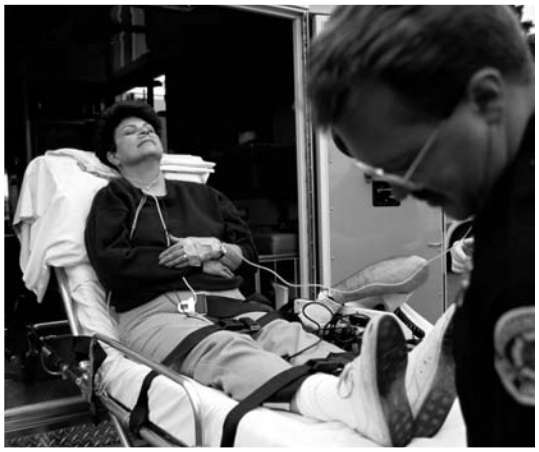
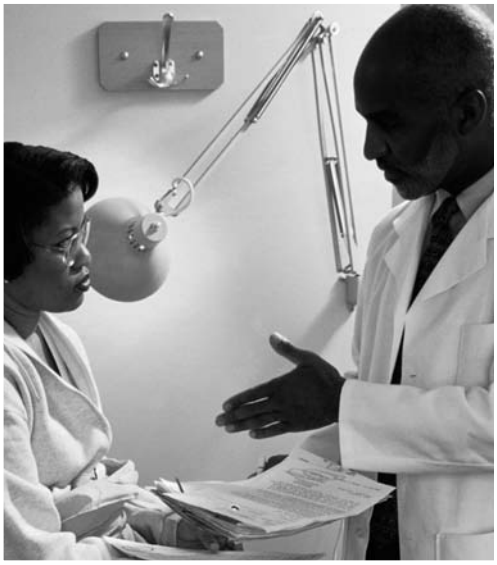
Moving into Action:
Promoting Heart-Healthy and Stroke-Free Communities

Health Care Leaders





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U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

What Is *Moving into Action*?

Moving into Action is a series of action lists designed to help governors, state legislators, local officials, employers, and health care leaders promote heart-healthy and stroke-free communities. Each list suggests actions that range from ways to encourage general interest and awareness of these health issues to specific policies that promote healthy behaviors and reduce risks associated with heart disease and stroke. Included are examples gathered from states and communities that are working to reduce these risks and a summary of the science underlying heart disease and stroke prevention.

Suggested actions are based on current national guidelines, scientific evidence, and existing efforts from states throughout the country. For example, some actions are supported by years of research from leading public health, public policy, and medical organizations, while others stem from efforts by communities and organizations to address unhealthy behaviors related to heart disease and stroke.

Moving into Action can help policy makers, employers, and health care leaders assess what actions are most appropriate for their communities and can lend support to the efforts of individuals to prevent, manage, and control their risks for heart disease and stroke.

Share Your Experiences

In suggesting these actions, we also invite you to share your ideas and experiences. Please e-mail your questions, suggestions, and experiences on how you are Moving into Action in your community at ccdinfo@cdc.gov.

Additional Copies

Additional copies of these lists can be requested at ccdinfo@cdc.gov. They will also be made available on the Cardiovascular Health Web site at www.cdc.gov/cvh.

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A Message from the Centers for Disease Control and Prevention

Heart disease and stroke, the principal components of cardiovascular disease, are the nation's first and third leading causes of death. They are also major causes of morbidity and health disparities. Millions of Americans are at risk for these largely preventable conditions. Advances in science have been considerable, but the challenge of translating this knowledge into action remains.

To address this need, the Centers for Disease Control and Prevention, in collaboration with the American Heart Association/American Stroke Association and the Association of State and Territorial Health Officials, along with a host of other partners, developed *A Public Health Action Plan to Prevent Heart Disease and Stroke*. The *Action Plan*, released in 2003, calls for engagement by all sectors of society to support the prevention and control of heart disease and stroke. *Moving into Action: Promoting Heart-Healthy and Stroke-Free Communities* suggests how certain sectors of society—policy makers, employers, and health care leaders—can take steps in this direction.

