

Wake County Human Services
Public Health Report
Chronic Diseases
2016



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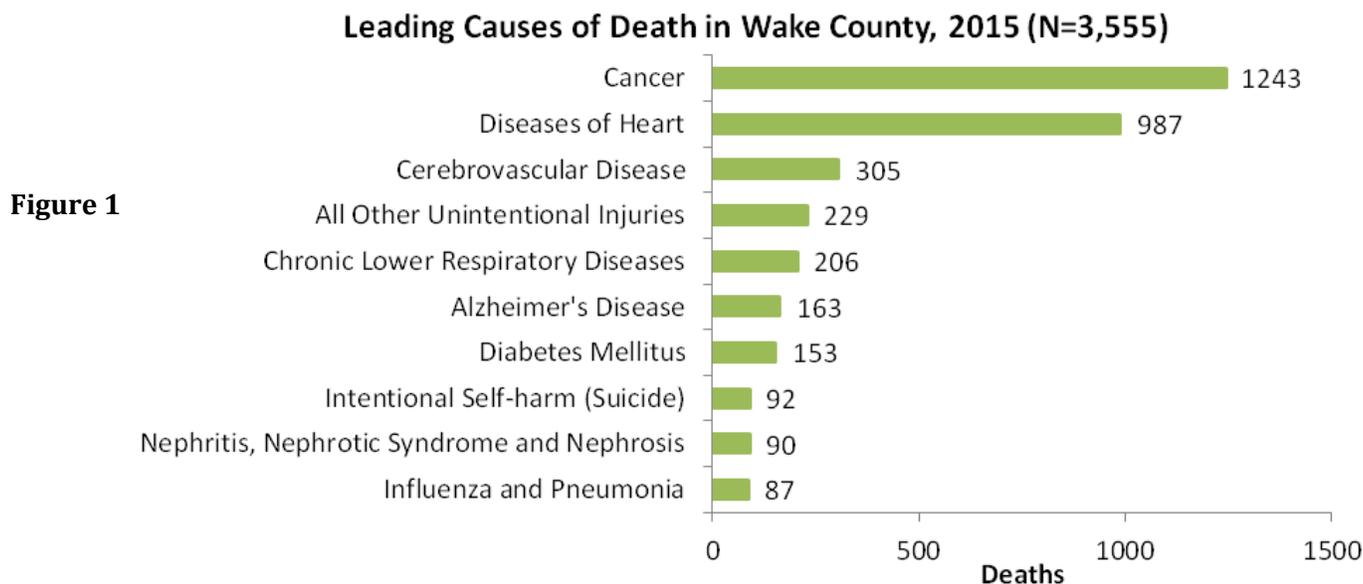
1.0 Overview

According to the Centers for Disease Control and Prevention, chronic diseases are the leading cause of death and disability in the United States. Diseases such as heart disease, stroke, cancer, type 2 diabetes, obesity, and arthritis are among the most common, costly and preventable of all health problems. This report contains information about:

- Common chronic diseases
- Risk factors for these diseases
- Health inequities among Wake County residents
- Wake County Human Services programs working to prevent these illnesses and their health impacts

2.0 Leading Causes of Death in Wake County

Cancer remained the leading cause of death in Wake County in 2015 (Figure 1). The next leading causes of death were diseases of the heart and cerebrovascular diseases. All other unintentional injuries moved from fifth place in 2014 to fourth in 2015, moving chronic lower respiratory diseases to fifth place. Figure 1 shows the top 10 causes of death in Wake County in 2015.



Source: "Leading Causes of Death." NC Health Data Query System. NC State Center for Health Statistics.
<http://www.schs.state.nc.us/interactive/query/lcd/getleadcauses.cfm>. Accessed 12/8/16.

There were 5,240 total deaths in Wake County in 2015. The 1,685 deaths not listed in Figure 1 were from residual causes (residual death data not shown). "Residual causes" are all other causes of death not otherwise categorized here. There were 217 different residual causes of death in Wake County in 2015 and none of those causes represented more than 7% of all causes of death. In North Carolina, there were 89,130 deaths in 2015. Figure 2 shows the top 10 causes of death in North Carolina in 2015. The 25,597 deaths not listed in Figure 2 were from residual causes (residual death data not shown).

Leading Causes of Death in North Carolina, 2015 (N=63,533)

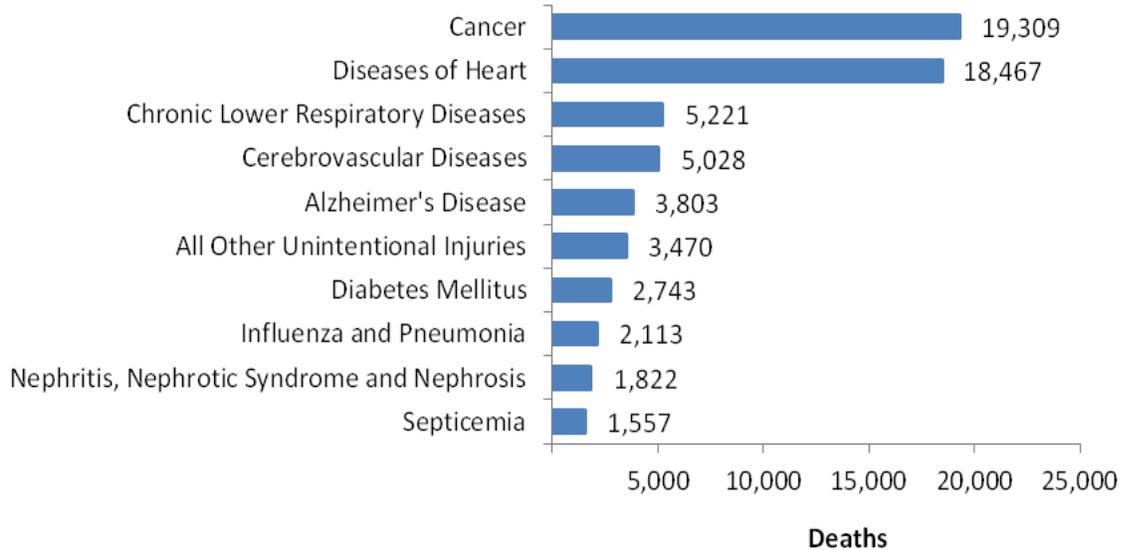


Figure 2

Source: "Leading Causes of Death". NC Health Data Query System. NC State Center for Health Statistics. <http://www.schs.state.nc.us/interactive/query/lcd/getleadcauses.cfm>. Accessed 12/8/16.

3.0 Cancer

According to the Centers for Disease Control and Prevention (CDC), cancer soon will become the leading cause of death in the United States, surpassing heart disease [1]. However, Wake County's cancer mortality rate declined from 2007-2011 to 2011-2015. As Figure 3 shows, Wake County's cancer mortality rate has been significantly lower than North Carolina's rate for the last five years and was consistently lower than Mecklenburg County's rate until 2011-2015.

Age-Adjusted Cancer Mortality Rate, 5-Year Trend Wake and Mecklenburg Counties* Compared to NC

