

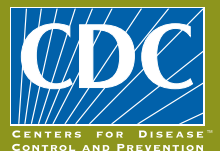
# HEART DISEASE AND STROKE PREVENTION

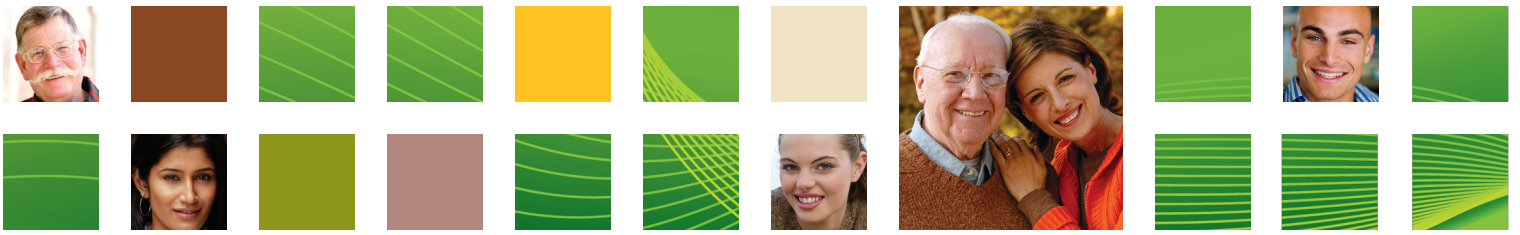
ADDRESSING THE  
NATION'S LEADING  
KILLERS

## AT A GLANCE

2009

**NATIONAL CENTER FOR CHRONIC DISEASE PREVENTION AND HEALTH PROMOTION**  
IMPROVING HEALTH AND QUALITY OF LIFE FOR ALL PEOPLE





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

Heart disease and stroke are among the most widespread and costly health problems facing our nation today, yet they are also among the most preventable. Cardiovascular diseases, including heart disease and stroke, are the first and third leading causes of death for both men and women in the United States. They account for more than one-third (35.3%) of all U.S. deaths. More than 151,000 Americans who died of cardiovascular diseases in 2005 were younger than age 65. Heart disease and stroke are also among the leading causes of disability in the U.S. workforce, with nearly 1 million people being disabled from strokes alone. If all major types of cardiovascular disease were eliminated, U.S. life expectancy would increase by nearly 7 years.

### The Costs of Disease Are Staggering

The burden of heart disease and stroke cannot be measured by death statistics alone. The cost of heart disease and stroke in the United States, including health care expenditures and lost productivity from deaths and disability, is projected to be more than \$475 billion in 2009. As the U.S. population ages, the economic impact of cardiovascular diseases on our nation's health care system will become even greater.

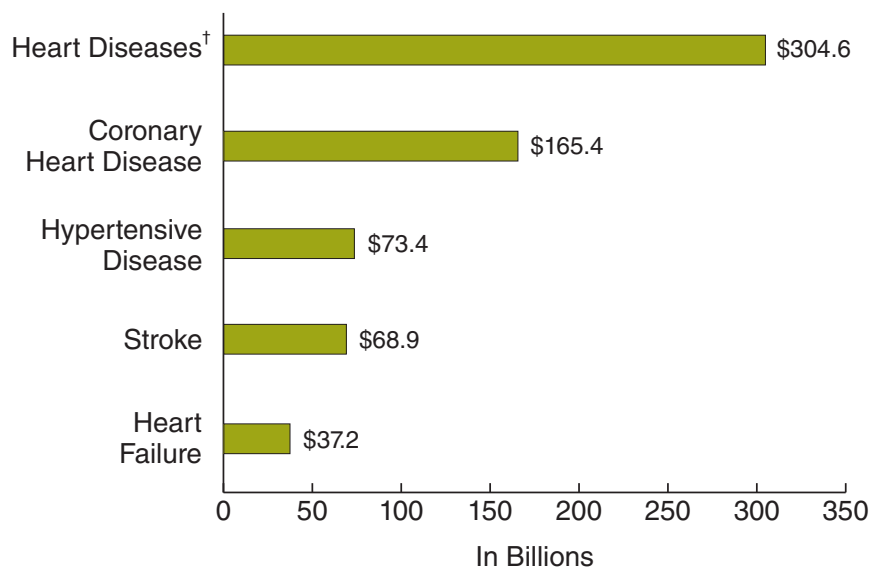
Overall, death rates for heart disease and stroke have decreased in the United States in recent decades. However, rates for incidence and death continue to be disproportionately high among some populations, including members of certain racial and ethnic groups, people with low socioeconomic status, and those living in the southeastern United States.

