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Prologue: In March 1990, Secretary of Health and Human Services Louis W. Sullivan announced a major new initiative to improve the labeling of food products sold in American grocery stores. The changes, to be proposed by the Food and Drug Administration (FDA), reflect response to consumer concern about the connection between foods they eat and diseases to which they succumb. Under public pressure, government public health officials have become increasingly vocal about the diet of the American public; recent statistics show that of the ten leading causes of death in this country, six are related to diet. In the U.S. Public Health Service's 1990 health objectives for the nation, seventeen specifically focused on nutrition. In this article, Sushma Palmer examines federal food and nutrition policies from a historical perspective and proposes challenges for the next decade. She finds that, although government has published food and nutrition guidelines for over a century, “progress in the food and nutrition programs of various federal agencies is impeded most notably by fragmentation, insufficient coordination, and duplication and sometimes contradiction in policies and practices.” Despite recent advances, Palmer asserts, the science of nutrition still lags behind its better-funded counterparts in other disciplines. She states, “Little short of intimate cohesion among and a singular mandate from the academic community, the private sector, and the public would stimulate [a change of course].” Palmer received a master's degree in foods and nutrition from the University of Delhi, India, and a doctorate in applied biochemistry from the University of Belgrade, Yugoslavia. She is associate professor of pediatrics at Georgetown University School of Medicine in Washington, D.C. From July 1983 until September 1989, she was director of the Food and Nutrition Board (FNB) of the National Research Council (NRC), National Academy of Sciences. She served as study director for the FNB’s landmark Diet and Health report and the tenth edition of the NRC’s report, Recommended Daily Allowances, which were both released in 1989.
The operative word in nutrition policy today is “implementation”—how to put into effect the recently achieved “loose consensus” on dietary recommendations for health promotion and disease prevention. A decade ago, in the aftermath of the furor surrounding the issuance of dietary goals for the United States, few could have predicted the rational discussion that prevailed after the Surgeon General’s Report on Nutrition and Health in 1988 and the National Research Council’s (NRC’s) Food and Nutrition Board report, Diet and Health: Implications for Reducing Chronic Disease Risk, in March 1989.¹

Two decades ago, prior to the White House Conference on Food, Nutrition, and Health convened by President Nixon, food and nutrition policy in the United States was in its infancy.² In the 1960s, the philosophical differences in approach to scientific inquiry that later characterized the nutrition community had yet to surface in public debate. The importance of nutrition in public health had yet to be fully appreciated, and although nutrition research and training programs occupied distinguished quarters in certain universities and medical schools, they did not head the list of federal priorities. The next two decades brought dissent and dispute that at times threatened to paralyze the science of nutrition and its application. But these “diet wars,” as the media have aptly termed them, also jolted the nutrition community into action.

It is now generally recognized that diet and nutrition are linked to six of the ten leading causes of death in the United States (Exhibit 1). The National Research Council and the surgeon general have both proposed dietary modifications to reduce the risk of these diseases.³ As the diet wars draw to a close, nutritionists, educators, the food industry, and policy makers seem ready to face the nutrition policy challenge of the next decade: implementation of current knowledge on diet and health.

Using historical precedent as a backdrop, this article considers the challenges for the next decade in three of the five major components of food and nutrition policy: adequate food production, food safety and quality, nutrition surveillance and monitoring, nutrition research and training, and guidance on nutrient intake and dietary recommendations. Special attention is given to challenges in implementing dietary recommendations to promote good health, which have implications for all facets of policy making. This review implies that while the development and implementation of major policies in the first half of this century tended to parallel advances in food science and nutrition research, in the 1970s and 1980s the policy process lagged behind scientific advances. In the 1990s we face a new dual challenge: a renaissance and new direction for nutrition research and training, and a concerted effort to develop a coordinated national food and nutrition policy.
Exhibit 1
Estimated Total Deaths And Percentage Of Total Deaths For The Ten Leading Causes of Death, United States, 1987

