

# Running the Numbers

*A Periodic Feature to Inform North Carolina Health Care Professionals  
About Current Topics in Health Statistics*

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## Healthy North Carolina 2020: Social Determinants of Health Indicators

Socioeconomic factors such as income, education, and affordable housing are important predictors of the health status of a community. Individuals with higher income, more advanced education, and more stable housing tend to have better health status compared to persons with more limited income, education, and less secure housing [1]. People living in poverty or who have lower levels of education face greater barriers to health care, and tend to engage in more high-risk behaviors such as smoking [2]. Individuals who have difficulty paying their utilities and rent have less discretionary income for needs such as preventive health care, and tend to have more hospitalizations and emergency room visits than people living in more affordable housing [2]. Compounding the problem is that, although each of these factors is independently predictive of health status, they are also strongly correlated with each other. Therefore individuals living in poverty are more likely to have lower levels of education and to live in less affordable or substandard housing [3].

At the request of the Governor's Task Force for Healthy Carolinians, the North Carolina Institute of Medicine (NCIOM) coordinated the development of the Healthy North Carolina 2020 objectives, with the goal of improving the health status of North Carolina's citizens. The NCIOM, in collaboration with the Governor's Task Force and the North Carolina Division of Public Health, created a steering committee to lead the development of the Healthy North Carolina 2020 objectives. The steering committee included the state health director, the chair of the Governor's Healthy Carolinians Task Force, and numerous other public health experts and practitioners. The committee identified 13 focus areas for the Healthy North Carolina 2020 objectives, one of which included social determinants of health [4]. Three objec-

tives were identified for the social determinants of health focus area: the percentage of individuals living in poverty; the 4-year high school graduation rate; and the percentage of people spending more than 30% of their income on rental housing. A 2020 target goal was set for each objective, which are respectively as follows: decrease the percentage of individuals living in poverty from 16.9% (2009) to 12.5%, increase the 4-year high school graduation rate from 71.8% (2008-2009 school year) to 94.6%, and decrease the percentage of people spending more than 30% of their income on rental housing from 41.8% (2009) to 36.1%.

Although each of these target objectives is set for the state overall, many of the strategies and interventions for achieving the target are local or community-centered efforts. Thus, it is important that each county track their own progress in reaching the 2020 targets. The figures below present the most current county-level data for the 3 social determinants of health objectives for 2020.

Figure 1 shows the percentage of the population living in poverty, by county. In 2010, 94 of the state's 100 counties were above the 2020 target of 12.5%. Many of the counties with the highest poverty rates (23.8% or higher) were located in the Sandhills region and in northeastern North Carolina. Figure 2 shows the high school graduation rate for the 2010-2011 school year. None of the counties met the 2020 target for this objective,

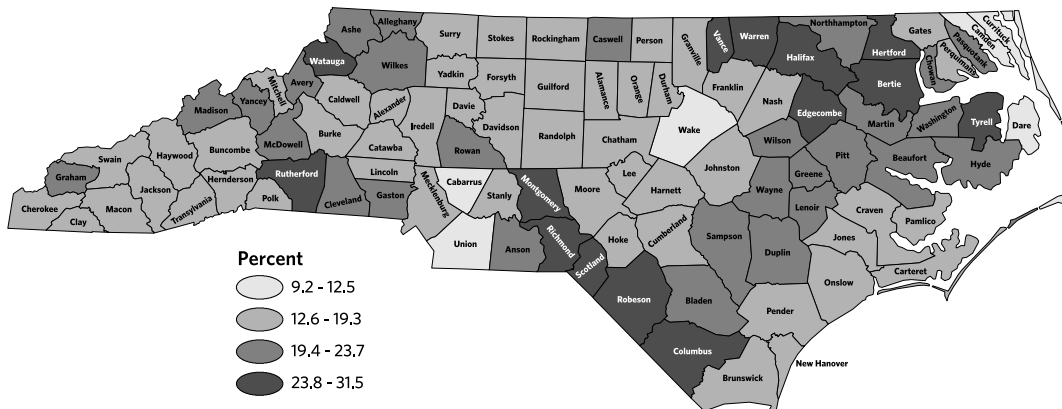
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**FIGURE 1.**  
**North Carolina Percent of the Population Living in Poverty by County, 2010**



