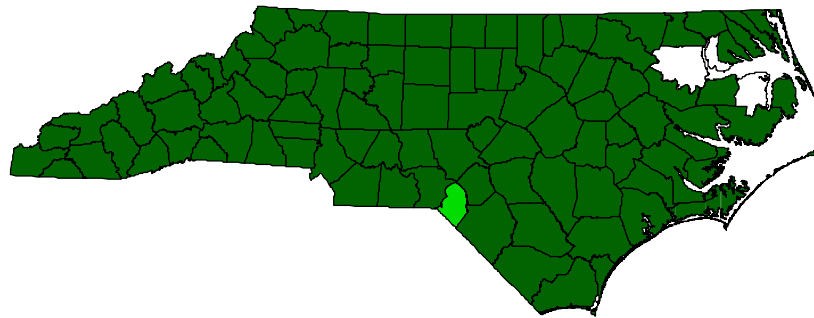
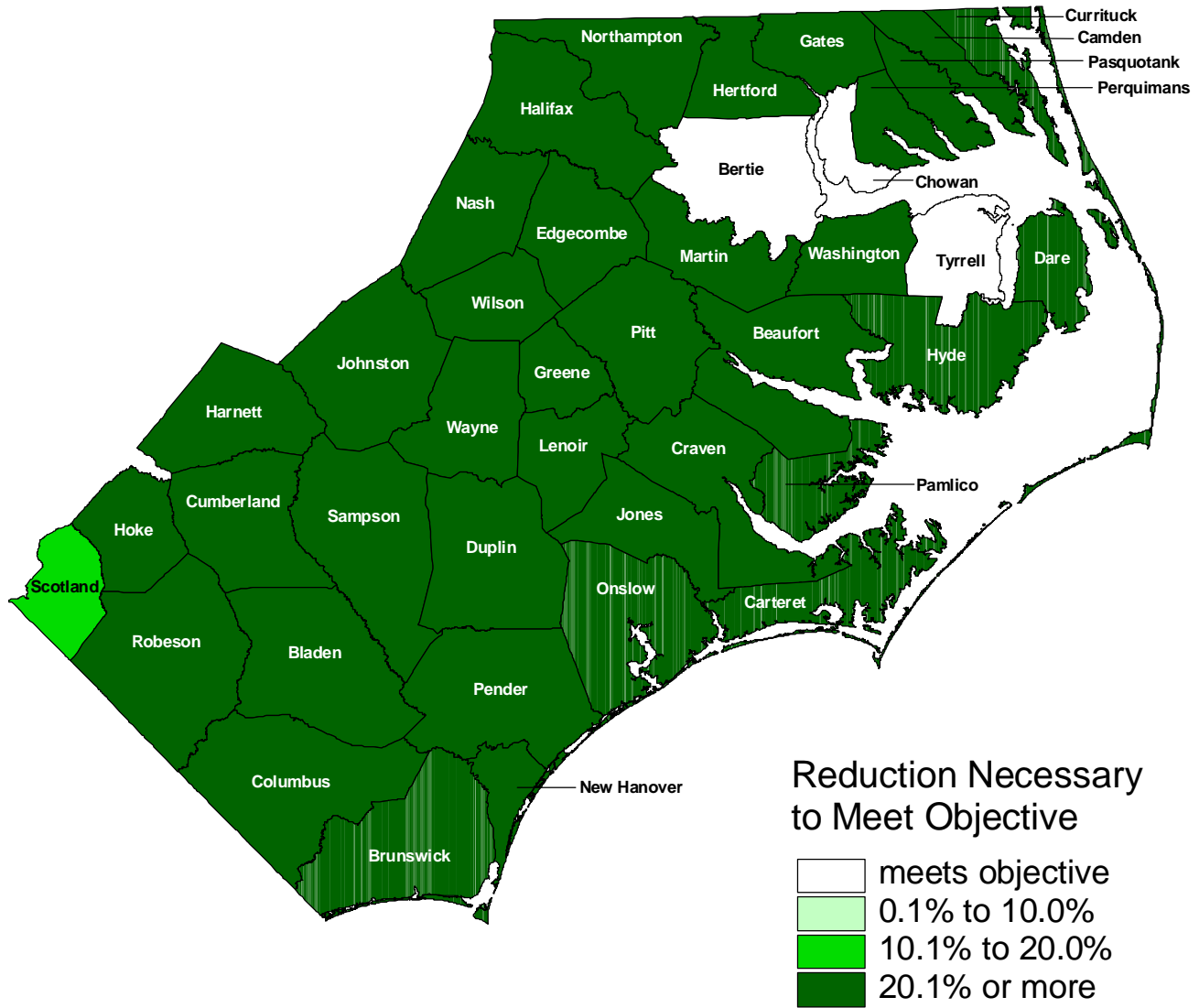


# **Suicide**

---

---

### Map 14.1 Progress Towards Suicide Mortality Objective



HP 2010 Objective for Suicide Mortality:  
Reduce suicide deaths to no more than 5.0 per 100,000 population

Suicide ICD-9 Codes: E950-E959  
Based on Five-Year Average, Age-Adjusted Rates Standardized to US 2000 SM

Data Source: NC State Center for Health Statistics

## SUICIDE

Suicide is a major mental health problem in the United States (US). More people die from suicide than homicide. Approximately 500,000 people attempt suicide each year. Of course, not all suicides are recorded as such because of the social stigma associated with taking one's own life. In 1998, 30,575 Americans took their own lives, making suicide the 8<sup>th</sup> leading cause of death in the nation. Three of every five of these suicides were committed with a firearm.

