



**Wake County Human Services
Public Health Report**

Chronic Disease 2018



Regina Petteway, Human Services Director
Sue Lynn Ledford, Public Health Division Director
Editor-in chief: Edie Alfano–Sobsey, Public Health Epidemiologist
Content Editor: Ramsay Hoke, Human Services Program Specialist



Table of Contents

| | |
|---|----|
| 1.0 Overview | 3 |
| 2.0 Leading Causes of Death in Wake County | 3 |
| 2.1 Cancer..... | 5 |
| 2.1a Trachea, Bronchus and Lung Cancer..... | 7 |
| 2.1aa Tobacco Use: Smoking and Electronic Cigarettes..... | 7 |
| 2.1b Breast Cancer..... | 9 |
| 2.1c Prostate Cancer..... | 10 |
| 2.1d Colon/Rectum/Anal Cancer..... | 11 |
| 2.1e Pancreatic Cancer..... | 11 |
| 2.1f Highlight—Cervical Cancer Disparity..... | 12 |
| 2.1g Highlight—Melanoma Death Disparity..... | 13 |
| 2.2 Heart Disease..... | 13 |
| 2.3 Cerebrovascular Disease..... | 15 |
| 2.4 Chronic Lower Respiratory Disease | 16 |
| 2.5 Alzheimer’s Disease..... | 17 |
| 2.6 Diabetes..... | 18 |
| 2.7 Nephritis, Nephrotic Syndrome and Nephrosis..... | 18 |
| 3.0 Service Matrix | 19 |
| 4.0 References | 24 |
| 5.0 Acknowledgements | 24 |

1.0 Overview

According to the Centers for Disease Control and Prevention (CDC), chronic diseases and conditions are among the most common, costly and deadly (yet at the same time preventable) of all health problems. The CDC defines chronic disease as a disease that has a prolonged course, does not resolve spontaneously, and for which a complete cure is rarely achieved, even with treatment. According to the most recent statistics from the National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP), 6 in 10 American adults have at least one chronic disease, and 4 out of 10 have two or more. Chronic diseases are the leading causes of death and disability in the US and drive the nation's \$3.3 trillion in annual health care costs. (1)

This report contains information on the burden of chronic diseases in Wake County including:

- the leading causes of death attributed to chronic diseases (seven out of ten in 2017)
- additional analysis for cancer, since the five most common types of cancers that lead to death differ in their impact on the population
- Wake County Human Services (WCHS) programs working to prevent these diseases and their health impacts

One limitation of this report is that except for overall mortality data for cancer and heart disease, the small numbers of deaths for Wake County's non-Hispanic American Indians, non-Hispanic other races and Hispanics do not allow for death rate calculations among the populations in most of the figures and tables. As a result, comparisons can only be made between White and African-American males and females.

2.0 Leading Causes of Death

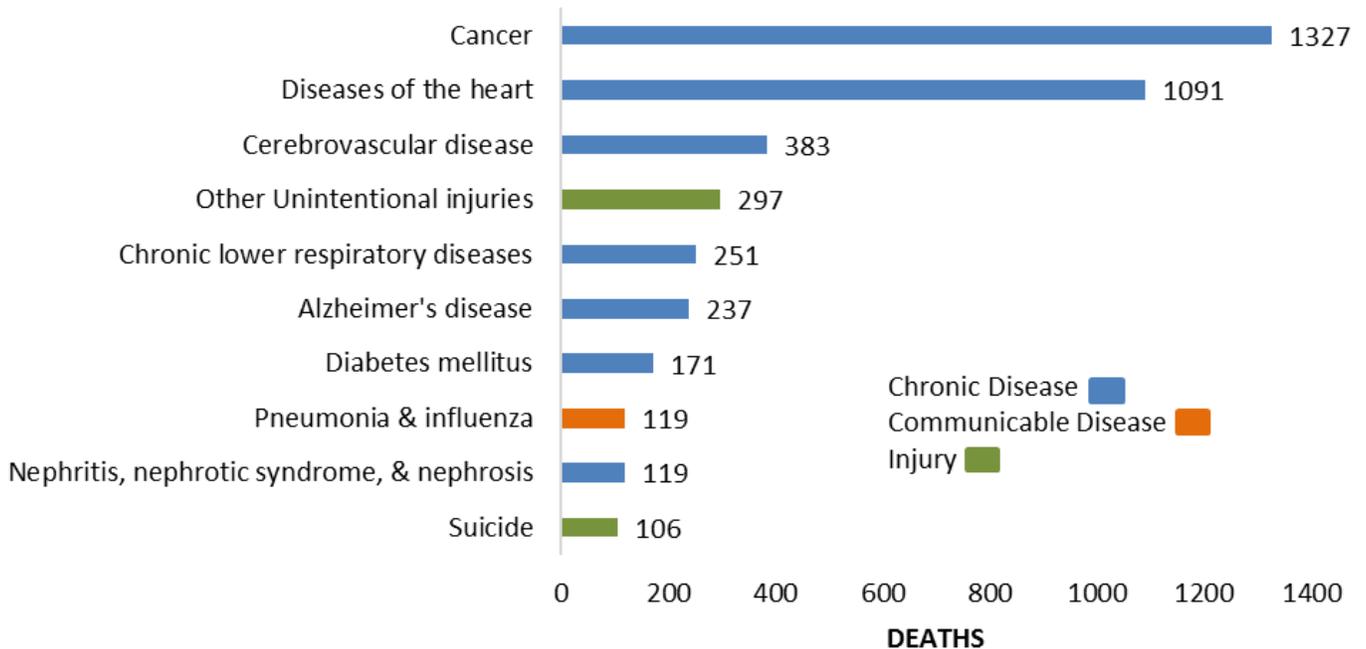
Mortality levels are regarded as accurate indicators of the overall health of a jurisdiction's population and its subgroups. They reflect **quantity** of life (in terms of life years gained for populations with low mortality rates and life years lost for those with high mortality rates), while links between mortality and morbidity also reflect **quality** of life.

Cancer remained the number one cause of death in Wake County in 2017 (Figure 1). The top 7 leading causes of death in Wake County were ranked the same in 2016 and 2017. In 2017 pneumonia and influenza ranked as the 8th leading cause of death, nephritis, nephrotic syndrome and nephrosis ranked ninth, and suicide ranked 10th.

There were 5,751 total deaths in Wake County in 2017. The 1,650 deaths not shown in Figure 1 were from residual causes (residual death data not shown). “Residual causes” are all other causes of death not categorized here. There were 237 different residual causes of death in Wake County in 2017 and none of those causes represented more than 5.4% of all causes of death.

Figure 1

Leading Causes of Death in Wake County, 2017 (N=4,101)



Source: Special report prepared by the North Carolina State Center for Health Statistics (NC SCHS), 10/24/18.

In 2017, the top ten causes of death in Wake County were the same as in North Carolina, though the order slightly differed. Cerebrovascular disease was 3rd, other unintentional injuries 4th and chronic lower respiratory diseases ranked 5th in Wake County, while chronic lower respiratory diseases were 3rd, cerebrovascular disease 4th and other unintentional injuries ranked 5th in North Carolina.

Figure 2 shows that Wake County had lower death rates than North Carolina for every chronic disease during 2013-17.

Chronic Disease Death Rates, Wake County Compared to North Carolina, 2013-2017

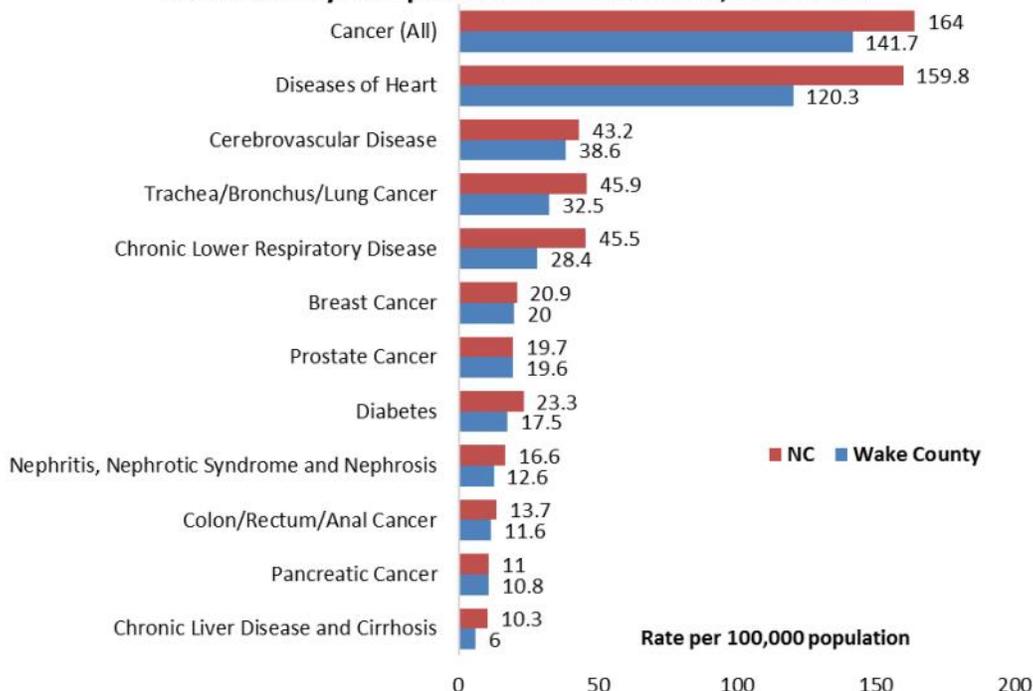


Figure 2

Source: “Race/Ethnicity-Specific and Sex-Specific Age-Adjusted Death Rates”. County Health Data Book 2019. NC State Center for Health Statistics. <http://www.schs.state.nc.us/data/databook/>, Accessed 12/3/18.