For example, age-adjusted death rates for heart disease are 32% higher among African Americans than among whites. The incidence of coronary heart disease among American Indians and Alaska Natives is nearly double the incidence among the general U.S. population. The risk for first-ever stroke is nearly twice as high for African Americans than it is for whites. In addition, about 55,000 more women than men have a stroke each year.

### The Cost of Heart Disease and Stroke

- More than 1 in 3 (80 million) U.S. adults currently live with one or more types of cardiovascular disease.
- An estimated 935,000 heart attacks and 795,000 strokes occur each year.
- Americans make more than 72 million doctor visits every year for treatment and management of cardiovascular diseases.
- More than 7 million hospitalizations occur each year because of cardiovascular diseases.

### Estimated Direct and Indirect Costs of Major Cardiovascular Diseases and Stroke,\* United States, 2009



\* Totals do not add up because of rounding and overlap.

<sup>†</sup> Includes coronary heart disease, congestive heart failure, part of hypertensive disease, cardiac dysrhythmias, rheumatic heart disease, cardiomyopathy, pulmonary heart disease, and other or ill-defined "heart" diseases.

Source: American Heart Association. *Heart Disease and Stroke Statistics—2009 Update*.



## Prevention Saves Lives and Money

Leading a healthy lifestyle—not using tobacco, being physically active, and making healthy food choices—greatly reduces a person’s risk of developing heart disease or stroke. Preventing and controlling high blood pressure and high blood cholesterol also play a significant role in cardiovascular health. For example, a 12–13 point reduction in systolic blood pressure can reduce heart disease risk by 21%, stroke risk by 37%, and risk for death

from heart disease or stroke by 25%. Public health strategies and policies that promote healthy living, encourage healthy environments, and promote control of blood pressure and cholesterol levels are key to improving the public’s health and saving lives. Ensuring that all Americans have access to early, affordable, and appropriate treatment is also essential to reducing disability and costs.

## CDC’s Response

Several CDC divisions, including the Office on Smoking and Health, the Division of Nutrition, Physical Activity and Obesity, and the Division of Diabetes Translation, are working to prevent risk factors for chronic disease. Through the Division for Heart Disease and Stroke Prevention, CDC translates prevention research into public health practice and provides national and state leadership to help reduce the burden of heart disease and stroke. CDC has funded heart disease and stroke prevention programs in the United States since 1998.

With \$50.1 million appropriated in Fiscal Year 2008, CDC funded health departments in 41 states and the District of Columbia to conduct heart disease and stroke prevention programs; six states were funded to implement Paul Coverdell National Acute Stroke Registry programs. CDC also funds national data collection, applied research, and evaluation initiatives. CDC’s work is grounded in goals and strategies set forth in *Healthy People 2010*, the Division for Heart Disease and Stroke Prevention’s strategic plan, and the landmark publication *A Public Health Action Plan to Prevent Heart Disease and Stroke*.

### National Heart Disease and Stroke Prevention Program

CDC-funded state programs promote policy and systems changes in health care, work site, and community settings. These programs also work to

- Increase awareness of the warning signs and symptoms of heart attack and stroke and the importance of calling 911 immediately.
- Improve emergency response and quality of care.
- Eliminate health disparities among racial and ethnic minority populations.

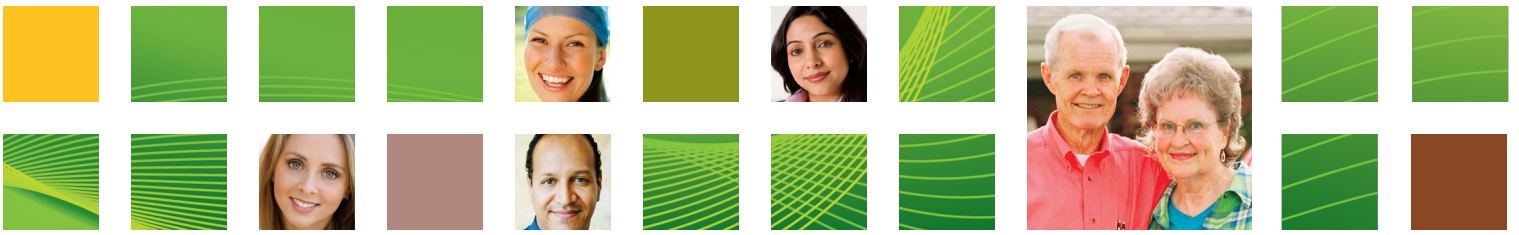
### State Activities Supported by CDC Funding