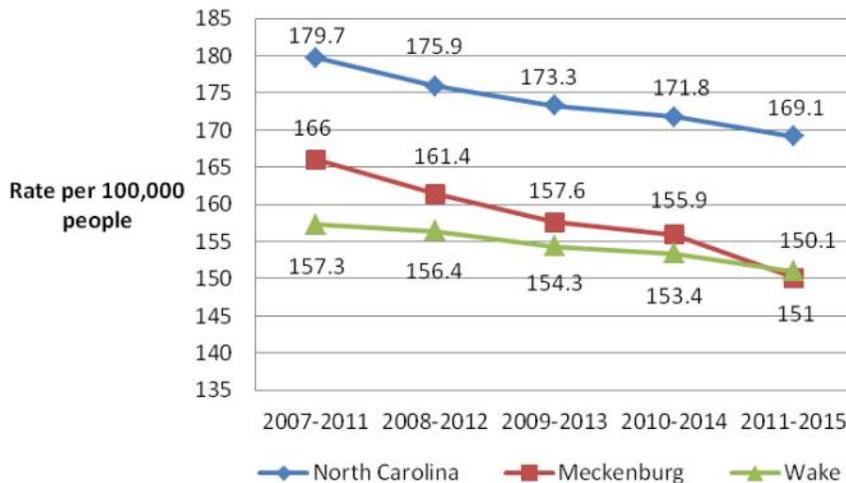


Figure 3

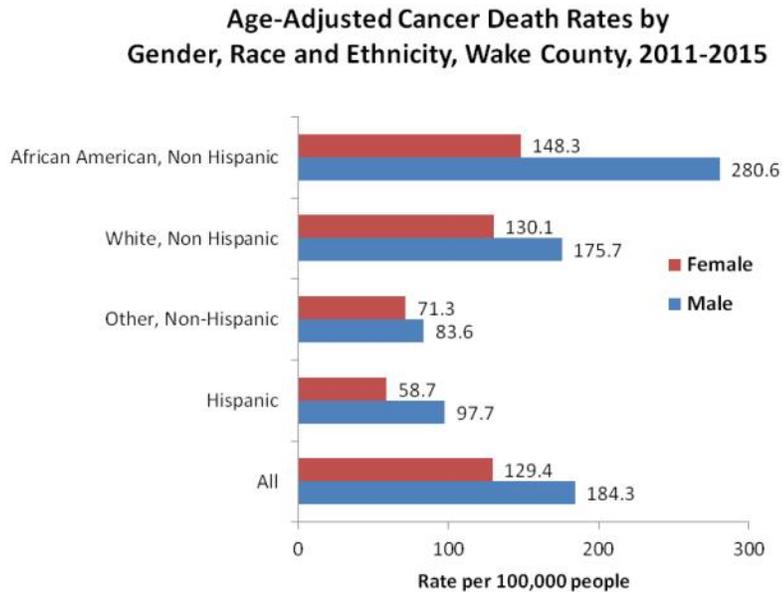
*NC's two largest counties

Source: "Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates". County Health Data Books 2017, 2016, 2015, 2014 and 2013. NC State Center For Health Statistics. <http://www.schs.state.nc.us/data/databook/>. Accessed 12/13/16.

Cancer can affect anyone; however, Figure 4 shows:

- Men are more likely to die of cancer than women
- African American, non-Hispanic men are more likely to die of cancer than people of any other race or ethnicity.

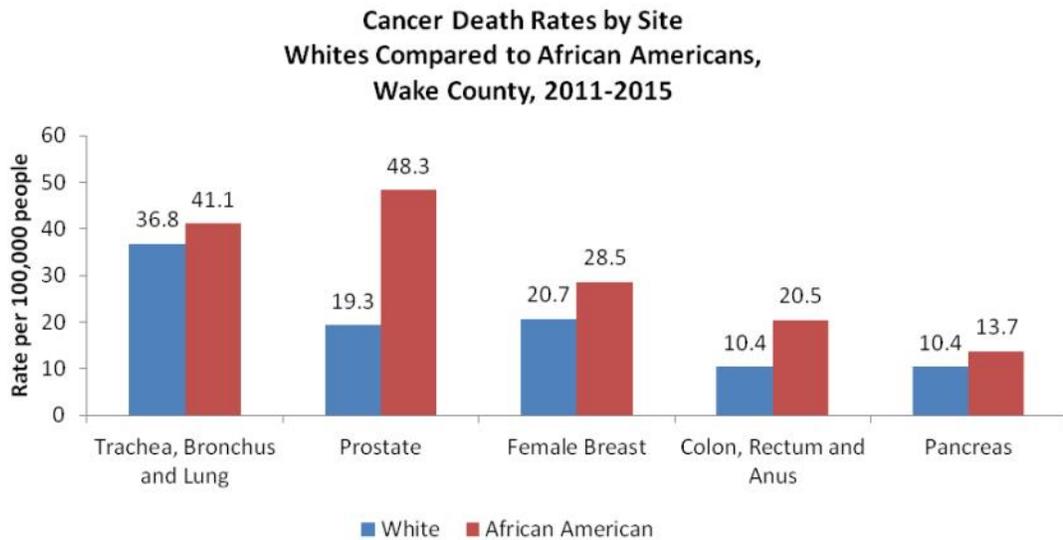
Figure 4



Source: “2011-15 NC Resident Race/Ethnicity-Specific and Sex-Specific Age-Adjusted Death Rates”. 2017 County Health Data Book. NC State Center for Health Statistics. <http://www.schs.state.nc.us/data/databook/>. Accessed 12/8/16.

There are over 100 types of cancer which are characterized by an uncontrolled growth and spread of abnormal cells. The majority of cancer deaths occur at five sites: colon/rectum and anus, pancreas, trachea/bronchus and lung, female breast and prostate. Figure 5 illustrates a general racial disparity in Wake County for the five cancer types mentioned above.

Figure 5



Source: “2011-15 NC Resident Race/Ethnicity-Specific and Sex-Specific Age-Adjusted Death Rates”. 2017 County Health Data Book. NC State Center for Health Statistics. <http://www.schs.state.nc.us/data/databook/>. Accessed 12/8/16.

3.1 Cancer—Inpatient Utilization and Cost

In terms of hospital utilization and cost, colon, rectum and anus cancer has the highest average cost per case with an average stay of seven days in the hospital at a cost of \$7,550 per day in 2014 (Table 1).

Table 1

Inpatient Utilization and Cost for Cancer by Site Wake County, 2014				
	Colon, Rectum, Anus	Trachea, Bronchus, Lung	Prostate	Female Breast
Total Cases	302	324	214	46
Average Stay in Days	7	5.9	1.9	3.5
Average Charge per Day	\$7,550	\$8,083	\$17,134	\$12,004
Average Charge per Case	\$53,224	\$47,723	\$33,148	\$42,276

Source: “Inpatient Hospital Utilization and Charges by Principal Diagnosis and County of Residence, North Carolina, 2014”. 2016 County Health Data Book. North Carolina State Center for Health Statistics. <http://www.schs.state.nc.us/data/databook2016/>. Accessed 12/13/16.

As the average age of the population increases, the incidence of cancer is projected to increase. In 2015, Wake County had a total of 1,243 cancer deaths; in 2016, there are projected to be 1,608 deaths and 4,884 new cancer cases. Breast cancer is projected to have more new cases in 2016 than lung, colon or prostate cancer; however, lung cancer will cause more deaths. Table 2 illustrates these projections.

Table 2

Projected* New Cases and Deaths from Cancer By Site, Wake County 2016								
Cancer Site	Projected New Cases				Projected Deaths			
	Lung/ Bronchus	Female Breast	Prostate	Colon/ Rectum	Lung/ Bronchus	Female Breast	Prostate	Colon/ Rectum
Number	689	895	621	379	477	119	69	131

*Projection estimates are made using 2009-2013 invasive cancer incidence and 2010-2014 mortality rates and 2016 NC population estimates (www.osbm.nc.gov/demog/county-projections).

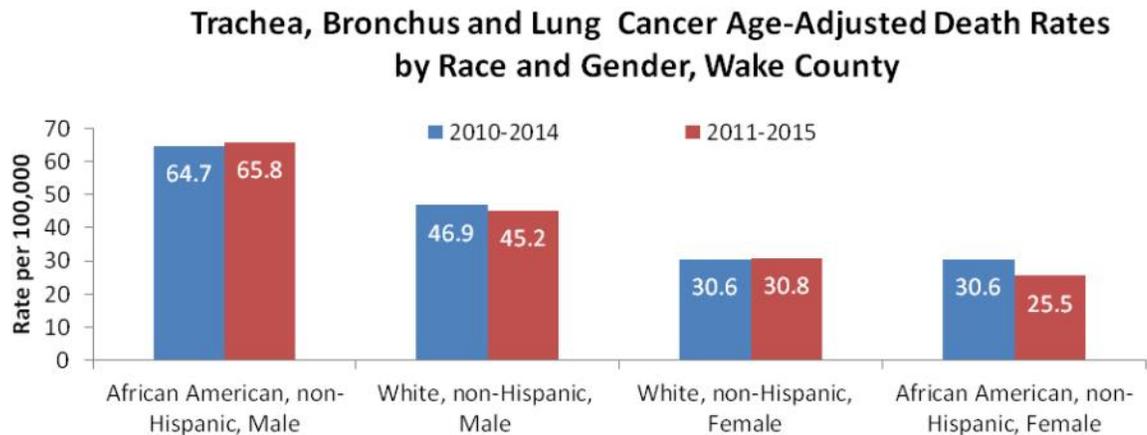
Source: “Projected New Cancer Cases and Deaths by County, 2016”. 2017 County Health Data Book. North Carolina State Center for Health Statistics. <http://www.schs.state.nc.us/data/databook/>. Accessed 12/8/16.

3.2 Trachea, Bronchus and Lung Cancer

Trachea, bronchus and lung cancers are the most common cancers among both men and women and have been declining in Wake County. In 2011-2015 there were 1,406 deaths and the overall age-adjusted death rate per 100,000 of 35.9 decreased slightly from 36.9 in 2010-2014 [2].

Men are more likely to die of trachea, bronchus and lung cancers than women. There were 771 male deaths and 635 female deaths in 2011-2015; the age-adjusted death rate per 100,000 for males was 46.3 compared to 28.5 for females [2]. African American, non-Hispanic males are more than twice as likely to die from trachea, bronchus and lung cancers as African American, non-Hispanic females in Wake County (Figure 6).

Figure 6



Source: “Resident Race/Ethnicity-Specific and Sex-Specific Age-Adjusted Death Rates”. 2017 County Data Health Data Book. North Carolina State Center for Health Statistics. <http://www.schs.state.nc.us/data/databook/>. Accessed 12/8/16.

