



Chronic Disease Report

PUBLIC HEALTH REPORT



Health and
Human Services

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1.0 OVERVIEW

According to the Centers for Disease Control and Prevention (CDC), chronic diseases are health conditions that last one year or more and require ongoing medical attention or limit activities of daily living or both ^[1]. Chronic diseases such as heart disease, cancer, and diabetes are among the leading causes of death and disability in the United States and contribute significantly to the nation's \$4.5 trillion in annual healthcare costs ^[2].

Currently, six in ten Americans have at least one chronic disease, and four in ten have two or more ^[1]. Many of these conditions are preventable, as they can be linked to common risk factors such as smoking, poor nutrition, physical inactivity, and excessive alcohol use.

Individuals can reduce their risk of chronic disease by:

- Quitting smoking
- Participating in regular physical activity
- Avoiding too much alcohol
- Eating a diet high in fruits and vegetables and low in sodium and saturated fats
- Receiving routine physical checkups and screenings
- Getting enough sleep

Preventing chronic diseases, or managing symptoms when prevention is not possible, can reduce health care costs and improve quality of life.

This report examines the burden of chronic diseases in Wake County, beginning with an overview of the county's geographic and sociodemographic composition. It focuses on chronic disease-related mortality and the disparities observed across racial and ethnic populations. The report explores the role of social determinants of health in shaping these disparities and concludes with strategies to reduce health inequities and improve outcomes for all residents. It also highlights the efforts of Wake County Health and Human Services (WCHHS) Health Promotion Chronic Disease Prevention Section in preventing chronic diseases and reducing their impact on communities.

2.0 DATA SOURCES

Data from the following sources were analyzed for the 2024 Wake County Health and Human Services (WCHHS) Public Health Chronic Disease Report:

United States Census Bureau

The Census Bureau collects and provides information about America's people and the economy of the United States. The Census Bureau's website includes data on demographic characteristics of the population (age, sex, race), employment status, marital status, income level, disability status and health insurance coverage. In this report, 2023 American Community Survey (ACS) (Census Bureau) estimates are reported for Wake County as well as North Carolina.

North Carolina (N.C.) State Center for Health Statistics

The N.C. State Center for Health Statistics is responsible for data collection, health-related research, production of reports and maintenance of a comprehensive collection of health statistics. The 2024 WCHHS Public Health Chronic Disease Report uses the leading causes of death data from the N.C. State Center for Health Statistics.

WCHHS Health Promotion Chronic Disease Prevention Section Programming and Services

In partnership with the community, the Wake County Health Promotion Chronic Disease Prevention Section provides a set of chronic disease and injury prevention and management services to populations and communities experiencing disparities. Data are collected on a quarterly basis. This report includes data from January 1-June 30, 2024.

National Youth Tobacco Survey (NYTS)

The NYTS provides nationally representative data about middle and high school youth's tobacco-related beliefs, attitudes, behaviors, and exposure to pro- and anti-tobacco influences. The latest NYTS (2024) data are utilized in this report.

Monitoring the Future

Monitoring the Future is an ongoing study of the behaviors, attitudes, and values of Americans from adolescence through adulthood. The latest Monitoring the Future (2024) data are utilized in this report.

North Carolina Youth Risk Behavior Survey (N.C. YRBS)

The CDC's Youth Risk Behavior Surveillance System (YRBSS) monitors priority health behaviors and experiences among students across the country. The results help in understanding the factors that contribute to the leading causes of illness, death, and disability among youth and young adults. For comparison, the YRBSS provides state level data. The latest N.C. YRBS (2023) data are utilized in this report.

3.0 GEOGRAPHICAL COMPOSITION AND DEMOGRAPHIC PROFILE OF GENERAL POPULATION, WAKE COUNTY, N.C.

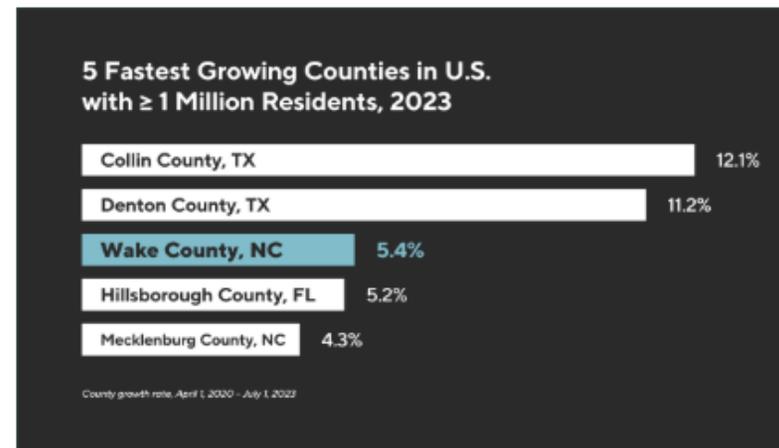
Geographical description of Wake County:

Wake County, with a population of over 1 million, is growing more than twice as fast as the rest of North Carolina, adding approximately 51 new residents per day and 225,000 over the past decade. A significant portion of this growth is attributed to an aging population, as Census Bureau estimates from April 2020 to July 2022 show that 48% of new residents were 55 and older [3].

Figure 1: Geographical Location of Wake County, N.C.



Figure 2: The Five Fastest Growing Counties in the United States with 1 Million or Greater Residents, 2023



In 2023, the median age of people living in Wake County was 37.7 years. More than half of the population (55.2%) in Wake County is between the ages 25-64 years. Nearly one-third of the population (31%) is younger than 25 years old and about 13.4% (15.5% increase compared to the previous year (11.6%) of the population is 65 years and older. Approximately 49.0% of the population is male and 51.0% of the population is female.

Table 1: Population Distribution by Age Group and Sex, Wake County, NC 2023

Age Group	Males N = 582,915	%	Females N = 607,360	%	Total Population N = 1,190,275	%
<15	112,425	19.3%	108,018	17.8%	220,443	18.5%
15-24	77,045	13.3%	76,174	12.5%	153,219	12.9%
25-34	84,682	14.5%	87,984	14.5%	172,666	14.5%
35-44	88,507	15.1%	91,748	15.1%	180,255	15.1%
45-54	82,851	14.2%	83,786	13.8%	166,637	14.0%
55-64	67,293	11.5%	70,523	11.6%	137,816	11.6%
65+	70,112	12.0%	89,127	14.6%	159,239	13.4%

Source: 2023 American Community Survey 1-Year Estimates, United States Census Bureau⁴

Note: Percentages may not sum to 100% due to rounding

The four largest ethnic groups in Wake County are White (Non-Hispanic, single race) (56.0%), Black or African American (Non-Hispanic, single race) (18.6%), Hispanic or Latino (11.5%) and Asian (Non-Hispanic, single race) (8.8%) (Table 2).

Table 2: Population Distribution by Race and Ethnicity, Wake County, NC 2023

Race and Ethnicity	Total Population	%
	*1,190,275	
Hispanic or Latino	137,414	11.5%
White Non-Hispanic, single race	666,121	56.0%
Black or African American Non-Hispanic, single race	221,946	18.6%
American Indian/Alaska Native Non-Hispanic, single race	2,633	0.2%
Asian Non-Hispanic, single race	104,741	8.8%
Native Hawaiian and Other Pacific Islander Non-Hispanic, single race	361	0.0%
Two or more races Non-Hispanic	48,794	4.1%

For Tables 2 and 3:

Source: 2023 American Community Survey 1-Year Estimates, United States Census Bureau⁴

Note: Percentages may not sum to 100% due to rounding

*This is the total including residents who identified as "other" race, which is not shown in Table 2.

N= The estimate cannot be displayed because there were an insufficient number of sample cases in the selected geographic area.

Poverty, Income and Education

In 2023, the median household income for Wake County was \$102,918 compared to \$70,804 for North Carolina. About 7% of the Wake County population live below the federal poverty level, compared to 12.8% for the state (Table 3). In Wake County, 6.4% of males and 7.7% of females live below the federal poverty level. The percentage of residents under 64 years old living below the federal poverty level decreased compared to the previous year. The percentage of residents aged 65 years and older living below the poverty level stayed the same as last year. When broken down by race and ethnicity, 5.1% of Non-Hispanic White, 10.9% of Non-Hispanic Black or African American, 10.3% of Hispanic or Latino and 6.2% of the Non-Hispanic Asian populations live below the federal poverty level.

Table 3: Socioeconomic Characteristics of Population, Wake County and North Carolina, 2023

Characteristics	Wake County	North Carolina
Median household income	\$102,918	\$70,804
Average per capita income	\$54,866	\$40,414
Below Federal Poverty Level		
Individual	7.1%	12.8%
Male	6.4%	11.5%
Female	7.7%	14.0%
Below Federal Poverty Level by Age Group		
<18	7.6%	17.6%
18-64	6.6%	11.6%
>=65	8.5%	10.9%
Below Federal Poverty Level by Race and Ethnicity		
Hispanic or Latino	10.3%	19.1%
White Non-Hispanic, single race	5.1%	9.3%
Black or African American Non-Hispanic, single race	10.9%	19.4%
American Indian/Alaska Native Non-Hispanic, single race	N	24.7%
Asian Non-Hispanic, single race	6.2%	10.3%
Native Hawaiian and Other Pacific Islander Non-Hispanic, single race	N	19.6%
Two or more races Non-Hispanic	6.9%	14.6%

More than half (58.8%) of the population aged 25 years and older in Wake County has a bachelor's degree or higher. While 13.3% of the population reported that a high school diploma/GED was their highest level of education, only 5.9% of the population reported having an education less than high school (Table 4).

Table 4: Highest Educational Attainment of the Population (Age ≥25 Years), Wake County, NC 2023

Education	Males N= 393,445	%	Females N= 423,168	%	Total Population N= 816,613	%
Less than High School	25,752	6.5%	22,525	5.3%	48,277	5.9%
High School Diploma/GED	53,390	13.6%	55,175	13.0%	108,565	13.3%
Some College, no degree	56,856	14.5%	63,095	14.9%	119,951	14.7%
Associate's degree	22,354	5.7%	36,982	8.7%	59,336	7.3%
Bachelor's degree	138,138	35.1%	148,887	35.2%	287,025	35.1%
Graduate or Professional degree	96,955	24.6%	96,504	22.8%	193,459	23.7%

Source: 2023 American Community Survey 1-Year Estimates, United States Census Bureau⁴

Note: Percentages may not sum to 100% due to rounding

Marital Status, Employment and Healthcare Coverage

Table 5 shows marital status information by sex for residents 15 years of age and older in Wake County. More than half (52.8%) of the population reported being married. Additionally, 11.4% of females and 6.4% of males reported being divorced, while 33.4% of the population have never been married, and 3.8% of the population (mostly females) reported being widowed.

Table 5: Marital Status of the Population (Age ≥ 15 years), Wake County, NC 2023

Source: 2023 American Community Survey 1- Year Estimates, United States Census Bureau⁴

Note: Percentages may not sum to 100% due to rounding

*Totals include marital status: separated, which is not shown in the current table.

Marital Status (> 15 years)	Males N = 470,490	%	Females N = 499,342	%	Total Population N = 969,832	%
Married	262,807	55.9%	249,032	49.9%	511,839	52.8%
Widowed	8,354	1.8%	28,251	5.7%	36,605	3.8%
Divorced	30,100	6.4%	56,814	11.4%	86,914	9.0%
Never Married	164,590	35.0%	159,244	31.9%	323,834	33.4%

Table 6 provides information on the employment status of the civilian labor force of those 16 years old and older in Wake County and North Carolina. The civilian labor force, or currently active workforce, is defined as all civilian noninstitutionalized residents who fulfil the requirements for inclusion among the employed or the unemployed. Those excluded from the labor force include retirees who are not working or actively seeking work, full time students not working or seeking work, stay-at-home parents, and individuals with disabilities who are not able to work or not seeking work. The employed of Wake County (67.9%) are defined as those who work for pay or profit at least one hour a week, or have a job, but are temporarily on leave due to illness, industrial action, etc. Those that are unemployed (3.4%) are defined as people without work but are actively seeking a job and currently available to start work ^[5]. Both the county and the state have experienced increases in unemployment rates compared to the previous year.

Table 6: Employment Status of the Population (Age ≥ 16 years), Wake County and North Carolina 2023

Employment Status	Wake County		North Carolina	
	Total	%	Total	%
In Labor Force	670,990	70.5%	5,555,824	63.2%
Employed	646,091	67.9%	5,230,146	59.5%
Unemployed	22,714	3.4%	219,760	4.0%

Source: 2023 American Community Survey 1-Year Estimates, United States Census Bureau⁴

Note: Percentages may not sum to 100% due to rounding

Table 7 shows the percentage of the Wake County population covered by health insurance compared to the state. More than half (66.9%) of the population has insurance through their employer, 13.5% of the population has Medicare and 11.0% is covered by Medicaid. Additionally, 6.7% reported being uninsured, representing a 9.5% decrease from the previous year.