Can we imagine a world where our communities are designed to encourage safe physical activity? Where worksites and school cafeterias provide affordable, heart-healthy food options? Where the environment of public spaces is smoke-free? Where health care purchasers universally include preventive services, coverage for prescription drugs for heart disease, and counseling for therapeutic lifestyle changes? Where large and small health systems implement national guidelines recommended by federal agencies and national voluntary organization? These scenarios are possible. The question is, how can we turn these scenarios into a reality?

Becoming engaged in the prevention of heart disease and stroke is a worthy cause for everyone, especially for those who can influence decisions that affect communities across the country. By sharing ideas, experiences, and expertise and by taking action now, we can effectively combat the persistent burden of heart disease and stroke and their related disparities in our society.

George A. Mensah, MD, FACP, FACC
Acting Director
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Centers for Disease Control and Prevention

A Message from the American Heart Association/American Stroke Association

When *A Public Health Action Plan to Prevent Heart Disease and Stroke* was first released at the Steps for a HealthierUS Conference in April 2003, the American Heart Association's president, Dr. Robert Bonow, observed that "this plan will help the public health community make the nation's number-one health threat a number-one priority. We already have much science and knowledge to help prevent and treat heart disease and stroke. Now we have a national vision and roadmap for the public health community to help guide its efforts, and strategies to give Americans a healthier future."

As the nation's largest voluntary health organization fighting cardiovascular disease, the American Heart Association and our division, the American Stroke Association, recognized that the release of the *Action Plan* was only the first step in a journey that would require strong partnerships and the active involvement of a number of government agencies and other organizations. We are pleased to be working with the Centers for Disease Control and Prevention and the Association of State and Territorial Health Officials to help guide the projects and activities that continue to take place as a result of the release of the *Action Plan*.

One such project is *Moving into Action: Promoting Heart-Healthy and Stroke-Free Communities*. This document can help elected policy makers, public employers, and health care leaders across the country become more meaningfully engaged in heart disease and stroke prevention.

Once again, we applaud the Centers for Disease Control and Prevention for the release of this publication and for its continued commitment to *A Public Health Action Plan to Prevent Heart Disease and Stroke*. This is a significant step forward in furthering the vision of the *Action Plan* and the achievement of our shared goal of reducing heart disease and stroke and their risk factors.

Rose Marie Robertson
Chief Science Officer
American Heart Association/American Stroke Association

A Message from the Association of State and Territorial Health Officials

As one of the lead partners supporting *A Public Health Action Plan to Prevent Heart Disease and Stroke*, we are very pleased, along with the Centers for Disease Control and Prevention and the American Heart Association/American Stroke Association, to present *Moving into Action: Promoting Heart-Healthy and Stroke-Free Communities*.

Heart disease and stroke are the first and third leading causes of death in the United States and continue to pose a formidable challenge to the public health community. We cannot address this challenge alone. Only through collaboration with elected officials, employers, health care leaders, and others can we adequately address the continuing burden of heart disease and stroke.

ASTHO is the national nonprofit organization representing the state and territorial public health agencies. ASTHO's members, the chief health officials of these agencies, are dedicated to formulating sound public health policy and to assuring excellence in state-based public health practice. We hope this document can serve as an important resource for those interested in addressing heart disease and stroke in their states.

ASTHO is committed to this public health issue and we will continue to strive for policies that promote heart-healthy and stroke-free states and local communities.

George E. Hardy, Jr., MD, MPH
Executive Director
Association of State and Territorial Health Officials

Heart Disease and Stroke Need Your Attention

What do we know about heart disease and stroke prevention?

Heart disease and stroke are deadly, disabling, and costly. They are the nation's first and third leading causes of death, killing nearly 930,000 Americans each year. Heart disease is a leading cause of premature, permanent disability in the U.S. workforce, and stroke alone has disabled more than 1 million currently surviving Americans. The cost of heart disease and stroke in the United States is projected to be $394 billion in 2005, of which $242 billion is for health care expenditures and $152 billion for lost productivity from death and disability. The costs, the disability, and the deaths will only increase as the baby-boomer generation ages and its age-dependent risks for heart disease and stroke increase.