3.2a Smoking

Smoking is the leading risk factor for lung cancer. In the 2015 County Health Rankings and Roadmaps, 13% of Wake County adults currently smoke every day or most days and have smoked at least 100 cigarettes in their lifetime [3]. The percentage of adults who smoke cigarettes in Wake County (13.6) is less than that of North Carolina (20%). Premature death is attributed to smoking, and smoking is also identified as a cause of:

- Various cancers
- Cardiovascular disease
- Respiratory conditions, such as chronic obstructive pulmonary disease (COPD) and emphysema
- Low birth weight
- Other adverse health outcomes [3]

Smokefree.gov (www.smokefree.gov), created by the Tobacco Control Research Branch of the National Cancer Institute, is a website with resources to help people quit smoking. The North Carolina Department of Health and Human Services State Tobacco Prevention and Control Branch website (<http://www.tobaccopreventionandcontrol.ncdhhs.gov>) provides evidence-based strategies and links to resources to prevent and reduce the negative health impacts related to tobacco use. Quitline NC is the North Carolina funded tobacco cessation resource for residents interested in quitting (www.quitlinenc.com; 1-800-QUIT-NOW).

3.2b Electronic Cigarettes (e-cigarettes)

While cigarette smoking among youth is down in North Carolina, the use of e-cigarettes jumped from 1.7% in 2011 to 16.8 % in 2015, surpassing cigarette use (9.3%) among North Carolina high school students. In 2016, 27% of students are considering using e-cigarettes while only 12% are considering using cigarettes [4].



Image : Brian King, PhD, MPH. What We Know About Electronic Nicotine Delivery Systems (ENDS.) PowerPoint Presentation. State Health Directors Conference January 22, 2016.

E-cigarettes are part of a class of products also referred to as electronic nicotine delivery systems (ENDS), which are battery-powered devices that provide doses of nicotine and other additives to the user in an aerosol. E-cigarettes simulate the experience and sensation of smoking, however, e-cigarettes are in the process of being regulated by the US Food and Drug Administration (FDA) and the long term health effects are unknown. They are not a FDA-approved cessation aid.

According to the CDC, more than half (51.1%) of the calls to poison centers due to e-cigarettes involved children under age 5 and about 42% involved people age 20 and older. Poisoning from conventional cigarettes is generally due to young children eating them, whereas poisoning related to e-cigarettes occurs when the liquid containing nicotine is ingested, inhaled or absorbed through the skin or eyes [5]. Vomiting, nausea and eye irritation are the most commonly reported symptoms from exposure.

In North Carolina, poisonings due to e-cigarette exposures have increased. The Carolinas Poison Center reported eight calls for exposures to e-cigarettes containing nicotine or nicotine liquid in 2011, compared to 149 calls in 2015. In 2015, 12 calls were made from Wake County to Carolinas Poison Center for e-cigarette exposure to nicotine (Figure 7).

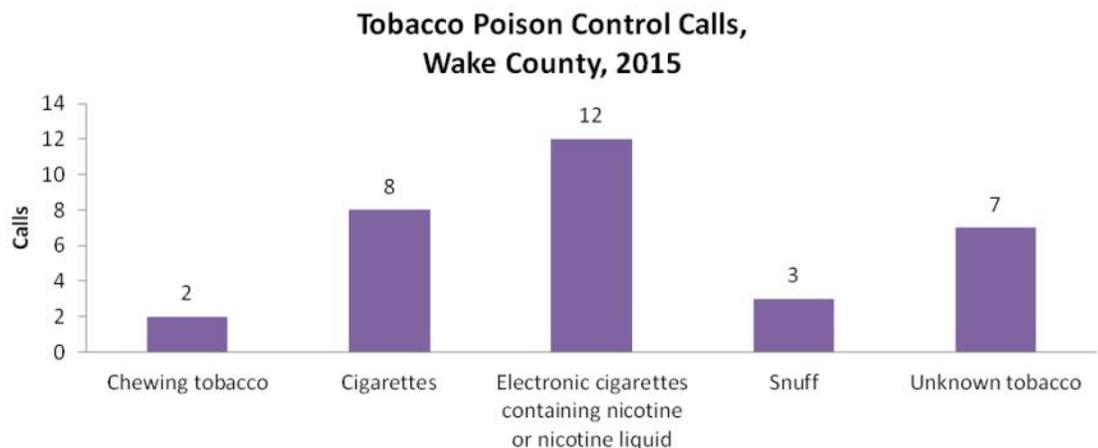


Figure 7

Source: Special Report on Tobacco Exposures in Humans. Prepared for Wake County by Carolinas Poison Center. 11/3/16.

In 2016 the FDA enacted a rule extending its authority over all tobacco products (including e-cigarettes, cigars, hookah tobacco and pipe tobacco among others) to include:

- Restricting youth access by:
 - ◆ Not allowing products to be sold to persons under the age of 18 years (both in person and online)
 - ◆ Requiring age verification by photo ID
 - ◆ Not allowing the selling of tobacco products in vending machines (unless in an adult-only facility)
 - ◆ Not allowing the distribution of free samples
- Subjecting all manufacturers, importers and/or retailers of newly-regulated tobacco products to any applicable provisions, bringing them in line with other tobacco products the FDA has regulated including:
 - ◆ Registering manufacturing establishments and providing product listings to the FDA
 - ◆ Reporting ingredients and harmful and potentially harmful constituents
 - ◆ Requiring premarket review and authorization of new tobacco products by the FDA
 - ◆ Placing health warnings on product packages and advertisements and
 - ◆ Not selling modified risk tobacco products (including those described as “light,” “low,” or “mild”) unless authorized by the FDA

This rule to regulate all tobacco products went into effect August 8, 2016 [6].

Under North Carolina General Statute § 14-313, sales or distribution of tobacco products to youth under eighteen years of age is a Class 2 misdemeanor. Tobacco products include a tobacco-derived product, vapor product, or components of a vapor product. General Statute § 130A Article 23 prohibits smoking in public places and places of employment and defines smoking as use of a “lighted” tobacco product [7].

The Wake County Health Promotion and Chronic Disease Prevention (HPCDP) Program’s Tobacco Prevention and Control (TPC) program has made great strides toward making Wake County tobacco-free via policy preparation, implementation and enforcement. The Wake County Board of Commissioners passed a comprehensive tobacco ordinance banning tobacco products, including e-cigarettes;

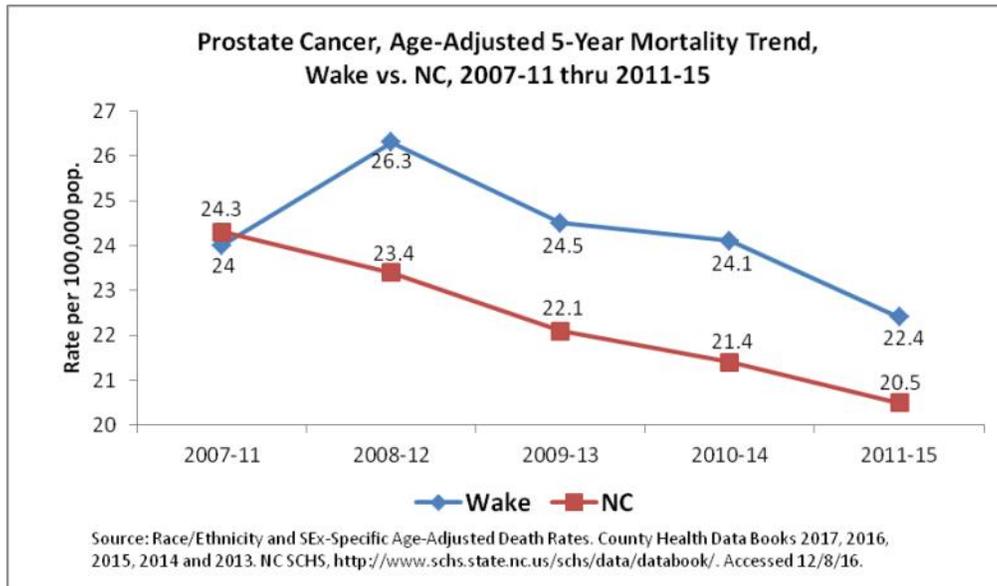
- In all Wake County Government buildings and vehicles
- On County grounds, including parks and recreation centers.

The ordinance became effective in February 2016. Similarly, the Town of Rolesville adopted a municipal ordinance for tobacco-free buildings, grounds, vehicles, parks and recreational facilities. The TPC program also works to promote the NC Quitline and train other professionals how to use available tobacco cessation resources.

3.3 Prostate Cancer

Prostate cancer is the most common cancer among American men. In Wake County in 2011-2015, 305 men died from prostate cancer. As Figure 8 indicates, the overall age-adjusted death rate per 100,000 has decreased from a high of 26.3 in 2008-2012 to 22.4 in 2011-2015.