- Work with health care providers to make system changes, such as automated reminders from providers to patients, that help increase the number of people who bring their blood pressure under control.
- Promote heart-healthy and stroke-free work site policies and programs, such as smoke-free workplaces, wellness programs, and insurance coverage of preventive health services for employees.
- Coordinate stroke prevention efforts across state borders in high prevalence areas through multistate networks.
- Promote training and standard protocols for emergency medical service staff.

### Paul Coverdell National Acute Stroke Registry

CDC’s Paul Coverdell National Acute Stroke Registry program helps to improve the delivery and quality of care for acute stroke patients by identifying gaps between recommended treatment guidelines and actual hospital practices. CDC currently funds programs in Georgia, Massachusetts, Michigan, Minnesota, North Carolina, and Ohio.

In 2007, CDC partnered with the American Heart Association and The Joint Commission to develop performance measures for acute stroke care. These measures are now being used in all hospitals that participate in the stroke registry and an additional 1,200 hospitals across the country to improve the quality of care for acute stroke patients.



## CDC's Response (continued)

### Cardiac Arrest Registry to Enhance Survival (CARES)

The Cardiac Arrest Registry to Enhance Survival (CARES) program is a database that consolidates essential data related to prehospital cardiac arrests in order to improve medical responses and health outcomes. The program began in 2005 in metro Atlanta and has since expanded to 15 cities, with nine added just in the past year. The goal is to create a national registry that helps local Emergency Medical Service (EMS) administrators and medical directors identify when and where cardiac arrests occur, what elements of their EMS system are functioning properly, and what changes can be made to improve outcomes.

In metro Atlanta, Grady EMS, a large-volume, hospital-based program, used CARES to identify weaknesses in its emergency dispatch process. This information led to changes designed to decrease delays in handling 911 calls. These changes, combined with a community-wide CPR training program, led to a significant increase in the cardiac arrest survival rate in Atlanta, from 12.5% in December 2006 to 31.2% in December 2007.

The federal Agency for Health Care Research and Quality (AHRQ) selected the CARES program to be part of its Health Care Innovations Exchange program, which highlights successes in health care quality improvement. The AHRQ program encourages health care professionals to share and adopt innovations that work.

### CDC Activities Support State Programs

In addition to funding state programs, CDC conducts the following activities to help prevent heart disease and stroke at state and local levels:

- **Evaluation.** CDC conducts evaluation research and helps states evaluate the effectiveness of prevention programs and policy and systems-level changes.
- **Monitoring and Tracking Disease.** CDC tracks data and trends in heart disease and stroke to help states make informed program decisions. For example, we recently

helped develop a Chronic Disease Cost Calculator (<http://www.cdc.gov/nccdphp/resources/calculator.htm>). This tool can provide estimates of state Medicaid spending for six chronic diseases—congestive heart failure, heart disease, stroke, hypertension, cancer, and diabetes.

- **Training and Technical Assistance.** CDC provides guidance and training to states on how to best apply evidence-based practices and develop effective programs.
- **Translating Science into Practice.** CDC interprets the science of prevention and translates it into practices and programs for states and communities.
- **Partnerships.** CDC builds partnerships with other federal agencies and national groups to promote policies and system improvements to prevent heart disease and stroke across the country. For example, we work with several federal agencies on the Healthy People 2010 Partnership and the Federal Interagency Committee on Emergency Medical Services.

### Future Directions

In recent years, risk factors for heart disease and stroke, such as high blood pressure, obesity, and diabetes, have increased at alarming rates. To reverse this trend, CDC must continue to focus on improving the nation's cardiovascular health. In 2009, CDC will work to help Americans control their blood pressure and reduce their sodium consumption. To achieve this goal, CDC is conducting research on sources of dietary sodium, disparities in dietary intake, and barriers to behavior change. CDC will work to increase public awareness of sodium's effect on blood pressure and to promote national, state, and local strategies to reduce sodium consumption.

In addition, CDC will promote the need for better surveillance systems to capture the data critical to guide states and partners in policy development, program planning, and evaluation. CDC also will continue to work to eliminate health disparities among population groups at higher risk.

For more information, please contact the Centers for Disease Control and Prevention  
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