2.1 Cancer

Cancer is the leading cause of death in both North Carolina and Wake County. Figure 3 shows that Wake’s cancer mortality rate decreased 17.5% from 2004-08 to 2013-17, and its incidence rate decreased 7.5% from 2005-09 to 2012-16.

Wake County, Age-Adjusted Cancer Mortality Compared to Incidence Rates, 2004-2008 to 2013-2017

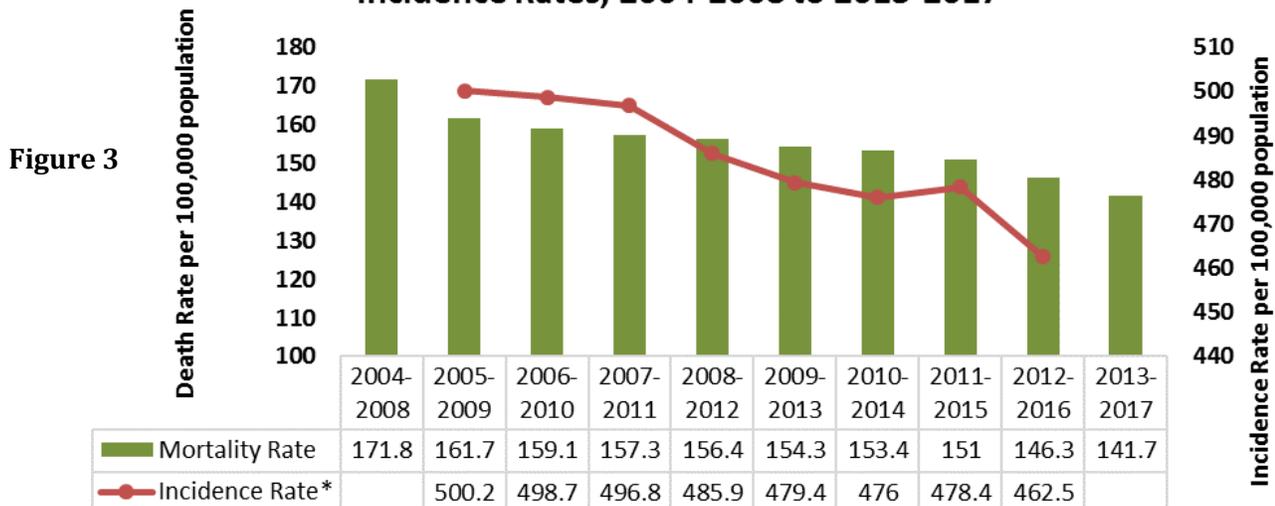


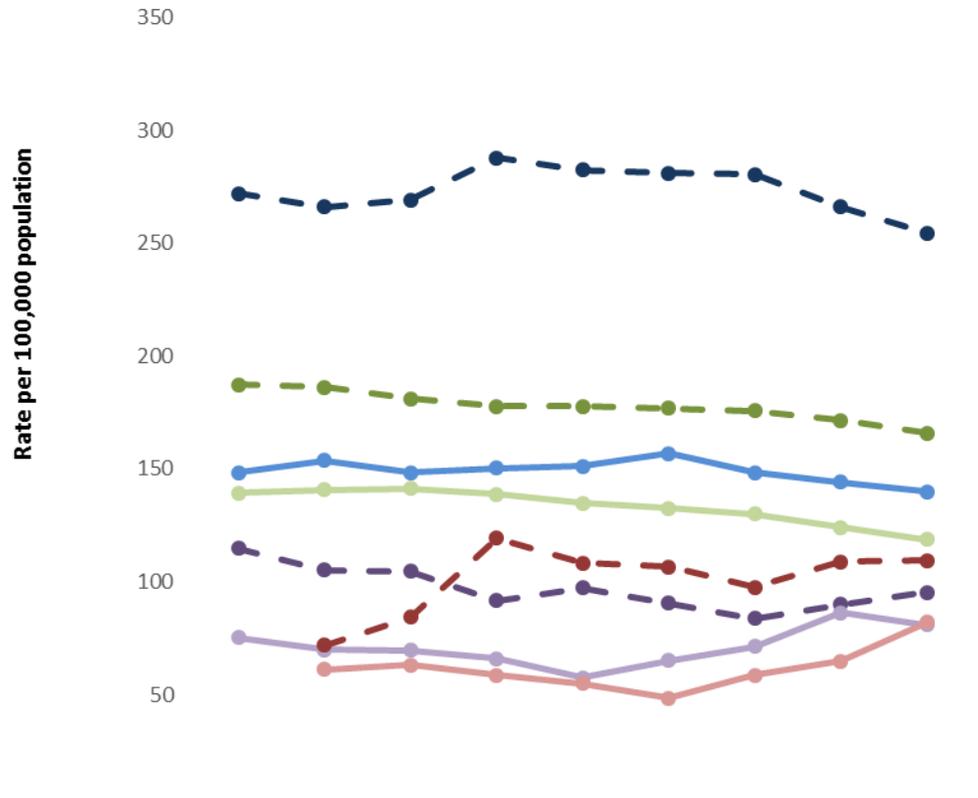
Figure 3

Source: For mortality data, “Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates”. County Health Data Books 2019, 2018, 2017, 2016, 2015, 2014, 2013, 2012, 2011 and 2010. NC State Center for Health Statistics. <http://www.schs.state.nc.us/data/databook/>. For incidence data, https://schs.dph.ncdhs.gov/data/cancer/incidence_rates.htm, 12/3/18. * Incidence data was not available for all years.

Figure 4 shows cancer mortality rates by race/ethnicity and gender in Wake County from 2005-09 to 2013-17. There is a significant and persistent disparity between African-American men and all other racial and ethnic groups. Men have higher death rates than women in all groups. While death rates have fallen for African-American and whites (both sexes) and other men, they have increased for Hispanics (both sexes) and other women.

