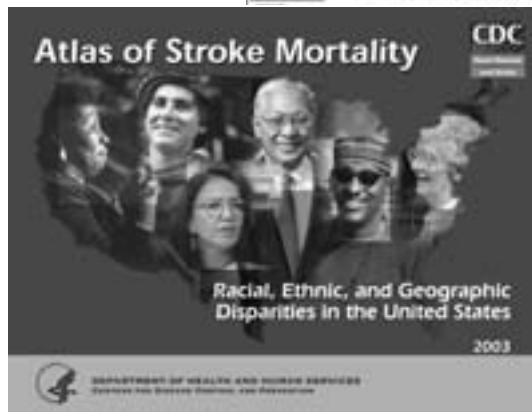




# Preventing Heart Disease and Stroke

## Addressing the Nation's Leading Killers 2004

### Charting the Course



*“Despite impressive advances in science and medicine, our nation continues to be plagued by unacceptably high rates of death and disability from heart disease and stroke, our nation’s first and third leading causes of death, and minority populations bear a disproportionate burden of these diseases. Our challenge is to ensure that all of our citizens benefit from the knowledge that we have gained.”*

Rose Marie Robertson, MD  
Heart Specialist and Chief Science Officer  
American Heart Association

# Heart Disease and Stroke: The Nation's Leading Killers

## Deaths, Disability, and Cost

Heart disease and stroke—the principal components of cardiovascular disease—are the first and third leading causes of death for both men and women in the United States, accounting for nearly 40% of all deaths. Over 930,000 Americans die of cardiovascular disease each year, which amounts to one death every 34 seconds. Although these largely preventable conditions are more common among people ages 65 years and older, the number of sudden deaths from heart disease among people ages 15–34 has increased.

Deaths are only part of the picture. Over 64 million Americans (almost one-fourth of the population) live with cardiovascular disease. Coronary heart disease is a leading cause of premature, permanent disability in the U.S. workforce. Stroke alone accounts for disability among more than 1 million Americans. Over 6 million hospitalizations each year are due to cardiovascular disease.

The economic impact of cardiovascular disease on the U.S. health care system continues to grow as the population ages. The cost of heart disease and stroke in the United States is projected to be \$368 billion in 2004, including health care expenditures and lost productivity from death and disability.

## Risk Factors Must Be Addressed

Two of the major independent risk factors for cardiovascular disease are high blood pressure and high blood cholesterol.

- About 90% of middle-aged Americans will develop high blood pressure in their lifetime, and over 70% of people

with high blood pressure do not have it under control. A 12–13 point reduction in blood pressure can reduce heart attacks by 21%, strokes by 37%, and all deaths from cardiovascular disease by 25%.

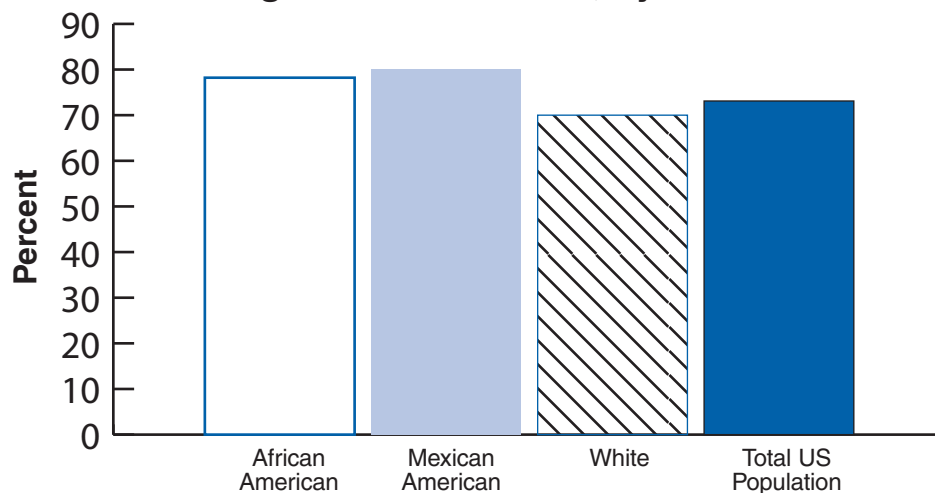
- Over 80% of those who have high blood cholesterol do not have it under control. A 10% decrease in total blood cholesterol levels may reduce the incidence of coronary heart disease by as much as 30%.