Although suicide affects people from all backgrounds, suicide rates vary across age, gender, and racial groups. Suicide is the third leading cause of death for people age 15 to 25, accounting for more deaths than cancer, heart disease, stroke, chronic lung disease, pneumonia, influenza, AIDS, and birth defects combined. Since the 1950's, the suicide rate among teens and young adults has tripled. The growing suicide rate for 10 to 14 year olds is also of concern. Between 1980 and 1997, their suicide rate increased 100%, making suicide the 4<sup>th</sup> leading cause of death for this age group. Suicide rates for the elderly are also of concern. White males over the age of 65 have the highest suicide rate in the nation. There are also marked gender and racial differences in the pattern of suicide. Females are more likely to attempt suicide than males, but males are four times more likely to die from suicide than women. Whites are much more likely than minorities to commit suicide. Of all the suicides in 1997, more than 90% were committed by whites. However, suicide is a major problem for some minority communities. Some Native American populations have suicide rates 1.5 times higher than the national average. In addition, suicide rates for young African Americans have increased more than 100% over the last two decades. Suicide rates also vary geographically, with western states having higher rates than eastern and mid-western states. Finally, population groups with low homicide rates tend to have high suicide rates and vice versa.

Research indicates that about 90% of people who commit suicide suffer from depression, other diagnosable mental disorders, or substance abuse problems. Many suicide victims with mental health disorders do not receive treatment. Other risk factors for suicide include: adverse life events, isolation, prior suicide attempts, presence of firearm in the home, incarceration, exposure to suicidal behavior of others, a history of abuse, and a family history of substance abuse, violence, and physical or sexual abuse.

The *Healthy People 2000* objectives for overall suicide mortality was obtained in 1997. While the suicide rate for white males over 65 also fell below the specific target range, the objectives for adolescents, adult males, and Native Americans were not achieved. In order to meet the suicide mortality objective set forth in *Healthy People 2010*, 37 of the 41 counties in eastern North Carolina (ENC) will have to reduce their current rate by more than 20% (see Map 14.1). Disparities in suicide mortality will also need to be addressed.

### HP 2010 OBJECTIVE FOR SUICIDE MORTALITY

Objective: Reduce suicide deaths to no more than 5.0 per 100,000 population

Baseline: 11.3 suicide deaths per 100,000 population in 1998

Currently, three counties in the region meet the objective for suicide mortality.

### **Crude Mortality Rates for Suicide, 1994-1998:**

The five-year average, crude mortality rates for suicide in eastern North Carolina (ENC), all other North Carolina counties (ONC), and the US are in the range of 11.0 to 12.0 per 100,000 population (see Table 14.1). Hyde County has the highest crude rate in ENC with 22.8 deaths per 100,000, a rate that is approximately two times higher than the rate for the ENC, ONC, and the US. Other counties with high crude rates include Currituck (19.7), Perquimans (16.7), Harnett (15.9), and Camden (15.9). The geographic pattern of crude suicide mortality rates is shown in Map 14.2.

### **Age-Adjusted Mortality Rates for Suicide, 1994-1998:**

Five-year average, age-adjusted mortality rates for ENC, ONC, and the US are nearly equal. In addition to having the highest crude suicide mortality rates in the region, Hyde (22.5) and Currituck (20.2) County also have the highest age-adjusted rates. The age-adjusted suicide mortality rate in each of these counties is twice the regional, state, and national rates. High age-adjusted suicide mortality rates are also found in Camden (16.2), Harnett (16.0), and Wilson (15.4) counties. Regional variation in age-adjusted suicide mortality rates is shown in Map 14.2.

### **Trends in Suicide Mortality, 1979-1998:**

Trends in suicide mortality over the last 20 years are shown in Figure 14.1. In recent years, age-adjusted suicide rates have fallen for white males in ENC, following the trend for males in ONC and the US. However, the rate for non-white males has recently increased. Suicide rates for females in ENC, ONC, and the US have declined slightly since the early 1980's. Currently, three counties in the region (Bertie, Chowan, and Tyrrell) meet the objective for suicide mortality. Of the 41 counties in the region, 37 will have to reduce their suicide rate by more than 20% to reach the national objective for suicide by 2010 (see Map 14.1).

### **Disparities in Suicide Mortality, 1979-1998:**

As shown in Figure 14.1, suicide mortality is much higher for males than females, and greater among whites than non-whites. The latest-five year average, age-adjusted suicide death rate for males in ENC is 359% higher than the rate for females. Whites in ENC have a suicide mortality rate 103% greater than non-whites. Figure 14.2 and Map 14.3 demonstrate disparities in suicide mortality by race and gender. While racial disparity in suicide has recently grown among US men, racial disparity among men in ENC has recently declined. Figure 14.1 reveals that the reduction in disparity among men in ENC is due to increasing suicide rates for non-white and declining rates for whites. Currently, white males have a suicide mortality rate 79% greater than non-white males. In contrast, suicide rates for white and non-white males in ONC have declined recently, and the mortality gap between these two groups has also been reduced. Suicide disparities among females follow a trend opposite to the male pattern. Suicide disparity has declined among US females, while the mortality gap between white and non-white women in ENC and ONC is growing. White females in ENC currently have a suicide rate 217% higher than non-white females.