Heart disease and stroke are largely preventable. Years of research have indicated that controlling high blood pressure and high blood cholesterol reduces a person's risk of developing heart disease or having a heart attack or stroke. Stopping smoking, eating a heart-healthy diet, being physically active, maintaining a healthy weight, and controlling diabetes can also help decrease a person's risk for heart disease and stroke.

How can we translate knowledge into action?

Promoting heart-healthy and stroke-free communities involves efforts from all sectors of society. Health care systems, state and local governments, and workplaces have important and distinct roles to play in improving cardiovascular health. For example, health care organizations can implement systems to better monitor and manage cardiovascular conditions in accordance with national guidelines. Policy makers can establish coverage for preventive health services, no-smoking laws, and emergency response systems. Businesses can provide employees with screening and follow-up services for blood pressure and blood cholesterol control and offer opportunities for physical activity.

Why should health care leaders promote heart-healthy and stroke-free communities?

Health care leaders can play an important role in protecting the health of the people in their care. This document provides a range of actions you can take to promote heart-healthy and stroke-free initiatives in all health care settings. These actions revolve around four central themes:

- Demonstrate leadership.
- Implement policies and incentives to promote heart-healthy behaviors.
- Promote coverage for and use of preventive health services.
- Implement life-saving improvements in health services and medical response.

The choice is yours. The time to act to prevent heart disease and stroke is now.

Actions for Health Care Leaders

Demonstrate leadership

- Implement worksite actions to provide a heart-healthy environment for all employees (see "Employers"). ②
- Apply guidelines and make referrals for all heart disease and stroke patients regardless of sex and race or ethnicity. ①
- Ensure that health care workers are trained in active listening and cultural sensitivity to optimally care for patients of different cultures and backgrounds. ②
- Ensure that the laboratory used for cholesterol testing participates in an external proficiency testing program. ②
- Partner with community agencies to offer heart disease and stroke prevention screenings and educational events for the public and follow-up counseling and education for those at risk. ①

Implement policies and incentives to promote heart-healthy behaviors

- Institute standardized treatment and prevention protocols that are consistent with national evidence-based guidelines to prevent heart disease, stroke, and related risk factors. Examples of these guidelines include National Cholesterol Education Program Guidelines, JNC–7 Guidelines for High Blood Pressure, AHA Guidelines for Primary and Secondary Prevention of Cardiovascular Disease and Stroke, and Clinical Practice Guidelines for Treating Tobacco Use and Dependence. Track changes in health outcomes and cost. ③
- Implement the Chronic Care Model in primary care settings and track changes in cardiovascular health indicators. (For more information on this model, visit http://www.improvingchroniccare.org.) ②
- Provide routine screening and follow-up counseling and education to patients to help prevent and control cardiovascular disease risk factors.③ These risk factors include

  - High blood pressure.
  - High blood cholesterol.
  - Poor nutrition.
  - Physical inactivity.
  - Tobacco use.
  - Diabetes.
  - Obesity.

Promote coverage for and use of preventive health services

- Institute an electronic medical records system and patient data registries to provide immediate feedback on a patient's condition and compliance with the treatment regimen.②

- Institute reminder systems to prompt the physicians of patients with risk factors for heart disease and stroke (including high blood pressure, ② high blood cholesterol, ② obesity, ② and tobacco use ③) to prescribe preventive medication, closely monitor these patients, and encourage them to comply with their treatment and prevention regimen.

- Provide incentives and other support mechanisms to encourage patients and providers to comply with recommended guidelines for preventing heart disease and stroke. ②

Implement life-saving improvements in health services and medical response

- Institute clinical information systems to reinforce guidelines (e.g., Get with the Guidelines, Guidelines Applied in Practice) in your hospital setting and track changes in health outcomes and cost. ②

- Review your health care system's capabilities for treating acute cardiac and stroke patients, including how effectively your wireless enhanced 9-1-1 and EMS providers identify an acute cardiovascular emergency and activate the system. ②

- Encourage your hospitals to ensure that your health care providers are up-to-date on the latest emergency heart disease and stroke training and treatment guidelines. Consider seeking recognition of your facilities' stroke care capabilities from the Joint Commission on Accreditation of Healthcare Organizations (JCAHO). ①