Figure 4

Cancer Death Rates by Race and Gender, Wake County, 2005-2009 to 2013-2017

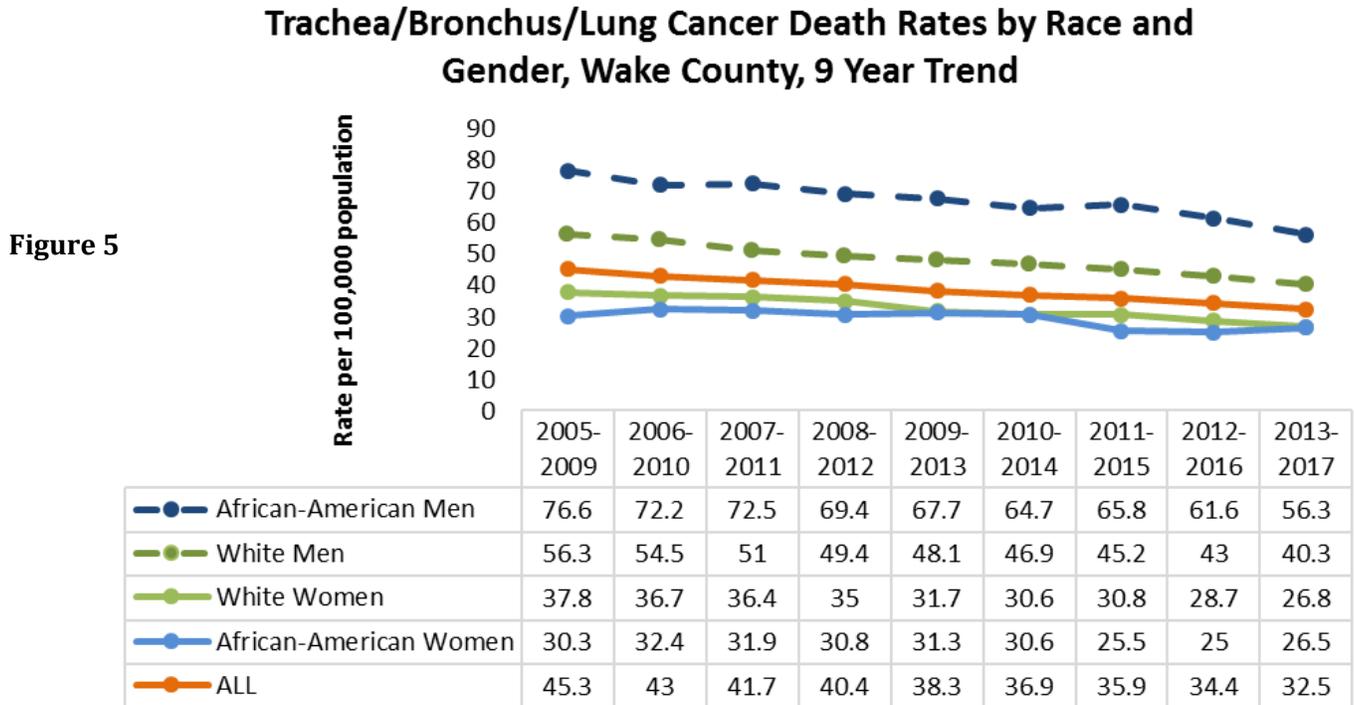


| | 2005-2009 | 2006-2010 | 2007-2011 | 2008-2012 | 2009-2013 | 2010-2014 | 2011-2015 | 2012-2016 | 2013-2017 |
|--------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| ● African-American Men | 272.2 | 266.3 | 269.4 | 287.8 | 282.5 | 281.2 | 280.6 | 266.3 | 254.6 |
| ● White Men | 187.4 | 186.3 | 181.3 | 177.9 | 177.9 | 176.9 | 175.7 | 171.6 | 166 |
| ● African-American Women | 148.3 | 153.7 | 148.4 | 150.5 | 151.2 | 156.9 | 148.3 | 144.3 | 139.8 |
| ● White Women | 139.3 | 140.7 | 141.4 | 138.8 | 134.8 | 132.6 | 130.1 | 124 | 118.8 |
| ● Other* Men | 114.8 | 105.3 | 104.5 | 91.7 | 97.4 | 90.4 | 83.6 | 90 | 95.4 |
| ● Other* Women | 75.3 | 69.9 | 69.5 | 66 | 57.5 | 65.1 | 71.3 | 86.3 | 80.9 |
| ● Hispanic** Men | | 71.8 | 84.3 | 119.3 | 108.3 | 106.6 | 97.7 | 108.8 | 109.3 |
| ● Hispanic** Women | | 61.2 | 63.1 | 58.6 | 54.9 | 48.5 | 58.7 | 64.8 | 82 |

Source: "Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates". County Health Data Books 2019, 2018, 2017, 2016, 2015, 2014, 2013, 2012 and 2011. NC State Center for Health Statistics. <http://www.schs.state.nc.us/data/databook/>. Accessed 12/3/18. * "Other" includes racial and ethnic categories such as Asian and Pacific Islander, but not American Indian; the number of American Indian deaths was too small to calculate a rate. ** "Hispanic" was not a separate statistical category until 2006-10.

2.1a Trachea/Bronchus/Lung Cancer

Trachea/bronchus/lung cancer was the leading cause of cancer-related deaths in Wake County during 2013-2017. From 2005-09 to 2013-17, the trachea/bronchus/lung cancer death rate decreased 28.2% (Figure 5). Both African-American and white men have higher death rates than African-American and white women. Though death rates for all groups declined, white women experienced the biggest percentage drop (29.1%). Additionally, the trachea/lung/bronchus cancer incidence rate fell 13.8% from 2005-09 to 2012-16 (data not shown).



Source: “Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates”. County Health Data Books 2019, 2018, 2017, 2016, 2015, 2014, 2013, 2012 and 2011. NC State Center for Health Statistics. <http://www.schs.state.nc.us/data/databook/>. Accessed 12/3/18.

2.1aa Tobacco Use

Smoking

Smoking is the chief risk factor for lung cancer mortality (as well as the leading cause of preventable death and disability) in the United States. The 2017 County Health Rankings reported that 14% of Wake County adults smoke every day or most days and have smoked at least 100 cigarettes in their lifetime (2).

The percentage of adults who smoke cigarettes in Wake County (14%) was less than that of North Carolina (18%). Premature death is attributed to smoking, and smoking is also identified as a cause of:

- More than twelve types of cancer
- Cardiovascular disease
- Respiratory conditions, such as chronic obstructive pulmonary disease (COPD) and emphysema
- Low birth weight
- Other adverse health outcomes (3)

Electronic Cigarettes (e-cigarettes)

E-cigarettes are known by many different names, including vapes, vape pens, and e-hookah. (Figure 6). They are generally composed of a battery, a heating element, and a place to hold a liquid. When used, they produce an aerosol by heating up the e-liquid solution. The aerosol then exposes users to:

- Potentially harmful substances, such as nicotine
- Ultrafine particles that can be inhaled deep into the lungs
- Flavorings such as diacetyl, a chemical linked to a serious lung disease
- Volatile organic compounds
- Cancer-causing chemicals
- Heavy metals, such as nickel, tin and lead

Bystanders also become exposed to the same chemical-containing aerosol when the user exhales, also known as secondhand aerosol. E-cigarettes are not an FDA-approved cessation aid and can be modified to deliver marijuana and other drugs.

Examples of E-cigarettes

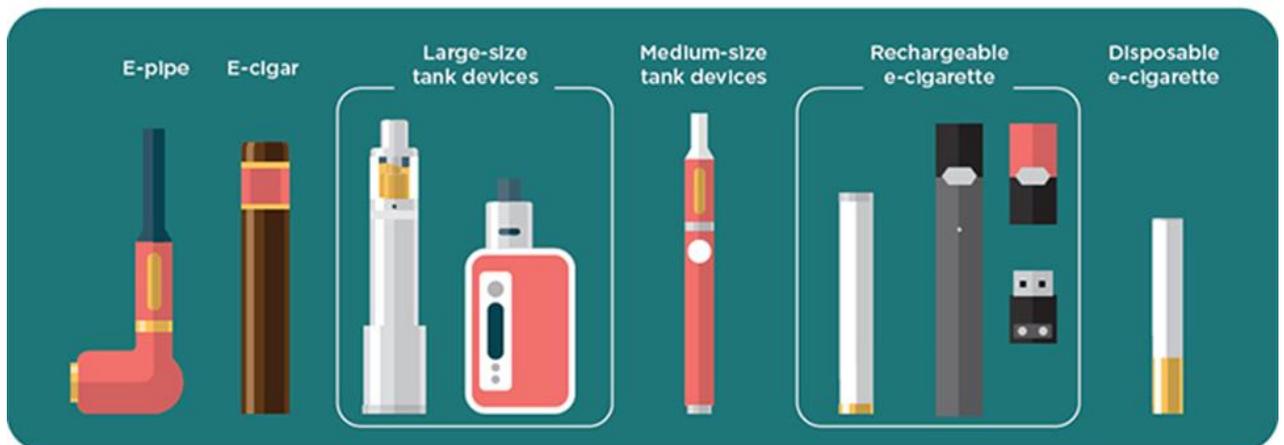


Figure 6

Image source: "Electronic Cigarettes". Centers for Disease Control and Prevention. https://www.cdc.gov/tobacco/basic_information/e-cigarettes/about-e-cigarettes.html, Accessed 12/4/18.

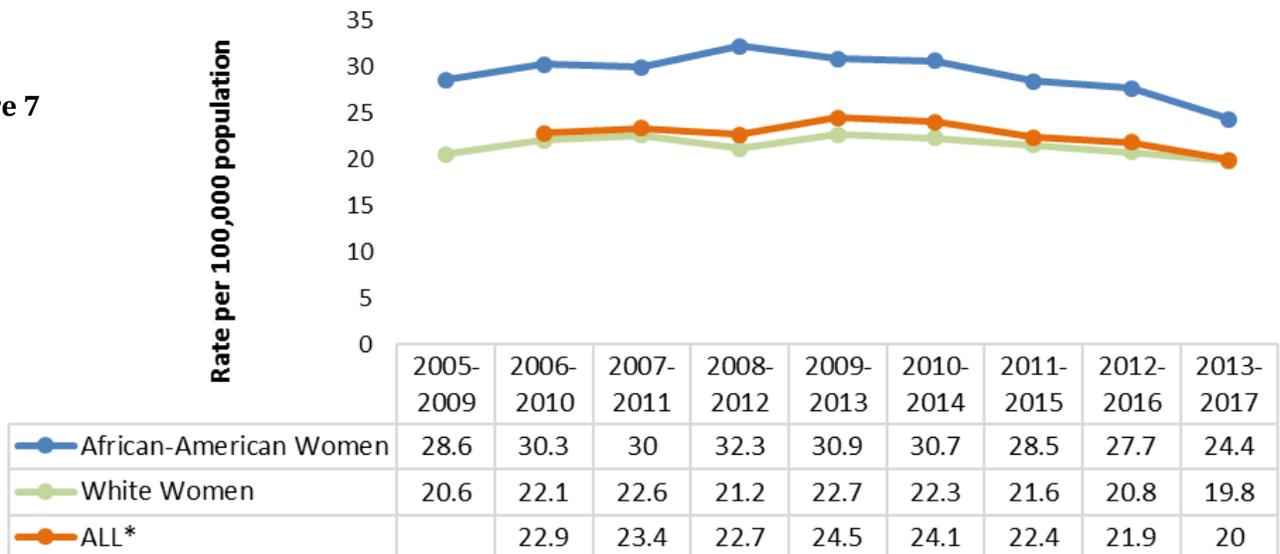
E-cigarettes are the most commonly used tobacco products by youth. In 2017, more than 2.9 million U.S. middle and high school students reported using e-cigarettes in the past 30 days (4). While cigarette smoking among youth is down in North Carolina, there was an 894% increase in use of e-cigarettes among youth from 2011 to 2017 (5). According to the 2017 North Carolina Youth Tobacco Survey, 23.3% of high school students are considering using e-cigarettes within the next year.