**Table 14.1 Suicide Mortality in Eastern North Carolina, 1994-1998**

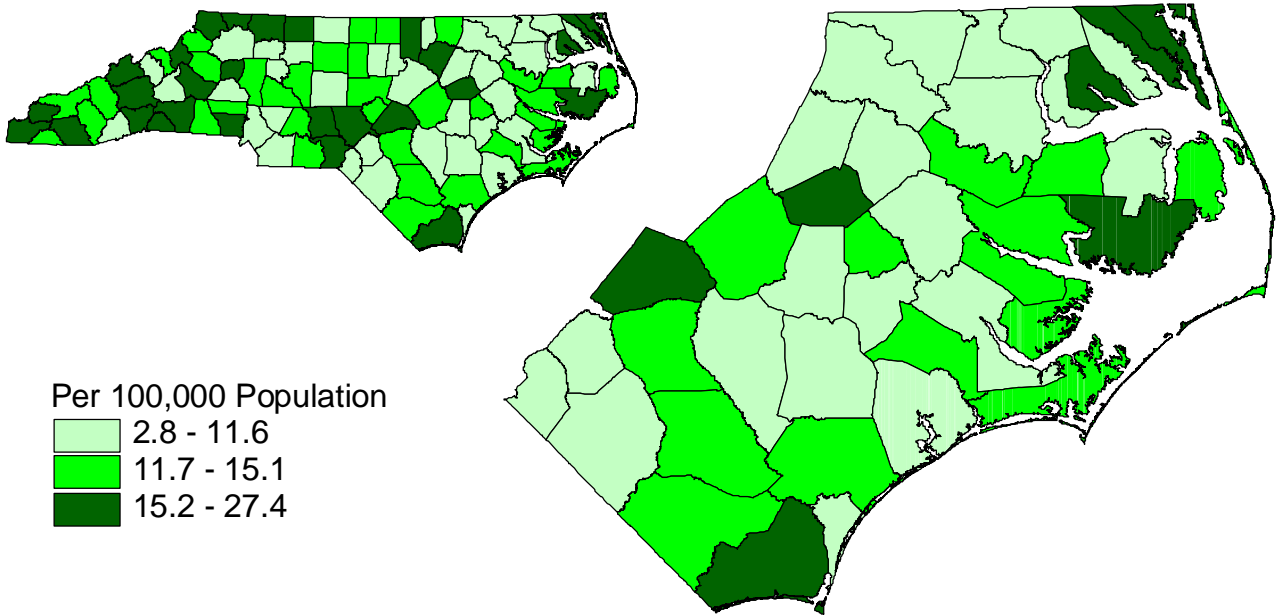
County	Totals			Race-Gender Specific Age-Adjusted Death Rates							
	Deaths	Rates		Non-White Males		Non-White Females		White Males		White Females	
		Crude	Adjusted	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate
Beaufort	29	13.4	13.0	6	22.5	1	2.8	19	23.9	3	3.6
Bertie	4	3.9	3.7	0	0.0	0	0.0	2	11.0	2	6.3
Bladen	18	12.0	12.2	7	28.7	0	0.0	9	22.1	2	4.5
Brunswick	49	15.6	15.1	6	31.2	0	0.0	35	26.2	8	5.8
Camden	5	15.9	16.2	1	28.6	0	0.0	3	25.8	1	6.2
Carteret	36	12.4	12.1	0	0.0	0	0.0	26	19.1	10	7.7
Chowan	2	2.8	2.6	1	9.6	0	0.0	1	5.9	0	0.0
Columbus	35	13.6	13.5	8	20.5	0	0.0	22	25.7	5	4.9
Craven	40	9.2	9.3	5	11.8	1	2.2	27	15.7	7	4.6
Cumberland	179	12.2	13.1	36	14.0	6	2.2	103	23.8	34	8.5
Currituck	16	19.7	20.2	0	0.0	1	14.8	13	41.2	2	4.9
Dare	20	15.1	14.0	0	0.0	0	0.0	18	26.3	2	2.7
Duplin	24	11.0	10.7	2	6.8	1	2.2	19	24.9	2	2.4
Edgecombe	24	8.6	8.9	7	11.6	3	3.0	11	18.5	3	4.7
Gates	5	10.1	10.2	2	24.4	0	0.0	1	7.8	2	13.9
Greene	11	12.8	12.5	2	11.1	0	0.0	8	27.7	1	4.3
Halifax	29	10.3	10.3	6	8.7	0	0.0	15	21.5	8	12.2
Harnett	63	15.9	16.0	10	21.7	1	1.7	45	31.5	7	4.9
Hertford	10	9.0	9.3	4	12.8	2	5.6	4	19.5	0	0.0
Hoke	15	10.7	11.3	5	10.2	1	2.3	6	23.5	3	10.9
Hyde	6	22.8	22.5	2	62.1	0	0.0	4	42.5	0	0.0
Johnston	69	13.9	13.7	2	4.8	1	2.1	54	27.6	12	5.4
Jones	6	13.0	12.5	1	10.6	0	0.0	5	36.2	0	0.0
Lenoir	34	11.5	11.5	5	10.5	1	1.7	24	30.5	4	4.4
Martin	15	11.7	11.2	3	11.5	1	3.3	8	22.2	3	7.0
Nash	43	10.0	9.9	10	14.7	0	0.0	24	17.8	9	5.0
New Hanover	80	11.2	10.8	10	15.5	0	0.0	51	17.8	19	6.2
Northampton	9	8.7	8.5	0	0.0	2	7.3	7	28.0	0	0.0
Onslow	74	10.0	10.7	5	6.3	2	4.3	59	20.8	8	3.3
Pamlico	9	15.1	14.4	0	0.0	0	0.0	9	38.1	0	0.0
Pasquotank	14	8.2	8.2	4	16.6	0	0.0	9	20.8	1	1.8
Pender	21	11.7	12.3	3	12.8	0	0.0	12	19.4	6	9.0
Perquimans	9	16.7	14.9	1	13.1	0	0.0	8	39.2	0	0.0
Pitt	63	10.5	10.9	13	14.0	3	2.6	38	23.2	9	4.8
Robeson	62	11.1	11.3	27	16.0	4	2.3	22	25.0	9	10.0
Sampson	28	10.8	10.7	2	4.7	0	0.0	22	26.9	4	5.2
Scotland	12	6.9	7.1	4	11.2	1	2.3	4	8.1	3	5.7
Tyrrell	1	5.4	3.8	0	0.0	0	0.0	1	13.9	0	0.0
Washington	9	13.3	13.1	2	14.6	0	0.0	5	27.2	2	11.1
Wayne	58	10.4	10.4	9	10.2	1	1.0	40	21.8	8	4.6
Wilson	53	15.5	15.4	8	13.7	3	4.4	31	31.6	11	9.7
<b>ENC 29</b>	658	10.9	11.0	99	10.9	22	2.1	439	22.6	98	4.9
ENC 41	1,289	11.6	11.6	219	12.8	36	1.8	824	22.9	210	5.7
ONC	3,157	12.4	12.2	292	13.0	52	2.0	2,226	22.4	587	5.4
PNC	2,288	11.7	11.6	257	12.7	45	1.9	1,572	21.6	414	5.1
WNC	869	14.9	14.2	35	15.4	7	2.8	654	24.2	173	6.0
NC	4,446	12.2	12.0	511	12.9	88	1.9	3,050	22.5	797	5.5
US, 1996	30,903	11.6	11.7	2,451	11.5	596	2.5	22,547	21.3	5,309	4.7

