

SCOTLAND HEALTH CARE SYSTEM

Closer Care. Better by Far.



Providing high quality, compassionate health care and to



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Executive Summary

Background and Purpose

Scotland Health Care System, located in Scotland County, North Carolina, is the leading health care provider serving the health care needs of those in the Scotland County area. The Mission of Scotland Health Care System is to work with our health care partners to create and operate a patient centered, integrated system to provide *Safe, High Quality, Compassionate, and Sustainable* health care to the people we serve. Scotland Health Care System is dedicated to improving the health of the community and providing gold standard, excellent care.

In the fall of 2016, Scotland Health Care System and Scotland County Department of Public Health began the implementation of a Community Health Needs Assessment (CHNA) for Scotland 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.

Summary of Findings

Getting Better (Compared to Scotland County past)	Getting Worse (Compared to Scotland County past)
<ul style="list-style-type: none"> • Smoke Free Restaurants and Government Buildings • Cholesterol Screenings • Industrial Wellness Programs • Scotland County Emergency Awareness 	<ul style="list-style-type: none"> • Heart Disease • Overweight and obesity • Exercise and nutrition • Diabetes • Cancer • Unemployment rate • Infant mortality
Positive Highlights (Incorporating comparisons to state, nation and community feedback)	Areas of Concern (Incorporating comparisons to state, nation and community feedback)
<ul style="list-style-type: none"> • Environment: Air quality, # of recreation facilities and access to healthy food • Preventive Screenings • Vaccines and immunizations 	<ul style="list-style-type: none"> • Healthy living habits – exercise, nutrition, weight • Diabetes • Heart Disease • Cancer • Asthma • High Blood Pressure • Dental Health • Mental Health

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) Scotland Health Care System-specific assets.

In addition to review of the 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
- Scotland Health Care 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 Scotland Health Care System's mission and vision
- Strategies selected take in consideration current assets in both the community and within Scotland Health Care System

In considering the above, the following priorities were selected:

1. Obesity

The issue of overweight and obesity is earning recognition throughout the country and North Carolina. The Center for Disease Control and Prevention states that adult obesity is common, serious and costly. North Carolina percentages in childhood obesity are the 5th highest in the Nation. The CDC further reports that more than one-third of U.S. adults (34.9% or 78.6 million) adults are obese. Obesity related chronic conditions includes heart disease, stroke, type 2 diabetes, and certain types of cancer, which are some of the leading causes of premature deaths. The estimated annual medical cost of obesity in the U.S. was \$147 billion in 2008. The medical costs for people who are obese were \$1,429 higher than those of normal weight. Obesity and obesity-related diseases continue to remain highest in the southern part of the country. North Carolina has a total adult obesity rate of 29.7%. In selecting priorities Scotland Health Care System will continue to address obesity by giving attention to those chronic conditions associated with obesity specifically:

Hypertension

High blood pressure affects about 70 million or one in three American adults. Hypertension can lead to stroke, heart failure, or kidney damage. According to the North Carolina State Center for Health Statistics 2014, the number of deaths in Scotland County for heart disease was 82 and 27 deaths for cerebrovascular disease. Hypertension should be monitored through a physician with regular blood pressure screenings. Increased physical activity and healthy eating are also important steps to preventing high blood pressure as well as maintaining a healthy weight. 41%

of respondents reported on the CHNA having been diagnosed by a doctor, nurse, or health professional with hypertension.

Diabetes

In Scotland County, diabetes was listed as the fourth leading cause of death in 2014 and in North Carolina the seventh leading cause of death. Diabetes, ranked 5th as the primary cause of mortality, from 2010-2014, 70 deaths ranked Scotland County twenty-first highest in North Carolina with a rate of 38.8 (per 100,000 population) compared to the rate of 24.2 (per 100,000 population) for the State of North Carolina. (NC SCHS, 2010). Diabetes is also a significant contributing factor to other causes of death, such as heart disease, stroke, high blood pressure and cholesterol, visual impairment and kidney failure with risk factors of obesity, physical inactivity, unhealthy diets and smoking. On average persons with diabetes have approximately 2.3 times higher medical costs than those without diabetes. 26.36% of respondents reported on the CHNA having been diagnosed by a doctor, nurse, or health professional with diabetes mellitus.

Heart Disease

Heart disease and stroke – the principal components of cardiovascular disease – are the second and third leading causes of death for men and leading cause of death among women. Heart disease attributed to 17,090 deaths in North Carolina in 2010, and 91 deaths in Scotland County (NCSCHS, 2010). While high blood cholesterol, high blood pressure, smoking and physical inactivity are considered four major risk factors, several other factors such as obesity and diabetes are also considered risk factors.

2. Mental Health

The most recent CHNA survey and Community Input Surveys showed that residents of Scotland County reported substance abuse as a new and emerging issue in Scotland County. Substance abuse is known to be a contributing factor to death and disability in North Carolina, as well as Scotland County. Addiction to drugs and alcohol is a chronic health issue and individuals who suffer from use and abuse are likely to develop dependency, and are at a greater risk for injuries and disabilities. Substance abuse has a significant impact specifically on the family, society, and the local community and can be linked with several other issues as well. 17.15% of survey respondents reported substance abuse as the biggest risk factor that has an impact on family members. Mental Health needs are best treated with regular and comprehensive care, such as that offered through a coordinated system of care. In 2011 North Carolina had 106.5 per 10,000 population emergency department visits (NC DETECT).

3. Dental Health

Dental Health is also a new and emerging issue in North Carolina and Scotland County. According to the Division of Oral Health 2006 report over the past 10 years, the number of adults missing all their natural teeth has declined from 31 % to 25% for those aged 60 years and older, and from 9% to 5% percent for those adults between 40 and 59 years. However, 5 % means a surprising 1 out of 20 middle-aged adults are missing all their teeth. This could have impact on adults receiving the proper nutrition and would contribute to malnourishment. Over 40 % of poor adults (20 years and older) have at least one untreated decayed tooth compared to 16 percent of non-poor adults.

Toothaches are the most common pain of the mouth or face reported by adults. This pain can interfere with vital functions such as eating, swallowing, and talking. Almost 1 of every 4 adults reported some form of facial pain in the past 6 months. Over 40 percent of poor adults (20 years and older) have at least one untreated decayed tooth compared to 16 percent of non-poor adults. Toothaches are the most common pain of the mouth or face reported by adults. This pain can interfere with vital functions such as eating, swallowing, and talking. Almost 1 of every 4 adults reported some form of facial pain in the past 6 months. Most adults show signs of gum disease. Severe gum disease affects about 14 percent of adults aged 45 to 54 years. Signs and symptoms of soft tissue diseases such as cold sores are common in adults and affect about 19 percent of those aged 25 to 44 years.

Chronic disabling diseases such as jaw joint diseases (TMD), diabetes, and osteoporosis affect millions of Americans and compromise oral health and functioning. Women report certain painful mouth and facial conditions (TMD disorders, migraine headaches, and burning mouth syndrome) more often than men. Every year more than 400,000 cancer patients undergoing chemotherapy suffer from oral problems such as painful mouth ulcers, impaired taste, and dry mouth. Employed adults lose more than 164 million hours of work each year due to oral health problems or dental visits. Customer service industry employees lose 2 to 4 times more work hours than executives or professional workers

Community assets related to these needs have been identified in the *Identified Priority Health Needs & Related Assets* section of this report (starting on page 35).

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

This CHNA report will be made widely available to the public and will be posted on Scotland Health Care System's website: www.scotlandhealth.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 Scotland Health Care System, Scotland 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 Scotland County.

Efforts were made to ensure that the research was conducted in a manner that was representative of the communities within Scotland Health Care's primary service area. The primary service area and focus of the CHNA is Scotland County as approximately 48.0% of Scotland Health Care System's inpatient, outpatient, and emergency room discharges were from residents of Scotland County.

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

- 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 DHEC biostatistics, and hospital discharge data. Dates of data collected ranged from 2008 – 2014. 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 Scotland County via web link 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 Scotland Health Care System's leaders and board.

Community Served-Scotland County

The geographic service area and focus of the Scotland Health Care System's CHNA is Scotland County as approximately 48.0% of Scotland Memorial Hospital's inpatient, outpatient and emergency room discharges were from those who reside in Scotland County.

Population Growth

According to the North Carolina State Census Quick Facts, Scotland County's population was estimated at 35,509 people in July 2015. This reflects a change of -1.8% since April 1, 2010. Population density is 113.4 per square mile. Designated as "rural" in the United States Census, Scotland County, made up of Laurinburg, East Laurinburg, Laurel Hill, Gibson and Wagram, is ranked 64th largest in North Carolina.

Scotland County

Population = 35,509

Growth Rate 2012-2015 = -1.8%

North Carolina

Population = 10,042,802

Growth Rate 2010-2015 = 5.3%

Race

Racial makeup is almost exclusively white and African American with other minorities accounting for 14.6% of the total population 2015 population breakdown is:

Race	Scotland County	Peer County	North Carolina
White	46.3%	32.2%	71.2%
Black	39.1%	24.4%	22.1%
American Indian	11.5%	39.9%	1.6%
Hispanic	2.8%	8.2%	9.1%
Asian	0.8%	0.7%	2.8%
Two or more Races	2.3%	2.6%	2.1%

Gender	Male	Female
Scotland County	49.2%	50.8%
North Carolina	48.7%	51.3%

(Scotland County Quick Facts from US Census Bureau 2015 estimate)

Education

Educational attainment for Scotland County has remained below the state and national levels. The current high school graduation rate is 77.8% in Scotland 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

Scotland County Poverty Rate: (2010-2014) 28.9% North Carolina: 17.2%

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

□ Median household income

- \$30,834 Scotland
- \$46,693 N.C.
- \$53,482 US

- Per Capita Income
 - \$15,787 Scotland
 - \$25,608 N.C.
 - \$28,555 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 14.8% poverty rate. Scotland County's poverty rate has dramatically increased to 28.9% when compared to the state's poverty level of 17.2%. (US Census Bureau, 2010-2015).

Unemployment

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

- **Unemployment rate in Scotland County in: 2013, 2014, 2015**
14.6%, 10.2%, 10.4%
- **Unemployment rate in North Carolina** 6.9% 5.5% 5.6%

Scotland County's Labor Force: (NC Dept. of Commerce-Labor Market 2012)

December 2013: 11,597 (1,872 unemployed)
December 2014: 12,161 (1,244 unemployed)
November 2015: 11,721 (1,221 unemployed)

General State of Our Community's Health

Summary of Findings

General Social Characteristics

- Scotland County's population has experienced a slight decline since 2012, with 2015 population estimates being 35,509 according to the U.S. Census Bureau.
- Educational attainment remains approximately 7% lower than state's level.
- Scotland 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 consistently higher than the state and national average.

General Health Rankings

- Scotland County is one of the least healthy counties among most other parts of the state of North Carolina. It ranks 99th out of 100 counties among the health outcomes ratings (morbidity, mortality) and 99th among the health factors ratings (Social, economic, environment, health behavior factors).

Healthy Lifestyles

- Smoke Free Restaurants and Government Buildings
- Cholesterol Screenings
- Industrial Wellness Programs
- Scotland County Emergency Awareness
- Nearly all restaurants and bars in North Carolina and many lodging establishments that prepare and serve food and drink became smoke-free, thanks to S.L. 2009-27 (G.S.130A-496), otherwise known as North Carolina's Smoke-Free Restaurants and Bars Law. A news release from November 9, 2011, from the North Carolina Department of Health and Human Services/Office of Public Affairs reported that emergency room visits by North Carolinians experiencing heart attacks have declined by 21% since the January 2010 start of the state's Smoke-Free Restaurants and Bars Law. Scotland County has made great strides in creating a culture that influences a steady decline in smoking.
- During the past twenty years, there has been a dramatic increase in obesity in the United States and rates remain high. Lack of physical activity and poor nutritional habits are major factors in overweight and obesity.
- In Scotland County, the number of teen pregnancies in 2013 for 15 to 19 year olds was 68 and decreased in 2014 to 63 pregnancies for this age group. The county rate is 51.8 compared to the NC state rate of 32.3 (per 1000 population). Scotland County continues to have one of the highest teen pregnancy rates in NC and ranks 2nd highest in the State tied with Montgomery County.
- 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 consistently eat a healthy diet, get enough physical activity, and seek medical care.

Health Environment

- Overall, Scotland County offers a health environment that is conducive to healthy lifestyles such as its natural resources that offer clean, safe drinking water and increased access to outdoor recreation. Recently, increases in county recreation facilities and physical activity opportunities have decreased barriers for sedentary lifestyles
- A healthy environment is critical for healthy people. The Environmental Health Section of the Scotland County Health Department protects and improves the public's health by controlling the environmental factors, which can adversely affect human health. Scotland County offers many natural resources and outside recreational activities with recent recreational gyms built within the community.

Health Risk Factors

- Prevalence of diabetes continues to climb, and Scotland has a higher rate than both the state and nation.
- Infant mortality and preterm births increased in Scotland County in 2011. In Scotland County the infant death rate for the period 2010-2014 was 11.7 (per 1000 population) compared to the state rate of 7.4 (per 1,000 population). In 2014, five infant deaths were reported in Scotland County, a rate of 11.4 (per 1,000 population), compared to North Carolina's Infant death rate of 7.1 (per 1,000 population), an increase for Scotland County's infant death rate in 2013 of 4.5 with two infant deaths.
- Hypertension rates continue to increase. Hypertension, high blood cholesterol, smoking and physical inactivity are considered four major risk factors for heart disease.
- Community Perceptions: The community health assessment surveys consistently reported that obesity, substance abuse, mental health, and dental health were the biggest health problems reported in Scotland County.

