

PROMOTING HEALTH PREVENTING DISEASE



Objectives for the Nation



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OBJECTIVES FOR THE NATION**

Fall 1980

**DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service**

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Public Health Service

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I am pleased to share with you Promoting Health/Preventing Disease: Objectives for the Nation. Our national strategy for achieving further improvements in the health of Americans was established in Healthy People, a document that notes our accomplishments in prevention, identifies the major health problems, and sets national goals for reducing death and disability. This volume sets out specific and measurable objectives for fifteen priority areas that are key to achieving our national health aspirations. We appreciate the work of so many people to define quantifiable objectives against which we can assess the effectiveness of our efforts.

Achievement of these objectives by 1990 is a shared responsibility, requiring a concerted effort not only by the health community, but also by leaders in education, industry, labor, community organizations and many others. These challenges for the eighties demand creative approaches and by working together we can realize our aspirations and really make a difference.

A handwritten signature in cursive script, reading "Julius B. Richmond", is positioned above the typed name.

Julius B. Richmond, M.D.
Assistant Secretary for Health
and Surgeon General

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INTRODUCTION AND OVERVIEW

The Purpose and the Process

In 1979 the first Surgeon General's Report on Health Promotion and Disease Prevention, *Healthy People*, was issued. That report chronicled a century of dramatic gains in the health of the American people, reviewed present preventable threats to health, and identified fifteen priority areas in which, with appropriate actions, further gains can be expected over the decade. The report established broad National goals—expressed as reductions in overall death rates or days of disability—for the improvement of the health of Americans at the five major life stages. Specifically, the goals established were:

- To continue to improve infant health, and, by 1990, to reduce infant mortality by at least 35 percent, to fewer than nine deaths per 1,000 live births.
- To improve child health, foster optimal childhood development, and, by 1990, reduce deaths among children ages one to 14 years by at least 20 percent, to fewer than 34 per 100,000.
- To improve the health and health habits of adolescents and young adults, and, by 1990, to reduce deaths among people ages 15 to 24 by at least 20 percent, to fewer than 93 per 100,000.
- To improve the health of adults, and, by 1990, to reduce deaths among people ages 25 to 64 by at least 25 percent, to fewer than 400 per 100,000.
- To improve the health and quality of life for older adults and, by 1990, to reduce the average annual number of days of restricted activity due to acute and chronic conditions by 20 percent, to fewer than 30 days per year for people aged 65 and older.

This volume, *Promoting Health/Preventing Disease*, sets out some specific and quantifiable objectives necessary for the attainment of these broad goals. Objectives are established for each of the 15 priority areas identified in the Surgeon General's report: high blood pressure control; family planning; pregnancy and infant health; immunization; sexually transmitted diseases; toxic agent control; occupational safety and health; accident prevention and injury control; fluoridation and dental health; surveillance and control of infectious diseases; smoking and health; misuse of alcohol and drugs; physical fitness and exercise; and control of stress and violent behavior. A number of different objectives are specified for each of the 15 areas. Taken together the targets established in *Promoting Health/Preventing Disease*, when attained, should permit the realization of the overall National goals set down in the Surgeon General's report.

The objectives are the result of a year long effort involving more than 500 individuals and organizations from both the private and governmental sectors. First drafts were drawn up by 167 invited experts at a conference held in Atlanta, Georgia, on June 13 and 14, 1979, sponsored by the then Department of Health, Education, and Welfare. The conference, organized into work groups for the 15 subject areas, was a joint effort of the Center for Disease Control and the Health Resources Administration, coordinated by the Office of Disease Prevention and Health Promotion of the Office of the Assistant Secretary for Health.

An invitation for public comment on these drafts was published in the *Federal Register* and the volume containing them was also circulated widely to people and agencies concerned with the various subjects. During the fall of 1979 the objectives and reports were revised according to the suggestions received. In early 1980 the revised objectives were circulated within the Department of Health and Human Services, to other relevant Federal agencies, and to Atlanta conference work group chairpersons to elicit further comment. Final revisions were made in the spring of 1980.

Because the process received such a substantial contribution from the 1979 Atlanta conference, it merits special note. The conference participants and invited observers were all knowledgeable about some aspect of risk reducing actions that can improve the opportunities for health. The chairpersons and members of each of the 15 work groups were expressly selected to provide a mix of backgrounds which could bring to the task not only technical expertise and consumer and professional viewpoints, but also practical experience with planning and program implementation. Thus, participants were drawn from a variety of affiliations—providers, academic centers, State and local health agencies, voluntary health associations, and many others.

To facilitate the discussions, each work group member received a draft background paper, prepared by staff of an HEW office with program responsibility in the relevant prevention activity. Other HEW activities in setting goals and standards for prevention were taken into account both in the background papers and in work group discussions, particularly the National Health Planning Goals called for by Section 1501 of P.L. 93-641, presently under development by the Health Resources Administration, and the Model Standards for Community Preventive Health Services called for by Section 314 of P.L. 95-83, whose

development was coordinated by the Center for Disease Control.*

While the objectives were developed under Public Health Service sponsorship, and are consistent with Federal policies, they are far wider in purpose and scope. They are intended to be National—not Federal—objectives. To realize the potential for reducing the rates of premature death and disability to the levels set forth here requires a truly National commitment, including, but going far beyond, that of government.