Table 7: Healthcare Coverage in Wake County and North Carolina, 2023

Health Insurance Coverage	Wake County (%)	North Carolina (%)
Employer	66.9%	52.5%
Medicaid	11.0%	19.1%
Medicare	13.5%	19.4%
Military/VA	2.0%	2.9%
Uninsured	6.7%	9.2%

For Tables 7 and 8:

Source: 2023 American Community Survey 1- Year Estimates, United States Census Bureau⁴

Note: Percentages may not sum to 100% due to rounding.

N= The estimate cannot be displayed because there were an insufficient number of sample cases in the selected geographic area.

Table 8 displays the disability status by age, race and sex in Wake County and North Carolina. Both males and females have similar percentage of disability in Wake County (8.8% vs 9.8%) as well as the overall state (13.4 % vs 13.7%). American Indian and Alaska Natives (Non-Hispanic, single race) has the highest percentage of disability in both Wake County and North Carolina (17.1% and 19.4% respectively) when compared with other racial groups. However, the percentage of American Indian and Alaska Natives with a disability status decreased by 26% compared to the previous year (2022: 23.1%). The population older than 75 years of age has the highest percentage of disability compared to all other age groups in both the county and state.

Table 8: Disability Status of the Population by Sex, Race and Ethnicity and Age, Wake County and North Carolina, 2023

Label	Wake County (%)	North Carolina (%)
Sex		
Male	8.8%	13.4%
Female	9.8%	13.7%
Race and Ethnicity		
Hispanic or Latino	6.4%	7.4%
White Non-Hispanic, single race	9.8%	14.7%
Black or African American Non-Hispanic, single race	11.5%	14.7%
American Indian/Alaska Native Non-Hispanic, single race	17.1%	19.4%
Asian Non-Hispanic, single race	4.0%	6.9%
Native Hawaiian and Other Pacific Islander Non-Hispanic, single race	N	21.6%
Two or more races Non-Hispanic	6.4%	10.1%
Age		
Under 5 years	0.6%	0.7%
5-17 years	4.5%	5.8%
18-34 years	6.4%	8.5%
35-64 years	7.9%	12.9%
65-74 years	19.1%	24.3%
75+	42.4%	45.1%

Understanding the county’s demographic profile sets the stage for this report by informing audiences of the current makeup of Wake County and who may be disproportionately disadvantaged by age, race and ethnicity, income, education, employment, healthcare coverage and disability--key factors in addressing health inequities and applying targeted interventions that promote health equity and improve overall community well-being. Additionally, to support this effort, the Wake County Social Equity Atlas serves as a vital resource by collecting, assembling, and analyzing socioeconomic and demographic data from the U.S. Census Bureau and other federal, state, and local agencies. The Atlas uses two key indices--community vulnerability and economic health to identify and measure the county’s socioeconomic conditions. More information about the Social Equity Atlas can be found [here](#).

4.0 DISPARITIES IN CHRONIC DISEASE: THE IMPACT OF SOCIAL DETERMINANTS IN WAKE COUNTY

Chronic diseases like heart disease, diabetes, and cancer are shaped by more than just individual choices and genetics; they are also influenced by **Social Determinants of Health (SDOH)**, which are nonmedical factors that influence health outcomes [6]. They are the conditions in which people are born, grow, work, live, and age. **The Healthy People 2030 framework** identifies five key SDOH areas: **economic stability, education, healthcare access, neighborhood conditions, and social support** [7]. Examples of negative SDOH include food insecurity; poor, unsafe, or unaffordable housing; poverty; lack of access to quality education and jobs that pay livable wages; and unsafe or unhealthy environments [6]. SDOH can lead to poor health and increase chronic disease risks, particularly among marginalized communities [8]. In Wake County, 7.1% of residents live below the federal poverty level with higher rates observed among Black or African American (10.9%) and Hispanic or Latino (10.3%) populations. Additionally, in the county, an unemployment rate of 3.4% and a lack of health insurance among 6.7% of residents can both limit access to healthcare services and hinder effective management of chronic diseases. These disadvantages along with systemic barriers contribute to the health inequities observed across Wake County. Addressing disparities requires local strategies that align with national efforts to promote

health equity. Policies that improve access to quality housing, education, and healthcare are critical to building healthier, more resilient communities. Furthermore, robust data collection, regional insights, and community-driven solutions (Healthy People 2030) are essential for identifying and addressing the root causes of poor health outcomes and chronic disease morbidity and mortality. By advancing these efforts, we can move toward a future where all residents of Wake County have the opportunity to achieve optimal health.

Figure 3: The Five Key Domains of Social Determinants of Health (SDOH)



Source: <https://odphp.health.gov/healthypeople/priority-areas/social-determinants-health>, retrieved 3/26/2025.

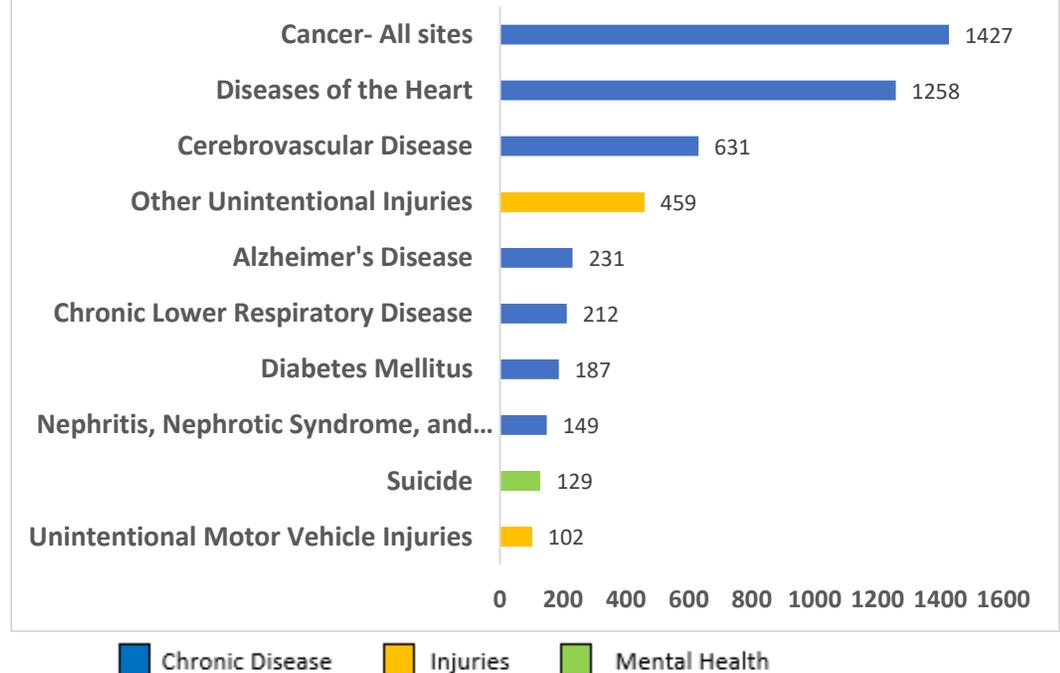
5.0 LEADING CAUSES OF DEATH IN WAKE COUNTY, N.C.

Leading causes of death provide critical insight into the most pressing health challenges facing a community. In Wake County, examining mortality data not only highlights the burden of chronic diseases but also reveals underlying disparities and opportunities for targeted public health action. Understanding these patterns is essential for prioritizing prevention strategies, reducing premature deaths, and improving life expectancy and quality of life for all residents.

In 2023, seven of the ten leading causes of death in Wake County were chronic diseases (Figure 4). As in the previous year, cancer and diseases of the heart ranked #1 and #2 respectively. While cerebrovascular disease ranked #3, Alzheimer’s disease, chronic lower respiratory diseases, diabetes mellitus, and nephritis/nephrotic syndrome/nephrosis ranked #5, #6, #7, and #8 respectively.

Source: Special report prepared by N.C. State Center for Health Statistics 3/04/2025.

Figure 4: Ten Leading Causes of Death, Wake County, 2023 (N = 4,785)



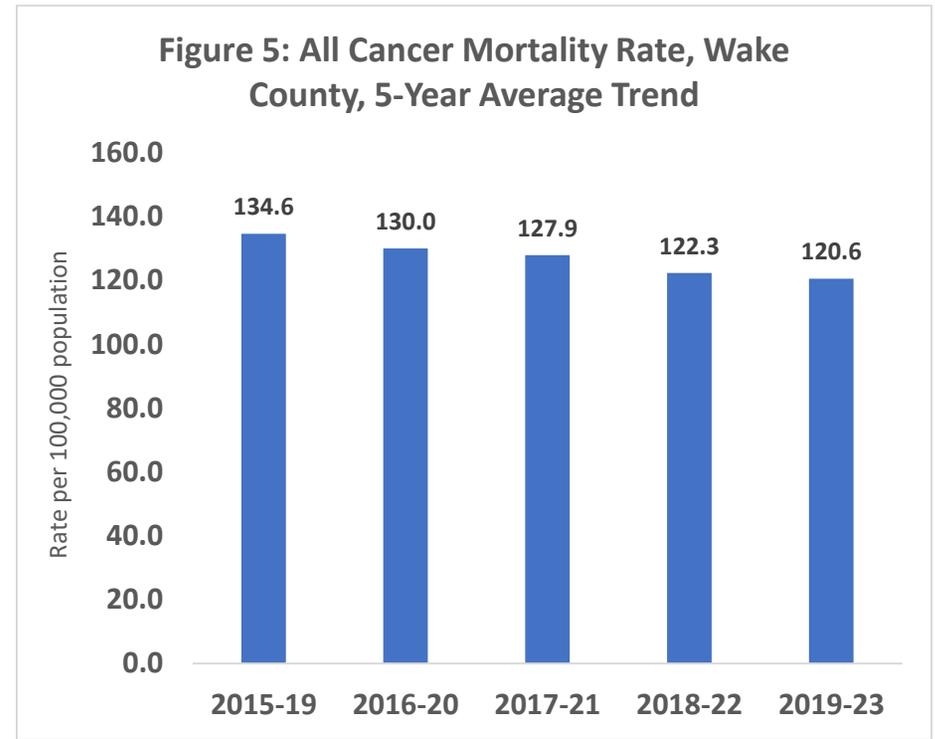
There were 6,864 deaths in Wake County in 2023, and the 2,079 deaths not shown in Figure 4 were from other causes of death not categorized here.

5.1 CANCER

As in previous years, cancer was the leading cause of death in Wake County for 2023. However, Wake County's all cancer mortality rate has steadily decreased since 2015-16 (Figure 5). Figure 6 shows the 5-year average trend for all cancer mortality rates by race, ethnicity (White, African American and Hispanic) and sex in Wake County.

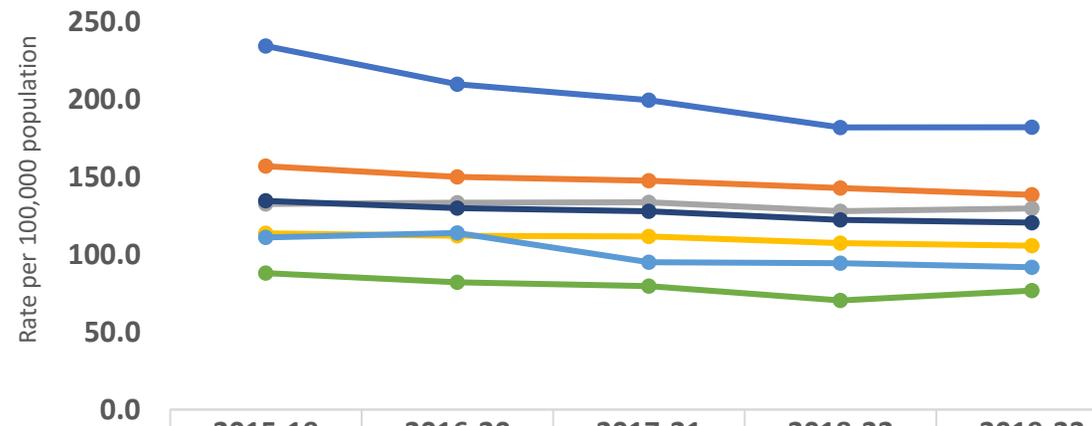
Overall:

- Men continue to have higher cancer death rates than women.
- African American men continue to have higher cancer death rates than all other racial groups.
- Among racial and ethnic groups, Hispanic women saw the highest mortality rate increase (9%) in 2019–2023 compared to 2018–2022.