Health Outcomes - Morbidity and Mortality

- Cancer is one of the leading causes of death among adults. Lung and colorectal cancers are of particular concern. In Scotland County, screening and removal of malignant neoplasm are among the top two diagnostic reasons for seeking general surgery.
- Diabetes prevalence and death rates are increasing.
- Heart disease and stroke – the principal components of cardiovascular disease – are the second and third leading causes of death for men and leading cause of death among women. Heart disease attributed to 17,090 deaths in North Carolina in 2010, and **82** deaths in Scotland County

Mental Health

- Scotland continues to be served by Southeastern Regional Mental Health, Developmental Disabilities, and Substance Abuse Services Local Management Entity (LME). As of October 2010, there are 18 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. Several services remain in short supply – psychiatric services, outpatient substance abuse services, intensive in home services, and day treatment programs. Often, clients need to go to more than one provider to receive services determined to be medically necessary and appropriate.
- Feedback from the community indicates that mental health screenings and educational services are needed within the community due to a growing need for mental health services.
- In 2013, Scotland Health Care System began renovating several rooms in the Emergency Department to provide dedicated exam rooms specifically for patients suffering from mental health illnesses. These rooms will increase patient safety while providing ED staff with continuous monitoring capability.

Health Services

- Due to the lower-income status of the county, Scotland County is designated as medically indigent with a Health Professional Shortage Area (HPSA) Score of 21 in primary care due to a rate of 28.9% of the population living below poverty.
- Scotland has improved and fares comparable to the state and nation in preventive clinical services such as diabetic and mammography screenings.
- With increases in unemployment in Scotland 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 visits increased by 6,785 visits from FY 2014 – 2015.
- Community Perceptions from the Community Health Assessment Surveys included the most frequently reported issues with access to care, the lack of funds for health insurance and medicine, fear and transportation being included in the top three.
- The community reported an increase in job opportunities, safe places to work; play and exercise would improve the health of their family.

Children's Health

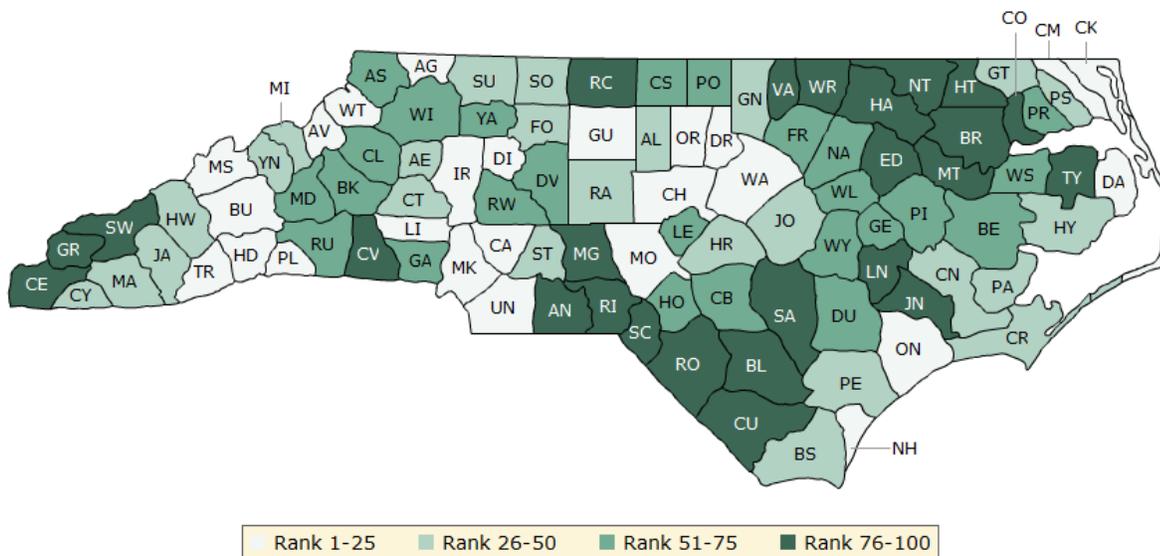
- Obesity is a condition affecting many residents in Scotland County and is the number one health problem in children. In Scotland County, 10.4 % of of children 2-4 years of age are overweight and 12.8% are obese, ranking us 25th in the State. (NC-NPASS 2012).
- While asthma does not cause many deaths among children in North Carolina, it is one of the most prevalent chronic diseases in our state among children. In 2015, the numbers of hospitalizations for asthma diagnosis in Scotland County were: 81 for all ages and 21 for children ages 0-14 years. (NCSCHS 2015)

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**

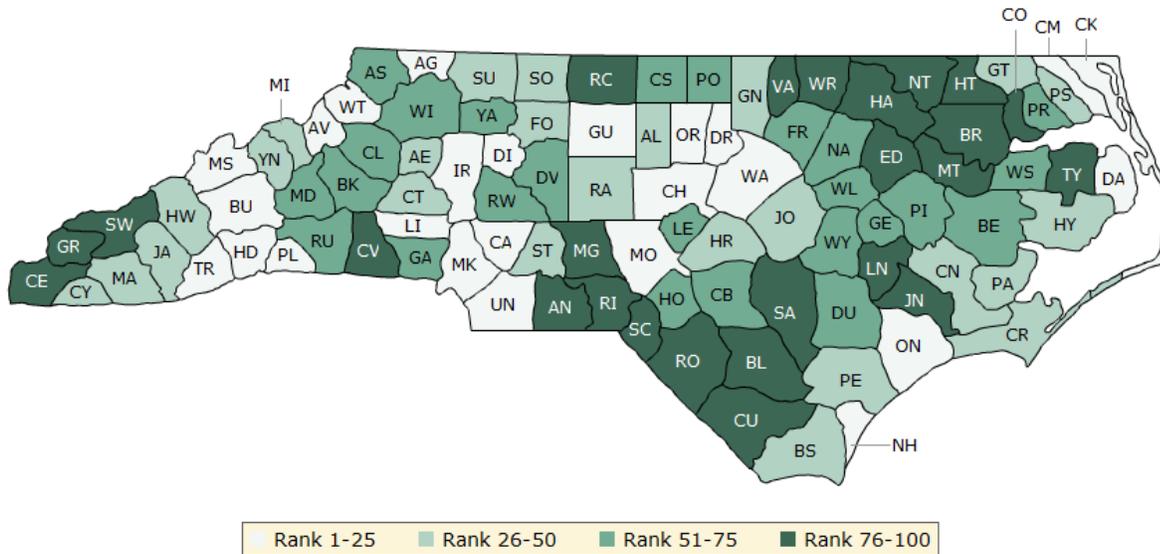
2016 Health Outcomes – North Carolina



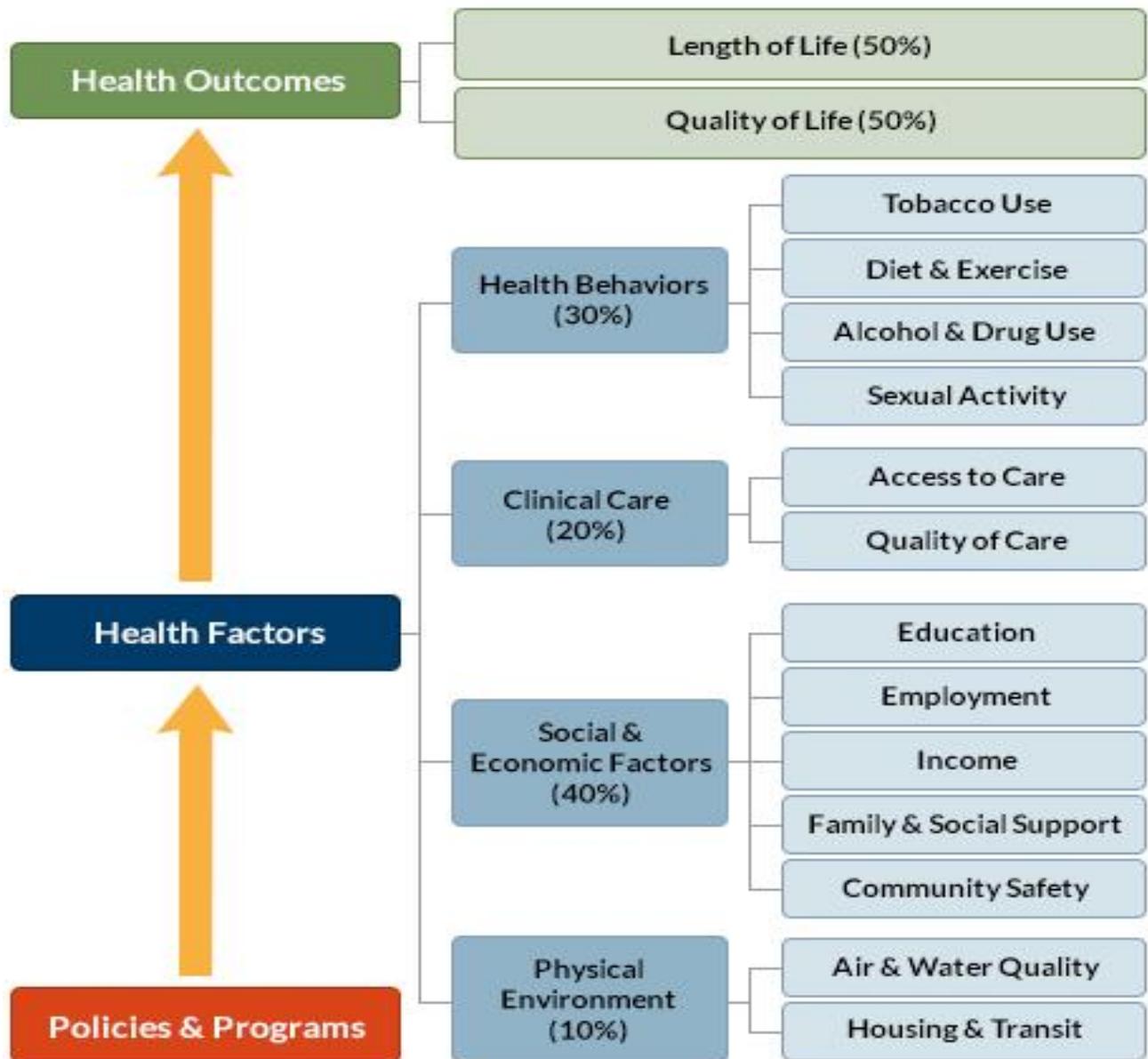
Scotland County (SC) ranked 93rd with rankings 1-25 having the highest, favorable outcomes and rankings of 76-100 having the least favorable outcomes. (County Health Rankings and Roadmaps, www.countyhealthranking.org)

Based on the County Health Rankings, Scotland County ranks high among unhealthy outcomes for the county when compared to most counties in other parts of the state of North Carolina. It ranks 99th out of 100 counties among the health outcomes ratings and 99th among the health factors ratings. Scotland County has slightly worsened over the past 2 years in its “health outcomes ranking” and remain stagnant with its “health factors” with previous ratings of 93% and 99%.

2016 Health Factors – North Carolina



Scotland County (SC) ranked 99th with rankings of 1-25 having the most favorable health factors and rankings of 76-100 having the least favorable health factors. (**County Health Rankings and Roadmaps, www.countyhealthranking.org**)



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, but represent just one way of combining these factors.

(County Health Rankings, 2016).

Healthy Lifestyles and Behaviors

Indicator	Scotland County Current	Scotland Past	North Carolina	Nation	Healthy People 2020 Goal
Smoking (adults age 18+)	23.4%	BETTER 26.4%	WORSE 22.9%	BETTER 25%	12%
Excessive Drinking (% adults reporting excessive drinking)	9.2%	WORSE 6.3%	BETTER 13.2%	BETTER 28%	25.3%
Nutrition (adults not eating 5 servings of fruits/vegetables daily)	79.0%	BETTER 80.1%	BETTER 79.4%		
Adults obese or overweight	35.4%	WORSE 34.0%	WORSE 28.6%	BETTER 35.7%	Increase proportion of adults at a healthy weight (30.8%-33.9%)
Teen Pregnancy	51.8%	BETTER 52.8%	BETTER 32.3%		

Sources: National health Indicators Warehouse (HIW), Healthy People 2020, NC State Center for Health Statistics

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 yrs. 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 to 17 yrs. Today, almost one in three children ages 2-19 yrs 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 affecting many residents in Scotland County and is the number one health problem in children. In Scotland County, 14.1% of children 2-4 years of age are overweight and 13.6% are obese, ranking us 25th in the State. (NC-NPASS 2010). The 2011 North Carolina Child Health Report Card (NC Institute of Medicine) states in 6 2010, 30.1% of children ages 10-17 yrs. were overweight or obese compared to 32.0% in 2005.

Lack of physical activity and poor nutritional habits are major factors in overweight and obesity. The North Carolina Child Health Report Card 2011 reported only 31.2% of students, ages 10-17 years, were physically active a total of 60 minutes or more per day on five days or more.

Alcohol Use among Adults

National Health Indicators Warehouse reported that 9.2% of adults in Scotland County reported excessive alcohol drinking. This result was significantly lower than the state of North Carolina at 13.2% although it has increased from its 2008-2010 rates of 6.3%.