2.1b Breast Cancer

Breast cancer edged out prostate cancer as the second leading cause of cancer-related death in Wake County during 2013-17. African-American women had a higher death rate than white women from 2005-09 to 2013-17, yet their death rate decreased more significantly and so the gap between the two groups has narrowed (Figure 7). The breast cancer incidence rate was stable from 2005-09 to 2012-16 (data not shown).

Figure 7

**Breast Cancer Death Rates by Race,
Wake County, 2005-2009 to 2013-2017**



Source: “Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates”. County Health Data Books 2019, 2018, 2017, 2016, 2015, 2014, 2013, 2012 and 2011. NC State Center for Health Statistics. <http://www.schs.state.nc.us/data/databook/>. Accessed 12/3/18. * The 2005-09 overall rate was calculated using the entire population, not just the female population.

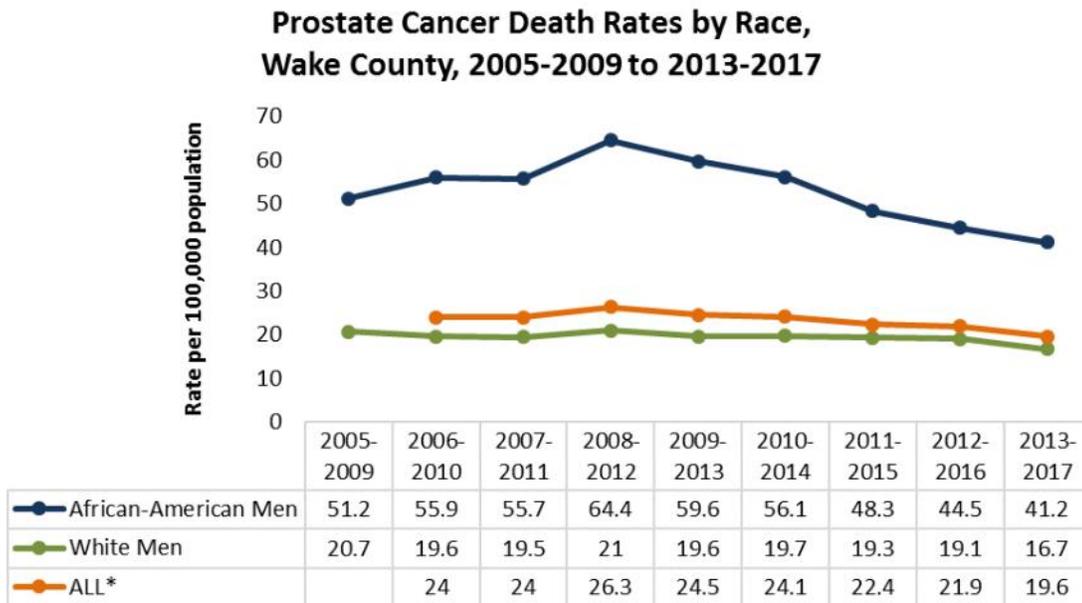


Wake County Commissioners proclaim October 2018 as Breast Cancer Awareness Month.

2.1c Prostate Cancer

Prostate cancer was the third leading cause of cancer-related death in Wake County during 2013-17. The overall trend from 2005-09 to 2013-17 was similar to that of breast cancer: an overall decline in death rates with a narrowing of the gap between African-Americans and whites (Figure 8). Additionally, the prostate cancer incidence rate fell 38.2% from 2005-09 to 2012-16 (data not shown).

Figure 8



Source: “Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates”. County Health Data Books 2019, 2018, 2017, 2016, 2015, 2014, 2013, 2012 and 2011. NC State Center for Health Statistics. <http://www.schs.state.nc.us/data/databook/>. Accessed 12/3/18. * The 2005-09 overall rate was calculated using the entire population, not just the male population.

2.1d Colon/Rectum/Anal Cancer

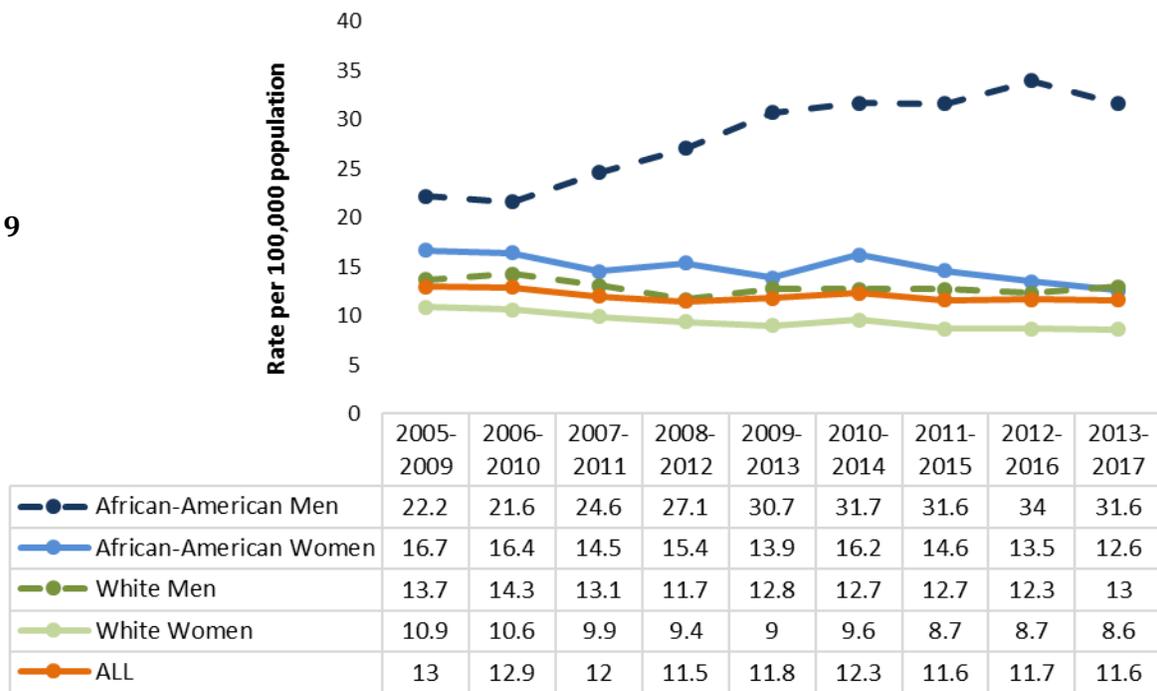
Colon/rectum/anal cancer was the fourth leading cause of cancer-related death in Wake County during 2013-2017. Figure 9 shows:

- The overall death rate declined slightly
- The gap between African-American men and other groups increased from 2005-09 to 2013-17

The 42.3% increase in colon/rectum/anal cancer death rates in African-American men is noteworthy because African-American men were already experiencing the highest death rates from these cancers. Additionally, the colon/rectal cancer incidence rate fell 20.6% from 2005-09 to 2012-16 (data not shown).

**Colon/Rectum/Anal Cancer Death Rates
by Race and Gender, Wake County, 2005-2009 to 2013-2017**

Figure 9



Source: “Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates”. County Health Data Books 2019, 2018, 2017, 2016, 2015, 2014, 2013, 2012 and 2011. NC State Center for Health Statistics. <http://www.schs.state.nc.us/data/databook/>. Accessed 12/3/18.

2.1e Pancreatic Cancer

Pancreatic cancer was the fifth leading cause of cancer-related death in Wake County during 2013-17. Figure 10 shows that from 2005-09 to 2013-17, death rates for African-American men and white women decreased and rates for white men and African-American women increased. The overall pancreatic cancer death rate was stable.

**Pancreatic Cancer Death Rates by Race and Gender,
Wake County, 2005-2009 to 2013-2017**

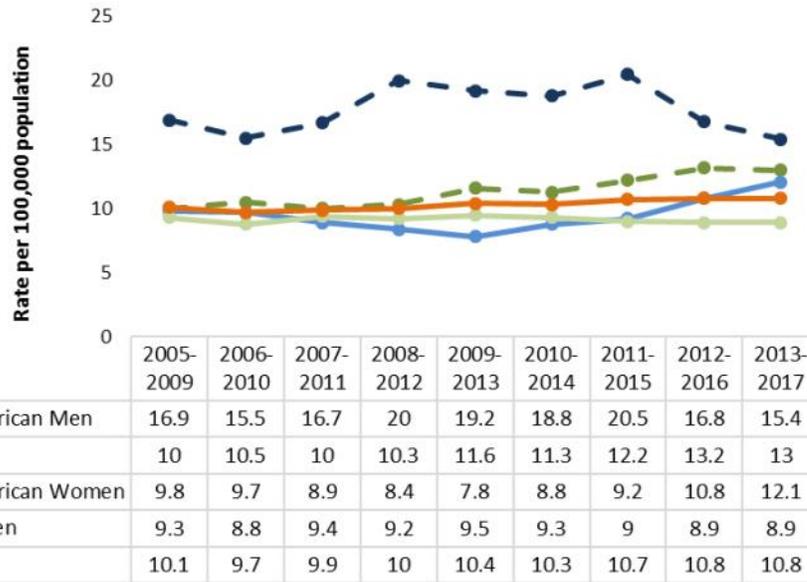


Figure 10

Source: “Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates”. County Health Data Books 2019, 2018, 2017, 2016, 2015, 2014, 2013, 2012 and 2011. NC State Center for Health Statistics. <http://www.schs.state.nc.us/data/databook/>. Accessed 12/3/18.