Source for Figures 5 and 6: "Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates". County Health Data Books 2022, 2021, 2020, 2019, and 2018, N.C. State Center for Health Statistics (N.C. SCHS). <http://www.schs.state.nc.us/data/databook/>. 2019-23 data provided in N.C. SCHS special report on 3/04/2025.

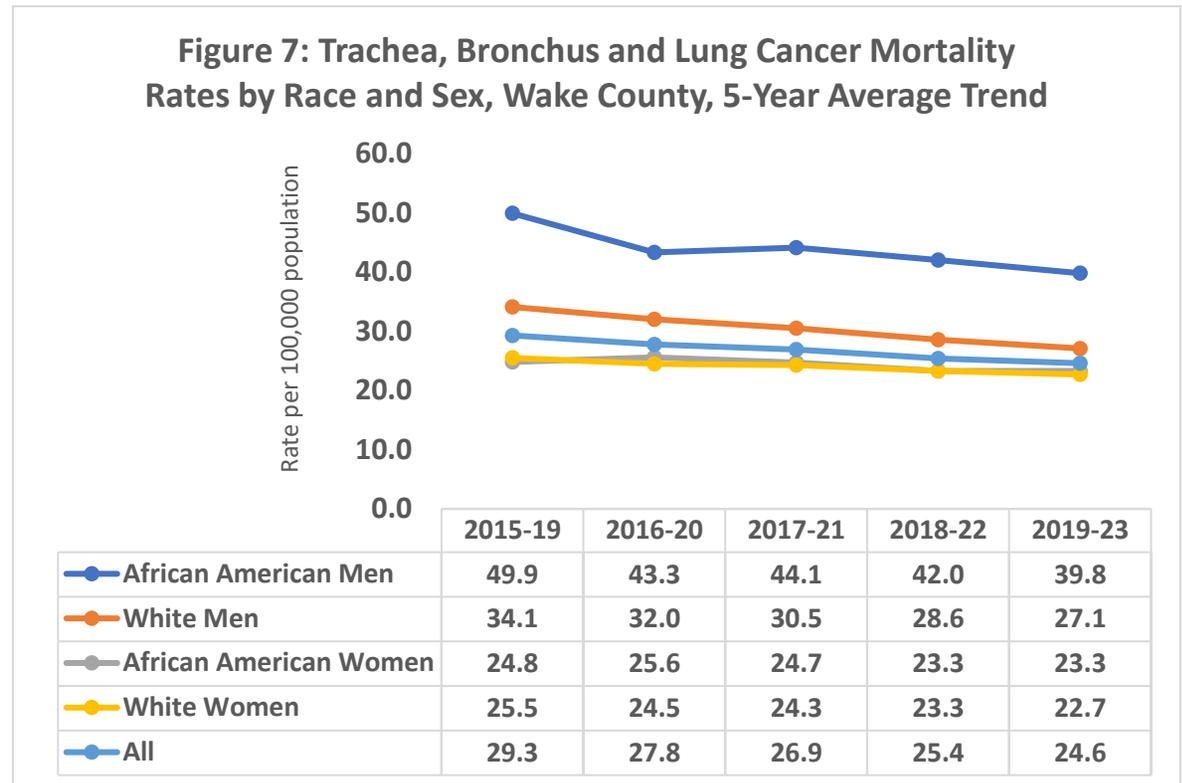
Figure 6: All Cancer Mortality Rates by Race, Ethnicity and Sex, Wake County, 5-Year Average Trend



	2015-19	2016-20	2017-21	2018-22	2019-23
—●— African American Men	234.5	209.9	199.6	182.0	182.1
—●— White Men	157.0	150.1	147.6	142.9	138.5
—●— African American Women	132.6	133.5	133.7	128.0	129.8
—●— White Women	113.7	112.0	111.7	107.4	105.7
—●— Hispanic Men	111.1	113.9	95.0	94.4	91.8
—●— Hispanic Women	88.0	82.1	79.7	70.4	76.7
—●— All	134.6	130.0	127.9	122.3	120.6

5.1a TRACHEA/BRONCHUS/LUNG CANCER

Trachea/bronchus/lung cancer remained the leading cause of cancer-related death in Wake County during 2019-23. From 2015-19 to 2019-23, the overall trachea/bronchus/lung cancer death rate decreased by 16% (Figure 7). African American men have some of the highest mortality rates compared to other racial groups. While both African American men and white men experienced higher death rates compared to African American women and white women, there was a notable decrease in death rates for both groups of men by 20% and 21% respectively between 2015-19 and 2019-23.



Source: "Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates". County Health Data Books 2022, 2021, 2020, 2019, and 2018, N.C. State Center for Health Statistics (N.C. SCHS). <http://www.schs.state.nc.us/data/databook/>. 2019-23 data provided in N.C. SCHS special report on 3/04/2025.

5.1aa TOBACCO-RELATED DEATHS IN WAKE COUNTY AND NORTH CAROLINA (N.C.)

Table 9: Top Five Causes of Death Attributed to Tobacco Use, Wake County, 2023

ICD 10 Codes	Description	Percentage
C34.9	Malignant neoplasm (cancer) of the bronchus and lung, unspecified	24%
J44.9	Chronic obstructive pulmonary disease (COPD), unspecified	14%
I21.9	Acute myocardial infarction (heart attack), unspecified	5%
I25.1	Atherosclerotic heart disease of native coronary artery	5%
I25.0	Atherosclerotic cardiovascular disease, unspecified	5%

Data Source: 2019-2023 tobacco related death data provided by North Carolina Center for Health Statistics (SCHS) on 3/11/2025.

The table to the left shows the significant impact of tobacco use on mortality, particularly through **lung cancer (C34.9) and chronic obstructive pulmonary disease (J44.9), which together account for 38% of tobacco-related deaths.** Additionally, cardiovascular diseases, including heart attacks (I21.9) and atherosclerotic heart disease (I25.1, I25.0), contribute to 15% of deaths.

Overall, tobacco-related deaths in Wake County have been declining since 2021 and remain significantly lower than the state average. Between 2019 and 2023, the county experienced a 21% decrease in the tobacco-related death rate. More than half (59%) of the deaths occurred in age group 60-79 years. The majority (74%) of tobacco-related deaths were observed among White Non-Hispanic individuals. Tobacco-related deaths accounted for 59% in males and 41% in females.

The data below includes deaths where tobacco use was identified as a contributing factor. Counts reflect cases where the "Yes" or "Probably" options were selected on the death certificate.

Figure 8: Tobacco-Related Deaths per 100,000 population, Wake County and North Carolina, 2019- 2023

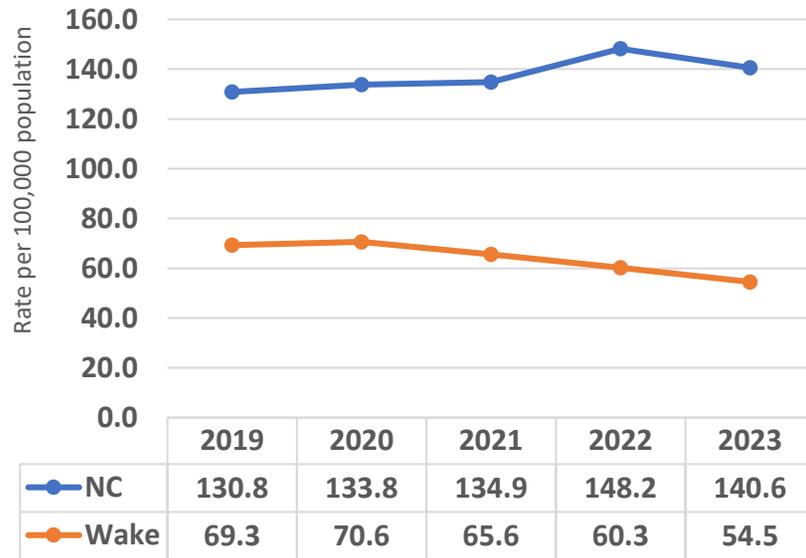
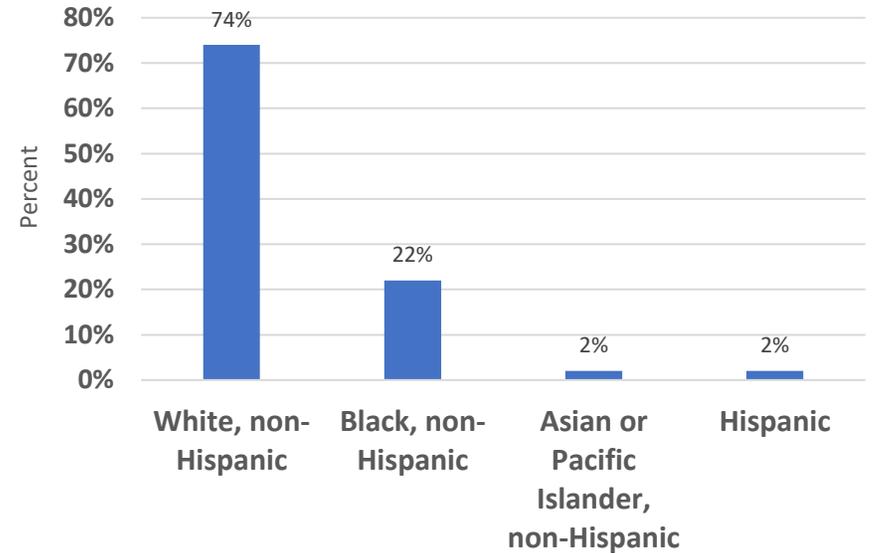


Figure 9: Percentage of Tobacco-Related Death Among Adults aged 20+ by Race and Ethnicity, Wake County, 2023



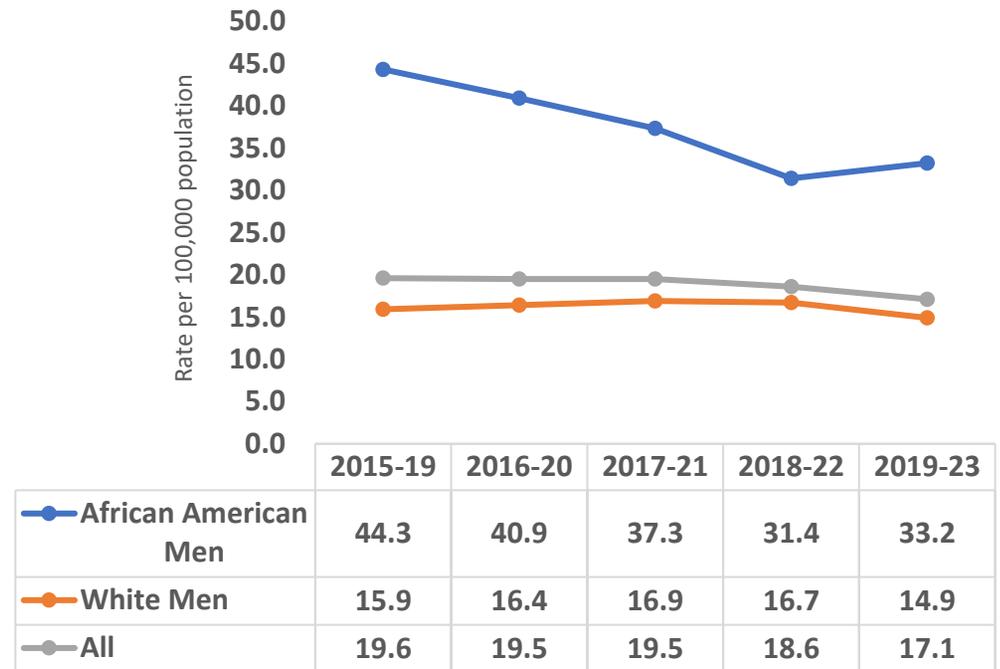
Data Source for Figures 8 and 9: 2019-2023 tobacco related death data provided by North Carolina Center for Health Statistics (SCHS) on 3/11/2025.

Note: ACS 1-Year Estimates for Total Population. The 2020 data is based on the 5-Year Estimate since the 1-Year Estimate was unavailable. Interpret 2020 data with caution.

5.1b PROSTATE CANCER

Prostate cancer was the second leading cause of cancer-related death among men in Wake County during 2019-23. Since 2015-19, the overall prostate cancer mortality rate has steadily decreased (Figure 10). A significant disparity in prostate cancer mortality persists between African American men and white men. Between 2019 and 2023, the prostate cancer mortality rate among African American men in Wake County increased by 6% compared to the 2018-2022 period.