Teen Pregnancy Rates

In Scotland County, the number of teen pregnancies in 2013 for 15 to 19 year olds was 68 and decreased in 2014 to 63 pregnancies for this age group. The county rate is 51.8 compared to the NC state rate of 32.3 (per 1000 population). Scotland County continues to have one of the highest teen pregnancy rates in NC and ranks 9th highest in the State tied with Montgomery County. (NCCHS, 2015).

Health Environment

A healthy environment is critical for healthy people. The Environmental Health Section of the Scotland County Health Department protects and improves the public's health by controlling the environmental factors, which can adversely affect human health. Lead poisoning, air, soil, water quality, and exposure to hazardous agents contribute to illness and development of disabilities and, therefore, must be monitored. Environmental Health provides preventive health through inspections, education, and enforcement of state and local rules in programs for food and lodging, on-site wastewater disposal, pools, tattoo establishments and institutions, poisoning and animal control. Scotland County Health Department has three Environmental Health Specialists and two Animal Control Officers to provide services for the county. In F/Y 2011-2012, the Environmental Health Department provided 35 new well permits; 120 on-site wastewater improvement permits; 465 food and lodging establishment inspections, 30 swimming pool inspections, 56 day care inspections with one child lead exposure and responded to 15 sewage complaints.

Health Environment

Scotland County offers an environment that supports and encourages healthy living.

Air Quality

The annual number of days with daily 8-hour maximum ozone concentration over the National Ambient Air Quality Standard in Scotland County was 0 days in 2006, compared to 3 days in 2003 and 12 days in 2002.

Access to Recreation

The availability of recreational facilities can influence individuals' and communities' choices to engage in physical activity. Proximity to places with recreational opportunities is associated with higher physical activity levels, which in turn is associated with lower rates of adverse health outcomes associated with poor diet, lack of physical activity, and obesity.

In 2013, Scotland Health Care System opened its own exercise facility increasing availability and access for physical activity of its employees, open 7 days a week. Since November 2009, the new recreation center opened in Wagram providing a variety of fitness opportunities to Scotland County residents. The Morgan Recreation Complex of Scotland County Parks and Recreation features a variety of outdoor recreational opportunities such as baseball, softball, and soccer to residents of all ages.

More information on Scotland County Parks and Recreation can be found at www.scotlandcounty.org

Health Risk Factors

Indicator	Scotland County Current	Scotland Past	North Carolina	Nation	Healthy People 2020 Goal
Smoking	23.4%	BETTER 26.4%	WORSE 22.9%	BETTER 25%	12%
Diabetes	21.0%	-	BETTER 23.2%	WORSE 8.3%	25.3%
Hypertension	32.7	WORSE 32.0	WORSE 29.5	WORSE 29.9	26.9%
Infant Mortality	11.4%	BETTER 15.3%	WORSE 7.1%	BETTER 7%	6.0%

Sources: National health Indicators Warehouse (HIW), Healthy People 2020, NC State Center for Health Statistics

Health Risk Factors

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

Health Outcomes-Mortality and Morbidity

Leading Causes of Death

The leading causes of death for Scotland County are similar to those of North Carolina and the US. Cancer and heart disease account for approximately half of all deaths at the county, state, and national level.

Cancer

The N.C. Division of Public Health reports that cancer is now the leading cause of death in North Carolina surpassing heart disease. According to newly released 2010 statistics, cancer claimed the lives of 18,013 North Carolinians and 80 in Scotland County. The majority of cancer deaths occur at five sites: lung, colon, female breast, prostate and pancreas. In 2010, Scotland County's cancer deaths by site were: lung - 21, female breast - 6, colon - 10, and prostate – 6 (NCSCHS 2010). Smoking by far is the leading risk factor for developing lung cancer. Other risk factors include poor nutrition and lack of physical activity. Eating a healthy diet and being active can reduce the risk of developing cancer.

Scotland Health's Cancer Center provided 2,131 chemotherapy treatments given in 2015 and we had 183 radiation therapy patients.

Heart Disease

Heart disease was responsible for 17,547 deaths in North Carolina, which resulted in a death rate of 179.3 for 2012. The N.C. State Center for Health Statistics reported 88 deaths due to heart disease in Scotland County during the year of 2015, which resulted in a death rate of 245.4. Scotland County is improving health care outcomes by offering blood pressure screenings and education through community health fairs, business and industry health screenings, the health department, Emergency Medical Service (EMS), local pharmacies, at the hospital, and through Healthy Carolinians. (NCSCHS, 2015).

Stroke

Cerebrovascular disease, or stroke, is the fourth leading cause of the death in the nation. While it does not cause as many deaths in Scotland County as heart disease or cancer, it can cause significant disability such as paralysis, speech impairment, and emotional/psychological problems. Lifestyle changes and, in some cases, medication can significantly decrease risk of stroke. Scotland's stroke mortality rate* is 59.1 per 100,000, an increase from the state rate of 46.0 and national rate of 40.5.

**North Carolina Center for Health Statistic, 2012*

Diabetes

As mentioned earlier in the Health Risk Factors section of this report, diabetes was listed as the sixth leading cause of death in 2014 in Scotland County and the seventh leading cause of death in North Carolina. Diabetes is 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. According to the BRFSS survey, the

prevalence of diagnosed diabetes in North Carolina increased from 6.4 percent of the adult population in 1998 to 9.6 percent in 2009, an increase of 50% in the last decade.

Asthma

While asthma does not cause many deaths among children in North Carolina, it is one of the most prevalent chronic diseases in our state among children. In 2015, the numbers of hospitalizations for asthma diagnosis in Scotland County were: **81** for all ages and **21** for children ages 0-14 years. (NCSCHS 2015). In 2011-2012, The Purcell Pediatric Clinic, in Scotland County, diagnosed or screened over 500 patients with asthma in 2014-2015.

Infant Mortality

An additional mortality issue affecting the county is infant mortality. In Scotland County the infant death rate for the period 2010-2014 was 11.7 (per 1000 population) compared to the state rate of 7.1 (per 1,000 population). In 2014, five infant deaths were reported in Scotland County, a rate of 15.3 (per 1,000 population), compared to North Carolina's Infant death rate of 11.4 (per 1,000 population), an increase for Scotland County's infant death rate in 2013 of four deaths. According to the America's Health Rankings 2015 report, North Carolina ranked among the 10 worst in the nation for infant mortality, with a rank of 31st.

Leading Causes of Death for Children

In 2009, motor vehicle injuries were the leading cause of death for North Carolina youth, ages five through 24 years, amounting to approximately one-third of all deaths in this age group. Among youth ages 10–17, suicide was the second leading cause of death in 2009, resulting in 35 deaths. According to North Carolina resident death certificates, unintentional injuries resulted in a total of 206 deaths to children ages 0–17 in 2009. More than half of these deaths (55%) involved motor vehicle injuries.

State Center for Health Statistics, 2011

Health Outcomes Summary-Mortality and Morbidity

Indicator	Scotland County Current	Scotland Past	North Carolina	Nation	Healthy People 2020 Goal
Cancer Mortality Per 100,000	189.6	BETTER 236.7	WORSE 188.5	WORSE 178.7	160.6
Heart Disease Death Rate Per 100,000	245.4	BETTER 253.3	WORSE 179.3	WORSE 185.2	100.8
Stroke Mortality Per 100,000	59.1	BETTER 61.3	WORSE 44.4	WORSE 40.5	33.8
Diabetes Prevalence	15.1%	WORSE 14.9%	WORSE 9.8%	WORSE 8.3%	NA
Diabetes Mortality Per 100,000	50.5	WORSE 50.2	WORSE 24.2	--	65.8
Years of Life Lost before age 75	11,099.8	BETTER 12,291.4	WORSE 7,480.3	WORSE 6,811.2	NA
Physically Unhealthy Days	3.4	BETTER 3.6	BETTER 3.7	BETTER 3.5	NA
Mentally Unhealthy Days	1.9	BETTER 3.0	BETTER 3.6	BETTER 3.7	2.8
Fair or Poor Health	19.2%	BETTER 24.5%	WORSE 18.1%	WORSE 14.9%	NA
Infant Mortality (per 1000)	11.4%	BETTER 15.3	WORSE 7.2%	WORSE 6.6%	6.0

Sources: National health Indicators Warehouse (HIW), Healthy People 2020, NC State Center for Health Statistics

Health Services-Preventive Clinical and Access

Due to the lower-income status of the county, the United States Census designates Scotland County as “rural”.

Scotland County ranks first in the state unemployment rate (2011), is considered a Tier I county, which means it’s economically depressed by the State Department of Commerce, and ranks 99th out of 100 for health outcomes in North Carolina (County Health Rankings, March 2016).

Clinical Preventive Services

Screenings

Scotland County screening rates for some of the most widely recommended screenings are better than the state and national rates. In 2015, Scotland Health Care System provided various free community health screenings: bone density 36-, cholesterol- **451**, blood pressure checks – **505**, PSA’s - **86** on the health care system’s mobile. Scotland Health Care System also hosted a *Women’s Health Event*, February 2015, which included **56** cholesterol screenings, and **56** height/weight and body fat screenings, **53** blood pressure assessments, as well as a full day of educational sessions on various health topics for over 200 women.

In June 2014, Scotland Health Care held a *Men’s Health Event*, which included **PSA** tests, cholesterol screenings, blood pressure screenings and rectal exams by a local urologist. The event included several informative speakers related to men’s health issues.

Through partnership with Scotland County Health Department, free immunizations were given to many community residents to ensure access to preventative health care services. In 2015, **346** Influenza vaccinations were administered to the general public along with 263 PPD Tuberculin skin tests, which also included Scotland High School students. A total of **1,595** immunizations were administered to infants, children and adults.

Primary Care

Primary Care Physician Rate

Primary care physician rate is higher in Scotland County than other parts of the state and country, but more people report delaying care due to cost.

Usual Primary Care Provider

Individuals who have identified a usual primary care provider are more likely to get routine medical screenings. Though county level data is not available for people who have a usual primary care provider, data indicates that people in the South are less likely than other regions of the country to have a usual primary care provider.

Emergency Room Usage

Emergency Departments are increasingly being used for primary care not only by individuals who do not have insurance, but by those with insurance (either through employment or through Medicaid and Medicare) who have difficulty getting an appointment with a regular primary care provider. In Scotland County, the number of ER visits has increased FY 2014-2015

Physician offices are concentrated in the zip code 28352, with most of the offices in the center of the county.

Indicator	Scotland County Current	Scotland Past	North Carolina	Nation	Healthy People 2020 Goal
Mammogram based on guidelines	88.3% (2006-2010)	BETTER 86.8%	BETTER 81.0%	BETTER 75.4%	81.1%
Colonoscopy/Sigmoidoscopy (adults 50+)	64.5% (2004-2010)	NA	69.4%		
Flu Vaccine 65+	NA	NA	69.7%	67%	90%
Pneumococcal vaccine	NA	NA	71.2%	60%	90%

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

Health Care Access

Indicator	Scotland County Current	Scotland Past	North Carolina	Nation	Healthy People 2020 Goal
Emergency Department Visits	43,349 (2012)	39,498 (2011)	854,692 (2011)	21,830,300 (2011)	
Primary Care Provider Rate (per 100,000)	91.3	WORSE 93.1	BETTER 85.7	NA	(Objective Being Developed)
Physician use delayed due to cost	18.1% (2008-2010)	BETTER 19.7%	WORSE 17.5%	WORSE 4.7%	4.2%
Uninsured	18.7% (2010)	WORSE 18.5%	BETTER 19.1%	WORSE 15.5%	100% Covered

