this topic as the chief concern. Substance Abuse Prevention was a key priority that emerged from the previous Community Health Assessment.

- **Active Living** – When asked about which community service "needs the most improvement," respondents to the Community Health Survey identified "Better/More Recreational Facilities" as a key concern. Only 25% of respondents self-reported exercising daily.

- **Nutrition** – Across all subgroups, respondents to the Community Health Survey indicated that "Eating Well/Nutrition" was a one of the top two health behaviors about which the community needs more information. Clearly, eating well is related to the prevention of a number of the leading causes of death in the county. In self-reporting their own dietary habits, the majority of respondents reporting consuming far less than the recommended intake of fruits and vegetables.

- **Sexual Health** – According to the most recent HIV/STD Epidemiological profile, the number of newly diagnosed HIV cases in Harnett County increased 31% over the last three years, while the average number of cases in peer counties decreased by 19% over that period. While significantly lower than the state as a whole, the trend is concerning and parallels trends with other sexually transmitted infections.



Rating & Identification of Key Priorities

After presenting the key focus areas at each of the aforementioned stakeholder meetings, participants were invited to rate each of the eight areas with regard to Urgency, Severity, and Feasibility. The average scores for each focus area are reported in the table below.

Average Scores of Key Focus Areas

	Urgency	Severity	Feasibility
Economic Opportunity	4.56	4.7	3.67
Education	4.75	4.82	4.11
Maternal & Child Health	4.41	4.29	4.43
Motor Vehicle Injuries	4.15	4.19	3.89
Nutrition	4.11	4.14	4.43
Recreational Facilities	3.69	3.64	3.35
Sexual Health	4.37	4.32	4.57
Substance Abuse Prevention	4.56	4.59	4.46

Community Health Priorities

After reviewing the stakeholder ratings of key community health concerns and all of the additional data in the report, the Community Health Assessment Team settled on the following three priorities: (1) Nutrition & Physical Activity, (2) Maternal & Child Health, and (3) Motor Vehicle Safety.

Nutrition & Physical Activity

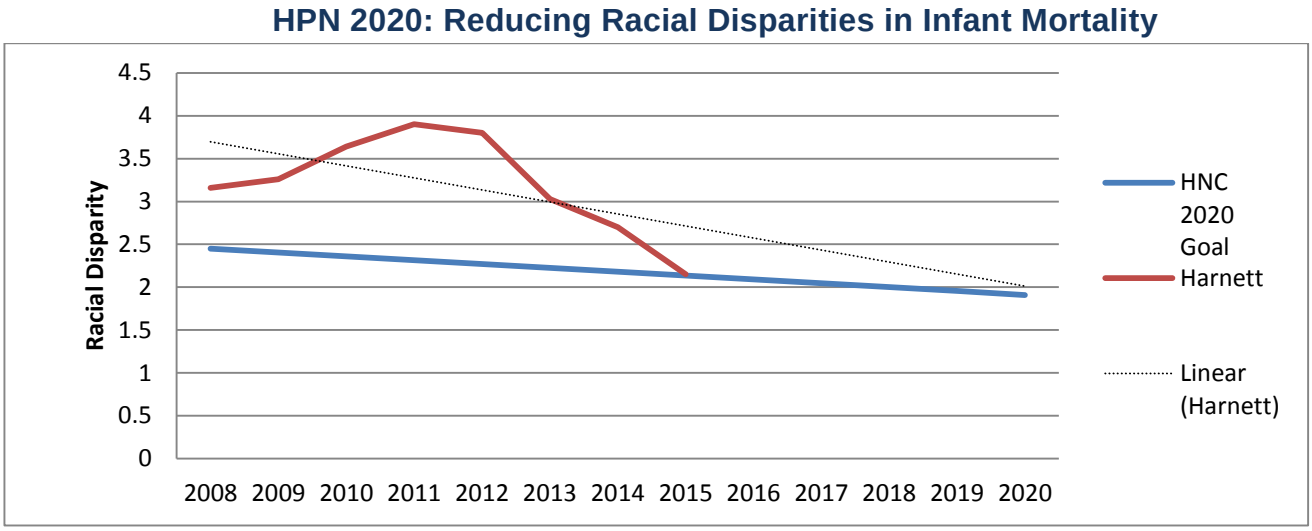
In Harnett County, respondents to the Community Health Survey indicated the need to improve health education related to nutrition and dietary habits. These community perceptions align with self-reports (on the survey) of physical activity and consumption of fruits and vegetables that are below the recommended levels. According to the Harnett County Community Food Assessment (Voices Into Action, 2014), substantial improvement in the diets of many Harnett County residents (particularly families living at or near poverty) would require specific nutrition education for the selection and preparation of low-cost healthy foods as well as improvements in the availability of fruits and vegetables in food pantries. This priority aligns well with Health NC 2020 goals around Physical Activity and Nutrition, with the potential to have significant impact on obesity and a range of chronic diseases.