2.1f Highlight: Cervical Cancer Disparity

While not one of Wake County’s leading causes of cancer deaths, cervical cancer deserves mention because of the continued decline in the mortality rate for African-American women, thus leading to a closing of the gap in cervical cancer deaths between African-American and white women. The African-American cervical cancer death rate was cut in half from 2009-13 to 2013-17 (Figure 11). The human papillomavirus (HPV) vaccine is a proven measure in reducing the incidence of cervical cancer, and in FY 2018 WCHS administered 2,128 HPV vaccines to clients, 881 of whom (41.4%) were ages 13-18.

**Female Cervical Cancer Death Rates by Race,
Wake County, 2009-2013 to 2013-2017**



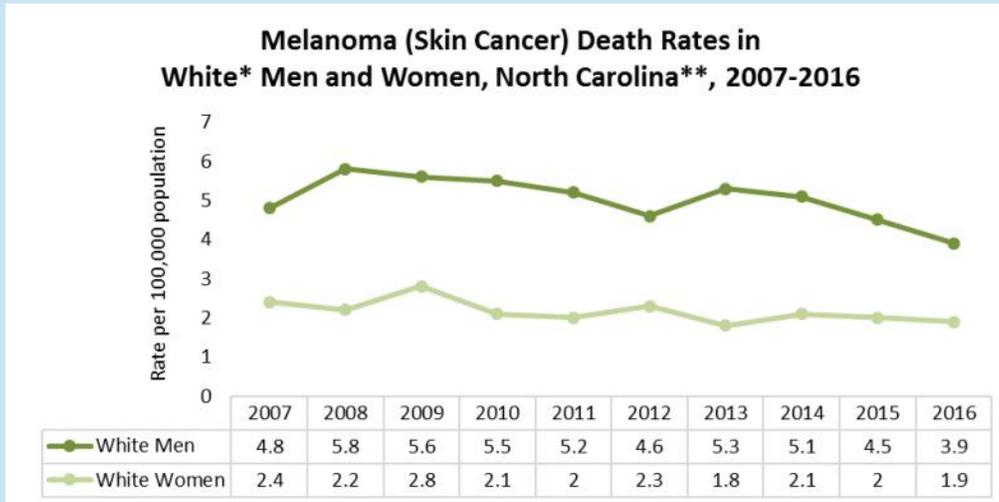
Figure 11

Source: Special reports prepared by NC SCHS on 11/2/16, 12/5/17 and 12/5/18.

2.1g Highlight—Melanoma (Skin Cancer) Death Disparity

While not one of the state’s leading causes of cancer deaths, melanoma is noteworthy in that the disparity in deaths between whites and other races and ethnicities is overwhelming. During 2012-16, there were 1,442 melanoma deaths in North Carolina; 1,390 (96.4%) occurred in whites. Figure 12 shows that from 2007 to 2016, statewide skin cancer death rates fell for both white women and men, though men died at a higher rate in every year.

Figure 12

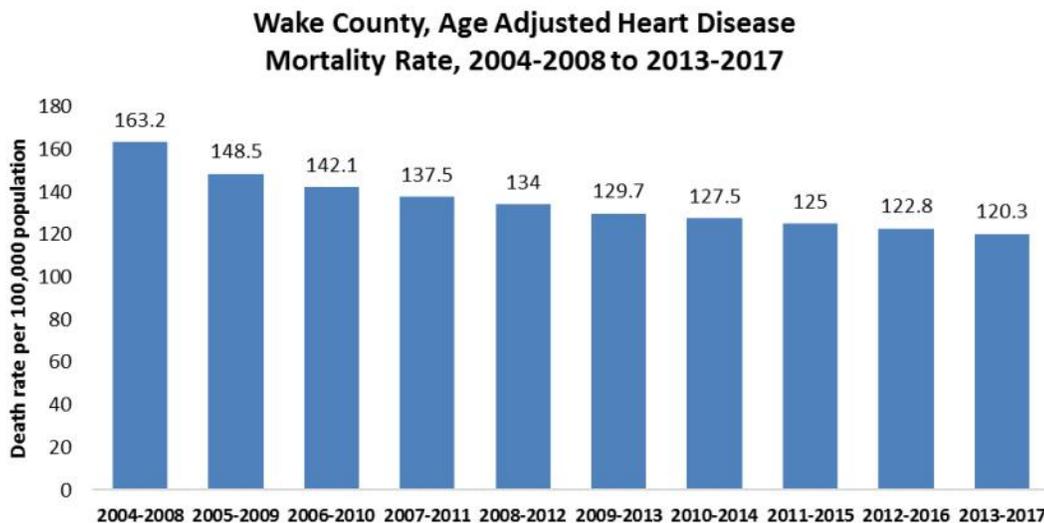


Source: https://schs.dph.ncdhhs.gov/data/cancer/mortality_rates.htm, 11/14/18. * Death rates among other racial and ethnic groups were negligible compared with whites. **No data available by county.

2.2 Heart Disease

Heart disease was the second leading cause of death in Wake County during 2013-2017. The term “heart disease” comprises conditions such as coronary artery disease, heart attack, arrhythmia, atrial fibrillation, heart valve disease, heart failure, and congenital heart disease. Figure 13 shows that Wake County’s heart disease death rate dropped 26.3% from 2004-08 to 2013-17.

Figure 13



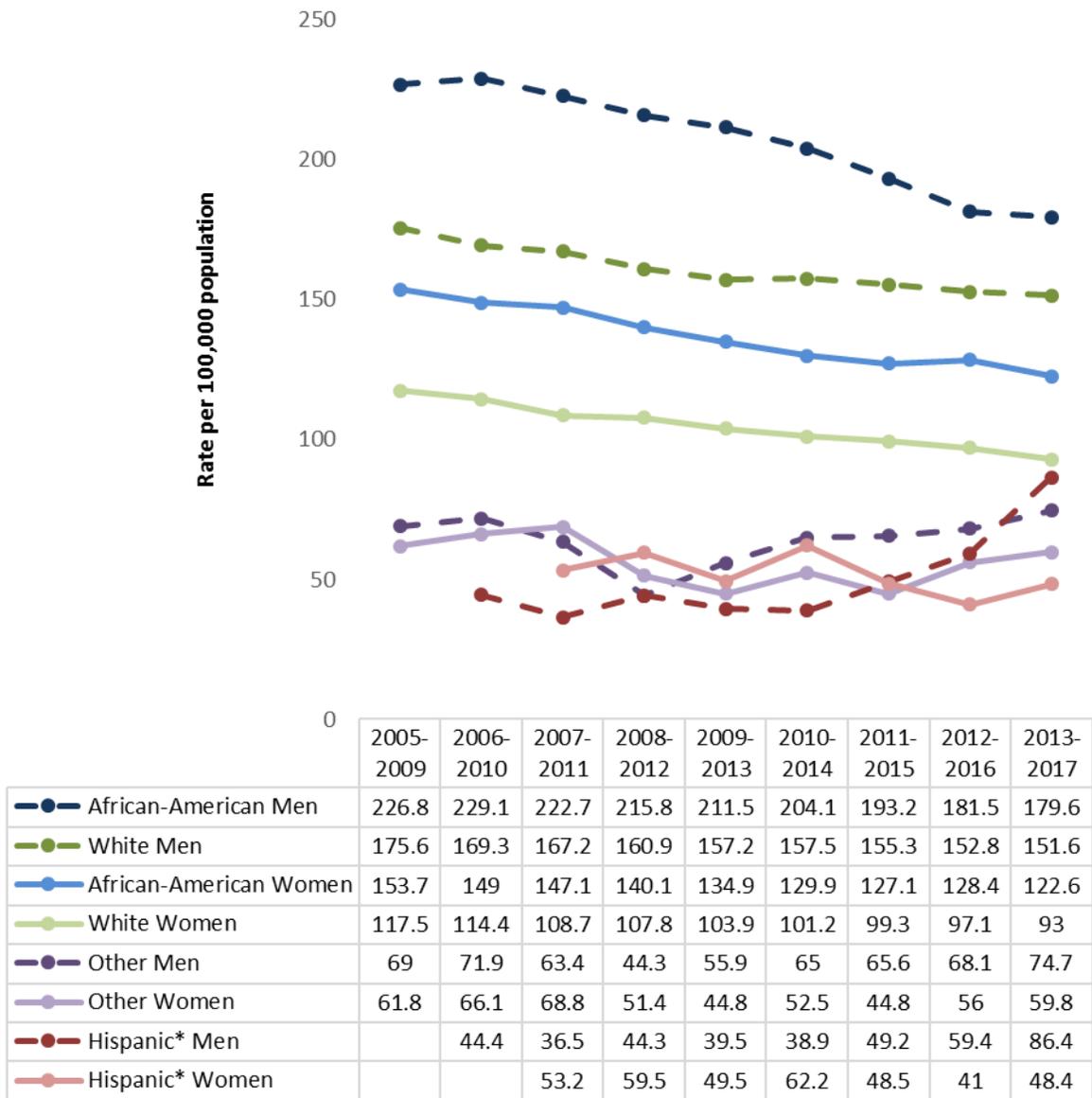
Source: “Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates”. County Health Data Books 2019, 2018, 2017, 2016, 2015, 2014, 2013, 2012 and 2011. NC State Center for Health Statistics. <http://www.schs.state.nc.us/data/databook/>. Accessed 12/3/18.

