

# Running the Numbers

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

*From the State Center for Health Statistics, NC Department of Health and Human Services  
<http://www.schs.state.nc.us/SCHS>*

## Selected Data Related to Health Literacy in North Carolina

Health literacy is the ability of people to understand basic health information, communicate with health practitioners, and properly use health services. Low health literacy might be associated with, for example, the inability to read and comprehend basic health-related materials such as prescription bottles and appointment slips. Studies suggest that people with low health literacy are less likely to take their medications as prescribed or follow treatment protocols, less able to manage their chronic conditions, and more frequently hospitalized.<sup>1</sup> There is new evidence that people with low health literacy have higher death rates.<sup>2</sup> Health literacy problems are more common among racial and ethnic minorities, the elderly, and people with lower education achievement or lower income, but people from all walks of life struggle with health information.

Some of the surveys fielded by the State Center for Health Statistics in North Carolina provide information about the level of health knowledge on certain topics. Health knowledge deficits may reflect underlying health literacy problems. Low rates of health knowledge could reflect that the population had difficulty understanding the message, but it could also reflect a failure of message dissemination.

The data summarized in this article are drawn from 2 surveys. The Behavioral Risk Factor Surveillance System (BRFSS) is a random telephone survey of persons ages 18 years and older in the state. The Pregnancy Risk Assessment Monitoring System (PRAMS) is a random mail and telephone survey of new mothers in North Carolina. Below are selected data from these surveys that give insight into health knowledge in our state.

**Table 1.**  
**North Carolina Health Knowledge**

Measure	Source	Year	Percentage
Percentage of new mothers who have ever heard or read that taking the vitamin folic acid can prevent some birth defects	PRAMS	2004	83.1
Percentage of diabetics who check their blood for glucose or sugar every day	BRFSS	2005	62.2
Percentage of diabetics who check their feet for sores or irritations every day	BRFSS	2005	71.9
Percentage of diabetics who have ever taken a course or class in how to manage your diabetes yourself	BRFSS	2005	54.7
Percentage of adults who identified all 5 heart attack symptoms correctly	BRFSS	2005	10.0
Percentage of adults who identified all 5 stroke symptoms correctly	BRFSS	2005	16.6
Percentage of adults age 50+ years who think that people their age or older who do not have symptoms should be tested for colon or rectal cancer	BRFSS	2005	94.9
Percentage of men age 40+ years who rated their understanding of the advantages and disadvantages of PSA tests as excellent or very good	BRFSS	2005	49.0

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The low percentages shown in the table for individuals who practice proper diabetes management, correctly identify heart attack and stroke symptoms, and report they understand PSA tests suggests substantial problems with health knowledge in the overall population of adults in North Carolina. More detailed data (for example, broken out by demographic categories) can be found at [www.schs.state.nc.us/SCHS](http://www.schs.state.nc.us/SCHS) (click on BRFSS or PRAMS on the left side of the page under Health Data). For example, the 2005 percentage of adults who identified all 5 stroke symptoms correctly was 6% for those with less than a high school education compared to 26% for those with a college degree.

A study on a North Carolina heart failure self-management program showed that an intervention designed for patients with low literacy reduced the rate of hospitalization and death in the intervention group as compared to a control group.<sup>3</sup> In another study, patients with diabetes and low literacy benefited more from a disease management intervention compared to those with diabetes and higher literacy skills.<sup>4</sup> These studies suggest that well-designed programs to engage and educate patients about their own chronic illness and disease self-management will help reduce morbidity and other problems associated with low health literacy.

Health literacy depends not only on individual capacity to communicate and understand health information but also on the demands posed by society and the health care system.<sup>5</sup> For example, health care professionals have a responsibility to reduce the complexity of their speech and written materials and simplify access to health care services. Finally, improving the levels of literacy, education, and income in the general population will have the effect of increasing health literacy in North Carolina.

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## REFERENCES

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