- Ensure that stroke survivors are screened for high blood pressure, high cholesterol, smoking, atrial fibrillation, and other risk factors; counseled about ways to reduce their risk factors; and referred to a stroke rehabilitation program before they are discharged from the hospital. Provide stroke recovery education to patients and their caregivers before discharge. ②

- Ensure that heart attack survivors are screened for high blood pressure, high cholesterol, smoking, atrial fibrillation, and other risk factors; prescribed ACE inhibitors and beta blockers; prescribed lipid-lowering medication if LDL cholesterol exceeds ATP III recommendations; counseled about ways to reduce risk factors; and referred to cardiac rehabilitation before they are discharged from the hospital. ②

- Use clinical care teams to deliver quality patient care to prevent heart disease and stroke. ②

What the Symbols Mean

The actions in this document are divided into three categories, which are indicated by the number following each action.

① Approaches that will bring visibility and support to the issues of heart disease and stroke.
② Interventions found by several studies or scientific reviews to support cardiovascular health.
③ Interventions recommended by CDC's Guide to Community Preventive Services or clinical guidelines.

References for level ② and level ③ actions are listed on the following page. References for level ② include pre/post, quasi-experimental, and experimental studies.

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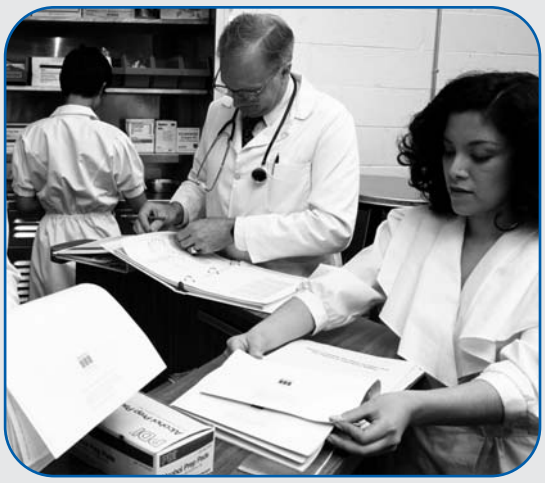
Examples of Health Care Leaders Promoting Heart-Healthy and Stroke-Free Communities

➤ **Institute standardized treatment and prevention protocols that are consistent with national evidence-based guidelines to prevent heart disease, stroke, and related risk factors. Track changes in health outcomes and cost.**

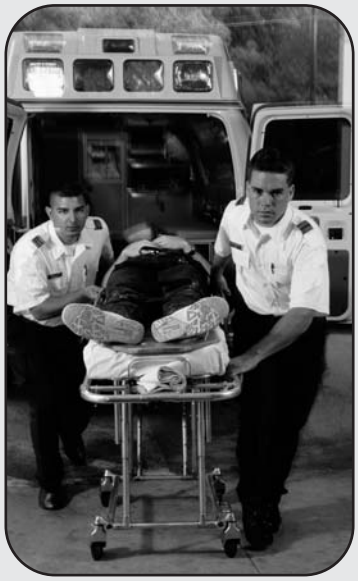


In South Carolina, many collaborators—including the Medical University of South Carolina, the Duke Foundation, the Agency for Healthcare Research and Quality, and the pharmaceutical industry—are working together to support the Hypertension Initiative, which aims to improve blood pressure control, especially among people in underserved, high-risk populations. The South Carolina Cardiovascular Health Program provides support to increase hypertension expertise among primary care providers statewide, particularly providers in rural areas and those with substantial numbers of Medicaid patients. Strategies include peer-led training on best practices for providers, quality-of-care monitoring, and feedback. The Carolina Medical Review, the state's quality improvement organization, is analyzing the South Carolina Medicaid database to determine how these strategies are affecting quality of care. About 50% of hypertensive patients have controlled blood pressure, according to baseline data from participating providers who are reporting on patients under active care. The Hypertension Initiative's goal is to increase this proportion to 70% of hypertensive patients. More than 300 participating providers from 38 of the state's 46 counties are involved in these quality improvement efforts, which will affect about 70,000 hypertensive patients statewide. This approach for improving quality of care has been adopted by the American Society of Hypertension.

