Chapter 11: Health Disparities

In 1999, The National Institutes of Health provided the initial definition for health disparities as "the difference in incidence, prevalence, mortality, and burden of disease. Also included are other adverse health conditions that exist among specific population groups in the United States." (National Cancer Institute, n.d.). While life expectancy and overall health for many Americans continue to improve, some racial and ethnic groups do not benefit equally. There is continuing disparity in the burden of illness and death experienced by many African Americans, Hispanic-Latinos, Asian Americans/Pacific Islanders, and American Indians/Alaska Natives. These communities experience shorter life expectancies and higher rates of poverty, infant mortality, low birth weight, cancer, asthma, diabetes, and cerebrovascular disease as compared to the United States population as a whole (NC-OMHHD, 2003[a] & The Office of Minority Health 2005).

Emerging Dimensions for Health Disparities

Although variations in health can be seen for certain racial and ethnic groups, differences also exist by age, gender, education, income level, geographic location, and disability status. Social determinants, physical environments, and genetic predisposition are all factors that influence health status. Some community members experience limited access to health-care services, economic resources, educational opportunities, or healthful living environments. Multiple factors can combine to create reduced health status for some groups, causing them to experience poorer health than the general population (NC-OMHHD, 2003[a]).

National Plan of Action

Healthy People 2010 outlines a national agenda for disease prevention and health promotion from the U.S. Department of Health and Human Services. Its two main goals are to improve the quality of life for all Americans and eliminate health disparities. This document sets measurable health objectives and established community benchmarks to measure gaps and monitor progress. Additionally, the North Carolina Office of Minority Health and Health Disparities published Health Disparities Report Card 2003 and Racial and Ethnic Health Disparities in North Carolina-Report Card 2006. These documents serve to guide community organizations, local health departments, state agencies, and healthcare providers as they administer services and engage in public health outreach (NC-OMHHD, 2003[b] & NC-OMHHD, 2006).

Rockingham County Healthy Carolinians and Rockingham County Department of Public Health collaborated in the collection of 474 community health indicators. The data was obtained to elicit specific groups in Rockingham County that were experiencing the most severe health inequalities. The finding were as follows:

- Leading causes of death
- Low birth weight
- Infant mortality
- Asthma
- Motor vehicle accident
- Unintentional injury
- Poverty

Health Disparity by Race and Ethnicity

The following tables and charts display persisting health disparities between White and Minority populations in Rockingham County. Ratios for comparison were calculated using the model from the Racial and Ethnic Health Disparities in North Carolina Report Card 2006. The Minority rates were divided by White rates. The White population is used as a point of comparison to determine the disparity ratio and the grade for the minority population groups because White people are the majority population in North Carolina and often have the best health outcomes. Comparing different Minority groups to the White majority population does not mean that Whites are setting a "gold standard". The White population also has major health issues that need to be addressed. The health status ranking of North Carolina in the nation is closely linked to the health status of minorities and other underserved groups. Although the following data have been presented by race and ethnicity to describe disparities in health status, race/ethnicity by itself is not a cause of a health condition or health status (NC-OMHHD, 2006).

Here is an Example

The 2002 – 2006 septicemia death rate for Minority males (28.7) was divided by the septicemia death rate for White males (18): 28.7 / 18 = 1.6. This ratio shows that the septicemia death rate for Minority males is 1.6 times as high as the rate for White males. Using the disparity ratio grading scale below, the ratio of 1.6 receives a grade of "**C**".

Disparity Ratio and Grades:

A = 0 - 0.5
B = 0.6 - 1.0
C = 1.1 - 1.9
D = 2.0 - 2.9
F = 3.0 or greater

Table 58 displays mortality rates for the leading causes of death by race and gender for Minority and White population groups.