Figure 10: Prostate Cancer Mortality Rates by Race, Wake County, 5-Year Average Trend

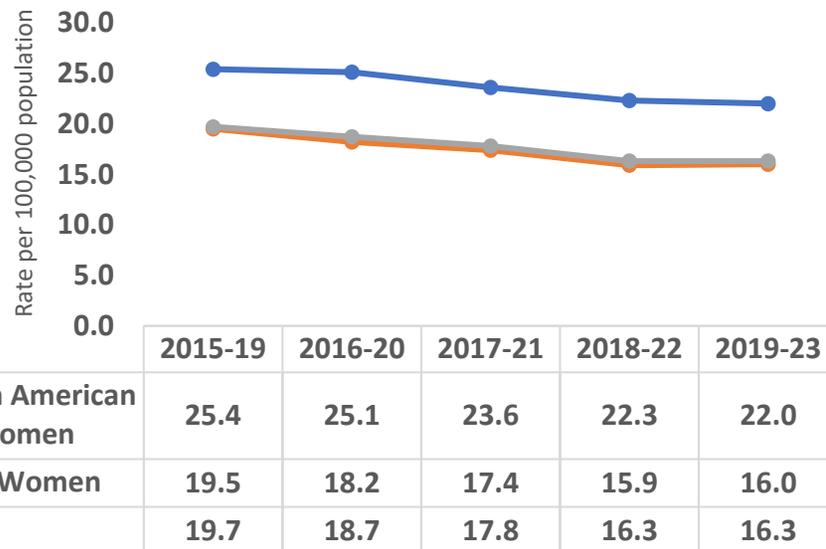


Source: "Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates". County Health Data Books 2022, 2021, 2020, 2019, and 2018, N.C. State Center for Health Statistics (N.C. SCHS). <http://www.schs.state.nc.us/data/databook/>. 2019-23 data provided in N.C. SCHS special report on 3/04/2025.

5.1c BREAST CANCER

Breast cancer was the third leading cause of cancer-related death in Wake County during 2019–2023. The death rates for both African American and white women remain stable. A disparity in breast cancer death rates persists between African American and white women.

Figure 11: Breast Cancer Mortality Rates by Race, Wake County, 5-Year Average Trend

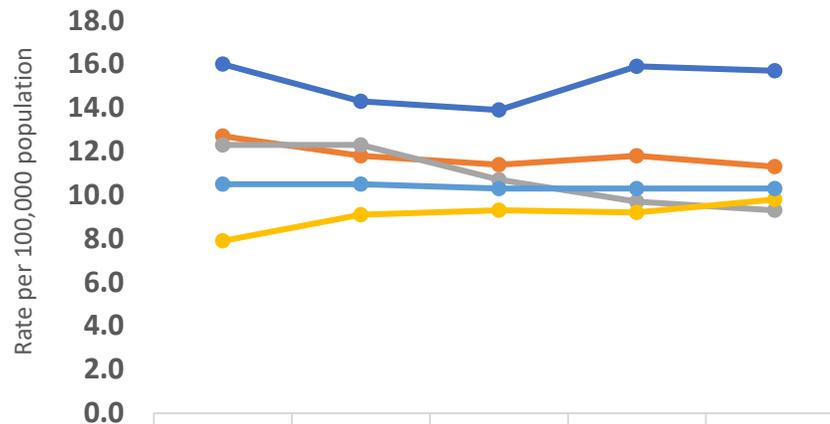


Source: “Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates”. County Health Data Books 2022, 2021, 2020, 2019, and 2018, N.C. State Center for Health Statistics (N.C. SCHS). <http://www.schs.state.nc.us/data/databook/>. 2019–23 data provided in N.C. SCHS special report on 3/04/2025.

5.1d PANCREATIC CANCER

Pancreatic cancer was the fourth leading cause of cancer-related death in Wake County during 2019–2023. Between 2019 and 2023, mortality rates for both African American and white men showed slight declines following increases observed during 2018–2022. In contrast, the mortality rate for white women rose by 7% during the same period (2019–2023). Since 2016–2020, pancreatic cancer mortality rates among African American women have shown a steady decline (Figure 12).

Figure 12: Pancreatic Cancer Mortality Rates by Race and Sex, Wake County, 5-Year Average Trend



	2015-19	2016-20	2017-21	2018-22	2019-23
African American Men	16.0	14.3	13.9	15.9	15.7
White Men	12.7	11.8	11.4	11.8	11.3
African American Women	12.3	12.3	10.7	9.7	9.3
White Women	7.9	9.1	9.3	9.2	9.8
All	10.5	10.5	10.3	10.3	10.3

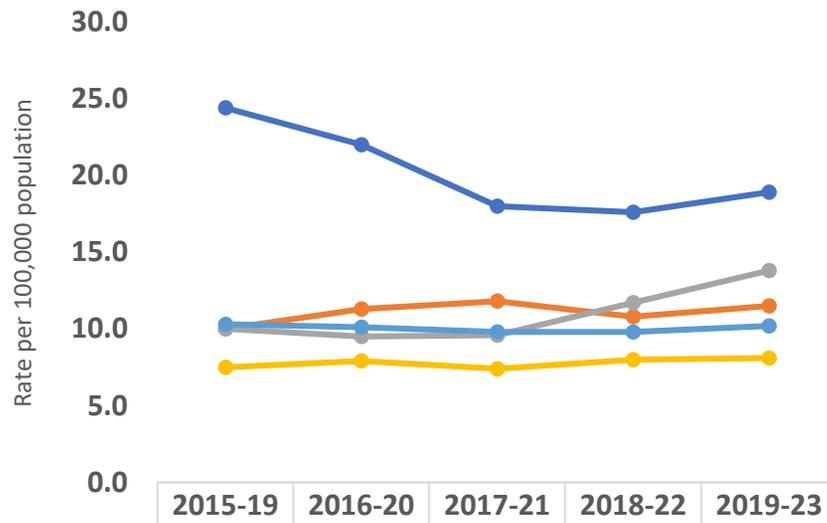
Source: "Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates". County Health Data Books 2022, 2021, 2020, 2019, and 2018, N.C. State Center for Health Statistics (N.C. SCHS). <http://www.schs.state.nc.us/data/databook/>. 2019-23 data provided in N.C. SCHS special report on 3/04/2025.

5.1e COLON/RECTUM/ANAL CANCER

Colon/rectum/anal cancer was the fifth leading cause of cancer-related death in Wake County during 2019-23. Figure 13 shows:

- A significant disparity in colon/rectum/anal cancer mortality rates persists, with African American men experiencing an increase (7%) in 2019-2023, reversing the declining trend observed since 2015-2019 and widening the gap between them and other groups.
- Between 2019 and 2023, mortality rates increased across all racial groups (White and African American) compared to 2018-2022. African American women experienced the largest rise (18%) with death rates in this group steadily increasing since the 2017-2021 period.

Figure 13: Colon/Rectum/Anal Cancer Mortality Rates by Race and Sex, Wake County, 5-Year Average Trend



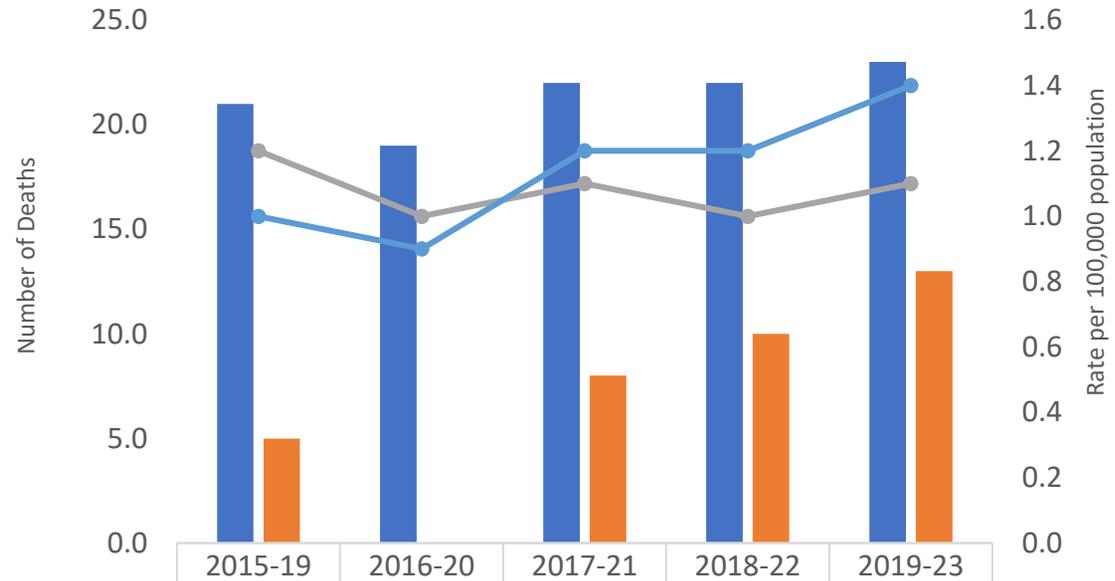
	2015-19	2016-20	2017-21	2018-22	2019-23
African American Men	24.4	22.0	18.0	17.6	18.9
White Men	10.0	11.3	11.8	10.8	11.5
African American Women	10.0	9.5	9.6	11.7	13.8
White Women	7.5	7.9	7.4	8.0	8.1
All	10.3	10.1	9.8	9.8	10.2

Source for Figures 13 and 14: "Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates". County Health Data Books 2022, 2021, 2020, 2019, and 2018, N.C. State Center for Health Statistics (N.C. SCHS). <http://www.schs.state.nc.us/data/databook/>. 2019-23 data provided in N.C. SCHS special report on 3/04/2025.

5.1f CERVICAL CANCER

Cervical cancer mortality trends from 2015-2019 to 2019-2023 show a slight increase in the number of deaths among both white and African American women in the most recent period (2019-2023) compared to 2018-2022. However, due to the consistently small number of deaths among African American women over each five-year period, a stable mortality rate could not be calculated for this group. Overall, the cervical cancer death rate for women in the county also increased in 2019-2023 compared to the previous five-year period (Figure 14).

Figure 14: Cervical Cancer Mortality, White Women and African American Women, Wake County, 5-Year Average Trend



	2015-19	2016-20	2017-21	2018-22	2019-23
White Women Deaths	21.0	19.0	22.0	22.0	23.0
African American Women Deaths	5.0	*	8.0	10.0	13.0
White Women Death Rate	1.2	1.0	1.1	1.0	1.1
African American Women Death Rate	-	-	-	-	-
All Women Death Rate	1.0	0.9	1.2	1.2	1.4

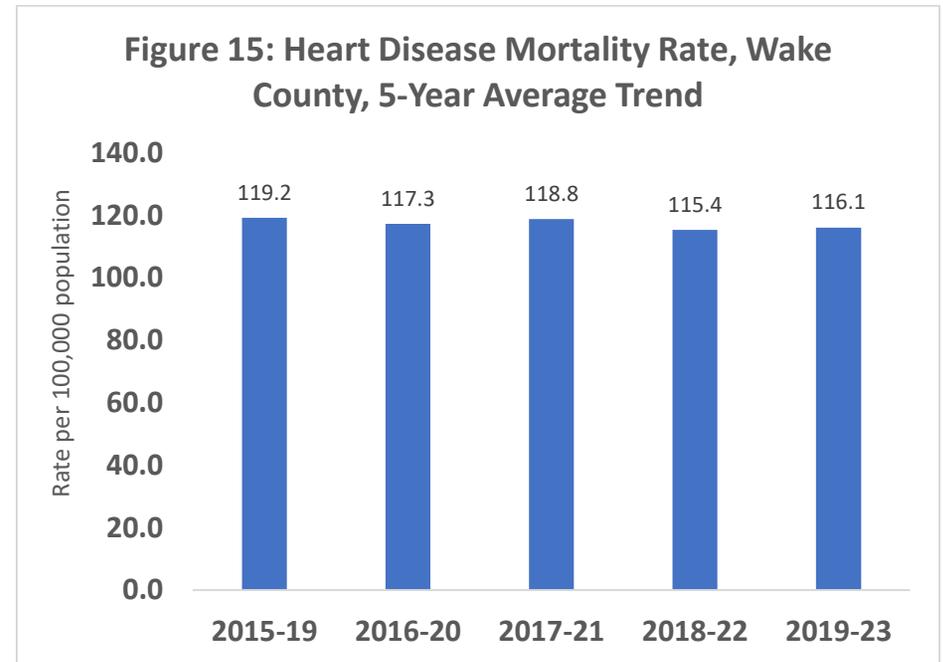
*Data suppressed due to fewer than 5 deaths. -Rate could not be calculated due to the number being too low (count being less than 5)

5.2 HEART DISEASE

Heart disease includes a range of conditions such as coronary artery disease, heart attack, arrhythmia, atrial fibrillation, heart valve disease, heart failure, and congenital heart defects. In Wake County, heart disease was the second leading cause of death in 2023. The county's heart disease mortality rate increased slightly in the 2019-2023 period compared to 2018-2022 (Figure 15).

