

Health Disparities Addressed at the National, State, and Local Level

Eliminating health disparities is a basic goal for many national, state, and local organizations. The Centers for Disease Control (CDC) defines health disparities, health inequalities, and health inequities as the following:

- Health disparities - differences in health outcomes and their determinants between segments of the population, as defined by social, demographic, environmental, and geographic attributes.
- Health inequality (a word that is quite equal in meaning to health disparities) - population health associated with individual- or group-specific attributes.
- Health inequities - a subset of health inequalities that are modifiable, associated with social disadvantage, and considered ethically unfair.

Health disparities, inequalities, and inequities are indicators of community health and provide information for decision making and intervention implementation to reduce preventable morbidity and mortality.

The CDC Health Disparities and Inequalities Report 2011 states that universally applied interventions will seldom be sufficient to address health disparity indicators effectively. Therefore, the CDC encourages the use of evidence-based strategies, support of public health partners, and convening of expert and public stakeholders to secure their commitment to take action to eliminate health disparities (CDC, 2011). State and local organizations also support the use of evidence-based strategies and collaboration efforts within communities.

The United States Department of Health and Human Services (DHHS) also addresses health disparities in its Healthy People 2020 objectives which aim to improve the health of all Americans. One of the overarching goals for Healthy People 2020 is to achieve health equity, eliminate disparities, and improve the health of all groups (HP, 2012^a).

Healthy People 2020 will assess health disparities among Americans by tracking rates of illness, death, chronic conditions, behaviors, and other types of outcomes in relation to demographic factors, including:

- Race and ethnicity
- Gender
- Sexual identity or orientation
- Disability status or special health care needs
- Geographic location (rural and urban) (HP, 2010)

Health disparities are not only being addressed at the national level by the CDC and DHHS, but also at the state level by the Healthy North Carolina 2020 objectives. North Carolina's goal is to become one of the healthiest states in the nation. Healthy NC 2020 consists of 40 objectives within 13 focus areas that in some way address those health disparities in order to make meaningful improvements in the health of North Carolinians.

Those 13 focus areas are:

- Tobacco Use
- Physical Activity and Nutrition
- Injury
- Sexually Transmitted Diseases/Unintended Pregnancy
- Maternal and Infant Health
- Substance Abuse
- Mental Health
- Infectious Disease/Foodborne Illness
- Oral Health
- Social Determinants of Health
- Environmental Health
- Chronic Disease
- Cross-Cutting (NCDHHS, 2011)

Health disparities are experienced in communities across the states, rural and urban, and Rockingham County is no exception. The following data shows health disparities that exist in Rockingham County in a variety of demographic settings. The data outlined consist of health disparity rates in which Rockingham County may be higher or lower than that of the state.

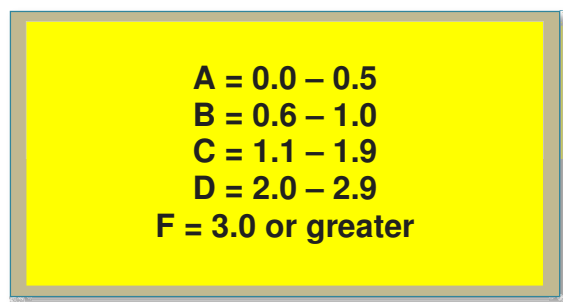
Disparity Ratios and Grades

The Racial and Ethnic Health Disparities in North Carolina Report Card 2010 uses ratios to compare race and ethnic groups in North Carolina. These ratios are a measure in one group divided by the measure in the white group. The ratios show areas with the greatest health disparities, areas with growing disparities, and disparity areas that are improving.

Letter grades ranging from “A” for very good to “F” for failing were given to each racial or ethnic minority group in North Carolina, as compared to the measures of the white population of North Carolina.

These grades do not consider trends in the data or the ranking of North Carolina relative to the United States, so a grade of “A” or “B” could still mean that improvement is needed. In this *Report Card*, the health status of the white population is not graded. The white population is used as a point of comparison to determine the disparity ratio and the grade for the minority population groups because whites are the majority population in North Carolina and because they often have the best health outcomes. Comparing the 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 (NCDHHS, 2010).

Figure 11.1 shows the grading scale used in assigning the letter grades. (This grading scale was reversed for the social and economic well-being indicator “median family income.”)

Figure 11.1 Disparity Ratio and Grades

Source: NCDHHS, 2010

Health Disparities by Race and Ethnicity

Table 11.1 depicts death rates by race in NC and Rockingham County. The bold numbers emphasize the causes of death in Rockingham County and North Carolina that have an African American-to-white ratio of **1.5** and higher, or grade C or higher. With a D grade, North Carolina has higher rates of diabetes mellitus, nephritis, and nephrotic syndrome than Rockingham County, which scored grades C in those areas.