<table>
<thead>
<tr>
<th>Rank</th>
<th>Cause of death</th>
<th>Number</th>
<th>Percent of total deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>1*</td>
<td>Heart disease (total)</td>
<td>759,400</td>
<td>35.7%</td>
</tr>
<tr>
<td></td>
<td>Coronary heart disease</td>
<td>511,700</td>
<td>24.1%</td>
</tr>
<tr>
<td></td>
<td>Other heart diseases</td>
<td>247,700</td>
<td>11.6%</td>
</tr>
<tr>
<td>2*</td>
<td>Cancer</td>
<td>476,700</td>
<td>22.4%</td>
</tr>
<tr>
<td>3*</td>
<td>Stroke</td>
<td>148,700</td>
<td>7.0%</td>
</tr>
<tr>
<td>4*</td>
<td>Unintentional injury (total)</td>
<td>92,500</td>
<td>4.4%</td>
</tr>
<tr>
<td></td>
<td>Motor vehicle</td>
<td>46,800</td>
<td>2.2%</td>
</tr>
<tr>
<td></td>
<td>All others</td>
<td>45,700</td>
<td>2.2%</td>
</tr>
<tr>
<td>5</td>
<td>Chronic obstructive lung disease</td>
<td>78,000</td>
<td>3.7%</td>
</tr>
<tr>
<td>6</td>
<td>Pneumonia and influenza</td>
<td>68,600</td>
<td>3.2%</td>
</tr>
<tr>
<td>7</td>
<td>Diabetes mellitus</td>
<td>37,800</td>
<td>1.8%</td>
</tr>
<tr>
<td>8</td>
<td>Suicide</td>
<td>29,600</td>
<td>1.4%</td>
</tr>
<tr>
<td>9*</td>
<td>Chronic liver disease and cirrhosis</td>
<td>26,000</td>
<td>1.2%</td>
</tr>
<tr>
<td>10*</td>
<td>Atherosclerosis</td>
<td>23,100</td>
<td>1.1%</td>
</tr>
<tr>
<td></td>
<td>All causes</td>
<td>2,125,100</td>
<td>100.0%</td>
</tr>
</tbody>
</table>


*Causes of death in which diet or alcohol play a role.

Food safety And Quality

The federal government's principal food safety system is currently governed by four laws: the Food, Drug, and Cosmetic (FD&C) Act (P.L. 85-929.72), the Federal Meat Inspection Act (P.L. 59-242 as amended), the Poultry Products Inspection Act (P.L. 85-172), and the Federal Insecticide, Fungicide-Rodenticide Act (FIFRA). Three agencies—the Food and Drug Administration (FDA), the Food Safety and Inspection Service (FSIS) of the US. Department of Agriculture (USDA), and the Environmental Protection Agency (EPA)—administer this system.

At the turn of the century in the United States, avoiding food spoilage and food adulteration were the primary food safety concerns. This was the direct result of technological advances in food preservation methods such as canning. Early in this century, Harvey Wiley conducted feeding experiments in his twelve-man “poison squad” at USDA to test the safety of food preservatives. These experiments are widely credited with the enactment of the Pure Food and Drugs Act of 1906 (P.L. 59-384) and the Federal Meat Inspection Act (P.L. 59-242) in the same year. The five most widely used food preservatives were consequently banned, as were health claims that cancer, baldness, and flat feet could all be cured with a
“cracker.” These simple and bold actions reportedly rid the U.S. marketplace of food fraud.6

Subsequent food safety issues, however, have proved a bigger challenge, and some have yet to be satisfactorily resolved. The rapid discovery of vitamins and several trace minerals in the 1920s and 1930s, for example, led to such food fortification policies as iodization of salt, enrichment of flour and cereals, and fortification of milk with vitamins A and D. While largely eliminating dietary deficiency diseases, these innovations created a new dilemma: how to regulate vitamin/mineral supplements, of which there were some 400 on the market by 1935. FDA’s attempts to ban dietary supplements or to require disclosure of product formulation on the label were opposed by both the public and Congress, and FDA regulations limiting the combinations and dosages of vitamin/mineral products were overturned in 1976.

Food labeling regulations—an issue of intense interest today—have in general not kept pace with the immense changes in the manufacture, processing, and distribution of foods since the 1938 FD&C Act, which established the foundation for current ingredient labeling. Nor have they adapted to the vast increase in knowledge of diet and health since the White House Conference in 1969, which triggered the labeling of foods for their nutrient content.

