

# Prevention Status Report | 2013

## Heart Disease and Stroke

## North Carolina

The Prevention Status Reports (PSRs) highlight—for all 50 states and the District of Columbia—the status of public health policies and practices designed to prevent or reduce important health problems. This report focuses on heart disease and stroke and briefly describes why they are public health problems, both for North Carolina and the United States as a whole. It also provides an overview of solutions (i.e., evidence-based or expert-recommended policy and practice options) for preventing or reducing heart disease and stroke and reports the status of these solutions in North Carolina.

### PSR Framework

The PSRs follow a simple framework:

- Describe the public health **problem** using public health data
- Identify potential **solutions** to the problem drawn from research and expert recommendations
- Report the **status** of those solutions for each state and the District of Columbia

### Criteria for Selection of Policies and Practices

The policies and practices included in the PSRs were selected because they

- Can be monitored using state-level data that are readily available for most states and the District of Columbia
- Meet one or more of the following criteria:
  - Supported by systematic review(s) of scientific evidence of effectiveness (e.g., *The Guide to Community Preventive Services*)
  - Explicitly cited in a national strategy or national action plan (e.g., *Healthy People 2020*)
  - Recommended by a recognized expert body, panel, organization, study, or report with an evidence-based focus (e.g., Institute of Medicine)

### Ratings

The PSRs use a simple, three-level rating scale to provide a practical assessment of the status of policies and practices in each state and the District of Columbia. It is important to note that the ratings reflect the *status of policies and practices* and do not reflect the *status of efforts* by state health departments, other state agencies, or other organizations to establish or strengthen those policies and practices. Strategies for improving public health vary by individual state needs, resources, and public health priorities.

### More Information

For more information about public health activities in North Carolina, visit the North Carolina Department of Health and Human Services website (<http://www.ncdhhs.gov/>). For additional resources and to view reports for other health topics, visit the CDC website (<http://www.cdc.gov/stltpublichealth/psr/>).

### Suggested Citation

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# PSR | 2013

[www.cdc.gov/stltpublichealth/psr](http://www.cdc.gov/stltpublichealth/psr)



Centers for Disease Control and Prevention  
Office for State, Tribal, Local and Territorial Support

### Public Health Problem



Cardiovascular disease—including heart disease, stroke, and other vascular diseases—is the leading cause of death in the United States. Each year, nearly 800,000 people die from cardiovascular disease, accounting for one in every three deaths (1).

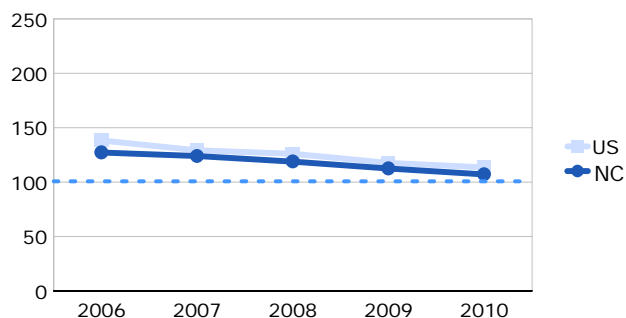


An estimated 67 million American adults have high blood pressure and 71 million American adults have high levels of low-density lipoprotein (LDL) cholesterol. These are two leading risk factors for heart disease and stroke (2,3).



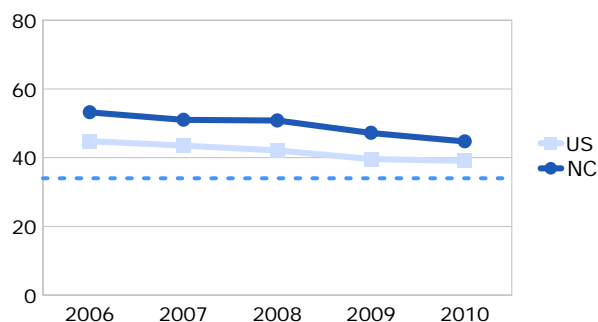
About one of every six healthcare dollars in the United States is spent on treating cardiovascular disease. Annual US cardiovascular disease costs exceed \$192.1 billion in direct medical expenses and \$312.6 billion when indirect expenses are included (4).

**Coronary heart disease death rate (age-adjusted rate per 100,000 population)**



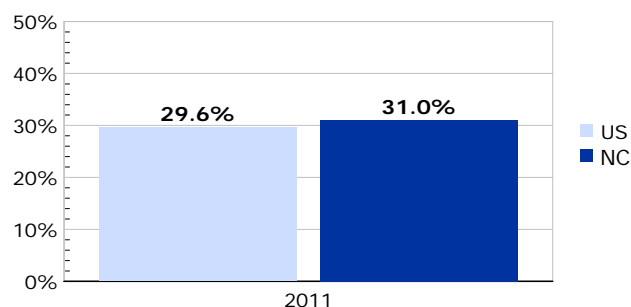
Source: National Vital Statistics System—Mortality (5)  
 Healthy People 2020 target: 100.8/100,000 (dotted blue line) (6)