Table 11.1 NC Resident Race/Ethnicity-Specific and Sex-Specific Age-Adjusted Death Rates Standard = Year 2000 US Population (Rates Per 100,000), 2006 - 2010

Cause of Death:	White, Non-Hispanic		African American, Non-Hispanic		Ratio to White NC	Grade	Ratio to White RC	Grade
	Deaths	Rate	Deaths	Rate				
All Causes	4,306	930.2	969	1025.9	1.2	C	1.1	C
Diseases of the Heart	994	207.0	224	228.4	1.2	C	1.1	C
Acute Myocardial Infarction	284	59.3	52	53.6	1.1	C	0.9	B
Other Ischemic Heart Disease	338	70.7	82	81.8	1.1	C	1.2	C
Cerebrovascular Disease	252	52.5	74	80.5	1.5	C	1.5	C
Cancer	951	201.1	224	231.0	1.2	C	1.1	C
Colon, Rectum, Anus	77	16.1	25	25.6	1.5	C	1.6	C
Trachea, Bronchus, Lung	329	69.1	64	65.9	1.0	B	1.0	B
Diabetes Mellitus	111	23.3	41	45.0	2.6	D	1.9	C
Pneumonia and Influenza	143	29.7	30	32.8	1.0	B	1.2	C
Chronic Lower Respiratory Diseases	373	77.1	44	46.7	0.6	B	0.6	B
Nephritis, Nephrotic Syndrome, Nephrosis	92	19.1	25	26.6	2.5	D	1.4	C
All Other Unintentional Injuries	169	42.7	24	25.4	0.7		0.6	B

Source: SCHS, 2012^a

Employment

The loss of economic opportunities in Rockingham County due to lost manufacturing jobs and decreased agricultural employment has ultimately resulted in increased unemployment. Table 11.2 shows Rockingham County with a higher unemployment rate than that of the state at 12.1% and 10.1%, respectively.

Table 11.2 Unadjusted Unemployment Rate, August 2012

	Unemployment Rate
United States	8.2%
North Carolina	9.7%
Rockingham County	11.3%

Source: ESC, 2012

Income and Poverty

From 2006 - 2010, Rockingham County had a significantly higher population of persons who live below the poverty level than that of the United States at 15.6% and 13.8%, respectively, as depicted in Table 11.3 (USCB, 2010^a, 2010^b). Figure 11.2 illustrates how Healthy North Carolina 2020 hopes to decrease the number of individuals living in poverty to 12.5%. Rockingham County must reduce the number of persons living in poverty by 3.1% in order to match the Healthy NC 2020 goal. People who live in poverty typically experience worse health outcomes than those with higher incomes. By decreasing the number of persons living below poverty level, the number of adults and children who experience poor health or who live with chronic illnesses can also be reduced. From 2006 - 2010, Rockingham County experienced a far lower median household income than that of the US, as shown in Table 11.4 (USCB, 2010^a, 2010^b).

Table 11.3 Persons Living Below Poverty Level, 2006 - 2010

	Percent Living Below Poverty Level
United States	13.8%
North Carolina	15.5%
Rockingham County	15.6%
Healthy North Carolina 2020 Target	12.5%

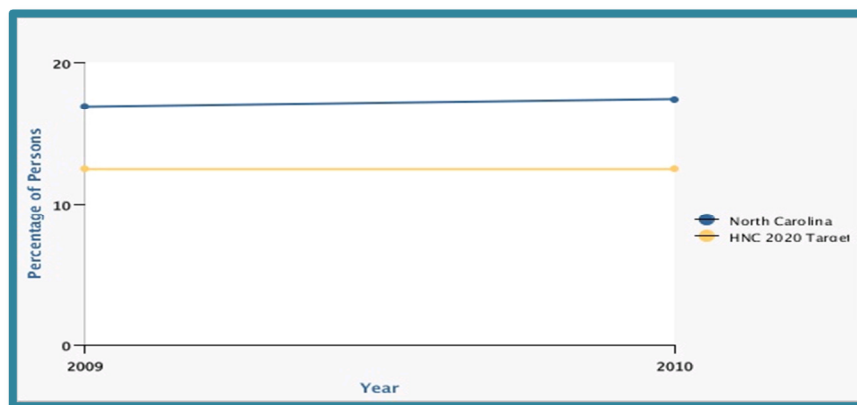
Source: USCB, 2010^a, 2010^b**Figure 11.2** Percentage of Individuals Living in Poverty NC vs. Healthy NC 2020 Target, 2009Source: SCHS, 2012^b

