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REPORT BY THE
Comptroller General
OF THE UNITED STATES

**Progress Made In Federal Human Nutrition
Research Planning And Coordination;
Some Improvements Needed**

The Government has no overall Federal nutrition plan that identifies specific goals with unified and coordinated strategies. However, the Departments of Agriculture and Health and Human Services, along with the Office of Science and Technology Policy, have set the groundwork for a coordinated planning system. Nine Federal departments and agencies, covering diverse areas such as nutrition research, food regulations, education, and information, have been working together to facilitate communication and effective and efficient use of resources.

This report provides an overview of the progress made to coordinate Federal nutrition research efforts and identifies some areas needing improvement.



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COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON D.C. 20548

B-206828

The Honorable Doug Walgren
Chairman, Subcommittee on Science,
Research, and Technology
Committee on Science and Technology
House of Representatives

The Honorable George E. Brown, Jr.
Member, Subcommittee on Science,
Research, and Technology
Committee on Science and Technology
House of Representatives

This report on the planning and coordination of federally supported human nutrition research is in response to a request from Representative George E. Brown, Jr., as Chairman of the Subcommittee on Science, Research, and Technology of the House Committee on Science and Technology of the 96th Congress.

As arranged with your offices, we are sending copies of this report to the Senate Committee on Agriculture, Nutrition, and Forestry; the House Agriculture Subcommittee on Domestic Marketing, Consumer Relations, and Nutrition; other interested committees and Members of Congress; the Director, Office of Management and Budget; the Director, Office of Science and Technology Policy; the Secretaries of Agriculture and Health and Human Services; the Director, Office of Technology Assessment; and the heads of the other departments and agencies mentioned in the report. We will make copies available to others on request.

A handwritten signature in cursive script that reads "Milton J. Forster".

Acting Comptroller General
of the United States



D I G E S T

The complexity of food and nutrition issues, the public's desire for guidelines to better health, a growing awareness of the link between diet and health, and the potentially large economic impact on food producers because of governmental actions point toward the continued need for a coordinated Federal effort and a broadened public dialog in developing and implementing nutrition policies and programs. Human nutrition research should continue to add to and revise the scientific knowledge base that Government needs to provide nutrition information to the public.

The Departments of Agriculture (USDA) and Health and Human Services (HHS), along with the Office of Science and Technology Policy (OSTP), made strides in the latter half of the 1970's in laying the groundwork for a coordinated research planning system.

According to OSTP, the Federal Government funded an estimated \$195 million in nutrition research in fiscal year 1979, the last year for which OSTP made such an estimate. Although nine Federal agencies support human nutrition research, 94 percent of the 1979 funding was from HHS and USDA. (See p. 5.)

The former Chairman of the Subcommittee on Science, Research, and Technology, House Committee on Science and Technology, asked GAO to review Federal nutrition research planning and coordination.

FEDERAL COORDINATION OF
HUMAN NUTRITION RESEARCH

Much progress has been made within and among Federal human nutrition research departments and agencies since the Congress called for improved coordination in the Food and Agriculture Act of 1977.

OSTP has been a major contributor to, and catalyst for, improved coordination of nutrition

research. For example, through its planning and coordination activities, the OSTP Joint Subcommittee on Human Nutrition Research, which is made up of representatives from USDA, HHS, and seven other departments and agencies, has set the groundwork for developing an improved Federal coordinated nutrition research planning system. USDA and HHS established nutrition coordinators and/or nutrition policy or coordination groups to deal with crosscutting nutrition issues.

GAO believes these coordination efforts should be continued and maintained as some of the Federal departments reorganize or revise their nutrition research programs. Coordination within USDA is more critically needed now than in the past because of the June 1981 USDA reorganization which decentralized its nutrition research program and separated its nutrition information functions from its nutrition research functions. In July 1981 USDA established a new USDA-wide policy and coordination council structure to deal with crosscutting issues such as nutrition. This new coordination mechanism has not been in operation long enough for its effects to be evaluated. (See pp. 10 to 24.)

FEDERAL NUTRITION RESEARCH PLAN

Federal support of varied aspects of human nutrition research is a reflection of a decentralized (pluralistic) system that encourages each department or agency to support research essential to its primary mission.

GAO believes that because of budgetary constraints and a similar objective to improve health or to develop optimal diets and practices, the nutrition research departments and agencies have an opportunity and a need to more clearly plan their research efforts in conjunction with the efforts of other Federal supporters of nutrition research through a Federal nutrition research plan. GAO details some of the advantages and disadvantages of a Federal nutrition research plan on pages 38 to 40.

The OSTP joint subcommittee's December 1980 report on human nutrition research is a first step toward developing a Federal nutrition research plan, but the six research areas discussed in its report (see p. 12) should be further developed and expanded into a single

research plan which would include an assessment of needs, priorities, and strategies.

The nutrition research "plans" or the nutrition components of other research plans developed over the last few years by USDA, the National Institutes of Health, the Food and Drug Administration, and the National Science Foundation have contributed to an overall Federal effort to improve nutrition research planning but are either narrow in scope or missing certain key planning components. (See pp. 34 to 38.)

A Federal nutrition research plan could help to ensure a coordinated and coherent nutrition research planning effort which could also allow the departments and agencies to support research aimed at their individual missions. This plan would also help to prevent any unwarranted overlap or duplication in some areas and insufficient coverage in others.

RECOMMENDATION TO THE DIRECTOR OF OSTP

The Director of OSTP should direct the Joint Subcommittee on Human Nutrition Research to develop a Federal nutrition research plan by updating and expanding its December 1980 report on federally supported human nutrition research. The OSTP subcommittee and the Federal departments and agencies should work together to develop specific goals, objectives, and strategies and to identify their responsibilities and the required resources and time frames to accomplish the research goals. (See p. 41.)

OTHER MATTERS

This report also discusses several other nutrition research management issues.

--The progress and problems of the new USDA human nutrition research centers at Boston, Houston, and San Francisco. (See p. 30.)

--The charter of the newly established USDA Human Nutrition Board of Scientific Counselors. (See p. 32.)

--The dissemination of nutrition research results by USDA's Food and Nutrition Information and Education Resources Center. (See p. 45.)

--The development of OSTP's human nutrition research management information system. (See p. 47.)

--The review of and reporting on the National Institutes of Health's Clinical Nutrition Research Units. (See p. 51.)

GAO recommendations relating to certain of these issues are on pages 33, 50, 51, and 54.

AGENCY COMMENTS

OSTP, HHS, and USDA agreed in principle with the recommendation for a Federal nutrition research plan. OSTP said it is the intention of its Joint Subcommittee on Human Nutrition Research to update and expand its 1980 report and to use it as the vehicle for evolving a broad Federal nutrition research plan within which the individual agencies can develop separate plans consistent with legislated responsibilities and missions.

USDA said that it supports OSTP's lead in developing a plan but that consideration should be given to alternative organizational approaches.

HHS said a broad plan can and should be developed but that detailed implementation planning should be left to the individual Federal departments and agencies and not to OSTP. (See p. 41 and apps. VII, VIII, and IX.)

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Director, Science and Education, U.S.
Department of Agriculture

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ABBREVIATIONS

ARS	Agricultural Research Service
CNRU	Clinical Nutrition Research Unit
CRS	Congressional Research Service
DOD	Department of Defense
FDA	Food and Drug Administration
FNS	Food and Nutrition Service
GAO	General Accounting Office
HHS	Department of Health and Human Services
NET	Nutrition Education and Training Program
NICHD	National Institute of Child Health and Human Development
NIH	National Institutes of Health
OMB	Office of Management and Budget
OSTP	Office of Science and Technology Policy
OTA	Office of Technology Assessment
SEA	Science and Education Administration
USDA	U.S. Department of Agriculture



CHAPTER 1

INTRODUCTION

Public concerns about food price inflation, dietary guidelines, and food safety increase the need to know what to produce, purchase, and consume while maximizing nutrition and minimizing cost. The complexity of food and nutrition issues, the public's desire for guidelines to better health, a growing awareness of the link between diet and health, and the potentially large economic impact on food producers because of governmental actions point toward the continued need for a coordinated Federal effort and a broadened public dialog in developing and implementing nutrition policies and programs. Human nutrition research 1/ should continue to add to and revise the scientific knowledge base that Government needs to provide nutrition information to the public.

Human nutrition is an issue that affects all people. Good nutrition or the lack of it can make people either productive members of society or burdens. Nutrition crosses many segments of our society, such as food, agriculture, health, science, and education. It is a multidisciplinary science dependent on the contribution of several broad areas--biomedical and behavioral sciences, food and agricultural sciences, education and information, and economic sciences.

Nutrition is a responsibility or concern of many public and private organizations, including Federal, State, and local government agencies; numerous private production, research, processing, marketing, and food distribution firms; and many academic and special-interest organizations.

Although important, nutrition is only one component of food production, food consumption, disease prevention, and health promotion efforts. The role of nutrition in health promotion must be shared with other dietary and nondietary approaches to promoting health. The multiple causes of chronic diseases, the adaptability of the human body to short-term dietary deficiencies and excesses, and the importance to consumers of educated food choices add to the complexity of nutrition and health issues. Additionally, nutrition may be affected by many other variables, such as food prices, food tastes and preferences, advertising, cultural differences, individual lifestyles, and family traditions. The following illustration shows the variables which tend to cluster around three factors: the availability

1/For this report, we used the definition of human nutrition research developed by the Office of Science and Technology Policy's Joint Subcommittee on Human Nutrition Research.
(See p. 48.)

of food, the acceptability of food, and the useability of food by the body.

Variables Affecting Nutrition

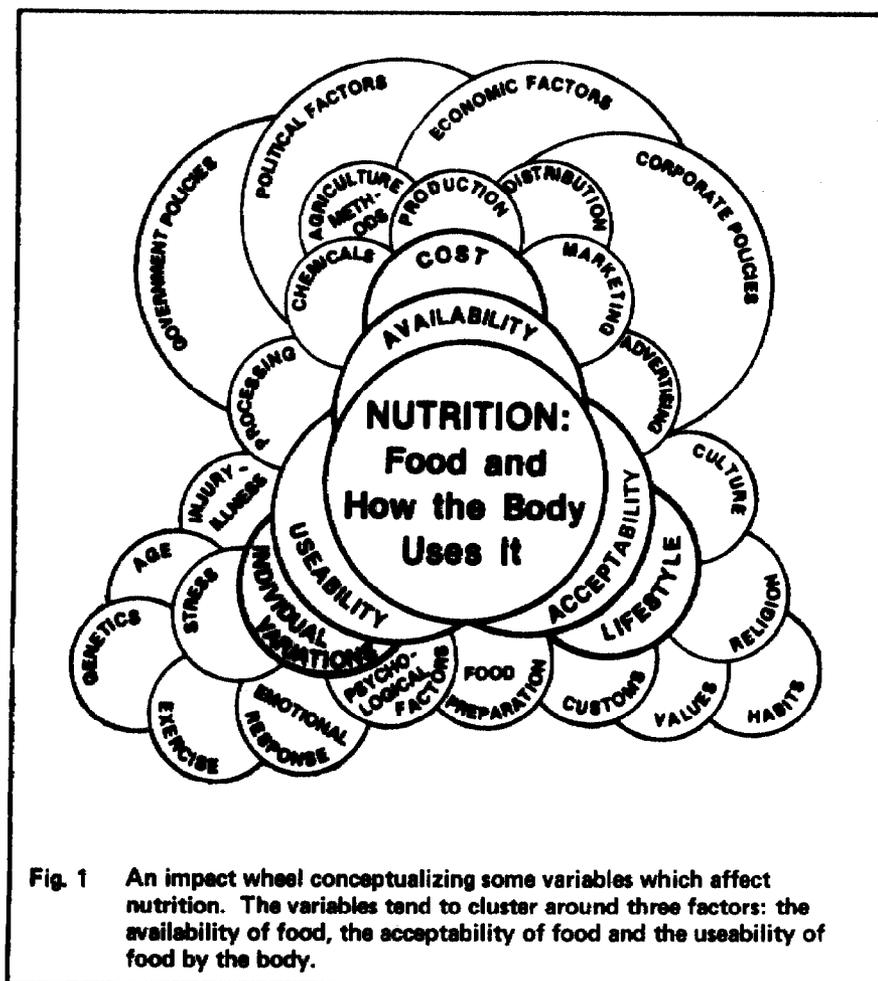


Fig. 1 An impact wheel conceptualizing some variables which affect nutrition. The variables tend to cluster around three factors: the availability of food, the acceptability of food and the useability of food by the body.

Source: "Nutrition and the Department of Education," Margaret Powers, Health Education, Journal of the Association for the Advancement of Health Education, Sept.-Oct. 1980, pp. 11-14.

NUTRITION AND HEALTH

A consensus is developing that nutrition is a major component of health promotion and disease prevention efforts, especially during human growth and development. According to a panel of experts, half the deaths in the United States in 1976 were due to unhealthy behavior or lifestyle. ^{1/} One's resistance to disease,

^{1/}"Healthy People: The Surgeon General's Report on Health Promotion and Disease Prevention," Department of Health, Education, and Welfare, 1979.

the prevention of some diseases, and the risk factors related to chronic diseases are influenced by nutrition, heredity, and lifestyle.

A sedentary lifestyle combined with a diet too high in calories, fat, salt, cholesterol, sugar, and alcohol and too low in fiber has been associated with cardiovascular diseases, obesity, diabetes, dental diseases, cirrhosis of the liver, and some cancers and has been a concern of some experts in Government and the medical and scientific communities. In 1977 the former Senate Select Committee on Nutrition and Human Needs published "Dietary Goals for the United States." Although some scientists, physicians, and academics agreed on the potential value of dietary goals, several others disagreed with some of the goals or with the specifics of the goals. The goals generated a great deal of interest, debate, and controversy among consumers, scientists, and some industry groups, such as meat and egg producers.

The associations between dietary patterns and disease prevalence have been observed in a variety of epidemiological investigations (studies of the relationships of the various factors determining the frequency and distribution of diseases in a population). Direct cause-and-effect relationships have not been established. In addition to diet, factors such as pollution, smoking, exercise, and stress are associated with some chronic diseases. Also, diet may play a modifying rather than a causative role. As a result, the scientific literature on diet and disease may appear to the lay public to show contradictory arguments for and against such items as fiber and animal fat. The public is confused by the lack of consensus among scientists on certain dietary recommendations. (See app. II for a list of dietary advice to the public recommended by various U.S. reports.)

Economics is another factor that contributes to the interest in nutrition and its relationship to health. The rapid acceleration of health care costs argues persuasively for disease prevention measures. All of these concerns emphasize the need for continued research in the area of human nutritional requirements and the role of diet in health and disease.

ADVANCES AND GAPS IN HUMAN NUTRITION RESEARCH

Federal support of human nutrition research has led to research findings that have been or can be potentially useful to Americans. Some of the significant human nutrition research findings that resulted in part from Federal support include the protective effect of high-density lipoproteins (a type of cholesterol) on cardiovascular disease, the relationship between fat and salt on hypertension, the effects of a high protein diet, and the superiority of human milk.

According to the U.S. Department of Agriculture's (USDA's) 1977-78 Nationwide Food Consumption Survey, the following changes have occurred in the American diet.

--Americans made wiser food choices by eating more nutrient-dense foods.

--Americans increased their consumption of fruits, green vegetables, fish, and poultry.

--Americans consumed fewer calories in 1977 than in 1965. However, USDA's Chief Scientist for Human Nutrition warns that a diet of fewer calories makes it increasingly difficult for Americans to meet the recommended dietary allowances for the essential nutrients.

"Healthy People: The Surgeon General's Report on Health Promotion and Disease Prevention" shows that the mean serum cholesterol levels in the U.S. population have dropped, which some experts view as a positive change due in part to increased consumer attention to diet.

Despite the knowledge that has been gained, many areas still need attention. New scientific findings and changes in the food supply, people's lifestyles, and demographics can affect human nutrition information and highlight new areas of concern. Some of the nutrition research gaps identified by USDA and the Department of Health and Human Services (HHS) include understanding the effects of various nutrients or intake patterns on the development of cardiovascular disease, identifying the dietary factors and mechanisms in the cause and prevention of certain cancers, determining the potential hazards of consuming high levels of certain nutrients, developing improved methods for monitoring nutrition status, improving the methodology for determining nutrient content and availability of a changing food supply, and identifying the factors affecting food knowledge, preferences, and attitudes.

GOVERNMENT'S ROLE IN HUMAN NUTRITION

Some Americans believe it is within the province of Government to determine the possible risks associated with foods and to inform consumers about them or to ban the food substances causing unacceptably high risks. However, disagreement arises about the extent to which Government should tell people what kinds of food they should eat. Some believe consumers should be free to make their own choice and determination of a food's benefits based on all relevant information. Because a wide variety of diets can provide adequate nutrition, many food choices are probably made for reasons of personal preference, pleasure, and cost, and not solely for health considerations.

Others believe that Government should provide consumers with guidelines on what to eat. Some disagreements occur about what foods should be encouraged and discouraged, how general or specific the guidelines should be, and whether the guidelines should be targeted at the whole population or at population subgroups.

Nutrition research provides information to help policymakers decide whether and how best to influence a shift in dietary practices toward eating habits which promote health, quality of life, and productivity and lower the incidence and severity of premature degenerative disease. Nutrition research cannot always provide the answers to some policy questions. With or without complete scientific evidence, policymakers are faced with the following questions.

- How much scientific evidence is needed before prudent dietary advice should be given?
- How far should nutrition education go to influence food choices?
- How much governmental regulation, in the name of health and safety, is desirable?

Nutrition policy is formulated within a loose, complex, and changing system of Federal departments and agencies, institutions, interest groups, and individuals. This system includes USDA, HHS, other Federal departments and agencies, several congressional committees, the Office of Science and Technology Policy (OSTP), the Office of Management and Budget (OMB), universities, professional scientific societies, the private sector, consumers, the National Academy of Sciences, and many special-interest groups. Nutrition policy decisions are made within a formal bureaucratic structure, but also important is the informal network of information exchange, agreements, understandings, relationships, work groups, and professional friendships. (App. III lists nutrition research organizations and app. IV describes the roles of the major Federal nutrition research departments and agencies.)

FEDERAL NUTRITION RESEARCH EXPENDITURES

Although the actual amount the Federal Government spends on nutrition research is not known with any high degree of accuracy, OSTP's Joint Subcommittee on Human Nutrition Research estimated fiscal year 1979 funding at \$195 million. Three-fourths of the funds supported extramural research; the remainder supported intramural research, research on public education and information, research training, and research manpower development.

Although nine Federal departments and agencies support human nutrition research, 94 percent of the 1979 funding came from HHS 1/ and USDA. (See p. 6.) We did not attempt to determine the funding

1/The Department of Health and Human Services was part of the Department of Health, Education, and Welfare until October 17, 1979. For simplicity, in this report we are using the current name, even when referring to events prior to that date.

level for fiscal year 1980 or 1981 because the budget reporting system cannot readily provide current Government-wide information. On page 47 we discuss the need to develop a better system for reporting information on Federal human nutrition research and expenditures as a management tool to facilitate research planning and coordination.

FY 1979 Human Nutrition Research, Research Training,
and Manpower Development and Education Research
Expenditures by Federal Agencies

<u>Department or agency</u>	<u>Amount</u>
	(000 omitted)
HHS	\$144,488
USDA	<u>a/39,500</u>
National Science Foundation	2,730
Department of Defense	2,600
Veterans Administration	2,500
National Aeronautics and Space Administration	1,610
Agency for International Development	1,605
Department of Commerce	266
Federal Trade Commission	<u>30</u>
 Total	 <u><u>\$195,329</u></u>

a/About 20 percent of this figure represents USDA-supported research in the States. USDA's Cooperative State Research Service administers Federal grant funds to the State agricultural experiment stations, the 1890 land-grant schools, and Tuskegee Institute for agricultural research. The States provide matching funds, sometimes in excess of the amount of Federal funds. Research projects are determined largely at the local level.

