

SECTION 3.

RECOMMENDATIONS: A CALL TO ACTION

Summary

The *Action Plan* outlines recommendations developed by five Expert Panels that were convened by CDC to address the plan's five essential components. These recommendations were reviewed by a Working Group, which determined that two of the recommendations were paramount and should be elevated above the others as fundamental requirements for implementing this plan (see Appendix D for details of this process). The two fundamental requirements are followed by 22 recommendations, which are presented according to the Expert Panel that produced them.

The Working Group also reviewed the premises that each panel used to guide its recommendations and determined that three of these were relevant to all five components. These were deemed overarching premises and precede the recommendations in this section. All of the other premises outlined by the panels are presented in Appendix D.

Most of the recommendations are directed to the public health community as a whole, especially public health agencies and their partners, which are called to action by this plan. The hope is that all interested agencies, organizations, and individuals will consider these recommendations and the related action steps outlined in Section 4 and will contribute their participation and support.

Overarching Premises

- All recommendations in the plan should contribute to increasing quality and years of healthy life and eliminating health disparities, as well as preventing heart disease and stroke.
- Recommendations should lead to specific actions and measurable outcomes that, when accomplished, will advance the plan. If successful outcomes are effectively communicated, the action steps that led to this success are likely to be replicated throughout the public health system and society at large.
- Because the impact of public health practice is ultimately local (even when the point of action is national or global), the elements required to make a program effective locally should be identified. This process should involve governmental agencies, schools, work sites, communities, families, and other local entities.

Fundamental Requirements

The Working Group determined that two of the Expert Panels' recommendations were paramount and should be elevated above the others as fundamental requirements. These requirements address the

crosscutting aspects of effective communication, as well as strategic leadership, partnerships, and organization.

Effective Communication

- **The urgency and promise of preventing heart disease and stroke and their precursors (i.e., atherosclerosis, high blood pressure, and their risk factors and determinants) must be communicated effectively by the public health community through a new long-term strategy of public information and education. This new strategy must engage national, state, and local policy makers and other stakeholders.**

Together, these partners must help the public understand three basic messages. First, heart disease and stroke and related conditions pose a serious threat to the health and well-being of all Americans, especially (but not only) during the middle and older adult years. Second, prevention is possible by reversing community-acquired behaviors, risks, and health disparities. Third, the consequence of failing to intensify preventive efforts is steep escalation in the burden and cost of these diseases in the next two decades and beyond. Success requires a communications infrastructure that includes federal, state, and local public health agencies, tribal organizations, and other government agencies working in partnership with the media and other related sectors.

Communication and education are fundamental to achieving policy and environmental changes, which are strongly recommended in this plan. In addition, policy makers must receive the information necessary to appreciate the urgency of the cardiovascular disease (CVD) epidemic and the opportunity that exists to arrest and reverse it. Leaders in prevention have argued for more than a decade that a broad societal commitment is needed for effective public health efforts to prevent heart disease and stroke. This commitment will depend on critical stakeholders devising and adopting a long-range strategy to convey clear, consistent, and contemporary messages to the public and policy makers.

Strategic Leadership, Partnerships, and Organization

- **The nation's public health agencies and their partners must provide the necessary leadership for a comprehensive public health strategy to prevent heart disease and stroke.**

Appropriate organizational arrangements and sufficient support are needed to achieve effective collaborations among all major partners and to implement the plan. Public health agencies must develop the expertise to create and maintain strong partnerships to advance the agenda for preventing heart disease and stroke at local, state, and national levels. Both traditional and nontraditional partners, including many beyond the health sector, are needed to fully implement the plan.

Strong and committed public health leadership is required to undertake and sustain major new efforts sufficient to arrest and reverse the nation's CVD epidemic. An agency with an appropriate mission, a tradition of relationships with official health agencies and national organizations of public health professionals, and extensive experience in developing and implementing population-wide and community-based health strategies could provide the necessary leadership.