Suicide ICD-9 Codes: E950-959  
 Age-Adjusted Rates Standardized to US 2000 SM  
 Total Number of Deaths and Rates for Five-Year Period, except US

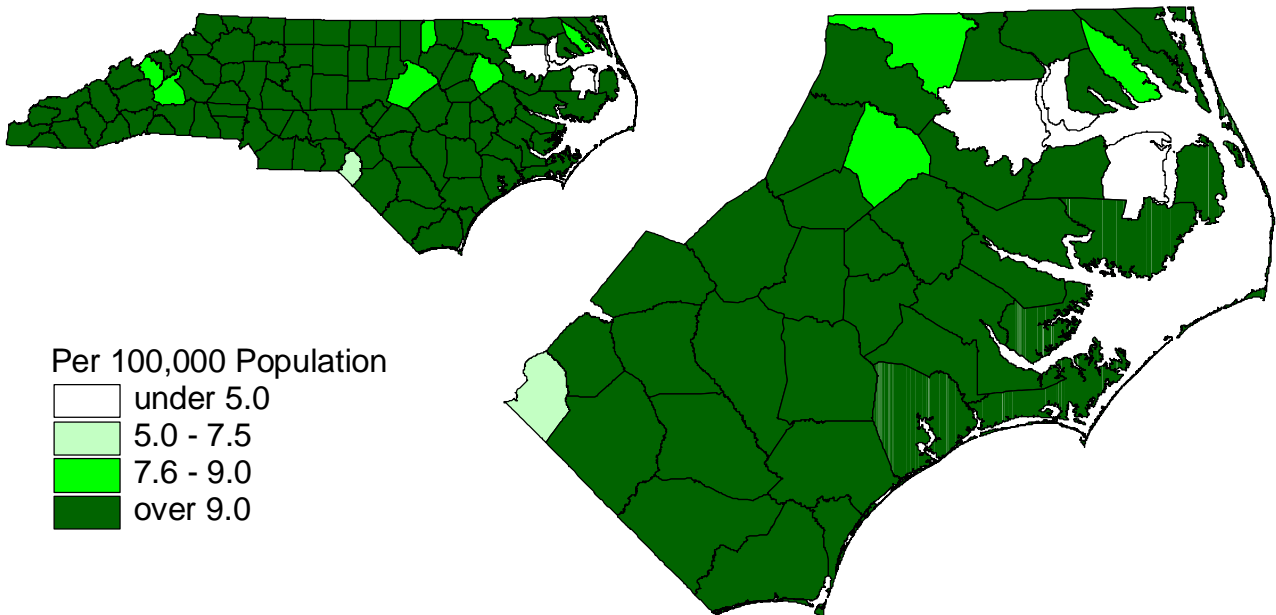
NC Data Source: NC State Center for Health Statistics  
 US Data Source: National Center for Health Statistics