Source: "Federally-Supported Human Nutrition Research, Training, and Education: Update for the 1980s," OSTP, Dec. 5, 1980.

OBJECTIVES, SCOPE, AND METHODOLOGY

Through title XIV of the Food and Agriculture Act of 1977 (Public Law 95-113), the Congress declared the important role of nutrition, called for a new Federal initiative in human nutrition research, designated USDA as the lead research agency, and required the establishment of a more effective planning and coordination system.

On September 10, 1980, Congressman George E. Brown, Jr., then Chairman of the Subcommittee on Science, Research, and

Technology, House Committee on Science and Technology, 1/ asked us to assess how title XIV was being implemented. (See app. I.) He suggested that nutrition research be reviewed as a case study in determining effective ways to facilitate planning. He specifically requested a review and assessment of the effectiveness of nutrition research planning and coordination. He also asked us to look at the impact on planning and achievements of advisory boards and scientific counselors to Federal nutrition research laboratories; the relationship among, and the integration into the planning process of, USDA's nutrition research centers and the clinical research centers of HHS' National Institutes of Health (NIH); and the effectiveness of nutrition research dissemination activities, such as the role of USDA's Food and Nutrition Information Center.

To obtain a comprehensive view of Federal support of human nutrition research, we reviewed the activities of USDA and HHS, the two Departments that accounted for 94 percent of the total Federal support of nutrition research in fiscal year 1979. We made the review in accordance with our current "Standards for Audit of Governmental Organizations, Programs, Activities, and Functions."

We reviewed the Departments' policies, programs, and procedures and examined pertinent legislation, documents, reports, and records relating to planning and coordinating Federal human nutrition research. At USDA we interviewed officials of Science and Education, 2/ including the directors of USDA's Children's Nutrition Research Center at Houston, Texas; the Human Nutrition Research Center on Aging at Boston, Massachusetts; the Human Nutrition Research Center at Grand Forks, North Dakota; and the Acting Director of the Western Human Nutrition Research Center at San Francisco, California. We also talked with the former USDA nutrition coordinator. At HHS we talked with the Department's present and past nutrition coordinators, NIH officials, and the chairperson of the NIH Nutrition Coordinating Committee. We also talked with

1/Beginning with the current 97th Congress, Congressman Doug Walgren became chairman of this subcommittee, and Congressman Brown became Chairman of the House Agriculture Committee's Subcommittee on Department Operations, Research, and Foreign Agriculture.

2/In a June 1981 USDA reorganization, the Science and Education Administration (SEA) was decentralized into four agencies and a Science and Education Management Staff, all under a Director for Science and Education. SEA (Human Nutrition) was abolished and its five human nutrition research centers were transferred to the Agricultural Research Service. The Consumer Nutrition Center and the Food and Nutrition Information Center were transferred to a new agency, the Human Nutrition Information Service, under the Assistant Secretary for Food and Consumer Services.

the Director of the Bureau of Foods of HHS' Food and Drug Administration (FDA). We talked with officials at OSTP, OMB, the Office of Technology Assessment (OTA), the National Science Foundation, and the Federal Trade Commission. We also interviewed representatives of several scientific bodies, such as the American Society for Clinical Nutrition, the National Nutrition Consortium, and the Food and Nutrition Board of the National Academy of Sciences.

We did not attempt to determine the adequacy of the current funding level of human nutrition research or to look at the nutrition research that is supported by private industry, the States, and private research groups. In addition, we did not review nutrition research manpower needs, including education and training of research personnel; all the nutrition education activities of the Federal Government that are directed at the public; and international nutrition research.

We, as well as OTA, the Congressional Research Service (CRS), OSTP, USDA, and HHS, have issued several reports on the organization and/or management of Federal human nutrition research in recent years which directly relate to matters discussed in this report. We reviewed the following major reports on human nutrition research as well as others listed in appendix V.

- "Federally-Supported Human Nutrition Research, Training, and Education: Update for the 1980s," Joint Subcommittee on Human Nutrition Research, OSTP, Dec. 5, 1980.
- "Promoting Health/Preventing Disease: Objectives for the Nation," HHS, fall 1980.
- "Research, Extension and Higher Education in Human Nutrition," Ad Hoc Committee on Human Nutrition of the Joint Council on Food and Agricultural Sciences, USDA, Mar. 1980.
- "Nutrition Research Alternatives," OTA, 1978.
- "Federal Human Nutrition Research Needs a Coordinated Approach To Advance Nutrition Knowledge," GAO, PSAD-77-156 and 156A, Mar. 28, 1978.
- "New Directions in Federally-Supported Human Nutrition Research," Nutrition Research Interagency Working Group, OSTP, Dec. 1977.
- "The Role of the Federal Government in Human Nutrition Research," CRS, Library of Congress, 1976.

On June 24, 1981, we testified before two House subcommittees 1/ on our past reviews of the proposed national nutrition surveillance and monitoring system. On August 17, 1981, we issued a report, "GAO Comments on the Impact of the USDA Reorganization on Nutrition" (CED-81-150), at the request of the chairmen of the same two subcommittees. On September 17, 1981, we testified on our report on the potential impact on nutrition of the USDA reorganization during joint hearings of the House Agriculture Committee's Subcommittee on Domestic Marketing, Consumer Relations, and Nutrition and the Subcommittee on Department Operations, Research, and Foreign Agriculture.

1/House Science and Technology Committee's Subcommittee on Science, Research, and Technology and House Agriculture Committee's Subcommittee on Domestic Operations, Research, and Foreign Agriculture.

CHAPTER 2

FEDERAL COORDINATION OF HUMAN NUTRITION RESEARCH

Much progress has been made in coordination among the major Federal human nutrition research departments and agencies, primarily USDA and HHS, since the Congress called for increased coordination in title XIV of the Food and Agriculture Act of 1977. OSTP has been a major contributor to, and catalyst for, improved coordination of nutrition research. These coordination efforts should be continued and maintained as some of the Federal departments reorganize or revise their management of nutrition research programs.

On March 28, 1978, we issued a report on Federal nutrition research activities entitled "Federal Human Nutrition Research Needs a Coordinated Approach To Advance Nutrition Knowledge" (2 vols., PSAD-77-156 and 156A). This chapter updates the status of coordination among and within the Federal departments and agencies since the issuance of that report and passage of the 1977 act.

WHAT IS COORDINATION AND WHY IS IT IMPORTANT?

Coordination of nutrition research programs includes assembling and exchanging information; obtaining agreement among the performers on the areas of responsibility, cooperative efforts, and needed program adjustments; and evaluating progress in achieving program objectives.

Coordination is especially important in the human nutrition research area because of the

- importance of nutrition to both food and health issues;
- role of nutrition in the missions of the nine Federal departments and agencies;
- multidisciplinary nature of nutrition science, which partially depends on the diverse fields of food and plant science, biomedicine, behavioral science, education, communication, and economics;
- effect of nutrition on several groups, such as food producers, manufacturers, and retailers; consumers; and health care deliverers and promoters; and
- limited funds and human resources.

EXTENT OF COORDINATION ACTIVITIES

In December 1980 OSTP reported that 48 interdepartmental coordination mechanisms (such as committees and reimbursement agreements) existed. For example, USDA and NIH executed two cooperative agreements to ensure that coordination and research

planning occurred between the two agencies. As a result of these agreements, the National Institute of Child Health and Human Development (NICHD) is represented on the executive committee of the new USDA Children's Nutrition Research Center at Baylor College of Medicine in Houston and the National Institute on Aging is represented on the executive committee of the new USDA Human Nutrition Research Center on Aging at Tufts University in Boston.

We reviewed the coordination mechanisms between and within USDA and HHS and the coordinating efforts of OSTP's Joint Subcommittee on Human Nutrition Research. Agency officials told us that most of the coordinating mechanisms were useful and needed. However, they told us, and OSTP reported, that the coordination activities need to be reviewed to find ways to simplify and strengthen the institutional coordination. Although we did not review coordination mechanisms extensively, some nutrition research program administrators told us that coordination may be reaching a saturation point. An HHS official who is on several nutrition coordinating groups told us that much could be learned from attending these meetings but that at certain times, depending on other responsibilities, the maximum amount of time that should be devoted to nutrition coordination had been reached.

OSTP's INTERDEPARTMENTAL COORDINATION ROLE

OSTP is the primary interdepartmental coordination mechanism for pulling together the Federal departments and agencies involved in nutrition research. In September 1978 the OSTP Committee on Health and Medicine and the OSTP Committee on Food and Renewable Resources established the Joint Subcommittee on Human Nutrition Research to increase the overall effectiveness and productivity of nutrition research efforts. The subcommittee's charter states:

"Because of the vital importance of the benefits from human nutrition research to the welfare of the American people and the world population, it is essential that the nutrition research efforts of the Federal agencies be mutually reinforcing."

Since the subcommittee's establishment, it has been co-chaired by USDA's Chief Scientist for Human Nutrition (the former Administrator, Human Nutrition, SEA) and the chairperson of NIH's Nutrition Coordinating Committee. This subcommittee is made up of representatives from nine Federal departments and agencies involved in human nutrition research. They are HHS, USDA, the Departments of Commerce and Defense, the Veterans Administration, the National Science Foundation, the Agency for International Development, the Federal Trade Commission, and the National Aeronautics and Space Administration. The subcommittee's objectives are to

- improve planning, coordination, and communication among Federal departments and agencies engaged in nutrition research;
- develop and update plans for Federal research programs to meet current and future domestic and international needs for nutrition;
- collect, compile, and disseminate information on nutrition research; and
- report on the subcommittee's activities, findings, and recommendations.

The subcommittee has been active, meeting 14 times as of December 1981, since it was established in September 1978. One subcommittee accomplishment was its December 1980 report, "Human Nutrition Research and Training." That report defined "human nutrition research." (See p. 48.) Prior to that report, the lack of a definition had been a major stumbling block to appreciating the size and scope of the multiple roles of the diverse sciences and Federal departments and agencies in nutrition. The report also identified and described the nutrition research activities and expenditures of the nine departments/agencies, identified legislative authorities and coordination mechanisms, and identified some critical issues in human nutrition research and research training in the 1980's. The subcommittee also drew some conclusions and made recommendations in the following six areas.

1. The role of diet in the prevention, development, and treatment of chronic diseases.
2. Assessment of dietary intake and nutritional status: surveys, surveillance, and monitoring of populations.
3. Clarification of the interactions of nutrients with each other and with other ingested substances.
4. The safety, quality, and nutritional value of the Nation's food supply.
5. Research training in human nutrition.
6. Interdepartmental relationships, integration, and coordination.

Although the subcommittee drew conclusions and made recommendations that were comprehensive and broad in scope, identified research gaps, and developed a rationale for the identified research needs, it did not do the more difficult job of identifying the priority areas and the agencies with the best capabilities for addressing them in light of limited research funds.

As of February 1982 the subcommittee had prepared two draft reports, one on nutrition education research and the other on international nutrition research. It planned to issue these reports in early 1982. We believe these two reports should provide useful information by identifying existing research efforts. They may help to determine whether any further actions are needed in streamlining, continuing, or expanding nutrition research activities.

Some subcommittee members told us that although some members were reluctant at first to have open and free discussions, the present atmosphere is one of cooperation. They also said that the subcommittee was a useful and effective forum for exchanging information, developing a better definition of human nutrition research, understanding the multiple roles of participating departments and agencies, understanding the terminology of nutrition so that members are talking about the same issues and concerns, and helping to reduce misconceptions and to facilitate open and free discussions.

According to Congressman Doug Walgren, Chairman, House Subcommittee on Science, Research, and Technology, Committee on Science and Technology, who cochaired the June 24, 1981, hearings on the National Nutrition Status Monitoring System:

"Many who have followed the course of science policy since the enactment of the Science and Technology Policy Act of 1976 will recognize that the difficulty in achieving inter-agency planning and plan implementation in technical areas is certainly not unique to nutrition policy. However, nutrition monitoring and planning present very vivid examples of the kinds of broad goal-setting, goal-implementation, and coordination problems for which the Office of Science and Technology Policy was set up in the Executive Office."

HHS' Deputy Assistant Secretary for Health (Special Health Initiatives) told us that the OSTP subcommittee was a very useful adjunct to both HHS' and USDA's nutrition research activities.

COORDINATION AT USDA

USDA has made substantial efforts to meet the Congress' mandate, in the Food and Agriculture Act of 1977, to initiate human nutrition as a high priority area and to improve the coordination and planning of nutrition research. Since enactment of title XIV of the act, USDA has initiated several positive efforts toward elevating nutrition and coordinating the Department's efforts.

In 1977 the Secretary of Agriculture reorganized several USDA activities and agencies to elevate consumer and nutrition issues to the same level in the Department as agricultural productivity and economic issues. A new position--Assistant Secretary for Food and Consumer Services--was created in part

to integrate and relate nutrition efforts to food and agricultural policies and programs. The Department's human nutrition research program, formerly in the Agricultural Research Service (ARS), was centralized and elevated as the Human Nutrition Center in the new SEA. The Human Nutrition Center was established to be the focal point for USDA's leadership role in nutrition, including human nutrition research, education, surveillance, and information activities within the Department and other Federal departments and agencies.

Examples of USDA coordination efforts done primarily under the previous administration include:

- Conducted departmentwide expanded nutrition staff meetings with representatives from SEA, the Food and Nutrition Service, the Food Safety and Quality Service, the Economics and Statistics Service, 1/ and the Office of Governmental and Public Affairs.
- Worked with HHS in developing and publishing the joint USDA-HHS "Dietary Guidelines for Americans."
- Worked with HHS in a joint project to develop a pilot version of a computer-based inventory of food and nutrition information and education materials for the public.
- Worked with HHS in developing a joint implementation plan for a proposed national nutrition monitoring system. (The current administrations of the two Departments submitted the plan to the Congress in October 1981.) (See p. 37.)
- Cochaired, with HHS, the OSTP Joint Subcommittee on Human Nutrition Research and published a report on Federal nutrition research activities.

In June 1981 the Secretary of Agriculture announced a reorganization involving several USDA agencies. The Secretary abolished SEA, including its Human Nutrition Center, and established four new program agencies: ARS, the Cooperative State Research Service, the Extension Service, and the National Agricultural Library. (These were the agencies that became part of SEA in 1978.) The Human Nutrition Center was divided. The Center's five human nutrition research centers were transferred to ARS, which is under the jurisdiction of the Director of Science and Education. These five centers are the Beltsville Human Nutrition Research Center in Beltsville, Maryland (established in 1941); the Human Nutrition Research Center on Aging at Tufts University in Boston,

1/In June 1981 the Food Safety and Quality Service was renamed the Food Safety and Inspection Service and the Economics and Statistics Service was divided into the Economic Research Service and the Statistical Reporting Service.

Massachusetts (1978); the Human Nutrition Research Center in Grand Forks, North Dakota (1966); the Children's Nutrition Research Center at Baylor College of Medicine in Houston, Texas (1978); and the Western Human Nutrition Research Center (formerly part of the Department of the Army's Letterman Army Institute of Research) in San Francisco, California (1979).

The Human Nutrition Center's other two groups that were involved in information activities were transferred to a new agency, the Human Nutrition Information Service, under the Assistant Secretary for Food and Consumer Services. These two groups include the Consumer Nutrition Center in Hyattsville, Maryland (1954), which conducts the nationwide food consumption survey and maintains the nutrient data bank, among other activities, and the Human Nutrition Information and Dietary Guidance Staff. Finally, the Food and Nutrition Information Center was also transferred to the new agency as its third component. This latter Center, which had been a part of SEA's Technical Information Systems component, provides published and audiovisual nutrition materials to nutrition educators and departments of education and State-level administrators of USDA's Child Nutrition and Women, Infants, and Children Programs.

In summary, the reorganization

- separates some of USDA's nutrition information functions from its nutrition research functions and
- decentralizes its human nutrition research activities by transferring nutrition research from its former high-level, separate-agency status to one of the component research programs of ARS.

Nevertheless, in testimony before two subcommittees of the House Committee on Agriculture on September 17, 1981, we said that we believed the reorganization complied with the 1977 act. We pointed out that the act does not prescribe the manner in which the Secretary is to (1) carry out the assigned mission (to establish research into food and human nutrition as a separate and distinct USDA mission) or (2) prohibit any particular action the Secretary might take to carry out the assigned mission. Our position was that the act intended that the Secretary have discretion in deciding how to accomplish the assigned mission. We also reported that the Deputy Secretary of Agriculture had said that USDA was "committed to active research and educational efforts in the human nutrition area * * *" and that "the reorganization does not diminish in any way our [USDA's] commitment or emphasis on human nutrition."

Changes in the role and organization
of USDA's nutrition policy committee
and nutrition coordinator

In 1978 the Secretary of Agriculture created the Human Nutrition Policy Committee to coordinate USDA's responsibilities and activities in human nutrition research, education, food assistance programs, and food safety and quality assurance. The committee was composed of the Assistant Secretary for Conservation, Research, and Education; the Assistant Secretary for Food and Consumer Services; and the administrators of the various departmental agencies with responsibilities directly affecting the nutritional status of the population.

The committee's functions were to assure close coordination between research activities and the nutritional aspects of other USDA programs; appraise nutritional implications of USDA policies and programs; identify appropriate program needs; recommend to the Secretary, through USDA's Program and Budget Review Board, appropriate nutrition policies and programs; and maintain liaison with other Government agencies or departments concerned with human nutrition, nutrition education, research, or related programs. The committee was staffed by a nutrition policy coordinator who worked closely with the two assistant secretaries and administrators on the committee.

The position of a departmentwide nutrition coordinator was established and located in the Office of the Secretary. The coordinator's responsibility was to coordinate and integrate nutrition matters within and outside USDA. Some of the coordinator's activities were to

- serve as the administrative officer of USDA's Human Nutrition Policy Committee;
- coordinate with HHS' nutrition coordinator;
- prepare, as required by title XIV of the 1977 act, the first comprehensive USDA nutrition research plan, "Food and Nutrition for the 1980's," which started the process of getting the Department to identify all its nutrition activities; and
- initiate efforts to develop and maintain a data base of nutrition information and education materials (the responsibility of USDA's Office of Governmental and Public Affairs).

In an August 17, 1981, report, "GAO Comments on the Impact of the USDA Reorganization on Nutrition" (CED-81-150), we said that individuals inside and outside USDA said that the coordinator was a useful link. We said that during the last few years, USDA, HHS, several other Federal departments and agencies, and OSTP had begun to establish a momentum in coordinating Federal efforts in the

nutrition area. We believed that part of this momentum was due to the existence of departmentwide nutrition coordinators under the previous USDA and HHS administrations. We added that although coordination may have been difficult, we believed that both Departments had a genuine interest in and made efforts to establish and use coordination mechanisms.

Under the current administration, the Human Nutrition Policy Committee has not met and the need for such a committee is being reviewed. Also, the position of departmentwide nutrition coordinator will not be filled. In July 1981 the Secretary of Agriculture established a Policy and Coordination Council for policy determination and issue resolution of all USDA crosscutting issues. This council is comprised of the Secretary, the Deputy Secretary, all under and assistant secretaries, the Director of Science and Education, the General Counsel, and the Inspector General. Each under and assistant secretary, the Director of Science and Education, and the General Counsel will organize and chair a committee for dealing with issues that fall primarily in his/her own area and necessitate interagency coordination. These committees will select issues for presentation to and resolution by the council.