Table 11.4 Median Household Income, 2006 - 2010

	Median Household Income
United States	\$51,914
North Carolina	\$45,570
Rockingham County	\$39,231

Source: USCB, 2010^a, 2010^b

Education

Educational level is a social determinant issue, much like poverty and income status, that correlates with maximum health attainment. Low educational attainment can be correlated to poor health status due to more people engaging in risky health behaviors because of lack of knowledge. Low SAT scores, as depicted in Table 11.5, can keep a person from obtaining higher education. Table 11.6 shows that during the 2010 - 2011 school year, Rockingham County had a much higher dropout rate (3.18) than the state (2.33). The four-year graduation rate describes the percentage of students who attend the same high school and are first considered to have entered grade 9 in the same year and graduated during their expected year of graduation. Although the four-year graduation rate in Rockingham County increased from the 2010 – 2011 school year to the 2011 - 2012 school year from 72.4% to 76.0%, respectively, the rate is still lower than North Carolina's rate of 80.4% as shown in Table 11.7. Healthy North Carolina 2020 aims to raise the graduation rate to 94.6% by the year 2020 as shown in Figure 11.3.

Table 11.5 SAT Scores, 2011

	United States	North Carolina	Rockingham County
Critical Reading	497	493	471
Math	514	508	487
Writing	489	474	456

Source: PSNC, 2011^a**Table 11.6** Grades 7-13 Dropout Rate, 2010 - 2011

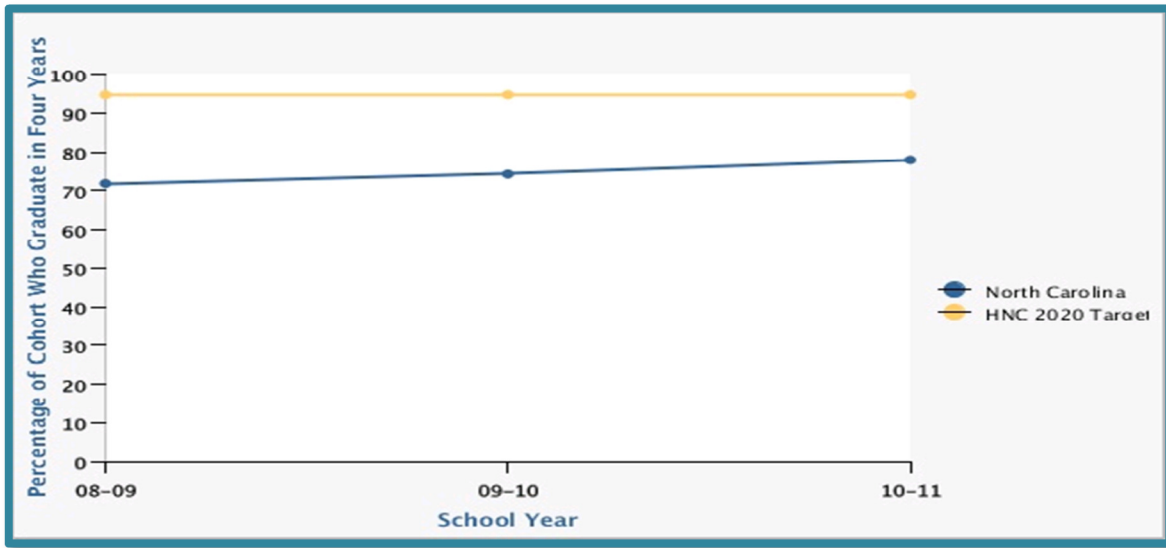
	Dropout Rate
North Carolina	2.33
Rockingham County	3.18

Source: PSNC, 2011^b**Table 11.7** Four-Year Cohort Graduation Rate (Percent), 2011 - 2012

	Graduation Rate
North Carolina	80.4%
Rockingham County	76.0%

Source: AECF, 2012, NCDPH-HNC, 2012

Figure 11.3 Four-Year High School Graduation Rate NC vs. Healthy NC 2020 Target, 2009 - 2011

