

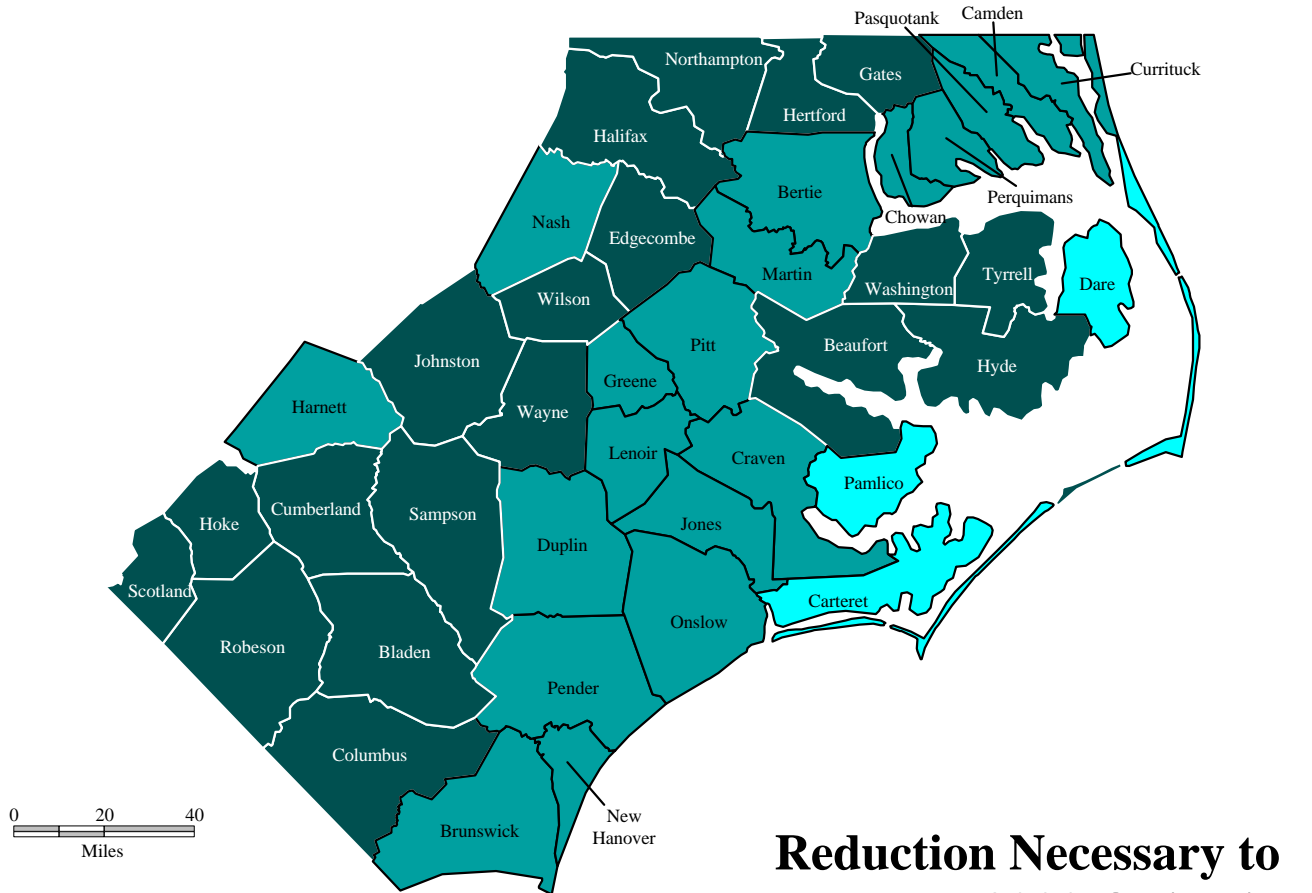
# **Heart Disease**

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# Heart Disease Objectives

## Based on 1989-1993 Age-Adjusted Mortality Rates



### Reduction Necessary to Reach HP 2000 Objective

- 15.1% to 30.0% (3)
- 30.1% to 45.0% (19)
- 45.1% or more (19)