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

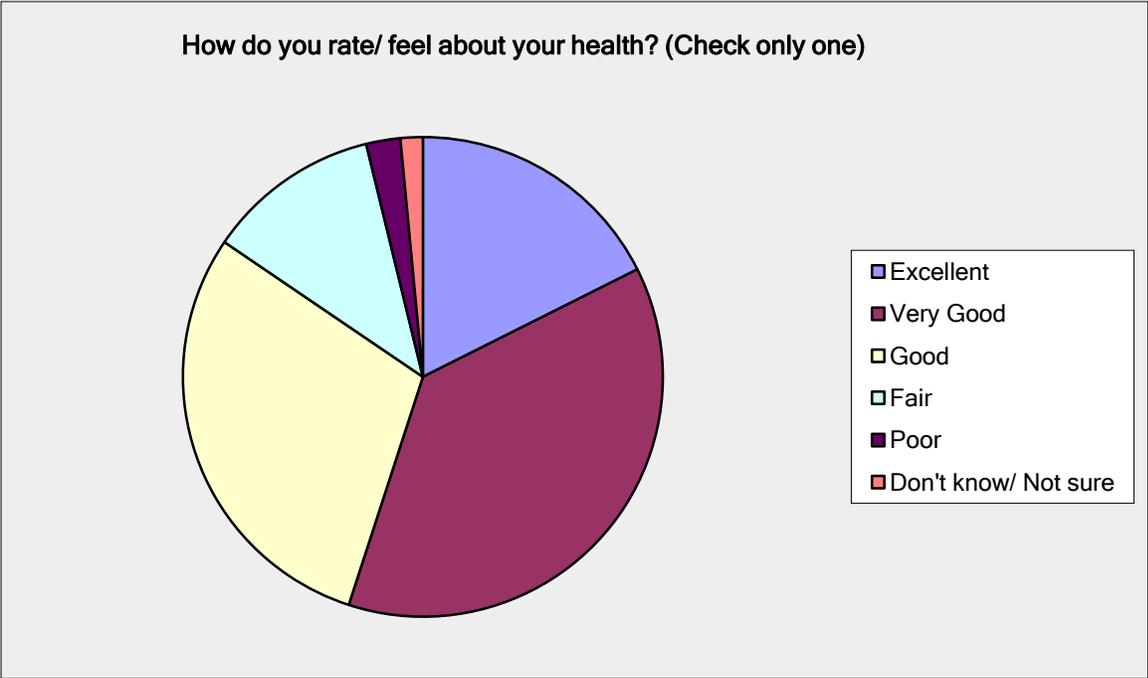
Community Feedback- A Community Survey

Community Survey

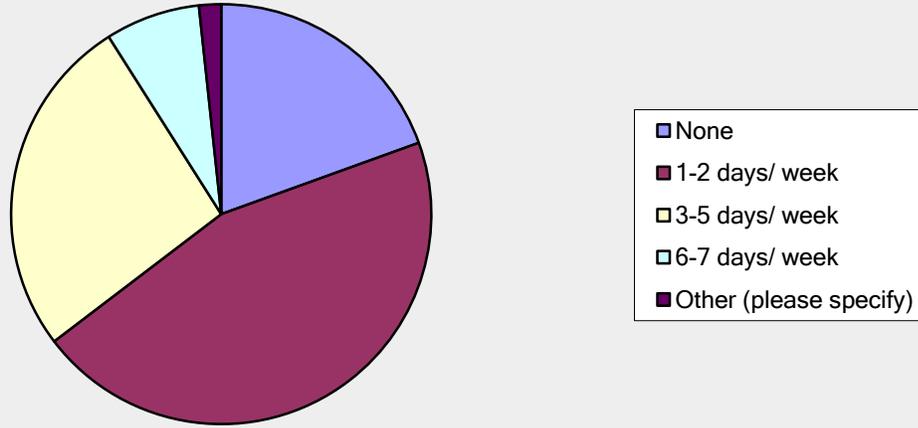
Qualitative data was gathered by conducting a community survey with a total of 478 responses from community members. The prioritization process included review and analysis of this primary, qualitative community feedback to determine priorities for healthcare interventions within Scotland County.

Community Health Survey Results

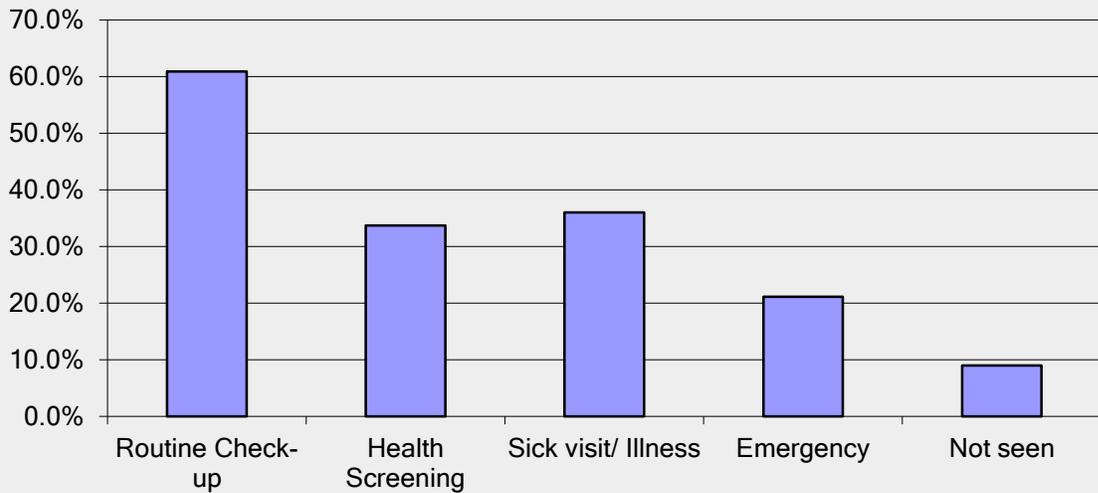
(Also See Appendix)



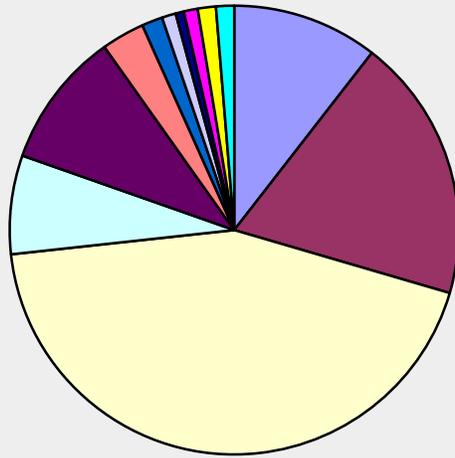
In the past 3 months, how often have you participated in any physical activities/ exercises such as running, sports, gardening, or walking for exercise? (Check only one)



In the past year, have you seen a medical provider for any of the following? (Check all that apply)

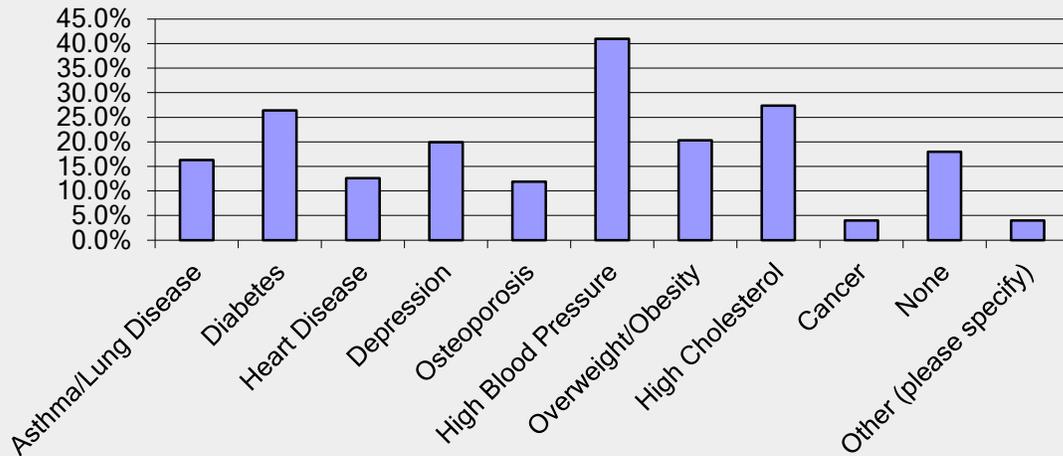


When seeking medical care, where do you go first? (Check all that apply)

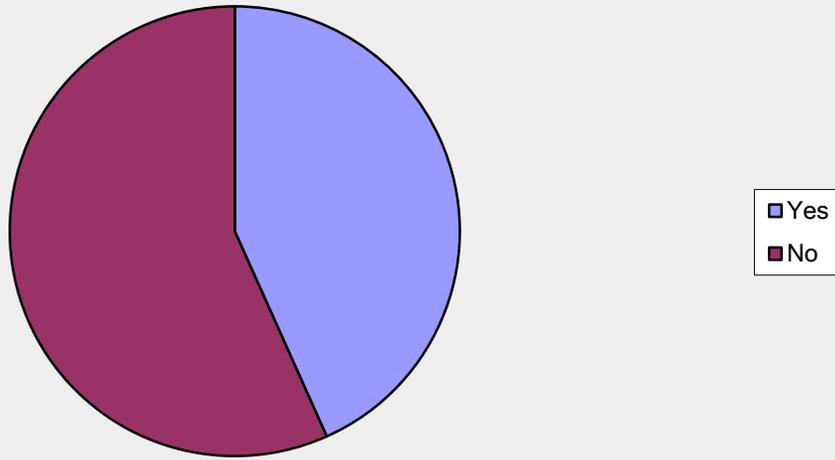


- Urgent Care at Scotland Memorial Hospital
- ER at Scotland Memorial Hospital
- Primary Provider/ Family Physician
- Scotland County Health Department
- Scotland Community Health (Free Clinic)
- Moore Regional Hospital

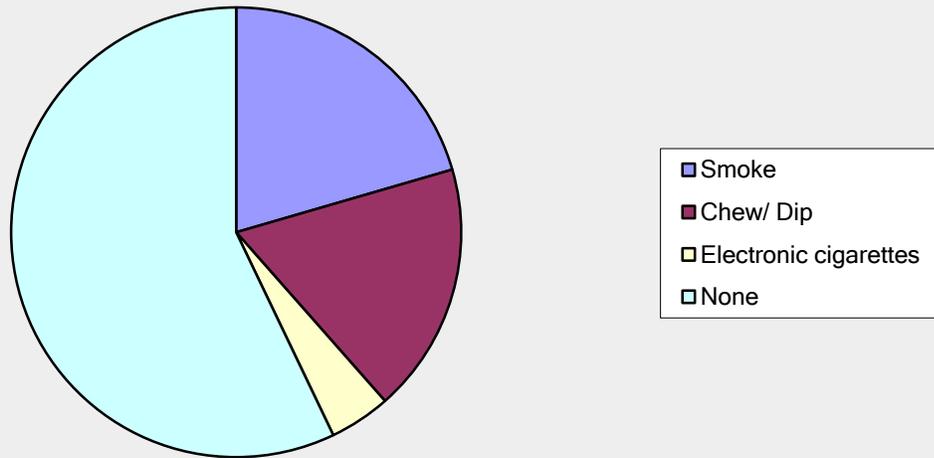
Have you ever been told by a doctor, nurse, or health professional that you have any of the following? (Check all that apply)



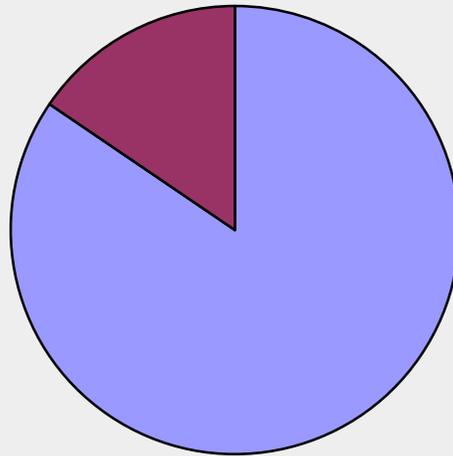
Have you ever attended any free community health screenings in Scotland County?(i.e. Blood pressure, Cholesterol, Diabetes)



Do you use any kind of tobacco or smokeless products? (Check all that apply)

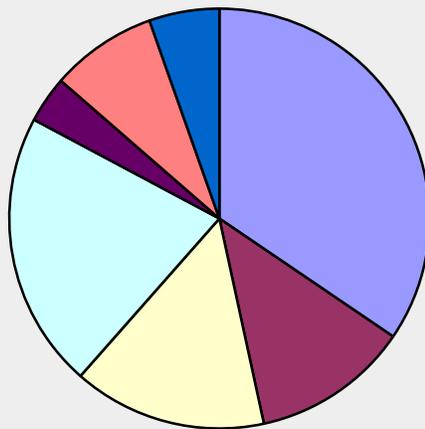


Do you support tobacco-free public places/buildings/grounds in Scotland County?



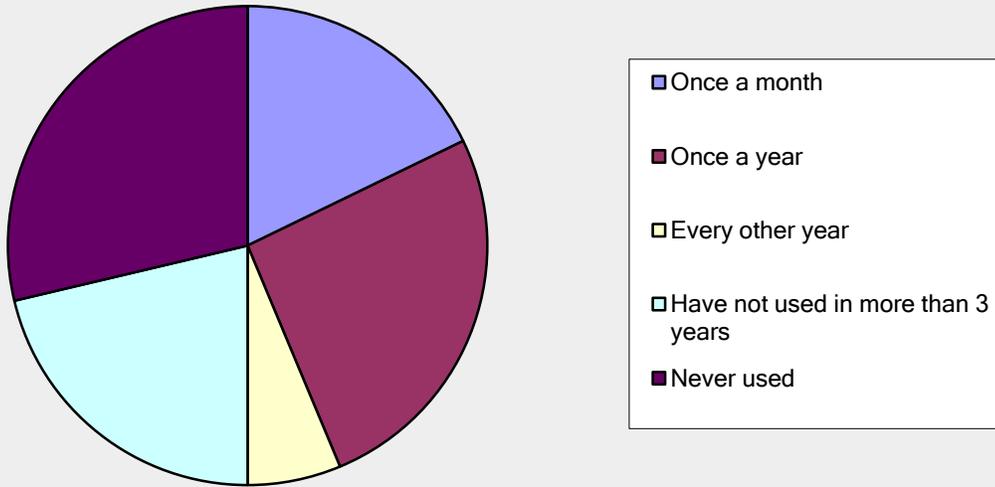
- Yes
- No

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

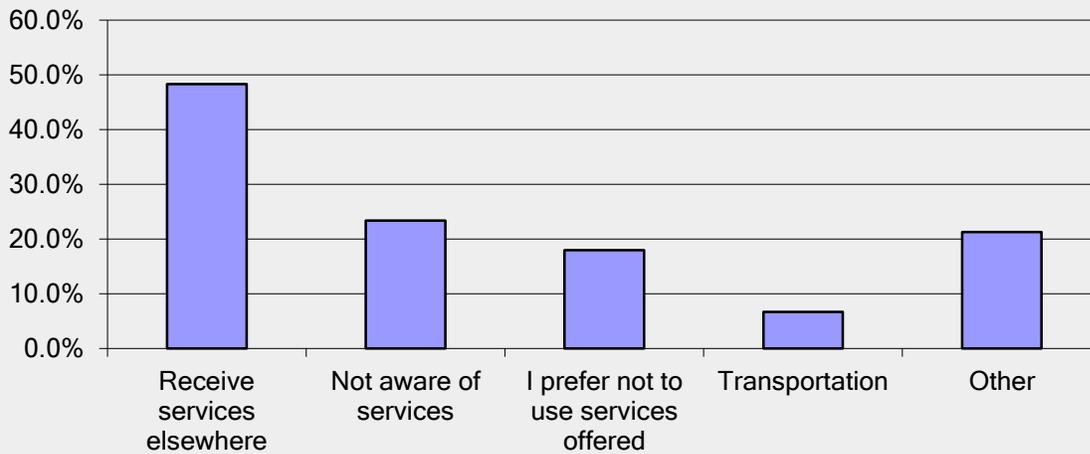


- Television
- Neighbors
- Radio
- Text Message (Emergency Alert System)
- Print Media (ex: newspaper)
- Social Networking site
- Don't Know/ Not Sure