There are two nutrition-related committees. The Assistant Secretary for Food and Consumer Services, who is the focal point and the key policy official for USDA's nutrition programs, chairs the Food and Consumer Services Committee. The Director of Science and Education, who is the key policy official for nutrition research, chairs the Research and Education Committee. This research committee includes an executive committee, several ongoing committees, two subcommittees (one on research and technology and the other on education, information, and technology transfer), and four work groups. A new Workgroup on Human Nutrition is in the formative stage to continue the coordination previously done through the pre-reorganization staff.

In August 1981 the Assistant Secretary for Food and Consumer Services established a confidential assistant on nutrition in her office. The nutrition advisor will advise the Assistant Secretary on nutrition matters and will also serve as the executive secretary for the new Food and Consumer Services Committee chaired by the Assistant Secretary. The advisor is not a departmentwide nutrition coordinator.

Impact of June 1981 USDA reorganization

In our August 17, 1981, report, we said that although it was too soon to reach any conclusions on the reorganization's impact on nutrition, we nevertheless had identified several potential impacts that the reorganization may have on USDA's role and responsibilities in nutrition research, education, and information. We said that some concerns of individuals inside and outside USDA were:

- Will nutrition be less visible and deemphasized?
- How will nutrition issues be coordinated and integrated?
- Will nutrition information policies, programs, and strategies be adversely affected?
- Will nutrition research continue to be supported under USDA's new decentralized setup?

On these concerns, we reported that:

- Nutrition is less visible at USDA since the Human Nutrition Center was abolished (it was created as a separate organization under the previous administration). However, this does not necessarily mean a lack of commitment to nutrition because USDA has not made any overall funding cuts in nutrition research, education, and information programs.
- Coordinating and integrating nutrition issues and policies within USDA, while not impossible, may be more difficult under the reorganization. At least temporarily, interested parties outside USDA may have difficulty obtaining quick and comprehensive responses to departmentwide nutrition questions because of the lack of a departmentwide nutrition coordinator or at least a formally designated liaison for all nutrition matters and the absence of clearly established coordination mechanisms. (As discussed on p. 17, USDA has established a new policy and coordination council structure and designated the Assistant Secretary for Food and Consumer Services and the Director of Science and Education as the focal points for nutrition and nutrition research, respectively.)
- USDA will continue past efforts to provide nutrition information, but changes in policies, programs, and strategies are uncertain.
- Regardless of how nutrition research is organized, it needs some special attention and a national focus because nutrition is primarily a national, not a regional issue and also because the regional human nutrition research centers need to be monitored as some of them progress toward completing their facilities and developing and implementing their research programs.

COORDINATION AT HHS

Within HHS, human nutrition research is supported by NIH, the Alcohol, Drug Abuse, and Mental Health Administration, the Food and Drug Administration, and the Health Services Administration. Also, the National Center for Health Statistics and the Centers for Disease Control carry out applied research and surveys that provide data of significance to the nutrition

research effort. HHS has initiated several mechanisms that have contributed to improved coordination among its research agencies as well as its education, health delivery, and food regulatory components. The following sections describe some of the activities of these coordination mechanisms.

HHS Special Advisor on Human Nutrition

Since 1977 the position of Special Advisor to the Surgeon General on Human Nutrition has been held by professors of medicine on leave from their medical schools. The advisor (more commonly known as the HHS nutrition coordinator) worked out of a Nutrition Coordinating Office within the Office of the Assistant Secretary for Health. The advisor also served as executive officer of the departmentwide HHS Nutrition Coordinating Committee. As discussed under the next section, the advisor, together with the HHS Nutrition Coordinating Committee, has accomplished several departmentwide nutrition tasks.

Since 1977 the position has been consecutively filled by three individuals serving, on the average, a 1-year term. The three individuals came to HHS from academia with backgrounds in human nutrition research. The most recent nutrition advisor, an internationally known senior nutrition expert, left the position in October 1981 to return to academic research.

Although the expertise of the nutrition advisors has not been questioned, questions about the position's effectiveness have been raised by individuals from HHS, USDA, and the nutrition community because of the turnover rate. Although we did not find any specific examples of ineffectiveness, individuals within and outside HHS told us that they perceive the nutrition advisor as a temporary outsider with a good nutrition background but limited in what he or she can achieve in a short time period. One year is not enough time for an individual to gain on-the-job experience, become familiar with the breadth and depth of HHS and its nutrition activities, and obtain an understanding of the organizational/political environment to be a fully effective coordinator, advisor, and executive officer.

One former advisor told us that the turnover rate was a problem which was partly due to the relatively low Federal salary. This individual said that he could probably have been a more effective coordinator had he served a second year because of the first year's learning experience. He said, however, that the deputy to the advisor, who has served under all three of the nutrition advisors, provided the needed continuity, background, and knowhow to help make the job effective.

HHS' Deputy Assistant Secretary for Health (Disease Prevention and Health Promotion) told us that he was aware of the turnover problem. He said that it is difficult for the Federal Government to attract experienced and internationally respected

nutrition researchers to serve in Government for more than a year because

- a researcher must maintain credibility by conducting research without too long a break and
- the individual must be able to deal effectively with administrative, policy, and political matters as well as to provide scientific expertise to HHS officials, a combination of capabilities that is not easy to find in one person.

He also said that a junior researcher, who may be willing to serve a longer term, may not have the necessary experience and respect to deal as effectively with HHS scientists-officials and the nutrition community as a senior researcher could. He also said that although the current practice of bringing in a senior researcher from the outside for a short term may not be without some disadvantages, it is preferable to hiring a permanent civil servant for a longer term because the outsider brings in a needed fresh perspective.

On another matter, two of the three former nutrition advisors we talked with told us that the support of top-level managers and frequent access to them is very important. One advisor said that he had had monthly meetings with the Surgeon General; another advisor said that he had met with the Assistant Secretary for Health only a couple of times during the year he was an advisor.

HHS Nutrition Coordinating Committee

A departmentwide Nutrition Coordinating Committee was established in 1977 to facilitate communication and coordination among the many HHS agencies and programs related to nutrition. The committee is chaired by the Assistant Secretary for Health or a designee. It is made up of representatives from 19 offices and agencies. As part of this committee, six nutrition issue subcommittees were established on (1) nutrition education, (2) nutrition research and research training, (3) nutrition services and manpower, (4) nutrition surveillance, (5) food safety, quality, and regulation, and (6) international nutrition.

Among its accomplishments, the committee:

- Developed with USDA the joint HHS-USDA implementation plan for a comprehensive national nutrition monitoring system to monitor Americans' nutritional status. The plan was submitted to the Congress in October 1981. (See p. 37.)
- Sponsored a symposium, in observance of National Nutrition Month (March 1981), highlighting research activities related to premature heart disease, the essentiality and safety of nutrients, and obesity.

- Assisted in developing the nutrition components of the 1979 "Healthy People: The Surgeon General's Report on Health Promotion and Disease Prevention" and the followup report, "Promoting Health/Preventing Disease: Objectives for the Nation."
- Helped coordinate the development and distribution of the joint HHS-USDA "Dietary Guidelines for Americans."
- Cosponsored a conference, the National Conference on Nutrition Education: Directions for the 1980s, with USDA, OSTP, the Federal Trade Commission, and the Society for Nutrition Education.
- Compiled an inventory of nutrition education and information materials intended for the general public.

Although the committee has been successful in coordinating and exchanging information among HHS agencies, some members said that the committee may be too large; its meetings sometimes become "show and tell" sessions; and not all members are interested in the same issues, nor do they always have something to contribute.

NIH Nutrition Coordinating Committee

In 1975 the NIH Nutrition Coordinating Committee was established to coordinate the nutrition research and training of the NIH institutes. The committee is made up of representatives from 11 NIH institutes, 2 NIH divisions, 9 other Public Health Service components, and OSTP (ex officio). The chairperson (also the NIH nutrition coordinator) and staff of the committee are located in the Office of the Director, NIH.

The committee has been effective as a coordinator and catalyst and as a mechanism for information-sharing across institute lines. It has:

- Prepared annual reports on NIH nutrition research and training.
- Sponsored nutrition conferences, seminars, and workshops such as the 1978 national conference, The Biomedical and Behavioral Basis of Clinical Nutrition: A Projection for the 1980s.
- Reviewed all NIH nutrition-related information materials.
- Encouraged and initiated nutrition research studies among several institutes.
- Encouraged nutrition research by calling for research proposals from the research community on studies dealing with nutrition-related topics such as infant feeding, diet and cancer, and obesity.

The NIH nutrition coordinator has had a major role within HHS regarding nutrition research coordination and planning because NIH supplies over 90 percent of HHS' financial support of nutrition research.

BARRIERS TO COORDINATION

Although USDA and HHS have coordinated many of their nutrition research and information activities, there have also been "turf battles" between the two Departments. For example, individuals from both Departments told us that the other Department was not committed to nutrition, was not capable of addressing practical nutrition problems, was not qualified to conduct clinical nutrition research, and/or did not want to conduct research needed by other agencies.

Coordinating nutrition research planning among the Federal agencies and obtaining their mutual support is sometimes difficult because of a natural bureaucratic tendency to be concerned primarily about areas for which they are directly accountable. However, in spite of this tendency, USDA and HHS have worked together in areas such as food consumption surveys and nutrient composition of foods.

Another barrier is the lack of a single operational, uniform data base of management information on government, private, and academic support of human nutrition research projects which can provide current information on funding levels and a description of individual projects and their status. (In ch. 4, we discuss the need to develop a data base of federally supported human nutrition research.)

Another barrier to coordination is an attitude of scientific elitism or separatism among some individuals from diverse scientific backgrounds, such as biomedical science, medicine, nutrition, agriculture, and food science. On several occasions we were told that certain individuals involved in managing nutrition programs were not "nutritionists"; did not have the necessary background in medicine or clinical research; or did not appreciate the practical problems of producing, maintaining, and feeding nutritious foods. These attitudes seem to reflect the difficulty in defining "nutrition" and who is a "nutritionist."

Among Federal researchers, different views exist regarding the value and appropriate proportion or mix of Federal support of basic and applied research. Should support of basic research be increased at the expense of applied research? Can the Federal Government be assured of the potential of more immediate payoffs by increasing support of applied instead of basic research? What is the right balance?

Of course, these questions are not unique to the field of nutrition but are also applicable to other science areas. There also appears to be little that anyone can do in the short run to

change attitudes among people working in the diverse fields that contribute to nutrition knowledge. However, over a long period and with frequent contact, communication, and coordination among basic and applied nutrition scientists and among Federal nutrition research managers with their diverse missions and approaches, attitudes may change to reflect a fuller understanding and appreciation of the multiple, diverse, and interrelated roles and contributions of the many sciences and the several Federal departments and agencies.

CONCLUSIONS

Much progress has been made in coordination among the major Federal nutrition research departments and agencies, primarily USDA and HHS. OSTP's Joint Subcommittee on Human Nutrition Research has been a useful mechanism for getting nine departments and agencies together to share information so that they could individually do a better job in their own agencies and, more importantly, to begin establishing a base for developing a Federal nutrition research plan. We support the concept of a coordinating body within OSTP. The joint subcommittee has made a good start with its report on nutrition research and planned activities. Its activities, although of minimal cost to OSTP according to an OSTP official, are contributing to establishing a better system for coordinating and planning nutrition research. The subcommittee should continue to fulfill its important role in coordination and planning and reach its full potential.

Although past USDA and HHS nutrition coordination activities have been generally useful and effective, certain conditions might make coordination less effective in the future. For example, USDA has abolished its nutrition coordinator position. Also, USDA's nutrition efforts have been separated and its nutrition research efforts decentralized. As a result, coordination is now much more important than in the past to ensure a unified and coherent USDA effort. USDA has established a high-level policy and coordination council structure to deal with all crosscutting issues such as nutrition. This mechanism has not existed long enough, however, to allow us to analyze its effectiveness.

The rapid turnover of individuals serving as HHS coordinator is also seen by some as a drawback to achieving effective coordination. Continuation of this trend could also affect future coordination efforts at HHS.

AGENCY COMMENTS

In its comments (see app. VII), OSTP said that the direct cost to OSTP of the subcommittee's coordination activities had been minimal because the responsibility for the subcommittee's operation is assigned to the agencies. OSTP said, however, that the cost to the agencies is considerable. According to OSTP, those who believe in and encourage greater cooperation and coordination among Federal agencies should understand that such efforts are not

without cost. Further, effective coordination requires a significant commitment of time and energy--real and opportunity costs which must be taken into account when considering the imposition of new coordination mechanisms and planning activities.

CHAPTER 3

EFFECTIVE NUTRITION RESEARCH PLANNING

COULD BE ENHANCED WITH AN INTEGRATED PLAN

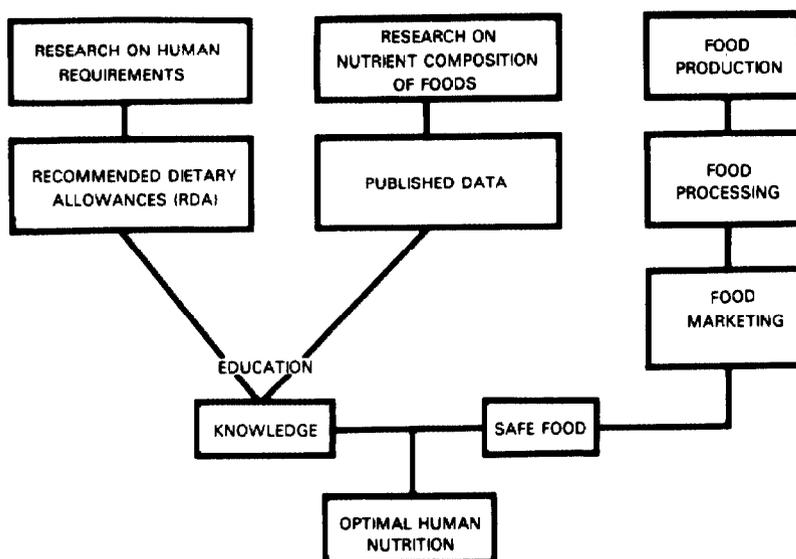
Although no Federal nutrition research plan exists, the 1977 congressional mandate for improved planning has stimulated progress among the major Federal nutrition research departments and agencies in coordinating and cooperating in research activities, in sharing and exchanging information, and in attempting to define terms and identify research gaps and needs. All these efforts are part of the formal and informal system that contributes to the individual departments' and agencies' plans.

We reviewed several nutrition research "plans" and found that although they contribute to the overall Federal effort to improve nutrition research planning, they are either narrow in scope or missing certain specific information such as strategies, costs, and needed resources. The need for and advantages of developing an integrated Federal nutrition research plan, built on the efforts of OSTP, HHS, and USDA, are explored below.

Nutrition research planning is only one segment of nutrition policy and must be integrated with the following other necessary components: establishing nutrition standards, determining the nutrient composition of foods, identifying population groups with nutritional needs, implementing cost-effective feeding programs, and educating the public and disseminating nutrition information.

The following illustration depicts the role of nutrition research as one of the inputs to optimal human nutrition. Other

INPUTS TO OPTIMAL HUMAN NUTRITION



Source: USDA

important inputs are a safe and nutritious food supply and a sound educational program and knowledge base built on research.

Nutrition research planning is also only one of several inputs to other broad Federal planning efforts that relate to or affect each department's or agency's research plan. For example, nutrition is part of the health research component of the National Science Foundation's 5-year outlook on science and technology for the Federal Government. Nutrition is also part of a USDA agricultural research plan and an HHS health research plan.

In a December 3, 1976, report, "Long-Range Analysis Activities in Seven Federal Agencies" (PAD-77-18), we said:

- No single way of organizing long-range analysis activities is necessarily best.
- The most important factor in assuring high quality, long-range analysis is the presence of decisionmakers in both the executive branch and the Congress who want it and will use it.
- Long-range analysis is not a panacea, but it can be of great assistance in identifying problems and developing effective solutions.

Some of the nutrition research administrators at USDA and HHS we talked with and witnesses appearing before the House Committee on Science and Technology in hearings on long-range planning in July 1980 said that the process that individuals, institutions, and organizations go through in developing a plan may be more important than the actual plan itself. During this hearing, some of the witnesses from foreign countries, academia, private industry, and the Federal Government made the following statements:

- Comprehensive strategic planning is extremely difficult in a complex society. The U.S. Government has decentralized agency missions; Federal, State, and local governments have mixed authorities; and grey areas exist in distinguishing between public and private sectors. On top of all this are the conflicts and uncertainties that require compromises in one or another equally desirable national goal.
- Federal agencies are not keen on the concept of a central planning agency. They see it as another layer of authority between themselves and the budget decisionmakers.
- The planning process in the Federal Government consists mainly of dollars assigned to program elements. Dollars without concepts are not sufficient to define a plan.

--Coupling long-range planning with the budget process may be difficult because the budget is formed under the pressure of immediate events while long-range plans are derived from policies that have yet to be formulated or do not have a fixed implementation time.

We recognize that Federal nutrition research departments and agencies face barriers, limitations, and constraints. Also, we are aware that flexibility is important because planning in the Federal Government is sometimes precluded by the political bargaining process. Planning is only a tool to help identify and solve national nutrition problems.

NUTRITION RESEARCH PLANNING AT USDA

USDA's agricultural research is categorized into 67 national research programs, including 3 relating to nutrition research, and 8 special research programs. These research programs form the basic structure for research planning in USDA's Science and Education area. Each of these programs integrates the Science and Education area's extensive list of research objectives into a more manageable number of programs and objectives. This structure provides a framework for planning, executing, budgeting, and reporting research.

These programs are coordinated by

- four ARS National Program Staffs, each in charge of one of the following broad areas: (1) crop sciences, (2) livestock and veterinary sciences, (3) soil, water, and air sciences, and (4) postharvest science and technology, and
- three assistants to the Deputy Administrator, ARS, each in charge of one of the following programs: plant germplasm, energy, and human nutrition.

The human nutrition program includes three national research program areas: human requirements for nutrients, food consumption and use, and food composition and improvement.

We did not review USDA's Science and Education budget and planning process in detail because an official of ARS' National Program Staff told us that the process as well as ARS' array of national and special research programs, including the human nutrition program, was being reviewed and revised by Science and Education and ARS officials. Some aspects of the planning process and its development, however, are discussed below.

ARS' human nutrition research program planning is evolving. With the reorganization of the Science and Education area in June 1981, most of the human nutrition research activities were transferred to ARS except for the activities (including some nutrition research) of the Consumer Nutrition Center and the Human Nutrition Information and Dietary Guidance Staff; those activities were

transferred to the new Human Nutrition Information Service. The ARS regional administrators now have line responsibility for the day-to-day operations of the five nutrition research centers within their respective regions. The human nutrition program is coordinated by an assistant to the ARS Deputy Administrator, National Program Staff. The assistant serves as coordinator, providing overall leadership, management, and liaison for planning, monitoring, and reporting on the human nutrition programs within ARS and in cooperation with other USDA and other Federal, State, and outside organizations.

The position of Chief Scientist for Human Nutrition was established after the June 1981 reorganization. The Chief Scientist position, currently occupied by the former head of SEA's Human Nutrition Center, reports to the Director of Science and Education and advises and assists the Director and other key Science and Education and USDA officials.