Table 58.
Race and Sex-Specific Death Rates* for Rockingham County: 2002-2006

CAUSE OF DEATH:	Overall Rate*	White Male	Minority Male	Ratio to White	Grade	White Female	Minority Female	Ratio to White	Grade
All Causes	980.0	1,168.0	1,410.3	1.2	C	808.5	820.6	1.0	B
Diseases of Heart	238.3	295.7	357.8	1.2	C	177.9	218.5	1.2	C
Acute Myocardial Infarction	72.8	96.0	125.3	1.3	C	49.4	62.3	1.3	C
Other Ischemic Heart Disease	86.1	122.1	150.9	1.2	C	56.3	59.1	1.0	B
Cerebrovascular Disease	72.4	66.5	105.0	**1.6**	C	71.7	76.5	1.1	C
Cancer-All Sites	218.8	282.9	332.7	1.2	C	176.6	163.9	0.9	B
Colon, Rectum, and Anus Cancer	22.3	27.5	35.4	1.3	C	18.5	14.6	0.8	B
Pancreas Cancer	12.6	17.1	16.2	0.9	B	9.0	10.6	1.2	C
Trachea, Bronchus, and Lung Cancer	70.4	106.4	73.1	0.7	B	54.0	23.0	0.4	A
Female Breast Cancer	25.9	0.4	0.0	**	**	25.1	28.5	1.1	C
Prostate Cancer	30.8	24.9	63.0	**2.5**	D	0.0	0.0	**	**
Chronic Lower Respiratory Diseases	60.3	77.0	70.4	0.9	B	56.1	29.0	0.5	A
All Other Unintentional Injuries	34.2	45.1	41.7	0.9	B	26.9	14.5	0.5	A
Diabetes Mellitus	32.2	29.1	49.9	**1.7**	C	28.0	47.5	**1.7**	C
Unintentional Motor Vehicle Injuries	28.3	39.0	45.4	1.2	C	19.2	9.1	0.5	A
Pneumonia and Influenza	26.8	34.3	36.2	1.1	C	23.1	18.5	0.8	B
Nephritis, Nephrotic Syndrome, and Nephrosis	21.6	23.4	37.5	**1.6**	C	16.9	28.8	**1.7**	C
Chronic Liver Disease and Cirrhosis	10.7	17.2	6.0	0.3	A	6.4	5.2	0.8	B
Septicemia	18.6	18.0	28.7	**1.6**	C	17.8	17.3	1.0	B
Alzheimer's disease	20.8	17.4	10.4	0.6	B	26.3	5.9	0.2	A
Suicide	13.8	27.1	12.2	0.5	A	6.2	0.0	0.0	**
Homicide	8.7	9.2	38.7	**4.2**	F	2.4	2.1	0.9	B
Acquired Immune Deficiency Syndrome	3.5	1.7	19.6	**11.5**	F	0.0	8.5	**	**

*Rates Per 100,000 Population, Standard = Year 2000 U.S. Population
Source: NC-SCHS, 2008[a]

Table 59 displays the data where death rate ratios are 1.6 or greater for Minority males and females compared to the White population.

Tables 59.
Race and Sex-Specific Age-Adjusted Death Rates* for Men in Rockingham County: 2002-2006

	Overall Rate*	White Male	Minority Male	Ratio to White	Grade
Septicemia	18.6	18.0	28.7	1.6	**C**
Nephritis, Nephrotic Syndrome, and Nephrosis	21.6	23.4	37.5	1.6	**C**
Cerebrovascular Disease	72.4	66.5	105.0	1.6	**C**
Diabetes Mellitus	32.2	29.1	49.9	1.7	**C**
Prostate Cancer	30.8	24.9	63.0	2.5	**D**
Homicide	8.7	9.2	38.7	4.2	**F**
Acquired Immune Deficiency Syndrome	3.5	1.7	19.6	11.5	**F**

*Rates Per 100,000 Population, Standard = Year 2000 U.S. Population
Source: NC-SCHS, 2008[a]