To achieve these objectives demands actions by Americans in all walks of life, in their roles as concerned individuals, parents, and as citizens of their Nation and of States and local communities. Sustained interest and action is required not only by physicians and other health professionals, but also by industry and labor, by voluntary health associations, schools, churches, and consumer groups, by health planners, and by legislators and public officials in health departments and in other agencies of local and State governments and at the Federal level.

While the diagnosis and treatment of disease are the primary responsibility of health professionals and health organizations, actions to reduce the risks of disease or injury extend far beyond health services *per se*. The range of preventive activities is broad. Included are key preventive services, such as immunization, delivered to individuals by physicians, nurses, other health professionals, and trained allied health workers. Also important are standards, voluntary agreements, laws and regulations, such as engineering standards, safety regulations and toxic agent control, to protect people from hazards to health in their living, travel and working environments. In addition, and perhaps most important for today's health threats, there are activities that individuals may take voluntarily to promote healthier habits of living and activities that employers and communities may take to encourage them.

This document is designed for the use of leadership in the wide range of private and public sector organizations with important roles in these various areas. At a time in the Nation's history when budgets become ever tighter, legislators, public officials and governing boards of industry, foundations, universities and voluntary agencies are beginning to re-examine their traditional bases for allocating their limited health-related resources. It is anticipated that in the years to come policy makers will be able to use the objectives in this volume to track the Nation's successes or failures in prevention.

The Reports

Each of the reports focuses on one of the 15 prevention areas and is presented in a standard format allowing a review of:

- the nature and extent of the problem, including health implications, status and trends;

*Readers who want to place disease prevention priorities in the perspective of overall national health policy should refer to the draft *National Health Planning Goals*, forthcoming from the Health Resources Administration which address broad health status and health system considerations. Readers who want more specifics on how to put prevention measures to work are referred to *Model Standards for Community Preventive Health Services*, issued in 1979 by the Center for Disease Control.

- prevention/promotion measures illustrative of approaches in education and information, services, technology, legislation and regulation, and economic incentives, followed by observations on the relative strength of these measures;
- specific national objectives for:
 - improved health status
 - reduced risk factors
 - improved public/professional awareness
 - improved services/protection
 - improved surveillance/evaluation;
- the principal assumptions that underlie the framing of the objectives;
- the data necessary for tracking progress.

Discussion of the objectives is limited to some extent by the need to distill often comprehensive and complex issues into a short outline form as well as by limitations in the knowledge base. In some instances, for example, it is not possible to relate the magnitude of a targeted problem to a specific disease incidence—e.g., the prevalence of a particular carcinogen in the environment to an identifiable level of cancer incidence. Also, the discussions of the various intervention measures are offered principally as checklists rather than as detailed blueprints with appropriate sequencing carefully established and presented. They do not necessarily reflect Federal policy—rather they represent a broader range of possible measures available throughout the public and private sectors.

But these limitations are dictated by the character of the existing data, as well as the necessity to tailor efforts to local conditions. Given these considerations, the discussions provide a concise review of the central issues relevant to each area.

With respect to the objectives themselves, certain premises are inherent. First, the stated objectives should reflect a careful balancing of potentials for benefits and harm to the individuals or populations concerned. Second, specific actions suggested should be in line with professional consensus on likely efficacy of the action. Third, continued biomedical, epidemiological and behavioral science research, and systematic evaluation will result in improved judgments.

The objectives focus on interactions and supports designed primarily for well people; to reduce their risks of becoming ill or injured at some future date. Thus, few of the objectives deal with secondary prevention. Objectives relating to the frequency and content of physical examinations and other means of detecting early conditions (such as cervical, breast and colon cancer, diabetes, vision and hearing problems and dental caries) were deliberately excluded from consideration, despite their obvious importance in signaling needs for intervention.

Finally, an attempt has been made to confine objectives to what might feasibly be attained during the coming decade, assuming neither major breakthroughs in prevention technology, nor massive infusions of new Federal spending. For example, the goal for infant health is to reduce the infant mortality rate to no more than 9 deaths per 1,000 live births. In theory the Nation should be able to do much better. Several areas in western Europe, and certain political jurisdictions within the United States

already have achieved rates of 5 per 1,000. Yet, the size of the gaps that presently exist between the risks experienced by pregnant women in different age, ethnic and income groups of the population, and the limited resources that now appear likely to become available to narrow those gaps make 9 per 1,000 a more realistic objective.

In sum, the objectives were framed in the context of current knowledge and the current aggregate level of public and private resources for the 15 prevention areas. While this parameter was not adhered to in every instance, it promoted a greater measure of restraint—or realism—on the process.

No effort has been made to establish priorities among the 15 areas, or even among the various objectives within any given area. Given the nature of our pluralistic society and the diversity of regional and local needs and capabilities, both the setting of priorities and the choice of program direction are best left to those responsible for planning, coordinating, and implementing prevention strategies—namely State and local health agencies, State health planning and development agencies, health system agencies, and governing boards of the wide range of private sector organizations involved.