USDA's human nutrition research program, according to ARS' Acting Administrator, will be shaped by the Assistant to the Deputy Administrator, National Program Staff-Human Nutrition, in cooperation with the Chief Scientist for Human Nutrition and the five research center directors and their respective regional administrators. In a July 10, 1981, letter to the regional administrators and center directors, the Acting Administrator stated his determination to assign the same high priority to human nutrition research in the future that it had had in the past. He said that ARS would continue to plan and manage human nutrition research with the objective of maintaining its unique status and identity.

In our July 24, 1981, report, "Long-Range Planning Can Improve the Efficiency of Agricultural Research and Development" (CED-81-141), we said that the U.S. agricultural research and development system, which includes the Federal/State research partnership, does not perform national long-range planning. We said that the long-range planning that does occur is done almost exclusively by USDA and focuses on inhouse research. We concluded that although USDA had made some progress in improving its development of long-range planning for USDA-directed research, several factors inhibited national long-range planning. One factor is a belief that long-range planning is an unaffordable luxury.

We believe that USDA has made progress in planning inhouse nutrition research due in part to nutrition's past expansion, increased emphasis, high visibility, and centralization within USDA during the last administration. USDA had:

- Enhanced nutrition research planning and priority-setting by expanding the source of inputs to include individuals from other Federal agencies, the professional community, and the general public.

- In its budget formulation, considered the recommendations of two new USDA advisory groups--the Joint Council on Food and Agricultural Sciences and the National Agricultural Research and Extension Users Advisory Board--for making nutrition research a high-priority item. In our July 1981 report, we said that the Users Advisory Board had contributed to the improvement of agricultural research in meeting its responsibility for reviewing national agricultural research and extension policies and priorities. We also said that although the Joint Council had prepared reports on research planning and created a structure for coordination, it had little direct impact on planning and coordinating agricultural research.
- Created budget-related "decision units" for human nutrition as a way of integrating inputs on nutrition research priorities from the former SEA groups, including Agricultural Research (USDA's intramural research centers), Cooperative Research (research at land-grant colleges and State agricultural experiment stations), Human Nutrition, and Extension. Since the June 1981 USDA reorganization, the Science and Education Management Staff (formerly a part of SEA) has been reviewing and revising the planning and budgeting process. According to the Management Staff's Director, the revised planning and budgeting process will be more decentralized than the past process, in line with the Secretary's reorganization decision. On February 18, 1982, the Director of Science and Education met with representatives from the land-grant and non-land-grant colleges and universities and the State extension services and agricultural experiment stations to discuss the proposed budgeting and planning process and to obtain their input to the areas of research emphasis.
- Obtained external input from NIH and collaborating universities through deliberations of planning committees in developing implementation plans for meeting the mission of two USDA human nutrition research centers. That is, USDA's human nutrition centers at Tufts University and the Baylor College of Medicine cooperated with the National Institute on Aging and the National Institute of Child Health and Human Development, respectively, in developing the centers' research plans.

Relationship between USDA's
nutrition research centers and NIH

According to conference report 95-1579 on Public Law 95-448 (Agriculture, Rural Development, and Related Agencies Appropriations, fiscal year 1979, approved Oct. 11, 1978), the Committee of Conference intended that mechanisms be implemented to ensure coordination and planning of nutrition research between USDA and NIH in establishing two new USDA nutrition research centers--the Children's Nutrition Research Center at Baylor College of Medicine

and the Human Nutrition Research Center on Aging at Tufts University.

In response to this requirement, the following actions have been taken.

- A memorandum of agreement to participate in joint planning to ensure cohesive and integrated nutrition research programs was executed among USDA, Baylor College of Medicine, Texas Children's Hospital in Houston, and NICHD.
- USDA and NICHD cosponsored a symposium, Nutrition of the Child: Maternal Nutritional Status and Fetal Outcome, Houston, Texas, October 24-26, 1979, to assess the state of knowledge to help plan further nutrition research efforts.
- NICHD awarded a contract to the Baylor College of Medicine to look at problems of managing human milk banks. Although this contract is unrelated to the establishment of USDA's Children's Nutrition Research Center at Houston, the scientist in charge of the milk bank contract is also the Director of the Houston center. This is an example of research collaboration between USDA and NIH which could be included in a Federal nutrition research plan, if one existed.
- The Baylor center's Board of Scientific Counselors, which includes NICHD representatives as well as USDA and non-government scientists, met six times between November 1978 and December 1981 to discuss the center's research plans.

Problems of the new USDA nutrition research centers

USDA's human nutrition research is conducted at ARS' five human nutrition research centers (see p. 14) and the Consumer Nutrition Center transferred in June 1981 to the new Human Nutrition Information Service. The Beltsville and Grand Forks centers were established before the Food and Agriculture Act of 1977 was passed. The Boston and Houston centers were established following a USDA study, directed by the 1977 act, of the potential value and cost of establishing regional food and human nutrition research centers in the United States. Also, congressional conferees on the fiscal year 1979 Department of Defense (DOD) appropriations bill directed the Army to transfer to USDA its nutrition research program at Letterman Army Institute of Research, San Francisco.

In planning the operation of the Boston, Houston, and San Francisco centers and implementing their research programs, USDA needs to address the following problems.

- The Army's nutrition research facilities in San Francisco were transferred to USDA in fiscal year 1979, becoming the Western Human Nutrition Center. The Center's role and

function is to develop methodologies for improved assessment of U.S. nutrition programs and to conduct research on human nutritional requirements. However, some details of the center's function are unclear. For example, although a memorandum of understanding between the Army and USDA was signed in April 1980 regarding USDA's responsibility for supporting the Army's research needs, the two agencies have not developed a DOD nutrition research program which specifically outlines what kind of support USDA or other agencies will provide. (See pp. 79 and 80 for USDA comments on the activities surrounding the DOD-to-USDA transfer.)

- Negotiations between USDA and the collaborating universities on the roles, degree of control, and operations of the Houston and San Francisco centers have been difficult and prolonged. This situation makes it difficult to develop plans and implement research programs.
- An official in the Office of the Director of Science and Education told us that congressional intent is unclear regarding the degree of Federal versus State control over the centers' operations. In its comments (see app. IX), USDA said that the responsibility for each of the nutrition research centers rests with the Secretary of Agriculture. Our review of the agency's files and our discussions with ARS officials indicate that USDA and some of the cooperating universities have differences of opinion regarding certain policy matters in the operation of the research centers. For example, several questions remain about the Western Human Nutrition Research Center and its cooperating university, the University of California, Berkeley. What kind of representation should the center's executive committee or board have? Should the membership be equally represented by USDA and university personnel? How much autonomy should the centers have? Should every personnel and research program action be approved by the cooperating university? At the Children's Nutrition Research Center at Houston, the question is, is it appropriate that this Federal center has no Federal employees?
- Inflation, especially in construction costs, has eroded the budget for constructing research facilities at the Boston center, thus making it difficult to plan for adequate resources.
- The San Francisco center was still without a director over 2 years after its transfer from the Army. As of February 1982 the position remained unfilled because of a personnel freeze. The center has had three acting directors.
- An official in the Office of the Director of Science and Education expressed concern about the possible lack of sustained congressional commitment to funding the research centers for operating needs, once the centers are built

and fully operational. He said that it is difficult to plan and implement without some assurance of a long-term commitment from the Congress.

USDA Board of Scientific Counselors

According to the conference report on USDA's fiscal year 1979 appropriations, the Committee of Conference intended that USDA establish a Board of Scientific Counselors, external to the new centers at Houston and Boston, to review and advise USDA on research scope and quality. In 1980 USDA officials initiated steps to set up separate boards for the two centers. However, in early 1981 the new USDA officials decided instead to set up one board to review all six centers, including the Consumer Nutrition Center.

On April 9, 1981, the Secretary of Agriculture, through Memorandum No. 2030, established the Human Nutrition Board of Scientific Counselors. The Board is responsible for externally reviewing the programs of the six centers and advising USDA on research scope and quality. Some of the Board's specific responsibilities are surveying the status of research in particular areas; reviewing the centers' annual work plans, budgets, and staffing; assessing the importance and relevance of the centers' research; and evaluating the scientific merit of the research. The Congress also intended that USDA and NIH coordinate their planning of human nutrition research programs. However, the Board's charter does not include any description of USDA and NIH coordination responsibilities. An ARS official told us that another mechanism was set up to assure coordination. This mechanism is an executive committee at the Houston and Boston centers composed of USDA and NIH members to plan and coordinate nutrition research.

The Board's charter calls for USDA officials to serve as Board officers. The charter, which has not been changed to reflect USDA's June 1981 reorganization, states that the Board shall consist of a chairman (USDA's Director of Science and Education), a vice chairman (Administrator, Human Nutrition, SEA), and 18 members appointed by the Secretary and selected from leading research and clinical authorities in sciences related to nutrition. At least three members are to have technical expertise in the specific field of science required for each of the six centers. Members will be drawn from universities, Government, private industry, and foundations. USDA's Chief Scientist for Human Nutrition told us that the USDA officials' participation as Board officers would be useful to provide quick input and information to the non-USDA Board members. As of February 1982 the Secretary of Agriculture had selected the candidates for membership, but the Board had not yet convened.

Conclusions

Although we did not review each of the nutrition research centers in detail, USDA officials told us of some concerns about

the establishment and operation of these centers. Some growing pains are expected. An early review of these centers and their programs is needed to avoid any unnecessary delays or problems in establishing the centers and operating the nutrition research programs. Ensuring that the Human Nutrition Board of Scientific Counselors conducts an independent and comprehensive review of USDA's human nutrition research programs would help establish the centers on a sound footing so that they can conduct needed research.

As the Congress directed, the Secretary of Agriculture established an advisory body to review the centers' nutrition research programs. However, the charter establishing this advisory body, the Human Nutrition Board of Scientific Counselors, does not address the congressional concern for USDA and NIH coordination in planning nutrition research programs. Although USDA established executive committees to assure USDA and NIH coordination, assigning specific responsibility to an external group of scientists, such as the Board of Scientific Counselors, to assess USDA's coordination responsibility would help ensure such coordination.

Also, the charter provides for USDA officials to be Board officers. USDA officials told us that USDA officials' participation as Board officers would be useful to provide quick input and information to the non-USDA Board members. Although we agree with this, we believe that excluding USDA officials from reviewing their own program is necessary to ensure that the Board is truly an independent and external scientific review group capable of providing objective and useful advice.

Recommendations to the Secretary of Agriculture

We recommend that the Secretary of Agriculture amend Memorandum No. 2030, dated April 9, 1981, which established the Human Nutrition Board of Scientific Counselors, to include USDA officials as ex officio Board members and exclude them from serving as chairman and vice chairman of the Board. The Board's charter also should be revised to reflect the USDA reorganization, including the nutrition activities transferred to the Assistant Secretary for Food and Consumer Services.

Agency comments and our evaluation

In its comments (see app. IX), USDA said that it is in the process of changing the Board's charter to reflect USDA's June 1981 reorganization. USDA also said it is in the process of convening a Board. In addition, USDA said it was acting on part of our recommendation that the Board's charter be amended to include USDA officials as ex officio Board members. USDA said that ARS' Assistant to the Deputy Administrator, National Program Staff-Human Nutrition, will serve as the Executive Secretary of the Board as an ex officio member.

We proposed earlier that the Secretary also amend the Board's charter to provide that the Board assess how research programs of USDA's human nutrition research centers are integrated with NIH's nutrition research programs. USDA said that it did not believe that such an action was warranted because ARS and NIH had fairly distinct programs and because a great deal of coordination already exists between USDA and HHS. But it added that ARS and NIH would continue to explore further opportunities for coordination. Although assigning specific responsibility to assure USDA and NIH coordination to an external group such as the Board would be one way to help ensure such coordination, we recognize USDA's commitment to coordination and its desire to explore further other ways to coordinate with NIH.

EXISTING "PLANS" RELATING TO NUTRITION
ARE FRAGMENTED, TEMPORARY, UNEVEN IN
QUALITY, OR NARROW IN SCOPE

Recent nutrition-related reports by us, OTA, CRS, OSTP, HHS, USDA, and congressional committees have reported on the fragmented efforts in nutrition research. These reports have addressed the need for some kind of coordinated effort. (See app. V for a list of reports on Federal nutrition research.)

We reviewed the following reports which are either nutrition research plans or a nutrition component of a broader research plan. We also identified their shortcomings.

--OSTP's Joint Subcommittee on Human Nutrition Research, as discussed on page 11, has a mandate to improve planning, coordination, and communication among Federal agencies supporting nutrition research. Although the subcommittee has been developing a data base of human nutrition research activities in the Federal Government and has been identifying national and international nutrition research issues, it has not developed a Government-wide nutrition research plan. The subcommittee's December 1980 report on Federal human nutrition research defined human nutrition research, identified and described the nutrition research activities and expenditures of nine Federal departments/agencies, identified legislative authorities and coordination mechanisms, and identified some critical issues in human nutrition research. (See p. 12 for details of the OSTP report.)

Although the subcommittee drew conclusions and made recommendations that were comprehensive and broad in scope and identified the gaps in and rationale for the identified research needs, it did not do the more difficult job of identifying the higher priority areas in light of limited research funds. The report is not and was not intended to be a list of high-priority nutrition research needs. However, it can serve as a foundation for further efforts to develop a Federal nutrition research plan. The subcommittee planned to issue two other reports on nutrition

education research and international nutrition research in early 1982.

- In February 1980 FDA developed a Bureau of Foods Research Plan because, as the Director of the Bureau of Foods told us, it was needed and had never been done at the Bureau. The plan is comprehensive in its coverage of Bureau of Foods research needs. It assessed NIH-supported research that related to FDA's research needs. The plan, however, did not include (1) details on how the plan will be implemented, (2) priorities of the research areas, and (3) estimated time, costs, and resource needs. The plan has not been formally integrated into FDA's operating system. 1/

- In April 1979 USDA reported "Food and Nutrition for the 1980's: Moving Ahead" which is a plan that the Congress mandated in title XIV of the Food and Agriculture Act of 1977. The Congress called for a comprehensive plan for implementing the national food and human nutrition research and education and information programs at USDA. The plan describes programs, objectives, and priorities for human nutrition research, but it does not specify the strategies, costs, and resource needs. A comprehensive plan, we believe, would include these. The plan describes USDA's efforts but does not include other Federal agencies' research plans and needs. Although the Congress did not specify that the plan include all Federal nutrition research efforts, it designated USDA as the lead agency for human nutrition research.

- On May 12, 1980, the National Science Foundation issued the first Five-Year Outlook on science and technology, including agriculture and health research issues, as required by the National Science and Technology Policy, Organization, and Priorities Act of 1976. Regarding human nutrition, the report lists seven specific problems (opportunities) for scientific and technological contributions. These seven items are similar to the six OSTP-identified critical issues discussed on page 12. The report also identified the following constraints in nutrition: lack of enough researchers, ethical limitations on using human research subjects, methodological limitations, and fragmented research activities. This plan is the broadest and most comprehensive research plan which shows nutrition as a small part of the total picture of the national science outlook. Although it provides the needed complement to an overview of nutrition research, it does not and was not intended to address the immediate needs of implementing a coordinated nutrition research plan. The plan does provide the

1/See app. VIII for HHS comments on FDA's intramural nutrition research and its Bureau of Foods Research Plan.

rationale for and an example of integrating nutrition with other science areas.

--In April 1978 the Secretary of Health and Human Services initiated a major review and appraisal of HHS health research activities and long-term intradepartmental research planning system. A steering committee of representatives from several HHS agencies met and defined a number of health research initiatives in order to coordinate research planning and implementation. The initiatives focused on selected problem areas where the needs of eight HHS agencies coincided with scientific opportunity. Nutrition research was designated as 1 of the 15 new research initiatives. The purpose of the nutrition initiative is to develop within HHS a more comprehensive and effective program of nutrition research and training to strengthen support of related missions. The plan called for establishing a committee of representatives from six HHS agencies that support nutrition research to develop a cohesive program for the Department to carry out the nutrition research initiative. As of February 1982 several of the research initiatives were being implemented.

--In 1979 the first Surgeon General's report on health promotion and disease prevention, "Healthy People," established broad national goals for improving Americans' health. In fall 1980 some specific objectives for attaining the goals by 1990 or earlier were outlined in "Promoting Health/Preventing Disease." Objectives were established for priority areas, such as smoking, high blood pressure control, pregnancy and infant health, and physical fitness and exercise. Nutrition is also included with specific national objectives for improved health status, reduced risk factors, improved public and professional awareness, improved services/protection, and improved surveillance/evaluation. The report is a good document and, as stated in the report, achieving 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. The nutrition objectives, which may serve as national guideposts, are based on many assumptions that nutrition research and education efforts will continue, expand, and improve. One shortcoming of these objectives is that some of the assumptions on which they are based may no longer be realistic under the current Government-wide budgetary constraints and climate.

A framework for joint planning: the National Nutrition Monitoring System

The joint HHS and USDA implementation plan for a National Nutrition Monitoring System (NNMS) could serve as a framework or a subcomponent of a broad Federal nutrition research plan.

Section 1428 of the Food and Agriculture Act of 1977 required HHS and USDA to develop and submit to the Congress, within 90 days, a joint proposal for a comprehensive nutritional status monitoring system. The system was to

- provide for an effective nutritional assessment system, a surveillance system, and program evaluations;
- identify mechanisms for coordinating activities; and
- recommend additional authorities necessary to achieve a comprehensive NNMS.

In May 1978 the Departments submitted the proposal to the Congress. The House Science and Technology Committee's Subcommittee on Domestic and International Scientific Planning, Analysis, and Cooperation asked us to review the proposal. In June 1978 reports 1/ to the Secretaries of Agriculture and Health, Education, and Welfare, we reported on some areas of concern about the proposal, such as lack of specificity and agreement between the two Departments and inadequacy of the coordination mechanism, and made recommendations to ensure that both Departments develop a specific plan to implement the proposal.

In January 1981, prior to the change in administration, the Departments submitted a revised draft plan with the anticipation that a final report would be submitted to the Congress in February 1981. Because the final plan was not submitted to the Congress by then, two House subcommittees 2/ held joint hearings on June 24, 1981, to bring the importance of nutrition research and the implementation plan to the attention of the administration and obtain its commitment to submit the plan to the Congress.

In our testimony at the subcommittees' hearing, we said that we believed that the delays in submitting an implementation plan indicated problems in resolving differences either within or between the Departments. The joint implementation plan was finally submitted to the Congress in October 1981, more than 3 years after we first recommended that an implementation plan be prepared.

The October 1981 joint HHS-USDA implementation plan for a comprehensive national nutrition monitoring system includes:

- Goals and scope.

1/Letter report to the Secretary of Agriculture, "Need for a Comprehensive National Nutrition Surveillance System" (CED-78-144, June 29, 1978); letter report to the Secretary of Health, Education, and Welfare, "Joint Proposal for a Nutrition Surveillance System" (CED-78-145, June 29, 1978).

2/Subcommittee on Science, Research, and Technology, House Committee on Science and Technology, and Subcommittee on Department Operations, Research, and Foreign Agriculture, House Committee on Agriculture.

- Uses of nutrition monitoring.
- Current nutrition monitoring activities.
- Plans scheduled for implementation.
- Plans deferred.
- Calendar of events.

The plan has two major steps. The first is to develop a comparable sampling plan for HHS' National Health and Nutrition Examination Survey and USDA's Nationwide Food Consumption Survey and to establish a joint committee responsible for it. The second major step is to establish a joint committee to provide a mechanism for evaluating and reporting the findings arising from these Federal nutrition monitoring activities.

However, because the plan was not meant to be all-inclusive, it does not cover the universe of nutrition research needs. Also, the plan does not identify priorities, resource needs, and future costs. The plan document states: "The perfect nutrition monitoring system can never be fully implemented. Neither the scientific basis nor the funding for such a system is foreseeable."