***Healthy People 2000 Goal***  
***Health Status Objective 15.1:***  
***Reduce Heart Disease Deaths***  
***to no more than***  
***100.0 per 100,000 Population***

## **HEART DISEASE**

Heart disease, the leading cause of death in both the United States and the state of North Carolina, claims 500,000 American lives annually. Although there has been a 49% decline in the mortality rate for heart disease over the past 25 years, further reduction can be expected. Individual behavior plays a large role in the development of heart disease and there is still significant room for improvement in lifestyle choices within the population. While heredity, gender, and advancing age predispose certain individuals to heart disease, factors within the individual's control are also important, e.g. cigarette smoking, high blood cholesterol, high blood pressure, and lack of long-term physical activity. People who do not engage in any sort of physical activity are twice as likely to develop heart disease. Half of all heart attack victims have high blood pressure.

Due to a combination of biological and lifestyle factors, death from heart disease is more common in men than women, and in blacks than whites. Heart disease mortality in black males is approximately 24% higher than in white males.<sup>1</sup> This is particularly evident in North Carolina, where heart disease is the number one cause of death among African American men.

### **Crude Mortality Rate:**

#### *HEALTHY CAROLINIANS 2000 OBJECTIVE*

##### *CHRONIC DISEASES PRIMARY GOALS:*

Reduce heart disease deaths to no more than 248.9 per 100,000 population.  
(Baseline: 288.8 heart disease deaths per 100,000 population between 1988-90; 331.9 heart disease deaths per 100,000 population projected for the year 2000)

*[In Eastern North Carolina, the only counties that currently meet this state objective are Craven, Cumberland, Dare, Hoke, Onslow and Pitt Counties.]*

##### *CHRONIC DISEASE SPECIAL TARGET POPULATIONS FOR HEART DISEASE*

###### *PREVENTION:*

Nonwhite males, white males, black females, and post-menopausal women who are overweight, sedentary, and/or smokers.

The crude mortality rate for heart disease in Eastern North Carolina is higher than the statewide rate. Three-fourths, or 31 out of 41, counties in ENC have rates that exceed the state's rate. Tyrrell County, the least populated county in ENC, has the highest mortality from heart disease, with a crude death rate of 469.4 deaths per 100,000 population. High mortality from heart disease, unadjusted for age, is concentrated in the northern counties with pockets in the eastern counties along the coast. In addition, a band of counties beginning in Lenoir County and reaching into the southern part of the region have relatively

high crude mortality rates.

Risk reduction strategies for heart disease include: smoking cessation, reduction in fat intake, weight control, physical activity, screening for high blood pressure, and reduction in alcohol and sodium intake.

**Adjusted Mortality Rates:  
(adjusted by age)**

*HEALTHY PEOPLE 2000 GOAL*

*HEALTH STATUS OBJECTIVE 15.1:*

Reduce coronary heart disease deaths to no more than 100 per 100,000 people. (Age-adjusted baseline: 135 per 100,000 in 1987)

*[Currently, every county in the region fails to meet this national goal. The age-adjusted disease mortality rates in the region range from 130.7 to 217.7.]*

*HEALTH STATUS OBJECTIVE 15.1A:*

Special Population Target: Reduce coronary heart disease deaths among blacks to no more than 115 per 100,000 people. (Age-adjusted baseline: 168 per 100,000 in 1987)

Scotland County's age-adjusted mortality rate (217.7) for heart disease is the highest in the region. Dare County has the lowest age-adjusted mortality rate (130.7) for heart disease and has the fourth lowest crude mortality rate (218.5) reported in the region. The highest age-adjusted heart disease mortality rates are concentrated in the southern counties (as opposed to the highest crude rates, which are predominantly found in the northern counties). In addition, there is a pocket of high age-adjusted mortality rates located in and west of Lenoir County.

