Heart Disease and Stroke

U.S. Department of Health & Human Services • Public Health Service

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PROGRESS REVIEW

In the ninth session in the second series of assessments of Healthy People 2010, ADM John O. Agwunobi, Assistant Secretary for Health, chaired a focus area Progress Review on Heart Disease and Stroke. He was assisted by staff of the co-lead agencies for this *Healthy People 2010* focus area, the Centers for Disease Control and Prevention (CDC) and the National Institutes of Health (NIH). Also participating in the review were representatives from other U.S. Department of Health and Human Services (HHS) offices and agencies. The three key topics selected for particular attention and discussion by Progress Review participants were prevention and control of heart disease and stroke, high blood pressure, and disparities in health status and outcomes among population groups.

The complete November 2000 text for the Heart Disease and Stroke focus area of *Healthy People 2010* is available online at **www.healthypeople.gov/document/html/volume1/12heart.htm.** Revisions to the focus area chapter that were made after the January 2005 Midcourse Review are available at **www.healthypeople.gov/data/midcourse/html/focusareas/fa12toc.htm.** Some more recent data used in the Progress Review for this focus area's objectives and their operational definitions can be accessed at **wonder.cdc.gov/data2010.** For comparison, the report on the first-round Progress Review (held on April 23, 2003) is archived at **www.healthypeople.gov/data/2010prog/focus12/2003fa12.htm.** The meeting agenda, tabulated data for all focus area objectives, charts, and other materials used in the Progress Review can be found at a companion site maintained by the CDC National Center for Health Statistics (NCHS): **www.cdc.gov/nchs/about/otheract/hpdata2010/focusareas/fa12-heart2.htm.**

Data Trends

In his overview of data related to this focus area, NCHS Director Edward Sondik noted that, of the leading causes of death in the United States in 2004, heart disease ranked first (27 percent, or more than 650,000 deaths) and stroke third (6 percent, or more than 150,000 deaths) after cancer (23 percent). In 2004, about 16 million Americans had had a heart attack, angina pectoris, or both. About 700,000 have a new or recurrent stroke each year. Of every five deaths from stroke, two occur in men and three in women. The estimated national burden in medical costs and disability for stroke will be about $62.7 billion in 2007. Of the 12 objectives and subobjectives in the focus area whose progress can be measured, 3 have met or exceeded the target, 7 are improving, 1 is getting worse, and 1 shows little or no change. Dr. Sondik then went into greater detail about objectives that were selected for highlighting during the Progress Review.

(Obj. 12-1): Of the total number of deaths from heart disease in the United States each year, about 75 percent are from coronary heart disease (CHD). The age-adjusted rate of deaths from CHD decreased from 203 per 100,000 standard population in 1999 to 160 in 2004. Among females, the CHD death rate decreased from 161 in 1999 to 125 in 2004 and, among males, from 260 to 204. Among racial and ethnic

groups for which data are available, the CHD death rate in 2004 was 90 per 100,000 for Asians/Pacific Islanders (compared with 124 in 1999), 112 for American Indians/Alaska Natives (compared with 148 in 1999), 159 for non-Hispanic whites (compared with 201 in 1999), and 207 for non-Hispanic blacks (compared with 250 in 1999). The target is 162 per 100,000. A notable concentration of high age-adjusted CHD death rates occurs in a band of state areas roughly tracking the southern reaches of the Appalachian mountain chain and extending westward in a widening arc through portions of Arkansas, Oklahoma, and Texas.

(Obj. 12-6a, 12-6b, 12-6c): Beyond the middle years of life, the rate of hospitalizations for heart failure tends to increase with advancing age. Among persons aged 65 to 74 years, the rate decreased from 13.2 per 1,000 in 1997 to 11.1 in 2005. Among whites in that age group, the decrease was from 9.9 in 1997 to 8.2 in 2005. Among blacks in the age group, the rate was 20.0 in 1997 and 15.6 in 2005. The target is 6.5 per 1,000. The rate among persons aged 75 to 84 years decreased from 26.7 per 1,000 in 1997 to 23.7 in 2005. Among whites in that age group, the rate decreased from 21.4 in 1997 to 18.6 in 2005. Among blacks in the age group, however, the rate increased from 21.4 in 1997 to 32.4 in 2005. The target is 13.5 per 1,000. The rate among persons aged 85 years and older decreased from 52.7 per 1,000 in 1997 to 44.5 in 2005. Among whites in that age group, the rate decreased from 41.8 in 1997 to 35.4 in 2005. Among blacks in the age group, the rate decreased from 47.0 in 1997 to 41.1 in 2005. The target is 26.5 per 1,000.