Figure 14 shows the following heart disease mortality trends for these groups:

- Men of all racial/ethnic groups died at higher rates than women
- African-Americans died at higher rates than whites
- Death rates for whites and African-Americans declined significantly
- The death rate for Hispanic men rose 94.6% from 2006-10 to 2013-17

**Heart Disease Death Rates by Race and Gender,
Wake County, 2005-2009 to 2013-2017**

Figure 14

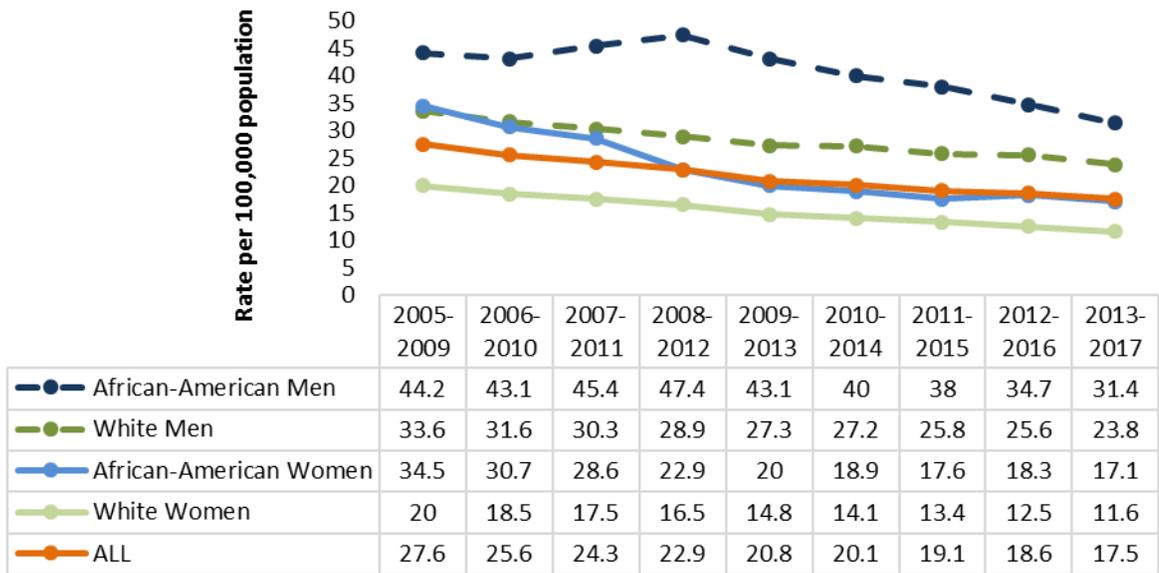


Source: "Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates". County Health Data Books 2019, 2018, 2017, 2016, 2015, 2014, 2013, 2012 and 2011. NC State Center for Health Statistics. <http://www.schs.state.nc.us/data/databook/>. Accessed 12/3/18. * Death rates for Hispanics were not available for all years.

From 2005-09 to 2013-17, heart attack death rates fell for men and women of both races. Men died at higher rates than women. The overall heart attack death rate fell 36.6% in Wake County (Figure 15), with the rate among women of both races almost cut in half.

**Heart Attack Death Rates by Race and Gender,
Wake County, 2005-2009 to 2013-2017**

Figure 15



Source: “Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates”. County Health Data Books 2019, 2018, 2017, 2016, 2015, 2014, 2013, 2012 and 2011. NC State Center for Health Statistics. <http://www.schs.state.nc.us/data/databook/>. Accessed 12/3/18.



Wake County EMS teaches “hands only CPR” at a Community Day event held at a Fuquay-Varina church.

2.3 Cerebrovascular Disease

Cerebrovascular disease (stroke) was the third leading cause of death in Wake County during 2013-17. The stroke death rate in Wake County fell 19.8% from 2005-09 to 2013-17, yet a significant racial disparity persists between African-American and white death rates (Figure 16).

**Cerebrovascular Disease Death Rates
by Race and Gender, Wake County, 2005-2009 to 2013-2017**



Figure 16

Source: “Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates”. County Health Data Books 2019, 2018, 2017, 2016, 2015, 2014, 2013, 2012 and 2011. NC State Center for Health Statistics. <http://www.schs.state.nc.us/data/databook/>. Accessed 12/3/18.

2.4 Chronic Lower Respiratory Disease

Chronic lower respiratory disease was again the fifth leading cause of death in Wake County during 2013-17. The chronic lower respiratory disease death rate experienced a slight drop (8.1%) over nine years. All groups trended downward, yet white men and women died at higher rates than their African-American counterparts in Wake County. (Figure 17)

Chronic Lower Respiratory Disease Death Rates by Race and Gender, Wake County, 2005-2009 to 2013-2017

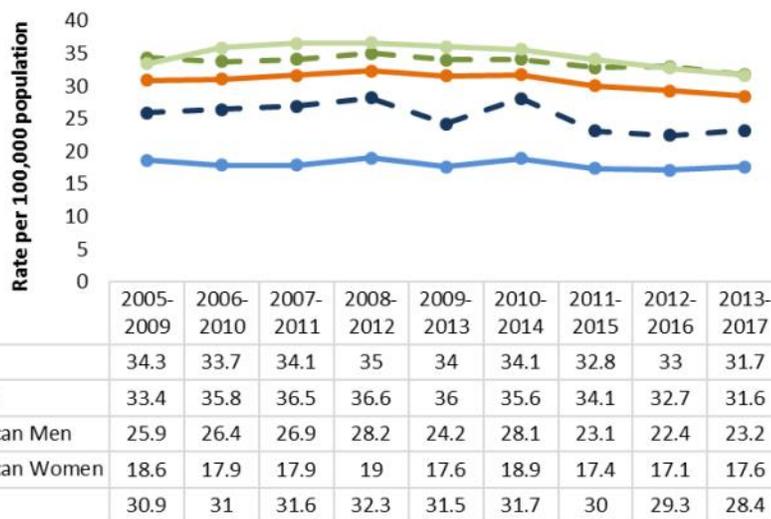


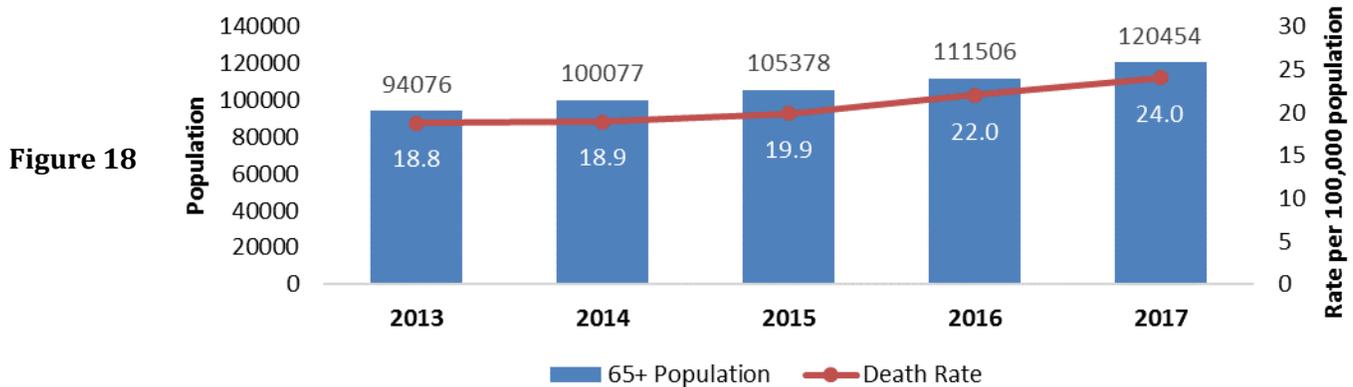
Figure 17

Source: “Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates”. County Health Data Books 2019, 2018, 2017, 2016, 2015, 2014, 2013, 2012 and 2011. NC State Center for Health Statistics. <http://www.schs.state.nc.us/data/databook/>. Accessed 12/3/18.

2.5 Alzheimer's Disease

Alzheimer's disease was again the sixth leading cause of death in Wake County during 2013-17. The Alzheimer's death rate continues to increase, mirroring the increase in the 65+ population in Wake County.