**Stroke death rate (age-adjusted rate per 100,000 population)**



Source: National Vital Statistics System—Mortality (5)  
 Healthy People 2020 target: 33.8/100,000 (dotted blue line) (6)

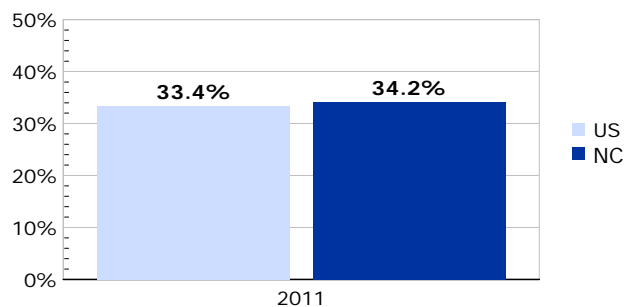
**Prevalence of self-reported hypertension (age-adjusted)**



Source: Behavioral Risk Factor Surveillance System (BRFSS) (7)

Note: These rates were adjusted using the direct method and the 2000 standard US population (8).

**Prevalence of self-reported high cholesterol (age-adjusted)**



Source: Behavioral Risk Factor Surveillance System (BRFSS) (7)

Note: These rates were adjusted using the direct method and the 2000 standard US population (8).

### Policy and Practice Solutions

This report focuses on policies and practices recommended by the Community Preventive Services Task Force, the US Surgeon General, and the Institute of Medicine on the basis of scientific studies supporting the policies' effectiveness in the management of heart disease and stroke risks (9–12). These policies and practices include 1) implementing electronic health records and 2) developing state policies that address collaborative drug therapy management, such as the use of pharmacists to facilitate collaborative practice agreements (10). Other strategies supported by scientific evidence and practice include promoting team-based care, establishing state-level policies for patient-centered medical homes, establishing stroke systems of care, and reducing sodium consumption at the community level. For information about why certain heart disease and stroke-related indicators were selected, and for links to additional data and resources, visit the CDC website (<http://www.cdc.gov/stltpublichealth/psr/heartandstroke/>).

### Status of Policy and Practice Solutions in North Carolina

#### Implementation of electronic health records

**As of December 2012, 23.0% of office-based physicians in North Carolina met criteria for meaningful use of electronic health records (12).**

Research shows that electronic health records, when used with specific goals in mind (i.e., "meaningfully"), allow physicians, nurses, pharmacists, and other healthcare providers to proactively monitor and protect the health of their patients by tracking heart disease and stroke risk factors (13–15).

Note: This indicator reflects the percentage of physicians using electronic health records that can support 13 capabilities needed to meet Stage 1 Core Set objectives to demonstrate meaningful use. Other data from the federal Office of the National Coordinator for Health Information Technology reflect the percentage of physicians using a basic system, which has seven capabilities (16).

Rating	Percentage of office-based physicians meeting meaningful use criteria:
Green	31.0%–45.0%
Yellow	16.0%–30.9%
Red	0.0%–15.9%

#### Pharmacist collaborative drug therapy management (CDTM) policy

**As of December 31, 2012, North Carolina had a statewide pharmacist CDTM policy for all health conditions (17).**

State policies such as CDTM laws, which authorize pharmacists to enter into collaborative practice agreements with prescribing providers, can increase medication adherence rates and improve health outcomes (e.g., lower blood pressure and LDL cholesterol, reduced hemoglobin A1c, fewer adverse drug events) (10).

Rating	CDTM policy
Green	Authorized pharmacists to collaborate for all health conditions
Yellow	Authorized pharmacists to collaborate but did not cover chronic diseases, or collaboration was limited to specified hospital, medical, or clinical practice settings
Red	Did not exist

### Simplified Rating System

A more detailed explanation of the rating system for heart disease and stroke indicators is available at <http://www.cdc.gov/stltpublichealth/psr/heartandstroke/>.

#### Green

The policy or practice is established in accordance with supporting evidence and/or expert recommendations.

#### Yellow

The policy or practice is established in partial accordance with supporting evidence and/or expert recommendations.

#### Red

The policy or practice is either absent or not established in accordance with supporting evidence and/or expert recommendations.

### Indicator Definitions

**Implementation of electronic health records:** An electronic health record is a real-time, digital, patient-centered record that replaces paper charts. "Meaningful use" of electronic health records means meeting criteria that focus on such aspects as engaging patients in their own care, sharing information among healthcare organizations, and providing support for decisions on national high-priority conditions. It is hoped that if healthcare providers meet these criteria, "meaningful use" will lead to 1) creation of tools that measure healthcare quality to improve clinical and population health, 2) increased transparency and efficiency, 3) individuals empowered to access clinical information, and 4) more robust research data on health systems (18). Electronic health records should include clinical decision supports, such as alerts for elevated blood pressure and cholesterol levels based on laboratory results, to support guidelines-based clinical decision making.

**Pharmacist collaborative drug therapy management policy:** A state legislative, regulatory, or other written policy that authorizes qualified pharmacists working within the context of a defined protocol to perform patient assessments; order drug therapy-related laboratory tests; administer drugs; and select, initiate, monitor, continue, and adjust drug regimens (19).

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