➤ **Institute clinical information systems to reinforce guidelines (e.g., *Get with the Guidelines, Guidelines Applied in Practice*) in your hospital setting and track changes in health outcomes and cost.**

The Kentucky Department of Public Health's Cardiovascular Health Program partnered with the American Heart Association Kentucky affiliate, the Kentucky Hospital Association, Healthcare Excel, and the American College of Cardiology to improve quality of care and care management for patients hospitalized with cardiovascular disease. The partners used the American Heart Association's *Get with the Guidelines—Coronary Artery Disease* to improve patient outcomes in acute care settings. Twenty-five hospitals in major metropolitan and rural areas in all five regions of Kentucky are conducting this secondary prevention program. Regular technical assistance is provided by the American Heart Association, the state Cardiovascular Health Program, and the project's information technology manager. By combining their strengths and resources, participating organizations have contributed to the development of a hospital-based quality improvement infrastructure that ensures appropriate medications during treatment and risk counseling before discharge. As more acute care hospitals across the state launch quality improvement programs, reductions in illness and death from heart disease and stroke are expected.

➤ **Encourage your hospitals to ensure that your health care providers are up-to-date on the latest emergency heart disease and stroke training and treatment guidelines. Consider seeking recognition of your facility's stroke care capabilities from the Joint Commission on Accreditation of Healthcare Organizations (JCAHO).**



The New York State Department of Health participated in a stroke demonstration project partnership in New York City to improve the standard of care for acute stroke patients, determine if compliance with the Brain Attack Coalition (BAC) guidelines results in quality care, and explore the possibilities for administering tPA to a greater number of eligible stroke patients. Partners included the American Heart Association, the Fire Department of New York EMS, IPRO (NY's Quality Improvement Organization), a panel of experts in stroke care, and an influential assemblywoman. Hospitals in Kings County, Brooklyn and Queens County, Queens that met the core set of BAC-based criteria participated in the project. These hospitals decreased the amount of time that stroke patients had to wait before being evaluated and increased the number of patients who received tPA. Essential to the success of the demonstration project was the close collaboration with the EMS system and the improved adherence to guidelines.

The Utah Cardiovascular Health program collected data on the public's general awareness of the signs and symptoms of stroke, the readiness of emergency medical centers to treat stroke patients, and EMS systems' use of protocols for stroke care. The data showed that the majority of people from Utah understood the signs and symptoms and called 9-1-1. However, the study found barriers to effective stroke care, including lack of an updated protocol among EMS systems, lack of coordination between centers accepting stroke victims, and a shortage of on-call neurologists. This effort acted as a catalyst for partnerships with Operation Stroke, the initiation of the American Heart Association's *Get with the Guidelines — Stroke* in two hospital stroke centers in Salt Lake, and the development of a stroke center work group to write an action plan and explore the use of funding for first-responders to enhance 9-1-1 services.

What the Science Tells Us

Blood Pressure

- Sixty-five million Americans have high blood pressure, and another 59 million are prehypertensive.[1]

- A 12–13 point reduction in systolic blood pressure can reduce heart attacks by 21%, strokes by 37%, and all deaths from cardiovascular disease by 25%.[2] Nearly 70% of people with high blood pressure do not have it under control.[3]

- The Dietary Approaches to Stop Hypertension (DASH) study has shown that following a healthy eating plan can both reduce a person's risk of developing high blood pressure and lower an already elevated blood pressure.[4]

- Medications can also help reduce high blood pressure.[5]

Cholesterol

- A 10% decrease in total blood cholesterol levels may reduce the incidence of coronary heart disease by as much as 30%.[6] Only 18% of adults with high blood cholesterol have it under control.[7]

- Lowering saturated fat and increasing fiber in the diet, maintaining a healthy weight, and getting regular physical activity can reduce a person's risk for cardiovascular disease by helping to lower LDL (bad) cholesterol and raise HDL (good) cholesterol.[8]

- A class of drugs called statins can reduce deaths from heart disease by reducing cholesterol levels.[9]