It is important to note that some themes can be identified which group the activities of the 15 areas into subcategories with common elements. "Substance abuse," for example, links the areas of smoking and health and misuse of alcohol and drugs. Common elements in these areas include questions of addictive properties, neurochemical action, long-term sequelae, age-related vulnerability, effectiveness of primary and secondary prevention measures, and ethical issues attendant to behavior change. Each of these issues should be considered not only on its own merit, but also for its lessons for, and commonalities with, the other abusive behaviors. Another example is the theme of "reproductive health." Family planning, pregnancy and infant health, and sexually transmitted diseases are, of course, all concerned with reproductive health, but elements are also found in the discussions of smoking and health, misuse of alcohol and drugs, nutrition, toxic agent control, occupational safety and health, and immunization. Approaches to ensuring positive results of human reproductive processes compel consideration of issues of sexual attitudes and behavior, understanding of fertility and infertility, decisions about pregnancy, activities and exposures during pregnancy, obstetrical services, and follow-up care of mother and infant. All are important factors in reproduction; central concerns of much of reproductive life. Considering the spectrum of issues in the aggregate, rather than a series of isolated events, has substantial merit.

Because such collective themes can be important to the implementation of measures to address the identified objectives, program directors designing such measures and setting priorities should search for the common elements particularly germane to their program needs and resources.

Crosscutting Issues

A number of issues are common to most or all of the reports: the problem of developing objectives in the face of economic uncertainties, a rapidly changing science base, the needs for more research and data, unpredictable shifts

in popular interests and values, trade-offs between health and other societal interests, and ethical considerations in attempts to influence changes in people's customary habits. Two are discussed below: data requirements and research needs.

- **Data requirements**—The most salient common feature across the 15 areas is the need for better data both to profile current status and to track progress towards the established objectives. Statistical analyses derived from reliable data, continuously reported and coded according to universally accepted definitions and conventions, are the *sine qua non* for establishing the true nature of the problems preventive measures should address, as well as for charting trends towards achieving the objectives. There is currently great variability in the depth and reliability of data available among the 15 areas. While statistical reports relevant to the problem of smoking are quite complete, virtually no data exist to estimate the problem of unmanaged stress in the population, and its association with mental illness, cardiovascular disease or violent behavior.

In some cases, the availability of baseline data and ability to track progress have been relatively more prominent than overall importance to health in shaping the nature of objectives. The paucity of data is particularly handicapping for State and local organizations and agencies seeking to set and track progress toward their own local priorities and objectives for prevention. For the most part, birth and death statistics and local hospital discharge abstract analyses remain their only guides. Results from the continuing National surveys, such as the Health Interview Survey (HIS) and the Health and Nutrition Examination Survey (HANES), while essential for tracking change in the United States population as a whole, are based on samples too small to permit analysis applicable to small areas.

Surveillance systems developed to monitor the occurrence of infectious diseases provide models for many of the specific objectives relating to the prevention of other types of diseases and injuries. They depend on systems through which the occurrence of the particular condition or action will be reported within some ascertainable limits of accuracy and completeness. Whatever the source of the necessary data—physicians, hospitals, highway patrols, or insurance claim systems—important issues concerning the quality of the data must be addressed. Using data from surveillance systems which are not based on probability sample designs, or which are based on voluntary reporting, carries risks in making National estimates for tracking objectives. The level of voluntary reporting may differ markedly from one local area to another and fluctuates unpredictably at different points in time.

Scientific evaluation of the impact of risk reduction on trends in health status or in reduction of risk factors is difficult methodologically and collection of the data required is expensive. To obtain valid results, test and control populations of considerable size must

be followed over considerable periods of time, and a multiplicity of variables must be systematically taken into account.

We anticipate considerable improvements will be made in our data capabilities over the next decade. New methods now being developed will help State health planning agencies, health systems agencies and health departments use existing data more effectively to establish base lines of prevention needs and opportunities. New efforts are underway to target new subjects for National data collection efforts. By 1990 the Nation should have a considerably improved data collection network and therefore be able to assess the progress with greater reliability as well as to establish new priorities based on new knowledge.

- **Research needs**—The development of realistic objectives for risk reduction obviously must take place within the framework of whatever scientific knowledge is currently available. Since for most areas the state of the art is constantly changing, developing objectives for a point in time ten years down the road often means shooting at a moving target. For example, when the initial section on high blood pressure was drafted in June 1979, uncertainty about the efficacy of intervention in cases where blood pressure was only slightly elevated (90 to 104 mm Hg diastolic blood pressure without complications) led the work group to caution that in such cases: “. . . intervention . . . is not yet of clearly proven benefit.” Ten months later, based on the results of a National study sponsored by the National Heart, Lung and Blood Institute, the statement was revised to read: “Based on 1979 research results, intervention seems warranted in a large proportion of this population.”

If the objectives developed are to be refined and improved, the continuing need for basic biomedical research in most of the 15 subject areas of prevention is clear. Were our understanding of biological processes sufficient to develop vaccines to protect individuals against the most prevalent sexually transmitted diseases, tremendous opportunities for prevention would unfold and the task would become much easier. Similarly, epidemiological and biomedical research to identify major health risks from exposures to toxic agents is fundamentally important. We need new technologies to aid prevention in many areas—the development of acceptable, reversible, male contraceptives, for instance. Many of these issues have been addressed in the process of establishing National research principles, directed by the National Institutes of Health.