A key strategy for addressing these risk factors is to educate the public and health care practitioners about the importance of prevention. Current guidelines recommend that all adults have their blood pressure checked regularly and their blood cholesterol levels checked every 5 years. Systems changes are also needed to help practitioners adhere to guidelines for treating patients with or at risk for heart disease and stroke, such as prescribing beta-blockers and aspirin. Preventive actions can help people at any level of blood pressure or cholesterol to reduce their risk.

People also need to be educated about the signs and symptoms of heart attacks and stroke and the importance of calling 911 quickly. Forty-seven percent of heart attack victims and about the same percentage of stroke victims die before emergency medical personnel arrive.

Other important risk factors for heart disease and stroke—such as diabetes, tobacco use, physical inactivity, poor nutrition, and overweight and obesity—need to be addressed through lifestyle changes and appropriate use of medications.

**Percentage of Americans with Uncontrolled High Blood Pressure, by Race and Ethnicity**



Source: United States Department of Health and Human Services. *Healthy People 2010 Progress Review: Heart Disease and Stroke*. Section E. Washington: April 2003

## CDC's National Leadership

In 1998, Congress funded CDC to launch a nationwide effort to help states develop the capacity, commitment, and resources necessary for a comprehensive program to prevent death and disability from heart disease and stroke and to improve the cardiovascular health of all Americans. In fiscal year 2004 Congress appropriated \$45.7 million for this program. CDC currently funds 32 states and the District of Columbia (11 for basic implementation and 22 for capacity building). Program priorities are to

- Control high blood pressure.
- Control high blood cholesterol.
- Increase awareness of the signs and symptoms of heart disease and stroke and the importance of calling 911 when these signs and symptoms occur.
- Improve emergency response.
- Improve quality of care.
- Eliminate disparities.

CDC provides national leadership through its many activities and programs, which include developing a broad public health action plan to prevent heart disease and stroke, collecting vital data to track these conditions, and providing support for state-based programs.

### Paul Coverdell National Acute Stroke Registry

CDC's Paul Coverdell National Acute Stroke Registry measures and improves hospital delivery of emergency care for stroke victims. From 2001 to 2003, CDC funded eight university-based sites to develop prototype registries and test

methods. CDC will begin to fund registries in state health departments in 2004.

### Charting the Course

#### Public Health Action Plan

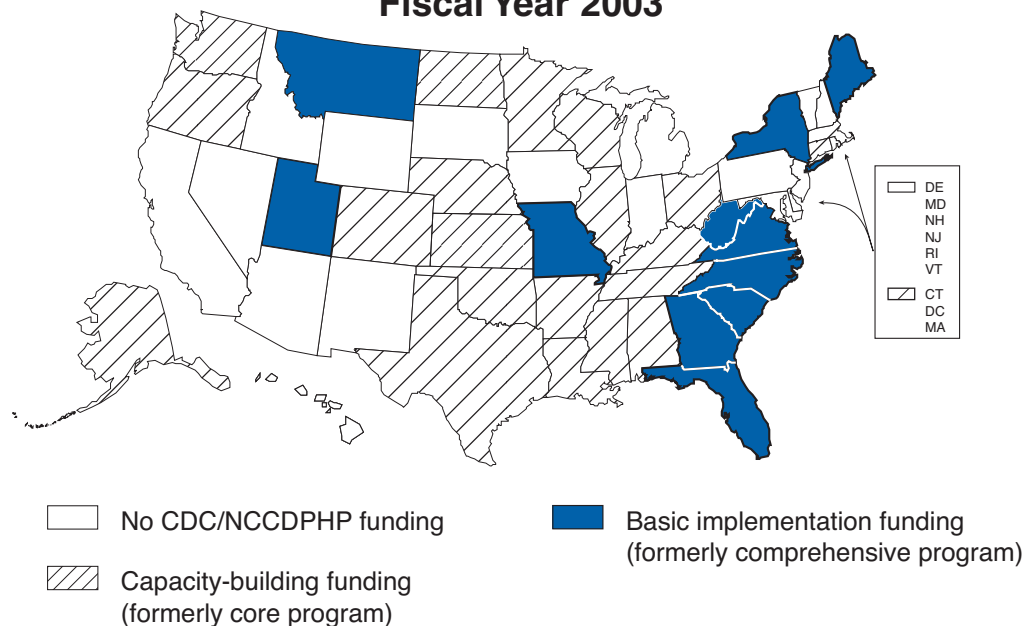
In 2003, CDC released *A Public Health Action Plan to Prevent Heart Disease and Stroke*. This plan charts a course for the nation—led by CDC, collaborating public health agencies, and other partners—to prevent heart disease and stroke over the next two decades and beyond. The *Action Plan* was developed with input from a broad range of partners. A national forum in April 2004 will seek commitments for implementing the plan from organizations throughout the country.