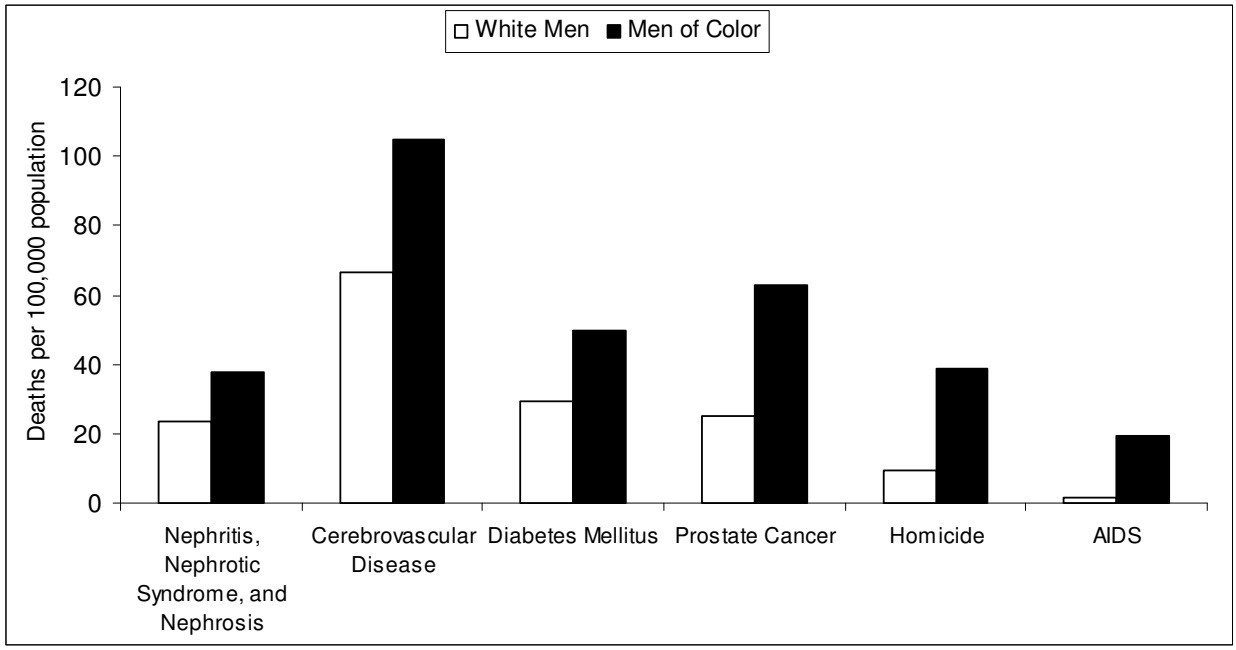
Table 60.
Race and Sex-Specific Age-Adjusted Death Rates* for Women in Rockingham County: 2002-2006

	Overall Rate*	White Women	Minority Women	Ratio to White	Grade
Diabetes Mellitus	32.2	28.0	47.5	1.7	**C**
Nephritis, Nephrotic Syndrome, and Nephrosis	21.6	16.9	28.8	1.7	**C**
Acquired Immune Deficiency Syndrome	3.5	0.0	8.5	**	**

*Rates Per 100,000 Population, Standard = Year 2000 U.S. Population.
Source: NC-SCHS, 2008[a]