Additionally, behavioral research is needed to learn the basis for such addictions as smoking, overeating, and dependence on alcohol and drugs. Research at the interface between biomedical and behavioral methodologies is required to advance our knowledge of the effects of stress on health, and of how to control them.

Social science research is needed to find more effective ways to communicate to vulnerable and inaccessible populations, such prevention techniques as

lifestyle change measures to reduce their percentage of low birth weight, high risk infants. Health services research is required to learn how to maintain adherence to health promotion measures over long time periods, such as high blood pressure control regimens and maintaining a balance between energy input from food and output from exercise. Cost effectiveness studies, too, could identify preferred measures in some areas of prevention, despite the difficulties already noted in defining the associated costs and benefits that limit the applicability of such analysis to many prevention activities.

Finally, legal and public policy research is called for in many areas of prevention, so that questions of individual and collective rights and responsibilities, and of trade-offs between economic and health values, and of short run versus long run benefits can be systematically introduced into public debates.

Implementation

Implementation of the objectives for each of the 15 areas requires a pluralistic process involving public and private participants from many sectors and backgrounds. Health officials and health providers must be joined by employers, labor unions, community leaders, school teachers, communications executives, architects and engineers, and many others in efforts to prevent disease and promote health. It is important to emphasize that, while the Federal Government must bear responsibility for leading, catalyzing and providing strategic support for these activities, the effort must be collective and it must have local roots.

Accordingly, the objectives contained in this volume must be viewed dynamically. They ought not to be considered rigid obligations, but as useful National guideposts—to be altered to fit local conditions, or as our level of understanding of the problems at hand changes. There will be controversy. Issues often raised in connection with the advocacy and adoption of prevention measures include: the appropriate role of government in fostering personal behavior change; the philosophy and psychology of throwing responsibility for serious health problems back to the victim; the role of business and industrial processes in health and disease; the preferential treatment of certain categories of people for insurance purposes; the role of government in regulating health protection measures.

Despite such questions, the objectives presented in *Promoting Health/Preventing Disease* represent an important component of a focused National prevention strategy. Substantial gains to the health of Americans can be attained if we have the will to apply what we know. From the Federal perspective, work is already under way to apply the capabilities of Federally sponsored programs to the agenda set forth. If similar efforts are undertaken at the State and local levels to design measures for implementing locally-based objectives, progress can be greatly facilitated. To draw upon the last line of *Healthy People*, “If the commitment is made at every level, we ought to attain the goals established in this report, and Americans who might otherwise have suffered disease and disability will instead be healthy people.”

HIGH BLOOD PRESSURE CONTROL

1. Nature and Extent of the Problem

High blood pressure is perhaps the most potent of the risk factors for coronary heart disease and stroke—and contributes as well to diseases of the kidney and eyes. Because it is asymptomatic, a large number of people are unaware of their condition. High blood pressure is, however, only one of several risk factors for heart disease and stroke. Other prominent factors for heart disease include cigarette smoking, elevated blood cholesterol levels, diabetes and obesity. It is essential to recognize the multiple nature of these risks and their proved or suspected interaction. Correspondingly, both health professionals and the public need to know more about approaches for dealing comprehensively with these multiple risk factors and how to act on the basis of this knowledge. Control of high blood pressure requires patients to adhere to regimens over their lifetime. These may include various combinations of pharmaceutical interventions and changes in diet, exercise and stress management practices. (See Smoking and Health, Nutrition, Physical Fitness and Exercise, and Control of Stress and Violent Behavior.)

a. Health implications

- Heart disease, the leading cause of death in the U.S. population, was responsible for over 700,000 deaths in 1977; stroke led to 183,000 deaths in that year. Survivors are often severely handicapped.
- About 60 million people have elevated blood pressures (above 140/90) and are at increased risk for death and illness.
- Of these, about 35 million people (15 percent of the U.S. population) have high blood pressure at, or above 160/95, which is the World Health Organization definite determination of hypertension. These people face excess risk of death or illness from heart attack, heart failure, stroke, and kidney failure, and are the primary targets for control efforts.
- Much of this excess risk is attributable to mild high blood pressure (90 to 104 mm Hg diastolic blood pressure without complications). Based on 1979 research results, intervention seems warranted in a large proportion of this population.
- Other important risk groups are: persons with diastolic blood pressure over 104 (for whom drugs have been proven beneficial); populations having a high prevalence (e.g., blacks and elder-

ly); persons with limited access to, or use of, medical care such as young men and the poor.