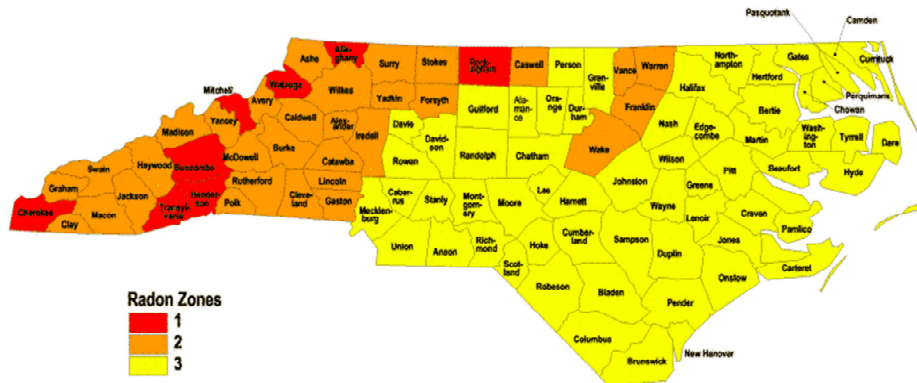


Source: SCHS, 2012^c

Physical Environment

Radon is a toxic, colorless, odorless, tasteless radioactive gas that is formed from the naturally occurring decay of uranium in the soil and bedrock. Radon is the number one cause of lung cancer in people who never smoked (NCRP, 2012). Figure 11.4 shows that Rockingham County is the only county in the Piedmont region that is designated as a Zone 1 county having the highest potential for elevated radon levels.

Figure 11.4 Radon Potential Zones in North Carolina



Source: NCRP, 2012

Maternal and Child Health

There are many reasons that a pregnancy can have unwanted outcomes including: chronic disease, multiple pregnancies, smoking, alcohol and drug use, poor nutrition, low birth weight, and even stress. As depicted in Table 11.8, the fetal death rates by race from 2006 - 2010 in NC and Rockingham County both have a grade of D, with Rockingham County only slightly higher than the state. Table 11.9 shows Rockingham County's infant mortality rate of 7.4 was higher than the state rate of 7.0. Healthy NC 2020 has a goal to reduce the infant mortality rate to 1.92, as shown in Figure 11.5.

Table 11.8 NC Resident Fetal Death Rate (per 1,000 Deliveries), 2006 - 2010

	White	Black	Black-to-White Ratio	Grade
North Carolina	4.9	12.0	2.4	D
Rockingham County	4.5	12.7	2.8	D

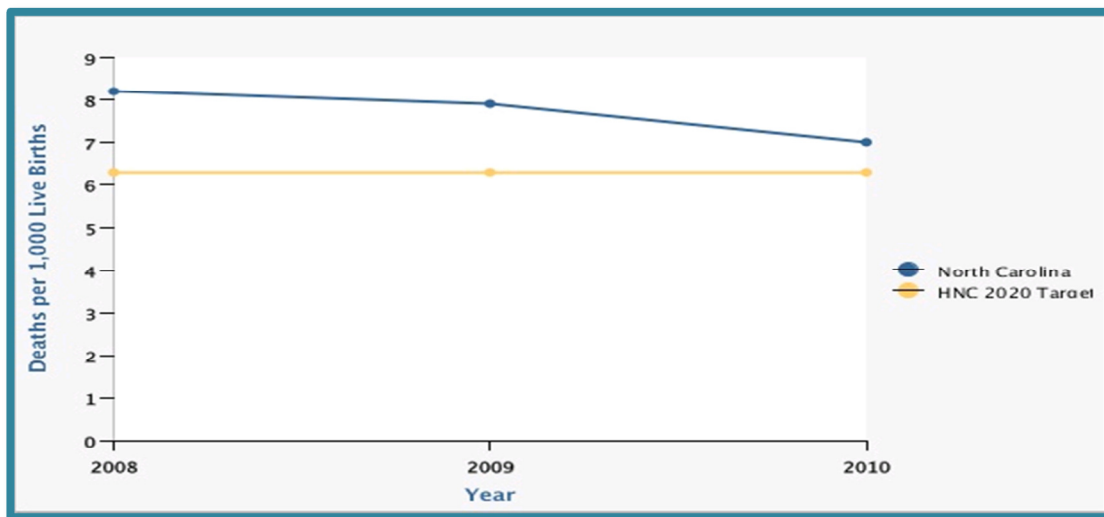
Source: SCHS, 2010^a, 2010^b

Table 11.9 Infant Mortality Rate (per 1,000 Live Births), 2010

	Infant Mortality Rate
North Carolina	7.0
Rockingham County	7.4

Source: SCHS, 2010^a, 2010^b

Figure 11.5 Infant Mortality Rate NC vs. Healthy NC 2020 Target, 2008 - 2010



Source: SCHS, 2012

There are positive aspects to maternal and child health statistics within the county when compared to the state. From 2006 - 2010, the ratio of black women to white women giving birth to low and very low weight babies was lower than the state. The ratios can be seen in Table 11.10. In 2010, although NC and Rockingham County both received grades of D in teen pregnancy by race, Rockingham County was still slightly lower than

the state at 2.3 and 2.4, respectively. This information is depicted in Table 11.11. While the county is somewhat lower by race and ethnicity in teen pregnancy, overall the county ranks 31 among all North Carolina counties in teen pregnancy rates with a rate of 58.3, compared to that of NC at 49.7. Healthy North Carolina 2020 aims to reduce the number of unintended pregnancies to 30.9% as shown in Figure 11.6.