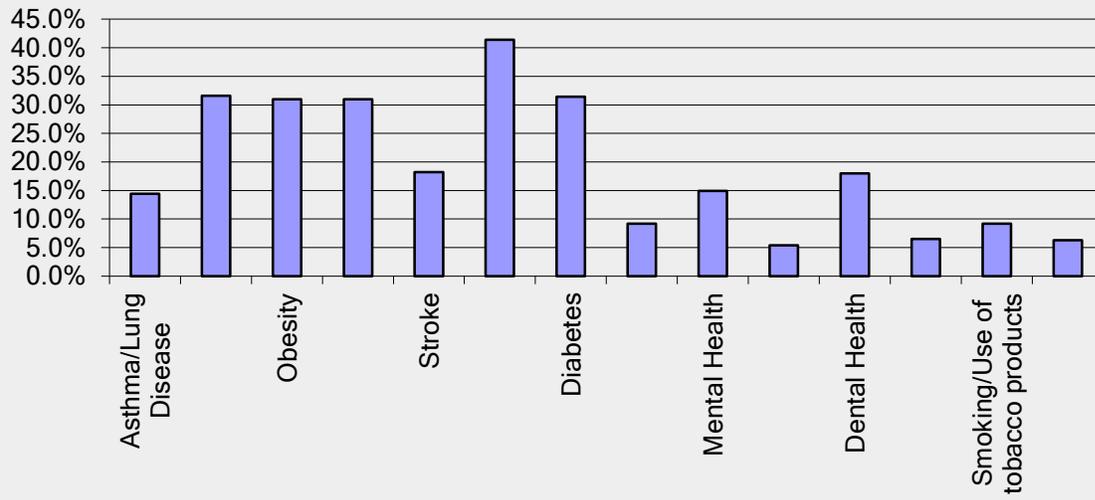
How often do you visit or use services at Scotland County Health Department (This includes services/clinics such as Family Planning)



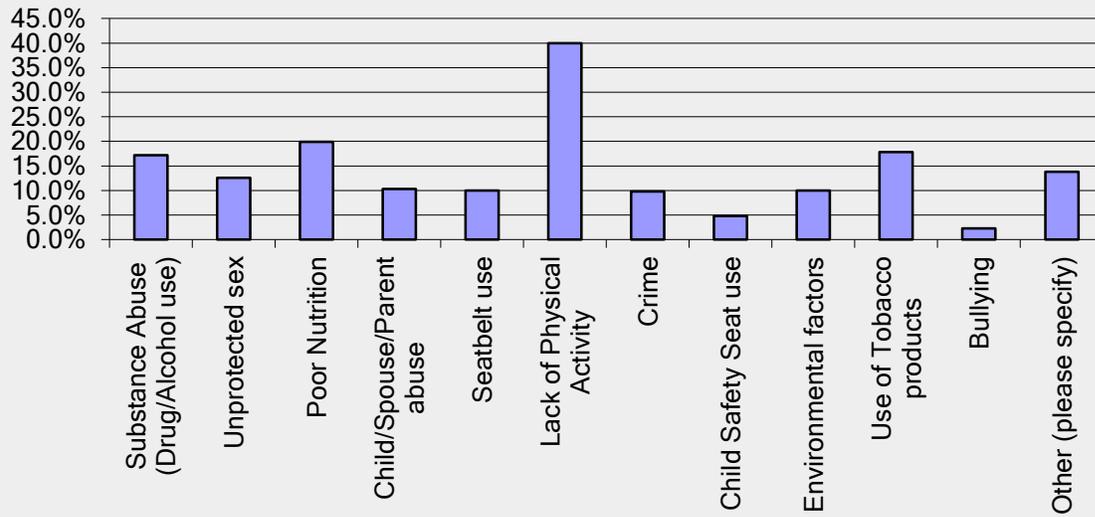
When answering the questions above, if you have not used public health department services, please indicate why. (Check all that apply):



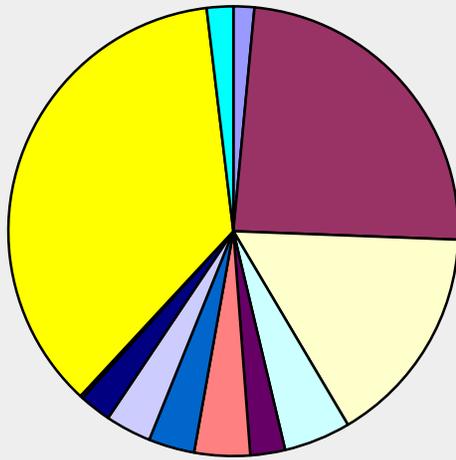
What are the biggest health issues/worries? (Check all that apply)



What are the biggest behaviors/ risk factors that impact your family? (Check all that apply)

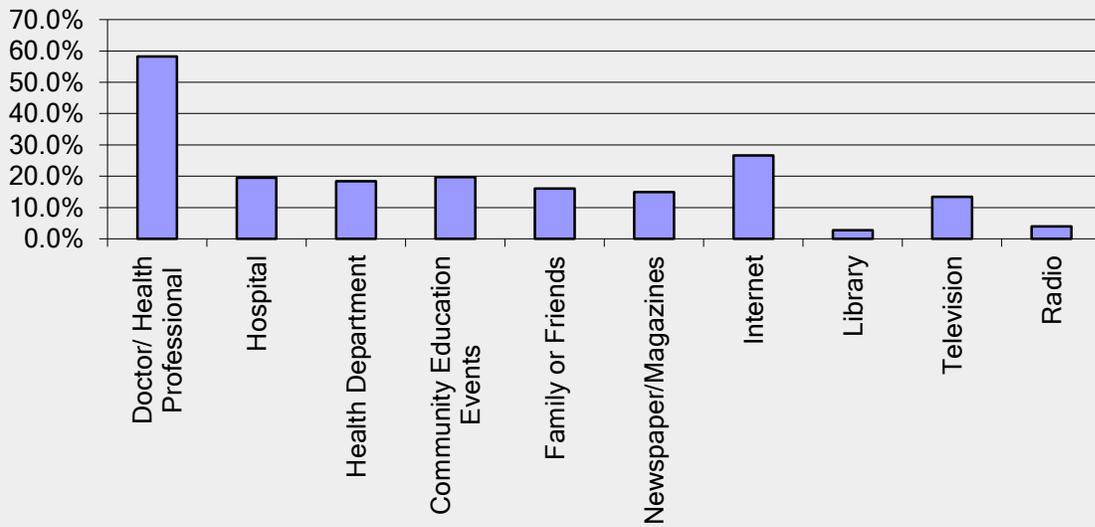


What is the main reason that keeps you or your family from seeking medical care? (Check only one)

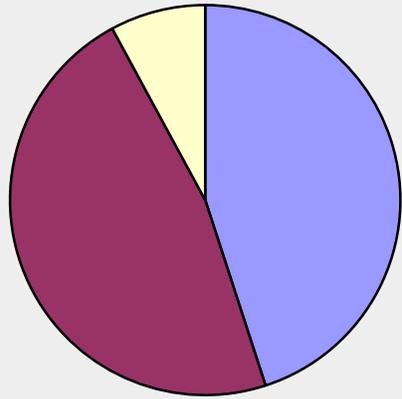


- Cultural or Religious Beliefs
- No insurance
- Unable to pay for visit to doctor
- Fear

Where do you and your family get most of your health information? (Check all that apply)

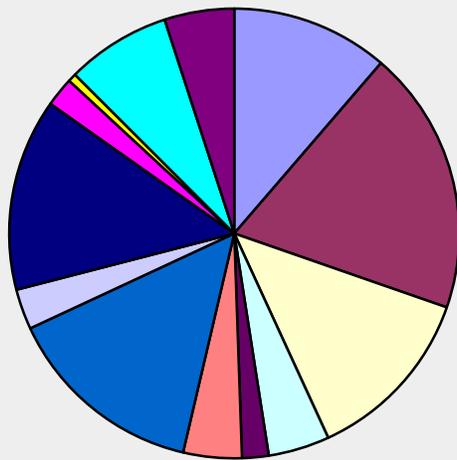


Does your family have a basic emergency supply kit? (These kits include water, non-perishable food, any necessary medicines, first aid supplies, flashlights and batteries, non-electric can opener, blanket, etc.)



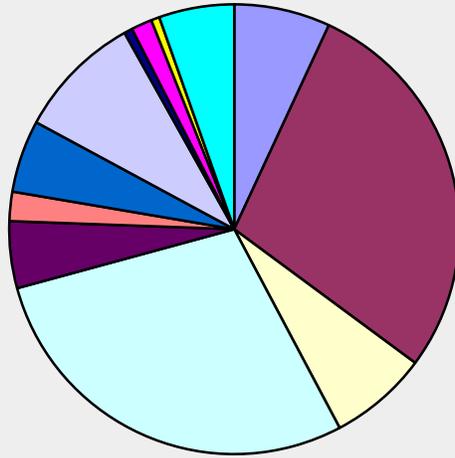
- Yes
- No
- Don't Know/ Not Sure

In your opinion, what is the biggest health issue/ worry in your community?
(Check only one)



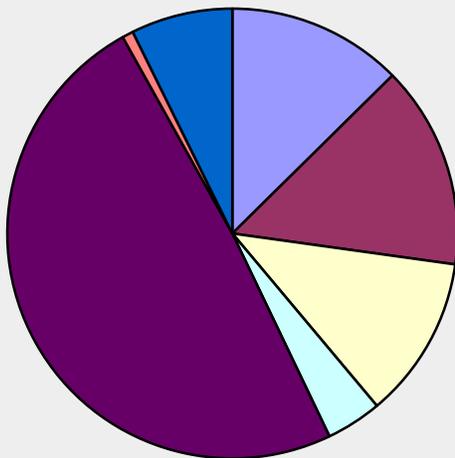
- Diabetes
- High Blood Pressure
- Heart Disease
- Asthma/ Lung Disease
- Dental Health
- Teen Pregnancy
- Substance Abuse (Drug/Alcohol)
- Tobacco Use

In your opinion, what do most people die from in your community? (Check only one)



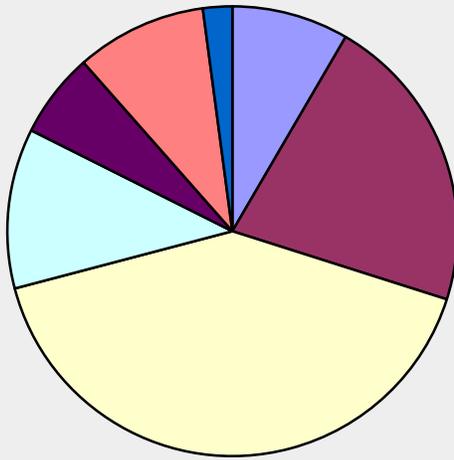
- Diabetes
- Heart Disease
- Asthma/ Lung Disease
- Cancer
- Stroke
- Kidney Failure
- Drug/ Alcohol Abuse
- Homicide/Violence
- Suicide
- Motor Vehicle Deaths
- HIV / AIDS
- Other (please specify)

Which do you feel affects the quality of the health care you or people in your community receive/seek ? (Check only one)



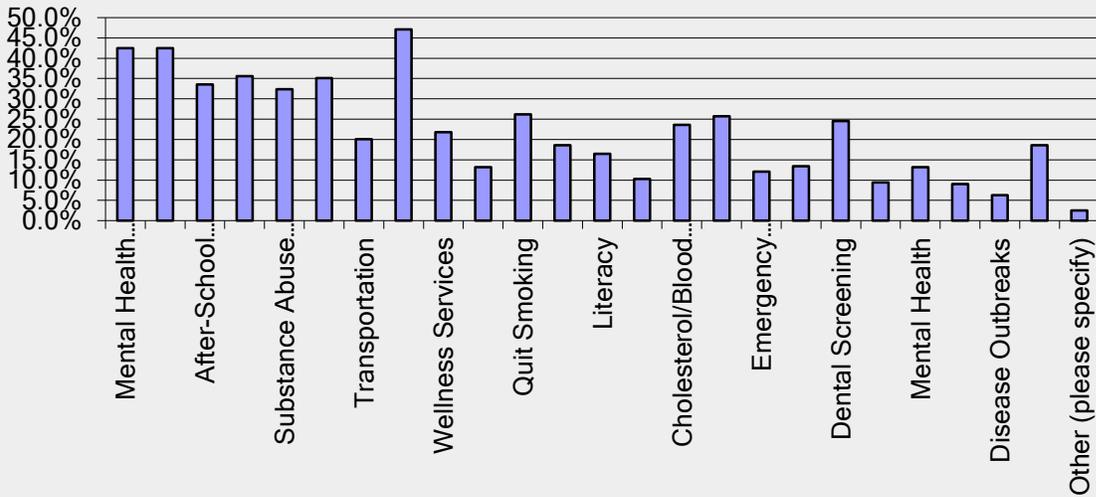
- Ability to read & write/ Education
- Language Barrier
- Age
- Race
- Economic (Low Income, No Insurance, etc.)
- Sex/Gender
- Not Affected