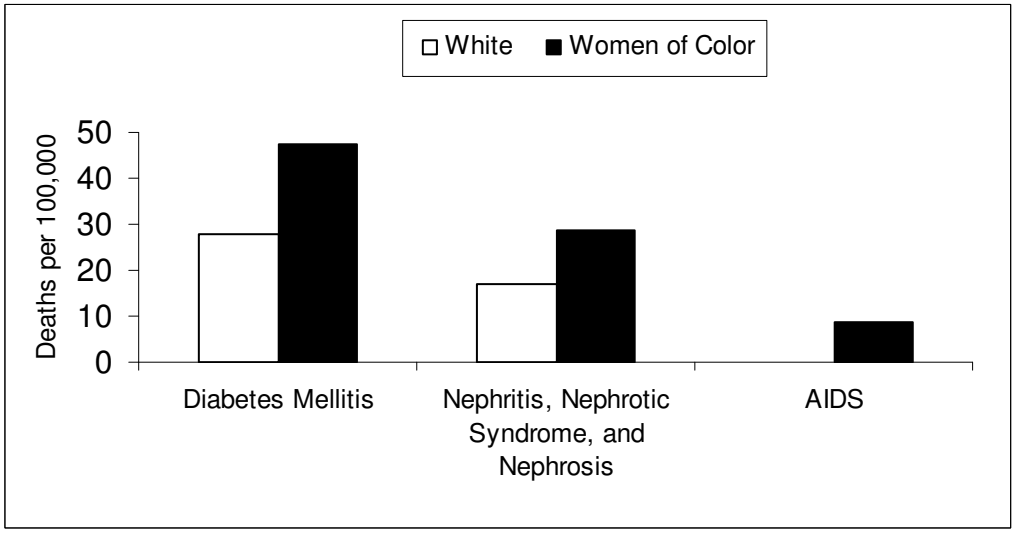
Examination of leading causes of death in Rockingham County reveal persisting and significant health disparities for people of color. A comparison was made of the leading causes of death by sex and race. Less disparity was noted for women of color, and areas of concern included diabetes mellitus, kidney disease, and AIDS. Among men of color, five areas of concern include cerebrovascular disease, prostate cancer, diabetes mellitus, homicide, AIDS, and kidney disease. Figures 81 and 82 show the severity of noted disparities.

Figure 81.
Health Disparity by Leading Cause of Death in Rockingham County Men, 2002-2006



*Rates Per 100,000 Population, Race and Sex-Specific Age Adjusted Death Rates per 100,000 Population, Standard = Year 2000 U.S. Population
Source: NC-SCHS, 2008[a]

Figure 82.
Health Disparity by Leading Cause of Death in Rockingham County Women, 2002-2006



*Rates Per 100,000 Population, Race and Sex Specific Age Adjusted Death Rates per 100,000 Population, Standard = Year 2000 U.S. Population
Source: NC-SCHS, 2008[a]

Tables 61 and 62 display significant disparities in birth outcomes for Minority infants.

Table 61.
North Carolina Resident Births 2002-2006: Percent Low Birth Weight Births By Race

	White	Minority	Ratio to White	Grade
Rockingham County	8.8	13.2	1.5	C
North Carolina	7.4	13.5	1.8	C

Source: NC-SCHS, 2008[a]

Table 62.
North Carolina Resident Fetal Death Rates per 1,000 Deliveries: 2002-2006

	White	Minority	Ratio to White	Grade
Rockingham County	7.2	16.6	2.3	D
North Carolina	5.2	11.7	2.3	D

Source: NC-SCHS, 2008[a]

Health Disparity by Age

Each year, the North Carolina State Center for Health Statistics ranks the 10 leading causes of death according to five age categories Tables 63 and 64 shows the impact of motor vehicle and unintentional injuries in Rockingham County by age category. Ratios and grades are not calculated.

Table 63.
Motor Vehicle Injury Death Rate by Age in Years: 2002-2006

	0 – 19	20-39	40-64	65-84	85+
Rockingham County	19.0	42.6	20.2	*	*
North Carolina	11.8	25.0	17.9	*	*

Non age-adjusted rate per 100,000 Population.
* Rate not available – not ranked as leading cause of death.
Source: NC-SCHS, 2008[a]