### Map 14.2 Crude and Age-Adjusted Suicide Mortality Rates: North Carolina and Eastern North Carolina, 1994-1998

#### Crude Rate



#### Age-Adjusted Rate

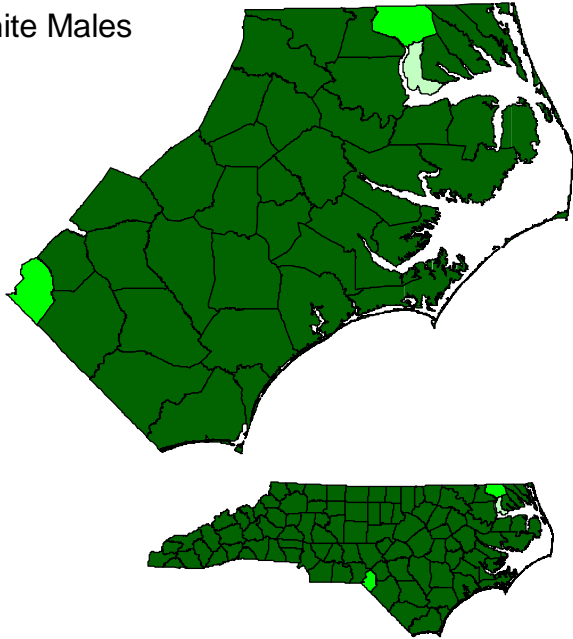


Suicide ICD-9 Codes: E950-E959  
Five-Year Average, Age-Adjusted Rates Standardized to US 2000 SM

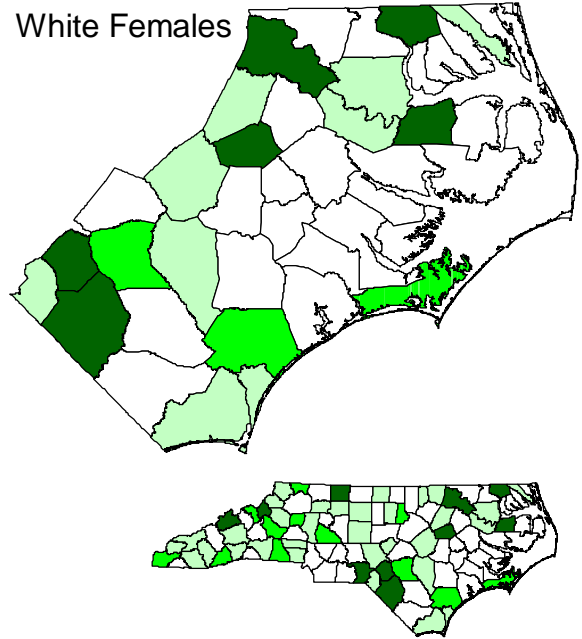
Data Source: NC State Center for Health Statistics

### Map 14.3 Race-Gender Specific, Age-Adjusted Suicide Mortality Rates: North Carolina and Eastern North Carolina, 1994-1998