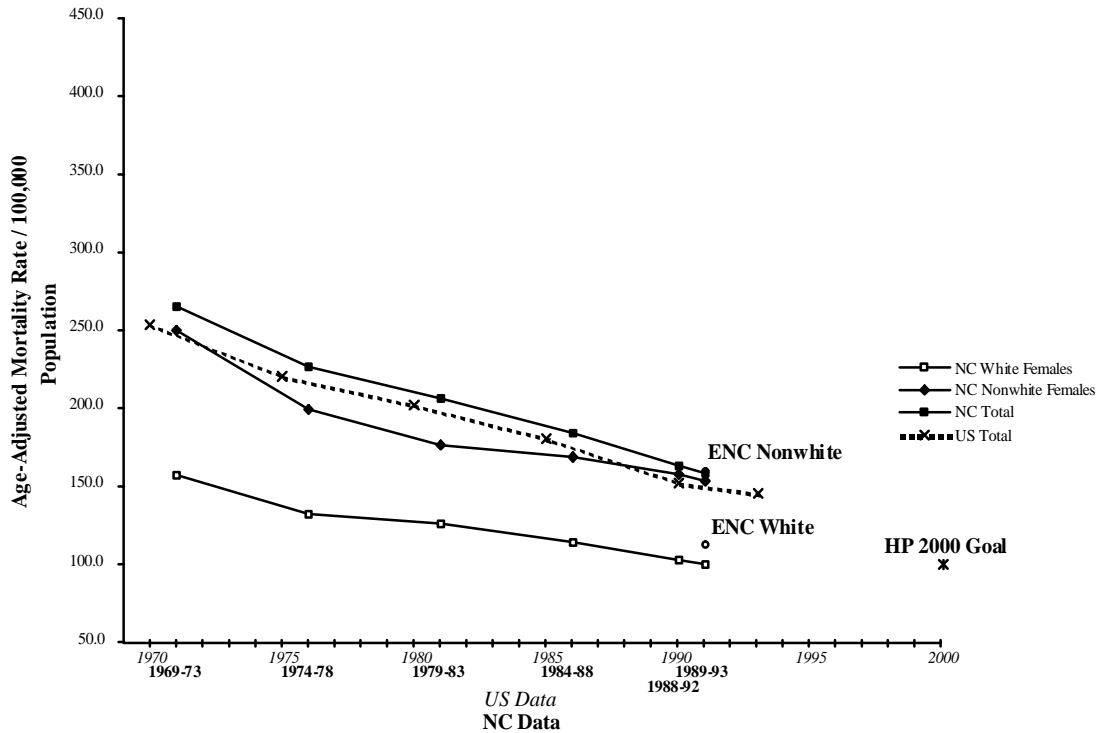
As can be seen in the accompanying plots, of heart disease mortality by race and gender for the last twenty years, heart disease is a serious health problem. It is especially so for males. However, the decline in overall heart disease mortality during the past two decades and the narrowing gap between the state's and the nation's mortality rates are good news and that trend is expected to continue, with steady decreases in both the male and female populations.

Still, heart disease should be of particular concern to the nonwhite population, which is disproportionately affected by the disease. For nonwhite females, the heart disease mortality rate is approximately 1.5 times greater than the rate for white females. In males, the nonwhite mortality rate is approximately 1.4 times greater than the rate for whites. Although most counties report mortality rates that are higher in the nonwhite population than in the white population, there are some exceptions. Most notably, in Hyde County mortality rates are greater for white males than nonwhite males, and in Perquimans County, mortality rates are greater for white females than nonwhite females.