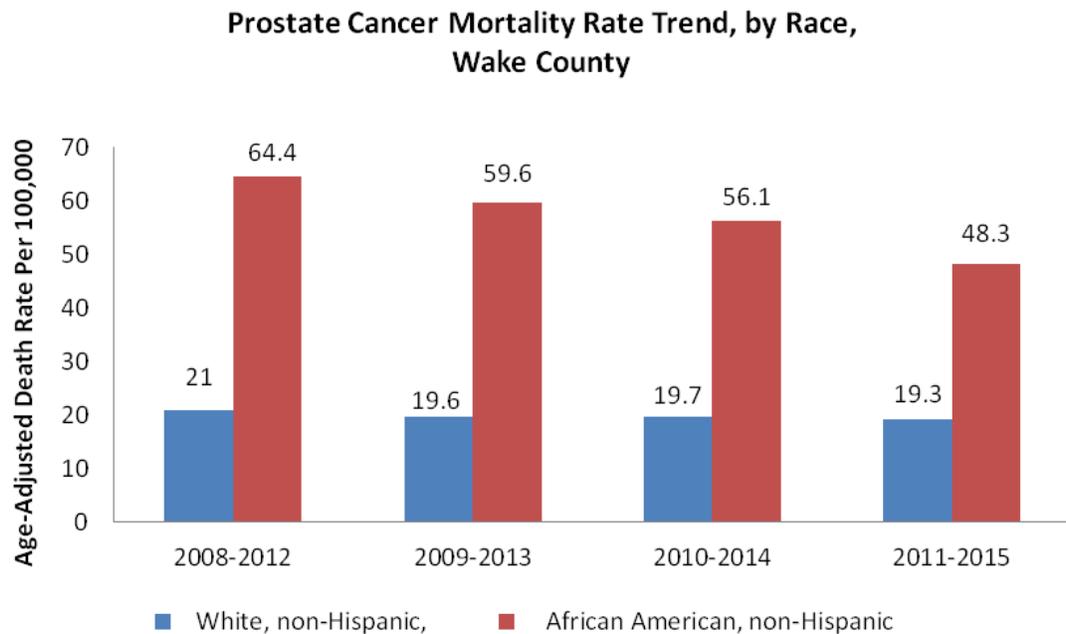
Figure 8



Source: Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates". County Health Data Books 2017, 2016, 2015, 2014 and 2013. NC State Center For Health Statistics. <http://www.schs.state.nc.us/data/databook/>. Accessed 12/8/16.

In Wake County from 2011-2015, 209 white, non-Hispanic men died of prostate cancer compared to 90 African American, non-Hispanic men. However, African American, non-Hispanic men are two and a half times more likely to die of prostate cancer than white, non-Hispanic men (see Figure 9). It is also important to note that the African American, non-Hispanic death rate dropped by 25% from 2008-2012 to 2011-2015, compared to an 8.1% decrease for white, non-Hispanic men. One American Indian, 1 Hispanic and 4 Other Races non-Hispanic men died from prostate cancer; the number of deaths for each was too small to calculate a death rate.

Figure 9



Source: Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates". County Health Data Books 2017, 2016, 2015, 2014 and 2013. NC State Center For Health Statistics. <http://www.schs.state.nc.us/data/databook/>. Accessed 12/8/16.

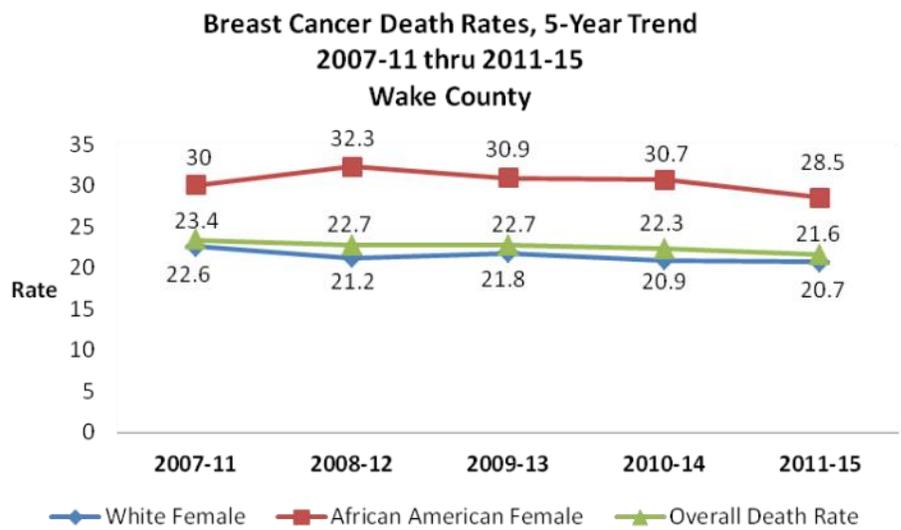
Risk factors for prostate cancer include age, family history and race. There is not agreement on what other factors may influence the risk of getting prostate cancer or how it can be prevented. Although prostate cancer is common, in many cases it grows very slowly and does not show symptoms or cause health problems during a man’s lifetime. Therefore recommendations to test for prostate cancer are controversial. One illustration of this controversy arose during the United States Preventive Services Task Force (USPSTF) comment period for screening guidelines that recommended against prostate-specific antigen (PSA)-based screening for prostate cancer in all age groups [8]. The American Cancer Society’s Prostate Cancer Advisory Committee disagreed with the USPSTF’s recommendation, stating that there are possible benefits in selective screening of appropriate candidates [9].

3.4 Breast and Cervical Cancer

3.4a Breast Cancer

Five-year trend data show that the overall death rate from breast cancer has decreased. Every year, more white women die from breast cancer than African American women (Table 3), yet the death rate for African American women is consistently higher (Figure 10). Hispanic, American Indian and Other Races non-Hispanic women registered 4, 42 and 52 deaths, respectively, over the five-year period, but the number of deaths in each year was too small to calculate a death rate.

Figure 10



Source: NC Resident Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates. County Health Data Books 2017, 2016, 2015, 2014, 2013. North Carolina State Center for Health Statistics. <http://www.schs.state.nc.us/data/databook>. Accessed 12/9/16.

Table 3

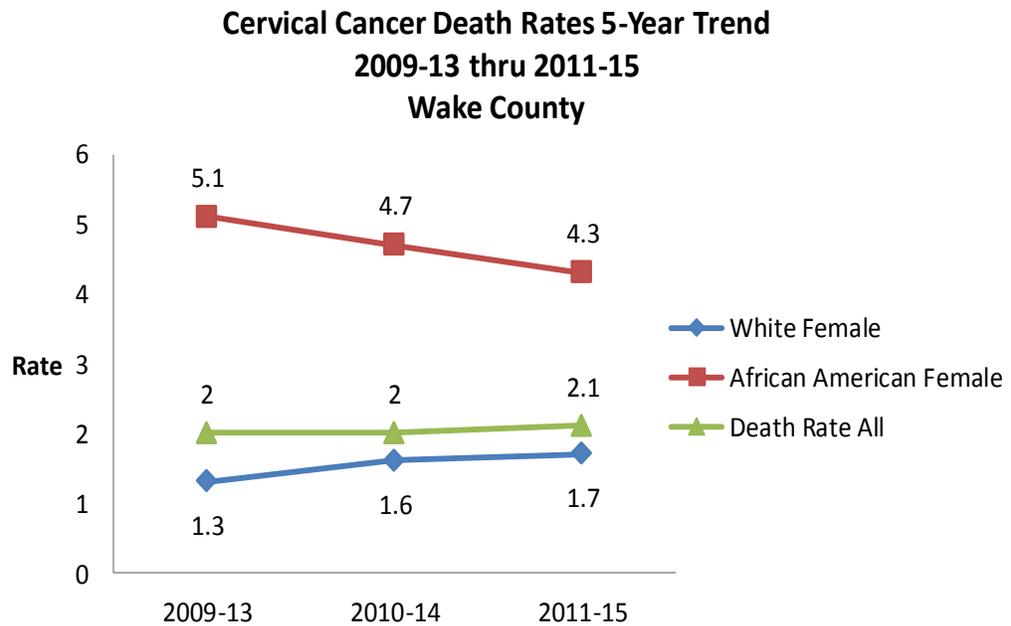
Breast Cancer Deaths, 5-Year Trend 2007-11 thru 2011-15, Wake County			
	White Female	African American Female	Overall Deaths
2007-11	338	122	476
2008-12	334	135	486
2009-13	354	136	507
2010-14	352	138	515
2011-15	361	133	520

Source: NC Resident Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates. County Health Data Books 2017, 2016, 2015, 2014, 2013. North Carolina State Center for Health Statistics. <http://www.schs.state.nc.us/data/databook>. Accessed 12/13/16.