Although it may be difficult for this type of plan to contain more specific details, a staff member of the House Committee on Science and Technology told us that such details would be helpful to the Congress in its decisions on funding the nutrition monitoring system's components. The staff member also said that the earlier January 1981 draft plan was more extensive than the final plan because it included specific objectives, detailed steps for accomplishing the objectives, responsible agencies, and projected time frames.

Advantages and disadvantages of a Federal nutrition research plan

We believe a cohesive and coordinated Federal nutrition research plan developed by an interagency group, such as OSTP's Joint Subcommittee on Human Nutrition Research, would have several advantages. For example, developing and implementing such a plan could:

- Improve coordination, communication, and cooperation among the agencies with nutrition research responsibilities. An interagency group could identify the activities carried out by the various agencies and suggest methods to help these agencies better coordinate their efforts.
- Better identify gaps in human nutrition research.

- Lead to a better understanding of all participating agencies' research needs, capabilities, and limitations and how to deal with them.
- Ensure a broad and more balanced perspective of nutrition research issues, and at the same time enhance the integration of nutrition with agriculture, health, education, science and technology, and regulatory issues.
- Increase opportunities for collaborative efforts and actions.
- Reduce the potential for unnecessary duplication of nutrition research and help in planning for necessary replication of nutrition research to ensure uniformity and comparability.
- Enhance cross-fertilization among the sciences that contribute to advances in nutrition.
- Facilitate interaction among Federal, university, and private sector scientists.

Efforts to develop a Federal nutrition research plan would encourage HHS, USDA, and the other nutrition-related agencies to plan their nutrition activities around a consistent, coherent, and integrated research plan with goals and strategies. Such a cohesive and coordinated Federal nutrition research plan could help provide a sound, scientific basis for providing nutrition information to the public, recommending any necessary dietary changes, setting measurable goals, and moderating the impact of new research findings on producers and consumers.

In its December 1980 report, the OSTP subcommittee concluded that a clear need exists for improved communication among departments and agencies so that the research objectives and efforts are known and mutually supportive. It also concluded that developing precise exclusionary definitions of areas of responsibility would not be useful.

An interagency group approach to developing a Federal nutrition research plan would not necessarily disrupt the existing organizations, processes, and structures and would be relatively inexpensive to operate since existing organizations would be used. However, the interagency group approach has the following disadvantages:

- Difficulties in reaching a consensus among participating agencies in their decisionmaking processes.
- Lack of a centralized authority to implement the group's recommendations.
- Some time and staff constraints for participating agencies.

--Questionable success without top-management commitment from participating agencies; such a commitment from so many diverse organizations could be difficult to obtain.

--Lack of direct input from nongovernment sources.

These disadvantages can be overcome. One of the more important means to overcome some of them is top-management commitment from the heads of participating agencies and OSTP to develop a Federal nutrition research plan.

We recognize that each department and agency has specific needs and programs in nutrition research which are required to fulfill its congressional mandate. Each department/agency should direct and control its research because it is in the best position to evaluate the potential of such research in meeting specific department/agency needs and to set nutrition research priorities within these needs and the budgetary limits of the department/agency.

However, we believe that because of the budgetary constraints and the somewhat similar objectives of some research departments/agencies (that is, to improve health or to develop optimal diets and practices), an opportunity and a need exist to more clearly plan individual research efforts in conjunction with the efforts of other Federal supporters of nutrition research through a Federal nutrition research plan.

Conclusions

Several Federal departments and agencies support human nutrition research. For the most part, these research programs have been administered independently to meet each agency's separate needs and missions. More can be learned and achieved with efficient use of limited resources if the agencies expand their coordination and collaborative efforts. Human nutrition research is directed at maintaining and improving the health of all people--infants, children, adults, and the elderly--the same target audience of several Federal nutrition research programs.

The OSTP joint subcommittee's report on human nutrition research is a first step toward developing a nutrition research plan because it identifies (1) the Federal departments' and agencies' nutrition research activities and (2) six critical nutrition research areas. Although the report calls attention to these six areas, it does not offer specific strategies for addressing them. Each of these six areas should be further developed and expanded to include an assessment of needs, priorities, and strategies for addressing or achieving the desired results.

The nutrition research "plans" or the nutrition components of other research plans developed over the last few years by USDA, HHS, NIH, FDA, and the National Science Foundation have contributed to the Government-wide effort to improve nutrition

research planning. Individually, however, these "plans" are either narrow in scope or missing certain specific information, such as strategies, costs, resources needed, time frames, and specific department/agency responsibilities. A Federal nutrition research plan needs to be developed which would

- be comprehensive, long term, multiyear, and action oriented;
- establish overall goals and strategies with specific department/agency strategies for accomplishing these overall goals as well as department/agency missions;
- set nutrition research priorities and time frames;
- identify various funding levels for the identified priorities; and
- identify available resources, including Federal, State, and industry resources, and the ability or limitation of these resources to address unmet research needs.

The development of this plan could serve to demonstrate a collaborative and cooperative spirit among Federal nutrition research components; set an example of a working model for other crosscutting research areas; and potentially improve the chances for a more effective, concerted, and efficient Federal nutrition research effort.

Recommendation to the Director, OSTP

We recommend that the Director of OSTP direct OSTP's Joint Subcommittee on Human Nutrition Research to develop a Federal nutrition research plan by updating and expanding its December 1980 report on federally supported human nutrition research. The process of updating the report would serve as a mechanism for achieving improved planning and coordination among the nine participating departments and agencies. In updating the report, the subcommittee and the Federal departments and agencies should work together to develop specific goals, objectives, and strategies and to identify the responsibilities of the Federal departments and agencies and the required resources and time frames to accomplish the research goals.

Agency comments and our evaluation

In their comments (see apps. VII, VIII, and IX), OSTP, HHS, and USDA agreed in principle with the recommendation for a Federal nutrition research plan. OSTP said its Joint Subcommittee on Human Nutrition Research intends to update and expand its 1980 report and to use it as the vehicle for evolving a broad Federal nutrition research plan within which the individual agencies can develop separate plans consistent with their legislated responsibilities and missions. OSTP said that to the degree

possible and appropriate, the Federal plan will delineate agency responsibilities and necessary resources.

USDA said that it supported OSTP's lead in developing a plan but that consideration should be given to alternative organizational approaches. USDA said that as the field of human nutrition grows, problems will arise in getting consensus from various agencies in their decisionmaking processes due to staff constraints, the necessity of making trade-offs in funding allocations in a period of tight budgets, and lack of input from State and nongovernment agencies.

To overcome these problems, USDA suggested that a committee on human nutrition research under OSTP should be empowered to take the necessary steps to develop subcommittees, task forces, and so forth to examine each problem area and make recommendations to the committee. The committee would take necessary steps to work through the executive and legislative branches to implement the recommendations. This committee would have a broader mandate than the current joint subcommittee.

HHS said other mechanisms besides OSTP are equally valid and should be explored before OSTP is established as the only, or primary, coordinator of human nutrition research activities. HHS also said a broad plan can and should be developed but that detailed implementation planning should be left to the individual Federal departments and agencies and not to OSTP.

In recommending that OSTP take the lead in developing a plan, we did not spell out the details of how the plan should be developed and implemented because we believe it is important that OSTP and the Federal departments and agencies consider the alternative mechanisms and agree on how they would develop the plan. We believe, however, that the plan should be a comprehensive, strategic plan with priorities and sequential implementation steps, specific details as to how it will be accomplished, and explicit agency roles and responsibilities for implementing the plan.

Finally, because the planning process is sometimes more important than the plan document itself, we believe that OSTP should be used as a mechanism for at least ensuring that the difficult tasks of developing and implementing detailed plans, in a crosscutting area such as nutrition, are effectively carried out.

CHAPTER 4

OTHER NUTRITION RESEARCH MANAGEMENT MATTERS

While focusing on planning and coordinating nutrition research, we found other management areas that warrant congressional and/or agency attention. These are the uncertainty about nutrition's priority compared with its past emphasis; the dissemination of nutrition information; the need for reliable and complete management information on Federal nutrition research projects and expenditures; and the need for NIH to report on the potential of NIH core grants to certain clinical facilities for Clinical Nutrition Research Units (CNRU's).

UNCERTAINTY ABOUT NUTRITION'S PRIORITY

Changes in the executive branch and the Congress in 1981 have contributed to an uncertainty about the priority of nutrition. Some Federal administrators of nutrition research activities and nongovernment individuals told us that they are concerned about the potential lowering of nutrition's priority. Specifically, they mentioned:

- The potential elimination of coordination and advisory committees. For example, USDA's Human Nutrition Policy Committee, which met only once in 1980, is being examined (although the Secretary later established a departmentwide Policy and Coordination Council responsible for developing and coordinating policies, including nutrition-related policies, that affect several USDA agencies). According to USDA's Director of Science and Education, governmental advisory committees are undergoing review. This includes the Human Nutrition Advisory Committee, which met for the first and only time in 1980 to obtain public advice and participation in developing nutrition-related policies and programs.
- The President's April 1981 moratorium on Federal spending for new periodicals, pamphlets, and audiovisuals to the general public on all subjects, including nutrition. According to an OMB official, the moratorium was to be selectively lifted, on a case-by-case basis, after each department prepared and submitted a publications plan for OMB's approval. OMB approved USDA's plan in November 1981 and lifted the moratorium at USDA. However, the acting head of USDA's Publications Center told us that the plan will have a major impact on nutrition materials because it substantially reduces all USDA publications, including nutrition-related ones.
- USDA's less-active approach in promoting dietary advice, such as the "Dietary Guidelines for Americans," to the general public. Instead of sending the guidelines out unsolicited, USDA will send them only on request. Also,

USDA does not plan to reprint the guidelines when the supply runs out. Officials told us that USDA is gradually shifting toward a policy of charging a small fee for all USDA publications. They said that in the future, a nominal fee of \$1.50 may be charged for the dietary guidelines.

- The potential impact of a dilution of consumer and nutrition representation on two USDA advisory boards of public representatives. The Agriculture and Food Act of 1981 (Public Law 97-98, Dec. 22, 1981) revised the makeup of two USDA advisory groups. The act increases by four the representation of producers of agricultural, forestry, and aquacultural products on the National Agricultural Research and Extension Users Advisory Board. It also requires that at least half the members on the Joint Council on Food and Agricultural Sciences be representatives of agricultural researchers from land-grant colleges and universities and State agricultural experiment stations. One of the two nutritionists on the Joint Council, the former Administrator of the Human Nutrition Center (currently serving as Chief Scientist for Human Nutrition), was dropped from the Joint Council when the June 1981 USDA reorganization abolished the Center and transferred some of its functions to ARS.
- Abolition of the USDA-wide nutrition coordinator position. (See p. 17.)
- Reduced Government-wide support of the "soft" sciences, such as behavioral science, which form the basis of educational efforts to change behavior in lifestyle and health and dietary habits.
- Cuts in Federal nutrition education efforts, such as USDA's Nutrition Education and Training (NET) Program. Public Law 97-35 (the Omnibus Budget Reconciliation Act of 1981, Aug. 13, 1981) authorized appropriations of not more than \$15 million for NET grants for fiscal year 1981 and not more than \$5 million for each subsequent fiscal year.
- The uncertain impact on the Nation's scientific research capabilities of the President's September 1981 proposal for an additional 12-percent cut in Federal nondefense agency budgets. An analysis of the proposed overall Federal budget for research and development in fiscal year 1982 by a consultant to the American Association for the Advancement of Science notes that if inflation were taken into account, this would mean an 11-percent drop over fiscal year 1980 for overall basic research. Also of concern is the importance of the advisory role of the President's science advisor on science policy matters and the reduction of the OSTP budget on Government-wide research planning, including nutrition research planning. OSTP is a small office with a fiscal year 1982 budget of

\$1.8 million and a staff of 12 full-time employees. OSTP's budget and staff were reduced by 30 percent and 50 percent, respectively, between fiscal years 1980 and 1982.

Some HHS officials also said that the Food and Agriculture Act of 1977, which designates USDA as the Federal Government's lead agency for human nutrition research, may inadvertently contribute to turf battles between USDA and HHS over nutrition because the act does not describe the role of HHS and other agencies regarding nutrition research.

In our August 17, 1981, report, "GAO Comments on the Impact of the USDA Reorganization on Nutrition" (CED-81-150), we reported that although details of USDA's nutrition policies had not yet been fully formulated, the Deputy Secretary of Agriculture told us that the present USDA administration is producer-farmer oriented. The Secretary has stated that USDA's major thrust will be to increase agricultural productivity, protect agriculture's natural resources, expand exports of agricultural products, and reduce Government regulations. While nutrition is not one of the major thrusts specifically mentioned, the Deputy Secretary said that USDA is "committed to active research and educational efforts in the human nutrition area and those efforts will not be manipulated by producer interests."

However, agency personnel and the nutrition community still are concerned that nutrition is being downplayed. For example, in a July 27, 1981, letter, "Operating Guidelines for Science and Education," to all USDA Science and Education employees, the Director of Science and Education briefly outlined the operational policies, overall goals, missions, strategies, and responsibilities of agency officials. Although several agricultural research areas are listed, the term "nutrition" does not appear in the four-page document. The closest phrase relating to nutrition is "improve the well-being of people."

Although the Congress, USDA, and HHS have stated that nutrition research is and will continue to be a priority area, an uncertainty persists within the nutrition community about nutrition's priority. Nutrition research continues to be supported, however, despite the fact that overall budget constraints have affected many Government programs. Some of the uncertainty surrounding nutrition is probably due in part to the overall changes occurring in other Government policies and programs.

USDA EFFORT TO DISSEMINATE NUTRITION
INFORMATION IS CAUGHT BETWEEN A TIGHT
BUDGET AND INCREASED PUBLIC DEMAND

Section 1411(b) of the Food and Agriculture Act of 1977 established the Food and Nutrition Information and Education Resources Center. In June 1981 the Center was transferred from SEA to the new agency, Human Nutrition Information Service, under the Assistant Secretary for Food and Consumer Services. The

Center is located at USDA's National Agricultural Library at Beltsville, Maryland. It is responsible for assembling, collecting, maintaining, and providing food and nutrition education materials, including the results of nutrition research, training methods, and procedures, for dissemination to State educational agencies and other interested persons. Before its establishment in SEA, the Center's functions were carried out in USDA's Food and Nutrition Service (FNS). According to the Center's head, when the Center was set up in SEA, it expanded its user clientele from primarily USDA Child Nutrition Program participants to other users, including educators, dietitians, nutritionists, and cooperative extension personnel.

The Center is unique in that it is the only specialized clearinghouse in the country that houses a comprehensive collection of print and audiovisual resources on child nutrition, nutrition education, and food service management. However, according to the Center's head, the Center is not able to fully carry out its responsibility of disseminating nutrition information to the public because of a substantial increase in user demand for services and a budget that has not increased since fiscal year 1979. Between fiscal years 1978 and 1979, user demand for services went from 6,900 to 11,500 requests, a 66-percent increase, while the budget increased about 54 percent, from \$308,000 to \$475,000 plus overhead. The Center's budget for fiscal years 1979 through 1981 remained substantially the same.

As of December 1, 1980, the Center was forced to cut back its services due to lack of increased funding to meet demand. The number of patrons served was cut back from 12,000 in fiscal year 1980 to 7,000 in fiscal year 1981. The Center reduced its lending operations by eliminating all lending to school food service personnel, the Head Start Program, hospitals, and certain other groups.

USDA's NET Program, established by the Congress in 1977 and administered by FNS, is a grant program providing seed money to State education agencies to develop nutrition education programs in the schools. The NET Program, whose budget has been cut (see p. 44), had generated much of the increased demand for the Center's nutrition education resources. According to the Center's head, the cut in the NET Program will not necessarily reduce the demand for the Center's nutrition education materials; instead the States could seek more information from the Center because of their increased interest in nutrition, their awareness of the Center's unique resources, and their own budgetary and resource limitations.

In March 1981 USDA requested a fiscal year 1982 budget increase of \$100,000 for its Center to meet increased user demands. According to USDA officials, the \$100,000 represented only one-third of the actual needs if the cutback in services is to be restored. Since then the Assistant Secretary for Food and Consumer Services has been attempting to provide funds for the

Center, such as reimbursing the Center with FNS funds to restore service to such FNS clientele as local schools and participants in the Special Supplemental Food Program for Women, Infants, and Children. FNS also reimbursed the Center with fiscal year 1981 funds for developing a bibliography of NET-developed nutrition education materials. The Assistant Secretary is currently considering other options, such as a user charge, to help cover the Center's expenses.

In November 1981 the Assistant Secretary said that expanding the Center's lending services will be a top priority. Expansion of the clientele will include making nutrition materials available to school districts and individual schools, including food service personnel; Head Start and other day-care services; the Women, Infants, and Children Program; and Commodity Supplemental Food Program personnel.

The Center's head said that although these recent efforts have helped to restore lending service to a broader clientele, additional resources of about \$100,000 would be needed if the Center is to also expand its service to HHS clientele, such as hospitals and nursing homes.

BETTER SYSTEM NEEDED FOR REPORTING ON FEDERAL HUMAN NUTRITION RESEARCH AND EXPENDITURES

In past years the former Senate Select Committee on Nutrition and Human Needs and others have questioned the accuracy and reliability of reported expenditures for human nutrition research. Some of the difficulties in obtaining reliable and timely data were due to

- the difficulty in defining nutrition research and the lack of a Government-wide definition of nutrition research agreeable to all parties,
- determining what percent of a research grant was nutrition related, and
- a "looking back" approach to determine the nutrition portions of research projects after the grants were funded.

In March 1980 USDA's Joint Council on Food and Agricultural Sciences commented as follows on the problem of a lack of a uniform and agreed-upon definition of nutrition research.

"A major problem found in all the reports [on nutrition research] was that of distinguishing nutrition research from other closely related research. This problem is at the root of current inability to compare sets of figures from one report to another. Thus, it is difficult to assess precisely how much funding for nutrition programs has increased and exactly what percentage it represents of our total research and education effort. A precise

definition of nutrition research, for the purpose of program assessment, would be helpful in developing better evaluation data."

In December 1980 OSTP's Joint Subcommittee on Human Nutrition Research issued its report on Federal human nutrition research, which included the following definition:

"Human nutrition research is the pursuit of new knowledge to improve the understanding of nutrition as it relates to human health and disease and, as here defined, encompasses studies in three major areas: biomedical and behavioral sciences, food sciences, and nutrition education."

Several Federal nutrition officials told us that they agreed with the joint subcommittee's definition of human nutrition research. They also believed that the subcommittee's reported figure of \$195 million for nutrition research expenditures in 1979 was the best figure available but that it may not be representative of the total expenditures because some agencies were either over- or underestimating their expenditures. For example, although NIH has made some improvements in developing and agreeing on an institutewide definition of nutrition research and has created a computer-based inventory of NIH nutrition research grants, questions remain about the reliability and accuracy of NIH-reported expenditures for nutrition research. The problem may be due to agency officials' overestimating the portions of research projects that are nutrition related. For example, a nutrition researcher in HHS, after analyzing a list of NIH nutrition-related research projects, told us that only 70 percent of the reported NIH figure represented nutrition research. This individual told us, for example, that a gastroenterology project was estimated to have a nutrition component of 30 percent, when it did not relate to nutrition except in a very general and tangential way.