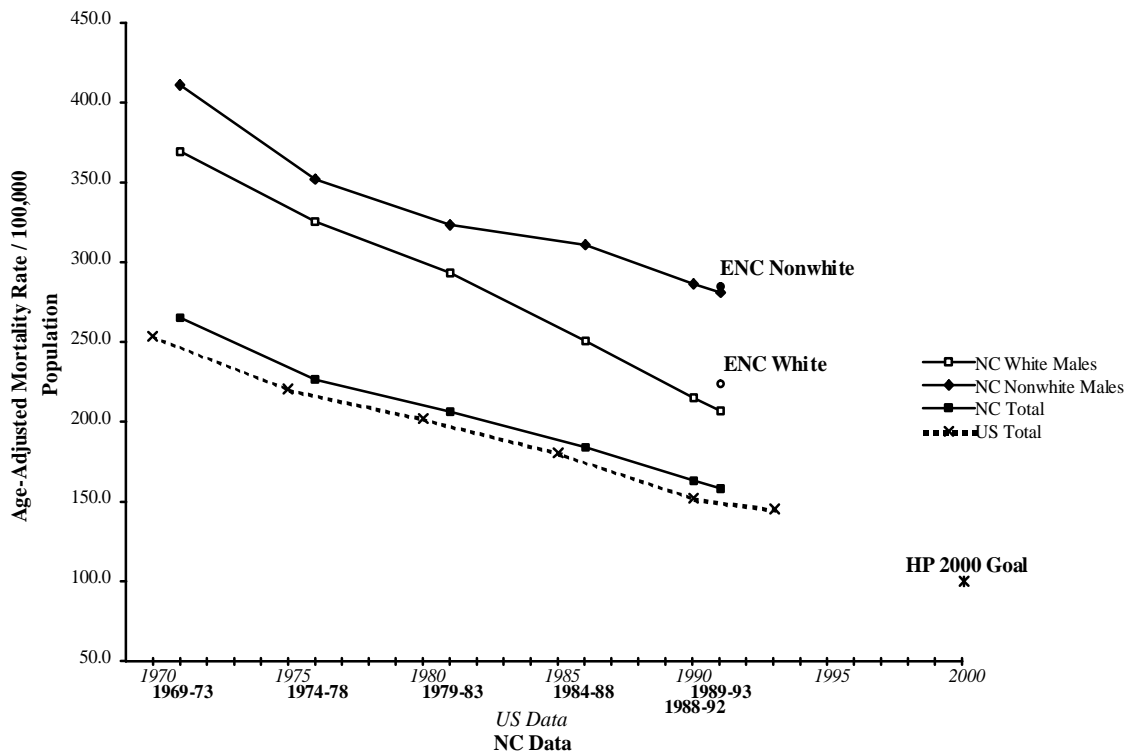
Differences in rates between genders also exist within the white population, as well as within the nonwhite population. In whites, males are approximately 2.1 times more likely than females to die from heart disease. In nonwhites, males are approximately 1.8 times more likely than females to die from heart disease.

## Trends in Heart Disease

**Heart Disease - Female Mortality**  
US and NC Age-Adjusted Rates, NC Race Specific, 1969-1993



**Heart Disease - Male Mortality**  
US and NC Age-Adjusted Rates, NC Race Specific, 1969-1993



Sources: NC Five Year Averages - State Center for Health and Environmental Statistics.  
 US Individual Years - Monthly Vital Statistics Report.  
 HP 2000 Goal - Healthy People 2000: National Health Promotion and Prevention Objectives.  
 US Department of Health and Human Services / Public Health Service.