What do you feel is the biggest problem in your community due to lack of money? (Check only one)

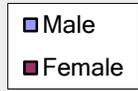
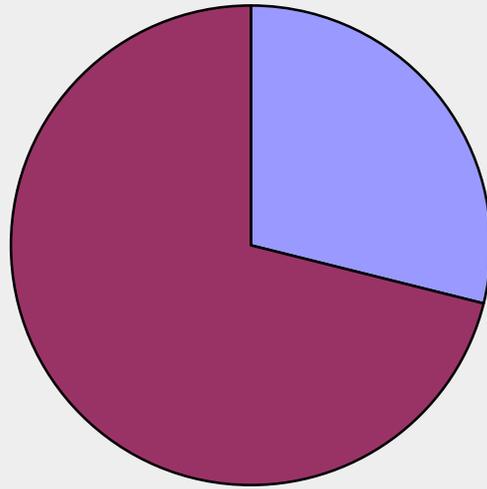


- Food
- Medicine
- Health Insurance
- Transportation
- Home/Shelter
- Utilities (ie. Electricity, Fuel, Water)
- Other (please specify)

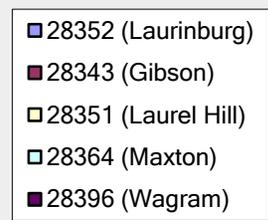
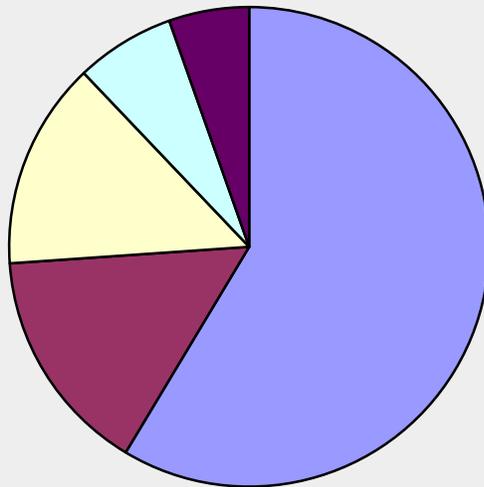
What services/screenings/education does your community need to help improve the health of your family and neighbors? (Check all that apply)



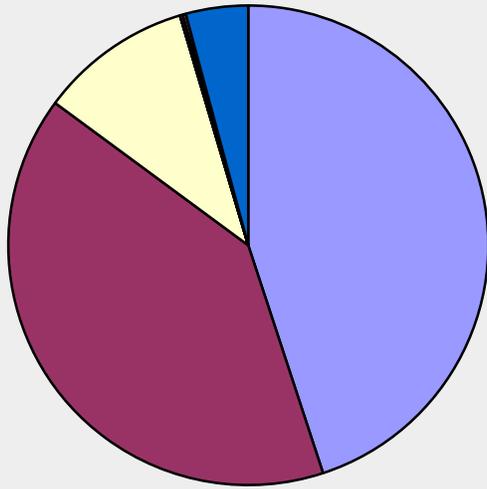
I am:



What is your zip code? If not known, what city do you live in?

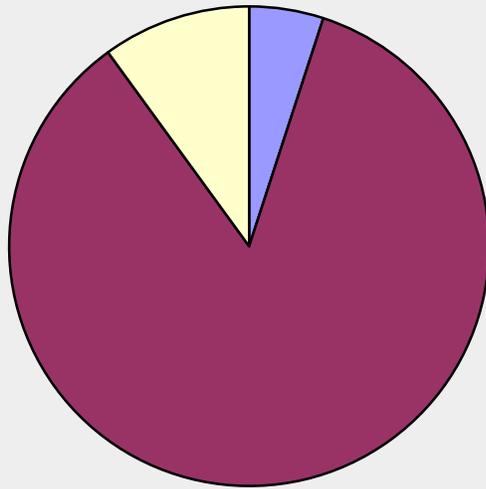


My race is:



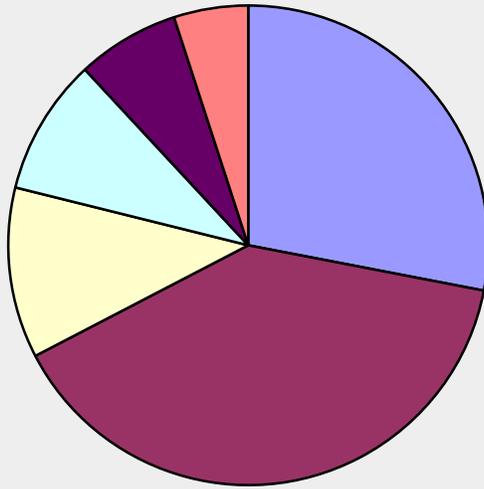
- White/Caucasian
- Black/African American
- Native American
- Alaskan Native
- Asian
- Pacific Islander
- Other (please specify)

Ethnicity



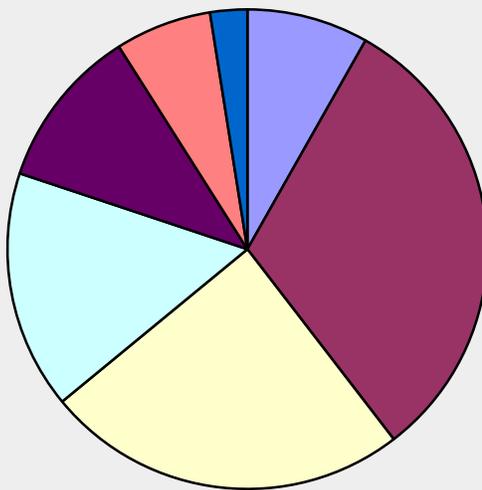
- Hispanic
- Not Hispanic
- Unknown/Not Sure

What is your marital status?



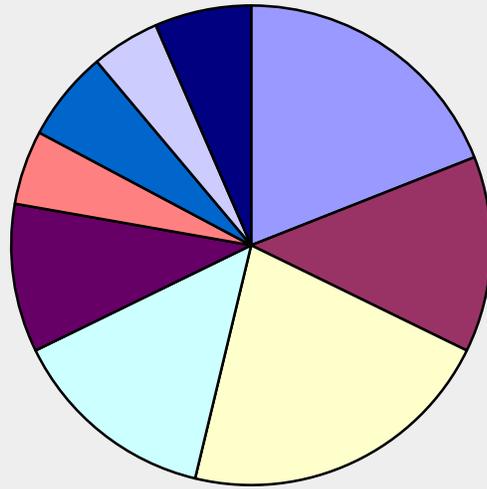
- Never Married/Single
- Married
- Separated
- Divorced
- Widowed
- Other (please specify)

My highest level of education is:



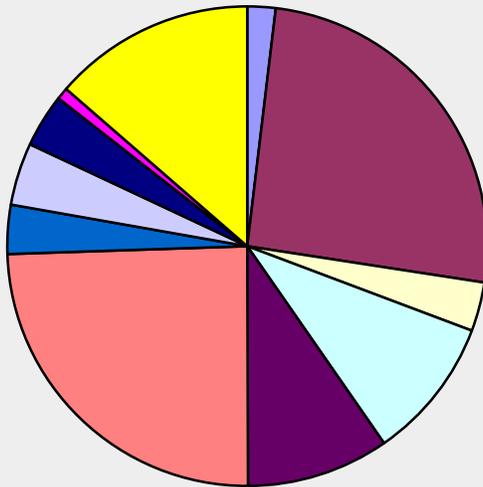
- Less than 12th grade
- High School Graduate
- Some college but no degree
- 2-year Degree
- 4-year Degree
- Graduate Degree
- Post Graduate Degree

My household income last year was



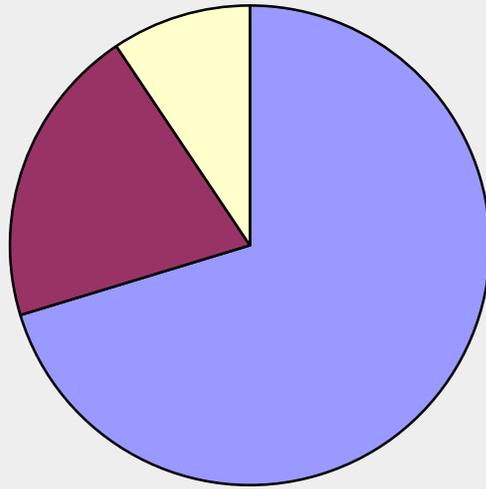
- less than \$10,000
- \$10,000-\$19,999
- \$20,000-\$29,999
- \$30,000-\$49,999
- \$50,000-\$74,999
- \$75,000-\$99,999
- \$100,000+
- Do not know
- Prefer not to answer

My job field is best described as:



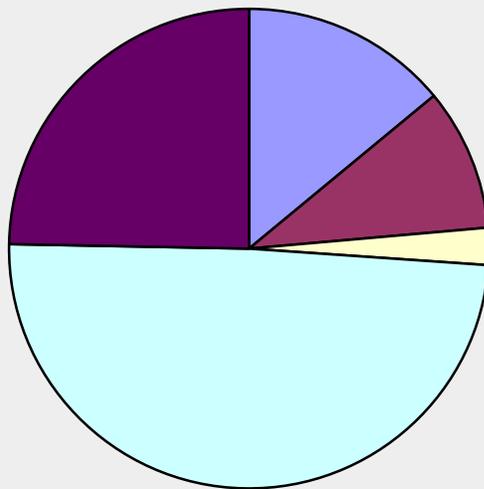
- Agriculture
- Business/Industry
- Retail
- Homemaker
- Government
- Healthcare
- Student
- Education
- Food Service
- Migrant Worker
- Other (please specify)

Do you currently have health insurance?



- Yes
- No
- Unknown

If yes, what type of health insurance?



- Medicare
- Medicaid
- ObamaCare
- Private
- Unknown

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
- Scotland Health Care 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 Scotland Health Care System's mission and strategic direction
- Strategies selected take in consideration current assets in both the community and within Scotland Health Care System

1. Obesity

The issue of overweight and obesity is earning recognition throughout the country and North Carolina. The Center for Disease Control and Prevention states that adult obesity is common, serious and costly. North Carolina percentages in childhood obesity are the 5th highest in the Nation. The CDC further reports that more than one-third of U.S. adults (34.9% or 78.6 million) are obese. Obesity related chronic conditions includes heart disease, stroke, type 2 diabetes, and certain types of cancer, which are some of the leading causes of premature deaths. The estimated annual medical cost of obesity in the U.S. was \$147 billion in 2008. The medical costs for people who are obese were \$1,429 higher than those of normal weight. Obesity and obesity-related diseases continue to remain highest in the southern part of the country. North Carolina has a total adult obesity rate of 29.7% in selecting priorities Scotland Health Care System will focus on obesity by giving attention to those chronic conditions associated with obesity more specifically:

Hypertension

High blood pressure affects about 70 million or one in three American adults. Hypertension can lead to stroke, heart failure, or kidney damage. According to the North Carolina State Center for Health Statistics 2014, the number of deaths in Scotland County for heart disease was 82 and 27 deaths for cerebrovascular disease. Hypertension should be monitored through a physician with regular blood pressure screenings. Increased physical activity and healthy eating are also important steps to preventing high blood pressure as well as maintaining a healthy weight. 41% of respondents reported on the CHNA having been diagnosed by a doctor, nurse, or health professional with hypertension.

Diabetes

In Scotland County, diabetes was listed as the fourth leading cause of death in 2013 and in North Carolina the seventh leading cause of death. Diabetes, ranked 5th as the primary cause of mortality, from 2010-2014, 91 deaths ranked Scotland County twentieth highest in North Carolina with a rate of 50.5 (per 100,000 population) compared to the rate of 24.2 (per 100,000

population) for the State of North Carolina. (NC SCHS, 2010). Diabetes is also a significant contributing factor to other causes of death, such as heart disease, stroke, high blood pressure and cholesterol, visual impairment and kidney failure with risk factors of obesity, physical inactivity, unhealthy diets and smoking. On average persons with diabetes have approximately 2.3 times higher medical costs than those without diabetes. 26.36% of respondents reported on the CHNA having been diagnosed by a doctor, nurse, or health professional with diabetes mellitus.

Heart Disease

Heart disease and stroke – the principal components of cardiovascular disease – are the second and third leading causes of death for men and leading cause of death among women. Heart disease attributed to 17,090 deaths in North Carolina in 2013, and 82 deaths in Scotland County (NCSCHS, 2013). While high blood cholesterol, high blood pressure, smoking and physical inactivity are considered four major risk factors, several other factors such as obesity and diabetes are also considered risk factors.