Developing and maintaining effective partnerships requires that public health agencies acquire nontraditional skills and competencies such as knowledge of other relevant organizations and agencies and expertise in communication, collaboration, and negotiation. These skills are presently limited in many if not most public health agencies. When these limitations are overcome, other agencies and organizations in the health sector and in fields that indirectly affect health (e.g., education, agriculture, transportation, community planning) can become engaged in cardiovascular health (CVH) issues and activities.

Recommendations for the Five Essential Components of the Plan

To help the public health community implement the *Action Plan*, specific recommendations were developed by five Expert Panels. These panels addressed the five essential components of the plan—taking action, strengthening capacity, evaluating impact, advancing policy, and engaging in regional and global partnerships. Their work was synthesized by a Working Group into 22 recommendations, which are presented here according to the Expert Panel that produced them.

Taking Action: Putting Present Knowledge to Work

- 1. Initiate policy development in CVH promotion and CVD prevention at national, state, and local levels to assure effective public health action against heart disease and stroke. In addition, evaluate policies in non-health sectors (e.g., education, agriculture, transportation, community planning) for their potential impact on health, especially with respect to CVD.**

As described in Section 1, interventions that address policy and environmental change can have population-wide impact. Such changes represent the coming era of chronic disease prevention and health promotion.¹ The greatest potential for sustained, population-wide health behavior change lies in policy decisions in communities and organizations that support heart-healthy behaviors and in interventions that favor CVH promotion and CVD prevention.

- 2. Act now to implement the most promising public health programs and practices for achieving the four goals for preventing heart disease and stroke, as distinguished by the**

Healthy People 2010 Heart and Stroke Partnership based on the different intervention approaches that apply. These goals are prevention of risk factors, detection and treatment of risk factors, early identification and treatment of heart attacks and strokes, and prevention of recurrent cardiovascular events. Public health agencies and their partners must provide continuous leadership to identify and recommend new and effective interventions that are based on advances in program evaluation and prevention research and a growing inventory of “best practices.”

To rigorously evaluate policies and programs, new evaluation concepts and methods must continuously be developed. Because input to this development may arise from many sources (e.g., other agencies and organizations, academia, participating communities), establishing leadership responsibility for this function will be advantageous. Taking action based on current knowledge presupposes a well-founded inventory of programs and practices and assessment of their potential effectiveness. Such an inventory is required in relation to the four Healthy People 2010 Heart and Stroke Partnership goals (which are based on the one *Healthy People 2010* goal for preventing heart disease and stroke²). Selected programs and practices must also be implemented on a sufficient scale to permit meaningful evaluation of their impact.

- 3. Address all opportunities for prevention to achieve the full potential of preventive strategies. Such opportunities include major settings (schools, work sites, health care settings, communities, and families), all age groups (from conception through the life span), and whole populations, particularly priority populations (based on race/ethnicity, sex, disability, economic condition, or place of residence).**

Only a comprehensive approach can most effectively control the progressive development of risk factors and disease outcomes. In this approach, multiple programs must often be coordinated if all major risk factors are to be addressed in all settings for all population groups. CVH leadership includes assuring that all risk factors are adequately addressed through the available resources and stakeholder groups and that requisite preventive and clinical programs and services of acceptable quality are accessible and used by those who need them.

- 4. Emphasize promotion of desirable social and environmental conditions and favorable behavioral patterns in order to prevent the major CVD risk factors and assure the fullest attainable accessibility and use of quality health services for people with risk factors or who develop subclinical or overt CVD. These actions are integral to a comprehensive public health strategy for CVH promotion and CVD prevention.**

Only a comprehensive strategy can effectively address the *Healthy People 2010* goal for preventing heart disease and stroke (see Recommendation 2). Such a strategy for CVH promotion must emphasize the earliest aspects of CVD risk development that jeopardize the health of the entire population (e.g., influences on behavior related to diet; physical activity; and tobacco, alcohol, and drug use) (see Section 2). This is the most neglected area of intervention, and it provides the greatest opportunities both to promote CVH and prevent the later consequences (e.g., risk factors, clinical events). Public health officials and their partners in the health care delivery system and other areas also must assure to the fullest extent possible that clinical guidelines and treatment recommendations for addressing risk factors when they are present (i.e., primary prevention) and CVD events and conditions once they have occurred (i.e., secondary prevention) are implemented effectively across all population groups.

