

Community Health Needs Assessment



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Columbus  Regional
HEALTHCARE SYSTEM

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Executive Summary

Background and Purpose

Columbus Regional Healthcare System, located in Columbus County, North Carolina, is the leading healthcare provider serving the health care needs of those in the Columbus County area. With a mission *to be the primary healthcare home of the citizens of Columbus County and surrounding communities*, Columbus Regional Healthcare System is dedicated to improving the health of the community and to being a leader in raising standards for excellence in care delivery

In the spring of 2012, Columbus Regional Healthcare System and the Columbus County Health Department began the implementation of a Community Health Needs Assessment (CHNA) for Columbus County. The effort focused on assessing community health needs, local health resources, barriers to care, gaps in services, and trends regarding health and healthy lifestyles. The resulting CHNA will be utilized to document community need and link those needs to community benefit efforts of the health system. The needs assessment will be utilized to assist the hospital in planning and prioritizing its community benefit investments.

Identified Health Priorities

A variety of data and information was collected and analyzed in order to identify key priority health needs of the community. The prioritization process included review and analysis of:

- 1) Secondary, quantitative statistical data,
- 2) Primary, qualitative community feedback, and
- 3) Current community and Columbus Regional Healthcare System assets.

In addition to review of above, additional meetings with stakeholders and community members were facilitated to identify priorities and potential action plans. To select priorities and related strategies, the following criteria were considered:

- Data and community feedback indicated the issue as an important community need
- Columbus Regional Healthcare System has the capacity to impact the issue
- Addressing a selected issue holds the potential to affect other key health conditions, therefore creating a multiplying effect
- Strategies selected align with and support Columbus Regional's mission and strategic direction
- Strategies selected take in consideration current assets in both the community and within Columbus Regional Healthcare System

In considering the above, the following priorities were selected:

1. Heart Disease and Stroke

Cardiovascular disease includes the second and fourth leading cause of death in North Carolina – heart disease and stroke- and account for nearly 30% of all deaths in North Carolina.

Heart disease is the number one leading cause of death in Columbus County attributing to 194 deaths in Columbus County and 22,819 deaths in North Carolina (NCSCHS, 2010). While high blood pressure, smoking and physical inactivity are considered four major risk factors, other factors such as obesity and diabetes are also considered risk factors.

Our county Cerebrovascular disease rate is 69.9 per 100,000 much higher than the North Carolina rate of 47.8 per 100,000.

2. Diabetes

The prevalence of diabetes continues to be high in Columbus County as the 7th leading cause of death in 2011. Diabetes is also a major cause of death and disability in North Carolina and the nation. With a greater prevalence of obesity and an increasing elderly population, diabetes is approaching epidemic proportions in North Carolina. The mortality rate for diabetes in Columbus is 31.3 which are above the state rate at 22.0 per 100,000.

3. Cancer

The N.C. Division of Public Health reports that cancer is now the leading cause of death in North Carolina surpassing heart disease. In Columbus County, the cancer rate is 204.3 per 100,000 compared to the state rate of 183.1. Lung cancer is the leading cause of cancer death in Columbus County (2010 State Center for Health Statistics).

Community assets related to these needs have been identified in the *Identified Priority Health Needs & Related Assets* section of this report (starting on page 37).

Strategic initiatives to address each of these identified needs have been developed and are included in the *Columbus Regional Healthcare System's Community Health Needs Assessment- Implementation Strategy* document. This will be reported annually to the IRS on Form 990.

The CHNA report will be made widely available to the public and will be posted on Columbus Regional Healthcare System's website: www.crhealthcare.org

About the Research

Community research was conducted by a Community Health Assessment Committee of team members consisting of community members and key stakeholders from Columbus Regional Healthcare System, Columbus County Health Department and various local businesses. A community-based approach was taken to complete the community health needs assessment. National, state, regional and county-specific data were collected from a broad set of data sources. Special emphasis was placed on assessing Healthy People 2020 Leading Indicators, medically underserved areas and gathering information from community residents, providers of health and human services and other stakeholders and representatives of Columbus County.

Efforts were made to ensure that the research was conducted in a manner that was representative of the communities within Columbus Regional's primary service area. The primary service area and focus of the CHNA is Columbus County as approximately 68.5% of Columbus Regional's inpatient, outpatient and emergency room discharges were from residents of Columbus County.

Research methods were conducted in approach that incorporated both quantifiable and qualitative data to get a well-rounded view of the state of the community's health needs.

- 1) Collection of **statistical (secondary, quantitative) data** at national, state, regional and local levels-key data sources included Healthy People 2020, County Health Rankings, National Health Indicators Warehouse, CDC and North Carolina DEHEC biostatistics and hospital discharge data. Dates of data collected ranged from 2006 - 2011. For each indicator, data was pulled for the most recent year available. In addition, data was pulled when available, from previous years in order to assess progress. A more detailed list of data sources is included in the appendix of this report.
- 2) Collection of **qualitative data** through a community health assessment survey was distributed throughout Columbus County via web link, email and hard copies of the survey.

The assessment was completed in partnership and with much input from the local public health professionals, health and human service agencies and Columbus Regional Healthcare System leaders and board.

Community Served – Columbus County

The geographic service area and focus of the Columbus Regional Healthcare System's CHNA is Columbus County as approximately 68.5% Columbus Regional's inpatient, outpatient and emergency room discharges were from those who reside in Columbus County

Population Growth

According to the North Carolina State Census Quick Facts, Columbus County's population was estimated at 57,638 people in July 2012. This reflects a change of -0.8% since April 1, 2010. Population density is 62.0 per square mile.

Columbus County

Population = 57,638

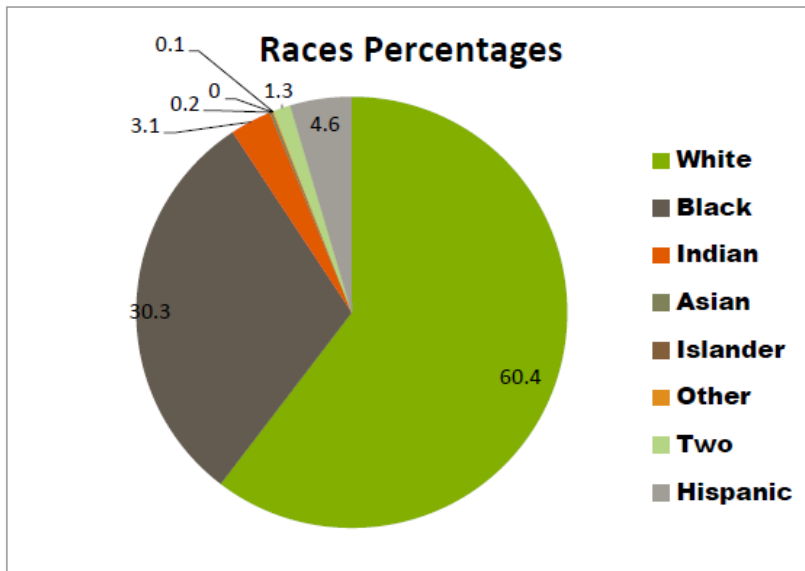
Growth rate 2010-2012 = -0.8%

North Carolina

Population= 9,752,073

Growth rate 2010-2012 = 2.3%

Race



The racial makeup is almost exclusively white and African American with other minorities accounting for 9.3 % of the total population. The 2010 US Census Bureau reported this information; the Hispanic population has increased slightly since the last census in 2000. Other races in our county have remained the same.

Education

Educational attainment for Columbus County is currently below the state and national levels. The current high school graduation rate is 78.6 in Columbus County, with the North Carolina average being 84.1% for the state. The national average remains slightly higher than the state's at a rate of 85.4%. (quickfacts.census.gov)

Income and Poverty

The median household and per capita income in Columbus County are lower than that of the state and nation.

Median Household Income
 \$34,938 Columbus
 \$46,291 NC
 \$52,762 US

Per Capita Income
 \$19,010 Columbus
 \$25,256 NC
 \$27,334 US

With the downturn in the economy over the past several years, poverty rates have climbed at an alarming rate and are much higher than the nation's 14.3% poverty rate. Columbus County's poverty rate has increased to 23% when compared to the state's poverty level of 16.1% (US Census Bureau, 2007-2011)

Unemployment

According to the NC Employment Security Commission (ESC) Workforce Website:

Unemployment rate in Columbus County:

2010: 13.1%
 2011: 14.7%
 2012: 13.1%

Unemployment rate in North Carolina:

2010: 9.1%
 2011: 10.0%
 2012: 8.9%

Summary of Findings

General Social Characteristics

- Columbus County's population has experienced a slight decline since 2011, with 2012 population estimates being 57,638 according to the U.S. Census Bureau.
- Educational attainment remains approximately 5.5% below the state level.
- Columbus County continues to reflect a more diverse population than the state and nation.
- Median household income has remained stagnant over the past 10 years and is lower than the state and nation. Poverty rates have increased at an alarming rate.
- Unemployment remains higher than the state and national average.

General Health Rankings

- Columbus County has been ranked as the least healthy county in the state of North Carolina for the past three years. It ranks 100th out of 100 counties among the health outcomes ratings (morbidity, mortality) and 92nd among the health factors ratings (social, economic, environment, health behavior factors).

Healthy Lifestyles

- Smoking rates have improved both in adults and adolescents. Efforts such as smoke free restaurants and government buildings have helped to create a culture that influences a decrease in smoking.
- Overweight and obese adults and children are a concern, as well as habits related to lack of exercise and healthy eating.
- In Columbus County, the number of teen pregnancies in 2010 for 15 to 19 year olds was 111 and rose to 114 in 2011 for this age group. The county rate is 59.6 compared to the NC state rate of 43.8 (per 1000 population).
- Community Perceptions: Feedback from the community health assessment surveys indicated that most people have a general knowledge of how lifestyle choices impact health; however most report that for reasons related to cost, access and convenience it is difficult to maintain a healthy lifestyle.

Healthy Environment

- A healthy environment is critical for healthy people. The Environmental Health Section of the Columbus County Health Department protects and improves the public's health by controlling the environmental factors, which can adversely affect human health.

Health Risk Factors

- Prevalence of diabetes continues to be high and Columbus has a higher rate than both the state and nation

- Infant mortality and preterm births have seen a decrease in Columbus County for 2011. The infant death rate for the period 2007-2011 was 12.1 (per 1000 population) compared to the state rate of 7.8. In 2011, six infant deaths were reported in Columbus County, a rate of 9.2, compared to North Carolina's Infant death rate of 7.2, a decrease for Columbus County's infant death rate in 2010 of 12 deaths.
- Hypertension rates continue to increase.
- Community Perceptions: The community health assessment surveys consistently reported that obesity, chronic disease and drug/alcohol abuse were the number one health problems in Columbus County.

Health Outcomes- Morbidity and Mortality

- Diseases of the heart are the number one leading cause of death in Columbus County in 2011 attributing to 154 deaths.
- Cancer is the second leading cause of death in adults in Columbus County in 2011.

Mental Health

- Columbus County is served by Southeastern Regional mental Health, Developmental Disabilities and Substance Abuse Services Local Management Entity (LME). There are ____ private providers (for-profit and non-profit) endorsed by them to provide at least one service related to mental health, developmental disabilities, and substance abuse.
- Feedback from the community indicates that there is a growing concern regarding mental health services related to substance abuse.