Advances in analytical techniques and toxicity testing methods in the first half of the twentieth century, including bioassays for carcinogenesis, greatly influenced amendments to the FD&C Act in 1958 (P.L. 85-929). Besides defining several distinct categories of food substances, each with a separate statutory standard, the 1958 amendment placed special emphasis on the presence of carcinogenic substances in foods, shifted to the manufacturer the burden of proving that a food additive was safe, and established a premarketing approval process. But subsequent technological and scientific advances have rendered current food safety regulations inadequate.

Prior to the 1958 amendments, for example, most experts believed that it was possible to achieve “zero” risk by eliminating from the food supply all substances that could increase the risk of cancer to humans or animals. This is the essence of the 1958 Delaney anticancer clause of the 1958 amendments to the FD&C Act. Today, the technical capability to detect even parts per trillion quantities of carcinogenic constituents in food raises serious doubt about the feasibility of the zero-risk approach. Furthermore, the Delaney clause requires categorizing each substance as a carcinogen or a noncarcinogen, even though contemporary tests can seldom demonstrate unequivocally whether or not a substance induces cancer. For example, FDA faced a new regulatory dilemma in 1985 when
an NRC panel concluded that cyclamate, while unlikely to be an initiator, may act as a cancer-promoting agent.\textsuperscript{7} The current law makes no provision for regulating cancer promoters.

New technology and newly recognized health concerns have also severely tested the efficiency and adequacy of the present meat and poultry inspection system, which was largely designed at the turn of the century to protect consumers from grossly visible evidence of microbial contamination. Between 1968 and 1977, for example, meat and poultry were implicated in more than 50 percent of the reported foodborne disease outbreaks from known sources. On average, 30 percent of poultry is contaminated with \textit{Salmonella}—the largest cause of food intoxication in the United States. In 1985, an NRC expert panel concluded that the current inspection methods are not adequate to detect \textit{Salmonella} and \textit{Campylobacter} and recommended major reform in the inspection system, especially coupling inspection strategies to public health risk outcomes and introduction of modern rapid detection and diagnostic techniques.\textsuperscript{8} Similar, perhaps more serious, concerns pertain to fish and seafoods, for which there is no systematic inspection system thus far.

Challenges for the 1990s. Among the primary drawbacks of present food safety policy are uneven standards for regulating each category of food component specified in the FD&C Act—for example, consideration of risks for food additives but of both benefits and risks for pesticides—and whether the current food surveillance system can detect the complete range of significant chemicals and microbiological hazards of concern. An underlying concern is that very little is known about the health effects of low levels of additives and contaminants, and even less is understood about their potential for synergistic and antagonistic interactions in foods or in the body. An NRC study in 1984 concluded, for example, that only 19 percent of food additives and 34 percent of the pesticides in use have adequate information for assessment of their health effects.\textsuperscript{9} Consequently, the past two decades have been studded with proposals for food safety reform. The latest among these is the Food Safety Amendments of 1989 proposed by Rep. Henry Waxman (D-CA) and Sen. Edward Kennedy (D-MA). While there is an apparent need to address the feasibility of zero risk, uniformity in standards, and currency of the overall regulations in general, implementation of diet and health recommendations requires special considerations.

First, uniformity is needed in approaches to controlling microbiological contamination in food. For example, the NRC diet and health recommendations emphasize decreased consumption of fat, partly by substituting fish, seafood, or lean poultry for fatty cuts of meat. However, current inspection strategies are inadequate for controlling the greater
concerns about microbial contamination of seafoods and poultry.

Second, higher priority should be given to assessing the complete range of significant chemical hazards and to coherence in communicating the relative risks from various food products to the public. On one hand, Americans are advised to increase consumption of fruits and vegetables; on the other hand, they are bombarded with concerns about pesticide residues in these foods. EPA recognizes that many pesticidal chemicals in current use are animal carcinogens and potential human carcinogens, and although they are present in minute amounts in the diet, their long-term effects on human health are unknown.

Third, future food safety regulations must address the regulation of “novel” food products. While diet and health recommendations are based mostly on evidence relating frequent consumption of minimally processed traditional foods to a lower risk of various chronic diseases, there is good precedent from the dietary deficiency era for the food industry to respond with a proliferation of genetically engineered or formulated foods that are low in fat and high in complex carbohydrates, whose long-term health effects are unknown.