In the community health improvement planning process, specific attention should be given to targeted educational activities with priority populations (e.g., low-income families), in addition to broader health promotion and policymaking efforts aimed at improving utilization of parks and recreation facilities and improving affordable access to fruits and vegetables throughout the county.

Maternal & Child Health

Like many areas of the state and nation, Harnett County has significant concerns with regard to infant mortality—particularly for minority populations. According to the most recent data (2011-2016), Harnett County ranks 21st in overall infant mortality rate among counties in our state. Even more striking, Harnett County has the ninth (9th) highest Black/African-American infant mortality rate in the state of North Carolina.

This priority aligns with the Maternal and Infant Health Objectives in Healthy NC 2020. While Harnett County has had racial disparities that have historically exceeded the state, by prioritizing Maternal & Child Health over the next four years Harnett County may still be able to approach the HNC 2020 objective of reducing the racial disparity to 1.92 by 2020.



Source: NC State Center for Health Statistics, County Data Books 2010-2017.

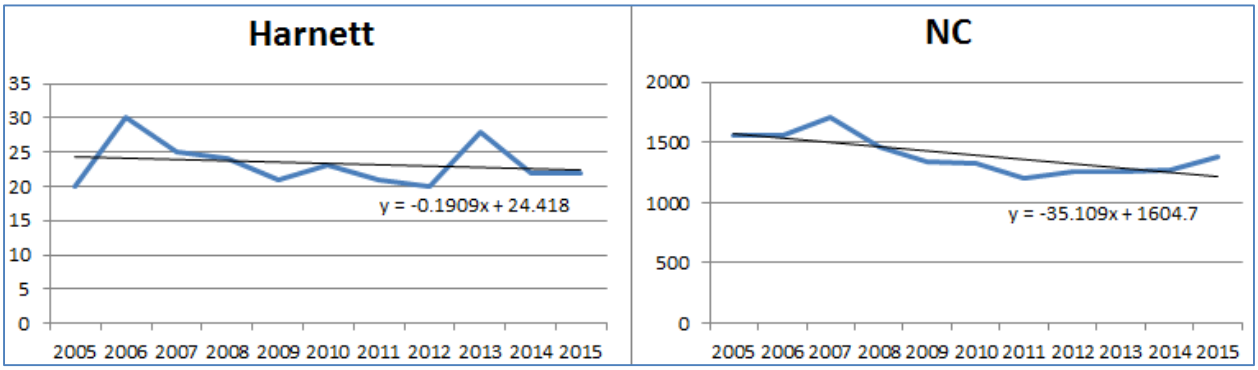
Improving the maternal and child health concerns of the county will require careful attention to maternal health behaviors and the social determinants of infant death—particularly neonatal deaths. In the most recent reporting period (2011-2015), almost 4 in 5 (79%) of the African-American infant fatalities occurred in the neonatal period (<28 days). Smoking during pregnancy creates significant risk for infants; however, Harnett County's rate of smoking during pregnancy (11.8) is only slightly higher than the average rate in North Carolina (10.2). Additionally, rates of high parity/short-interval births and low/very low birth weight are comparable to peer counties and state rates, even though infant mortality rates are much higher in Harnett County.

In the community health improvement planning process, specific attention should be given to targeted outreach and intervention with priority populations (e.g., Black/African-American mothers), in addition to broader prevention efforts aimed at improving pregnancy outcomes and reducing neonatal deaths.

Motor Vehicle Safety

In the most recent report from the NC Department of Transportation (2015), Harnett County ranks ninth (9th) among the 100 counties of NC with regard to the fatal crash rate. The three year fatal crash rate for Harnett County (2.14/100 MVMT) is 46% higher than the fatal crash rate for peer counties. Over the last ten years, while the state of NC is reducing the number of crash fatalities by approximately 35 deaths per year, Harnett County remains stagnant over the period (reduction of less than 0.2 deaths per year).

Comparison of Crash Fatalities: 10 Year Trend (Harnett & NC)



Source: North Carolina Traffic Crash Facts 2015, NC Department of Motor Vehicles.

In 2015, almost half (45.5%) of fatal crashes in Harnett County were alcohol related and Harnett County ranks 13th highest among counties in NC in the percentage of alcohol-related crashes (5.7% overall). In the community health improvement planning process, specific attention should be given to alcohol use and the prevention of alcohol-related motor vehicle accidents, in addition to broader prevention efforts aimed at increasing seat-belt use and reducing distracted driving.