Strengthening Capacity: Transforming the Organization and Structure of Public Health Agencies and Partnerships

5. **Maintain or establish definable entities with responsibility and accountability for CVH programs within federal, state, and local public health agencies, including laboratory components.**

As a preventable disease that profoundly affects mortality, disability, and health care costs in the United States, CVD warrants visibility and attention as a major public health problem. The large and growing level of disparity among certain racial and ethnic populations adds urgency to this need. Establishing the visibility of CVH in all public health agencies will contribute to the needed recognition of this area of responsibility.

6. **Create a training system to develop and maintain appropriately trained public health workforces at national, state, and local levels. These workforces should have all necessary competencies to bring about policy change and implement programs to improve CVH promotion and decrease the CVD burden, including laboratory requirements.**

The necessary competencies go beyond traditional public health knowledge to encompass practical skills such as developing and maintaining partnerships and coalitions, defining and identifying the burden and status of chronic diseases, and knowing how to incorporate sound business practices. Few academic training opportunities to learn these essential skills exist in currently available curricula, including master of public health programs. New workers require on-the-job training or other informal means to acquire these skills. Several training options are proposed in Section 4 to meet the needs of local, state, and national public health workers.

- 7. Develop and disseminate model performance standards and core competencies in CVD prevention and CVH promotion for national, state, and local public health agencies, including their laboratories.**

Rather than mandating specific personnel and other resources for CVD prevention programs, setting performance standards and competencies that public health agencies can meet through flexibility with their own personnel and resources may be more successful.

- 8. Provide ongoing access to technical assistance and consultation to state and local health agencies and partners for CVD prevention.**

Although health agencies and organizations can develop personnel capacities through episodic training, continuous availability of technical support through consultation and information sharing can enhance the effectiveness of staff with sufficient previous training. Resources are needed to assure the availability of such support.

Evaluating Impact: Monitoring the Burden, Measuring Progress, and Communicating Urgency

- 9. Expand and standardize population-wide evaluation and surveillance data sources and activities to assure adequate assessment of CVD indicators and change in the nation's CVD burden. Examples include mortality, incidence, prevalence, disability, selected biomarkers, risk factors and risk behaviors, economic burden, community and environmental characteristics, current policies and programs, and sociodemographic factors (e.g., age, race/ethnicity, sex, and ZIP code).**

Existing data sources do not adequately support current population-wide surveillance and evaluation priorities. Strengthening and enhancing these data sources will contribute better information for monitoring and improving CVH in the United States.

- 10. Establish a network of data systems for evaluation of policy and program interventions that can track the progress of evolving best practices and signal the need for changes in policies and programs over time. This network would support the full development, collection, and analysis of the data needed to examine program effectiveness.**

The scientific basis for public health policy and programs in heart disease and stroke prevention must be continually strengthened. A prerequisite for achieving this recommendation is to build data systems that can evaluate health burdens, health practice experiences, and the possible opportunities for new policy and program development.

- 11. Develop the public health infrastructure, build personnel competencies, and enhance communication systems so that federal, state, and local public health agencies can communicate surveillance and evaluation results in a timely and effective manner.**

Communicating health information is essential to assuring the timely application of proven interventions for the greatest public health benefit. Strengthening the capacity of public health systems to collect and use information will stimulate policy development and lead to more effective programs and a greater ability to measure their impact.