- Among special issues are the growing proportion of elderly in the population, their high prevalence of high blood pressure, uncertainty about the benefit of treating isolated systolic blood pressure and the sometimes unpredictable side effects of drugs used to control high blood pressure in older people.
- Children present an opportunity, since precursors of high blood pressure may be identified in them, but also present a dilemma as the benefit of early intervention in this population is not known and a firm consensus on defining high blood pressure in youngsters has not yet been reached. Changes in habitual diet may prove useful in prevention.

b. Status and trends

- Although blood pressure can be controlled, the specific cause of 90 to 95 percent of high blood pressure is not known. Thus, while short-term emphasis must be placed on control, increased understanding of the causes of hypertension must be pursued to enable prevention of high blood pressure in the long run.
- High salt intake is associated with high blood pressure in susceptible people; reduced salt intake is one measure for reducing high blood pressure.
- Many successful approaches to detection and control (e.g., use of allied health personnel, worksite care, patient tracking systems) are not yet widely adopted or integrated into mainstream care.
- Although prevalence data indicate a problem of great magnitude, incidence data for high blood pressure and its complications do not exist to aid improved planning of intervention strategies for both primary and secondary prevention.
- Men are only half as likely as women to have their high blood pressure controlled.
- Rural (non-SMSA) areas and urban inner city areas have made less progress in high blood pressure control in recent years than have metropolitan areas.
- Many health professionals are inattentive to regimen adherence issues and lack skills to deal with adherence.
- School health education rarely addresses risk

factor control and lifestyle impact on health in a satisfactory way.

- The proportion of the population with high blood pressure who are aware of their condition and are successfully controlling it appears to have doubled in the last 5 years, while the proportion of this population who are unaware of their condition has sharply decreased. However, the proportion who are aware of their condition, but whose high blood pressure remains untreated or uncontrolled, appears to have stayed constant.

2. Prevention/Promotion Measures

a. Potential measures

- Education and information measures include:
 - continuing current efforts to heighten professional and public awareness of possibilities for blood pressure control, with messages targeted to groups at special risk, such as black males, the elderly and users of oral contraceptives;
 - informing the public that daily intake of over 5 grams of total salt (2 grams sodium) is not essential for good health and may contribute to the development of high blood pressure in some people;
 - developing and distributing palatable recipes for low sodium diets;
 - raising public awareness that overweight predisposes to high blood pressure and weight control often assists blood pressure control; avoidance of juvenile obesity is especially important;
 - encouraging increased physical activity and understanding that maintaining an appropriate balance between the energy individuals expend in their daily physical activity and the amount of energy they consume through the food they eat determines their success in controlling weight;
 - increasing public awareness of the fact that stress reduction and exercise may be useful adjuncts for some persons to provide a healthy lifestyle and lessen the risk of hypertension;
 - increasing public awareness of multiple risk factors and the interaction of risk factors;
 - alerting physicians on value of monitoring the children of hypertensives with attention to weight control and low salt intake;
 - increasing professional school training in behavioral/motivation skills;
 - involving specialists in behavioral medicine in teaching programs and assisting in patient adherence to regimens;
 - encouraging introduction/inclusion of health-related content into the curricula of public/private institutions which train food preparation/processing personnel;
- more active nutrition education in school health and lunch programs for school children and for the elderly;
- influencing industry to take active steps to promote high blood pressure control/prevention among its employees and throughout the Nation by changes in both products (primarily reduced sodium content of processed foods) and marketing approaches;
- increasing awareness by employers and the public of the potential for insurance premium cost savings associated with blood pressure control, not smoking and weight control among individual and group policy purchasers.
- Service measures include:
 - providing blood pressure checks routinely at contact with health providers (e.g., physicians, dentists, nurse practitioners) and through programs staffed by suitably trained non-professionals (e.g., firemen);
 - providing high blood pressure detection and treatment services at the worksite with a systematic program for follow-up;
 - giving health providers instruction in techniques to improve patient adherence to blood pressure control regimens.
- Technologic measures include:
 - increasing use of systems/policy analysis methods in program planning at all levels;
 - reducing fat content (caloric density) and sodium content of snack and highly processed foods;
 - developing practical means to supply low sodium content water to populations living in “hard” water areas.
- Legislative and regulatory measures include:
 - promoting consumer choice through labeling of foods for sodium and caloric content;
 - seeking uniform National guidelines and Federal agency (National Institutes of Health, Department of Agriculture, and Food and Drug Administration) policies for nutrition (e.g., sodium consumption, total dietary fat content);
 - modifying State practice acts to provide for expanded roles of allied health professionals in the management/control of high blood pressure.
- Economic measures include:
 - providing free or low cost access to blood pressure checks during intervals between physician examinations;
 - reducing economic barriers (e.g., reimbursement, training costs) to use of allied health personnel;
 - providing industry with tax incentives to en-

courage development of lower calorie, fat, sodium-containing foodstuffs;

- reducing economic barriers to control through reimbursement for antihypertension prescription drugs.

b. Relative strength of the measures

- Education and information measures:
 - established impact; low technology implementation possible; wide acceptance of this approach now exists; excellent cost/effective potential.
- Service measures:
 - effective with potential for significant impact.
- Technologic measures:
 - use of systems analysis approach to planning to facilitate more comprehensive/objective problem analysis resulting in more effective plans;
 - food content changes to allow greater consumer choice; may influence a major source of calorie self-abuse, and could be especially relevant to school children among whom adverse eating patterns have lasting effects.
- Legislative and regulatory measures:
 - not well evaluated as a behavioral tool, slow to achieve results.
- Economic measures:
 - difficult to achieve but usually effective when accomplished.