## Heart Disease Eastern North Carolina

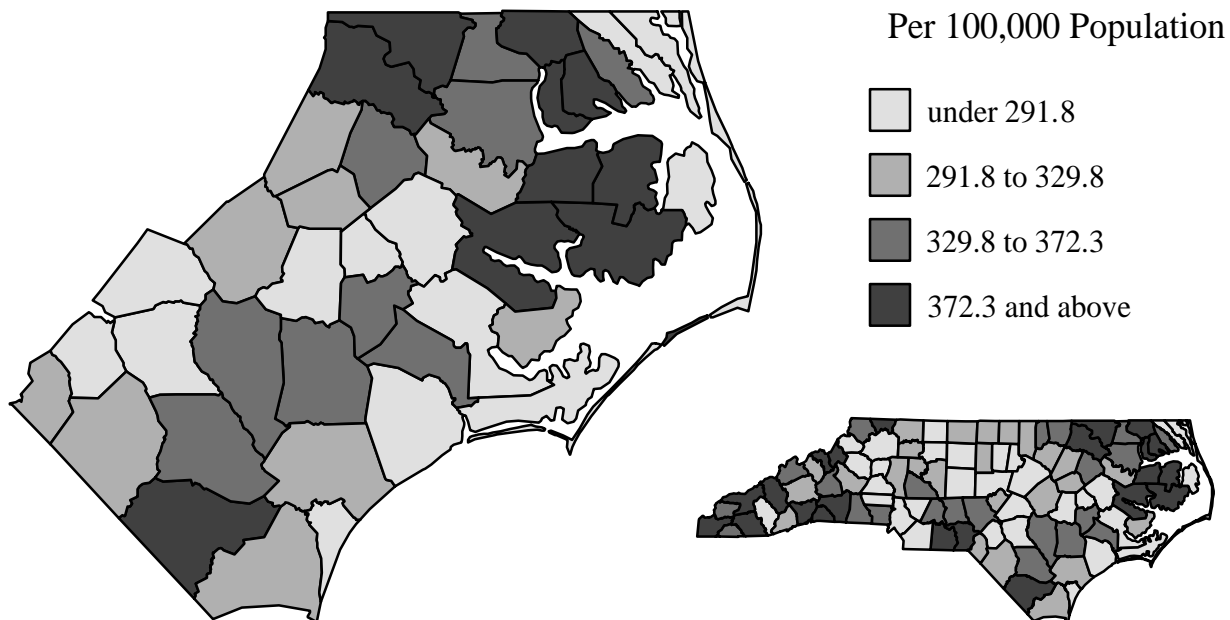
County	Population	Deaths	1990-1994	Race-Gender Specific Age-Adjusted Death Rates 1989-1993				
			Crude Death Rate	White Males	White Females	Minority Males	Minority Females	Total
Beaufort	42,768	853	398.9	251.1	106.9	309.8	193.2	184.9
Bertie	20,405	368	360.7	225.1	105.1	264.7	142.3	178.7
<b>Bladen</b>	29,014	525	361.9	249.7	146.3	315.6	152.2	203.3
<b>Brunswick</b>	54,755	806	294.4	182.9	105.6	247.9	129.0	147.8
Camden	6,025	81	268.9	160.4	125.7	273.8	136.5	157.5
Carteret	54,862	787	286.9	181.7	91.3	295.9	139.9	137.6
Chowan	13,851	262	378.3	205.8	114.0	234.8	139.5	164.3
<b>Columbus</b>	50,210	955	380.4	265.4	137.8	316.0	186.3	204.9
Craven	83,154	1,002	241.0	196.4	112.3	223.5	128.5	153.0
<b>Cumberland</b>	284,158	2,583	181.8	238.2	133.1	273.1	167.4	189.7
Currituck	14,502	192	264.8	202.7	108.3	291.5	222.2	163.9
Dare	23,616	258	218.5	164.1	89.9	307.8	215.2	130.7
Duplin	41,026	688	335.4	224.5	94.8	284.2	180.7	174.0
Edgecombe	56,699	948	334.4	259.9	121.8	320.1	168.6	202.0
Gates	9,521	184	386.5	205.5	117.5	305.0	172.5	188.0
Greene	15,875	224	282.2	235.6	103.1	266.0	105.9	162.1
Halifax	56,523	1,107	391.7	265.8	124.5	287.8	149.5	196.9
<b>Harnett</b>	70,961	1,019	287.2	207.2	111.2	315.8	175.8	169.7
Hertford	22,490	410	364.6	207.0	100.0	329.4	136.0	184.6
<b>Hoke</b>	24,153	278	230.2	209.4	117.6	333.5	151.0	188.4
Hyde	5,395	127	470.8	266.7	121.1	208.2	131.1	182.6
<b>Johnston</b>	86,458	1,395	322.7	265.1	131.7	324.3	173.8	196.6
Jones	9,451	166	351.3	209.6	118.0	262.0	163.3	173.6