In a June 1, 1981, report, "Nutrition Research Peer Review at the National Institutes of Health" (HRD-81-95), we addressed the question, "Are NIH estimates of expenditures for nutrition-related research reasonable?" We randomly selected 30 projects from a list of 1,557 nutrition research projects funded by NIH in fiscal year 1979. We asked each principal investigator to corroborate NIH's estimate of the amount spent for nutrition research. Principal investigators for 23 of the 30 projects accepted NIH's estimate of project costs for nutrition research. Principal investigators for six projects believed NIH's estimate was too high and one believed NIH's estimate was too low.

The former NIH Director told us that NIH made a sincere effort to more accurately determine the level of NIH support of nutrition research. In spite of these efforts, the NIH figures are still perceived by some non-NIH individuals to be overstated.

OSTP has worked to develop a human nutrition research data base

At the time of our review, OSTP's Joint Subcommittee on Human Nutrition Research was developing a data base, including data on Federal funds, of all federally supported human nutrition research and research training activities. The subcommittee's member agencies had tentatively agreed on what the data base would contain and how the data would be collected. A subcommittee staff member said that the data base tentatively had 30 nutrition research categories, including normal nutritional requirements, nutrition-related diseases, food science, and nutrition education research. An estimated 4,000 nutrition-related research items were to be included in the inventory. Each agency was to develop its own list of projects using its own existing data bases. The data was then to be forwarded to the OSTP subcommittee and be processed by the NIH nutrition coordinator's office, which serves as the subcommittee's executive secretariat. External advice and comment on the usefulness of the data from such users as the Congress and the scientific community was not included in developing the system.

According to a subcommittee staff member, the subcommittee met in February 1982, discussed the data base, and agreed that because of the recent farm act (see p. 50), OSTP should suspend further action until the Secretaries of Agriculture and Health and Human Services decide on how they plan to proceed in developing and implementing a plan for a nutrition research management system, as required by the farm act.

Although we fully support and encourage the development of a data base on all federally supported human nutrition research to facilitate coordination, planning, and reporting, we believe that several concerns must be addressed.

--What can be done to ensure that the data will be usable by the Congress, the executive agencies, and the scientific community?

--What criteria will be used by the individual agency classifiers to estimate the nutrition components of broad, basic research projects? This concern is directed particularly at NIH, whose representatives have appeared several times before congressional committees to explain NIH's method of identifying the nutrition component of its research grants. The former NIH Director told us that although NIH had made a sincere effort to more accurately classify the nutrition component of its research grants, improvements can always be made.

--Should basic research, which potentially could contribute to several areas, including nutrition, be included in the inventory? If so, should it be flagged or grouped in a separate category?

--What plans are being made to eventually include information on nutrition research supported by the States; the food, health, and vitamin supplement industries; and others?

Recent congressional mandate

The Congress recognized the need for a nutrition research management system in the Agriculture and Food Act of 1981 (Public Law 97-98) approved on December 22, 1981. Section 1425(a) of the act states:

"The Secretary [of Agriculture] and the Secretary of Health and Human Services shall formulate and submit to Congress, within one hundred and eighty days after the date of enactment of this section, a plan for a human nutrition research management system. This system shall be based on on-line data support capability allowing for fiscal accounting, management, and control of cross-agency human nutrition research activities. The plan shall provide for management activities of all agencies managing funds for human nutrition research activities under existing authorities and contain recommendations for any additional authorities necessary to achieve a human nutrition research management system."

Conclusions

A good information system is one tool to help the executive agencies and the Congress improve their planning functions. Although OSTP had been working to develop an improved management information system on Federal support for human nutrition research, it had not sought external advice and comment from some of the system's potential users. Congress recently directed the Secretaries of Agriculture and Health and Human Services to develop a plan for a human nutrition research management system. Ideally, the system should be designed to provide information on research projects and costs that is accurate, current, timely, and useful to the Congress, the executive agencies, and the nutrition community. Accordingly, external advice and comment should be sought from such potential users as Federal nutrition-related agencies, relevant congressional committees, and the nutrition community.

Recommendation to the Secretaries of Agriculture and Health and Human Services

In a draft of this report, we proposed that the Director, OSTP, in developing a nutrition research management system, obtain expert and user advice and comment from nutritionists and other scientists; library, computer, and budget specialists; congressional staff; and others outside the OSTP subcommittee.

Subsequently, the Congress, through enactment of the Agriculture and Food Act of 1981, directed the Secretaries of Agriculture and Health and Human Services to formulate and submit to

the Congress a plan for a human nutrition research management system. The Congress said this system shall be based on on-line data support capability allowing for fiscal accounting, management, and control of cross-agency human nutrition research activities.

In light of this mandate and our continued belief in the need for a nutrition research management system, we recommend that the Secretaries of Agriculture and Health and Human Services, in developing their plan, address the need to obtain expert and user advice and comment from nutritionists and other scientists; library, computer, and budget specialists; congressional staff; and others external to the Federal departments. Such expert and external input should help the Secretaries develop a system that will provide research information and cost data that is timely, useful, comprehensive, reliable, and widely accepted by the Congress, the executive agencies, and the nutrition community.

Agency comments and our evaluation

Both OSTP and HHS concurred in our proposal that the OSTP joint subcommittee should seek external input in its development of a nutrition research management system. OSTP said it would encourage the subcommittee members to follow through in their plan to involve the various relevant external communities in developing and implementing the system. (See apps. VII and VIII.)

USDA's Director of Science and Education agreed with our revised recommendation and added that expert user input should be obtained from groups outside the Federal Government. HHS' Deputy Assistant Secretary for Health (Disease Prevention and Health Promotion) also concurred in our revised recommendation.

By developing a management information system, we believe OSTP has laid the groundwork to enable the Secretaries of Agriculture and Health and Human Services to begin to satisfy the congressional mandate of section 1425(a) of the Agriculture and Food Act of 1981 to submit a plan for a human nutrition research management system to the Congress within 180 days.

NIH CLINICAL NUTRITION RESEARCH UNITS HAVE POTENTIAL MERIT

A relatively new development in Federal support of human nutrition research is NIH's program of core grants for Clinical Nutrition Research Units. The program was established in 1979 for interdisciplinary research on the relationship of specific nutrients and health, human development, and the prevention and treatment of disease. A CNRU involves an integration of research, education, and service activities oriented toward human nutrition in health and disease. The grant is supposed to facilitate planning and coordination of the CNRU's activities by providing funding for facilities and associated staff that

serve the CNRU's various projects on a shared basis. The core grant is designed to complement other NIH-supported project grants and training awards and other funding sources. CNRU funding is a long-term--5 year--funding mechanism to ensure some stability for the research project.

The CNRU program's objectives are to

- create or strengthen biomedical research institutions for multidisciplinary research in clinical nutrition;
- strengthen the training of medical students, house staff, practicing physicians, and other medical personnel in clinical nutrition; and
- enhance patient care and promote good health.

Funding for the program in fiscal year 1979 totaled \$1.3 million for four CNRU's. Fiscal year 1981 funds of \$2.4 million supported seven CNRU's located at the

- University of Chicago,
- University of Wisconsin,
- University of Alabama in Birmingham,
- Vanderbilt University (Tennessee),
- Medical College of Georgia in Augusta,
- Memorial Sloan-Kettering Hospital (New York), and
- Columbia University's College of Physicians and Surgeons (New York).

(App. VI describes the nutrition activities at each CNRU.)

Each CNRU consists of seven components: research with human subjects and populations; laboratory investigations; research training; shared facilities and research services; educational programs for medical students, house staff, practicing physicians, and other medical personnel; nutrition support services; and public information activities. Several scientists told us that NIH support of CNRU's is a good idea for funding research because the CNRU's (1) integrate the many disciplines such as nutrition, medicine, nursing, dietetics, and education, (2) bring clinical nutrition into the mainstream of medical practice, (3) upgrade the role of clinical nutrition, and (4) strengthen ongoing nutrition research.

A group of NIH program officials and non-NIH scientists visited four CNRU's in summer 1981 to review scientific and management progress and problems. None of the groups that visited and

reviewed the CNRU's included representatives from other Federal agencies, such as USDA and the Veterans Administration, that have nutrition research units. NIH planned to review the other three CNRU's by the end of 1981 or after they had been in operation for at least 20 months.

We reviewed three of the site-visit reports and were briefed on the progress of the other site visited. These reports identified some problems at some of the sites, such as questionable impact on graduate training, a delay in establishing a major core laboratory, and fragmentation of nutritional activities. Although a few problems were identified at the sites, the reports were generally positive regarding the sites' progress in achieving some of the purposes of the CNRU funding mechanism. An NIH official told us that these site reports would not be shared with other CNRU directors unless the individual CNRU directors granted permission. Several nutrition research managers told us that they believe that CNRU's have a good potential for integrating clinical nutrition research, training, education, and patient care.

Conclusions

Recent external scientific and management reviews of four of the seven CNRU's showed that CNRU funding is an idea with promise and potential merit. Some of the positive features, which could be expanded or applied to other multidisciplinary research fields, are

- wider use of limited Federal resources by encouraging different research units to share facilities and resources;
- integration of research, medical practice, education, and patient care; and
- enhancement of cross-fertilization between sciences and disciplines.

The results of past and future CNRU reviews should be summarized and reported to all CNRU directors; others at NIH; other Federal research agencies, such as USDA's nutrition research centers and the Veterans Administration's research units; the nutrition community; the scientific community; and the Congress. Sharing information and experiences could benefit research directors in nutrition and other multidisciplinary fields. Also, the Congress should be informed of the impact of this form of Federal research funding.

Further, representation on the review group for all future CNRU site visits should be expanded to include representatives from the research units of other Federal agencies, such as USDA's human nutrition research centers at Boston, Houston, San Francisco, and Grand Forks and the Veterans Administration. This would be one way of ensuring that the directors of the Federal Government's nutrition research laboratories are sharing information, knowledge,

and experiences among themselves and with the academic research community. Although differences exist in the nutrition research approaches of USDA and HHS and the backgrounds of the Departments' research managers, both Departments share the common need to efficiently and effectively manage research programs during the current period of limited budgets.

Recommendation to the Secretary of Health and Human Services

We recommend that the Secretary of Health and Human Services direct the Director of NIH to (1) include other Federal nutrition research center representatives as participants in the planned CNRU site visits, or revisits, and (2) prepare a summary report on the CNRU reviews and provide the information to other Federal nutrition research administrators and other interested parties, such as the appropriate congressional committees and the scientific community. This report should include an assessment of all seven CNRU's.

Agency comments and our evaluation

HHS concurred in the recommendation to include other Federal nutrition research representatives in the CNRU site visits. HHS also said it is interested in coordinating Federal programs in clinical nutrition. HHS said that the OSTP Joint Subcommittee on Human Nutrition Research is planning a joint meeting in May 1982 with representatives from NIH, including the CNRU directors, USDA, FDA, the Veterans Administration, DOD, and the National Aeronautics and Space Administration to discuss research progress and future needs. (See app. VIII.) We commend OSTP's joint subcommittee and the participating departments and agencies for this coordination effort.

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September 10, 1980

Honorable Elmer Staats
Comptroller General of the United States
General Accounting Office
441 G Street
Washington, D. C. 20548

Dear Mr. Staats:

In recent years the Committee on Science and Technology has held hearings on various aspects of nutrition research and development. In September of 1979, the Subcommittee on Science, Research and Technology, which I chair, held hearings on Nutrition Research Methods and Technology. The General Accounting Office has provided helpful testimony and support to the Subcommittee in all of these hearings.

Analyses of our hearings, as well as those of other Congressional Committees, and recent reports of GAO, OTA, and OSTP have identified a common theme. That theme concerns the need for a central Government focus, and associated coordination mechanisms, to develop a comprehensive national nutrition plan delineating implementation and accountability strategies. Such a plan is fundamental to the development of a much needed national nutrition policy, which was recommended by the 1969 White House Conference on Food, Nutrition and Health. A similar recommendation was made in 1974 by the National Nutrition Consortium, which reaffirmed its position in January of this year, and in 1979 by the American Dietetic Association which identified the goals of a national nutrition policy.

During the past five years, several components of a national nutrition policy have been realized, but in a fragmented fashion. Both the Congress and the Executive Branch are responsible for this fragmentation. One of those fragments was the Food and Agriculture Act of 1977 which provided for new Federal initiatives and expansion in the area of human nutrition research and extension. A major portion of the Act was designed to improve the coordination and planning of agriculture research with special emphasis on nutrition research. Another fragment was the establishment of additional USDA human nutrition research centers concomitant with NIH Clinical Nutrition Research Units. Likewise, mechanisms were delineated in Conference Report 95-1579 to insure coordination of the USDA centers with NIH program plans and objectives.

Honorable Elmer Staats
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As our Subcommittee on Science, Research and Technology continues to pursue mechanisms for developing and implementing viable comprehensive science planning and policies, and nutrition research priorities, we would like to use the area of nutrition as a case study in determining the effectiveness of specific ways to facilitate planning in one area of science. Since the need for a national nutrition policy has been recognized for many years and recent legislation has included specific attempts to coordinate nutrition planning at the national level, the nutrition area would provide helpful insight to the activities of the Subcommittee. Therefore, I would like GAO to analyze the processes used to carry out these legislative nutrition coordinating directives and how effective the coordination and planning mechanisms have been in achieving the stated goals.

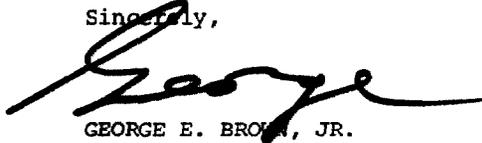
We are particularly interested, for example, in the impact on the nutrition planning process and resulting achievements of: 1) the use of advisory boards and scientific counselors, 2) the creation of a Subcommittee on Food and Renewable Resources within OSTP, 3) the requirement of a comprehensive plan for implementing the national food and human nutrition research and extension program within USDA. Other components of science planning and policy which have been emphasized in recent legislation relating to nutrition include the establishment of Federal laboratories and centers of excellence and dissemination of the resulting research to scientists and the public. Thus, we would also like GAO to include in the analysis the relationship and integration of Federal nutrition laboratories and clinics into the planning process. It would be valuable to discuss how the dissemination of nutrition research results has been facilitated through the establishment of a Food and Nutrition Information and Education Resources Center within USDA under P.L. 95-113 and comparable activities of other Agencies such as specified in the DHEW expansion of research and testing authority in P.L. 95-622. In addition to analyzing accomplishments in national nutrition planning, GAO should include, if warranted by the analysis, suggestions for an effective national comprehensive strategic nutrition planning and decision system. The results of this nutrition coordination and planning analysis may also make an important contribution to the study on strategic planning for food and agriculture research and development which I recently requested GAO to undertake.

We would like to receive your analysis in the Spring of 1981 so that we might utilize this effort as we consider new legislative initiatives

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early in the 97th Congress. We would appreciate it if you would coordinate this work with related CRS and other Congressional studies such as the OTA Food and Agriculture Research Study which will include a nutrition research component.

Sincerely,



GEORGE E. BROWN, JR.
Chairman
Subcommittee on Science,
Research and Technology

GEB:Omj

cc: Honorable Frederick W. Richmond
Chairman
Subcommittee on Domestic Marketing,
Consumer Relations, and Nutrition
House Committee on Agriculture

TABLE I
Dietary Advice to the Public Recommended by Various U.S. Reports

	Maintain Ideal Body Weight	Reduce Total Fat (% Calories)	Reduce Saturated Fat	Increase Poly- unsaturated Fat	Reduce Cholesterol	Reduce Simple Sugar	Increase Complex Carbo- hydrate	Increase Fiber	Reduce Sodium (g NaCl equiv.)	Other Recommen- dations
American Heart Association* 1965	yes	ND	yes	yes	yes	ND	ND	ND	ND	1
American Heart Association* 1968	yes	ND	yes	yes	yes	ND	ND	ND	ND	
American Heart Association* 1978	yes	yes (30-35%)	yes	yes	yes (300 mg)	yes	yes	no	yes	2
Dietary Goals First Edition* 1977	no	yes (30%)	yes	yes	yes (300 mg)	yes	yes	yes	yes (3 g)	3-6
Dietary Goals Second Edition* 1977	yes	yes (27-33%)	yes	yes	yes (250-350 mg)	yes	yes	yes	yes (< 8 g)	2-8
Healthy People* 1979	yes	yes	yes	no	yes	yes	yes	ND	yes	6-10
AMA Recom- mendations* 1979	yes	moderate	ND	ND	yes (< 12 g)	2,6-9
NCI Prudent Interim Principles* 1979	yes	yes	ND	no	ND	ND	ND	yes	ND	2,6-8
ACSH Report 1980	yes	no	no	no	no	ND	ND	ND	no	6,7
USDA-DHEW Guidelines 1980	yes	yes	yes	no	yes	yes	yes	yes	yes	2,6-9
FNB Recom- mendations* 1980	yes	adjust to calorie need	no	no	no	** ***	***	****	yes (3-8 g)	2,6-8

ND—not discussed

*—for high risk groups

**—if energy needs are low

***—for diabetics at risk

****—as dictated by Basic Four Food Groups

*Committee on Nutrition authorized by the Central Committee for Medical and Community Program

*Nutrition Committee of the Steering Committee for Medical and Community Programs

*Select Committee on Nutrition and Human Needs, U.S. Senate

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

*Adopted by American Medical Association House of Delegates

'of the National Institutes of Health, Department of Health, Education and Welfare

*of the Division of Biological Sciences, National Research Council, National Academy of Sciences

Other Recommendations:

1. apply dietary recommendations early in life, maintain principles of good nutrition, adhere to aforementioned guidelines, make sound food habits a family affair
2. moderate/reduce intake of alcohol
3. moderate/reduce use of additives
4. moderate/reduce use of processed foods
5. associates use of sugar with diabetes
6. considers special needs of high-risk groups and special populations
7. stresses importance of variety in a well-balanced diet
8. encourages exercise
9. encourages breast feeding

SUPPORTERS, ADVISORS, OR USERS OF
FEDERAL HUMAN NUTRITION RESEARCH

FEDERAL GOVERNMENT

Office of Science and Technology Policy:
Federal Coordinating Council for Science, Engineering,
and Technology
Joint Subcommittee on Human Nutrition Research

U.S. Department of Agriculture:
Agricultural Research Service
Cooperative State Research Service
Extension Service
Food and Nutrition Service
Human Nutrition Information Service
Food Safety and Inspection Service
Economic Research Service
Office of International Cooperation and Development

Department of Health and Human Services:
National Institutes of Health
Food and Drug Administration
Center for Disease Control
Alcohol, Drug Abuse, and Mental Health Administration
Health Resources Administration
Health Services Administration
National Center For Health Statistics
Administration on Aging

Department of Defense

Veterans Administration

National Science Foundation

National Aeronautics and Space Administration

Department of Commerce:
National Oceanic and Atmospheric Administration
National Marine Fisheries Service

U.S. International Development Cooperation Agency:
Agency for International Development

Federal Trade Commission

FOOD INDUSTRY AND TRADE ASSOCIATIONS

UNIVERSITIES AND LAND-GRANT COLLEGES

SUPPORTERS, ADVISORS, OR USERS OF
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OTHER