Health Services

- Due to the lower-income status of Columbus County, it is designated as a medically indigent with a Health Professional Shortage Area (HPSA) Score of 19 in primary care.
- Columbus County has improved and fares comparable to the state and nation in preventive clinical services such as diabetic and mammography screenings with rates of 89% and 69% compared to state percentages of 88% and 69%.
- With increases in unemployment in Columbus County, the community reports that access to care remains an issue, due mostly to lack of insurance and inability to pay for medical care.
- Hospital data shows ER usage rates have increased by nearly 5.5% from 2011 to 2012.
- Perceptions from the Community Health Assessment Surveys included:
 - Issues with access to care were: Lack of insurance, Lack of knowledge and fear being the top 3, with No appointments available and Transportation being in the top 5.
 - The community reported an increase in job opportunities would improve the health of their family, neighbors and friends while decreasing barriers to health care.
 - The community reported a need for more health screenings and/or education services related to cholesterol, cancer and substance abuse being in the top three.

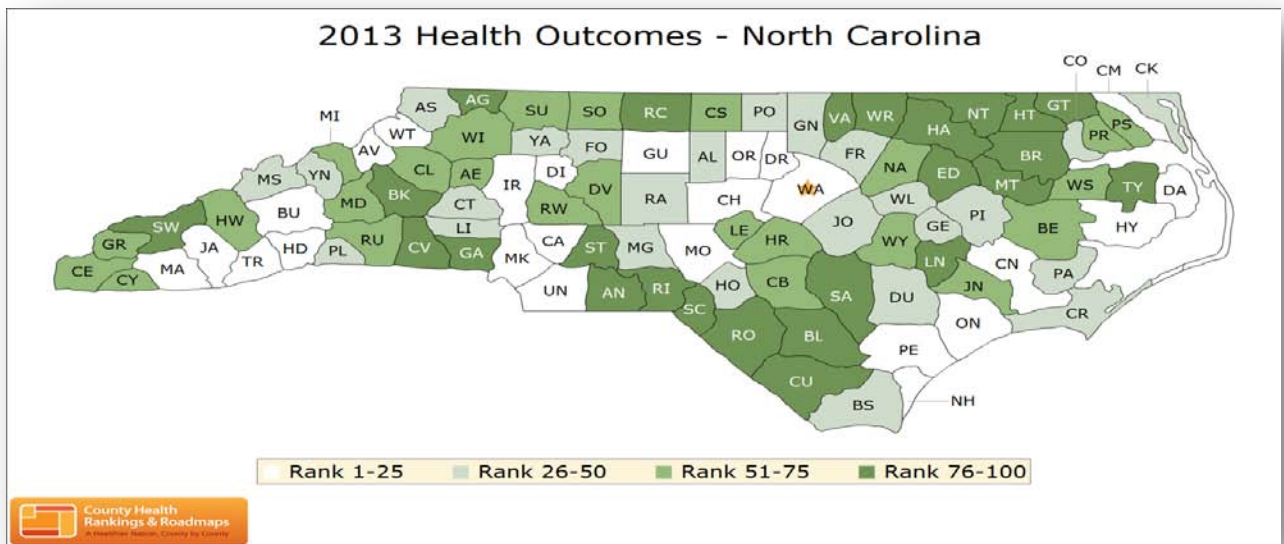
Children's Health

- Obesity is a condition affecting many residents in Columbus County and is the number one health problem in children. In Columbus County, 17.1% of children 2-4 years of age are overweight and 18.3% are obese, ranking Columbus County 87th in the State. (NC-NPASS 2010)

County Health Rankings

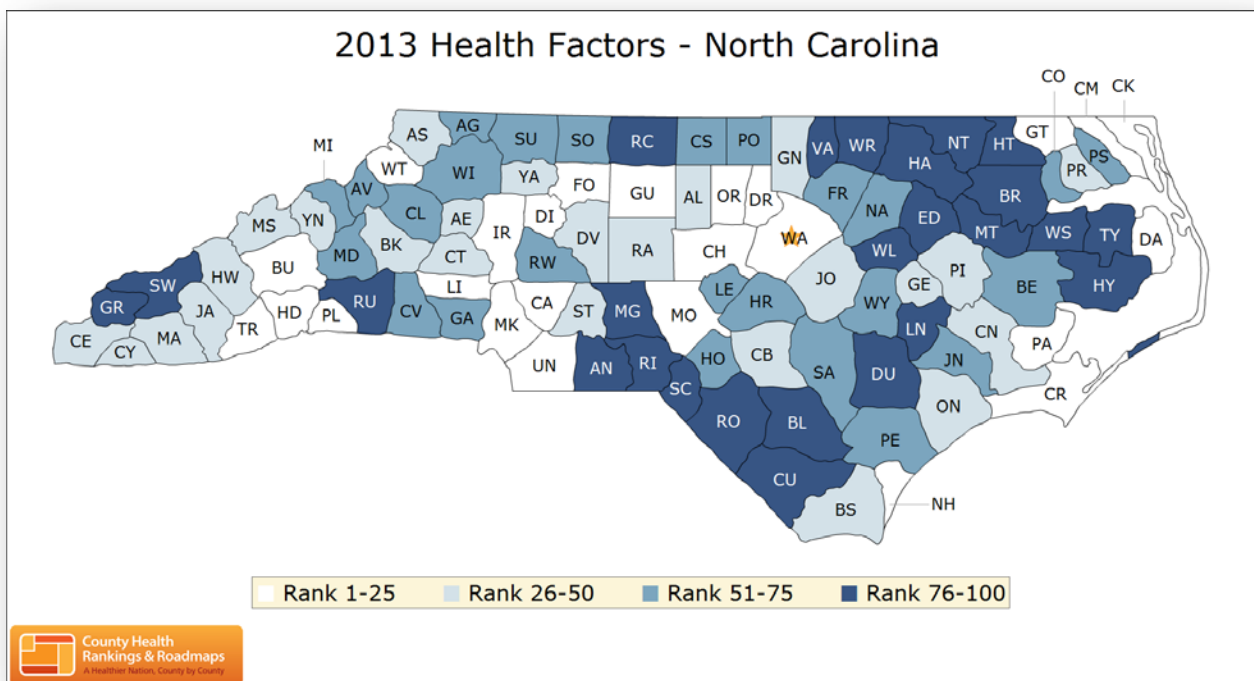
The *County Health Rankings* rank the health of nearly every county in the nation and show that much of what affects health occurs outside of the doctor's office. Published by the University of Wisconsin Population Health Institute and the Robert Wood Johnson Foundation, the *Rankings* help counties understand what influences how healthy residents are and how long they will live. The *Rankings* confirm the critical role that factors such as education, jobs, income, and environment play in influencing health. The Rankings look at a variety of measures that affect health such as the rate of people dying before age 75, high school graduation rates, access to healthier foods, air pollution levels, income, and rates of smoking, obesity and teen births. The *Rankings*, based on the latest data publically available for each county, are unique in their ability to measure the overall health of each county in all 50 states on the multiple factors that influence health.

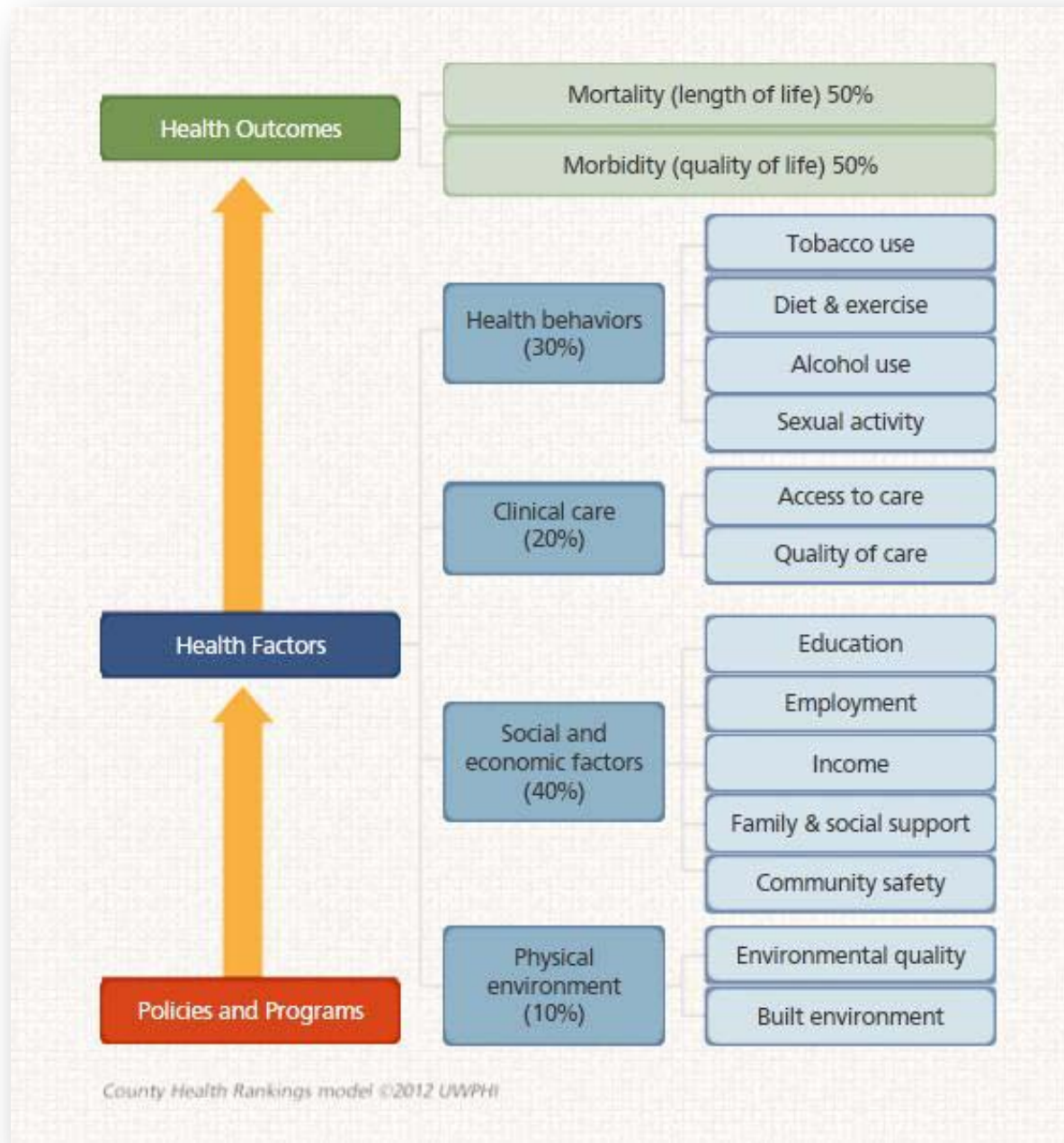
County Health Rankings and Roadmaps, www.countyhealthranking.org



Columbus County ranked 100 out of 100 counties for having the least favorable health outcomes.

Based on the County Health Rankings, Columbus County ranks the highest in the state among unhealthy outcomes. It ranks 100 out of 100 counties among the health outcomes ratings and 92 out of 100 among the health factors ratings. Columbus County has remained at 100 for the past 4 years although there has been a slight improvement in the health outcomes with previous ratings of 97 and 94.





The summary health factor rankings are based on weighted scores of four types of factors: behavioral, clinical, social and economic, and environmental. The weights for the factors (shown in parentheses in the figure) are based upon a review of the literature and expert input, and represent just one way of combining these factors.

(County Health Rankings, 2013).