65+ Population Compared to Alzheimer's Disease Death Rates, 2013-2017, Wake County

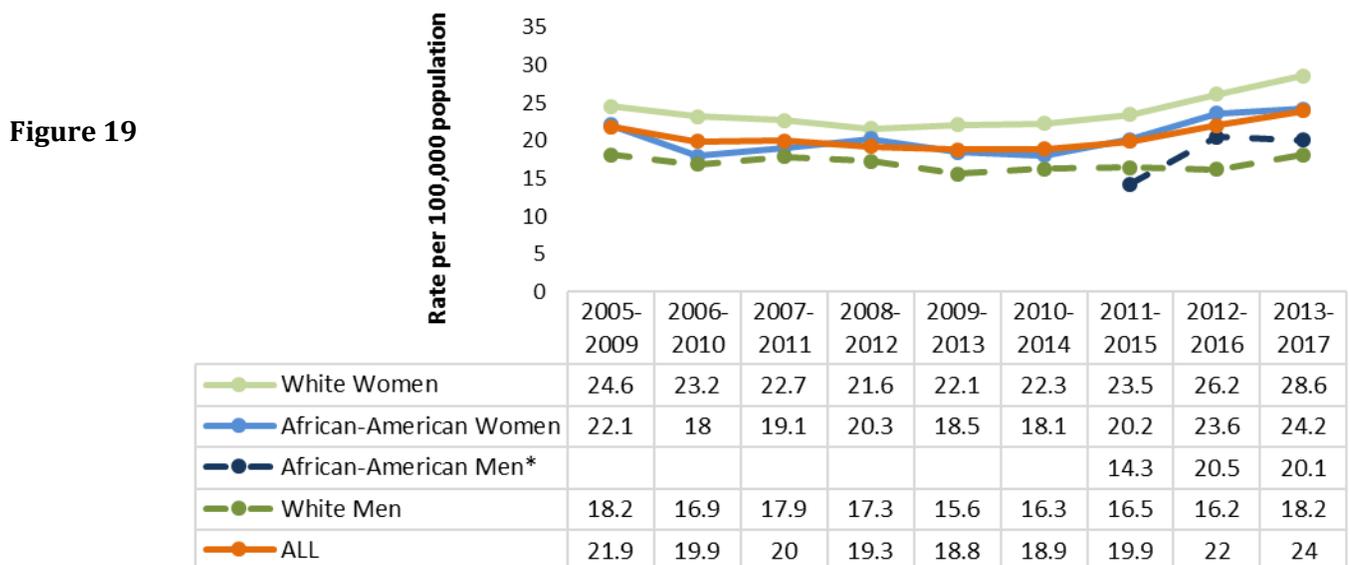


Sources:

"Population Estimates by Age, Race and Sex". "Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates". County Health Data Books 2019, 2018, 2017, 2016 and 2015. NC State Center for Health Statistics. <http://www.schs.state.nc.us/data/>

Figure 19 shows women die at higher rates from Alzheimer's than men, with white women consistently having the highest death rates over the last nine years.

Alzheimer's Disease Death Rates by Race and Gender, Wake County, 2005-2009 to 2013-2017



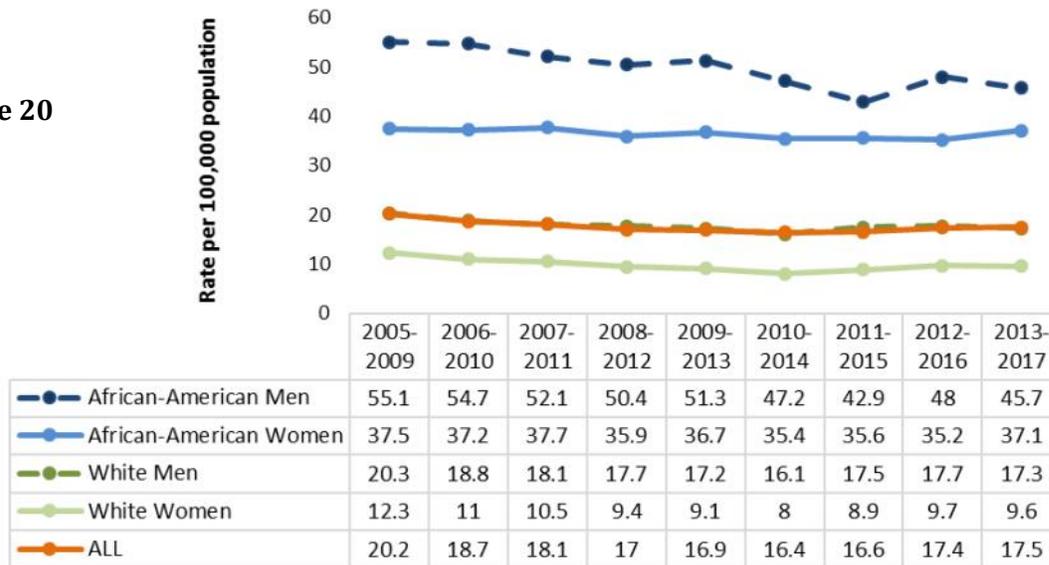
Source: "Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates". County Health Data Books 2019, 2018, 2017, 2016, 2015, 2014, 2013, 2012 and 2011. NC State Center for Health Statistics. <http://www.schs.state.nc.us/data/databook/>. Accessed 12/3/18. * The number of deaths for African-American men was too small to calculate a rate from 2005-09 to 2010-14.

2.6 Diabetes

Diabetes was the seventh leading cause of death in Wake County during 2013-17. Figure 20 shows that diabetes has the most significant and persistent death rate disparity when comparing African-Americans and whites. Additionally, African-American men have persistently higher death rates than other groups.

Figure 20

Diabetes Disease Death Rates by Race and Gender, Wake County, 2005-2009 to 2013-2017



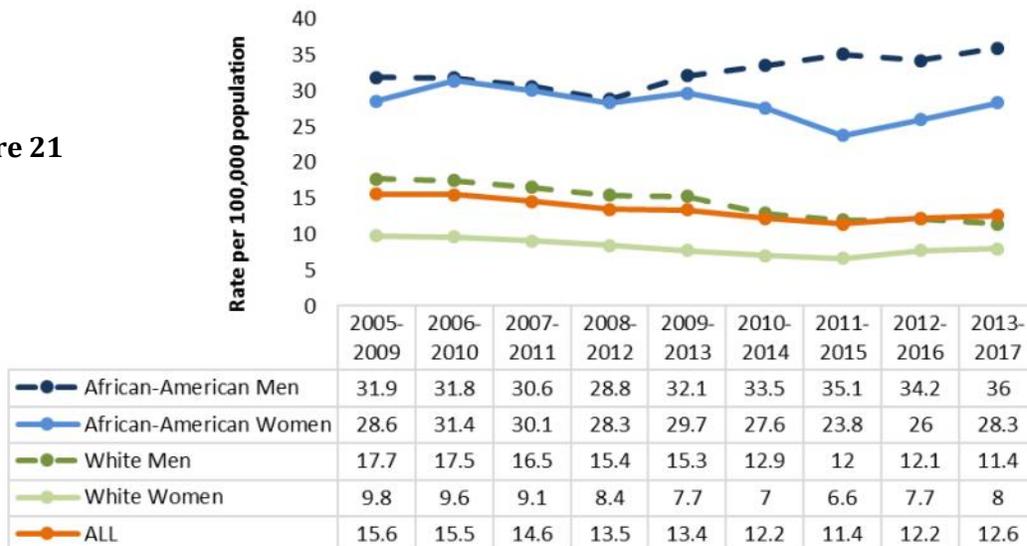
Source: "Race/ Ethnicity and Sex-Specific Age-Adjusted Death Rates". County Health Data Books 2019, 2018, 2017, 2016, 2015, 2014, 2013, 2012 and 2011. NC State Center for Health Statistics. <http://www.schs.state.nc.us/data/databook/>. Accessed 12/3/18.

2.7 Nephritis, Nephrotic Syndrome and Nephrosis

Nephritis, nephrotic syndrome and nephrosis (kidney disease) was the ninth leading cause of death in Wake County during 2013-17. Figure 21 shows that, similar to diabetes, there is a persistent disparity in death rates between African-Americans and whites from 2005-09 to 2013-17. While the overall trend is lower, an increase in death rates is seen in African-American men.

Figure 21

Nephritis, Nephrotic Syndrome and Nephrosis Death Rates by Race and Gender, Wake County 2005-2009 to 2013-2017



Source: "Race/ Ethnicity and Sex-Specific Age-Adjusted Death Rates". County Health Data Books 2019, 2018, 2017, 2016, 2015, 2014, 2013, 2012 and 2011. NC State Center for Health Statistics. <http://www.schs.state.nc.us/data/databook/>. Accessed 12/3/18.

3.0 Service Matrix

Health Promotion Chronic Disease Prevention (HPCDP) Section Public Health Division, Wake County Human Services

The Health Promotion Chronic Disease Prevention Section provides a set of chronic disease prevention and management services (including screenings) that address obesity, cardiovascular disease, stroke, diabetes, breast and cervical cancers, injury prevention, drug overdose education and tobacco prevention to communities and worksites.