Fourth, food and nutrition labeling reform, which is already under review by FDA, Congress, and the Food and Nutrition Board (FNB), needs to consider not only updating the label to conform to present knowledge on diet and health but also making it user-friendly. A 1989 Food Marketing Institute survey indicated that while 96 percent of consumers considered nutrition important in food selection, only 42 percent found the food label informative. Also, nutrition labeling needs to be more comprehensive. Currently, because labeling is voluntary, only about half of the over 20,000 foods in the typical supermarket carry a nutrition label. Attention is also needed to the implications of putting health claims on food labels and to updating standards of identity of foods so that terms such as “low fat,” “lite,” and “low sodium” are aligned with diet and health recommendations.

**Nutrition Research And Training**

Nutrition research has witnessed surges and decelerations in federal support and national attention. It has been perhaps most affected by the absence of leadership or a single locus. At the turn of the century, nutrition research defined the chemical nature and biological role of the macronutrients—protein, fats, and carbohydrates. The familiar “At-water Units” that derived from this research provided the earliest basis for determining the macronutrient composition of the U.S. food supply. The first three decades of this century were replete with historic discover-
ies of fat-soluble and water-soluble vitamins by American scientists and of many essential trace elements including iron, copper, magnesium, manganese, and fluoride. By 1940, more than forty nutrients considered essential for defining a nutritionally adequate diet had been discovered, isolated, and chemically characterized.

In the postwar period, as concern about nutrient deficiencies dissipated, attention shifted to diet-related chronic diseases. Laboratory experiments showed that diets high in saturated fatty acids and cholesterol accelerated the development of atherosclerosis and that high-fat and high-calorie diets enhanced tumorigenesis in rodents. Subsequently, large-scale community-based studies confirmed the association between dietary risk factors and long-term health outcomes such as heart disease, hypertension, and obesity. These were followed by descriptive and analytical epidemiological studies of diet and cancer, and, more recently, dietary intervention studies to lower the risk of coronary artery disease. This vast body of evidence led to our current recognition that dietary factors play an important role in the etiology and prevention of chronic diseases and that diet is among the more significant environmental factors with a potential for decreasing the risk of these diseases.

Early pioneers at recognized nutrition centers within and outside the federal government played at best a peripheral role in research on diet and chronic diseases. Most of that research was conducted by epidemiologists, toxicologists, and scientists in other disciplines rather than by members of the traditional nutrition community. Instead, most nutrition research in the 1950s and 1960s focused on enzymology, and with unraveling of the structure of the double helix by James Watson and Francis Crick in 1953, some nutritionists and biochemists turned to molecular biology.

The present-day paradigmatic shift, toward molecular genetics and cell biology, began in the 1960s. It achieved worldwide recognition when Joseph Goldstein and Michael Brown won the Nobel Prize in 1985 for elucidating genetically governed defects in low-density lipoprotein (LDL) metabolism and the role of the LDL receptor. Today’s rapid advances in molecular genetics and cell biology necessitate a new approach to studying the complex interactions between dietary factors and health. With increasing knowledge about genetic markers for chronic diseases, the next step might be dietary recommendations geared to genetically characterized subpopulations—and individuals—all as a potential consequence of combining the tools of molecular biology, nutrition, and epidemiology.

Furthermore, “genetic engineering” has developed to the point that the composition of animal and plant foods can be modified to suit human health or achieve economic benefits. Parallel advances in food science
and food technology are producing novel “foods” (such as nonabsorbable sucrose polyesters and fat substitutes) that will profoundly alter the nutrient composition of the food supply and pose new questions to health professionals.

Early advances in nutrition research were accompanied by widespread teaching of nutrition in faculties of medicine, biochemistry, and physiology. In the 1950s and 1960s, nutrition teaching in medical schools was relegated to a lower priority in the curriculum. The Public Health Act of 1956 authorized funds for graduate training in public health nutrition, and graduate and postgraduate departments of nutrition seemed to flourish. Despite this, Congress and nutrition leaders discerned a gradual decrease in attention to nutrition, a concern that persists to this day.