Lenoir	58,109	1,014	349.0	247.5	117.3	296.2	144.3	180.7
Martin	25,569	416	325.4	233.4	102.8	279.1	128.4	170.4
Nash	79,536	1,234	310.3	229.3	108.5	288.4	175.8	177.6
<b>New Hanover</b>	127,542	1,681	263.6	181.6	89.5	300.5	163.1	144.5
Northampton	20,696	422	407.8	243.2	96.1	277.8	156.5	185.9
Onslow	148,722	873	117.4	212.7	114.1	219.1	122.7	159.9
Pamlico	11,538	189	327.6	192.5	81.9	201.4	103.6	132.0
Pasquotank	32,154	550	342.1	237.2	113.7	240.3	153.4	174.6
<b>Pender</b>	31,263	468	299.4	198.7	99.8	283.7	188.8	165.2
Perquimans	10,472	202	385.8	208.2	90.1	245.3	71.4	145.6
Pitt	112,348	1,201	213.8	189.5	87.5	279.7	142.6	152.2
<b>Robeson</b>	107,271	1,586	295.7	278.4	127.0	302.7	156.2	204.2
<b>Sampson</b>	48,536	862	355.2	242.3	121.4	252.9	169.3	184.3
<b>Scotland</b>	34,280	543	316.8	295.4	123.6	316.8	224.2	217.7
Tyrrell	3,835	90	469.4	258.5	117.5	302.9	150.9	195.6
Washington	13,916	266	382.3	251.1	112.9	270.2	153.7	185.1
Wayne	107,088	1,458	272.3	242.2	128.0	274.1	170.7	188.5
Wilson	66,776	1,017	304.6	236.1	91.8	354.0	179.1	183.0
<b>29 County Region</b>	1,166,920	16,589	284.3	219.0 <sup>2</sup>	107.1 <sup>2</sup>	278.6 <sup>2</sup>	153.0 <sup>2</sup>	171.0 <sup>2</sup>
<b>41 County Region</b>	2,115,521	29,290	276.9	223.9 <sup>2</sup>	112.7 <sup>2</sup>	285.0 <sup>2</sup>	159.4 <sup>2</sup>	176.4 <sup>2</sup>
<b>North Carolina</b>	6,848,124	94,915	277.2	207.0	99.9	281.1	153.4	158.2
<b>United States</b>	255,039,000	743,460 <sup>4</sup>	281.3 <sup>1</sup>	190.3 <sup>3</sup>	99.2 <sup>3</sup>	229.7 <sup>3</sup>	141.8 <sup>3</sup>	145.3 <sup>3</sup>