Table 64.
Other Unintentional Injury Death Rate* by Age Group: 2002-2006

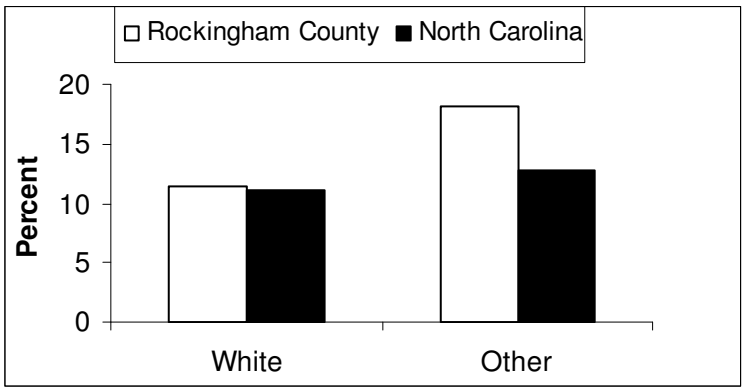
	0 – 19	20-39	40-64	65-84	85+
Rockingham County	10.4	29.8	33.4	64.7	351.1
North Carolina	5.8	18.9	25.9	62.3	319.5

*Rate is non age-adjusted rate per 100,000 Population.
Source: NC-SCHS, 2008[a]

Health Disparity by Asthma

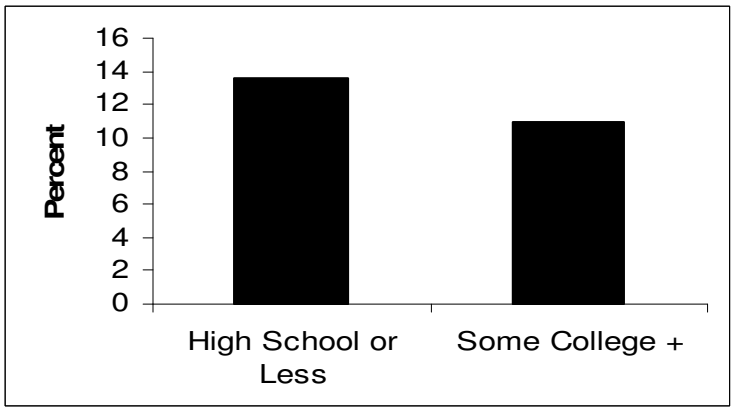
Figures 83, 84, and 85 represent notable health disparities for asthma in the Rockingham County Region (Davie/Rockingham/Stokes/Surry/Yadkin Counties) during 2006 by race, education and income level.

Figure 83.
Percent Reporting Asthma in Rockingham County Region and North Carolina by Race, 2006



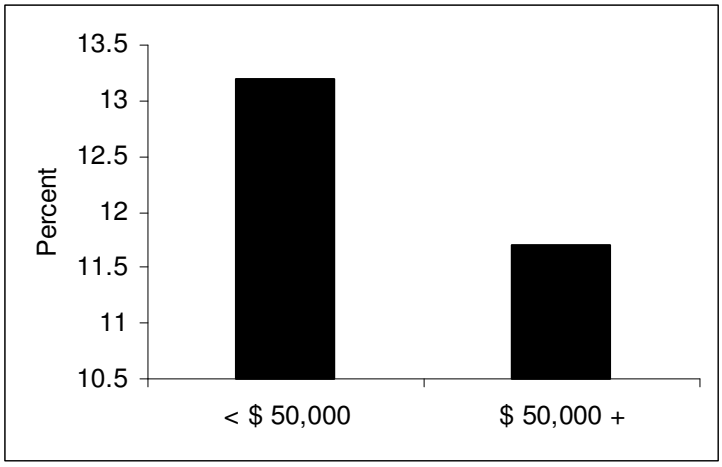
Source: BRFSS, 2006

Figure 84.
Percent Reporting Asthma in Rockingham County Region by Education Level, 2006



Source: BRFSS, 2006

Figure 85.
Percent Reporting Asthma in Rockingham County Region by Household Income, 2006