3.4b Cervical Cancer

Three-year trend data show that the overall death rate from cervical cancer in Wake County has remained fairly steady. More white women died from cervical cancer than African American women in the time period 2011-15 (Table 4), yet the death rate for African American women was significantly higher (Figure 11). However, one element of cervical cancer data is particularly striking— the African American female death rate actually fell by 15.7% from 2009-13 to 2011-15, a clear reduction of a health disparity. The number of deaths for American Indian, Other non-Hispanic and Hispanic women were 0, 1 and 5 deaths, respectively, over this time period. These numbers are too small to calculate a death rate.

Figure 11



Source: Special report prepared for Wake County by NC State Center for Health Statistics, 11/02/16.

Table 4

Cervical Cancer Deaths, 5-Year Trend 2009-13 thru 2011-15 Wake County			
	White Female	African American Female	All Deaths
2009-13	21	21	46
2010-14	26	21	48
2011-15	29	20	50

Source: Special report prepared for Wake County by NC State Center for Health Statistics, 11/02/16.

4.0 Diseases of the Heart

While heart disease is the leading cause of death in the US, it was second to cancer as the leading cause of death in Wake County in 2015. The age-adjusted heart disease mortality rate decreased in Wake County from 137.5 per 100,000 in 2007-2011 to 125.0 per 100,000 in 2011-2015 (Figure 12).

Figure 13 demonstrates that, in Wake County, the heart disease death rate for males is higher than females for all race/ethnic groups and that African American non-Hispanic males have the highest heart disease death rate compared to all other groups.

Figure 12

Source: NC Resident Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates. County Health Data Books 2017, 2016, 2015, 2014, 2013. North Carolina State Center for Health Statistics. <http://www.schs.state.nc.us/data/databook>. Accessed 12/9/16.

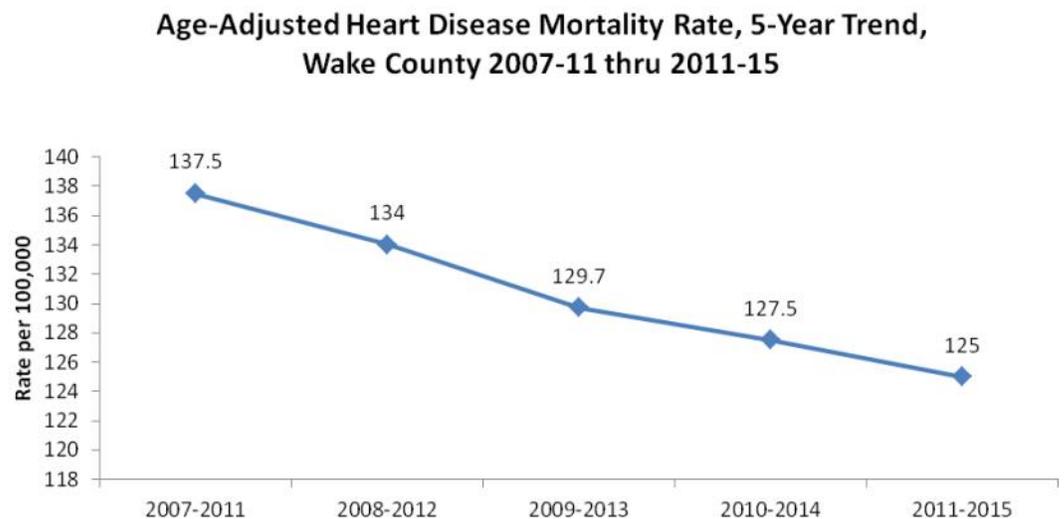
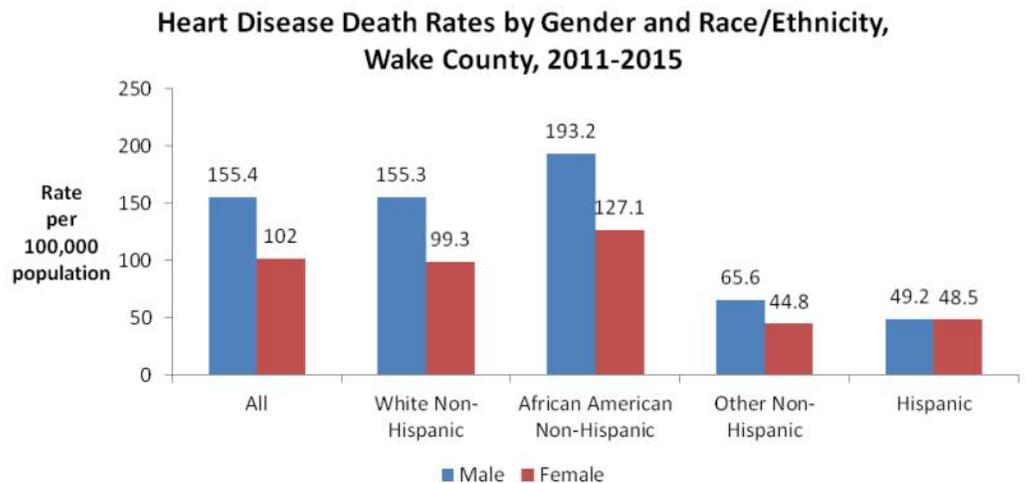


Figure 13

Source: NC Resident Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates. County Health Data Books 2017, 2016, 2015, 2014, 2013. North Carolina State Center for Health Statistics. <http://www.schs.state.nc.us/data/databook>. Accessed 12/9/16.



4.1 Heart Disease —Inpatient Utilization and Cost

There were 6,421 inpatient hospital discharges reported with \$345,684,893 spent for inpatient care for heart disease in 2014. Figure 14 breaks down the average charge per person.

**Heart Disease—Inpatient Utilization and Charges
Wake County, 2014**



Source: “Inpatient Hospital Utilization and Charges by Principal Diagnosis and County of Residence, North Carolina, 2014 (Excluding Newborns and Discharges from Out of State Hospitals).” County Health Data Book. North Carolina State Center for Health Statistics. <http://www.schs.state.nc.us/data/databook2016/>. Accessed 12/12/16.

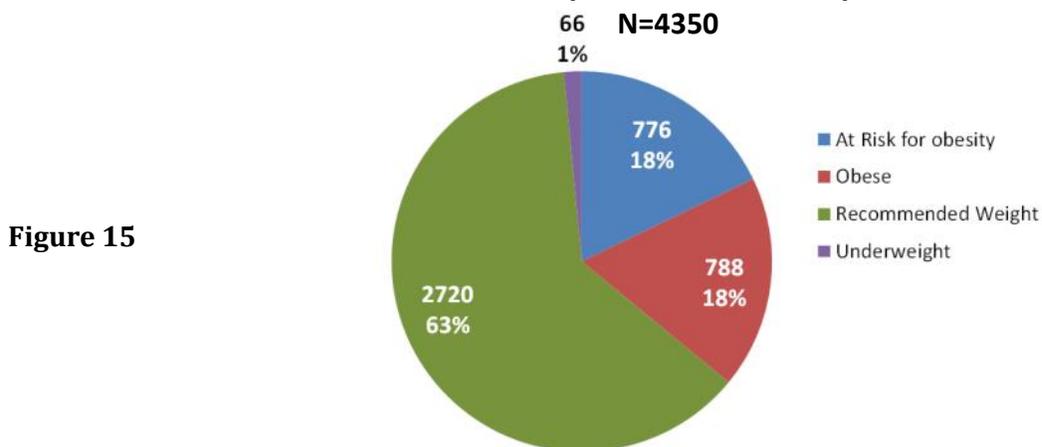
5.0 Obesity

5.1 Childhood Obesity

Body mass index (BMI) is a useful screening tool, using height and weight to classify underweight, healthy or recommended weight, overweight and obesity. A child’s BMI (ages 2-20) is ranked on a growth chart, using age and gender to determine a percentile which corresponds to his/her weight classification.

Wake County Human Services Child Health Clinic provides well-child visits that include a complete physical examination. During the visit, a BMI measurement determines whether a child is underweight, healthy weight, overweight (at risk for obesity) or obese. Of the 4,350 children seen during FY 2015-16, 18% were obese and 18% were overweight (Figure 15).

**Body Mass Index
WCHS Child Health Annual Physical Exam Visits July 1, 2015 –June 30, 2016**



Source: Wake County Human Services GE Centricity Electronic Health Record. Accessed 10/20/16.

The National Committee for Quality Assurance (NCQA) endorses weight assessment and counseling for children by a health care provider to promote regular physical activity, healthy eating, and behavioral changes that support a healthy weight.