Healthy Lifestyles and Behaviors

Indicator	Columbus County Current	Columbus Past	North Carolina	Nation	Healthy People 2020 Goal
Smoking (adults age 18+)	21.90%	BETTER 24.4%	BETTER 22.9%	BETTER 25%	12%
Excessive Drinking (% adults reporting excessive drinking)	11.50%	BETTER 15.7%	BETTER 13.2%	BETTER 28%	25.30%
Nutrition (adults not eating 5 servings of fruits/vegetables daily)	79.70%	BETTER 79.5%	BETTER 79.4%		
Adults obese or overweight	34.30%	WORSE 22.7%	WORSE 28.6%	BETTER 35.7%	Increase proportion of adults at a healthy weight (30.8%-33.9)
Teen Pregnancy Rate	59.6%	BETTER 71%	WORSE 56%	WORSE 21%	

Sources: National Health Indicators Warehouse (HIW), Healthy People 2020

Obesity and Related Health Habits

During the past twenty years, there has been a dramatic increase in obesity in the United States and rates remain high. More than one-third of US adults (35.7%) and approximately 17% (or 12.5 million) of children and adolescents ages 2-19 years are obese, (CDC/Centers for Disease Control, 2011). In 2008, North Carolina ranked 14th in the nation in childhood overweight and obesity for youth ages 10-17 years. Today, almost one in three children ages 2-19 years in the United States are overweight compared to one in five in 2002. At its current rate, it will soon become the costliest disease, surpassing cardiovascular diseases. Despite the medical advances of the past 100 years, our children's life expectancy will likely decrease due to overweight and associated diseases.

Obesity is a condition that affects many residents in Columbus County and has been identified as a local priority issue on the most recent Columbus Community Health Action Plan for the period 2012-2015.

Alcohol Use Among Adults

National Health Indicators Warehouse currently says that 11.5% of adults in Columbus County reported excessive alcohol drinking. This result is slightly lower than the state of North Carolina at 13.2% and is better than the 2002 rate of 15.7%

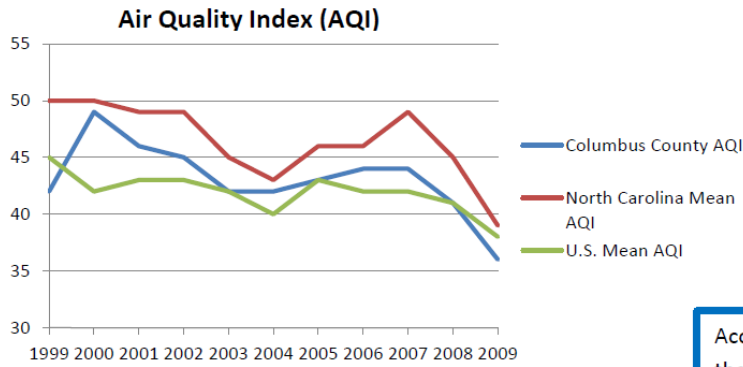
Teen Pregnancy Rates

In Columbus County, the number of teen pregnancies in 2010 for 15 to 19 year olds was 111 and rose to 114 in 2011 for this age group. The county rate is 59.6 compared to the NC state rate of 56 (per 1000 population).

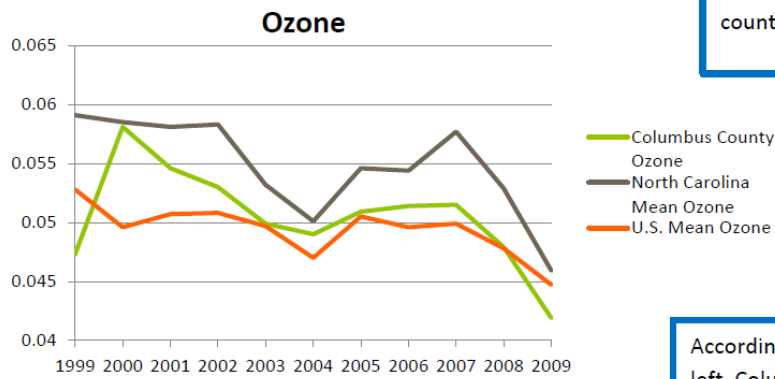
Health Environment

Columbus County Environmental Information

Information Provided by NC Department of Natural Resources

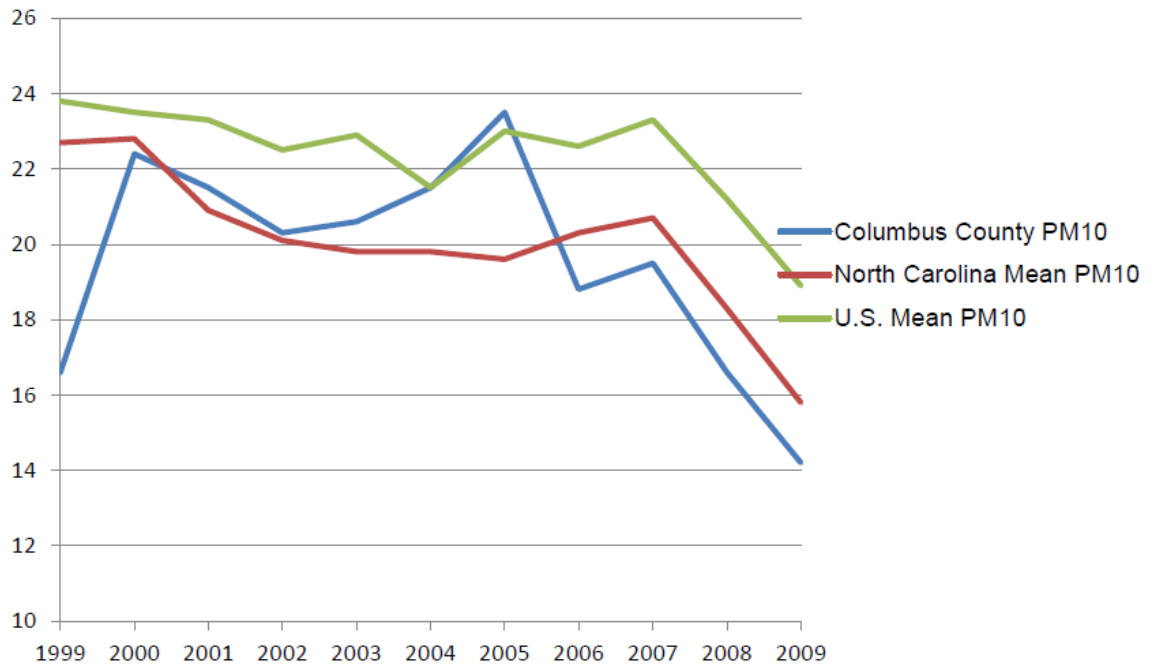


According to the graph on the left, Columbus County is below the state average for Air Quality Index. The U.S. mean average is below both the state and counties average.



According to the graph on the left, Columbus County is below the state average for Ozone. The U.S. mean average is below both the state and counties average.

Particulate Matter (PM₁₀)



According to the graph above, Columbus County ranks below the state for particulate matter. Excessive particulate matter can negatively affect air quality.

Health Risk Factors

Indicator	Columbus County Current	Columbus Past	North Carolina	Nation	Healthy People 2020 Goal
Smoking (adults age 18+)	21.90%	BETTER 24.4%	BETTER 22.9%	BETTER 25%	12%
Diabetes	15.10%	WORSE 14.6%	BETTER 23.2%	WORSE 8.3%	25.30%
Hypertension	32.70%	WORSE 32%	WORSE 29.5%	WORSE 29.9%	26.90%
Infant Mortality	9.20%	BETTER 17.9%	WORSE 7.2%	WORSE 7%	6%

Sources: National Health Indicators Warehouse (HIW), Healthy People 2020

Health Risk Factors

Health, well-being and quality of life are affected by a variety of genetic, environmental and behavioral risk factors that are most commonly associated with poor health, disability and premature death. Columbus County typically fares worse than the rest of the state and is below the national average as well as the Healthy People 2020 goal.

Health Outcomes – Mortality and Morbidity

Leading Causes of Death in Columbus County

According to the State Center for Health Statistics, the ten leading causes of death for Columbus County are the following (2011)

- 1) Diseases of Heart
- 2) Cancer
- 3) Cerebrovascular Diseases
- 4) Chronic Lower Respiratory Diseases
- 5) All other unintentional Injuries
- 6) Motor Vehicle Injuries
- 7) Diabetes Mellitus
- 8) Influenza and Pneumonia
- 9) Nephritis, Nephrotic Syndrome and Nephrosis
- 10) Septicemia

As a whole, Columbus County's rates for the leading causes of death exceed state rates. In several instances, the rates nearly double those of the state. For example, our disease of the heart rate is 259.8 per 100,000 population and the state rate is 184.9 per 100,000.

Cancer

The N.C. Division of Public Health reports that cancer is now the leading cause of death in North Carolina surpassing heart disease. In Columbus County, the cancer rate is 204.3 per 100,000 compared to the state rate of 183.1. Lung cancer is the leading cause of cancer death in Columbus County (2010 State Center for Health Statistics).

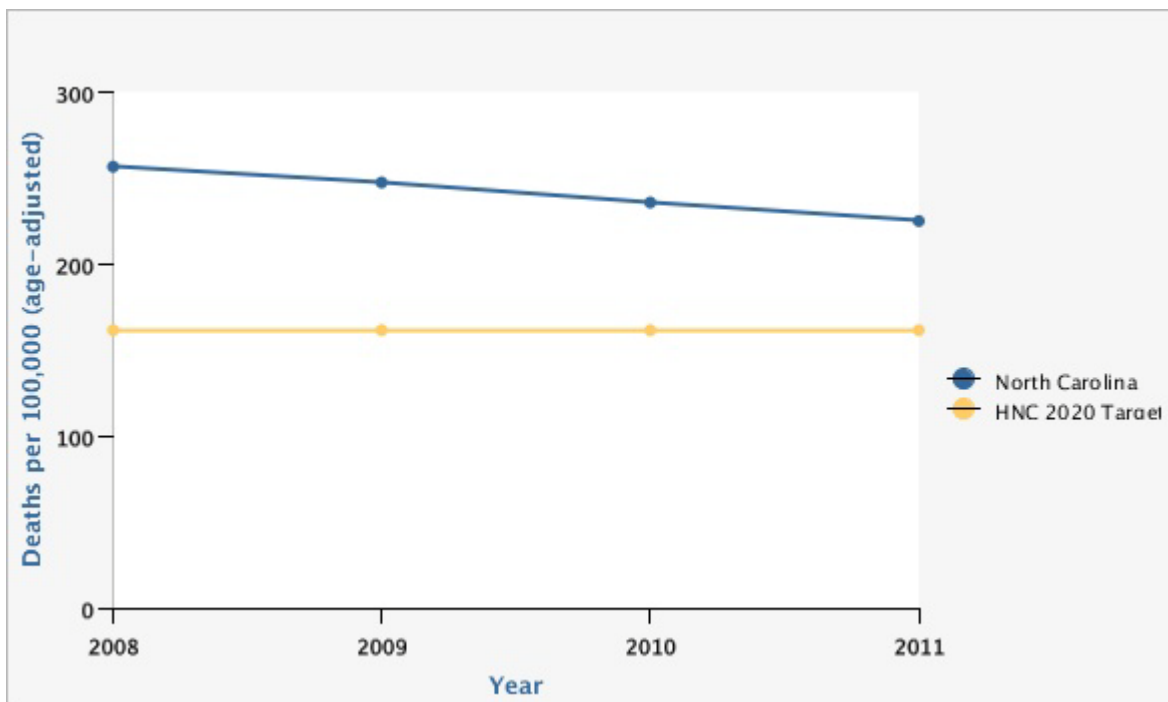
Cancer Deaths 2011	Columbus County	North Carolina
Lung/Bronchus	49	7,307
Colon/Rectum	31	4,672
Female Breast	50	7,781
Prostate	45	6,800
Pancreas	7	1,077

Heart Disease

Heart Disease is the second leading cause of death for men and women in North Carolina. The risk for heart disease increases as a person's age increases. In addition to behavioral risk factors, obesity, high blood pressure, high cholesterol and diabetes are other known risk factors for heart disease. (North Carolina Institute of Medicine. Healthy North Carolina 2020: A Better State of Health.

The Columbus County disease of the heart mortality rate is nearly double that of the state rate at 259.8 per 100,000 population with the state rate being 184.9.