Advancing Policy: Defining the Issues and Finding the Needed Solutions

- 12. Conduct and facilitate research by means of collaboration among interested parties to identify new policy, environmental, and sociocultural priorities for CVH promotion. Once the priorities are identified, determine the best methods for translating, disseminating, and sustaining them. Fund research to identify barriers and effective interventions in order to translate science into practice and thereby improve access to and use of quality health care and improve outcomes for patients with or at risk for CVD. Conduct economics research, including cost-effectiveness studies and comprehensive economic models that assess the return on investment for CVH promotion as well as primary and secondary CVD prevention.**

The importance of policy, environmental, and sociocultural determinants of risk factors and CVD has only been recognized recently and requires intensified investigation. Innovative approaches are needed to advance CVH promotion policy. For example, research is needed to assess community-wide interventions aimed at maintaining and restoring low blood cholesterol levels and low blood pressure, which help prevent atherosclerosis and high blood pressure. To quickly and effectively translate science into practice and improve health outcomes, researchers must identify barriers and implement interventions that prove successful. As the U.S. population ages over the coming decades, the economic aspects of CVD health care (e.g., managing risk factors, events, disabilities, and long-term dependency) will become an even greater problem. Prevention effectiveness research must provide current and projected estimates of the cost to prevent and treat each CVD risk factor and outcome, singly and in integrated multifactor approaches, and determine the cost-effectiveness of current interventions.

- 13. Design, plan, implement, and evaluate a comprehensive intervention for children and youth in school, family, and community settings. This intervention must address dietary imbalances, physical inactivity, tobacco use, and other**

determinants in order to prevent development of risk factors and progression of atherosclerosis and high blood pressure.

The need to focus on prevention early in life is compelling. First, very early experience (even in utero or during early postnatal life)³ may contribute to risk for adult CVD and determine vulnerability to later effects from factors such as weight gain or low income. Second, many health behaviors are established in childhood and youth, when they are more susceptible to change. Third, biological CVD risk factors such as blood cholesterol level and blood pressure and behavioral risk factors such as tobacco use track from childhood into adult life, and family history of CVD predicts CVD risk factors in children and adolescents. Fourth, preclinical CVD in the form of atherosclerosis is already present in youth, and its extent and severity are increased by the presence of these risk factors. Fifth, emerging evidence on biomarkers of risk may point to specific groups especially likely to benefit from intervention. The evidence outlined here indicates that critical, early periods exist when CVD risk can be detected and treated, and research is needed to define these periods more precisely and to demonstrate the impact of population-wide interventions.

- 14. Conduct and facilitate research on improvements in surveillance methods and data collection and management methods for policy development, environmental change, performance monitoring, identification of key indicators, and capacity development. Address population subgroups in various settings (schools, work sites, health care, communities) at local, state, and national levels. Additionally, assess the impact of new technologies and regulations on surveillance systems and the potential benefit of alternative methods.**

Existing surveillance systems do not collect sufficient data in many of these areas. Thus, the ability to make evidence-based improvements in policy and capacity development is limited. Declining survey response rates and increased cell phone use, caller identification technologies, and privacy protections impede collection of data representative of many target populations. Because future innovations could produce communication methods more useful for data collection, methodological research must continue to adapt.

- 15. Conduct and support research to determine the most effective marketing messages and educational campaigns to create demand for heart-healthy options, change behavior, and prevent heart disease and stroke for specific target groups and settings. Create and evaluate economically viable CVD prevention ventures (e.g., in food production, manufacturing, marketing).**

The need for more effective communication about the potential for effective CVH promotion and CVD prevention is widely acknowledged. Research on this topic can contribute substantially

to the impact of marketing and public education about heart disease and stroke and increase the return on investment. Strengthening the market for heart-healthy commercial ventures is essential. For example, change in the nation's dietary patterns may require extensive change in food production, processing, marketing, and consumption. Research collaborations that bring interested parties together should achieve a major—if gradual—transition in which public interest and demand for healthy options continue to provide a sustainable economic market for the food industry.