<sup>1</sup> Number is for 1994 only<sup>3</sup> NC DEHNR, data 1993<sup>2</sup> Estimated<sup>4</sup> Health, United States, data 1993

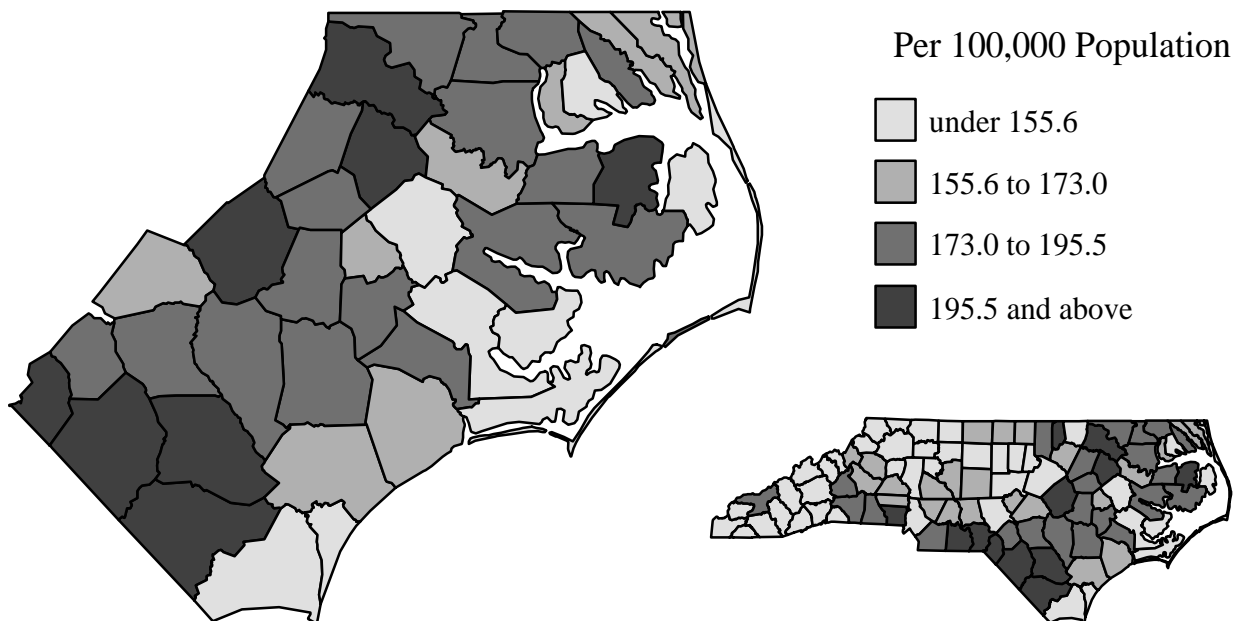
# Heart Disease

## Eastern North Carolina

Crude Mortality Rates: 1990 - 1994



Age-Adjusted Mortality Rates: 1989 - 1993

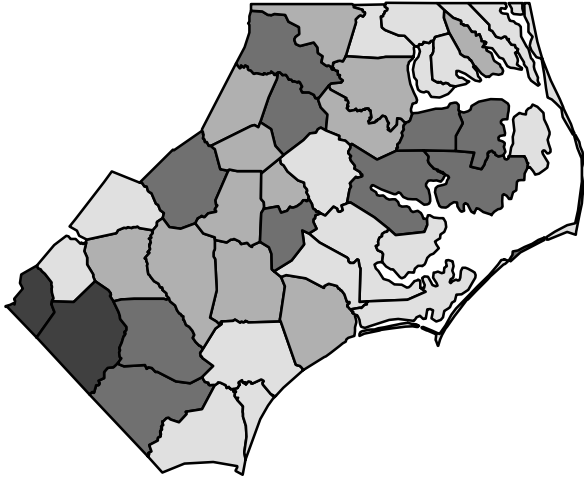


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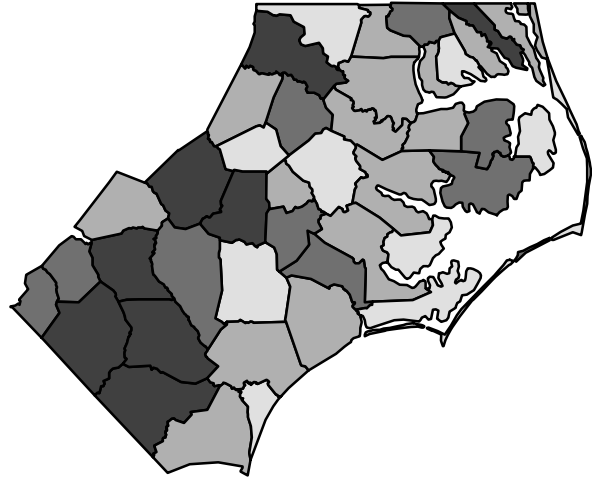
## Age-Adjusted Mortality Rates 1989-1993

Per 100,000 Population

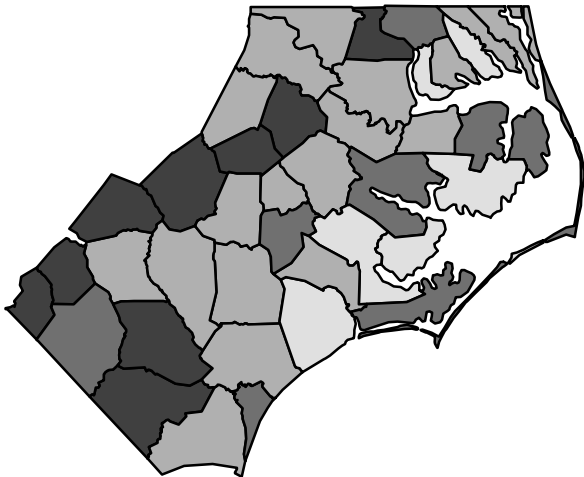
White Males



White Females



Nonwhite Males



Nonwhite Females