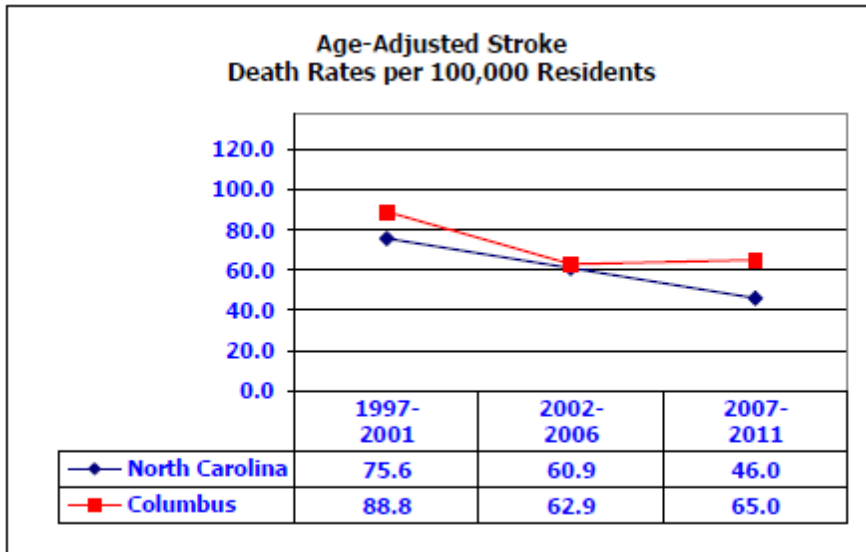
Cardiovascular Disease Mortality Rate North Carolina vs. HNC 2020 Target, 2008-2011



Stroke

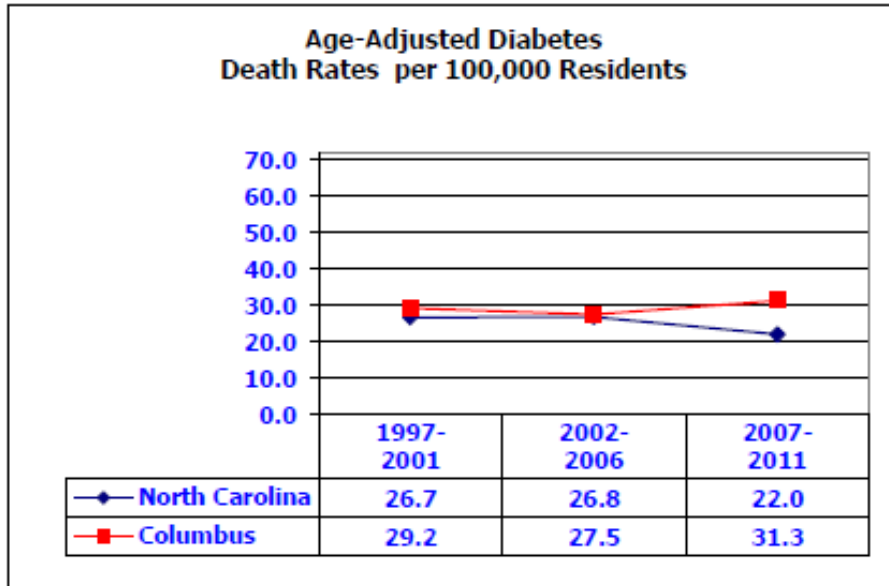
Cerebrovascular disease or stroke is the fourth leading cause of death in the nation and the 3rd leading cause of death in Columbus County. The county stroke mortality rate is 65.0* per 100,000, an increase from the state rate of 46.0 and the national rate of 40.5

**North Carolina Center for Health Statistics*



Diabetes

As mentioned earlier, prevalence of diabetes continues to be high in Columbus County as the 7th leading cause of death in 2011. Diabetes is also a major cause of death and disability in North Carolina and the nation. With a greater prevalence of obesity and an increasing elderly population, diabetes is approaching epidemic proportions in North Carolina. The mortality rate for diabetes in Columbus is 31.3 which is above the state rate at 22.0 per 100,000.



Health Outcomes Summary – Mortality and Morbidity

Indicator	Columbus County Current	Columbus Past	North Carolina	Nation	Healthy People 2020 Goal
Cancer Mortality per 100,000	258.2	WORSE 229.8	WORSE 188.5	WORSE 178.7	160.6
Heart Disease Death Rate per 100,000	204.8	BETTER 207.2	WORSE 175.6	WORSE 185.2	100.8
Stroke Mortality Per 100,000	70.6	BETTER 72.9	WORSE 44.4	WORSE 40.5	33.8
Diabetes Prevalence	15.10%	BETTER 16.5%	WORSE 9.8%	WORSE 8.3%	NA
Diabetes Mortality pe 100,000	DSU	32.4	WORSE 23.6		65.8
Years of Life Lost before age 75	12,108.20	WORSE 11,851.3	WORSE 7,480.3	WORSE 6811.2	NA
Physically Unhealthy Days	5.3	WORSE 5.0	WORSE 3.7	WORSE 3.5	NA
Mentally Unhealthy Days	4.3	WORSE 4.5	WORSE 3.6	WORSE 3.7	2.8
Fair or Poor Health	30.70%	BETTER 31.3%	WORSE 18.1%	WORSE 14.9%	NA
Infant Mortality (per 1000)	13.50%	WORSE 12.1%	WORSE 7.2%	WORSE 6.6%	6

Sources: National Health Indicators Warehouse (HIW), Healthy People 2020

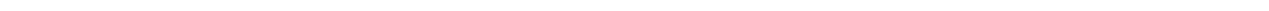
Health Services – Preventive Clinical and Access

Due to the lower-income status of the county, the United States Census designates Columbus County as “rural”. Columbus has an unemployment rate of 12.6% (2012) and is considered a Tier 1 county, which means it is economically depressed by the State Department of Commerce and ranks 100 out of 100 for health outcomes in North Carolina.

Clinical Preventive Services

Screenings

Columbus County screening rates for some of the most widely recommended screenings are better than the state and national rates. Various events are held throughout the year where free screenings are provided to the public for regular cholesterol, blood pressure and bone density checks.



Health Care Access

At 18.6 %, Columbus County has one of the highest rates of uninsured adults age 19 and over. Additionally, 10.4% of our children ages 0-18 lack health insurance coverage, which is right above the state's average of 10.3%

Healthcare Access Data <i>Source: NC State Center for Health Statistics, Behavioral Risk Factor Surveillance Survey</i>		
Indicator	Columbus	NC
% of Adults (age 18+) That Do Not Have any kind of Health Care	18.6%	18.1%
% Estimate of uninsured Age 0-18	10.4%	10.3%
% of Adults 18+ Who Needed to see a Dr. in past 12 mo. But couldn't due to cost	18.2%	17.5%

Indicator	Columbus County Current	Columbus Past	North Carolina	Nation	Healthy People 2020 Goal
Emergency Department Visits	31,281 (2012)	29,722 (2011)	854,692 (2011)	21,830,300 (2011)	
Primary Care Provider Rate (per 100,000)	46.5	WORSE 55.3	Worse 85.7	NA	(Objective being developed)
Physician use delayed due to cost	21.4	WORSE 16.1	WORSE 17.5	WORSE 4.7	4.2
Uninsured	21.50%	WORSE 20.2%	WORSE 19.1%	WORSE 15.5%	100% Covered

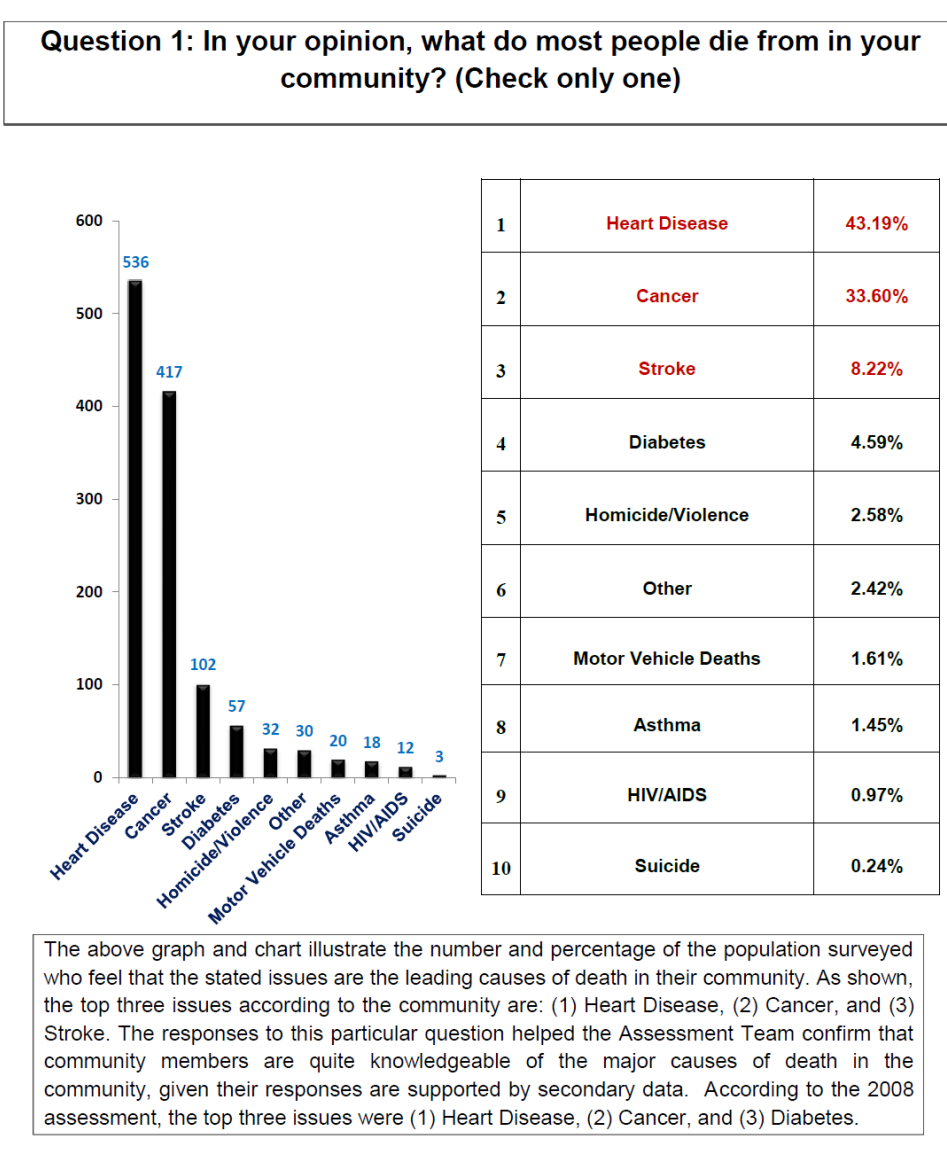
Sources: National Health Indicators Warehouse (HIW), Healthy People 2020

Community Feedback-A Community Survey

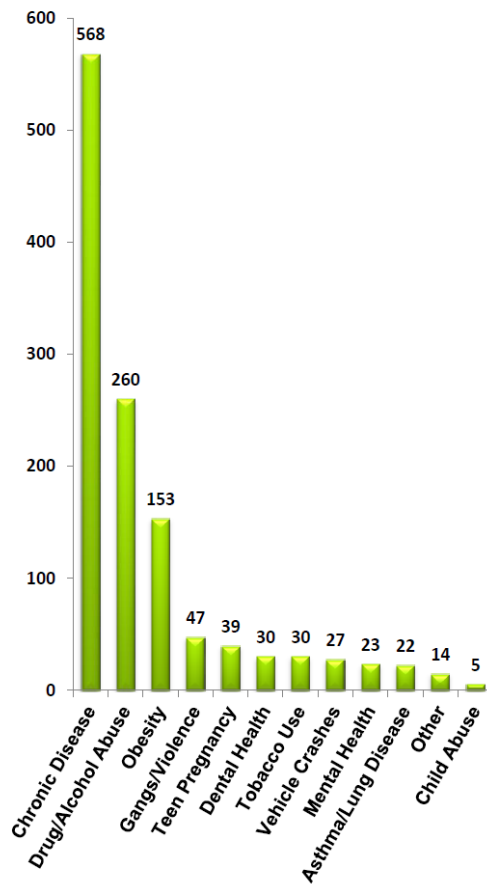
Community Survey

Qualitative data was gathered by conducting a community survey with a total of 1,241 responses from community members. The prioritization process included review and analysis of this primary, qualitative community feedback to determine priorities for healthcare interventions within Columbus County.