(Obj. 12-7): The age-adjusted death rate from stroke decreased from 62 per 100,000 in 1999 to 50 in 2004, thus attaining the target of 50 per 100,000. Among females, the decrease was from 60 in 1999 to 49 in 2004; among males, the decrease was from 63 in 1999 to 50 in 2004. Among racial and ethnic groups for which data were available, the stroke death rates were as follows: American Indians/Alaska Natives—48 in 1999, compared with 35 in 2004; Hispanics—47 in 1999, compared with 38 in 2004; Asians/Pacific Islanders—53 in 1999, compared with 41 in 2004; non-Hispanic whites—60, compared with 48 in 2004; and non-Hispanic blacks—83, compared with 71 in 2004. Geographically, stroke death rates are higher in a group of states in the southeastern/Atlantic coastal region of the United States, an area termed the "stroke belt" because of stroke mortality rates that have exceeded average rates in the rest of the Nation for the past four decades or more. To cite an example, the age-adjusted death rate from stroke among non-Hispanic blacks is more than 80 per 100,000 in the stroke belt, compared with less than 40 in New York State.

(Obj. 12-9): In the survey period 1988–1994, 26 percent of the total U.S. population aged 20 years and older (age-adjusted) had high blood pressure. This estimate increased to 31 percent in the period 2001–2004, moving away from the target of 14 percent. Between these two time periods, increases in the proportion of those with high blood pressure were reported for the following population groups: Mexican-Americans—from 26 percent in the first period to 28 percent in the second; non-Hispanic whites—from 24 percent to 29 percent; non-Hispanic blacks—from 38 percent to 43 percent; females—from 24 percent to 31 percent; and males—from 27 percent to 30 percent.

(Obj. 12-10): In the survey period 1988–1994, 25 percent of the total U.S. population with high blood pressure aged 18 years and older (age-adjusted) had their blood pressure under control. This increased to 36 percent in the period 2001–2004, still far short of the target of 68 percent. Between these two time periods, increases in the proportion of persons with controlled high blood pressure were reported for the following population groups: Mexican-Americans—from 15 percent in the first period to 27 percent in the second; non-Hispanic whites—from 26 percent to 37 percent; non-Hispanic blacks—from 23 percent to 34 percent; females—from 35 percent to 39 percent; and males—from 18 percent to 33 percent.

Key Challenges and Current Strategies

In presentations that followed the data overview, the principal themes were introduced by Janet Collins, Director of the CDC National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP); Susan Shurin, Deputy Director of the NIH National Heart, Lung, and Blood Institute (NHLBI); Darwin Labarthe, Director of the NCCDPHP Division for Heart Disease and Stroke Prevention; Richard Benson, Program Director, Office of Minority Health and Research, in the NIH National Institute of Neurological Disorders and Stroke (NINDS); and Garth Graham, Deputy Assistant Secretary for Health (Minority Health). These agency representatives set the stage for discussions among Progress Review participants, identified a number of barriers to achieving the objectives, and discussed activities under way to meet these challenges, including the following:

Challenges

- An estimated 15.8 million people in the United States are living with CHD and more than 5.7 million with the effects of stroke, which is the second leading cause of dementia after Alzheimer's disease.
- Risk factors for heart disease and stroke are well established and include high blood pressure, high blood cholesterol, tobacco use/cigarette smoking, overweight/obesity, poor nutrition, physical inactivity, and diabetes.
- About 70 million Americans fall into the newly recognized blood pressure risk category of "prehypertension" and are in danger of developing hypertension (high blood pressure) and its associated complications. Hypertension leads to more than half of all heart attacks, strokes, and heart failure cases in the United States each year and also increases the risk of kidney failure and blindness.
- The prevalence of overweight in children has risen steadily since the early 1980s, with 18 percent of all children currently being defined as overweight or obese. Obesity is associated with adverse levels of lipids, blood pressure, and insulin. Of those children whose body mass index (BMI) is greater than the 99th percentile, 59 percent have at least two risk factors for cardiovascular disease.
- If hypertension is not present at age 55, there is still a 90 percent chance of developing it at some point later in life. Even if blood pressure is deemed normal or optimal, damage to the arteries still can occur at fairly low blood pressure levels.
- Heart failure, which has no cure at present, is a condition in which the heart cannot pump enough blood and oxygen to meet the needs of other body organs. The most common causes of heart failure are coronary artery disease, high blood pressure, and diabetes. About 7 of 10 people with heart failure had high blood pressure before being diagnosed. About 22 percent of men and almost half of all women will develop heart failure within 6 years of having a heart attack.