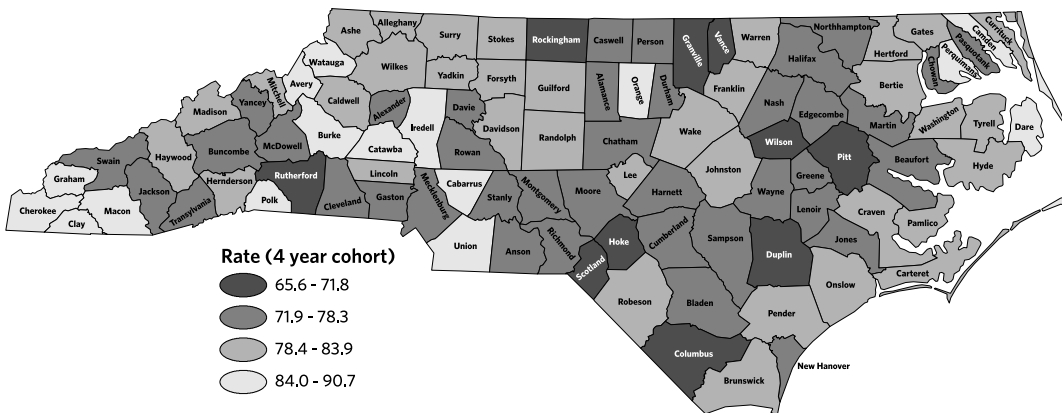
Source: US Census Bureau Small Area Income and Poverty Estimates (SAIPE)

and 10 counties had graduation rates of 71.8% or less. The percentage of the population spending more than 30% of their income in rental housing, by county, is shown in Figure 3. Nineteen counties met the 2020 target of 36.1% for the 5-year period of 2006-2010. Counties meeting that target were predominantly rural counties. Among the larger metropolitan counties the percentages were fairly high, typically above 42%.

Meeting the 2020 target goals for social determinants of health will be a challenging endeavor, as these 3 objectives represent complex, multifaceted problems. Reducing the poverty rate is out

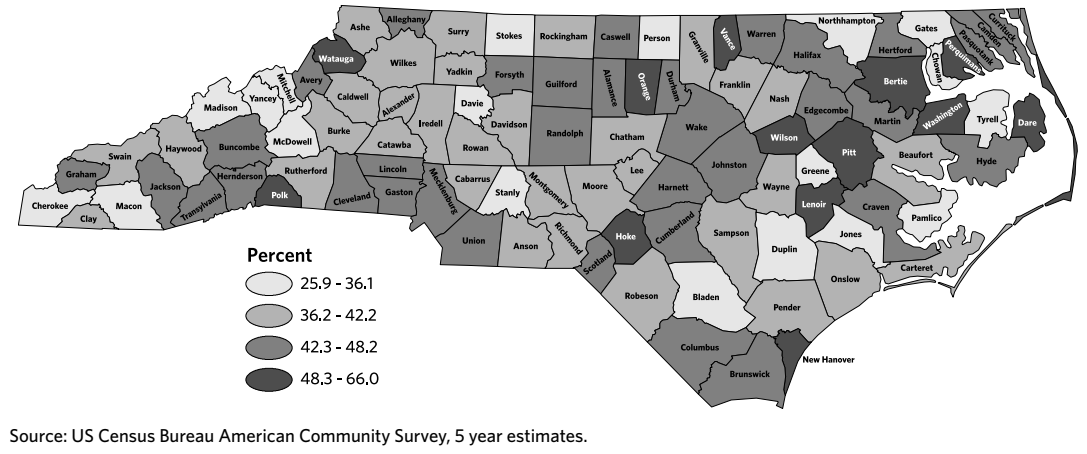
of the direct control of public health, and requires improvements in the economic climate at both the national and state level, as well as a reduction in the state's unemployment rate which remains above that of the US overall [5]. Improving the high school graduation rate is a goal established by the North Carolina General Assembly, but achieving the 2020 target will require buy-in from parents and students, as well as more support for school districts to implement and maintain programs aimed at improving student performance and retention. Housing issues are also largely dependent on improving the state's economic and employment outlook, but

**FIGURE 2.**  
**North Carolina High School Graduation Rate by County, 2010-2011**



Source: NC Department of Public Instruction

**FIGURE 3.**  
**North Carolina Percentage of Population Spending more than 30% of their Income on Rental Housing in the Last 12 Months by County, 2006-2010**



community-level efforts such as establishing local rental-assistance programs can have an impact. As public health embraces a more holistic approach that incorporates social, economic, and environmental determinants of health into a life course perspective, the State Center for Health Statistics has begun to integrate a wider array of data into the scope of our public health surveillance mission. The State Center for Health Statistics will continue to track progress toward the Healthy North Carolina 2020 objectives at both the state and local level, to help ensure that stakeholders and policy makers have current and accurate information to assess the effectiveness of public health programs, interventions, and policies. **NCMJ**

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