American Academy of Pediatrics

American Dietetic Association

American Heart Association

American Institute of Nutrition

American Medical Association

American Society for Clinical Nutrition

Federation of American Societies for Experimental Biology

Food and Agricultural Organization of the United Nations

Institute of Food Technologists

National Academy of Sciences:
Institute of Medicine
Food and Nutrition Board

National Nutrition Consortium

Nutrition Foundation

Society for Nutrition Education

THE ROLE OF THE FEDERAL GOVERNMENT IN HUMAN NUTRITION RESEARCH

<u>Department/agency</u>	<u>Role or mission</u>	<u>Areas of nutrition research</u>	<u>Target audience</u>
U.S. Department of Agriculture	Ensure an adequate, safe, palatable, nutritionally balanced, and reasonably priced food supply, equitably available to all Americans.	Nutrient requirements; food composition; food safety; relation of diet to disease; food enrichment; effects of agricultural practices and of handling, processing, and cooking on the nutrients in foods; surveillance of nutritional impact on USDA food assistance program participants; factors influencing nutritional practices, food choices and consumption behavior; food processing and distribution; impact of food prices on consumer food choices; and nutrition education.	All segments of the population, with special emphasis on infants, children, women, and the elderly.
U.S. Department of Health and Human Services	Advance the knowledge necessary for the understanding, prevention, and treatment of diseases.	Biomedical research; role of nutrients on normal development, health promotion, disease prevention, and disease treatment; behavioral research; nutritional assessment; determining the nutritional status of the Nation; and determining the nutrient composition and the presence of potentially hazardous substances in foods.	All segments of the population.
National Science Foundation	Strengthen the coupling between basic and applied research and the use of science and technology in meeting national problems.	Nutritional impact of food processing, including refining, cooking, packaging, and storing; nutrition and behavior; nutrition education research; and mineral content of human tissues. The NSF human nutrition program was phased out in FY 1982.	All segments of the population; the food industry.
Department of Defense	Provide acceptable, high-quality, nutritious food to authorized personnel.	Nutritional requirements under normal and special operating conditions; nutritional status of military personnel; nutritional impact of feeding systems; nutrient standards for rations; and effect of prolonged feeding of rations. Beginning in FY 1979, some of these nutrition research functions were transferred to USDA.	Authorized military personnel and dependents.
Veterans Administration	Provide quality medical care to eligible veterans.	Nutrition-related studies to support medical and surgical research in such areas as aging, alcoholism, heart disease, diabetes, tissue regeneration, and obesity.	Eligible veterans.
National Aeronautics and Space Administration	Maintain health and facilitate manned space flight.	Nutritional support of humans in the space shuttle; development of life-support systems, including self-sustaining crew feeding; and development of nutritional measures to counteract adverse effects of space flight.	Astronauts, with potential application to bedridden patients.
U.S. International Development Cooperation Agency—Agency for International Development	Assist less developed countries to improve the nutritional status of their populations.	Research focused on infants, young children, and pregnant and nursing women; effective nutrition intervention programs; development of low-cost nutritious foods; nutrient fortification; and nutrition planning, education, and evaluation methods.	Infants, young children, and pregnant and nursing women.
Department of Commerce—National Oceanic and Atmospheric Administration	Ensure adequate supplies of wholesome seafood products and enhance consumer and industry awareness of the safety, wholesomeness, and high nutritional value of seafoods to assure efficient and expanding seafood product utilization.	Nutritional value of seafoods; seasonal variation of the nutritional composition of certain species of fish and shellfish; effects of cooking on nutritional composition; and standardized methods for assessing the edibility characteristics of fish.	Consumers of seafood and the seafood industry.

SELECTED GAO AND OTHER REPORTS ON HUMAN NUTRITIONGAO REPORTS

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- "GAO Comments on the Impact of the USDA Reorganization on Nutrition," CED-81-150, Aug. 17, 1981.
- "Nutrition Research Peer Review at the National Institutes of Health," HRD-81-95, June 1, 1981.
- "Research Planning and Evaluation at the National Institutes of Health and Aspects of Advisory Council Operations," HRD-81-18, Dec. 30, 1980.
- "Comments on Food Advertising Proposals," CED-81-27, Nov. 7, 1980.
- "The Office of Science and Technology Policy: Adaptation to a President's Operating Style May Conflict With Congressionally Mandated Assignments," PAD-80-79, Sept. 3, 1980.
- "What Foods Should Americans Eat? Better Information Needed on Nutritional Quality of Foods," CED-80-68, Apr. 30, 1980.
- "Recommended Dietary Allowances: More Research and Better Food Guides Needed," CED-78-169, Nov. 30, 1978.
- "Future of the National Nutrition Intelligence System," CED-79-5, Nov. 7, 1978.
- "Federal Human Nutrition Research Needs a Coordinated Approach To Advance Nutrition Knowledge," 2 vols. PSAD-77-156 and PSAD-77-156A, Mar. 28, 1978.
- "Informing the Public About Nutrition: Federal Agencies Should Do Better," CED-78-75, Mar. 22, 1978.
- "National Nutrition Issues," CED-78-7, Dec. 8, 1977.

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"Promoting Health/Preventing Disease: Objectives for the Nation," HHS, fall 1980.

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CLINICAL NUTRITION RESEARCH UNITS

The most significant development in human nutrition research with human relevance in FY 1979 was the establishment of a new National Program in Clinical Nutrition based on Clinical Nutrition Research Units (CNRUs). Objectives of the CNRU program are:

- Creating or strengthening foci in biomedical research institutions for multidisciplinary research in clinical nutrition in order to develop new knowledge about specific nutrients in health throughout the life cycle, human development, and the prevention and treatment of disease.

- Strengthening training environments in order to improve the education of medical students, house staff, practicing physicians, and paramedical personnel in clinical nutrition.

- Enhancing patient care and promoting good health by focusing attention on clinical nutrition and generating nutritional information for the public.

Each CNRU consists of the following seven components: research with human subjects and populations; laboratory investigations; research training; shared facilities and research services; educational programs for medical students, house staff, practicing physicians, and paramedical personnel; nutritional support services; and public information activities.

Seven CNRUs were funded in FY 1979 and FY 1980. A brief description of each follows:

The University of Chicago CNRU is under the direction of Irwin H. Rosenberg, M.D., Professor of Medicine, Department of Medicine. This CNRU is built on the research base currently existing at the University for the study of diabetes, ischemic heart disease, atherosclerosis, urolithiasis, and cancer, and the programs in lipoprotein research, stable isotopes, and vitamin metabolism. Along with the resources of their nutrition support service and the biological sciences facility, this CNRU provides nutritional assessment, clinical intervention, laboratory assays, and support services to foster clinical investigation.

The University of Wisconsin CNRU is under the direction of Alfred E. Harper, Ph.D., Professor and Chairman of the Department of Nutritional Sciences, and Earl Shrago, M.D., Professor of Medicine and Nutritional Sciences. The components of the CNRU are particularly involved with a selected number of clinical programs, including geriatrics, preventive cardiology, anorexias, lipid disorders, cancer and nutrition, and dialysis. Integration of the components of the CNRU with these clinical programs is expected to provide a significant impetus to research and education in clinical nutrition, as well as to lead to a general improvement in clinical management and patient care.

The CNRU at the University of Alabama in Birmingham is under the direction of Charles Butterworth, M.D., Professor and Chairman of the Department of Nutrition Sciences. The Schools of Community and Allied Health, Medicine, and Dentistry cooperate in this interdisciplinary program. Due to the strong institutional backing for a model Center for Clinical Nutrition Research, plans are underway for a Nutrition Science Center that will include an administrative unit and five other centralized units or teams consisting of: a laboratory providing shared facilities for basic research and clinical support services; a clinical nutrition support team; an animal facility supporting basic nutrition research; an information service to combat fraud, waste, and misinformation; and an international unit to promote understanding and exchange of information with students and scientists in other parts of the world.

The CNRU at Vanderbilt University's School of Medicine is under the direction of Harry L. Greene, M.D., Associate Professor of Pediatrics and Head, Division of Gastroenterology. In keeping with the concepts of a CNRU, six clinical nutrition research projects serve as a focus in order to develop new knowledge about specific nutrients in health, human development, and prevention and treatment of disease. Ongoing fellowship training grants in nutrition and gastroenterology serve as a basis to implement much of

Source: "Federally-Supported Human Nutrition Research, Training, and Education: Update for the 1980s." Report of OSTP's Joint Subcommittee on Human Nutrition Research. Reprinted in the American Journal of Clinical Nutrition, Supp. vol. 34, No. 5, May 1981, pp. 991-995.

CLINICAL NUTRITION RESEARCH UNITS

the above teaching and patient care. The Vanderbilt public information office, and its daily contact with the news media as well as its own publication department, will increase public awareness of the nutrition program.

The CNRU at the Medical College of Georgia in Augusta is under the direction of Elaine Feldman, M.D., Chief, Section of Nutrition, Department of Medicine, and director of the Georgia Institute of Human Nutrition. The CNRU provides partial financial support and the structure for the administrative and laboratory activities of the Georgia Institute of Human Nutrition (GIHN). The staff of the CNRU functions in one or more of the three nutrition related areas of clinical research, education and training, and service. An experienced nutritional biochemist supervises three core laboratories—lipids, trace metals, and nutritional biochemistry. The nutrition education program in the School of Medicine is supported in conjunction with a separately funded curriculum development grant in applied nutrition. The goal of the CNRU is to search for the etiology and treatment of nutrition related disorders affecting the population of Georgia. The joint efforts of the School of Medicine, the GIHN, the CNRU, and the interdisciplinary team curriculum in nutrition will provide a resource to enhance the effective role of nutrition as an important discipline in patient care.

The CNRU at Memorial Sloan-Kettering in New York is under the direction of Richard S. Rivlin, M.D., Professor of Medicine and Chief of the Nutrition Service at the Memorial Sloan-Kettering Hospital for Cancer and Allied Diseases, and Chief of the Division of Nutrition, Department of Medicine, Cornell University Medical College. This CNRU is the major focus for the nutrition activities of the Memorial Sloan-Kettering Cancer Center and of Rockefeller University. A collaborative program with the participating institutions fosters development of all seven components of the CNRU. This CNRU establishes an administrative core facility that includes the following five core laboratories: immunology, lipid metabolism, metals, mass spectrometry, and biophysics.

The CNRU at Columbia University's College of Physicians and Surgeons in New York is directed by Robert W. Winters, M.D., Professor of Pediatrics. The CNRU includes the following three core components: a clinical core, a laboratory core, and a computer/biostatistics core. Activities of this CNRU focus on the pediatric patient, since large research, education, and training programs already exist in the Department of Pediatrics and the Institute of Human Nutrition at Columbia. Pediatrics offers important and unique opportunities for the study of nutritional problems in patients. Plans include building onto existing programs in parenteral and enteral, clinical, and basic nutrition research. This research is directed toward providing adequate nourishment to the fetus, the premature or term infant, child, or adolescent. The planned new projects with nutrition components embrace such diverse fields as cardiology, oncology, neonatology, allergy, pulmonary disease, immunology, and perinatology. In addition to catalyzing extensive new areas of nutrition research, the CNRU acts as a major new institutional resource for the integration of research, education, and service in the field of clinical nutrition.

Many unanswered questions remain on the relationship of diet to health and disease, especially cancer, other chronic diseases, and aging. To answer these questions, nutritional science must integrate many disciplines—such as biochemistry, molecular biology, genetics, and physiology—as well as medical specialties—such as internal medicine, pediatrics, and surgery. A close interaction among research, health services, and education is crucial for the advancement of nutritional science. These seven CNRUs are designed to provide maximal efficiency of research, service, and training through enhanced personnel contact and intellectual stimulation, use of shared resources, and coordinated effort.

From report by Joint Subcommittee on Human Nutrition Research, American Journal of Clinical Nutrition, Supplement Vol. 34, Number 5, Pages 991-995, May 1981

EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF SCIENCE AND TECHNOLOGY POLICY
WASHINGTON, D.C. 20500

February 5, 1982

The Honorable Charles A. Bowsher
Comptroller General of the United States
Washington, DC 20548

Dear Mr. Bowsher:

I am pleased to comment on the GAO draft report "Progress in Federal Human Nutrition Research Should Continue with Planning and Coordination Improvements."

This draft report reviews the recent history of coordination efforts among the major federal agencies involved in human nutrition research and proposes steps to continue, extend, and formalize those efforts. I am pleased that the report recognizes the excellent progress made during the last five years in coordination of federal human nutrition research activities, the lead role played by the Office of Science and Technology Policy (OSTP) in that progress, and the commitment and hard work of the members of the Joint Subcommittee on Human Nutrition Research (JSHNR) as evidenced in their December 1980 report on human nutrition research and training.

The draft GAO report contains two recommendations to the Director of OSTP. The first recommendation is for the Director of OSTP to direct the JSHNR to develop a federal nutrition research plan by developing specific goals for federal human nutrition research programs, and by identifying the responsibilities of the federal departments and agencies and the resources and time required to accomplish those goals. I concur in principle with this recommendation and perceive it to be consistent with the policies of this Administration and the intention of the members of the Joint Subcommittee. That Subcommittee has demonstrated its commitment to effective coordination by: agreeing on a common definition of human nutrition research; describing the existing nutrition research activities and expenditures of federal departments and agencies; identifying critical research issues; preparing reports on international nutrition research and nutrition education and professional manpower; organizing a conference to discuss research progress and identify research needs; and developing a common computerized data retrieval system.

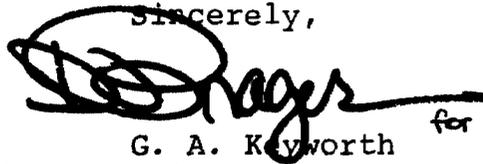
The Honorable Charles A. Bowsler
Page 2

These varied activities provide the groundwork for improved planning of federal human nutrition research. It is the intention of the JSHNR to update and expand its 1980 report and to use that report as the vehicle for evolving a broad federal nutrition research plan within which the individual agencies can develop separate plans consistent with their legislated responsibilities and missions. To the degree possible and appropriate, the federal plan will delineate agency responsibilities and necessary resources. We agree that the process of preparing such a plan will greatly enhance federal nutrition research programs.

The second GAO recommendation to the Director of OSTP urges that, in developing a nutrition research management system, external input be broadly solicited. I concur fully in this recommendation and will encourage the members of the JSHNR to follow through in their plan to involve the various relevant external communities in the development and implementation of the data retrieval system now envisioned.

One other comment. On page 23, the text indicates that an OSTP official referred to the cost of JSHNR activities as "minimal." I wish to clarify that the term "minimal" was meant to refer to the direct cost of these activities to OSTP. Since the responsibility for the operation of the JSHNR is assigned to the agencies, our costs are minimal. However, the cost to the agencies is considerable. Those who believe in, and encourage, greater cooperation and coordination among federal agencies should understand that such efforts are not without cost. Effective coordination requires a significant commitment of time and energy -- real and opportunity costs which must be taken into account when considering the imposition of new coordination mechanisms and planning activities.

Sincerely,



G. A. Keyworth for
Science Advisor to the President

[GAO NOTE: The page number in OSTP's comments has been changed to reflect that in the final report.]



DEPARTMENT OF HEALTH & HUMAN SERVICES

Office of Inspector General

Washington, D.C. 20201

FEB 8 1982

Mr. Gregory J. Ahart
Director, Human Resources
Division
United States General
Accounting Office
Washington, D.C. 20548

Dear Mr. Ahart:

The Secretary asked that I respond to your request for our comments on your draft of a proposed report "Progress in Federal Human Nutrition Research Should Continue with Planning and Coordination Improvements". The enclosed comments represent the tentative position of the Department and are subject to reevaluation when the final version of this report is received.

We appreciate the opportunity to comment on this draft report before its publication.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "R. Kusserow".

Richard P. Kusserow
Inspector General

Enclosure

[GAO NOTE: Changes, additions, or deletions to the report were made, as appropriate, in response to these comments. The page numbers in HHS' comments have been changed to reflect those in the final report.]

COMMENTS OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
ON THE GENERAL ACCOUNTING OFFICE'S DRAFT REPORT "PROGRESS IN
FEDERAL HUMAN NUTRITION RESEARCH SHOULD CONTINUE WITH
PLANNING AND COORDINATION IMPROVEMENTS"

General Comments

The General Accounting Office (GAO) report represents a fair review of the progress made in nutrition research and its coordination in recent years. The Department of Health and Human Services (HHS) concurs with the thrust of the GAO recommendations. However, our comments on several statements made in the report follow.

On page 1, Chapter I under Introduction, it would be helpful if the final report included a definition of the term human nutrition research as used therein. We suggest that the final report include and be based upon the consensus definition of human nutrition research developed by the Office of Science and Technology Policy (OSTP). This would provide a common basis for determining what is needed in the way of planning and coordinating human nutrition research. We believe this draft report incorporates other issues outside that definition, such as food production and dissemination of nutrition information. As a result of the absence of such a definition the report does not discuss the entire area of nutrition monitoring and surveillance as a research function that is of particular importance to agencies involved with applied research, such as the Food and Drug Administration (FDA).

[GAO COMMENT: For this report, we used the definition of human nutrition research developed by the OSTP nutrition subcommittee--see p. 48.]

On page 35, under the discussion of FDA's Bureau of Food Research Plan, it should be noted that this is the first such attempt by an agency to clearly identify issues, areas of little information, agency needs, and possible ways of satisfying those requirements. As such, we believe the plan has been useful and continues to direct the utilization of scarce research funds to achieve agency goals. We believe GAO should also recognize FDA's intramural research activities which are carried out through a multi-disciplinary, integrated program that fosters strong planning, cooperation, and coordination within the agency.

On page 40, paragraph 6, reference is made to the OSTP report on human nutrition research as a first step toward developing a plan. We recognize that the OSTP is one of several coordination mechanisms currently in use. However, other mechanisms are equally valid and should be explored before OSTP is established as the only, or primary, coordinator of human nutrition research activities. A lower-level committee of nutrition experts from each of the Federal research units involved could also serve a useful role in planning and coordinating Federal efforts in this area.

Page 2

On page 48 of the report, the report states:

Although several Federal nutrition officials told us that they agreed with the Joint Subcommittee's definition of human nutrition research, they believed that the Subcommittee's reported figure of \$195 million for nutrition research was not representative of the total expenditures because some agencies were either over or under estimating their nutrition research expenditures. For example, although NIH has made some improvements in developing and agreeing on an Institute-wide definition of nutrition research and has created a computer-based inventory of NIH nutrition research grants, questions remain about the reliability and accuracy of NIH-reported expenditures for nutrition research. The problem may be due to agency officials overestimating the portions of research projects that are nutrition-related. For example, a nutrition researcher in HHS told us that after analyzing a list of NIH nutrition-related research projects, only 70 percent of the reported NIH figure represented nutrition research. This individual told us, for example, that a gastroenterology project was estimated to have a nutrition component of 30 percent when it did not relate to nutrition except in a very general and tangential way.

The former NIH Director told us that NIH made a sincere effort to more accurately determine the level of NIH support of nutrition research. In spite of these efforts, the NIH figures are still perceived by non-NIH individuals to be overstated. The level of nutrition research is more easily and accurately determined at USDA than at NIH because USDA's nutrition research is a specific program and a clearly identifiable budget line item.

These statements cause concern to HHS, especially in light of the findings of the June 1, 1981 GAO report that addressed the question, "Are NIH estimates of expenditures for nutrition-related research reasonable?" That report describes a study carried out by GAO which responds to this question. Based on data collected by GAO, the study shows that agreement of principal investigators with the National Institutes of Health's (NIH) estimate for nutrition research expenditures in Fiscal Year 1979 (for 1,557 reported projects) ranges from 87.1 to 99.5 percent with a mean of 93 percent. HHS believes that this agreement is the best possible evidence for the satisfactory functioning of the nutrition expenditure reporting mechanism being used at NIH. While some differences of opinion regarding definitions are difficult to avoid, it would be surprising, in light of these GAO findings, if the NIH estimates of nutrition research expenditures were far off the mark.

HHS, therefore, takes exception to the statements on page 48 and would like to see this section of the report deleted in the final report.