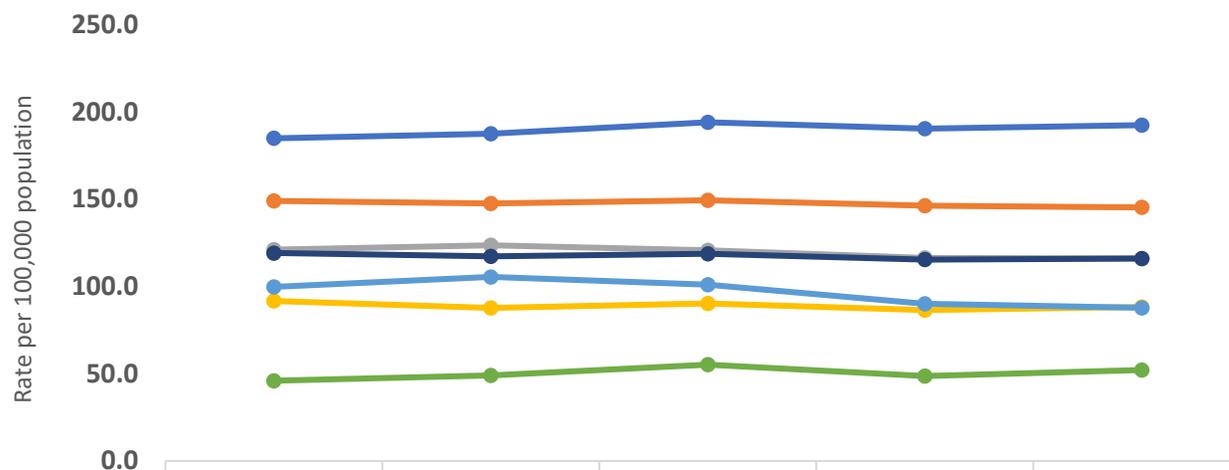
Figure 16 shows the following disease mortality trends:

- Men from all racial/ethnic groups (White, African American and Hispanic) died at higher rates than women.
- A disparity in death rates persists between the African American population and other racial/ethnic groups. African American women experienced higher heart disease mortality rates compared to their white and Hispanic counterparts.
- Between 2019 and 2023, Hispanic women experienced the largest increase in heart disease mortality rates, with a 7% rise compared to the previous period.



Source for Figures 15, 16, and 17: "Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates". County Health Data Books 2022, 2021, 2020, 2019, and 2018, N.C. State Center for Health Statistics (N.C. SCHS). <http://www.schs.state.nc.us/data/databook/>. 2019-23 data provided in N.C. SCHS special report on 3/04/2025.

Figure 16: Heart Disease Mortality Rates by Race, Ethnicity and Sex, Wake County, 5-Year Average Trend



	2015-19	2016-20	2017-21	2018-22	2019-23
— African American Men	184.9	187.5	194.1	190.5	192.5
— White Men	149.1	147.6	149.4	146.3	145.3
— African American Women	121.2	123.6	120.7	116.3	116.1
— White Women	91.7	87.8	90.2	86.5	88.3
— Hispanic Men	99.7	105.5	101	90.1	87.8
— Hispanic Women	46.0	49.1	55.2	48.7	52.2
— All	119.2	117.3	118.8	115.4	116.1

From 2015-2019 to 2019-2023, heart attack mortality rates declined among both men and women across racial groups. However, men continued to experience higher death rates than women. Overall, the heart attack mortality rate in Wake County decreased by 15% during this period (Figure 17).

Figure 17: Heart Attack Mortality Rates by Race and Sex, Wake County, 5-Year Average Trend

35.0
30.0
25.0
20.0
15.0
10.0
5.0
0.0

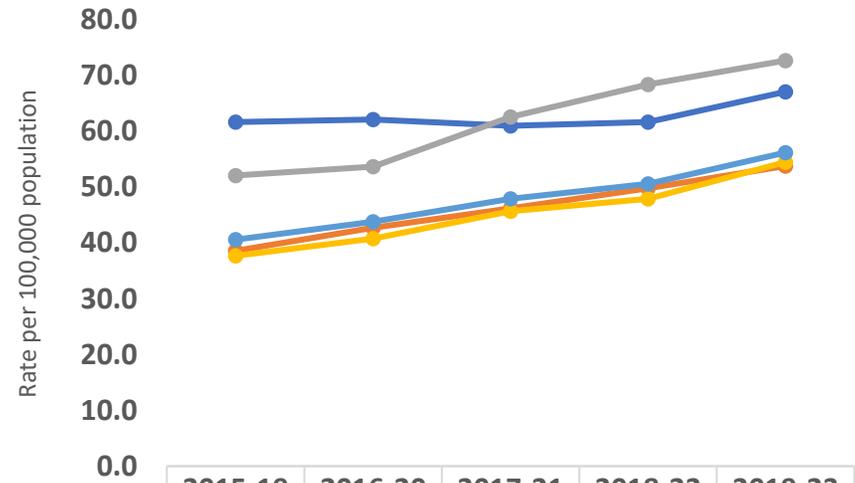
Rate per 100,000 population

	2015-19	2016-20	2017-21	2018-22	2019-23
— African American Men	29.7	25.2	26.5	26.4	26.5
— White Men	20.5	18.3	18.9	18.7	17.8
— African American Women	14.0	12.2	12.7	13.7	12.7
— White Women	10.7	9.7	9.8	8.8	8.8
— All	15.8	14.2	14.6	14.0	13.5

5.3 CEREBROVASCULAR DISEASE

Cerebrovascular disease was the third leading cause of death in Wake County in 2023. Cerebrovascular disease includes conditions such as stroke, carotid and vertebral artery stenosis, intracranial stenosis, aneurysms, and vascular malformations. From 2015-2019 to 2019-2023, cerebrovascular disease mortality rates increased across all racial groups, including both white and African American populations. During this period, the overall death rate in Wake County rose by 38%. Although a persistent disparity remains between African American and white men and women, increases across all groups have slightly narrowed the gap. Since the time period of 2017-2021, African American women have had the highest mortality rates which continue to increase, while white women experienced the highest increase (14%) in death rates within recent years when comparing 2019-2023 to 2018-2022 (Figure 18).

Figure 18: Cerebrovascular Disease Mortality Rates by Race and Sex, Wake County, 5-Year Average Trend

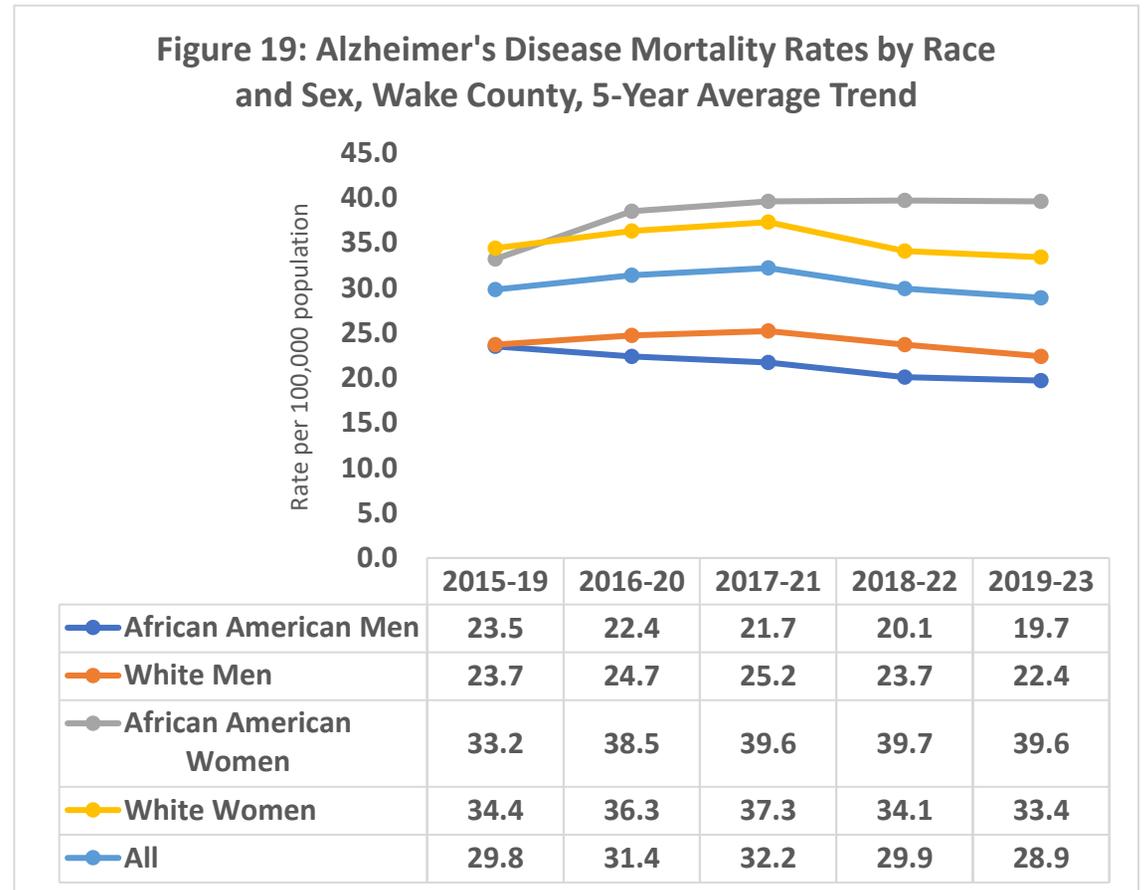


	2015-19	2016-20	2017-21	2018-22	2019-23
African American Men	61.7	62.1	61.0	61.7	67.1
White Men	38.6	42.7	46.2	49.8	53.8
African American Women	52.1	53.7	62.6	68.4	72.7
White Women	37.7	40.8	45.7	47.9	54.5
All	40.6	43.8	47.9	50.6	56.2

Source: "Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates". County Health Data Books 2022, 2021, 2020, 2019, and 2018, N.C. State Center for Health Statistics (N.C. SCHS). <http://www.schs.state.nc.us/data/databook/>. 2019-23 data provided in N.C. SCHS special report on 3/04/2025.

5.4 ALZHEIMER'S DISEASE

Alzheimer's disease was the fifth leading cause of death in Wake County in 2023. Women continued to die from Alzheimer's at higher rates than men, reflecting national trends. Among all racial groups, African American women experienced the highest mortality rate, highlighting a continued disparity in Alzheimer's disease outcomes (Figure 19).

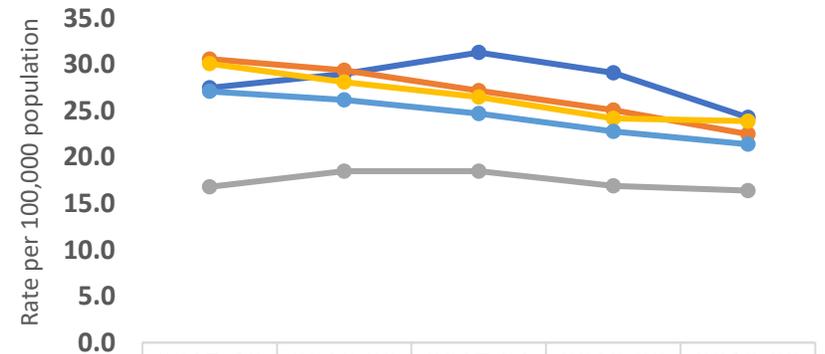


Source: "Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates". County Health Data Books 2022, 2021, 2020, 2019, and 2018, N.C. State Center for Health Statistics (N.C. SCHS). <http://www.schs.state.nc.us/data/databook/>. 2019-23 data provided in N.C. SCHS special report on 3/04/2025.

5.5 CHRONIC LOWER RESPIRATORY DISEASE

Chronic lower respiratory was the sixth leading cause of death in Wake County in 2023. The overall mortality rate for chronic lower respiratory disease has consistently declined year over year, with a 21% decrease from 2015-2019 to 2019-2023. African American men had the highest death rate among all racial groups, including both white and African American populations, though their rate decreased by 17% from 2018-2022 to 2019-2023 (Figure 20).