Adequate funding is central to progress in nutrition research and training. Prior to World War II, the principal support for human nutrition research and training came from the private sector, appropriated state funds, USDA formula grants to agricultural experiment stations in land-grant colleges, and the Department of Defense. Now USDA and the Department of Health and Human Services (HHS) share the principal responsibility for nutrition research. But it is widely recognized that the current federal contribution of some $300 million for nutrition research and training has not kept pace with the proportional increase for basic research allocated to most other disciplines.

Federal support increased following the 1969 White House conference on nutrition and enhanced congressional interest during the 1970s. Establishment of the seven Clinical Nutrition Research Units by the National Institutes of Health (NIH) in 1979, intended to provide a focal point for nutrition research and training, was a landmark achievement. In 1979, the federal government also initially supported grants for curriculum development. However, although the Food and Agriculture Act of 1977 (P.L. 95-113) divided responsibility for nutrition between USDA and HHS and gave direction by designating USDA the lead federal agency for human nutrition research, it planted the seeds for jurisdictional squabbles and inaction. Since 1977, at least ten government reports have identified nutrition research and training priorities. However, the absence of clear leadership, adequate funding, or infrastructure has stymied the implementation of research priorities.

Challenges for the 1990s. The next two decades are likely to continue to witness rapid advances in molecular biology, many of which will have profound implications for human nutrition. Nutrition scientists, educators, and policymakers need to consider whether nutrition research is adequately profiting from advances in molecular and cellular biology and whether clinicians, educators, public health leaders, and policymakers...
are sufficiently engaged in transfer of nutrition and food science research to policies and practice.

Besides inadequate federal support of nutrition training and research, and a continual lack of attention to nutrition in medical schools, a further serious concern is the decreasing emphasis on nutrition in graduate and postgraduate training in universities such as Berkeley, Harvard, and the Massachusetts Institute of Technology, which traditionally housed distinguished nutrition departments. Private foundations such as The Pew Charitable Trusts have recently demonstrated foresight by funding several centers of nutrition excellence. However, a coordinated effort is required by the federal government and private sources to give nutrition training the funding support, the institutional framework, and the clear direction it needs to attract young, dynamic researchers. Attention is also needed to fostering optimal interaction between nutrition and other rapidly advancing disciplines such as molecular biology.

Guidance On Nutrient Intake And Dietary Recommendations

Dietary guidance and food fortification policies paralleled historic discoveries and accompanying concepts of food and nutrition at the turn of the century. USDA’s food guides such as the Five Food Groups and the Basic Seven date back to the prewar period. They were based on the concept of selecting from different food groups and maintaining a balance between the proportion of “protective” or micronutrient-dense foods and energy-yielding foods. New knowledge about the essential nature of vitamins and minerals stimulated the launching of federal food assistance programs, starting in 1933 and leading to the National School Lunch Act of 1946 and to the Child Nutrition Act and the School Breakfast Program in 1966.

The NRC’s Food and Nutrition Board was established in 1940 in response to concerns about widespread nutrient deficiencies at the beginning of the war and a need for providing guidance on nutrient intake. FNB’s first set of Recommended Dietary Allowances (RDAs) was issued in 1941. Since their origin, the RDAs have served as the primary dietary standard for federal food assistance programs and policies on vitamin and mineral supplementation, enrichment, and food fortification—policies that are credited with virtual elimination of deficiency diseases in the United States.

Subsequent editions of the RDAs have continued to be considered a nationwide and perhaps a worldwide reference for determining adequacy of nutrient intake. However, based on wide-scale consultation, the FNB itself in 1985 pointed to a need for new criteria and direction for the
RDAs. This was partly motivated by increasing emphasis since the 1970s on development of a broader scientific base for nutrient standards, dietary guidelines, and goals in the United States.

Although the role of dietary guidelines and goals rather than nutrient standards—RDAs—alone as a basis for nutrition policy has received more attention in the past two decades, this concept dates back nearly a century. In 1895, Wilbur Olin Atwater proposed that the U.S. diet derive 35 percent of calories from fat, 15 percent from protein, and 50 percent from carbohydrates. Half a century later, USDA made similar recommendations. The recent era of dietary recommendations began with the findings of the 1968–1970 Ten-State Nutrition Survey, which documented not only malnutrition in a land of plenty but also widespread occurrence of obesity, hypertension, diabetes, anemia, coronary heart disease, osteoporosis, periodontal disease, and tooth decay.