16. Initiate and strengthen training grants and other approaches, such as training workshops and supervised research opportunities, to build the competencies needed to implement the CVD prevention research agenda.

Current training programs in prevention research are too few and too small to develop the large cadre of skilled researchers needed to conduct the program effectiveness research and other investigations recommended in this plan. Training grants in other areas have proven that this approach can work.

***Engaging in Regional and Global Partnerships:
Multiplying Resources and Capitalizing on
Shared Experience***

17. Engage with regional and global partners to mobilize resources in CVH promotion and CVD prevention, develop and implement global CVH policies, and establish or strengthen liaison with the partners identified in these recommendations.

Global partnerships should be strengthened to develop CVH policy and programs that will advance both U.S. and global agendas for enhancing CVH. These efforts can build on existing partnerships, thereby increasing the net investment of effort and resources, and draw on the strengths of the public health community.

18. Address inequalities in CVH among developed and developing countries, rich and poor people within countries, and men and women of all ages. Work with national and global partners to assess the impact of globalization and trade policies on global CVH.

Inequalities strongly influence CVH nationally and globally, and eliminating them is a cardinal goal of public health interventions aimed at promoting CVH. Globalization affects many aspects of health among people in the United States and worldwide. Current information on how globalization, including trade policies and practices, affects CVH is inadequate. Better information is needed to determine how the positive forces of globalization can be harnessed to benefit CVH nationally and globally.

19. Develop a strategy to promote use of the media to support CVH globally.

Media channels are powerful health promotion tools that are underused in CVH promotion and CVD prevention. In fact, their messages sometimes serve countervailing interests. Partnership with the global media can help mobilize the use of these capacities to promote CVH.

20. Strengthen global capacity to develop, implement, and evaluate policy and program interventions to prevent and control heart disease and stroke. Involve all relevant parties—governmental and nongovernmental, public and private, and traditional and nontraditional partners—in a systematic and strategic approach.

Improvements in a country's ability to develop or expand its activities in policy and program interventions can best be made if the organizations with experience in this area contribute their expertise. Thus, public health agencies in the United States and their partners can play a significant role in supporting global efforts to prevent and control heart disease and stroke. In addition, partnerships limited only to organizations and agencies within the health sector will be less effective, especially globally, because effective interventions must be multidimensional. Further, the potential for expanding resources and commitments to preventive policies and programs increases as participation grows.

21. Strengthen the global focus of public health agencies in the United States and their partners on CVH and increase their participation in partnerships intended to a) develop and implement standards for adequate monitoring of health, social, and economic indicators and b) develop the ability to effectively disseminate and translate information into policy and action.

A set of standard elements that could or should be collected in a monitoring system is needed. Through technical assistance, public health agencies in the United States and their partners could contribute to this development.

22. Promote and support research on implementing and evaluating CVH policy interventions in diverse settings where different social and economic development and health transition experiences offer contrasting conditions for testing new intervention approaches.

Current research on policy interventions and their impact on CVH promotion and CVD prevention, nationally and globally, is insufficient to provide adequate assurance of their effectiveness. Policy research tools should be developed, and emerging policy interventions that could be useful to the United States and its global partners should be identified and evaluated continually.

References

1. Association of State and Territorial Directors of Health Promotion and Public Health Education (ASTDHPPHE), and Centers for Disease Control and Prevention (CDC). *Policy and Environmental Change: New Directions for Public Health. Final Report*. Atlanta, GA: ASTDHPPHE and CDC; August 2001.
2. US Department of Health and Human Services. *Healthy People 2010: Understanding and Improving Health and Objectives for Improving Health*. 2nd ed. Vol 1. Washington, DC: US Government Printing Office; November 2000.
3. Barker DJP, editor. Fetal and Infant Origins of Adult Disease. London: *British Medical Journal*; 1992.