Figure 20: Chronic Lower Respiratory Disease Mortality Rates by Race and Sex, Wake County, 5-Year Average Trend



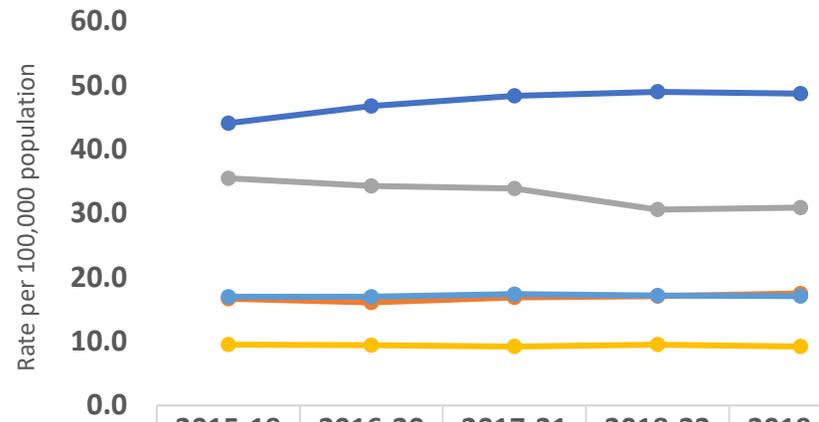
	2015-19	2016-20	2017-21	2018-22	2019-23
African American Men	27.5	29	31.3	29.1	24.3
White Men	30.6	29.4	27.2	25.1	22.5
African American Women	16.8	18.5	18.5	16.9	16.4
White Women	30.1	28.1	26.5	24.2	23.9
All	27.1	26.2	24.7	22.8	21.4

Source: "Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates". County Health Data Books 2022, 2021, 2020, 2019, and 2018, N.C. State Center for Health Statistics (N.C. SCHS). <http://www.schs.state.nc.us/data/databook/>. 2019-23 data provided in N.C. SCHS special report on 3/04/2025.

5.6 DIABETES MELLTUS

Diabetes was the seventh leading cause of death in Wake County in 2023. The most significant and longstanding disparity is observed when comparing diabetes mortality rates across racial and ethnic groups, particularly between African American and white men and women. In Wake County, while the overall diabetes death rate has remained stable, the disparity in outcomes persists, highlighting the ongoing need for targeted interventions (Figure 21).

Figure 21: Diabetes Mortality Rates by Race and Sex, Wake County, 5-Year Average Trend



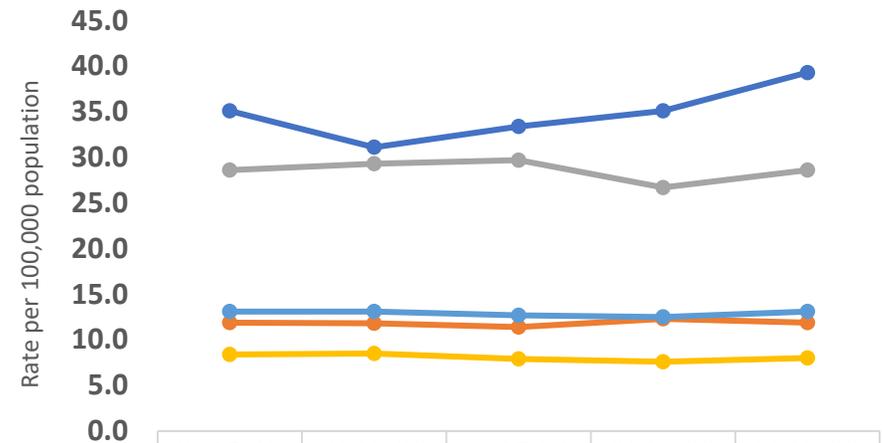
	2015-19	2016-20	2017-21	2018-22	2019-23
African American Men	44.1	46.8	48.4	49.0	48.7
White Men	16.7	16.1	16.9	17.1	17.5
African American Women	35.5	34.3	33.9	30.6	30.9
White Women	9.5	9.4	9.2	9.5	9.2
All	17.0	17.0	17.4	17.2	17.1

Source: "Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates". County Health Data Books 2022, 2021, 2020, 2019, and 2018, N.C. State Center for Health Statistics (N.C. SCHS). <http://www.schs.state.nc.us/data/databook/>. 2019-23 data provided in N.C. SCHS special report on 3/04/2025.

5.7 NEPHRITIS, NEPHROTIC SYNDROME AND NEPHROSIS

Nephritis, nephrotic syndrome, and nephrosis (kidney disease) was the eighth leading cause of death in Wake County in 2023. Persistent disparities in death rates continue to exist between African American and white men and women, with African American men experiencing the highest burden. From 2018-2022 to 2019-2023, African American men, African American women, and the overall kidney disease mortality rate saw increases (12%, 7%, 5%, respectively) highlighting a growing public health concern that needs attention (Figure 22).

Figure 22: Kidney Disease Mortality Rates by Race and Sex, Wake County, 5-Year Average Trend



	2015-19	2016-20	2017-21	2018-22	2019-23
● African American Men	35.1	31.1	33.4	35.1	39.3
● White Men	11.9	11.8	11.4	12.3	11.9
● African American Women	28.6	29.3	29.7	26.7	28.6
● White Women	8.4	8.5	7.9	7.6	8.0
● All	13.1	13.1	12.7	12.5	13.1

Source: "Race/Ethnicity and Sex-Specific Age-Adjusted Death Rates". County Health Data Books 2022, 2021, 2020, 2019, and 2018, N.C. State Center for Health Statistics (N.C. SCHS). <http://www.schs.state.nc.us/data/databook/>. 2019-23 data provided in N.C. SCHS special report on 3/04/2025.

6.0 MORTALITY DATA SUMMARY

Chronic diseases continue to pose a major public health challenge in Wake County, with significant disparities observed across racial and ethnic groups. In 2023, cancer remained the leading cause of death, although the overall mortality rate has decreased. However, disparities persist, particularly among African American men, who experience the highest cancer death rates. Hispanic women saw the largest increase (9%) in cancer-related mortality between 2019 and 2023 compared to 2018–2022. Lung cancer remains the leading cause of cancer-related deaths, although its mortality rate has declined. Prostate and breast cancer also continue to be major contributors to cancer-related mortality, with persistent disparities between African American and white populations.

Heart disease was the second leading cause of death, with higher mortality rates observed among men across all racial and ethnic groups, and African American populations experiencing the highest rates. Hispanic women had the largest increase (7%) in heart disease mortality. Whereas heart attack mortality declined by 15%. Stroke was the third leading cause of death, with a 38% increase in mortality from 2015–2019 to 2019–2023. White women had the highest increase (14%), and racial disparities in stroke mortality remain evident.

Alzheimer’s disease ranked fifth, with women continuing to experience higher mortality rates than men, although mortality has decreased since 2018–2022. Chronic lower respiratory disease was the sixth leading cause of death, with a 21% decrease in mortality between 2015–2019 and 2019–2023. However, African American men had the highest mortality rates, while white women had higher rates than African American women.

Diabetes was the seventh leading cause of death, with the largest mortality disparity between African American and white populations, though the overall rate remained stable. Kidney disease (nephritis, nephrotic syndrome, and nephrosis) ranked eighth, continuing to show persistent disparities with African American populations experiencing higher mortality rates than white populations.

7.0 PROMOTING HEALTH EQUITY IN WAKE COUNTY AND REDUCING DISPARITIES IN CHRONIC DISEASE

To reduce the burden of chronic disease in Wake County, interventions must focus on populations disproportionately affected, particularly African American and Hispanic residents who experience higher mortality rates. Strengthening protective factors (i.e. supportive environments, access to resources, strong social connections) within key social determinant areas is essential for communities. This includes improving access to healthcare through regular check-ups, screenings, and preventive services, as these communities often encounter barriers such as lack of insurance, limited provider access, and cultural or language differences ^{[9][10]}.

African American men continue to experience disproportionately high mortality from chronic diseases, underscoring the need for sex-specific outreach and treatment strategies. At the same time, rising deaths from stroke and heart disease among Hispanic and white women highlight the importance of targeted interventions among these groups. Diabetes and kidney disease also remain major concerns, requiring improved disease management, early detection and support for healthy lifestyle changes.

Community engagement is key to ensuring that public health efforts are effective and culturally relevant. Involving African American and Hispanic residents in design, implementation, and evaluation of health initiatives can build trust and promote long-term success. Additionally, strengthening data collection on health outcomes and disparities will be vital for tracking progress and allocating resources where they are most needed. By prioritizing equitable access to care, prevention, and community-driven solutions, Wake County can make meaningful progress in reducing chronic disease disparities and improve the health and well-being of all residents ^{[9][10][11]}.

8.0 WCHHS HEALTH PROMOTION CHRONIC DISEASE PREVENTION SECTION SERVICE MATRIX

Mission: In partnership with the community, Wake County Health Promotion Chronic Disease Prevention provides a set of chronic disease and injury prevention and management services to populations and communities experiencing disparities. The data within the matrix below pertain to the outcomes observed from January 1, 2024 to June 30, 2024.

Source for Local Morbidity Facts: The North Carolina Disease Event Tracking and Epidemiologic Collection Tool (NCDETECT), Emergency Department Visits for Diabetes (ICD910 CM), Acute MI (ICD 10 CM), Cervical Cancer (ICD910CM) and Breast Cancer (ICD910CM), Wake County, 2024

Local Morbidity Facts:

For Wake County:

- The 2024 Breast Cancer Emergency Department (ED) Visit Rate for those aged 20 and older is 99.4 per 100,000 population
- The 2024 Cervical Cancer Emergency Department (ED) Visit Rate for those aged 20 and older is 99.4 per 100,000 population

Programs and Services	January 1, 2024–June 30, 2024
<p data-bbox="233 711 470 740">Clinical Services</p> <ul data-bbox="233 773 653 837" style="list-style-type: none">•  Breast and Cervical Cancer Control Program (BCCCP)	<ul data-bbox="1346 764 1766 992" style="list-style-type: none">• 223 breast cancer screenings• 13 cervical cancer screenings• 3 breast cancer detected• 1 cervical cancer detected• 185 women referred for diagnostic screenings• 1 woman was able to secure biopsy <ul data-bbox="814 764 1262 1365" style="list-style-type: none">• Wake County BCCCP provides free or low-cost breast and cervical cancer screenings and follow up services to eligible women in Wake County. Additionally, BCCCP provides navigation to Breast/Cervical Cancer Medicaid for women diagnosed with these cancers outside of BCCCP. Eligible women are:<ul data-bbox="814 1105 1262 1365" style="list-style-type: none">• Uninsured or underinsured,• Between the ages of 40-64 for breast screening services and 18-64 for cervical screening services, and• Have a household income at or below 250% of the federal poverty level. For more information regarding BCCCP, contact Jane Riley, 919-212-9310.

Local Morbidity Facts:

For Wake County:

- The 2024 Myocardial Infarction Emergency Department (ED) Visit Rate for those aged 20 and older is 231.4 per 100,000 population

Programs and Services		January 1, 2024-June 30, 2024
 • WISEWOMAN	<ul style="list-style-type: none">• Wake County WISEWOMAN provides free cardiovascular health screenings to BCCCP eligible women. Women are screened for blood pressure, cholesterol, diabetes, and body mass index (BMI). Participants create physical activity and nutrition goals and receive health coaching based on those goals. Women with abnormal lab values are referred to a medical provider for treatment and management of their chronic condition. For more information regarding the WISEWOMAN, contact Elizabeth Spender-Smith, 919-250-3990.	<ul style="list-style-type: none">• 35 women received WISEWOMAN screening services• 45 second and third health coaching sessions were completed• 3 final follow ups completed• 4 referrals to primary care physician• The WISEWOMAN program was on hold from Oct 2023-March 2024, in Mid-October of 2023, the State WISEWOMAN program instructed all WISEWOMAN programs to stop seeing patients until further notice (impacting number of screenings).

Programs and Services

January 1, 2024–June 30, 2024



- Medical Nutrition Therapy

- Nutrition counseling provided to patients of WCHHS Women's Clinic and Child Health Clinic.

Women's Clinic:

- 106 clients seen in Women's Clinic
- 27 clients seen for more than one visit
- 67% showed positive health change

Child Health Clinic:

- 113 clients seen in Child Health Clinic
- 39 clients seen for more than one visit
- 90% showed positive health change

Community Health Education and Physical Activity Programs



- Movin' and Groovin'

- The Health Promotion Chronic Disease Prevention Section in partnership with the City of Raleigh Parks, Recreation and Cultural Resources offers a 10-week Movin' and Groovin' Community Physical Activity Series. This free fitness program helps individuals get active and stay active! Participants also receive take home activities to ensure continued movement throughout the week. Water, snacks, and wellness-based door prizes are provided. Movin' and Groovin' is open to everyone over the age of 12. For more information regarding Movin' and Groovin', contact Elizabeth Spender-Smith, 919-250-3990.

- 45 registered participants
- Fall series with an average of 25 adult participants at each session
- 17 participants eligible for free produce

Programs and Services

January 1, 2024–June 30, 2024



- Couch to 5K

- The Health Promotion Chronic Disease Prevention Section partners with City of Raleigh’s Parks and Recreation and Cultural Resources Department to offer “Couch to 5K”. Couch to 5K is a nine-week training series for anyone 12 years of age and older. Participants meet as a group once a week and follow a daily training program to ensure continued progress and success. For more information regarding Couch to 5K, contact Elizabeth Spender– Smith, 919-250-3990.