Congressional hearings by a newly appointed Senate Select Subcommittee on Nutrition and Human Needs in 1968 and the White House Conference on Food, Nutrition, and Health in 1969 gave new impetus to the need for dietary guidelines to combat chronic diseases. The 1977 Dietary Goals for the United States that resulted from the select subcommittee hearings in 1974, however, launched the hottest debate on nutrition policy in the past two decades. The subcommittee report pointed to changes in eating patterns over the past century, that is, a reduction in the intake of complex carbohydrates (fruit, vegetables, and grain products) and the overconsumption of fat, cholesterol, sugar, salt, and alcohol as significant factors in six of the ten leading causes of death in the United States (Exhibit 1). Between 1977 and 1989, at least ten authoritative bodies within and outside the government proposed dietary recommendations to promote good health and to reduce the risk of specific chronic diseases such as heart disease, cancer, osteoporosis, and obesity.

While complete consensus on dietary recommendations is yet to come, the debate that raged far and wide in the 1980s has suddenly subsided with the publication of the Surgeon General’s Report on Nutrition and Health and the FNB report, Diet and Health. These two comprehensive studies of the relationship between dietary factors, health, and disease come to similar conclusions and propose similar modifications in the U.S. diet to reduce the risk of coronary heart disease, several cancers, hypertension, chronic liver disease, and obesity. Now the seat of controversy has shifted from the validity of the recommendations themselves to their feasibility and strategies for implementation.

What is the impetus for this change? First, the scientific database is indeed stronger, more coherent, and more consistent than it was a decade
ago. This has calmed the fears of those who took genuine issue with the science. Second, dietary recommendations to reduce the risk of different diseases such as heart disease and cancer are mostly consistent. This has largely contained the turf battles among voluntary health organizations concerned with single diseases. Third, consumer advocacy groups such as the Center for Science in the Public Interest became more effective in influencing the public and, to a certain extent, policymakers, too. This has shifted the balance in favor of consensus. And, last, food producers and processors, who earlier viewed the recommendations as economically damaging, now realize their potential economic benefits, such as from marketing of lean beef and high-fiber cereals.

**Challenges for the 1990s.** There is an obvious need for more definitive research to permit refinement in dietary recommendations for the population. The next step is to analyze emerging data on genetic susceptibility to chronic diseases to determine their relevance to formulating recommendations for subgroups and individuals at high risk for specific diseases. But perhaps the final residual blind spot in dietary guidance policy in the United States is bridging the gap between nutrient standards—the RDAs—and dietary guidelines, a concept that is already in practice in several European countries. Supporters of the RDAs in the United States—the traditional nutritional biochemists—maintain that the proper physiological role of nutrients does not extend to their effect on the multifactorial diet-related chronic diseases, and thus RDAs and dietary guidelines must remain apart. Yet nutrition scientists and policy makers in Sweden and France have long combined the two into one conceptual framework for dietary guidance.  

Freedom of choice is a central issue in the challenge of implementing dietary recommendations. Should implementation be limited to public education, so that individuals can themselves make informed food choices? Or should the recommendations be implemented by modifying the food supply through food processing or fortification, by legislative measures, or by some combination of these actions?  

A second issue is the proper organizational framework for implementation given the absence of a single, federal governmentwide, national nutrition policy. HHS's attempts to establish a national nutrition agenda during the 1980s could serve as a possible model. Proposed public health objectives by HHS include seventeen nutrition objectives, to be achieved by 1990 (now by the year 2000) through the combined efforts of government and the private sector. It is unclear, however, what support these objectives and the implementation measures command beyond HHS. Despite attempts at collaboration among USDA/HHS and other influential groups concerned with nutrition, the tenure of key policies
and consequently the opportunity for their implementation is often limited by the tenure of each administration.

A third issue is the role of professionals and the private sector in implementing dietary recommendations. Professionals must interpret the recommendations in terms of food choices and specific quantities and discern their applicability to individuals versus the general population. They also face a special challenge: assessing the traditional nutrition education guides such as the Basic Four Food Guide to determine their relevance to current dietary recommendations, and developing tools (such as food labels) to educate the public about how to move from the macronutrient composition of the current average American diet (37 percent calories from fat, 17 percent from protein, and 46 percent from carbohydrates) toward the proportions now recommended (less than 30 percent calories from fat and more than 55 percent from carbohydrates).