5.2 Adult Obesity

In the 2015 North Carolina Health Rankings, 25% of Wake County adults (age 20 and older) reported being obese, compared to 29% in North Carolina [10]. Obesity increases the risk for health conditions such as coronary heart disease, type 2 diabetes, cancer, hypertension, dyslipidemia (fat in the blood is not within normal limits), stroke, liver and gallbladder disease, sleep apnea, respiratory problems and osteoarthritis. During FY 2015-16, the HPCDP program screened 258 people in Wake County who were primarily from minority and low-income populations. Eighty-two percent of those screened were overweight or obese (BMI 25 or above), and 51% were obese (BMI 30 or above).

6.0 Diabetes

Diabetes deaths have increased in Wake County over the last five years (Table 5), but this may be a function of the county's growing population since the overall death rate has dropped by 8.3%. African American non-Hispanic males died at higher rates than any other subgroup, yet the African American, non-Hispanic male death rate has fallen 17.7%. Death rates for all other groups have remained stable (Figure 16). The number of deaths for American Indians, Other Races non-Hispanic and Hispanics (both males and females) in each year was too small to calculate a death rate (Table 5).

Table 5

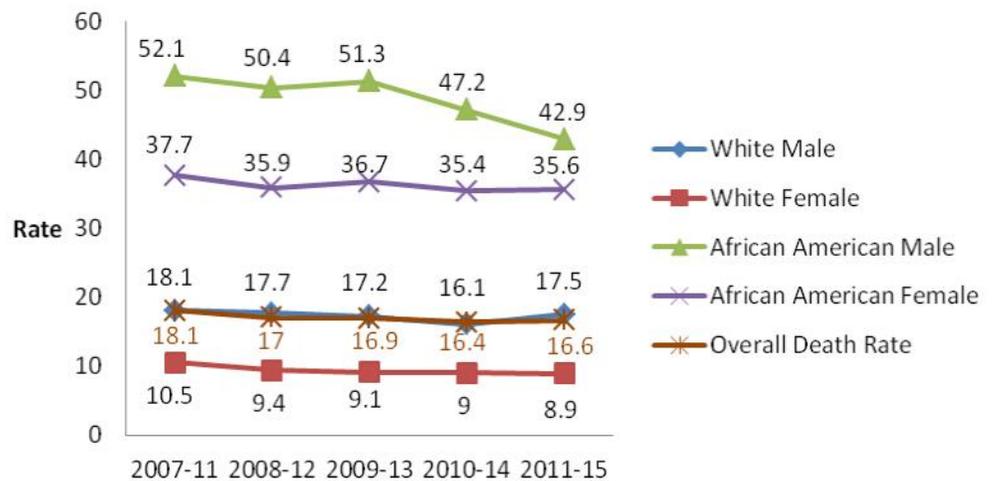
Diabetes Deaths, 5-Year Trend 2007-11 thru 2011-15, Wake County											
Years	White		African American		American Indian		Other races, non-Hispanic		Hispanic		Overall Deaths
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	
2007-11	184	152	109	124	not available	not available	3	6	1	3	582
2008-12	188	144	105	121	0	1	3	2	3	3	570
2009-13	196	145	119	133	0	2	1	2	4	2	604
2010-14	195	151	125	132	0	2	2	3	7	4	621
2011-15	223	154	123	140	0	3	4	3	7	7	664

Source: NC Resident Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates. County Health Data Books 2017, 2016, 2015, 2014, 2013. North Carolina State Center for Health Statistics. <http://www.schs.state.nc.us/data/databook>. Accessed 12/9/16.

Diabetes Death Rates, 5-Year Trend 2007-11 thru 2011-2015 Wake County

Figure 16

Source: NC Resident Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates. County Health Data Books 2017, 2016, 2015, 2014, 2013. North Carolina State Center for Health Statistics. <http://www.schs.state.nc.us/data/databook>. Accessed 12/9/16.



7.0 Asthma

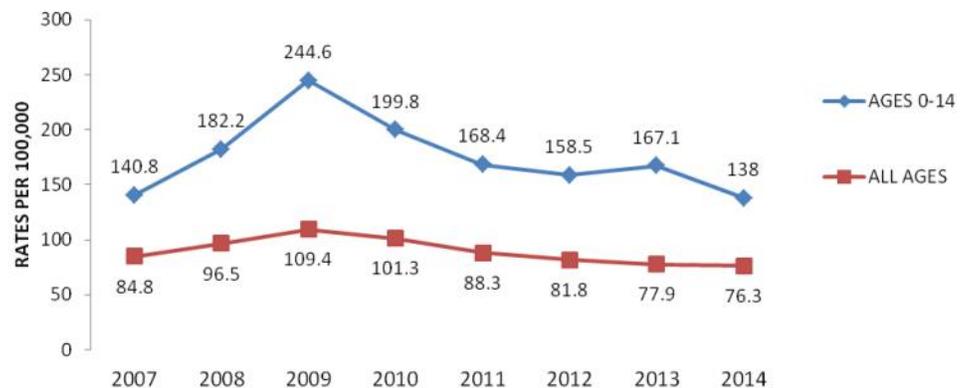
Asthma is a disease that affects the lungs. It causes repeated episodes of wheezing, breathlessness, chest tightness, and nighttime or early morning coughing. Asthma can be controlled by taking medicine and avoiding the triggers that can cause an attack. Common asthma triggers include cigarette smoke, dust mites, cockroaches, pets, mold, air pollution and upper respiratory infections [11].

The rate for Wake County hospital discharges with a primary diagnosis of asthma is consistently higher in children ages 0-14 than for all ages (Figure 17). Rates peaked for both age categories in 2009; both groups have experienced declining trends in rates, with ages 0-14 seeing a bigger drop in rates since 2009.

Hospital Discharge Rates with a Primary Diagnosis of Asthma, Ages 0-14 Compared to All Ages, Wake County, 2007-2014

Figure 17

Source: North Carolina Hospital Discharges with a Primary Diagnosis of Asthma. County Health Data Books 2016, 2015, 2014, 2013, 2012, 2011, 2010 and 2009. North Carolina State Center for Health Statistics. <http://www.schs.state.nc.us/data/databook>. Accessed 12/12/16.



7.1 Asthma—Inpatient Utilization and Cost

There were 762 cases reported in Wake County with \$13,912,648 spent for inpatient care for asthma disease in 2014. The average cost per case was \$18,258 (Figure 18).

Figure 18

Asthma—Inpatient Utilization and Charges Wake County, 2014



Source: “Inpatient Hospital Utilization and Charges by Principal Diagnosis and County of Residence, North Carolina, 2014”. County Health Data Book 2016. North Carolina State Center for Health Statistics. <http://www.schs.state.nc.us/data/databook2016/>. Accessed 12/12/16.

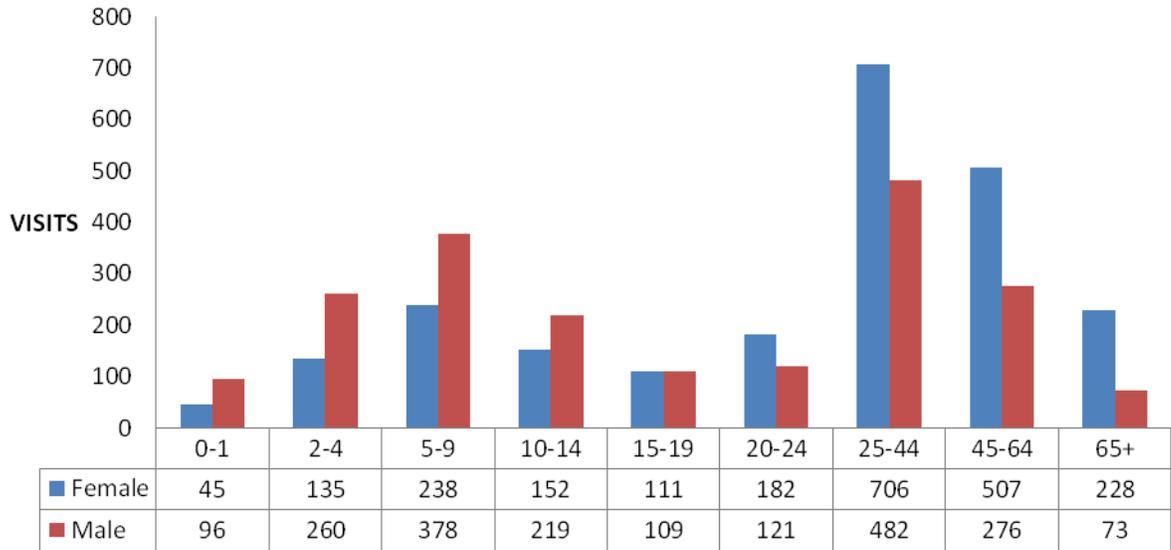
The WCHS Child Health Clinic, in collaboration with Community Care of Wake and Johnston Counties (CCWJC), works to improve the quality of asthma care for the Medicaid patient population by implementing this best practice strategy— decreasing hospital utilization through asthma action plans. These plans are written by a provider for patients to manage their own care. Asthma action plans include information on:

- Utilizing medications appropriately
- Identifying and avoiding exposure to allergens and irritants
- Recognizing and handling worsening asthma
- Knowing when, how and who to contact in an emergency

These plans also provide direction for parents and responsible staff in schools, day cares and other programs caring for children with asthma. This strategy, along with a coordinated clinical and community efforts, have helped to sustain the decrease in hospital utilization rates in Wake County. Asthma data from Emergency Departments (EDs) reflect age-, gender- and race-based health disparities. Males have more visits than females from ages 0-14, and females have significantly more visits than males from age 20 onward (Figure 19). Asthma ED visits “peak” at two different life stages: ages 5-9 and ages 25-44 (shown in both Figures 19 and 20). Through the first 3 quarters of 2016 (in which NC DETECT began tracking race and ethnicity for ED visits), African Americans had the most asthma-related visits for every age group *except* those 65 and older (Figure 20).