3. Specific Objectives for 1990 or Earlier

- Improved health status
 - a. By 1990, at least 60 percent of the estimated population having definite high blood pressure (160/95) should have attained successful long term blood pressure control, i.e., a blood pressure at or below 140/90 for two or more years. (High blood pressure control rates vary among communities and States, with the range generally being from 25 to 60 percent based on current data.)
- Reduced risk factors
 - *b. By 1990, the average daily sodium ingestion (as measured by excretion) for adults should be reduced at least to the 3 to 6 gram range. (In 1979, estimates ranged between averages of 4 to 10 grams sodium. One gram salt provides approximately .4 grams sodium.)
 - *c. By 1990, the prevalence of significant overweight (120 percent of "desired" weight) among the U.S. adult population should be decreased to 10 percent of men and 17 percent of women, without nutritional impairment. (In 1971-74, 14 percent of adult men and 24 percent of women were more than 120 percent of "desired" weight.)

*NOTE: Same objectives as for Nutrition.

- Increased public/professional awareness
 - d. By 1990, at least 50 percent of adults should be able to state the principal risk factors for coronary heart disease and stroke, i.e., high blood pressure, cigarette smoking, elevated blood cholesterol levels, diabetes. (Baseline data unavailable.)
 - e. By 1990, at least 90 percent of adults should be able to state whether their current blood pressure is normal (below 140/90) or elevated, based on a reading taken at the most recent visit to a medical or dental professional or other trained reader. (In 1971-74, 55 percent of people with high blood pressure greater than 160/95 were not aware of their condition.)
- Improved services/protection
 - f. By 1990, no geopolitical area of the United States should be without an effective public program to identify persons with high blood pressure and to follow up on their treatment. (Baseline data unavailable.)
 - g. By 1985, at least 50 percent of processed food sold in grocery stores should be labeled to inform the consumer of sodium and caloric content, employing understandable, standardized, quantitative terms. (In 1979, labeling for sodium was rare; the extent of calorie labeling was about 50 percent in the market place.)
 - See Nutrition.
- Improved surveillance/evaluation systems
 - h. By 1985, a system should be developed to determine the incidence of high blood pressure, coronary heart disease, congestive heart failure and hemorrhagic and occlusive strokes. After demonstrated feasibility, by 1990 ongoing sets of these data should be developed.
 - i. By 1985, a methodology should be developed to assess categories of high blood pressure control, and a National baseline study of this status should be completed. Five categories are suggested: (1) Unaware; (2) Aware, not under care; (3) Aware, under care, not controlled; (4) Aware, under care, controlled; and (5) Aware, monitored without therapy.

4. Principal Assumptions

- The etiology of high blood pressure is multifactorial and no research breakthrough will eliminate it as a public health problem in the next decade.
- The basic components of successful control programs will continue to be detection, evaluation, treatment and/or changes in lifestyle, and follow-up.
- While there are still some uncertainties about the quantitative relationship between sodium ingestion and high blood pressure, it is important to begin moving in the direction suggested by the data.
- While there is not yet a true consensus as to what constitutes dangerous levels of overweight for the population as a whole, the stated targets provide the pattern for a productive trend.

- Governmental efforts to control high blood pressure will be continued and expanded.
- Voluntary and private sector efforts to control high blood pressure will be continued and expanded.
- Health Systems Agencies will give high priority to high blood pressure detection, treatment and control.
- Implementation of the smoking, nutrition, and physical activity recommendations (see appropriate sections) will impact favorably on the prevention and control of high blood pressure.

5. Data Sources

a. To National level only

- Health and Nutrition Examination Survey (HANES). Prevalence of hypertension by demographic characteristics; blood pressure distributions; some data on awareness and control status. DHHS-National Center for Health Statistics (NCHS). NCHS *Vital and Health Statistics*, Series 11, selected reports, especially No. 203, and *Advance Data from Vital and Health Statistics*, selected reports. Periodic National surveys, obtaining data from physical examinations, clinical and laboratory tests and related measurement procedures on National probability sample of the U.S. civilian noninstitutionalized population. Data on adults currently available from the 1960–1962 Health Examination Survey and the 1971–1974 HANES. 1971–1975 data are expected during 1980. 1976–1980 data not yet available.
- Health Interview Survey (HIS). Interview reported data on prevalence of hypertension by demographic characteristics, disability days associated with high blood pressure therapy and regimen adherence, and other related topics. DHHS-NCHS, NCHS *Vital and Health Statistics*, Series 10, selected reports, especially No. 121, and *Advance Data from Vital and Health Statistics*. Continuing household interview health survey; National probability samples of the U.S. civilian noninstitutionalized population. Special survey on hypertension conducted in 1974. Data on hypertension available from the 1972 and 1978 HIS will be published in the 1979 and 1980 survey reports.
- National Ambulatory Medical Care Survey (NAMCS). Patient visits to office-based private practice physicians in the U.S. by patient and physician characteristics, diagnosis (including high blood pressure and its sequelae), patient's reason for the visit and services provided. DHHS-NCHS. NCHS *Vital and Health Statistics*, Series 13, selected reports and *Advance Data from Vital and Health Statistics*. Continuing survey, since 1973; National probability sample of office-based physicians.
- Hospital Discharge Survey (HDS). Patient stays in short-term hospitals, by patient characteris-