Strategies

- The *Healthy People 2010* Memorandum of Understanding (MOU) between the American Heart Association/American Stroke Association, CDC, NHLBI, NINDS, the Indian Health Service, and the Office of Disease Prevention and Health Promotion (ODPHP) aims to synergize efforts toward the achievement of the *Healthy People 2010* objectives for heart disease and stroke. Current projects of the MOU, which was renewed in April 2006, include improving awareness of heart attack signs and symptoms and controlling high blood pressure among American Indians living in rural areas and reducing the lag time between heart attacks they may suffer and the provision of treatment.

- "Mission Possible: Prevent and Control High Blood Pressure" is a campaign that attracts new partners and revitalizes existing partners within the public health community in the fight against high blood pressure and promotes improved high blood pressure prevention and control among high-risk audiences.
- In 2003, 90 percent of adults had had their blood pressure measured in the preceding 2 years and knew if it was in the normal range or high. Of those with high blood pressure, 93 percent were taking action to control it.
- The National Forum for Heart Disease and Stroke Prevention was established in 2002 and charged with implementing *A Public Health Action Plan To Prevent Heart Disease and Stroke*. The *Action Plan* incorporates *Healthy People 2010* objectives and addresses seven key action areas, including effective communication, partnering, capacity-building, and prevention research. National Forum membership includes representatives from some 80 national and international organizations.
- The NHLBI Cardiovascular Knowledge Network speeds the application of scientific advances in the prevention, detection, and treatment of cardiovascular disease. Through network activities, NHLBI will provide opportunities for communication and collaboration among researchers, clinical and public health practitioners, patients, and the general public.
- The program Well-Integrated Screening and Evaluation for Women Across the Nation (WISEWOMAN) helps women with little or no health insurance gain access to screening and lifestyle interventions that can reduce their risk for heart disease and other chronic diseases. The program includes 15 projects in 14 states and addresses high blood pressure and cholesterol, nutrition and weight management, physical inactivity, and tobacco use.
- The Heart Truth is a national awareness campaign that warns post-reproductive age women about heart disease and provides guidance to help them take action against its risk factors, which generally begin to increase between the ages of 40 and 60. The campaign's message is characterized by the emblem of the Red Dress, which is intended as a warning that heart disease is the leading killer of women.
- Four state-based Paul Coverdell National Acute Stroke Registries are currently funded, largely by CDC, to monitor, promote, and improve the quality of acute stroke care in the states. The data collected will guide quality improvement interventions at acute care hospitals to help close the gap between clinical guidelines and practice.
- Stroke disparity research at NINDS includes the REasons for Geographic And Racial Differences in Stroke (REGARDS) study, which is designed to explore the role of geographic differences in stroke risk factor prevalence, stroke incidence, and stroke mortality. The study is projected to cover some 30,000 individuals and also will assess race, genetics, and lifestyle choices as stroke risk factors.
- *Get With the Guidelines* is a hospital-based quality improvement program of the American Heart Association and the American Stroke Association that provides tools to help collaborative healthcare provider teams follow the most recently updated treatment guidelines when treating patients. The program concentrates on reaching patients when they are most receptive to providers' guidance, that is, immediately after an acute event brought on by CHD, stroke, or heart failure.

Approaches for Consideration

Participants in the Progress Review made the following suggestions for public health professionals and policymakers to consider as steps to enable further progress toward achievement of the objectives for Heart Disease and Stroke:

- Accelerate efforts to reduce the time it takes to get critical research findings on heart disease and stroke applied effectively, which is reported by the Institute of Medicine to be about 17 years.
- Increase the utilization of worksites as venues for educational campaigns to promote preventive action to eliminate or reduce the impact of risk factors for heart disease and stroke.
- Make greater use of Regional Health Administrators and their staff to reach people in the areas they serve with information about heart disease and stroke prevention and control, especially inner-city and minority populations.
- Assist additional states to institute state cardiovascular health examination surveys and other means of monitoring progress to improve control of high blood pressure and high cholesterol.
- Pursue more vigorously activities to encourage retail food marketers and managers of restaurants to make full disclosure to consumers of salt content in the products they sell and to offer more heart-healthy choices.
- Employ more creative social marketing techniques to better reach target audiences, especially children and younger people, with messages about the vital importance of eating a nutritious diet (including reduction of salt intake) and becoming routinely physically active to reduce the risk of overweight and obesity and the harmful consequences these conditions can have for heart and vascular health.

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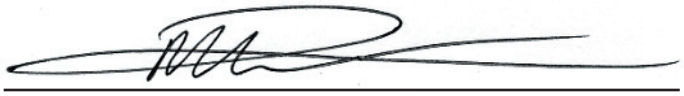

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