Community Health Survey questions and results are listed on the following pages.



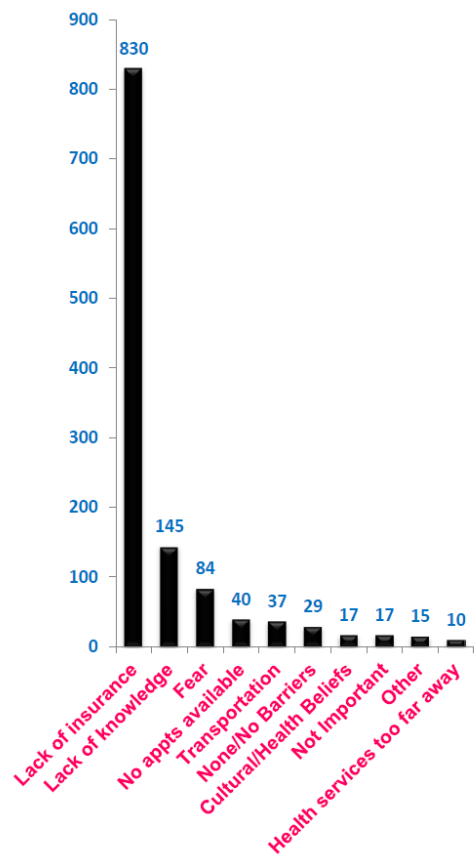
Question 2: In your opinion, what is the biggest health issue of concern in your community? (Check only one)



1	Chronic Disease	46.63%
2	Drugs/Alcohol Abuse	21.35%
3	Obesity	12.56%
4	Gang/Violence	3.86%
5	Teen Pregnancy	3.20%
6	Dental Health	2.46%
7	Tobacco Use	2.46%
8	Vehicle Crashes	2.22%
9	Mental Health	1.89%
10	Asthma/Lung Disease	1.81%
11	Other	1.15%
12	Child Abuse	0.41%

The above graph and chart illustrate the number and the percentage of the population surveyed who feel that the stated issues are the leading causes of death in their community. As shown the top three issues are: (1) Chronic Disease, (2) Drugs/Alcohol Abuse, and (3) Obesity. According to the 2008 assessment, the top three issues were (1) Drug/Alcohol Abuse, (2) Obesity, and (3) Gangs/Violence.

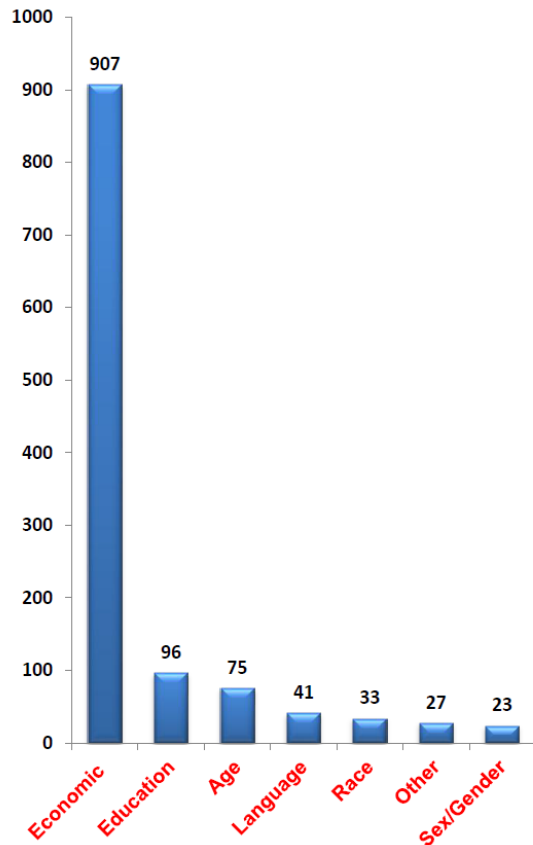
Question 3: In your opinion, what do you think is the main reason that keeps people in your community? (Check only one)



1	Lack of Insurance	66.88%
2	Lack of Knowledge	11.68%
3	Fear	6.77%
4	No Appointments Available	3.22%
5	Transportation	2.98%
6	None/No Barriers	2.34%
7	Cultural/Health Beliefs	1.37%
8	Not Important	1.37%
9	Other	1.21%
10	Health Services Too Far Away	0.81%

The graph and chart illustrate the number and percentage of the population surveyed who feel that the following issues are the main reason that people in their community do not seek medical treatment: (1) Lack of Insurance, (2) Lack of Knowledge, and (3) Fear. According to the 2008 assessment, the top three issues were (1) Lack of Insurance, (2) No Appointments, and (3) Other factors. Given the current economy, it was predicted that “lack of insurance” would be the top issue chosen by survey respondents. The various responses to this particular question will assist the Community Health Assessment Team in their efforts to identify and link residents to available resources, in hopes of reducing the above referenced barriers.

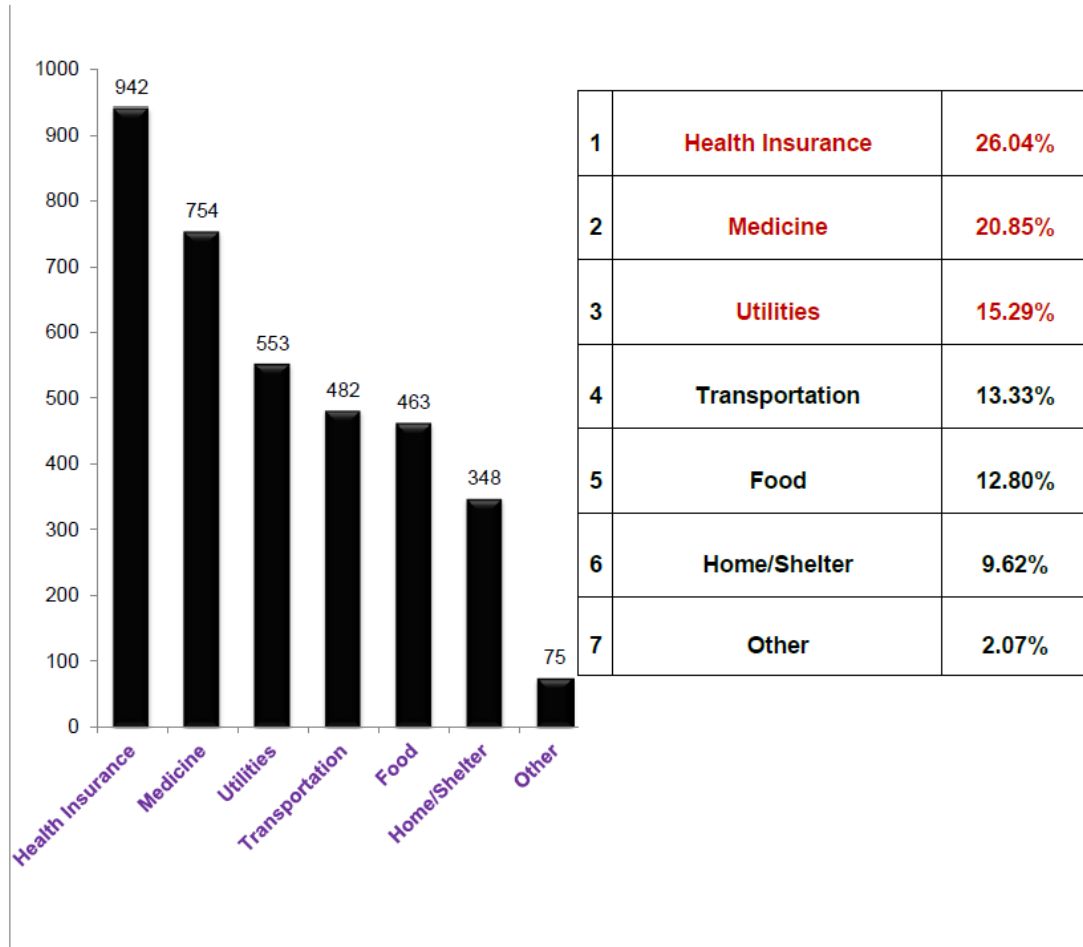
Question 4: What factor do you feel most affects the quality of the health care you or people in your community receive? (Check only one)



1	Economic	75.46%
2	Education	7.99%
3	Age	6.24%
4	Language	3.41%
5	Race	2.75%
6	Other	2.25%
7	Sex/Gender	1.91%

The above graph and chart illustrate the number and percentage of the population surveyed who feel that the stated factors most impact the quality of the health care received by themselves as well as their community. As shown, the top three factors are: (1) Economic, (2) Ability to Read/Education, and (3) Age. In the 2008 Columbus Health Assessment, 52% reported economics as the reason people did not seek care and this percentage increased in 2012 to 75.46%.

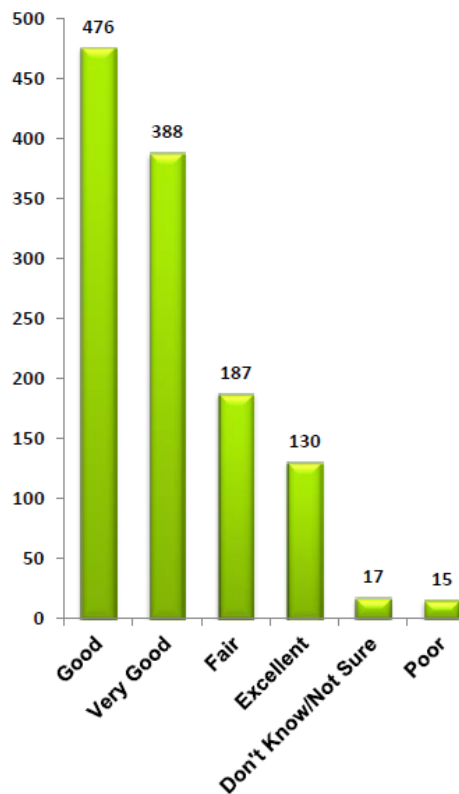
Question 5: In your opinion, do you feel people in your community lack the funds for any of the following: (Check all that apply)



The above graph and chart illustrate the number and percentages of the population surveyed who feel people in their community lack the funds for the stated resources. As shown, the top three factors are: (1) Health Insurance, (2) Medicine, and (3) Utilities. In the 2008 assessment, 38% reported health insurance followed by medicine (29%) and transportation (18%) as issues that people in the community lack funds. In 2012, utilities overtook transportation as an area for lack of funds.

Question 6: How do you rate your own health?