- tics, diagnosis (including high blood pressure and its sequelae), survey and other procedures. DHHS-NCHS. NCHS *Vital and Health Statistics*, Series 13, selected reports. Continuing survey, since 1965; data from discharge records of samples of patients in a National probability sample of general and special short stay hospitals.
- National Disease and Therapeutic Index (NDTI). Patient visits to office-based private practice physicians in the United States by patient and physician characteristics, type of visit, diagnosis (including high blood pressure and its sequelae), whether blood pressure was measured and actual measurement and prescribing behavior of the physician. IMS America, Ltd., Ambler, Pennsylvania. Regular reports from IMS, plus specially requested computer tabulations. Continuing survey from a representative sample panel of physicians in private practice. Blood pressure measurements available only since 1976.
- National Prescription Audit (NPA). Drug sales (including hypertensive drugs), source of prescription, payment status and prescriber type. IMS America, Ltd., Ambler, Pennsylvania. IMS reports. Continuing audit of pharmacies on IMS panel.
- Physician response to high blood pressure diagnosis. Physicians' knowledge, attitudes and behavior toward high blood pressure; perceived importance of high blood pressure diagnosis and treatment practices. Surveys conducted for DHHS-Food and Drug Administration (FDA) and the National High Blood Pressure Education Program (NHBPEP), National Heart, Lung, and Blood Institute (NHLBI), National Institutes of Health. DHHS Publication No. (NIH) 79-1056, *Diagnosis and Management of Hypertension: A Nationwide Survey of Physicians' Knowledge, Attitudes and Reported Behavior*. National survey 1977; follow-up surveys anticipated.
- The public's view of high blood pressure. Public knowledge, attitudes and reported behavior towards high blood pressure. Surveys conducted for NHBPEP-NHLBI, National Institutes of Health. DHHS Publication No. (NIH) 77-356 (1973 survey), *The Public and High Blood Pressure: A Survey*. 1979 survey to be published. Periodic surveys; National probability sample of the U.S. adult population.
- Hypertension Detection and Follow Up Program. State of knowledge among persons of high risk of coronary and vascular diseases. DHHS-NHLBI. NHLBI (NIH) *Hypertension Task Force Reports*, Nos. 8 and 9. One time survey.

b. To State and/or local level

- National Vital Registration System — Mortality. Deaths by cause, including hyper-

tension and hypertension-related sequelae, by age, sex and race. DHHS-NCHS. NCHS *Vital Statistics of the United States*, Vol. II, and NCHS *Monthly Vital Statistics Reports*. Continuing reporting from States; National full count. (Many States issue earlier reports.)

- Hospitalized illness discharge abstract systems
 - Professional Activities Study (PAS). Patients in short stay hospitals; patient characteristics, diagnoses of hypertension and hypertension-related sequelae, procedures performed, length of stays. Commission on Professional and Hospital Activities, Ann Arbor, Michigan. Annual reports and tapes. Continuous reporting from 1900 CPHA member hospitals. Not a probability sample; extent of hospital participation varies by State.
 - Medicare hospital patient reporting system (MEDPAR). Characteristics of Medicare patients, diagnosis, procedures by hospitals, HSA areas. DHHS-Health Care Financing Administration, Office of Research, Demonstration and Statistics (ORDS). Periodic reports 1975, 1976, 1977. Continuing reporting from hospital claim data, 20 percent sample.
 - Other hospital discharge systems as locally available.
- Selected health data. DHHS-NCHS. NCHS *Statistical Notes for Health Planners*. Compilation and analysis of data to State level.
- Area Resource File (ARF). Demographic, health facility and manpower data at State and county level from various sources. DHHS-Health Resources Administration, *Area Resource File: A Manpower Planning and Research Tool*, DHHS-HRA-80-4, Oct 79. One time compilation.

FAMILY PLANNING

1. Nature and Extent of the Problem

Family planning is based on the voluntary decisions and actions of individuals. Its purpose is to enable individuals to make their own decisions regarding reproduction and to implement their decisions. Family planning includes measures both to prevent unintended fertility and to overcome unintended infertility.

a. Health implications

- Family planning is a preventive health measure which supports:
 - maternal and infant health;
 - the emotional and social health of individuals and the family.
- Pregnancies among teenagers, among women who are unmarried, among women over the age of 34 and among high parity women are all associated with higher than average rates of maternal and/or infant morbidity and mortality. They are also more likely than other pregnancies to be unintended and unwanted.
- Compared to pregnancies carried by women in the most favorable childbearing years, teenage pregnancies are associated with markedly increased risks of maternal morbidity and mortality and of premature and other low birth weight infants who have reduced chances of surviving infancy and high rates of serious neurological impairment.
- Adolescent motherhood is associated with greater risk of lowered educational and occupational attainment, reduced income and increased likelihood of welfare dependency.
- Unwanted pregnancies impose psychological and social costs that often continue throughout the lifetimes of the mother and the child.

b. Status and trends

- In 1978, about 545,000 babies were born to unmarried American women, almost half of whom were teenagers.
- Although fertility rates for teenagers are declining in the United States, the rates continue to exceed those in more than a dozen developed countries. Both the birth rate and the number of births for unmarried women are increasing; unmarried mothers are more likely to have begun prenatal care late in pregnancy and to have made fewer prenatal visits than married

mothers; infants born to single mothers are more likely to have a low birth weight.