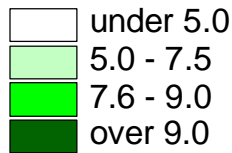
White Males



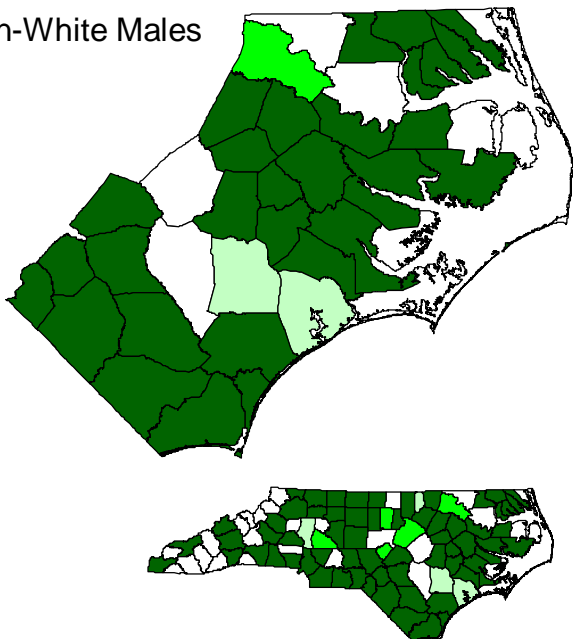
White Females



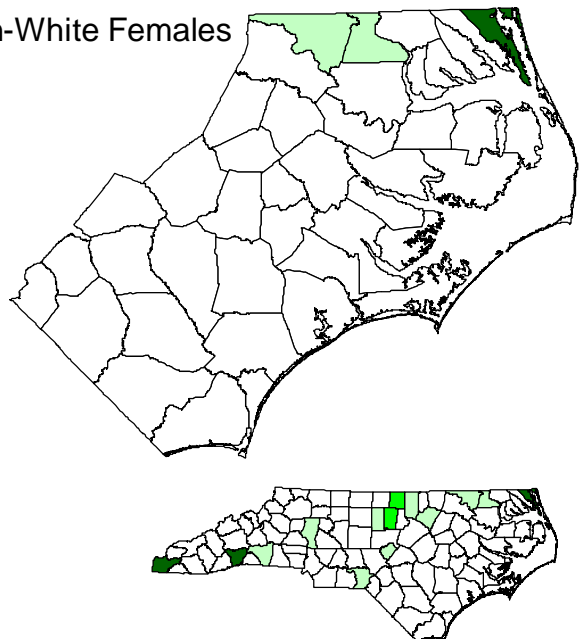
Per 100,000 Population



Non-White Males



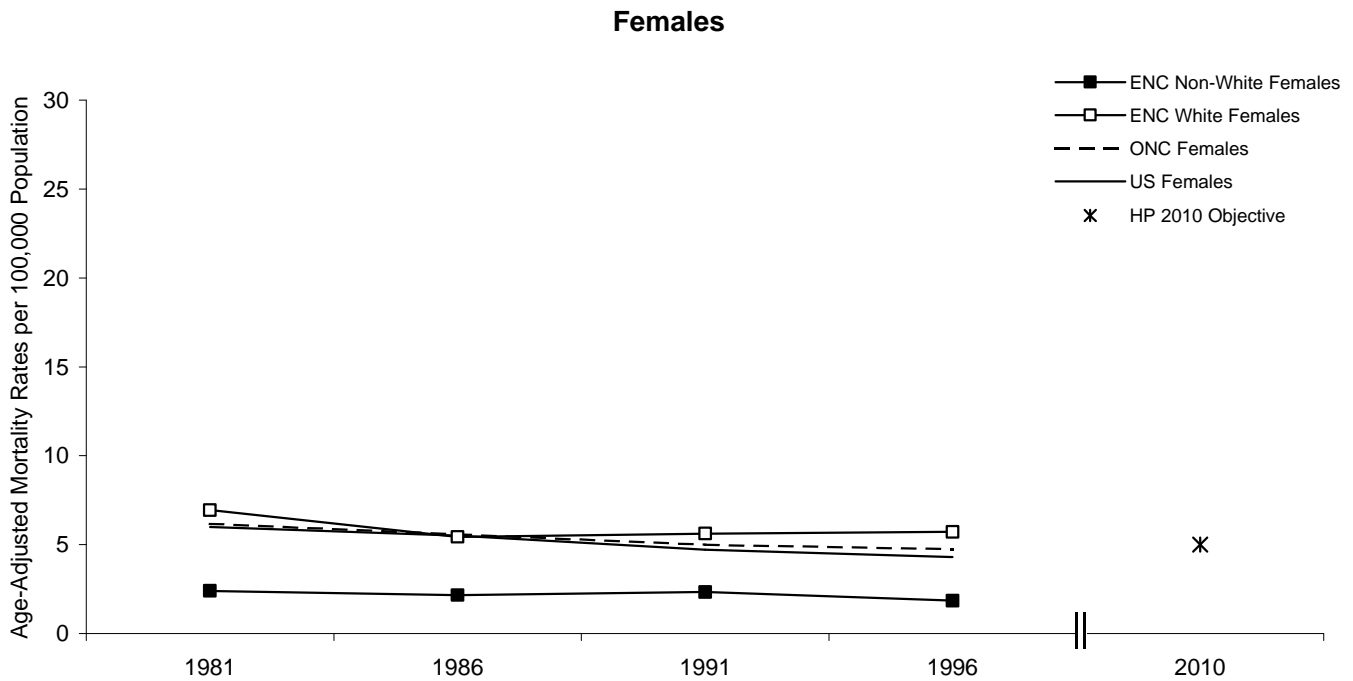
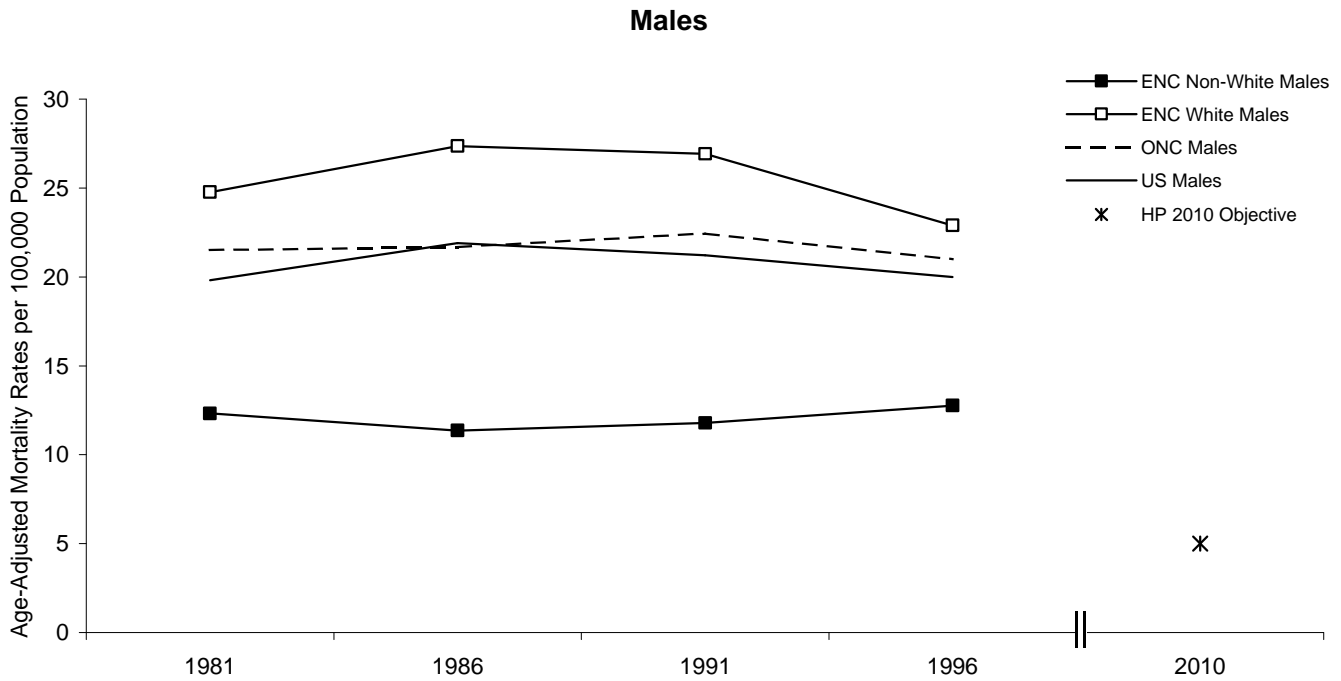
Non-White Females