2. Mental Health

The most recent CHNA survey and Community Input Survey showed that residents of Scotland County reported Substance Abuse as a new and emerging issue in Scotland County. Substance abuse is known to be a contributing factor to death and disability in North Carolina, as well as Scotland County. Addiction to drugs and alcohol is a chronic health issue and individuals who suffer from use and abuse are likely to develop dependency and are at a greater risk for injuries and disabilities. Substance abuse has a significant impact specifically on the family, society, and the local community and can be linked with several other issues as well. Mental Health needs are best treated with regular comprehensive care, such as that offered through a coordinated system of care. Mental Health related visits to the emergency departments in North Carolina vs. Healthy North Carolina 2010 showed 92 visits per 10,000 and HNC 82.8 visits per 10,000 population. (NC DETECT).

3. Dental Health

Dental Health is also a new and emerging issue in North Carolina and Scotland County. According to the Division of Oral Health 2006 report over the past 10 years, the number of adults missing all their natural teeth has declined from 31 % to 25% for those aged 60 years and older, and from 9% to 5% percent for those adults between 40 and 59 years. However, 5 % means a surprising 1 out of 20 middle-aged adults are missing all their teeth. This could have impact on adults receiving the proper nutrition and would contribute to malnourishment.

Over 40 % of poor adults (20 years and older) have at least one untreated decayed tooth compared to 16 percent of non-poor adults. Toothaches are the most common pain of the mouth or face reported by adults. This pain can interfere with vital functions such as eating, swallowing, and talking. Almost 1 of every 4 adults reported some form of facial pain in the past 6 months. Over 40 percent of poor adults (20 years and older) have at least one untreated decayed tooth compared to 16 percent of non-poor adults.

Toothaches are the most common pain of the mouth or face reported by adults. This pain can interfere with vital functions such as eating, swallowing, and talking. Almost 1 of every 4 adults reported some form of facial pain in the past 6 months. Most adults show signs of gum disease. Severe gum disease affects about 14 percent of adults aged 45 to 54 years. Signs and symptoms of soft tissue diseases such as cold sores are common in adults and affect about 19 percent of those aged 25 to 44 years.

Chronic disabling diseases such as jaw joint diseases (TMD), diabetes, and osteoporosis affect millions of Americans and compromise oral health and functioning. Women report certain painful mouth and facial conditions (TMD disorders, migraine headaches, and burning mouth syndrome) more often than men. Every year more than 400,000 cancer patients undergoing chemotherapy suffer from oral problems such as painful mouth ulcers, impaired taste, and dry mouth. Employed adults lose more than 164 million hours of work each year due to oral health problems or dental visits.

Implementation Strategies

After identification of health care priorities, additional planning meetings were facilitated with Scotland 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 Scotland Health Care System.

Scotland Health Care System's Implementation Strategies include:

1. **Obesity-** To address obesity, Scotland Health Care System will focus on specifically on Heart Disease, Diabetes, and Hypertension by implementing the following 1) Education, 2) Implementing blood pressure screening and care protocols into current community benefit-related programs (such as heart and community programs), and 3) participating with current community efforts that are taking a policy, systems and environmental approach to addressing hypertension in all facets of the community. More specifically, initiatives include:
 - a) Provide community education programs on topics related to effective and safe treatment for hypertension, screenings, preventative measures such as physical exercise and weight loss. Hypertension should be monitored through a physician with regular blood pressure screenings. Increased physical activity and healthy eating are also important steps to preventing high blood pressure as well as maintaining a healthy weight. Blood pressure screenings and/or education are provided through community health fairs sponsored by Scotland Health Care System and Scotland Memorial Foundation and industrial health screenings provided by Scotland Health's Mobile Health Department. Scotland's Mobile health care clinic provided 211 free blood pressure screenings to community members during 2012. Preventative screenings and education measures have continued to increase through partnership with Scotland County's Health Department, Scotland County's Emergency Medical Service (EMS), local pharmacies, and through Healthy Carolinians.
 - b) Scotland Health Care's Associate Health developed an annual associate wellness program based on wellness labs, immunization compliance, and identification of hypertension and other chronic illnesses for all Scotland Health Care Associates. Associates are screened annually by the Associate Health Department under supervision of the Medical Director.
 - c) Implement hypertension screenings and education into current community programs such as medical outreach van screenings, health fairs, and other heart related screening programs. Work in collaboration with Scotland County Health Department and Scotland County Parks and Recreation Department to increase opportunities for recreational activities while increasing physical activity and promoting healthy weight loss, which ensures positive outcomes on hypertension management. Scotland County is fortunate to have existing and newly developed resources. These

collaborations include programs such as the Cooperative Extension's Expanded Food and Nutrition Education Program (EFNEP) for youth and adults; Parks and Recreation Youth Sports, the "Lunch & Learn Healthy Lifestyles" Program and the "WOW!" (Workouts for Women) programs through Healthy Carolinians. In addition, WIC New Food Packages addresses public health nutrition concerns by offering foods that give participants a greater balance and variety. Others such as Weight Watchers are available to address nutrition and obesity. Scotland County Parks and Recreation also has sixteen area parks conducive to physical activity such as walking trails, athletic and summer programs for youth age 5 to 15, senior games and exercise classes and a newly opened Recreation Center in Wagram conducive to physical activities, sports, and education.

- d) Scotland Health Care System has formed a committee to review and implement a Fit/Walking Trail on the hospital grounds with free access to all community members. The Fit/Walking Trail will provide a safe, well-lit area for leisure and/or aerobic walking along with the opportunity to use permanent exercise stations located along the Fit Trail. The Fit Trail will encourage increased physical activity for all community members.
- e) Scotland Health Care System provides a Farmer's Fresh Market during the summer months to increase community access to fresh produce and vegetables. The Fresh Market proved successful, allowing patients, associates, and community members a safe, comfortable, convenient place to obtain fresh, healthy foods. Scotland Health Care System is working with The Wellness Committee to provide the Farmer's Fresh Market for 6 weeks during the summer months to increase awareness of healthy eating.
- f) Scotland Health Care encourages healthy weight and exercise to improve hypertension through its annual Weight Loss Challenge open to all associates and community members. Since May 2013, Scotland Health Care System Wellness Committee offered its first Weight Watcher's Program for associates as well as community members. This program will consist of 12 weeks of healthy diet and exercise with body fat and BMI measurements.
- g) Scotland Health Care System opened its Fitness Center in 2013, free to all associates, encouraging physical activity and healthy living. Scotland's Fitness Center offers Yoga, Zumba, and low-impact aerobic classes to associates as well as partnering with a local area business to increase access to community members.
- h) Since 2013, Scotland Health Care System and the Wellness Committee formed a Walking group for associates and community members. The Walking group also helps members train for the "2016 Fund Run". This proved successful in encouraging community members to join the group while increasing participation in the "Fund Run" community event.

Scotland Health Care System will address Diabetes by 1) increasing education 2) Identifying ways to decrease barriers to treatment of Diabetes for community members such as facilitating access for healthcare for patients without insurance or ability to pay 3) 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 and plans to have a Certified Diabetes Educator as a part of the Diabetes Education Plan that will be developed.

- a) Scotland Health Care System increased community awareness through education of Diabetes signs and symptoms, treatment options, and preventative measures at monthly support group meetings. Provided space and/or financial support through Scotland Memorial Foundation for Diabetes monthly support group along with other groups including Alzheimer's, Amputee, Pain Management, Cancer, Stroke, and Multiple Sclerosis. Scotland Health Care System provided individual education and self-management for persons with diabetes through one on one dietician nutritional counseling. Scotland Health Care System collaborated with Scotland County Healthy Carolinians in providing the Community Diabetes Support Group programs and participated on the Healthy Carolinians Steering Committee.
- b) Scotland Community Health Clinic (SCHC), a 501(c)(3) non-profit organization, opened July 2007 as a free clinic and medical safety net facility for uninsured Scotland County residents, aged 18 – 64, who are at or below 150% FPL. A member of the NC Association of Free Clinics (NCAFC) and the National Association of Free and Charitable Clinics (NAFC), SCHC's mission is to deliver compassionate, high quality evidence-based, primary care and prescription assistance to the uninsured and most needy residents of the county. Scotland Community Health Clinic is not connected with any local, state or federal agencies and must rely primarily on local donations, and assistance from grants and foundations. Collaboration and support from Scotland Health Care System, along with other donations from community business and affiliates, 3000 patients have been served and as well as 1400 active patients. Thousands of dollars of services have been donated by Scotland County Imaging and Scotland Memorial Hospital. The Scotland Memorial Foundation has written and received grants, which provide free mammograms. Currently this collaboration has enabled the Scotland Community Health Clinic to provide a Diabetes Care Program to help patients manage their diabetes more effectively. In addition to closer following, participants have access to various classes to help manage their diabetes.
- c) Scotland Health Care System funds and provides *A Diabetes Education Health Fair* serving nearly 285 participants during 2013-2015, in collaboration with The Scotland County Department of Public Health/Healthy Carolinians and funded by Scotland Memorial Foundation, which has become an annual event. Hemoglobin A1C blood test were offered free to community members at four local community sites, including churches and lodges, to increase screening measures for diabetes and decrease barriers to health care. Education was provided to community members about management and treatment options during these screenings. The increase in events are funded by Scotland Health Care System in hopes of reaching disadvantaged

community members and increase access to care, while increasing knowledge of this chronic disease.

- d) Scotland Health Care System and Scotland Memorial Foundation raised funds with their annual “FUNd Run-4-Life” to support The Diabetes Education Fund. Currently, this fund is sponsoring the Diabetes Path to Sweet Success Program, which includes weekly Diabetes Self Management classes to be hosted at Scotland Health Care System. The classes are free to community members and focus on Diabetes treatment and management, healthy low carb eating choices, and prevention of diabetes complications. The classes are provided to small groups during evening hours to provide convenient times for working and active community members.
- e) Scotland Health Care collaborates with the Scotland Health Department in assisting patients with education and management of diabetes by referring patients and community members to the Diabetes Self-Management Education Class. A Diabetes Educator performs these individualized assessments. The classes consist of 4 hours of classroom education and 3-month follow- ups.

Heart Disease- To address heart disease, Scotland Health Care System will focus on 1) Community education and efforts to increase early heart disease awareness and detection 2) increase at risk population screenings for heart disease, 3) support and seek funding for improving and providing additional vascular procedures, increasing early identification of heart disease and at risk populations.

- a) Scotland Health Care System and Scotland Memorial Foundation provided and sponsored 451 cholesterol screenings and 505 blood pressure checks throughout the community along with 56 cholesterol screenings, 53 blood pressure assessments, and 56 body fat and BMI screenings during the Annual Women’s Health Event in 2016. These screenings included collaboration with business partners to increase awareness of heart disease and multiple break- out education sessions provided by local area physicians.
- b) Through collaboration with the Scotland County Department of Public Health and EMS, blood pressure screenings were provided free on site throughout various sites within the community. Ongoing progress to increase heart disease education and early detection continues through the partnership of Scotland Health Care System and Scotland County Healthy Carolinians, which has increased its programs for education and effects on heart disease initiatives.
- c) Scotland Health Care System continues to house the Scotland Cardiovascular Center, a joint venture with First Health of the Carolinas since 2011. The center offers cardiac catheterizations and vascular procedures in a state-of-the-art facility and also offers inpatient and outpatient cardiology services, a cardiac/pulmonary rehabilitation center where supervised exercise, nutrition, stress management, vocational assessment and cardiovascular education are provided, and screenings for high blood pressure and cholesterol.

- d) Scotland Health Care System is also helping to expand accessibility to health care by increasing local physician offices and specialty practices. Scotland Health Care System added thirteen new physicians to the active medical staff in the specialties of Gastroenterology, Internal Medicine, OB/GYN, General Surgery, Hospitalist, Podiatry, Anesthesiology/Pain Management, Medical Oncology, Radiology, and Physiatry/Pain Management.
 - e) Scotland Memorial Foundation has written a grant for the Active Health Living Partnership. If awarded, this position would create a full time position to serve as a Program Manager Coordinator to increase patient knowledge of programs centered on heart disease, diabetes, hypertension, along with many other chronic diseases, decrease barriers to health care, and connect patient with additional resources to improve patient outcomes.
 - f) Through partnership with Sandhills Community Health Network, Scotland Health Care System is increasing access for medical care of chronic diseases, ensuring individualized treatment plans, and optimizing patient's awareness of follow up care and preventative services. Sandhills Community Health Network identifies patients with chronic medical illness such as heart disease through ER visits, provider, and Associate referral. Case managers are assigned to patients who meet the chronic disease criteria in order to assist with improvements in patient compliance and outcomes. Local providers were given information and in-services about this partnership with Sandhills Community Health Network and the resources available.
 - g) Through implementation of Scotland Health Care Network's EMR system by Cerner, meaningful use is being tracked for continuous monitoring of chronic disease management such as heart disease, hypertension, healthy weight, diabetes mellitus, and other chronic diseases at all network practices. All providers and staff received adequate training on meaningful use protocols and EMR usage.
2. **Mental Health-** To address mental health, Scotland Health Care System will continue to partner with various community partners. Particular attention will be given to alcohol, prescription drugs, and tobacco usage. This will allow the opportunity for programs and educational opportunities to educate community members on mental health issues. Eastpointe Mental Health Services will continue to be utilized as an outpatient service. Grant opportunities will be sought after by Scotland Memorial Foundation to implement new programs particularly giving attention to Project Lazarus.