February 22–April 19

- 41 registered participants and 33 completed the 5K race



- Public Health Education Campaigns

- The Health Promotion Chronic Disease Prevention Section provides educational information and activities to employees of Wake County regarding Breast Cancer Awareness Month, Heart Health Month, and National Nutrition Month.

- Breast Cancer Awareness Month
- 2024 Heart Health Month
- 2024 National Nutrition Month

Local Morbidity Facts:

For Wake County:

- The 2024 Diabetes Emergency Department (ED) Visit Rate for those aged 20 and under is 82.0 per 100,000 population
- The 2024 Diabetes Emergency Department (ED) Visit Rate for those aged 20 and older is 1,052.5 per 100,000 population

Programs and Services		January 1, 2024-June 30, 2024
<ul style="list-style-type: none"> • Minority Diabetes Prevention Program (MDPP) 	<ul style="list-style-type: none"> • The North Carolina Minority Diabetes Prevention Program (NC MDPP) is a free, year-long diabetes prevention program. Throughout the program, participants learn how to eat healthier, meal plan, get active and overcome barriers. 	<ul style="list-style-type: none"> • New cohort began on February 19, 2024, at Brookridge Apartments • 10 enrolled participants during this cohort • 14 classes facilitated
<p>Food Security and Local Food Systems</p> <ul style="list-style-type: none"> • Farmer’s Market 	<ul style="list-style-type: none"> • Health Promotion provides technical support and nutrition education at farmer’s markets to increase access to fresh, local food among low resource individuals. Health Promotion promotes the use of SNAP/EBT at farmer’s markets by advertising the Double Bucks program (SNAP/EBT match) throughout the community. 	<ul style="list-style-type: none"> • 15 farmer’s markets in Wake County (8 accept EBT payments, 1 accept WIC payments and 3 accept Senior vouchers)

Programs and Services

January 1, 2024–June 30, 2024



- The Summer Food Service Program (SFSP) ensures that low-income children continue to receive nutritious meals when school is not in session. The Sunnybrook meal site provides meals, along with activities, for any child aged 1-18 or adults with disabilities who participate in school programs.

- Sunnybrook reapplied to be a site for summer 2024 with the serving dates: June 18–August 8
- Sunnybrook meal site served 56 meals in June



Drug Overdose Prevention Initiative

- The Drug Overdose Prevention Initiative is a coordinated effort to reduce opioid overdoses through a partnership with Wake County EMS and Certified Peer Support Specialists (CPSS). Wake County partners with Healing Transitions which encourages individuals who use substances toward harm reduction.

- 391 Clients served by PORT (Post Overdose Response Team)
 - 26 Clients received MOUD (Medication for Opioid Use Disorder)
 - 1294 Rides to Treatment
 - 343 Naloxone kits distributed
 - 165 reported reversals
 - 457 food bags distributed
- For more information about the coordinated efforts to reduce drug overdoses through partnerships within Wake County, please refer to the [2023 Wake County Post Overdose Response Team \(PORT\) Program Profile](#). Additionally, visit <https://www.wake.gov/overdose>.

Programs and Services

January 1, 2024–June 30, 2024



Tobacco Prevention and Control (TPC)

- The Tobacco Prevention and Control (TPC) regional project provides technical expertise to guide policy development to move forward tobacco-related policy in Wake County. TPC also provides tobacco cessation resources and professional training.
- 108 people receiving NRT through Wake public-private partnership with Quitline NC
- 350 Stakeholders educated around evidence-based smoke-free/tobacco-free policy (Wake County School Health Nurses, Advocacy training for Poe Center Youth Empowerment Group, Wake County Tobacco-Free Coalition, Wake AHEC tobacco use treatment webinar, Wake County Tobacco-Free Community Forum)
More information about Wake County's Tobacco Prevention and Control Initiative and mortality data can be found at the end of this report.

Programs and Services

January 1, 2024-June 30, 2024



Safe Routes to Schools (SRTS)

- The Safe Routes to School initiative is a comprehensive approach to making it safer and easier for K-12 students to walk and bike to school. This is accomplished by creating and maintaining a wide variety of partnerships across different sectors with local, regional, and state-level partners.

- All Kids Bike curriculum purchased to be implemented within two (2) additional Wake County Schools: Conn and Millbrook Elementary Schools
- Wake County SRTS partnered with Oaks and Spokes, at the City of Raleigh's Carolina Pines Park, for the annual 2024 Learn to Ride event. There were 28 attendees and 12 volunteers that participated in the event
- Twenty elementary schools registered for Bike & Roll to School Day event
- Learn to Ride Event at Worthdale Park with 20 attendees and 7 volunteers participating in the event.
- Pop-up traffic garden activity at Marbles Kids Museum's 2024 Bike Rodeo event, over 1,000 people attended the event.

** SRTS coordinator position was vacant March 2024-Sept 2024.

For more information about SRTS, please refer to <https://www.wake.gov/departments-government/health-human-services/children-and-family-services/safe-routes-school-wake-county>.

9.0 HEALTH PROMOTION PROGRAM TESTIMONIALS AND SUCCESS STORIES

The following stories are testimonials from individuals who have benefited from Health Promotion services and programs.

Success Story #1: “Ruth” is a WISEWOMAN (WW) participant who shared that she feels healthier and more energetic from her involvement in the WW program. The health coaching from the WW coordinator motivated her to take care of herself and gave her the strength to be a better version of herself. Being a part of the WW program provided her with tools on how to improve health behaviors and demonstrated that being healthy is a “good thing”. Ruth has lost five pounds, and her cholesterol levels have improved. WW connected her with a primary care provider and linked her to supplemental food and housing resources.

Success story #2: “Alex” is an 8-year-old patient from the Child Health Clinic who was referred to the Health Promotion Registered Dietitian (Kameron Rowe) for Medical Nutrition Therapy (MNT). Alex was referred for prediabetes. His A1C was 5.9% (5.7% –6.4% is considered prediabetes). Upon learning Alex’s diagnosis, his mother, was teary and wanted to learn how to help not only Alex, but also her other children to be healthy. Alex’s current diet and eating habits were assessed and dietary changes were recommended along with incorporating daily physical activity. His mother started packing Alex a healthy lunch to take to school. At Alex’s follow-up visit in November 2024, his A1C decreased to 5.4%. His mother, teary again, was very thankful for the nutrition counseling. She asked to meet again in 3 months to ensure that Alex’s A1C remained stable. In February 2025, Alex’s A1C was still 5.4%. A third follow-up is scheduled in June 2025. His mother shared the following: “The first time I met with a nutritionist was when I was told that my son was prediabetic. I was very scared. By talking about the importance of making changes in habits, nutritionist Kameron helped me reflect and realize that my family had to change, giving up carbohydrates and sugary juices a little. The nutritionist has helped me a lot. Today, my son is no longer prediabetic thanks to my dietitian.”

Success Story #3: A client who will go by Patient A was diagnosed with breast cancer under the Breast & Cervical Cancer Control Program (BCCCP) in 2022. The program's Nurse Navigator, Jane Riley, secured Breast Cancer Medicaid (BCCM) to secure treatment for her diagnosis. Recently, Jane reached out to Patient A to discuss her BCCM eligibility and assisted her with the application to renew. With BCCM in place, Patient A will be able to receive medication for several years to help prevent the cancer from returning. Patient A expressed her sincere gratitude and stated, "I am so thankful for your program- it has saved my life". Since her surgery, Patient A has resumed her love for rock climbing.

Success Story #4: "Thank you, Dr. Elizabeth Collins, for teaching me that changing my nutrition and exercise habits, as well as having a positive attitude, can make a big difference in our health. So far, this has helped me a lot to keep my weight and health under control. Three years ago, I had carcinoma in situ and to this day, I am still clean. I will continue with these good healthy habits to continue maintaining this good state of health. Thank you, and I hope everyone could do the same; they would have a big change in their lives and health. Thank you for everything!" (MNT patient quote)

Success Story #5: "Brenda" is a Minority Diabetes Prevention Program (MDPP) participant. Brenda battled with hypertension and obesity for many years. She had gained weight with sitting around as a retiree and lost focus of her health goals. She would even watch the Food Network Channel but would never implement the changes in her diet. Brenda admitted that she was a "foodie" and had stopped cooking meals at home. Most of her eating was done at fast food restaurants. Food became her comfort. It was hard for Brenda to move around; she was always tired and could not get involved in activities with her family because she was overweight. Brenda went in for her annual doctor's visit and discovered that she had hypertension. Immediately, she began to think about her grandkids and wanted to be around to see them grow up. She wanted help with normalizing her blood pressure. In 2024, Brenda heard about MDPP and signed up right away. Brenda was a little reluctant at first because it is a yearlong class and commitment. Through it all, Brenda was able to complete the entire class session and lose weight. She learned of healthier eating habits, how to track her calories, and has since adopted a goal to get in at least 6,000 steps per day. Brenda said, "Thank you to the health coaches for helping me be more mindful of what and how much food I eat and drink. I lost weight and I feel great." Brenda is a true testament of the class's overall goal.

10.0 SMOKING, ELECTRONIC CIGARETTES/VAPING, AND NICOTINE USE

Smoking

Smoking remains the leading cause of preventable disease, disability, and death in the United States, accounting for over 480,000 deaths annually, including more than 41,000 from secondhand smoke exposure ^[12]. The 2024 County Health Rankings reported that 11% of Wake County adults smoke every day (or most days) and have smoked at least 100 cigarettes in their lifetime ^[13]. The percentage of adults who smoke cigarettes in Wake County is lower than that of North Carolina (15%) ^[13].

Smoking causes:

- More than twelve types of cancer
- Increased risk of cardiovascular disease
- Respiratory conditions, such as chronic obstructive pulmonary disease (COPD) and emphysema
- Increased risk of low birth weight
- Increased risk of premature death ^[13]

Any tobacco product use is defined as the use of one or more of the following tobacco products: e-cigarettes, nicotine pouches, cigarette, cigars, smokeless tobacco (chewing tobacco, snuff, dip, or snus), other oral nicotine products, heated tobacco products, hookahs, pipe tobacco, or bidis (small, brown cigarettes wrapped in a leaf) ^[18].

E-cigarettes continue to be the most used tobacco products by youth ^[14]. In the U.S., youth are more likely to use e-cigarettes than adults. According to the 2024 National Youth Tobacco Survey (NYTS), around 2.25 million youth in the U.S. were estimated to be current e-cigarette users compared to 2.8 million in 2023 and 5 million in 2019 ^[15]. Despite the decline in e-cigarette use among youth, it remains a public health crisis. More than one in four current e-cigarette users report daily use, and 87.6% used flavored e-cigarettes ^[16]. Daily use of e-cigarettes puts these youth at a higher risk for a lifetime of nicotine addiction, as well as dual use with other tobacco products.

Image 1: Examples of E-cigarettes



Source: <https://www.cdc.gov/tobacco/e-cigarettes/index.html>, retrieved 4/04/2025

Nationally, current tobacco use has decreased from 2022 to 2024 among high school and middle school students, with 8.1% of students currently using tobacco products. The 2024 Monitoring the Future Report, conducted by the National Institutes of Health (NIH) and the National Institute on Drug Abuse (NIDA), has shown a decrease in e-cigarette use among all high school students, with e-cigarette use in tenth graders showing the most statistically significant decrease. Both surveys' data emphasize the ongoing need for providing evidence-based cessation services to help current users quit nicotine products ^[15].

According to the 2024 Monitoring the Future Report, “For nicotine vaping, the 2024 declines continue a 180-degree turn centered around the pandemic onset. Prior to the pandemic, use levels surged from 2017 to 2019 and then held steady in 2020. Large declines took place during the pandemic and have since continued to the point where the 2024 levels for past 12-month use are close to where they started in 2017, the first year that questions on nicotine vaping were included on the survey. Specifically, past 12-month use was 21% in 12th grade (compared to 35% in 2020 and 19% in 2017), 15% in 10th grade (compared to 31% in 2020 and 16% in 2017), and 10% in 8th grade (compared to 17% in 2020 and 10% in 2017).”

Any Nicotine Use

In 2024, any nicotine use in the past 30 days declined in all three grades, a decrease that was statistically significant in 8th grade. The 2024 decline in any nicotine use is driven in large part by a decline in nicotine vaping, even though vaping is the most popular way to use nicotine. Any nicotine use was indicated by any use of any of the following: vaping nicotine, cigarettes, large cigars, flavored small cigars, regular small cigars, tobacco using a hookah, or smokeless tobacco.