(Check only one)

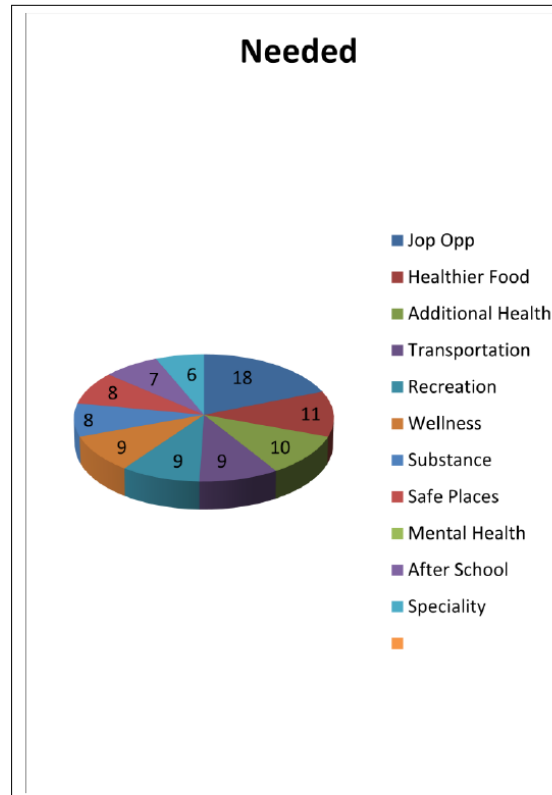


1	Good	38.36%
2	Very Good	31.27%
3	Fair	15.07%
4	Excellent	10.48%
5	Don't Know/Not Sure	1.37%
6	Poor	1.21%

The graph and chart above show the number and percentage of the population surveyed who rated their personal health. As shown, the majority of the respondents feel they are in good health. The Community Health Assessment Team asked this question to gain insight about the individual's health through completing the survey. Given that Columbus County is the unhealthiest county in the state, the Team wanted to clarify whether or not the community members had a thorough understanding of their personal health. The ratings provided by the respondents who completed the survey contradict the information given by the Robert Wood Johnson and University of Wisconsin County Health Rankings Report in 2009-2012 in which Columbus was ranked the least healthy county in the state of NC.

Question 7: What does your community need to improve the health of your family, friends, and neighbors? (Check all that apply)

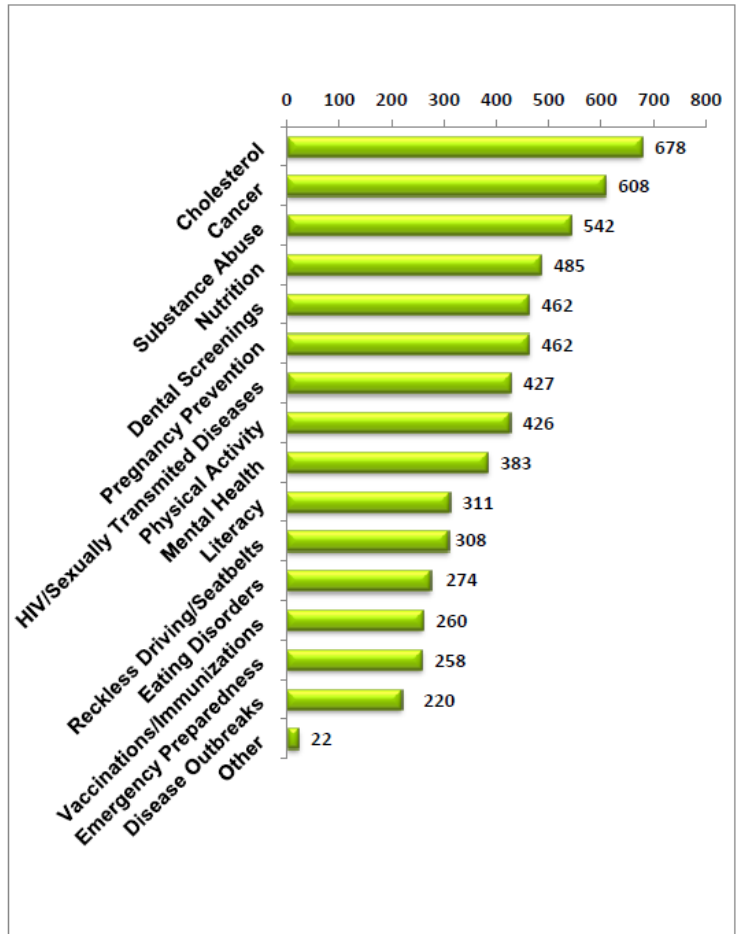
1	Job Opportunities	18%
2	Healthier Food Choices	11%
3	Additional Health Services	10%
4	Transportation	9%
5	Recreation Facilities	9%
6	Wellness Services	9%
7	Substance Abuse/Rehabilitation Services	8%
8	Safe Places to Walk/Play	8%
9	Mental Health Services	7%
10	After-School Programs	6%
11	Specialty Practices	4%
12	Other	1%
13	Tobacco Free Places	0%



The graph and chart show the percentage of those surveyed who feel that the stated resources are needed to improve the health of their friends, etc. As shown, the top four responses are: Job opportunities, healthier food choices additional health services and transportation. In the 2008 assessment, 30% stated that they would like more job opportunities, followed by wellness services.

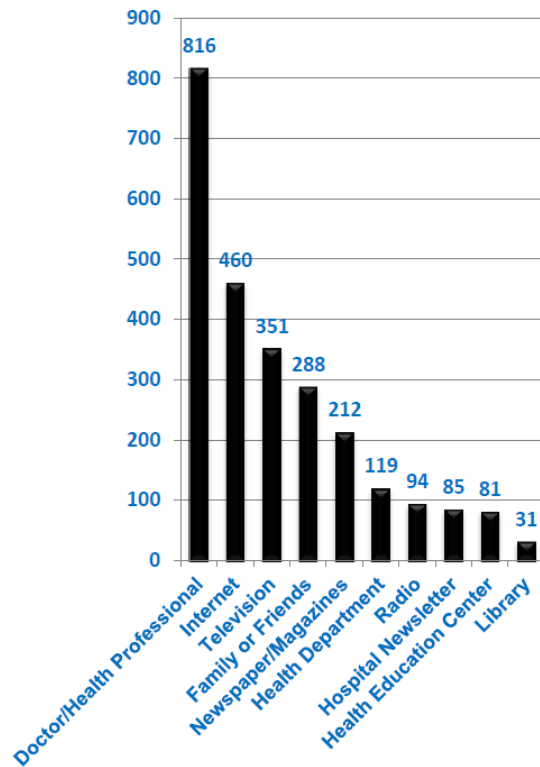
Question 8: What health screenings or education/information services are needed in your community? (Check all that apply).

1	<i>Cholesterol/Blood Pressure/Diabetes</i>	11%
2	<i>Cancer</i>	10%
3	<i>Substance Abuse</i>	9%
4	<i>Nutrition</i>	8%
5	<i>Dental Screenings</i>	8%
6	<i>Pregnancy Prevention</i>	8%
7	<i>HIV/Sexually Transmitted Diseases</i>	7%
8	<i>Physical Activity</i>	7%
9	<i>Mental Health</i>	6%
10	<i>Literacy</i>	5%
11	<i>Reckless Driving/Seat Belts/Child Car Seats</i>	5%
12	<i>Eating Disorders</i>	4%
13	<i>Vaccinations/Immunizations</i>	4%
14	<i>Emergency Preparedness</i>	4%
15	<i>Disease Outbreaks</i>	4%
16	<i>Other</i>	0%



The graph and chart above show the number and percentage of the population surveyed who feel that the stated the health screenings or educational/informational services are needed in their community. As shown, the top three preferences are: (1) Cholesterol/Blood Pressure/Diabetes, (2) Cancer, and (3) Substance Abuse. In 2008, respondents indicated that cholesterol, blood pressure and diabetes screenings were ranked as the top desired screening as well (29%). Columbus County Health Department, Columbus Regional Healthcare System, Columbus County DREAM Center, and other community organizations offer free community health screenings for Cholesterol/Blood Pressure/Diabetes; unfortunately these services are under-utilized by the community. The responses to this particular question confirmed to the CHA Team that our community is not fully aware of available resources; therefore enhanced community awareness is needed.

Question 9: Where do you and your family get most of your health information?



1	Doctor/Health Professional	32%
2	Internet	18%
3	Television	14%
4	Family or Friends	11%
5	Newspaper/Magazines	9%
6	Health Department	5%
7	Radio	4%
8	Hospital Newsletter	3%
9	Health Education Center	3%
10	Library	1%

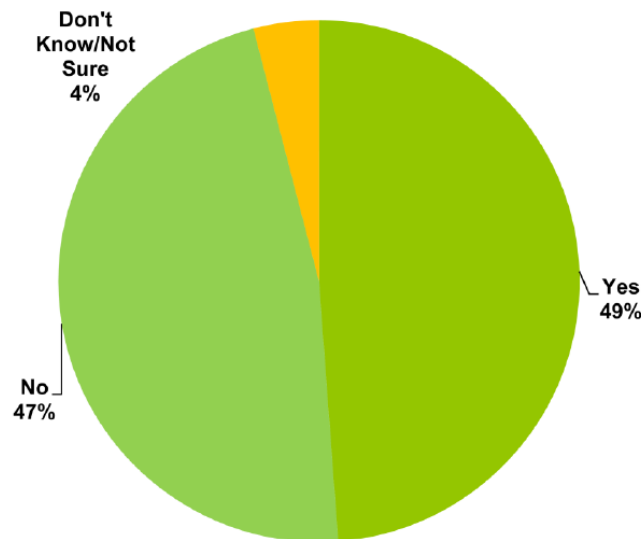
The graph and chart above show the number and percentage of the population surveyed who indicated the health information sources most commonly used by themselves, as well as their family members. As shown, the top three resources are: (1) Doctor/Health Professional, (2) Internet, and (3) Television. Responses to this question assisted the Community Health Assessment Team in determining the best method(s) of relaying health education to the community.

Community Opinion Survey Results

Preparedness & Response

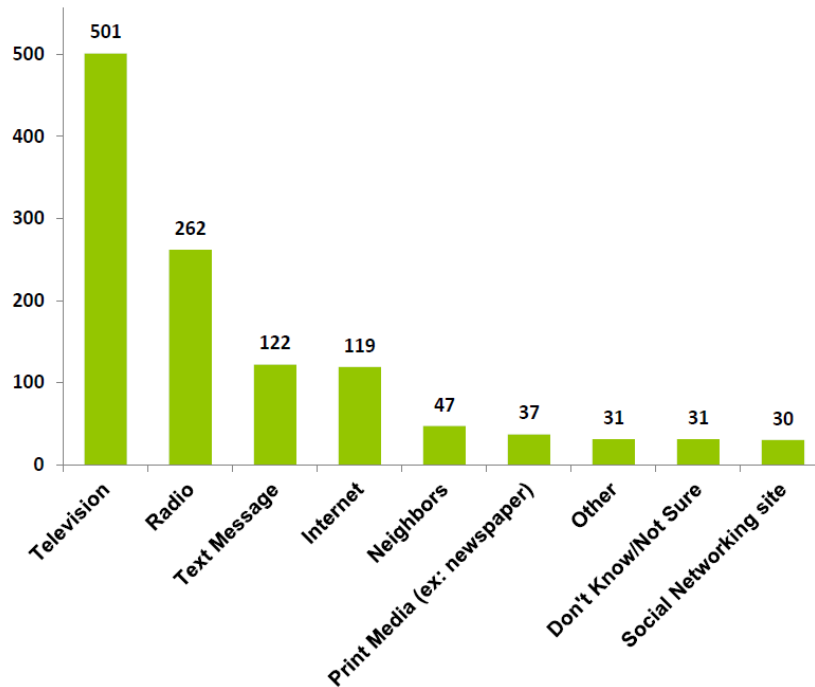
Following any type of natural disaster, emergency event or public health crisis, officials must be prepared to respond and meet the needs of the affected community. The following four questions provide useful information that allows public health officials to better serve the community in emergency situations.

Question 10: Does your family have a basic emergency supply kit? (These include water, non-perishable food, any necessary prescriptions, first aid supplies, flashlights and batteries, non-electric can opener, blanket, etc.)