Staff: County Funded: 8.5 FTE County Funded Direct Service: 5.5 FTE Grant Funded: 4.5 FTE

| Programs and Services | | | Results Fiscal Year '17/18 |
|--------------------------|---|--|--|
| Clinical Services | Community Screenings | Staff provide community screenings to low-resource individuals that include analysis of blood pressure, body mass index (BMI) and body fat. Participants then receive nutrition counseling to encourage healthy behavior change based on his/her screening results. Information: 919-250-4746 | <ul style="list-style-type: none"> • Total 321 individuals screened • Of the 199 individuals screened for BMI, 83% were overweight or obese |
| | 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"> • 492 women served • 591 mammography services provided • 14 breast cancers detected and referred for treatment • 37 cervical screenings provided |
| | 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 medical provider for follow up treatment for abnormal lab values. Information: 919-250-3990 | <ul style="list-style-type: none"> • 145 women received services including screening, health coaching and referrals to a medical providers to manage chronic diseases |

| Programs and Services | | | Results Fiscal Year '17/18 |
|---|---|---|---|
| Clinical Services cont. | Medical Nutrition Therapy | Nutrition counseling provided by Health Promotion Registered Dietician (RD) to patients of WCHS Women's Clinic. Information: 919-250-4677 | <ul style="list-style-type: none"> • 36 clients seen • 69% showed positive changes |
| | | Nutrition counseling provided by Health Promotion RD to patients of Shepherd's Care Medical Clinic (SCMC) and Eastern Regional Center (ERC). Information: 919-250-4734 | <ul style="list-style-type: none"> • 44 clients seen • 50% showed positive changes |
| Health Education Training and Workshops | 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 participants' children also take part in activities promoting healthy eating and fitness facilitated by Wake County 4-H Cooperative Extension. This past year, Club CHOICE Plus expanded to reach eastern Wake County and provided fresh produce to participants through a partnership with the Food Bank of Central and Eastern NC. Information: 919-250-4677 | <ul style="list-style-type: none"> • 87 women and children participants • 66% of women lost weight with an average weight loss of 4 pounds • 100% of women made healthy behavior changes |
| | Cooking Matters at the Store (CMATS) | 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 | <ul style="list-style-type: none"> • 73 participants learned techniques to shop for healthy food on a budget |
| | Diabetes Management | A Diabetes Management Education series at Shepherd's Care Medical Clinic includes 12 sessions focused on managing diabetes through nutrition education, medical management, physical activity and social support. Information: 919-250-4734 | <ul style="list-style-type: none"> • 6 participants completed the series • 100% of participants made healthy behavior changes |
| | Minority Diabetes Prevention Program (MDPP) | The North Carolina Minority Diabetes Prevention Program (NC MDPP) is a statewide, evidence-based program designed for people at high risk of developing diabetes. This CDC approved program involves a year of interactive classes to help participants reduce their risk of developing type 2 diabetes. Information: 919-212-9663 | <ul style="list-style-type: none"> • 3 cohorts • 36 participants • Average weight loss of 5 pounds • 100% of participants made healthy behavior changes |

| Programs and Services | | | Results Fiscal Year '17/18 |
|--|---|--|---|
| Health Education Training and Workshops cont. | STEPS | STEPS is a component of 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: 919-212-9663 | <ul style="list-style-type: none"> •75 participants •Results: Individuals reported making healthy behavior changes for themselves and their children |
| Community Physical Activity Programs | Movin' and Groovin' | Movin' and Groovin' is an 8-week 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 | <ul style="list-style-type: none"> • 3 series with 116 adults and 39 youth • Over 90% of participants reported increased physical activity and healthy eating behaviors as a result of participating in the series |
| Food Security and Local Food Systems | Farmer's Markets | Health Promotion provides technical support to Farmer's Markets to increase access to fresh, local food among low resource individuals. This includes encouraging and supporting markets who accept EBT and participate in Farmer Foodshare. Health Promotion promotes the use of EBT at Farmer's Markets throughout the county and provides interactive nutrition education displays at Farmer's Markets. Information: 919-212-9663 | <ul style="list-style-type: none"> • 16 Farmer's Markets in Wake County • 8 accept EBT payment • 1 accepts WIC vouchers • 9 participate in Farmer FoodShare • 1 was a Summer Meals Site |
| | Mobile Markets Grocers on Wheels | Health Promotion partners with <i>Grocers on Wheels</i> mobile market 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. WCHS Sunnybrook and Swinburne Health Promotion has expanded the partnership, inviting <i>Grocers on Wheels</i> to serve the Sunnybrook and Swinburne Human Services buildings to provide access to fresh produce to WCHS clients and staff. Information: 919-212-9663 | <p><i>Movin' & Groovin'</i> Over 592 pounds worth of fresh produce distributed to 40 families</p> <p>Mobile Markets at Sunnybrook</p> <ul style="list-style-type: none"> • 7 visits; 254 customers • 1983 pounds of produce sold with average of 283 pounds per visit • 18 EBT transactions totaling \$342 <p>Mobile Markets at Swinburne</p> <ul style="list-style-type: none"> • 2 visits; 86 customers • 954 pounds of produce sold with average of 477 pounds per visit • 4 EBT transactions totaling \$40 |

| Programs and Services | | | Results Fiscal Year '17/18 |
|---|------------------------------------|---|---|
| Food Security and Local Food Systems cont. | Summer Food Service Program | <p>HP staff works in partnership with the NC Department of Public Instruction to increase the number of summer meal sites and the number of meals served.</p> <p>The Sunnybrook site provided meals, and activities for the children as a summer meal site, Summer 2018. Information: 919-212-9663</p> | <ul style="list-style-type: none"> • Wake County: 147 sites; 251,702 meals served which is a 7% increase from 2017 • Sunnybrook meal site: <ul style="list-style-type: none"> • Served 1,194 meals over 8 weeks • Received a visit from Congressman David Price • Received 2018 Summer Nutrition Champion Award from the NC Department of Public Instruction and No Kid Hungry North Carolina |
| Regional Center Service Integrations | | <p>Health Promotion is formally integrated into all Wake County regional centers (ERC, NRC, SRC and Millbrook) to provide population health services for vulnerable groups. 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</p> | <p>Staff Wellness:</p> <ul style="list-style-type: none"> • 55 education or fitness sessions reaching 261 staff* • 5 Wellness challenges reaching 67 staff* <p>*(with duplication)</p> |
| Community Partnerships | | <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 build capacity and share resources regarding health promotion and disease prevention interventions. Information: 919-250-4553</p> | <ul style="list-style-type: none"> • Partner with over 120 community organizations • Provide interventions with 4 community and faith based organizations |
| Public Health Education Campaigns | | <p>Health Promotion provides public health education campaigns corresponding to national health observances to build awareness and connect people to disease prevention and management resources. Campaign components include presentations, education outreach and fundraisers to corresponding non-profits. Information: 919-212-8376</p> | <ul style="list-style-type: none"> • Breast Cancer Awareness • Heart Health |

| Programs and Services | | | Results Fiscal Year '17/18 |
|---|--|--|--|
| Active Routes to School (ARTS) | | <p>This regional project is a partnership between NC Division of Public Health and NC Department of Transportation. The goal of the project is to increase the number of elementary and middle school students who safely walk and bike to and at school. The Active Routes to School coordinator works with community, 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.</p> <p>Information: 919-610-5760</p> | <ul style="list-style-type: none"> • Policies that include support for walking and biking to school: <ul style="list-style-type: none"> • Durham and Wake School Districts adopted revised Local Wellness Policies • 2 municipal and regional plans including the Wendell Pedestrian Plan • Increased Walk and Bike to School Day participation: 38 schools in May and 61 schools in October |
| Tobacco Prevention and Control (TPC) | | <p>This regional project provides technical support in the form of preparation, implementation and enforcement of tobacco free policies. TPC also provides tobacco cessation resources and professional training.</p> <p>Information: 919-250-1171</p> | <ul style="list-style-type: none"> • Policies Passed: <ul style="list-style-type: none"> • Tobacco Free Parks Town of Morrisville • Smoke Free Multi Unit Housing: CASA and Raleigh Housing Authority • NC Quitline: 1308 registered callers and 489 fax referrals in Wake County • 99 health professionals received 5As training regarding tobacco cessation counseling and resources |

4.0 References

1. “Chronic Diseases in America”. *cdc.gov*. Centers for disease Control and Prevention. October 25, 2018. Web. 12/31/18. <https://www.cdc.gov/chronicdisease/resources/infographic/chronic-diseases.htm>
2. “County Health Rankings and Roadmaps, North Carolina Health Outcomes Overall Rank, Wake”. *county-healthrankings.org*. County Health Rankings. 2018. Web.12/17/18. <http://www.countyhealthrankings.org/app/north-carolina/2017/rankings/wake/county/outcomes/overall/snapshot>
3. “Health Effects.” *cdc.gov*. Centers for Disease Control and Prevention. February 8, 2018. Web. 12/4/18. https://www.cdc.gov/tobacco/basic_information/health_effects/index.htm
4. “Youth Tobacco Use: Results from the National Youth Tobacco Survey”. 2017 US Youth Tobacco Survey. *fda.gov*. US Food and Drug Administration. 11/16/18. Web. 12/17/18. <https://www.fda.gov/TobaccoProducts/PublicHealthEducation/ProtectingKidsfromTobacco/ucm405173.htm%20-%202017youthuse>
5. North Carolina Youth Tobacco Survey Middle and High School Fact Sheet”. *tobaccoprevention-andcontrol.ncdhhs.gov*. North Carolina Tobacco Prevention and Control Branch. No date. Web. 12/17/18. <https://www.tobaccopreventionandcontrol.ncdhhs.gov/data/yts/docs/2017-YTS-FactSheet-FINAL.pdf>

5.0 Acknowledgements

NC State Center for Health Statistics

Justin Arcury

Matt Avery

Wake County Human Services

Meghan Malka

Michelle Mulvihill

Carla Piedrahita

Michelle Ricci