Any Nicotine Use Other Than Vaping

The past 30-day prevalence of any nicotine use other than vaping has also declined in all three grades in 2024, a decline that was statistically significant in 8th grade. Overall, nicotine use has declined annually since first tracked by the survey. Prevalence fell about threefold since tracking began in 2017 for 12th-grade students (21% to 5% use), in 2019 for 8th-grade students (6% to 1% use), and 10th-grade students (10% to 3% use). Any nicotine use other than vaping is indicated by any use of the following: cigarettes, large cigars, flavored small cigars, regular small cigars, tobacco using a hookah, or smokeless tobacco.

Nicotine Pouches

The use of nicotine pouches such as Zyn and On! significantly increased in 2024 among high school students. Nicotine pouches are small pouches that contain synthetic nicotine that users place in their mouth. Unlike other smokeless tobacco products such as snus, dip, or chew, nicotine pouches do not contain any ground tobacco leaf, meaning there is no tobacco juice. This makes the pouches easier to conceal since the user does not need to spit. Prevalence doubled in 12th grade from 2023 to 2024 for past 12-month use, with a significant increase from 3% to 6%. In 10th grade, there was a statistically significant increase in use from 2% to 3%. In 8th grade, prevalence held steady at less than 1%. Nicotine pouches have generated media attention amid concerns that adolescent use may grow rapidly, often drawing comparisons to the rise of nicotine vaping from 2017 to 2019. As of 2024, prevalence remains relatively low at 6% in 12th grade for past 12-month use (which compares to 21% for nicotine vaping). Similar oral nicotine products have made substantial inroads among students in the past (e.g., smokeless tobacco reached a lifetime prevalence of 32% in the early 1990s), suggesting that the prevalence of nicotine pouches could increase.

The 2023 N.C. Youth Risk Behavior Survey (YRBS) revealed that 21.4% of North Carolina high school students currently use an e-cigarette ^[17]. In 2021, 7.7% of middle school students reported current usage of e-cigarettes. The percentage of high school students who currently use an e-cigarette increases with each grade level in both high school and middle school.

11.0 WAKE COUNTY TOBACCO PREVENTION AND CONTROL (TPC) INITIATIVES

The purpose of this initiative is to prevent deaths and health problems attributable to tobacco use.

RECENT EVENTS

JANUARY 2024

- Wake County TPC presented to WCHHS School Nurses on the topics of e-cigarettes and youth vaping.
- Wake County TPC conducted an advocacy training for the Poe Center Youth Empowerment team. The purpose of this training was to help youth empowerment members understand the landscape of tobacco prevention and control in N.C. and Wake County and formulate ideas for photovoice projects for the Wake County Tobacco-Free Community Forum.

FEBRUARY 2024

- The Wake County Tobacco-Free Coalition held an advocacy training during a quarterly coalition meeting. Over thirty people were in attendance.
- Participants had a chance to work in breakout groups and walk through nine advocacy strategy questions.
- The topic areas of the breakout sessions were smoke-free/tobacco-free policy, youth prevention/alternative to suspension programs, and tobacco retail outlet density via zoning.

APRIL 2024

- The Wake County TPC coordinator and the Sexual and Gender Minority Tobacco Treatment Coordinator conducted a statewide training (64 attendees) for the BreatheEasyNC series to prepare behavioral health and substance use treatment facilities that contract with Medicaid to prepare for the July 1, 2024 deadline of the Medicaid Tobacco-Free requirement.

RECENT EVENTS

APRIL 2024

- In partnership with Wake County, Wake AHEC conducted a Tobacco Use Treatment Training in which 294 people registered and 186 people attended.
- The target audience of the training was providers, nurses, dental health professionals, behavioral health professionals, substance use disorder specialists, and respiratory therapists. The training provided basic knowledge of screening for tobacco use, tobacco use treatment, cessation resources, and information surrounding new and emerging tobacco products.
- The Wake County TPC Coordinator assisted in planning and facilitating the 2024 Wake County Tobacco-Free Community Forum, along with local partners, which included Poe Center for Health Education, Wake County Public School System, and the American Heart Association.
- The event highlighted five local youths' concerns for tobacco use in the Wake County community, as well as advocacy efforts and featured a panel of experts speaking about tobacco prevention and control work at the local level, UDO amendments to regulate tobacco retail outlet density via zoning, the WCPSS JUUL settlement plan, and Escape the Vape Week.
- 68 people attended the in-person event including elected officials, county commissioners, school board members, candidates for local offices and municipal leaders.

RECENT EVENTS

SEPTEMBER 2024

- A new Wake County TPC Coordinator joined WCHHS.
- Wake County TPC and planning staff presented at the North Carolina Public Health Association Fall Educational Conference in Cherokee, N.C.
- Staff served on a panel discussing the successful partnership of public health and planning to get the Wake County UDO amendment passed that regulates tobacco retail outlet density via zoning. Such a passing created a ripple effect throughout the state with other counties and localities passing similar UDO amendments.
- The Wake County Tobacco-Free Coalition hosted a Media Spokesperson Training for coalition members and partners. Participants learned how to engage the media, create message maps, and interview.

OCTOBER 2024

- Wake County Tobacco Prevention and Control Staff presented to the NC Zoning workgroup on the Wake County UDO amendment regulating tobacco retail outlet density via zoning.
- Wake County TPC coordinated a You Quit Two Quit training (100 staff/clinicians were trained) for WCHHS clinic providers, RNS, and support staff. The training fulfilled requirements for LHD RN standing orders to bill for tobacco use treatment counseling and receive reimbursement from Medicaid. The training also ensured all clinical staff and providers were educated on the most up-to-date information.

TOBACCO USE TREATMENT AND CESSATION EFFORTS

BETWEEN JANUARY AND DECEMBER 2024

- Over 562 Wake County residents sought assistance with quitting through Quitline NC's comprehensive tobacco cessation treatment program.
- More than 108 uninsured Wake County residents received free nicotine replacement therapy (NRT) as part of their tobacco cessation plan.
- Through the public/private partnership with Quitline NC, Wake County continues to provide funding for nicotine replacement therapy (NRT) for uninsured residents. State funding only covers 1% of the state's tobacco users.
- As part of ongoing efforts to increase the number of providers offering tobacco use treatment and resources, such as referrals to QuitlineNC, Wake County TPC provided trainings to staff at local organizations on the harms of youth tobacco use, specifically vaping, and the available evidence-based and evidence-informed resources available for them to use and implement with the youth population the organization serves.

MEDIA AND COMMUNICATIONS

SUMMER OF 2024

Wake County ran three media campaigns:

- Take the First Step campaign -a cessation campaign focused on reaching people who smoke, specifically Hispanics and African Americans. Over 1.1 million impressions were delivered, 12,200 clicks took place, and 224,900 were reached. Creatives were delivered via TikTok and Snapchat. The campaign's click-through rate (CTR) was above 0.07, which denotes an above-average performance.
- Lesbian/Bisexual Cessation Campaign - a cessation media campaign focused on reaching lesbian and bisexual women who use tobacco. Over 2 million impressions were delivered with a click-through rate (CTR) of 0.18%. The campaign's click-through rate (CTR) was above 0.07, which denotes an above-average performance.
- Rescue Campaign - Youth Tobacco Prevention Campaign. The target audience was 13-18-year-olds in Wake County who are susceptible to, ever used, or currently vaping. Running the campaign resulted in 514,297 impressions delivered, 3,907 exploratory engagements (video completions, clicks, reactions), and 17 active engagements (shares, comments, saves).

12.0 REFERENCES AND SOURCES

1. Chronic diseases in America. Cdc.gov. National Center for Chronic Disease Prevention and Health Promotion. October 4, 2024. Web. 3/26/25. <https://www.cdc.gov/chronic-disease/about/index.html>
2. Health and Economic Costs of Chronic Conditions. cdc.gov. National Center for Chronic Disease Prevention and Health Promotion. July 12, 2024. Web. 3/26/25. https://www.cdc.gov/chronic-disease/data-research/facts-stats/?CDC_AAref_Val=https://www.cdc.gov/chronicdisease/about/costs/index.htm
3. Growth and Population Trends. wake.gov. Wake County Government. Web. 3/26/25. <https://www.wake.gov/departments-government/planning-development-inspections/planning/census-demographics/growth-and-population-trends>
4. American Community Survey 1-year Estimates, Wake County, North Carolina. census.gov. United States Census Bureau. 2023. Web.2/13/25. <https://data.census.gov/all?q=Wake+County,+North+Carolina>
5. United States Census Bureau. Topics. Labor Force Statistics Glossary. Web 3/26/25. <https://www.census.gov/glossary/?term=Labor+force>
6. Centers for Disease Control and Prevention (CDC). Addressing social determinants of health and chronic diseases. U.S. Department of Health and Human Services. August 14, 2024. Web 4/11/25. https://www.cdc.gov/health-equity-chronic-disease/social-determinants-of-health-and-chronic-disease/index.html#cdc_generic_section_2-examples-of-negative-sdoh
7. Healthy People 2030. U.S. Department of Disease Prevention and Health Promotion. Web 3/26/25 <https://odphp.health.gov/healthypeople/priority-areas/social-determinants-health>
8. Centers for Disease Control and Prevention (CDC). Why is addressing social determinants of health important? U.S. Department of Health and Human Services. January 17, 2024. Web 4/11/25. <https://www.cdc.gov/about/priorities/why-is-addressing-sdoh-important.html>
9. Social Determinants of Health.cdc.gov. Public Health Professionals Gateway. May 15,2024. Web 3/26/25 <http://cdc.gov/public-health-gateway/php/about/social-determinants-of-health.html>
10. North Carolina Minority Health Facts: African Americans. NC State Center for Health Statistics and Office of Minority Health and Health Disparities. July 2010. Web 3/26/2025. https://schs.dph.ncdhhs.gov/schs/pdf/AfricanAmer_FS_WEB_080210.pdf

11. Wake County Community Health Needs Assessment (CHNA). Wake County Government. April 2022. Web 3/26/25. https://livewellwake.org/wp-content/uploads/2022/09/LWW_CHNA-2022-FINAL.pdf

12. Association of American Medical Colleges (AAMC). Smoking is still the leading cause of preventable death in the U.S. Doctors may soon have new tools to help people quit. December 15, 2024. Web 4/11/25. <https://www.aamc.org/news/smoking-still-leading-cause-preventable-death-us-doctors-may-soon-have-new-tools-help-people-quit>

13. County Health Rankings & Roadmaps. North Carolina: Wake County Health Data, 2024. Web 4/4/25. <https://www.countyhealthrankings.org/health-data/north-carolina/wake?year=2024>

14. Park-Lee E, Ren C, Sawdey MD, et al. Notes from the Field: E-Cigarette Use Among Middle and High School Students – National Youth Tobacco Survey, United States, O cdc.gov. Centers for Disease Control and Prevention. October 1, 2021. Web. 4/8/24. <https://www.cdc.gov/mmwr/volumes/70/wr/mm7039a4.htm>

15. U.S. Food and Drug Administration. Results from the Annual National Youth Tobacco Survey. October 2024. Web 4/11/25. <https://www.fda.gov/tobacco-products/youth-and-tobacco/results-annual-national-youth-tobacco-survey>

16. Truth Initiative. E-cigarettes: Facts, stats, and regulations. Web 4/4/25. <https://truthinitiative.org/research-resources/emerging-tobacco-products/e-cigarettes-facts-stats-and-regulations>

17. North Carolina Department of Public Instruction. 2023 NC Youth Risk Behavior Survey Update. North Carolina State Board of Education Meeting. June 2024. https://www.ednc.org/wp-content/uploads/2024/06/2023-NC-YRBS-Update-June-SBE-Meeting_399473s2aignbmlDft1gb0xuszu0gz.pdf

18. Centers for Disease Control and Prevention (CDC). Tobacco product use among middle and high school students, National Youth Tobacco Survey, United States 2024. October 17, 2024. Web 4/22/25. <https://www.cdc.gov/mmwr/volumes/73/wr/mm7341a2.htm>

URLs for links, in order of appearance, included in this report:

Cancer. Centers for Disease Control and Prevention
<https://www.cdc.gov/cancer/>

Heart Disease. Centers for Disease Control and Prevention
<https://www.cdc.gov/heart-disease/about/index.html>

Stroke. Centers for Disease Control and Prevention
<https://www.cdc.gov/stroke/>

Alzheimer's Disease. Centers for Disease Control and Prevention
https://www.cdc.gov/alzheimers-dementia/about/alzheimers.html?CDC_AAref_Val=https://www.cdc.gov/aging/aginginfo/alzheimers.htm

Chronic Lower Respiratory Disease. Centers for Disease Control and Prevention
<https://www.cdc.gov/nchs/fastats/copd.htm>

Diabetes. Centers for Disease Control and Prevention
https://www.cdc.gov/diabetes/about/?CDC_AAref_Val=https://www.cdc.gov/diabetes/basics/diabetes.html

Kidney Disease. Centers for Disease Control and Prevention
<https://www.cdc.gov/kidney-disease/about/index.html>

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