The graph above shows the percentage of the population surveyed that indicated whether their families have a basic emergency supply kit. As shown, 47% of the community indicated their family did not have an emergency kit in their home. Therefore, community education must be conducted to better inform individuals and families on the importance of maintaining an emergency supply kit. Also, essential in the educational process are comprehensive instructions as to what contents should be included.

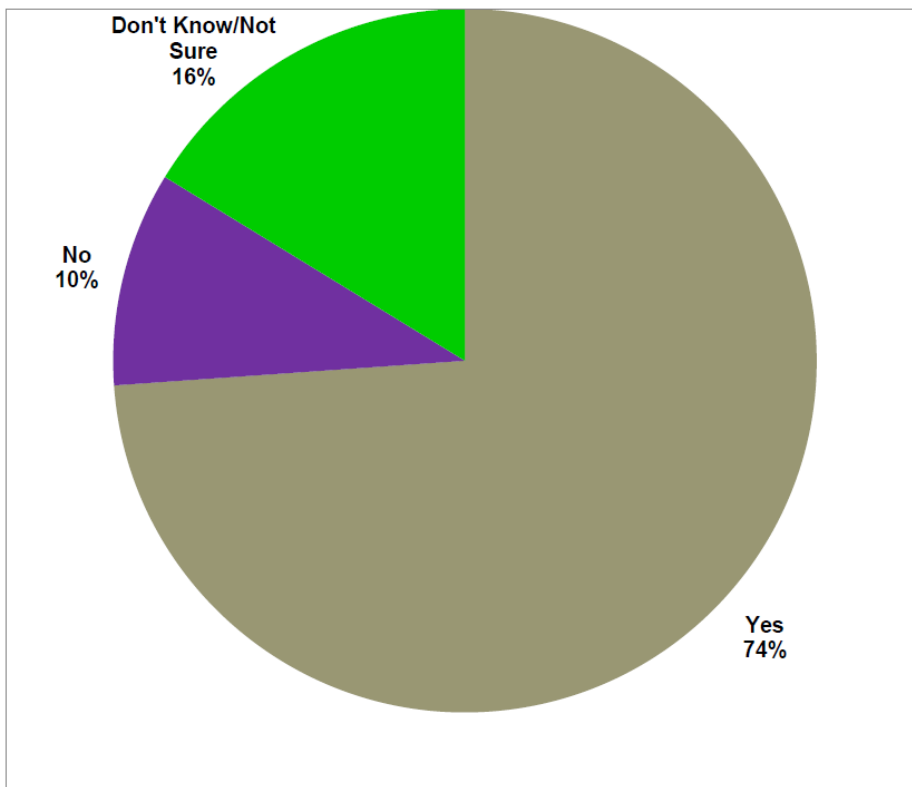
Question 11: What would be your main way of getting information from authorities in a large-scale disaster or emergency? (Check only one)



1	Television	42.46%
2	Radio	22.20%
3	Text Message	10.34%
4	Internet	10.08%
5	Neighbors	3.98%
6	Print Media (ex: newspaper)	3.14%
7	Other	2.63%
8	Don't Know/Not Sure	2.63%
9	Social Networking Site	2.54%

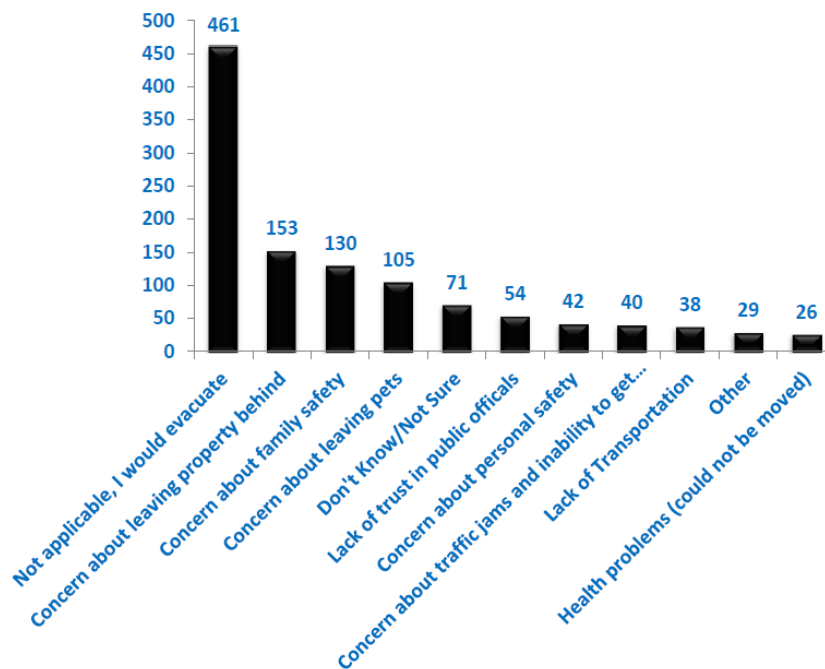
The graph and chart show the number and percentage of the population surveyed that indicated the primary means of obtaining information from authorities in a large-scale disaster or emergency will be from the stated resources. As shown, the top three resources are: (1) Television, (2) Radio, and (3) Internet. This question helped the Community Health Assessment Team identify the best avenue to deliver information to the community in emergency situations.

Question 12: If public authorities announced a mandatory evacuation from your neighborhood or community due to a large-scale disaster or emergency, would you evacuate? (Check only one)



The chart above shows the percentage of the population surveyed who would be willing to evacuate from their neighborhood/community due to a mandatory evacuation ordered by public authorities during a large-scale disaster or emergency. 26% of the respondents indicated they were either uncertain or would definitely not follow a mandatory evacuation order; thus providing clarification to the Community Health Assessment Team that enhanced community education relevant to emergency preparedness and response is vital.

Question 13: What would be the main reason you might not evacuated if asked to do so? (Check only one)



The graph above shows the number and percentage of the population surveyed that indicated what reason might cause them to not evacuate if public authorities announced a mandatory evacuation from their neighborhood or community due to a large-scale disaster or emergency. As shown, more than 40% of persons surveyed felt that a mandatory evacuation would not be applicable to themselves/their families; thus, they would not opt to follow the order issued by public authorities. Nearly 24% indicated they would not comply with a mandatory evacuation order due to family safety concerns and/or fear of leaving their personal property behind. The responses to this particular survey question reiterated to the Community Assessment Health Team that enhanced public awareness efforts are critical.

Identified Priority Health Needs & Related Health Assets

To select priorities and related strategies, the following criteria were considered:

- Data from the Community Health Assessment Survey indicated the issue as an important community need.
- Columbus Regional Healthcare System has the capacity to impact the issue.
- Addressing a selected issue holds the potential to affect other key health conditions, therefore creating a multiplying effect.
- Strategies selected align with and support Columbus Regional Healthcare System's mission and strategic direction
- Strategies selected take in consideration current assets in both the community and within Columbus Regional Healthcare System

In considering the above, the following priorities were selected:

1. Heart Disease and Stroke

Cardiovascular disease includes the second and fourth leading cause of death in North Carolina – heart disease and stroke- and account for nearly 30% of all deaths in North Carolina.

Heart disease is the number one leading cause of death in Columbus County attributing to 194 deaths in Columbus County and 22,819 deaths in North Carolina (NCSCHS, 2010). While high blood pressure, smoking and physical inactivity are considered four major risk factors, other factors such as obesity and diabetes are also considered risk factors.

Our county Cerebrovascular disease rate is 69.9 per 100,000 much higher than the North Carolina rate of 47.8 per 100,000.

2. Cancer

In 2011, 18,201 people in North Carolina died from cancer, 142 in Columbus County making it the second leading cause of death with a rate of 204.3 (per 100,000 population) compared to the rate of 183.1 for North Carolina. Lung cancer is the leading cause of cancer death in Columbus County accounting for 38% of the county cancer deaths.

It is generally recognized that the majority of cancers are related to personal lifestyle or environmental factors (smoking and diet). Other factors (age, gender, family history of a specific cancer) are also associated with the development of cancer and aid in the identification of people at high risk.

3. Diabetes

The prevalence of diabetes continues to be high in Columbus County as the 7th leading cause of death in 2011. Diabetes is also a major cause of death and disability in North Carolina and the nation. With a greater prevalence of obesity and an increasing elderly population, diabetes is approaching epidemic proportions in North Carolina. The mortality rate for diabetes in Columbus is 31.3 which are above the state rate at 22.0 per 100,000.

Implementation Strategies

After identification of health care priorities, additional planning meetings were facilitated with Columbus Regional Healthcare System leaders and the Community Health Assessment Committee to develop strategic initiatives to address the health care need priorities.

Implementation strategies were identified for Columbus Regional Healthcare System.

Columbus Regional Healthcare System's Implementation Strategies include:

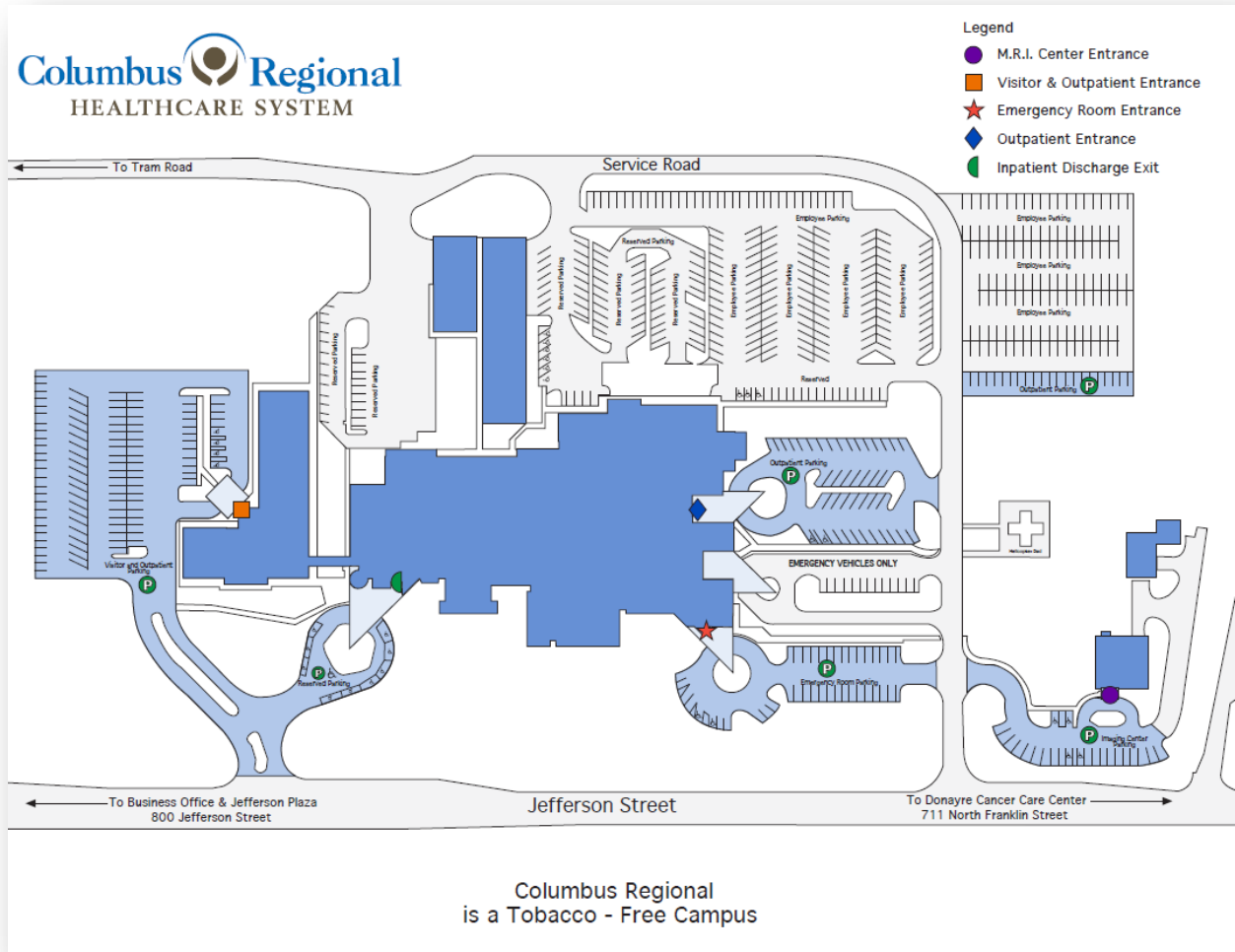
1. **Heart disease and stroke**- To address heart disease and stroke, Columbus Regional Healthcare System will focus on:
 - 1) Community education and efforts to increase early heart disease/stroke awareness and detection
 - 2) Increase at risk population screenings for heart diseaseMore specifically, initiatives include:
 - a. Offer community education programs on topics related to heart disease and stroke awareness including cholesterol screenings, blood pressure checks and education related to preventative measures such as physical exercise and weight loss. Continue inclusion of screenings and education into current community programs such as the CRHS Family Health Festival, and the Mobile Medical Dental Van, which partners with CRHS to provide FREE medical screening to the community at various community wide events.
 - b. Ongoing focus to increase heart disease education and early detection through a partnership with Columbus County Health Department and Columbus County Healthy Carolinians, whose mission is to coordinate and facilitate county-wide health initiatives that create an environment supporting total health.
 - c. Columbus Regional Healthcare System employees are offered an annual wellness program that includes wellness labs, immunization compliance and identification of hypertension and other chronic illnesses.
 - d. Columbus County Board of Commissioners and Columbus Regional Healthcare System Board of Trustees are jointly providing leadership for a County Wellness Task Force. The goal is to create a coordinated county wide wellness program and to study the feasibility of a community supported wellness center.
 - e. Columbus Regional Healthcare System encourages healthy weight and exercise to its employees through a "90 day Weight loss Challenge" that features "Weigh-In Wednesdays", offering weekly and grand prizes to those who lose the most body weight percentage. The exercise equipment in the CRHS Physical Therapy department is available at no cost to employees for their use after hours.