The sub-committee will work with local law enforcement, key community stakeholders, and community members to modify/ change policies with the intention of implementing new programs. This will also make Scotland County safer and have an impact on the number of reported substance abuse cases.

3. **Dental Health-** To address dental health, while Scotland Health Care System does not provide dental services the organization plans to serve as a referral site for those patients needing dental treatment. 1). Scotland Memorial Foundation will host fundraising efforts to assist indigent patients with cost of dental treatment. 2). Partner with local dental providers to offer free dental screenings/ services. 3).Partner with Scotland County Health Department using the MOA with East Carolina School of Dentistry community service learning centers. 4). Partner with the North Carolina Department of Health and Human Services Public Health Dental Hygienist to provide treatment/ educational opportunities in regards dental health care.

Community Health Needs Assessment: Implementation Strategy: Scotland Health Care System

CHNA Priority	Community Assets/Efforts	Scotland Health Care Programs, Services & Community Benefit Activities	Process & Internal Metrics to Track	Long-Term Community Indicators to Track
<p>1. Obesity</p> <p>a. Hypertension</p> <p>b. Diabetes</p>	<p>-Scotland County EMS</p> <p>-Local pharmacies</p> <p>-Healthy Carolinians</p> <p>-Scotland County Health Department</p> <p>-Scotland County Parks & Recreation</p> <p>-WOW!</p> <p>-Wagram Recreation Center</p> <p>- Scotland Community Health Clinic (SCHC)</p> <p>-Healthy Carolinians Steering Committee</p> <p>-The Diabetes Bus Initiative</p> <p>-Diabetes Self-Management Education Class, Scotland County Health Department</p>	<p>-Scotland Mobile Health Community Van</p> <p>-February Healthy Heart Month</p> <p>-Women’s Health Fair</p> <p>-Men’s Health Fair</p> <p>-Other Health Fair Screenings & Educational Programs</p> <p>-Employee Fitness Center</p> <p>-Employee Weight Loss Challenge</p> <p>-Scotland Health Fit/ Walking Trail</p> <p>-Fresh Farmer’s Market</p> <p>-Annual Associate Wellness Program</p> <p>-Active Healthy Living Partnership</p> <p>Group -Scotland Memorial Foundation partnership and funding of SCHC</p> <p>-Fund Run Event</p> <p>-Diabetes Education Fund</p> <p>- Diabetes Bus Initiative</p> <p>-Diabetes Health Fair</p> <p>-Free Community A1C Screenings</p>	<p># education sessions & screenings in the community, # people attended, # educational seminars provide to health providers</p> <p># Scotland Health programs implementing Hypertension education & control messaging</p> <p># employees who participate in Fitness Center, weight loss challenge, & wellness program</p> <p># education/support group classes</p> <p># referrals to Diabetes Self-Management Education</p> <p># of community participates in Community A1C Screenings/Health Fair</p>	<p>% of population with hypertension and BMI/Body Fat</p> <p>County Health Factor Rankings</p> <p>County Health Outcomes Rankings</p> <p>Hypertension prevalence and mortality</p> <p>Heart Disease and stroke death rate</p> <p>% of population with Diabetes</p> <p>Diabetes Prevalence and mortality</p> <p>Diabetes Complications prevalence and mortality</p> <p>County Health Factor Rankings</p> <p>County Health Outcomes Rankings</p>

c. Heart Disease	<ul style="list-style-type: none"> -Scotland County Department of Public Health -Scotland County EMS -Scotland County Healthy Carolinians -First Health of Carolinas -Sandhills Community Health Network 	<ul style="list-style-type: none"> -Scotland Health Care Heart Healthy Community Screenings -Scotland Cardiovascular Center -Scotland Health Care Network Physicians' Practices -Case management referrals -Community Health/Patient Navigator -Scotland Health Care Cerner EMR 	<ul style="list-style-type: none"> # community health care screenings and education sessions # patients seen at Cardiovascular Center # of patients referred for case management # patients diagnosed with heart disease and monitoring of meaningful use criteria # of patients seen at physicians practices with heart disease 	<ul style="list-style-type: none"> % of population with heart disease Heart disease prevalence and mortality rates County Health Factor Rankings County Health Outcomes Rankings
CHNA Priority	Community Assets/Efforts	Scotland Health Care Programs, Services & Community Benefit Activities	Process & Internal Metrics to Track	Long-Term Community Indicators to Track
2. Mental Health	<ul style="list-style-type: none"> Scotland County Health Department Scotland County Sheriff's Department City of Laurinburg PD Eastpoint Mental Health Services Safe Kids Mids-Carolina Region Coalition Operation Medicine Drop 	<ul style="list-style-type: none"> Kiosk @ Scotland County Health Department IVC Rooms located within Scotland Health Care ER Rooms Tobacco Cessation Education Annual Operation Medicine Drop Scotland County Alcohol Anonymous Groups 	<ul style="list-style-type: none"> # of drop boxes in Scotland County # of referrals made to AA support group # of Prescription Medication collected at medicine drop # of referrals made to tobacco cessation program # unwanted expired medicines safely disposed 	<ul style="list-style-type: none"> population abusing/misusing prescription drugs of tobacco users become quit County Health Rankings County Health Outcomes

3. Dental Health	Scotland County Health Department NC Oral Health Section DPH NC Missions of Mercy East Carolina School of Dentistry Love Dental Clinic The Purcell Clinic	Scotland Memorial Foundation NC MOM Free Dental Screenings Scotland Count Health Department MOA w/ECU School of Dentistry NC Safety Net Clinics NC Dental Society	# of referrals to East Carolina School of Dentistry # of referrals to NC Missions of Mercy Clinic # referrals made to safety net clinics # MOA users of SCHED Dental Services partnership	NC Preventative Health Treatment County Health Rankings America's Health Rankings Dental County Health Outcomes
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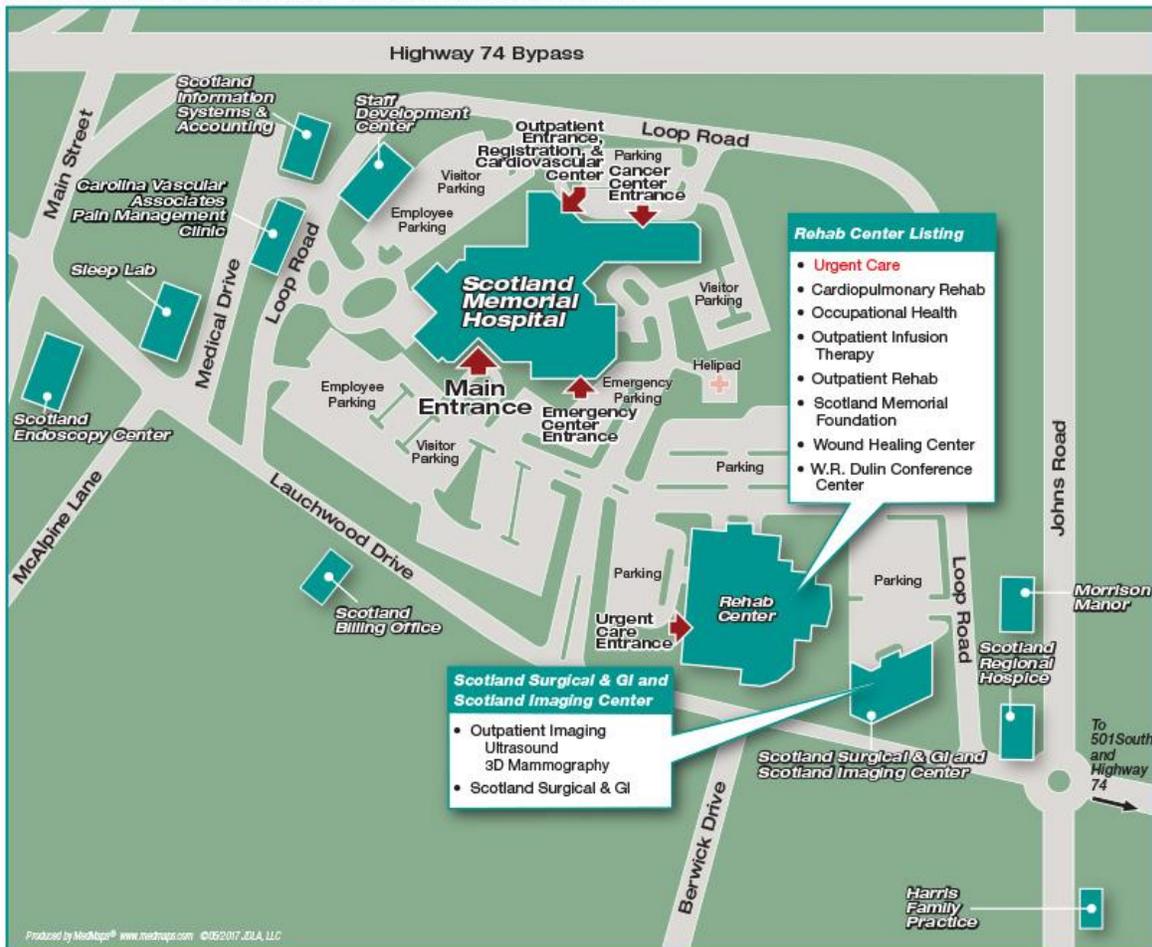
APPENDIX



Closer Care. Better by Far.

500 Lauchwood Drive
Laurinburg, North Carolina 28352
910-291-7000
scotlandhealth.org

The Mission of Scotland Health Care System is to work with our health care partners to create and operate a patient centered, integrated system to provide *Safe, High Quality, Compassionate, and Sustainable* health care to the people we serve. Scotland Health Care System will be recognized and chosen by patients and their families throughout our region for the quality and value of services we provide. This value will be demonstrated through the highest level of Quality and Service, along with the Safest environment. We will lead efforts to improve the health and well-being of the citizens in our region.



Directions to Scotland Health Care System

From Bennettsville & Cheraw – Traveling North on Hwy 401, veer right on 401 Business (Main Street). At the first traffic light (intersection of Main Street and Lauchwood Drive) turn right onto Lauchwood Drive. The entrance to the Hospital is approximately 1/2 mile on the left.

From Raeford & Wagram – Traveling South on Hwy 401, stay on 401S Bypass past Walmart. Continue past the Jameson Inn to the next traffic light. Turn left at the light and then right at the next traffic light onto Main Street. Turn left onto Lauchwood Drive at the first traffic light. The Hospital is on the left about 1/2 mile.

From Rockingham & Hamlet – Traveling East on Hwy 74 Bypass: Exit onto 501 South (Caledonia Road). Turn right onto Hwy 501 and proceed through the roundabout, taking the second exit to Lauchwood Drive. The Hospital is on the right about 1/8 mile.

From Pembroke & Lumberton – Traveling West on Hwy 74 Bypass: Exit onto 501 south (Caledonia Road). Turn left onto 501 and proceed through the roundabout, taking the second exit to Lauchwood Drive. The Hospital is on the right about 1/8 mile.

From Red Springs – Traveling towards Maxton on Hwy 71 merge onto US-74 W Bypass. Exit onto Hwy 501 South (Caledonia Road). Turn left onto Hwy 501, proceed through the roundabout, taking the second exit to Lauchwood Drive. The Hospital is on the right about 1/8 mile.

Data Sources

1. National Health Indicators Warehouse
<http://healthindicators.gov/>
2. County Health Rankings 2016
<http://www.countyhealthrankings.org/>
3. Healthy People 2020
<http://www.healthypeople.gov/2020/topicsobjectives2020/default.aspx>
4. North Carolina State for Health Statistics
<http://healthstats.publichealth.nc.gov/home>
5. Center for Disease Control
<http://www.cdc.gov/DataStatistics/>
<http://www.cdc.gov/bloodpressure/index.htm>
http://www.cdc.gov/oralhealth/publications/factsheets/adult_oral_health/adults.htm
6. US Census Bureau
 - a. 2015, 2016 US Census Data
 - b. <http://www.cdc.gov/DataStatistics/>
 - c. 2005-2009, 2010 American Community Survey
<http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>
 - d. County and State Quick Facts
 - e. <http://quickfacts.census.gov/qfd/index.html>
7. NC Campaign for the Prevention of Teen Pregnancy
<http://www.teenpregnancync.org/>
8. NC Department of Education
<http://ed.nc.gov/>
9. National Cancer Institute, State Cancer Profiles
<http://statecancerprofiles.cancer.gov/>
10. American Diabetes Association
<http://www.diabetes.org/>
11. NC Department of Employment and Workforce
<http://dew.nc.gov/about-lmi.asp>
12. NC Behavioral Risk Factor Surveillance System
http://www.ncdhec.gov/hs/epidata/brfss_index.htm

CHNA Team

Scotland Health Care System Leadership Groups

Scotland County Community Health Assessment Committee

Scotland County Board of Trustees

Public Health Officials - NC Dept. of Health and Environmental Control - Public Health Dept

Kathy Cox, B.S., CHES, RHed, Healthy Carolinians Coordinator, PIO

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Scotland County School System

Wendy Peele, RN, BSN

Scotland Community Health Clinic

Andy Kurtzman, Director

Community Members

Dorothy Tyson

*Public health officials represent the broad health interests of the community, especially Scotland 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.