- Ten percent of babies born to married American women between 1973–1976 resulted from conceptions the mothers wished had never happened. An additional 25 percent resulted from pregnancies which the mothers wanted to have some time in the future but which occurred too early in their lives.
- Certain subgroups of our population have disproportionately high risks of unintended pregnancy and childbearing. Examples include:
 - unplanned births are almost twice as frequent in poor as compared to nonpoor families (52 percent of births that occurred during the previous five years were unplanned as reported in 1976 by women with family incomes below the poverty level, compared to 29.2 percent for women with family incomes of 150 percent of poverty level or higher);
 - reports of black women in a 1973 survey that one of every four of their births had been unintended, versus reports by white women that only one of every 10 of their births had been unintended;
 - high rates of unintended pregnancy among teenagers, women with language barriers and/or illegal immigration status, women living in rural areas on on Indian reservations and members of some religious groups.
- More than a million American women have pregnancies terminated by abortion every year. The teenage population accounts for approximately one-third of these abortions.
- The risk of death associated with temporary methods of contraceptions, sterilization and legal abortion is less than the risk of death from childbearing, although the absolute numbers of deaths are about equal.
- Many deaths associated with methods of contraception are preventable, including those associated with:
 - smoking by women who use oral contraceptives;
 - oral contraceptives with unnecessarily high estrogen content;
 - legal abortions performed after the first trimester of pregnancy;

— illegal abortion.

- The psychological and biologic bases and underlying causes of a large proportion of infertility cases are not understood and/or are not remediable by medical treatment. Those treatments which are available technically are costly and are largely inaccessible to the poor.

2. Prevention/Promotion Measures

a. Potential measures

- Education and information measures include:
 - providing content on human sexuality, reproduction, family planning and parenting in the curricula of schools which train personnel for delivery of human services (i.e., professional schools for social workers, clergy, nurses, nurse practitioners, teachers, counselors, pharmacists and physicians);
 - providing content on human sexuality, reproduction and contraception within continuing education programs for graduate level professionals involved in human services;
 - incorporating into elementary and high school educational programs a family life curriculum which includes human sexuality, reproduction, contraception and parenting as well as approaches to decision-making and values clarification—offering parents opportunities to participate in parallel programs;
 - using a variety of approaches to inform teenagers about prescription and nonprescription contraceptives, including how they work, their relative effectiveness, how to use them effectively, their availability and cost;
 - educating parents to provide effective and accurate sex education to their children;
 - encouraging and assisting the public media to educate the public, especially parents and young people, about the realities and possible problems of unwanted pregnancies, and to present appropriate role models for teenagers;
 - using the public media as appropriate for advertisements explaining the use, cost and benefits of certain over-the-counter contraceptives;
 - upgrading the knowledge of family planning clinicians regarding the relative risks and effectiveness of all family planning methods and of lifestyle characteristics which may place certain individuals at increased risk of complications associated with one or more specific methods, such as smoking by users of oral contraception;
 - upgrading the counseling skills of individuals who work in health care settings which

serve adolescents—taking care to avoid coercive implications;

- improving knowledge within the general public (both males and females) of the relative safety and effectiveness of available family planning methods;
 - preparing and expecting family planning counselors and clinicians to include concern for protection of future fertility and prevention of sexually transmitted diseases when they counsel family planning clients regarding selection of a family planning method;
 - improving knowledge and skills of family planning educators, counselors and clinicians regarding “natural” family planning methods which require periodic abstinence;
 - increasing awareness of family planning problems among health care planners;
 - informing HSAs how to interpret local data relevant to family planning.
- Service measures include:
 - making all forms of contraception accessible and acceptable to people who find the currently available services either inaccessible or unacceptable;
 - encouraging wider and more varied distribution of effective nonprescription contraceptives (in medical and other settings);
 - providing opportunities for teenage boys and girls to attend family planning educational and counseling sessions in environments not identified specifically for family planning and in which they do not feel pressure to make a decision regarding use of contraception;
 - providing family planning education, counseling and services to sexually active males as well as females;
 - reducing the waiting time required for the social, educational and medical assessment of clients in family planning clinics;
 - ensuring that family planning is part of routine perinatal service (if a woman is breastfeeding, preference should be given to contraceptive methods which do not interfere with normal lactation).
 - Technologic measures include:
 - development of more reliable, acceptable contraceptive methods for men and women.

b. Relative strength of the measures

- By 1976, 68 percent of married U.S. couples were using contraception:
 - almost 80 percent of married users were employing methods which are at least 95 percent effective in preventing conception (male or female surgical sterilization, oral contraception or an intrauterine device);
 - most of the 32 percent non-users were try-