[GAO COMMENT: We revised the report by citing the finding of our earlier report, "Nutrition Research Peer Review at the National Institutes of Health" (HRD-81-95, June 1, 1981).]

Page 3

GAO Recommendation

We recommend that the Director of OSTP direct OSTP's Joint Subcommittee on Human Nutrition Research to develop a Federal nutrition research plan by updating and expanding its December 1980 report on federally supported human nutrition research. The process of updating the report would serve as a mechanism for achieving improved planning and coordination among the nine participating departments and agencies and the required resources and timeframes to accomplish the research goals. Development of the plan should also consider the work already done in other research "plans" discussed in this report.

HHS Comment

In general, we concur with the GAO recommendation. As the GAO report indicates, the Joint Subcommittee on Human Nutrition Research (JSHNR) has already made strides in that direction by establishing a definition of human nutrition research and by identifying and describing the nutrition research activities and expenditures of nine Federal departments/agencies, the legislative authorities and coordination mechanisms, and critical issues in human nutrition research.

The Subcommittee has completed two additional reports: Federally-Supported Human Nutrition Research, Training and Education: Update for the 1980s, Volume II, International Nutrition Research and Volume III, Nutrition Education Research and Professional Personnel Needs for Nutrition Education of Professionals and the Public. Both reports are undergoing final clearance by the participating agencies.

The Subcommittee is currently making plans for a meeting of the directors of the NIH Clinical Nutrition Research Units (CNRU), the intramural laboratories of the United States Department of Agriculture (USDA), NIH, FDA, the Veterans Administration's (VA) clinical nutrition and alcohol research programs, and the managers of the Department of Defense (DOD) and the National Aeronautics and Space Administration (NASA) programs with nutrition research components to discuss research progress and future research needs. This meeting is scheduled on the first week of May 1982 in conjunction with the clinical meetings of several professional societies.* This meeting will help to identify priorities and other needs in human nutrition research and actions required by each agency to develop mechanisms for their implementation.

*The American Federation for Clinical Research, the American Society for Clinical Investigation, The American Association of Physicians, The American Society for Clinical Nutrition, The American Pediatric Society, and The Society for Pediatric Research.

As the GAO report indicates, the members of the JSHNR have agreed on a computerized data retrieval system that will include data on all federally-supported human nutrition research, education, and training activities. Such a data base will help to coordinate, report, and plan for future nutrition research activities.

In summary, we conclude that the preliminary steps of identification, agreement, and acceptance of what constitutes nutrition research and research training in the Federal Government have been taken by the JSHNR. Establishing specific goals, objectives, and strategies that would constitute the recommended nutrition research plan can now be considered seriously by the JSHNR.

The general principles behind a nutrition research plan as described by the GAO seem laudatory, and a broad Federal nutrition research plan can, and should, be developed. However, the application of such a plan to the diverse programs and missions of HHS, USDA, and other Federal departments and agencies that support human nutrition research, and detailed implementation planning, should not be undertaken by the JSHNR but left to the individual Federal departments and agencies.

As given in its charter, the purpose of the JSHNR is to increase the overall effectiveness and productivity of research efforts in nutrition. In order to fulfill its purpose, the JSHNR will continue to:

- a) improve planning, coordination, and communication among Federal agencies engaged in research in nutrition,
- b) develop and update plans for Federal research programs to meet current and future domestic and international needs for nutrition,
- c) collect and compile and disseminate information on nutrition research, and
- d) prepare reports describing activities, findings, and recommendations of the Subcommittee.

[GAO COMMENT: We agree. However, we believe that OSTP could be used as a mechanism for at least assisting in the difficult task of developing detailed implementation plans in a crosscutting area such as nutrition, to be acted upon by the individual Federal departments and agencies.]

GAO Recommendation

We recommend that the Director, OSTP, in developing a nutrition research management system, obtain expert and user advice and comment from nutrition and other scientists; library, computer, and budget specialists; congressional staff; and others outside the OSTP Subcommittee. Such external input should help the Subcommittee develop a system that will provide research information and cost data that is timely, useful, comprehensive, reliable, and widely accepted by the Congress, the executive agencies, and the nutrition community.

Page 5

HHS Comment

We concur. As noted above, the data retrieval system has now been accepted by the entire JSHNR and plans to implement the system are being discussed. It is appropriate for the JSHNR to now ask for advice and comment from nutrition and other scientists from outside the JSHNR and OSTP. Certainly such a system will help establish accurate reporting of nutrition research expenditures.

GAO Recommendation

We recommend that the Secretary of Health and Human Services direct the Director of NIH to (1) include other Federal nutrition research center representatives as participants in the planned site visits, or revisits, to the CNRUs, and (2) prepare a summary report on the reviews of the CNRUs and provide the information to other Federal nutrition research administrators and other interested parties such as the appropriate congressional committees and the scientific community. This report should include an assessment of all seven CNURs.

HHS Comment

We concur with the GAO recommendation regarding the site visits to the CNRUs. NIH selects members of the site visit teams on the basis of their scientific and managerial expertise. These experts can come from both the Federal departments and agencies and academia.

HHS is indeed interested in the coordination of the Federal programs in clinical nutrition. The need for an annual meeting of the CNRU Directors with representatives from other Federal departments and agencies was emphasized in the JSHNR Report of December 1980 as part of the recommendation on Interdepartmental Relationships, Integration, and Coordination. One of the activities to be undertaken by the JSHNR, as stated in recommendation 6 of its report, Federally-Supported Human Nutrition Research, Training, and Education: Update for the 1980s. I. Human Nutrition Research and Training, is to "Establish an annual meeting at which the Directors of the NIH Clinical Nutrition Research Units, the intramural laboratories of USDA, NIH, FDA, VA clinical nutrition and alcohol research programs, and the managers of DOD and NASA programs with nutrition research components will discuss research progress and future research needs. Such discussions should lead to increased coordination and collaboration among the intramural programs of USDA, NIH, FDA, NASA, DOD, VA, and the Department of Commerce. Furthermore, it may indicate the need for the development of joint program announcements and requests for applications and proposals by USDA, NIH, FDA, NASA, and the National Science Foundation. JSHNR is uniquely qualified to determine specific needs for such joint action by cooperating agencies and assist in the development of mechanisms for implementation." Plans are in progress to have this joint meeting in May 1982.

Page 6

Each year a meeting of the Directors of the CNRUs is held in order to facilitate communication, to review research findings and problems, and to discuss administrative concerns and constraints among the seven currently funded CNRUs. To date, two annual meetings have been held; the first was held on December 3, 1980 and the second on December 17, 1981. Reports on both annual meetings are being prepared by the appropriate NIH personnel and will be made available to interested parties.

It should also be noted that efforts have been made to inform other professionals of the programs at CNRUs. During the 1981 annual meeting of the American Dietetic Association, a panel of registered dietitians representing the research units presented papers on the activities of their clinical nutrition research unit with emphasis on implications for the registered dietitian and the dietetic profession.

Technical Comments

[GAO NOTE: The agency's "Technical Comments" have been deleted and suggested changes have been incorporated in the report.]



DEPARTMENT OF AGRICULTURE
OFFICE OF THE SECRETARY
WASHINGTON, D. C. 20250

FEB 22 1982

Mr. Henry Eschwege
Director, Community and
Economic Development Division
General Accounting Office
441 G Street, N.W.
Washington, D.C. 20548

Dear Mr. Eschwege:

Attached are Science and Education's comments on your draft report entitled, "Progress in Federal Human Nutrition Research Should Continue with Planning and Coordination Improvements."

We appreciate the opportunity to review and comment on the draft report.

Sincerely,

A handwritten signature in cursive script, appearing to read "Anson R. Bertrand".

ANSON R. BERTRAND
Director
Science and Education

Enclosure

[GAO NOTE: Changes, additions, or deletions to the report were made, as appropriate, in response to these comments. The page numbers in USDA's comments have been changed to reflect those in the final report.]

Comments on GAO Draft Report Entitled
 "Progress in Federal Human Nutrition Research Should Continue
 With Planning and Coordination Improvements"

There are no general points of disagreement. Rather, the following points of omission are noted:

- In Appendix III the Extension Service should be added under USDA, Science and Education. This agency transfers Federal Human Nutrition Research to a wide array of users through Extension education.
- The second omission is less easy to correct. On page 8, paragraph 2, the first sentence reads, "We did not attempt to determine the adequacy of the current funding level of human nutrition research nor to look at the nutrition research that is supported by private industry, the States, and private research groups." The entire report then proceeds to ignore the USDA Federally-supported research in the states. This support is about 20 percent of the reported USDA funding listed on page 6. By contrast, the report describes a single, specific NIH Program, Clinical Nutrition Research Units, in a fairly detailed manner. It is recommended that GAO be encouraged to include a paragraph in the report that describes USDA contributions in parallel detail.

Specific Responses to Critical Issues

COORDINATION

A. USDA Nutrition Coordination post-June 1981 Reorganization

In addition to informal interagency coordination on a person-to-person basis, a more formal coordination mechanism is in the process of formation. GAO is encouraged to add the following information on the Working Group on Human Nutrition to its final Report.

Development of Formal Coordination of Human Nutrition in USDA (post-June reorganization)

The Secretary of Agriculture chairs a Policy and Coordination Council composed of Under-or-Assistant-Secretaries, the Director of Science and Education and the General Counsel, which meets on an "as needed" basis to determine policy and resolve issues. The Secretary requested each Coordination Council member, in turn, to organize and chair a Committee (under the Council) to deal with issues which primarily fall in his/her own area, but necessitate interagency coordination.

The Director of Science and Education chairs the USDA Research and Education Committee. The structure of the R&D Committee includes an Executive Committee under which are ongoing Committees, two Subcommittees, ((a) Research and Technology, and (b) Education, Information and Technology Transfer) and four Work Groups. A new Workgroup on Human Nutrition is in the formative stage. This Work Group continues the coordination previously done informally through the pre-reorganization staff.

B. Barriers to Coordination

- With USDA--The report is an accurate presentation of many of the concerns expressed by the scientists and administrators in USDA, and throughout the country. Past concern that one Agency within USDA "speaks" for USDA, yet has authority to speak only for itself, and the related concern that only the programs of that lead Agency will be adequately represented, should dissipate with the implementation of the Working Group on Human Nutrition (see I-A above).
- Across Federal Agencies--There is agreement that coordination of human nutrition research should be continued. Perhaps more emphasis is required to recognize that coordination must not impede the ability of the various Federal Agencies to achieve their separate nutrition research missions. Nutrition research currently is supported in several Agencies because this type of research is required (by legislation) in support of the Agencies' missions.

PLANNING

A. Are Current Attempts of Federal Government-wide Planning too Narrow or Missing Key Planning Components?

- Current efforts are mainly in the area of coordination and have not been directed towards construction of a single Federal government-wide strategic plan for nutrition research. There is agreement that a government-wide strategic plan would be useful but concern is expressed that implementation of the resultant plan will be difficult before an on-line uniform data base of all human nutrition research is operational.
- The Joint Subcommittee on Human Nutrition Research has not developed a government-wide nutrition work plan because such a plan was not a stated major objective of the Subcommittee.

B. Should OSTP Lead in Development of a Government-wide Nutrition Research Plan?

- OSTP lead is supported. Such a role for OSTP would "give legitimacy" to the planning system. However, the current membership of the Joint Subcommittee on Human Nutrition Research does not adequately represent the research interests of the Departments, nor do the members have budgetary responsibilities within their Departments. GAO cites the Implementation Plan for a Joint National Nutrition Monitoring System as an example of long range planning. This plan was developed outside of the Joint Subcommittee. Before decisions are made about the organization responsible for long range planning in nutrition research, we urge that consideration be given to alternative approaches.

C. The Practicality of Working Across Departments at the Operational Level

- Working across Departments at the operational level is harder than at planning and policy levels. However, there are areas of human nutrition research where it is practical to work across departments at the operational level, and, to a certain degree, this is presently being done (referred to on next page). As the field of human nutrition grows, it is becoming more apparent that there will be more and more problems in getting consensus from various agencies in their decision-making processes, due to staff constraints, the necessity of making trade-offs in funding allocations in a period of tight budgets, and lack of input from State and non-government agencies. In order to overcome these problems, the new "Committee on Human Nutrition Research" of OSTP, recommended by GAO, should be empowered to take the necessary steps to develop subcommittees, task forces, etc., to examine each problem area, and make recommendations to the Committee. Such a committee would take the necessary steps to work through the Executive and Legislative Departments to implement the recommendations. This Committee would have a broader mandate than the current Joint Subcommittee.

OTHER ISSUES -- Corrections and/or clarifications suggested for the final GAO Report.

- Examples given under Barriers to Coordination (pp.22-23) are mainly off-the-cuff remarks that for the most part have not been substantiated.

Example: To suggest that there are no clear incentives to participate more fully in joint, coordinated research efforts suggests that important strides have not been made in developing a joint implementation plan for nutrition status monitoring between USDA and HHS. Staff members of NIA and NICHD of HHS have participated in program and building plans of the Human Nutrition Research Center on Aging and the Childrens' Nutrition Research Center of USDA. USDA and HHS have worked together for over 6 years in the area of nutrient composition of foods, and the Consumer Nutrition Center/USDA and Food and Drug Administration/HHS have worked jointly on the National Food Consumption Survey of 1977-78.

- An update is required in the final GAO report concerning USDA/DOD interaction, especially as concerns the new USDA Western Human Nutrition Research Center. The West Coast facility has been involved in completing DOD research programs since the Center was transferred to USDA. Only within the last couple of months have most of the reports of completed DOD projects been drafted by the DOD group transferred to the USDA facility. One high level scientist from the Western Human Nutrition Research Center was designated as the key person to coordinate DOD research with USDA.

The role of DOD nutrition research as it applies to the USDA has been coordinated through the Washington DOD nutrition liaison person and the Assistant to the Deputy Administrator of ARS. However, the major effort during the past 2 years between DOD and USDA has been to complete the nutrition research of DOD left undone by DOD at the time

of transfer to USDA and to publish the reports of this research. The liaison person for DOD nutrition and the liaison person for USDA nutrition have been working on a DOD nutrition research program for several months.

- On page 31 it is stated that an official of S&E told GAO that there is a question as to whether there will be Federal or State control over the Western Human Nutrition Research Center's operations (p. 31). Since these Centers have been designated as Federal laboratories by legislation, the responsibility for each of these Centers rests with the Secretary of Agriculture. Therefore, the final GAO report should reflect this new information.
- GAO questions the role and functions of the Western Human Nutrition Research Center. However, the role and functions of the Western Human Nutrition Center were clearly identified from the outset. The Center's role and function is (1) to develop methodologies for improvement of assessment of nutrition intervention programs of the U.S.A., and (2) to do studies on nutritional requirements. Therefore, the final GAO report should reflect this information.
- The GAO suggested that slowness in selecting key scientists to the Boston Nutrition Research Center was due to the difficulty in attracting top nutritional scientists at relatively low Federal salaries. This is not true: Scientists already hired are among the very best in their field. The process of selecting key scientists for the Center has appeared slow because of the need to select the proper leaders to fill the key posts of the Center. Therefore, the final GAO report should reflect this information.
- "Recommendations to the Secretary of Agriculture", page 33:
ARS and NIH have fairly distinct programs in human nutrition research. The ARS program is directed toward the role of food as it relates to nutrition, that is, research on nutrient requirements, nutrient composition of foods, and methodology development for nutritional status monitoring, while NIH's nutrition research program is geared to matters of preventive health and clinical nutrition. In order to satisfy the Congressional directive in the FY 1979 Conference report, the USDA and HHS have signed Memorandums of Understanding to coordinate activities at the Human Nutrition Center on Aging at Tufts and at the Children's Nutritional Research Center at Baylor. In addition, an implementation plan for national nutrition status monitoring has been signed by the Secretaries of USDA and HHS. In other words, a great deal of coordination of research activities already exists between USDA and HHS. Even in the area of nutrient composition of foods, USDA has had a long standing reimbursable agreement (6 years) with HHS in which USDA has worked closely with HHS in acquiring new data on nutrient composition of foods. In the light of these examples of ARS-NIH coordination and cooperation, we do not believe that the GAO recommendation that the Board of Scientific Councilors review USDA/NIH coordination is warranted. ARS and NIH continue to explore further opportunities for coordination.
- GAO faults USDA for poor planning of the Boston Center. GAO should correct the statement on p. 31 which says that cost estimates were not fully developed before funds for construction were provided by Congress. In fact,

estimates for the Boston Center were fully developed before funds for construction costs were requested. A period of 2 years elapsed in developing a building plan for the Center at Boston. The various stages of planning a research building in terms of the size, scope, and need were affected by a period of high inflation which resulted in higher costs than estimated.

- On page 31 it is stated that the Western Human Nutrition Center was still without a Director over two years after its transfer from the Army. The Western Human Nutrition Center at San Francisco has never been without an Acting Director (from the moment the Center was activated). Attempts were made to hire a Senior Executive to fulfill the position of permanent Director but each time the position was advertised, a freeze by OPM prevented the selection and the hiring of a Director.
- USDA Board of Scientific Councilors - page 32.
The final GAO report should be updated to state that the Department is in the process of changing the charter of the Board of Scientific Councilors to reflect the reorganization of USDA's activities in June 1981. The USDA is in the process of convening a Board. With regard to the recommendation that the USDA officials be excluded from serving as official members of the Board of Scientific Councilors, page 33, a change has been made in the plan which partially brings about the recommended change suggested in this report. The Assistant to the Deputy Administrator, National Program Staff-Human Nutrition, will serve as the Executive Secretary of the Board of Scientific Councilors as an ex-officio Board member.

OTHER SPECIFIC COMMENTS

[GAO NOTE: Changes, additions, or deletions to the report were made, as appropriate, in response to the following specific comments.]

- Page i -- The statement that the dietary guidelines were the first since World War II could be disputed. For example, Food for Fitness--a Daily Food Guide issued in the 1950's with the backing of the Interagency Committee on Nutrition Education and Food issued in 1979 after considerable peer review constitute guidelines based on a scientific consensus.
- Page ii, para. 1 -- Whether "consuming fewer calories" is a positive change, when mean levels are well below mid levels suggested in the 1980 Recommended Dietary Allowances, is questionable. USDA research shows that as diets drop below 1800 kcal, the probability of achieving the RDA's drops.
- Page 3, para. 4 -- Is "role of diet on health and disease" intended?
- Page 4, para. 2 -- Reports on changes in serum cholesterol levels in the U.S. population cannot be attributed to the Nationwide Food Consumption Survey. No data on serum cholesterol are collected as part of this survey.

- Page 4, para. 5 -- Information gaps in food knowledge, preferences, and attitudes and factors affecting them should be mentioned.
- Page 12 -- The six points in the OSTP report exclude research in the "soft" sciences (see p.34) basic to changes in food consumption behavior; yet the definition of nutrition research on page 48, also from the OSTP report includes behavioral science and nutrition education. Does the GAO recommendation for expanding on the OSTP report to develop a comprehensive plan intend that this type research be covered? Should nutritional evaluation of food programs be mentioned specifically or is it a part of the monitoring activity? Such evaluation is not included in the National Nutrition Monitoring System.

[GAO COMMENT: Although we believe that behavioral science and nutrition education research should be included in a comprehensive nutrition research plan, the final decision of what is included or excluded from a plan is up to the participating Federal departments and agencies and OSTP.]

- Page 35, line 3 -- A line appears to be missing.
- Page 43, para. 3 -- We are no longer exploring a reimbursable agreement with DHHS to extend lending services to DHHS clientele. In view of the severe budget cutbacks in DHHS, it is not possible for them to support this activity.

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