Table 11.10 NC Resident Live Births Percent of Low (<=2500 grams) and Very Low (<=1500 grams) Weight Births, 2006 - 2010

		White	Black	Black-to-White Ratio	Grade
North Carolina	Low	7.7	14.4	1.8	C
	Very Low	1.3	3.4	2.6	D
Rockingham County	Low	9.0	13.5	1.5	C
	Very Low	1.7	3.2	1.8	C

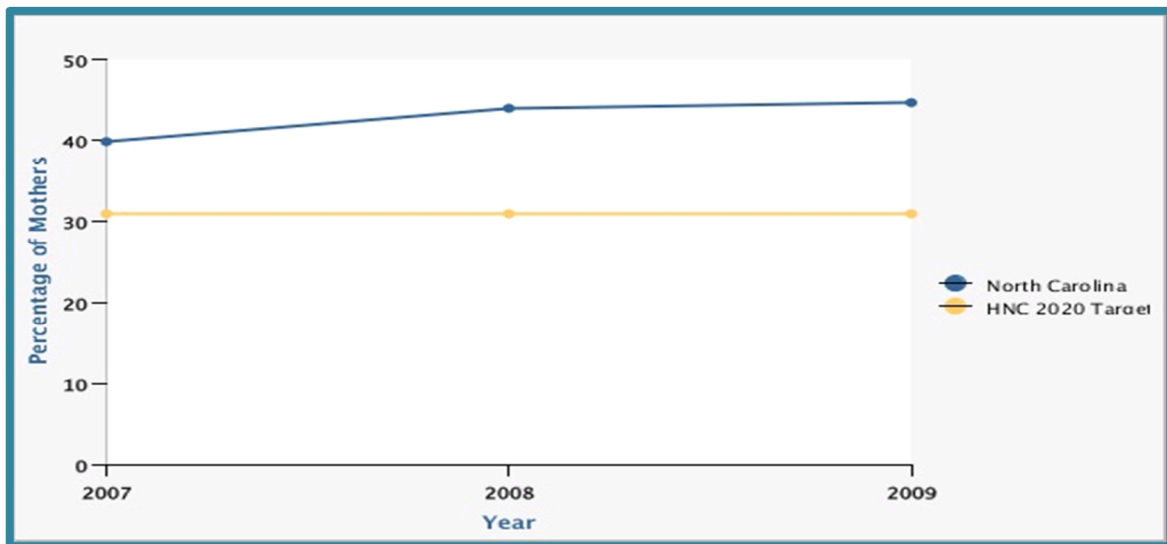
Source: SCHS, 2012^e

Table 11.11 NC Teen Pregnancies Ages 15-19 Rate per 1,000, 2010

	White	Black	Hispanic	Black-to-White Ratio	Grade	Hispanic-to-White Ratio	Grade
North Carolina	34.4	70.2	82.7	2.0	D	2.4	D
Rockingham County	52.2	56.4	122.3	1.1	C	2.3	D

Source: APPCNC, 2010^a, 2010^b, 2010^c

Figure 11.6 Unintended Pregnancies NC vs. Healthy NC 2020 Target, 2007 - 2009



Source: SCHS, 2012^f

Room for Improvement

Although there have been many advances in health technology, health disparities remain between racial and ethnic populations, and health equity remains difficult to achieve. Health disparities are often driven by the social conditions in which individuals live, learn, work, and play. By improving the following categories of determinants of health that surround a person, it is fair to say that health disparities can be reduced.

- Policymaking – new laws implemented at the local, state, and federal levels
- Social/Physical Conditions – quality of schools, exposure to discrimination, transportation options, public safety, natural environment, exposure to toxic substances, physical barriers for people with disabilities
- Health Services – lack of availability, high cost, lack of insurance coverage, limited language access
- Individual Behavior – diet, physical activity, tobacco use, hand washing
- Biology and Genetics – inherited diseases, such as sickle cell disease; age; sex; HIV status; family history (HP, 2012^b)

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