Emergency Response

- Forty-seven percent of heart attack deaths occur before an ambulance arrives and 48% of stroke deaths occur before hospitalization.[10, 11]

- Only 3%–10% of eligible stroke victims get the emergency therapy (tPA) that can lead to recovery.[12]

Tobacco

- Cigarette smokers are 2–4 times more likely than nonsmokers to develop coronary heart disease.[13]

- Cigarette smoking approximately doubles a person's risk for stroke.[13]

- People who quit smoking reduce their risk of death from cardiovascular disease by half within a few years.[13]

- Each year, secondhand smoke results in an estimated 35,000 deaths due to heart disease among nonsmokers.[14]

Nutrition[15]

- Fruits and vegetables are high in nutrients and fiber and relatively low in calories. A diet rich in fruits and vegetables can lower a person's risk of developing heart disease, stroke, and hypertension.

- Grain products provide complex carbohydrates, vitamins, minerals, and fiber. A diet high in grain products and fiber can help reduce a person's cholesterol level and risk of cardiovascular disease.

- Foods that are high in saturated fats (e.g., full-fat dairy products, fatty meats, tropical oils) raise cholesterol levels.

- People can lower their blood pressure by reducing the salt in their diets, losing weight, increasing physical activity, increasing potassium, and eating a diet rich in vegetables, fruit, and low-fat dairy products.

Physical Activity[16]

- Regular physical activity can decrease a person's risk of cardiovascular disease and prevent or delay the development of high blood pressure.

- People of all ages should get a minimum of 30 minutes of moderate-intensity physical activity (such as brisk walking) on most, if not all, days of the week.

Obesity[15, 17]

- Because people who are overweight or obese have an increased risk for cardiovascular disease, diabetes, and hypertension, weight management can reduce a person's risk for these conditions.

Diabetes[17, 18]

- Adults with diabetes have heart disease death rates about 2 to 4 times higher than adults without diabetes, and the risk for stroke is 2 to 4 times higher among people with diabetes. About 65% of deaths among people with diabetes are due to heart disease and stroke.

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The Centers for Disease Control and Prevention

The Centers for Disease Control and Prevention (CDC) is one of the 13 major operating components of the Department of Health and Human Services (HHS), which is the principal agency in the United States government for protecting the health and safety of all Americans. Since it was founded in 1946 to help control malaria, CDC has remained at the forefront of public health efforts to prevent and control infectious and chronic diseases, injuries, workplace hazards, disabilities, and environmental health threats.

CDC's Heart Disease and Stroke Prevention Program is located in the National Center for Chronic Disease Prevention and Health Promotion, which is part of the Coordinating Center for Health Promotion. The central strategies of the program include a focus on high blood pressure and cholesterol control, increasing knowledge of signs and symptoms of heart attack and stroke, improving emergency response, improving quality of care, and eliminating health disparities between population groups. Heart disease and stroke outcomes are also related to healthy eating, physical activity, and tobacco use, as well as diabetes and obesity. CDC's Heart Disease and Stroke Prevention Program coordinates these activities to improve overall cardiovascular health in the United States.

For more information on heart disease and stroke prevention at CDC, please visit www.cdc.gov/cvh.

The American Heart Association/American Stroke Association

The American Heart Association is a national voluntary health agency whose mission is to reduce disability and death from heart disease and stroke. Together with the American Stroke Association, the volunteer-led affiliates and their divisions form a national network of local AHA organizations involved in providing research, education, and community programs to prevent heart disease and stroke. The network continues to gain strength as it expands at the grass-roots level in states and local communities.

For more information on the American Heart Association/American Stroke Association, please visit www.americanheart.org.

The Association of State and Territorial Health Officials

The Association of State and Territorial Health Officials (ASTHO) is the national nonprofit organization representing the state and territorial public health agencies of the United States, the U.S. Territories, and the District of Columbia. ASTHO's members, the chief health officials of these jurisdictions, are dedicated to formulating and influencing sound public health policy, and to assuring excellence in state-based public health practice.

For more information on the Association of State and Territorial Health Officials, please visit www.astho.org.

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