Source: BRFSS, 2006

Health Disparity by Income

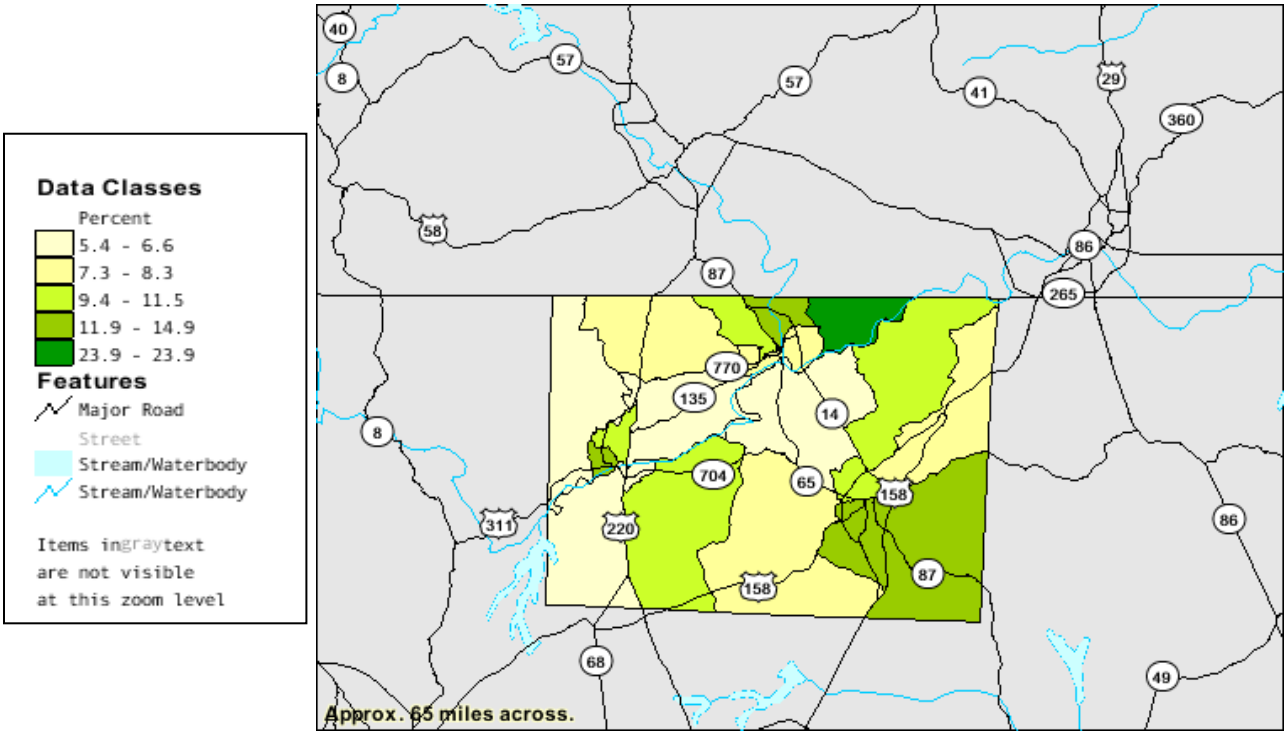
Table 65 and Figure 86 provide information on poverty in Rockingham County by race and geographic location. Income level and poverty status are strong social determinants of physical and mental health.

Table 65.
Percent of Children Under 18 Years of Age Living Below Federal Poverty Level in 2000

	Rockingham County Percent	Ratio to Whites
All	16.8	**
White	13.1	1.0
African American or Black	26.5	2.02
American Indian	19.7	1.5
Asian/Pacific Islander	31.8	2.43
Hispanic or Latino	35	2.67

Source: RCDPH, 2004

Figure 86.
Percent of Families in Rockingham County Below the Poverty Level, 1999: 2000 by Census Tract



Source: U.S. Census Bureau, 2006[b]

A Call to Action

An examination of local health indicators by race, age, education, geography, income, and education is a tool that:

- Allows communities to measure health disparity gaps and monitor progress toward eliminating health status gaps.
- Provides current data to help guide community and faith-based organizations, local health departments, state agencies, legislators, and local businesses to make plans for services and outreach to help specific groups and communities with health status gaps.
- Assists service providers with planning and implementing targeted public health interventions. Programs that are targeted to reach specific populations are more likely to create the desired impact and utilize public resources more wisely.
- Can be used to inform key decision makers on eliminating health disparities through policy reform and systems change.