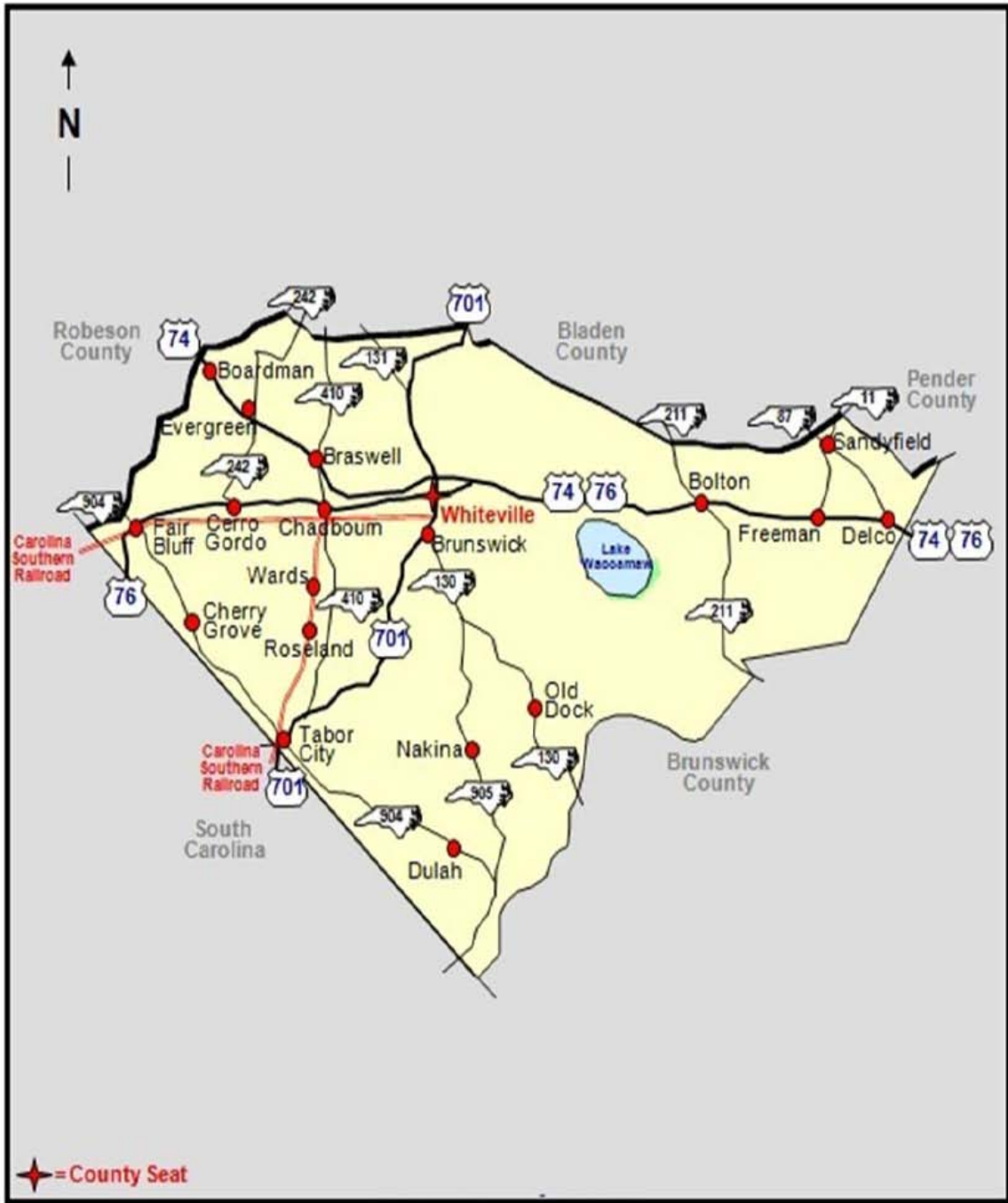
- f. Expanded relationship with Cape Fear Heart Associates, cardiology physician group from New Hanover County, to provide efficient, convenient cardiac care to the citizens of Columbus County.
 - g. Columbus Regional Healthcare System and New Hanover Regional Medical Center have teamed up to expand air ambulance service to Columbus County. The NHRMC Air Link helicopter and pilots are stationed on the CRHS campus to provide 24/7 transport services for patients with cardiac events and stroke among other emergencies.
 - h. CRHS is helping expand accessibility to health care by increasing the number of physicians serving the community. Over the past 18 months Columbus Regional Healthcare System recruitment efforts added 9 providers to the active medical staff in the specialties of urology, family practice, hospitalist, surgery and ophthalmology.
 - i. Columbus Regional Healthcare System is providing funding for the local health information exchange (HIE), an electronic database of patient information contributed by participating hospitals and providers. The goal of the HIE is to facilitate provider access to and retrieval of clinical data to provide safer and more timely, efficient and effective patient-centered care.
2. **Cancer-** To address Cancer, Columbus Regional will focus on the following:
- 1) Increasing education to the community
 - 2) Implement cancer screening programs into current community benefit related activities
- Initiatives include:
- A. The Donayre Cancer Care Center at Columbus Regional Healthcare System participates in community activities and health fairs to provide education and cancer screenings to the community. The DCCC also supports the CRHS annual Family Health Festival with education programs on topics related to the value of cancer screenings and early detection.
 - B. The Columbus Regional Healthcare System Foundation has established a restricted fund for the Donayre Cancer Care Center. Money that is raised for the fund is used to provide medicines, transportation and other needs for DCCC patients in need. Since the beginning of the fund over 5 years ago, almost \$25,000 has been provided to assist cancer patients.
 - C. Columbus Regional Healthcare System sponsors a breast cancer support group by offering meeting space and financial support of fundraising activities. CRHS participates in the county Relay for Life as a major sponsor and supports the fundraising activities of a hospital sponsored team. CRHS employee serves on the county Relay for Life executive committee.
 - D. In 2012, Columbus Regional Healthcare System was certified as a Pink Ribbon Facility by offering digital mammography with 3D tomosynthesis imaging. Women in the community are educated on the importance of early detection through a series

of events such as Mammo Mondays and Breast Cancer Awareness activities each October. Fundraising activities will be held to assist with providing financial support for screening those patients without funds.

- E. Columbus Regional Healthcare System will be endowing the development of a dedicated Women's Imaging Center to increase early detection of breast cancer and gynecology/urology cancers.
3. **Diabetes**- Columbus Regional Healthcare System will address Diabetes by:
- 1) Increasing education
 - 2) Participate and offer community events to provide free screenings for patients at risk for this chronic disease while offering resources for management and treatment options.
 - A) Columbus Regional Healthcare System increases community awareness through education of diabetes signs and symptoms, treatment options and preventative measures at monthly diabetes support group meetings. CRHS provides space and financial support including group leader and program speakers.
 - B) The Diabetes Education Program at CRHS is recognized by the American Diabetes Association as meeting the National Standards for Diabetes Self-Management Education. The program provides group classes and individual diabetes education sessions and self-management through dietician nutritional counseling. Education is provided by a multidisciplinary staff including a certified diabetes educator nurse, certified diabetes educator dietitian, podiatrists, exercise physiologists and pharmacists. Participants are offered both day and night options for classes.
 - C) Columbus Regional Healthcare System annually sponsors a Diabetes Awareness Day which features various screenings and education opportunities for the community. Participants are offered examinations by a local podiatrist who screens for diabetic neuropathy. In 2012 more than 50 individuals received blood pressure checks, stroke screening assessments and a monofilament test.
 - D) Columbus Health Talks, the CRHS Speakers Bureau offers health related educational programs to area organizations at no cost. Programs can be tailored to meet the needs of the group and speakers include physicians, nurses and other healthcare experts who provide information on a variety of topics.

APPENDIX





Columbus County, NC

Data Sources

1. National Health Indicators Warehouse
www.healthindicators.gov
2. County Health Rankings 2012, 2013
www.countyhealthrankings.org
3. Healthy People 2020
www.healthypeople.gov/2020
4. North Carolina State for Health Statistics
www.healthstats.publichealth.nc.gov/home
5. Center for Disease Control
www.cdc.gov
6. US Census Bureau
www.quickfacts.census.gov
7. National Cancer Institute, State Cancer Profiles
www.statecancerprofiles.concer.gov
8. American Diabetes Association
www.diabeter.org
9. NC Department of Employment and Workforce
www.dew.nc.gov/about-lmi.asp
10. NC Behavioral Risk Factor Surveillance System
www.ncdhec.gov/hs/epidata/brfss_index.htm

CHNA Team

Columbus Regional Healthcare System Administration Team

Columbus County Community Health Assessment Team

Kim Smith - Columbus County Health Department

Sarah Gray – Columbus County Health Department

Hilda Memory - Columbus County Health Department

Lorraine Matthews – Columbus County Health Department

Charlene Bush – Columbus County Health Department

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Terrie Priest – Columbus Regional Healthcare System

Beth Brown – Columbus Regional Healthcare System

Carol Caldwell – Columbus County DREAM Center

Radene Caision – Columbus County DREAM Center

Charlotte Smith – Assisted Care

Ricardo Rivero, Jr. – Columbus County Community Health Center

Guillermo Noguera – Columbus County Community Health Center

Laurie Goodman – Student, UNCW School of Nursing

Brittany Ward – Intern

Mark Gilchrist – The News Reporter and Take the Lake

*Public health officials represent the broad health interests of the community, especially Anderson County residents served by the public health department. The public health officials listed above reviewed the secondary data and concurred with the assessment of the key priorities. Curriculum vitae of these individuals are available upon request.