**Asthma-Related ED Visits by Age and Gender,
Wake County, January 1, 2016 - September 30, 2016**

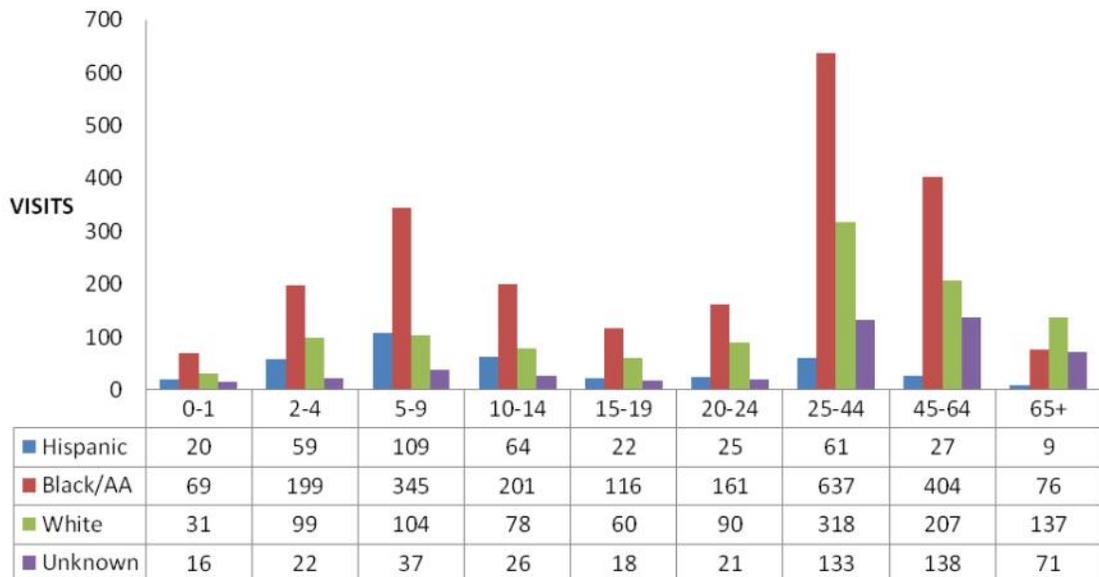
Figure 19



Source: NCDETECT. Custom Event Line List. 11/3/16

**Asthma-Related ED Visits by Age and Race/Ethnicity,
Wake, January 1, 2016 - September 30, 2016**

Figure 20



Source: NCDETECT. Custom Event Line List. 11/3/16

8.0 Alzheimer's Disease

Alzheimer's disease is the most common form of dementia and among the top ten leading causes of death in both North Carolina and the United States. This progressive brain disorder affects memory, decision making and doing simple tasks. Alzheimer's disease may be underreported, because other dementia-related conditions are listed as the primary cause of death.

Alzheimer’s disease was the sixth leading cause of death in Wake County in 2015. The five year age-adjusted death rate remained stable from 2007-2011 to 2011-2015 (20 per 100,000) while the number of deaths increased from 561 in 2007-2011 to 679 in 2011-2015 (Figure 21).

Alzheimer’s Disease, Age-adjusted Death Rate and Deaths, Wake County, 5-Year Trend

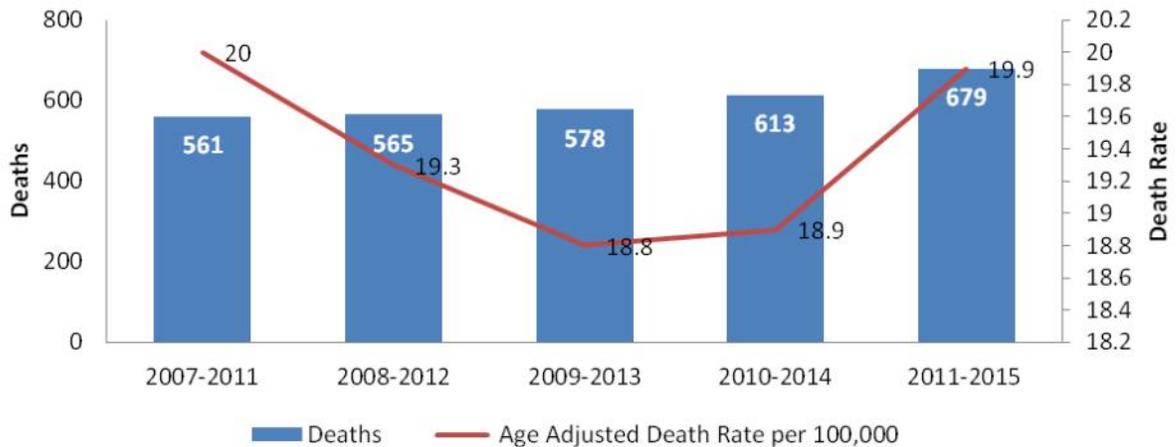


Figure 21

Source: North Carolina Vital Statistics, Volume 2: Leading Causes of Death, 2015; 2014; 2013; 2012 and 2011. North Carolina State Center for Health Statistics. <http://www.schs.state.nc.us/data/vital.cfm>. Accessed 12/12/16.

A National Institutes of Health study found the costs for deaths from dementia were 57% greater than costs associated with death from other diseases, including cancer and heart disease [12]. According to the North Carolina Senior Care Council, there are seven Alzheimer Care Facilities in Wake County. This organization is a resource that:

- Lists companies and individual providers who help families deal with the crisis and burden of long term care
- Educates the public on the need for care planning before a crisis occurs, and
- Provides available government and private services for eldercare [13]

Advancing age is the greatest risk factor for Alzheimer’s disease. There has been an increase in the 65 and older population in Wake County, from 82,193 in 2011 to 105,510 in 2015 (Figure 22). As Wake County’s aging population increases, so will the burden of Alzheimer’s and the need for additional resources and services for those affected and their care givers.

Wake County Aging Population 2011 to 2015 Comparison

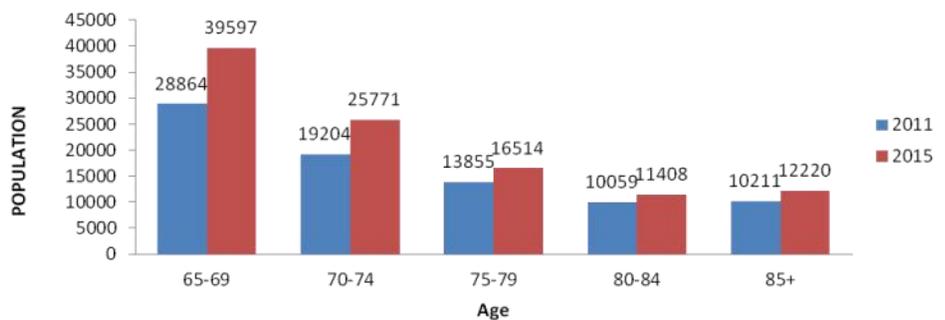


Figure 22

Source: “Population Estimates by Age, Race and Sex projected from the 2010 Census”. County Health Data Books 2017 and 2013. <http://www.schs.state.nc.us/data/databook/>. Accessed 12/12/16.

9.0 Health Promotion Chronic Disease Prevention (HPCDP) Programs and Services

Health Promotion Chronic Disease Prevention provides a set of chronic disease prevention and management services to people and communities experiencing the greatest health disparities. These services address obesity, cardiovascular disease, stroke, diabetes, breast and cervical cancers and tobacco cessation. Health Promotion staff help to empower community organizations, including faith partners and worksites, by creating healthy environments and improving health behaviors.