Suicide ICD-9 Codes: E950-E959  
Five-Year Average, Age-Adjusted Rates Standardized to US 2000 SM

Data Source: NC State Center for Health Statistics

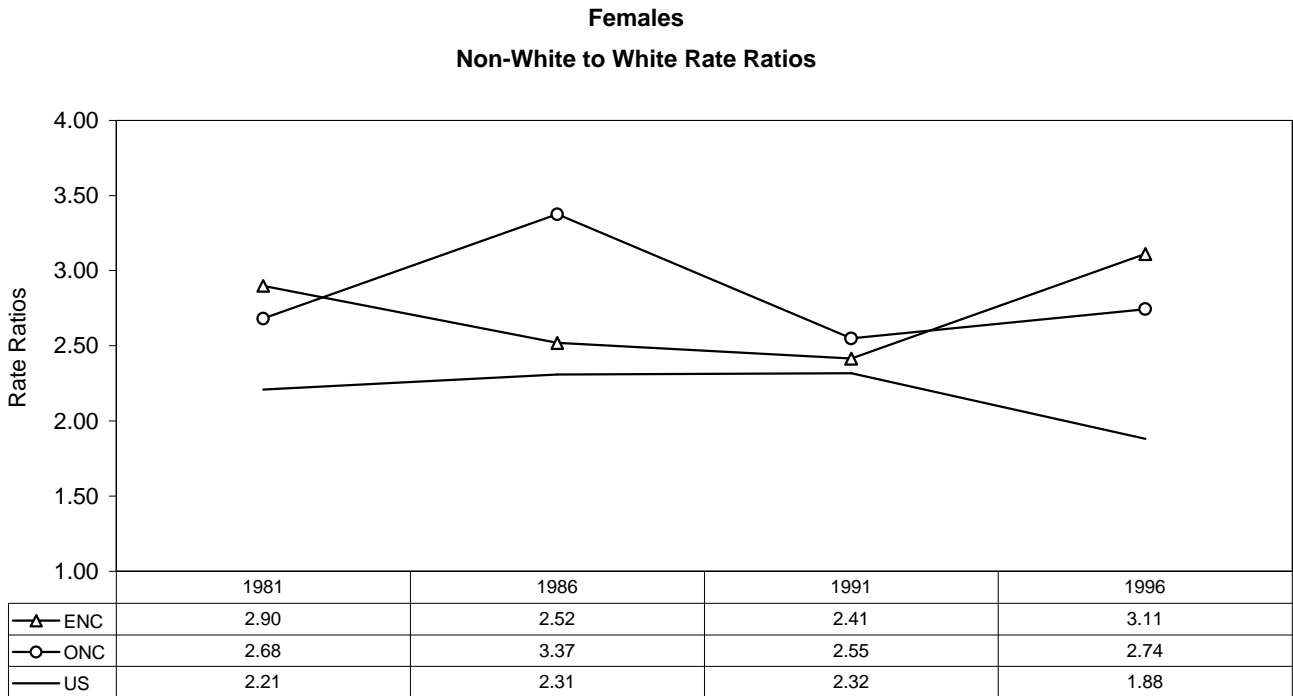
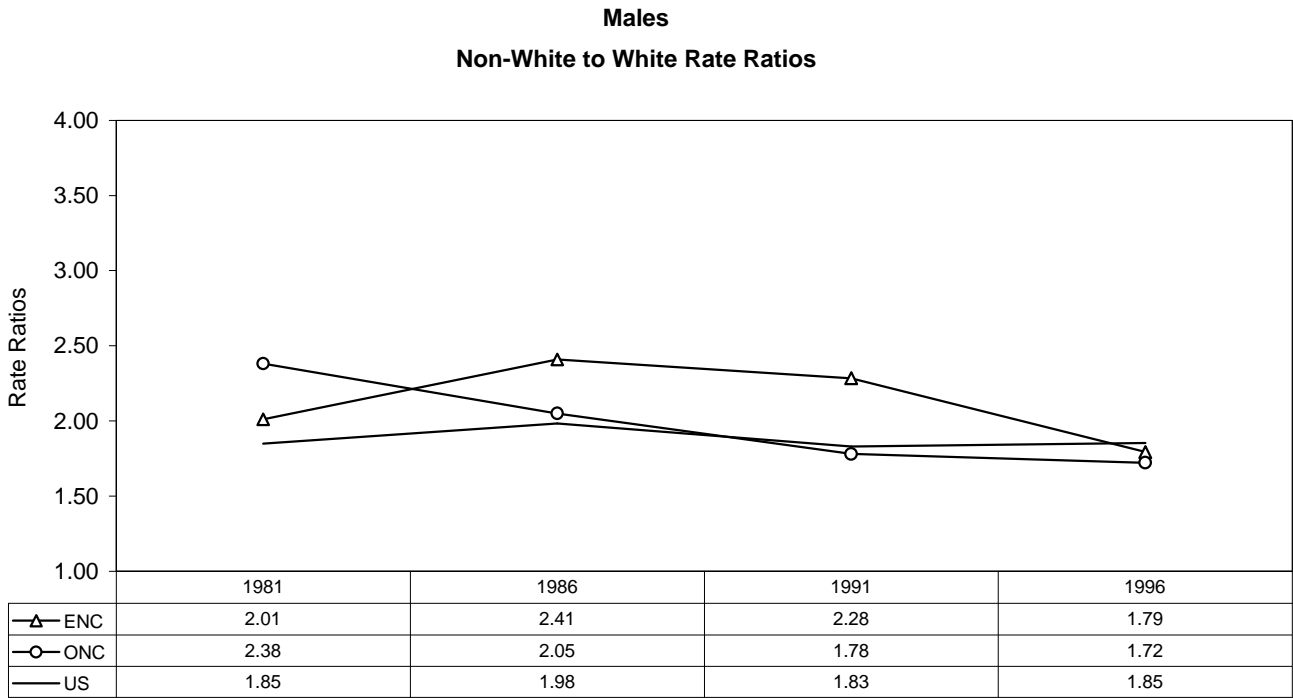
**Figure 14.1 Age-Adjusted Suicide Mortality Rates by Gender: Regional and National Trends, 1979-1998**