Fully implementing the *Action Plan* will increase our nation's investment in preventing disease rather than waiting to treat its consequences. The plan will also help to transform public health agencies and their partners into effective agents of change.

#### Atlases Highlighting Local Data

As the third in a series of CDC atlases related to cardiovascular diseases, the *Atlas of Stroke Mortality: Racial, Ethnic and Geographic Disparities in the United States* provides, for the first time, an extensive series of national and state maps of county-level data on stroke death rates among the five largest racial and ethnic groups. Future planned atlases include the *On-Line Heart Disease Atlas for 1996–2000*, *Atlas of Out-Of-Hospital Cardiac Deaths*, and *Atlas of Heart Disease and Stroke Among American Indians and Alaska Natives*.

### States Funded by CDC for Heart Disease and Stroke Prevention Programs, Fiscal Year 2003



## State Programs and Key Partnerships

### State Heart Disease and Stroke Prevention Programs

With support from CDC, states are conducting a range of activities to reduce the burden of heart disease and stroke, including the following:

- As part of the National Health Disparities Collaborative, partnering with the Health Resources and Services Administration (HRSA) and health care centers to help centers better manage high blood pressure among underserved populations.
- Promoting changes in the health care system to help providers implement prevention guidelines.
- Helping work sites establish policies and environments that support cardiovascular health.
- Collaborating with educational partners to promote school policies and environments that support cardiovascular health.
- Developing campaigns that educate people about the signs and symptoms of heart attack and stroke and the importance of calling 911 for immediate medical care.

### Collaborations Are Key to Success

CDC works with partners both inside and beyond the health sector to address the *Healthy People 2010* objectives for preventing heart disease and stroke. Partners include other federal agencies (e.g., Centers for Medicare and Medicaid Services, HRSA, Indian Health Service, National Institutes of Health), national health organizations (e.g., American Heart Association/American Stroke Association, National Stroke Association), and professional groups (e.g., American College of Cardiology, Association of Black Cardiologists).

### Future Challenges and Directions

CDC will continue to provide national leadership to prevent death and disability from heart disease and stroke and to eliminate disparities in health and health care. In this leadership role, CDC will work with partners to fully implement *A Public Health Action Plan to Prevent Heart Disease and Stroke*. Priorities will be to build the public health foundation for translating science into practice, to address disparities in quality years of healthy life by ensuring the availability of basic essential services, and to fund the 18 unfunded states to help prevent heart disease and stroke among all Americans.

### State Programs in Action

- **The Montana Cardiovascular Health Program** is using the Guidelines Applied in Practice (GAP) model to help Montana hospitals implement acute care guidelines and secondary prevention practices as ongoing routine. This pilot program has stimulated health care facilities statewide to evaluate their practices and make changes to improve care.
- **The Missouri Cardiovascular Health Program** is partnering with the Missouri Diabetes Control Program and Federally Qualified Health Centers to administer and evaluate a comprehensive approach to improving standards of care for patients with cardiovascular disease, hypertension, and diabetes. Part of this approach will include a registry of clinical patient data to help health care providers more effectively follow-up and monitor patients.
- **The Kentucky Cardiovascular Health Program** and its partners are collaborating to improve the quality of care for patients with coronary artery disease by using the American Heart Association's *Get with the Guidelines for Coronary Artery Disease*. These guidelines help health care professionals follow proven treatments and procedures for hospitalized patients with coronary artery disease to reduce their risk for recurrent heart attacks.
- **The South Carolina Cardiovascular Health Program** has partnered with universities and private organizations to address the hypertension crisis in South Carolina, where one of every four adults has high blood pressure. The state program is providing support to increase the hypertension expertise of primary care providers statewide, especially those with large numbers of Medicaid patients and those who practice in rural areas.

**For more information or additional copies of this document, please contact the  
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