Staff: County Funded: 6.5 FTE (of which 3.5 FTE provide direct services) Grant Funded: 3.5 FTE

Programs and Services			Participants in Fiscal Year 2015/16
Community Screenings	Blood Pressure Body Mass Index Body Fat Analysis Nutrition Counseling	Information: 919-212-9663	<ul style="list-style-type: none"> • 230 individuals screened
Clinical Screenings	Mammography Pap Smear Clinical Breast Exam	(refer to BCCCP description below) Information: 919-212-9310	<ul style="list-style-type: none"> • 415 mammography services • 54 cervical screenings
Breast and Cervical Cancer Control Program (BCCCP)		Wake County BCCCP provides free or low cost breast and cervical cancer screenings and follow up services to eligible women in Wake County. Women are eligible if they are uninsured or underinsured, are between the ages of 40-64 for breast screening services and 21 - 64 for cervical screening services, and have a household income at or below 250% of the federal poverty level. Information: 919-212-9310	<ul style="list-style-type: none"> • 384 women served • 415 mammography services provided (8 breast cancers detected) • 54 cervical screenings (3 cervical cancers detected)
WISEWOMAN		Wake County WISEWOMAN provides free cardiovascular health screenings to the women enrolled in BCCCP. Women are screened for blood pressure, cholesterol, diabetes, and BMI. Participants also receive counseling on physical activity and nutrition. If necessary, women are referred to a medial provider for follow up treatment for abnormal lab values. Information: 919-250-3990	167 women served

Health Education Training and Workshops	Health and Wellness Community Presentations	Various interactive workshops for adults on healthy eating and physical activity to reduce risk and/or manage chronic diseases. Information: 919-212-8376	205 participants
	Club CHOICE Plus	Club CHOICE Plus is a weight management series for adult women. The series includes eight sessions, each session consisting of nutrition education (in English and Spanish) and group fitness. The children of the participants also take part in activities promoting healthy eating and fitness facilitated by Wake County 4-H Cooperative Extension. Information: 919-250-4677	70 women and children participants
	Cooking Matters at the Store	An on-site grocery store tour which provides participants with hands-on education as they shop for food. Participants learn how to budget and plan for a healthy, affordable and delicious meals for their families through a curriculum sponsored by the Inter-Faith Food Shuttle. Information: 919-212-9663	117 participants
	Older Adult Series	An interactive workshop for older adults that increases knowledge of healthy eating and physical activity; promotes healthier life style options related to chronic disease management. Information: 919-212-8376	211 participants
	<i>In Shape</i>	A training for youth leaders on how to incorporate physical activity and nutrition information into their youth programs. Information: 919-212-8376	5 participants
	5As Training	Training for health care providers to become knowledgeable about tools needed to counsel people who smoke and smoking cessation resources in the community. Information: 919-250-1171	52 participants
	Community Physical Activity Programs	Movin' and Groovin'	A series of free physical activity sessions for Wake County families to encourage healthier lifestyles and reduce the burden of overweight/obesity in children and adults. Families engage in mini physical activity sessions, as well as organized walking, facilitated by Health Promotion and 4-H Youth Development staff. Information: 919-250-4731

Food Security and Local Food Systems	Farmer's Markets	Health Promotion provides technical support to those Farmer's Markets interested in accepting EBT payment and promotes the use of EBT at Farmer's Markets. Health Promotion also provides interactive educational displays providing information on nutrition and local foods. Information: 919-250-4734	18 Farmer's Markets in Wake County; 8 of which accept EBT
	Mobile Markets	<i>Grocers on Wheels'</i> mission is to provide affordable, accessible and fresh foods to low-income areas of the Triangle area of North Carolina. Health Promotion partners with <i>Grocers on Wheels</i> to bring fresh fruits and vegetables to <i>Movin' & Groovin'</i> participants during the finale of the walking series in an effort to improve access to fresh produce within the community. Information: 919-250-4734	Health Promotion and <i>Grocers on Wheels</i> distributed over 1,100 pounds worth of fresh produce to 100 <i>Movin' & Groovin'</i> participants
	Summer Feeding Program	Health Promotion works in partnership with the NC Department of Public Instruction to increase the number of summer feeding sites and the number of meals served including an innovative pilot strategy to utilize a Farmer's Markets as a summer feeding site. Information: 919-250-4734	Summer 2016: 165 sites which is a 14% increase from 2015; 294,079 meals served
Regional Center Service Integrations		Health Promotion is formally integrated into all Wake County regional centers to provide population health services for vulnerable groups since those communities tend to have fewer resources both programmatically and financially. Health Promotion brings added value to the clients as well as the staff through wellness initiatives and leveraging resources with community partners. Information: 919-212-8376	
Integration across Human Services Divisions	Middle Class Express (MCE)	MCE is a program to help individuals advance toward self-sufficiency to achieve a middle class lifestyle. Health Promotion provides a nutrition education session to each MCE cohort. Additionally, the Health Promotion RD provides health coaching to MCE participants who select health as one of their goals.	8 presentations reaching 77 participants; 14 individuals participated in health coaching

<p>Integration across Human Services Divisions Continued</p>	<p>STEPS</p>	<p>STEPS is a program offered by the Work First Program in which participants learn skills to thrive on their own. Health Promotion provides a series of three nutrition education sessions to each STEPS cohort. Information: 919-212-9963</p>	<p>51 participants</p>
<p>Community Partnerships</p>		<p>Health Promotion partners with numerous community based organizations, including faith partners, non-profits, municipalities and medical providers, along with other Wake County Departments to address preventable causes of death associated with tobacco use, inadequate physical activity, unhealthy diet, poor chronic disease management, and unintentional injury. Information: 919-250-4553</p>	<p>Partner with over 100 community organizations</p>
<p>Public Health Education Campaigns</p>		<p>Health Promotion provides monthly public health education campaigns corresponding to national health observances (i.e. Breast Cancer Awareness Month, Heart Health Month) to build awareness and connect people to disease prevention and management resources. Campaign components include education, outreach and fundraisers to corresponding non-profits. Information: 919-212-8376</p>	<p>Coordinated activities and events for 6 Public Health Education Campaigns with local and state affiliates</p>
<p>Active Routes to School (ARTS)</p>		<p>This regional project is part of North Carolina's Safe Routes to School Program. The goal of the project is to increase the number of elementary and middle school students who safely walk and bike to school. ARTS works with community, municipal, county and state partners to support schools in starting ongoing education programs and foster policy changes at all levels to support safer routes to school. Information: 919-610-5760</p>	<ul style="list-style-type: none"> • Supported 30 Walk and Bike to School events, impacting 1500+ participants • Coordinated the installation of 2 school cross-walks • Trained 43 teachers impacting 600 students

Tobacco Prevention and Control (TPC)		<p>This regional project provides technical support in the form of preparation, implementation and enforcement, on tobacco free policies including policy TPC also provides tobacco cessation resources and training for the community.</p> <p>Information: 919-250-1171</p>	<p>Ordinances Passed: Tobacco Free Buildings, Grounds, Vehicles, Parks and Recreation in:</p> <ul style="list-style-type: none"> • Wake County Government • Town of Rolesville <p>NC Quitline: 1022 registered callers</p>
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10.0 Additional Chronic Disease Prevention Activities

In March 2016 Youth Thrive published the *Wake County Strategic Planning Blueprint: A Guide for Collective Impact for Wake County Youth*. One of the five broad goals identified in this plan is that Wake County youth will be healthy and safe. Action teams, led by co-conveners from the community, engage in problem identification and root cause analysis for each area. A key outcome indicator for the health area is the percentage of youth who are a healthy weight. Within the next 6 months Youth Thrive will be sharing a data platform that will allow community partners to input their data into a shared system.

Wake County 4-H Youth Development provides a variety of programs that use evidence based curricula to teach and reinforce behaviors with youth that prevent obesity and develop healthy habits. In order to reach the most vulnerable youth, much of this work is done in partnership with Public Health, Child Welfare, Family Services and Juvenile Justice. In fiscal year 2016, educational series were delivered at 34 locations throughout the county reaching 1,383 youth.

Over the last two years, food security has emerged as an area of concern and study among stakeholder groups within Wake County. In June 2016 the Wake County Food Security Work Group, under the leadership of Commissioner Matt Calabria, and working in conjunction with the Capital Area Food Network (CAFN), hosted a summit. The summit was an opportunity for the community to come together, learn, share innovative ideas, and build upon existing resources and expertise. It was also a starting point for a process of planning and capacity building toward a comprehensive food security plan for Wake County. This event, made possible through the support of Wake County and Cooperative Extension, had the following goals:

- Create a shared understanding of food security
- Create the vision, and propose metrics for a food secure Wake County
- Establish a broad multi-sector dialogue that facilitates collaboration within the entire food system

- Identify community assets for food security in Wake County to complement hunger relief efforts, beyond emergency hunger relief, that work on root causes (assets could include agricultural, social, economic and community development, and environmental assets)
- Explore innovative models of community food security

Progress was made in each of these areas, and CAFN will continue to engage the community through participatory planning. Cooperative Extension is in the process of securing four VISTA volunteers that will work with CAFN and other partners to build on the existing momentum in our community. A supplement to this report, *Addressing Food Insecurity in Wake County*, describes these efforts in more detail.

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*no date

12.0 Acknowledgements

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