Suicide ICD-9 Codes: E950-E959  
 Five-Year Average, Age-Adjusted Rates Standardized to US 2000 SM  
 US Rates for Middle Year of Five Year Periods

NC Data Source: NC State Center for Health Statistics  
 US Data Source: National Center for Health Statistics

**Figure 14.2 Racial Disparities in Age-Adjusted Suicide Mortality Rates by Gender: Regional and National Trends, 1979-1998**



Suicide ICD-9 Codes: E950-E959  
Based on Five-Year Average, Age-Adjusted Rates Standardized to US 2000 SM  
US Rates for Middle Year of Five Year Periods

NC Data Source: NC State Center for Health Statistics  
US Data Source: National Center for Health Statistics

## SOURCES OF INFORMATION ABOUT SUICIDE

Governor's Task Force for Healthy Carolinians (2000). *Healthy Carolinians 2010: North Carolina's Plan for Health and Safety*. Raleigh, NC: Department of Health and Human Services.

National Center for Health Statistics (1999). *Health, United States, 1999*. With Health and Aging Chartbook. Hyattsville, MD: National Center for Health Statistics.

National Center for Health Statistics (1999). *Healthy People 2000 Review, 1998-1999*. Hyattsville, MD: Public Health Service.

United States Department of Health and Human Services (2000). *Healthy People 2010*. 2nd ed. With Understanding and Improving Health and Objectives for Health Improvement. 2 vols. Washington, DC: U. S. Government Printing Office.

United States Public Health Service (1999). *The Surgeon General's Call to Action to Prevent Suicide*. Washington, DC: United States Public Health Service.

Centers for Disease Control and Prevention  
(<http://www.cdc.gov>)

Healthy People 2010  
(<http://web.health.gov/healthypeople>)

National Center for Health Statistics  
(<http://www.cdc.gov/nchs>)

National Institute for Mental Health  
National Institutes of Health  
(<http://www.nimh.nih.gov>)

North Carolina Center for Health Statistics  
(<http://www.schs.state.nc.us/SCHS>)

## APPENDIX N

### ICD-9 Codes for Suicide

- E950: Suicide and self-inflicted poisoning by solid or liquid substances
- E951: Suicide and self-inflicted poisoning by gases in domestic use
- E952: Suicide and self-inflicted poisoning by other gases and vapors
- E953: Suicide and self-inflicted injury by hanging, strangulation, and suffocation
- E954: Suicide and self-inflicted injury by submersion
- E955: Suicide and self-inflicted injury by firearms and explosives
- E956: Suicide and self-inflicted injury by cutting and piercing instrument
- E957: Suicide and self-inflicted injury by jumping from high place
- E958: Suicide and self-inflicted injury by other and unspecified means
- E959: Late effects of self-inflicted injury