The private sector, which has a major influence on the public’s eating patterns, has both criticized dietary guidelines and attempted to comply by producing low-salt, low-fat foods; whole-grain cereal products; and so-called diet menus in restaurants. The industry has also produced leaner animals and taken voluntary measures to control additives and contaminants of concern. The challenge in the next decade is to undertake more scientifically justified product promotion, to develop suitable educational materials, and to make more nutritionally desirable foods widely available.

A number of positive trends in collaboration among traditional rivals provide hope for the future. For example, a spate of community-based health promotion initiatives have been funded jointly by government agencies and the private nonprofit and for-profit sectors. The private voluntary sector has taken the lead in implementing certain key dietary recommendations by launching innovative programs such as The Henry J. Kaiser Family Foundation’s Project LEAN. While some partnerships (for example, the one between the National Cancer Institute and the Kellogg cereal company) have come under criticism, they set an important precedent for multisectorial collaboration.

Barriers To A National Food And Nutrition Policy

Although the United States has played a leading role in shaping the design of nutrition programs and policies worldwide, it is distinguished among industrialized nations by its absence of a central food and nutrition policy. Responsibilities for nutrition programs and policies in the United States are scattered among more than ten major departments, over twenty federal agencies, and nearly twenty congressional commit-
This is perhaps the principal barrier to meeting the challenges ahead.

The need for a national food and nutrition policy has long been recognized. In 1941, President Roosevelt convened a National Nutrition Conference to address the wartime crisis and shortage of food. From this, RDAs emerged as the cornerstone of U.S. nutrition policy. Gradually, other initiatives such as food assistance programs, food fortification, food safety measures, and nutrition monitoring have come to be recognized as central themes of nutrition policy. The 1960s witnessed mounting pressure to enact a more comprehensive national nutrition policy and resulted in 1969 in the White House conference. The 4,000 conference participants concluded that a national nutrition policy and an organizational framework were imperative and recommended the creation of a federal nutrition office, a presidential assistant for nutrition policy, and coordination of nutrition policy by the Secretary of the Department of Health, Education, and Welfare (DHEW). None of the recommendations was implemented.

In 1974, based on recommendations of the National Nutrition Consortium (a consortium of professional nutrition societies), the Senate Select Subcommittee on Nutrition and Human Needs also recommended a federal office of nutrition and a national nutrition policy, but not within any single government agency. These recommendations were also not accepted. Rather, in 1977, Congress assigned USDA the lead role for human nutrition.

Since then, there have been numerous proposals by subsequent administrations, by professional societies, and by USDA and HHS themselves to capture the lead role in nutrition overall or to shift specific major programs such as WIC (Special Supplemental Program for Women, Infants, and Children) from one department to another. Despite these actions, there has been little progress in developing a coordinated, comprehensive, national nutrition policy.

The main issues now are whether or not a comprehensive national nutrition policy is imperative, and whether it is feasible to develop a coordinated, action-oriented policy in a pluralistic society that must satisfy competing pressures from agricultural, health, economic, medical, and industrial sectors. The organizational framework for such a policy, that is, the relative role of Congress versus specific federal agencies, also must be determined.

Progress in the food and nutrition programs of various federal agencies is impeded most notably by fragmentation, insufficient coordination, and duplication and sometimes contradiction in policies and practices. Of major concern to the nutrition community is the slow progress in the
National Nutrition Monitoring System and in food labeling practices—two leading examples of the consequences of fragmentation. These complex organizational issues alone could occupy the entire decade. Thus far, U.S. nutrition policy has inched along a spiral path, and it is clear that little short of intimate cohesion among and a singular mandate from the academic community, the private sector, and the public would stimulate Congress and the Executive Branch to change course.

Implementation of dietary recommendations will require not only such a mandate but a partial blurring of the special interests of nutrition scientists, educators, policymakers, and the private sector. There is a clear need for more definitive basic research to enhance understanding of the diet/disease link and applied research to better understand factors that shape people’s eating habits. It would be simple to forestall action pending future research in the vain hope of obtaining “all the answers.” But, the challenge and the opportunity are there now, to gear the level of action to the level of knowledge and the degree of certainty. Failure to do so would be to admit that nutritionists and policymakers have learned nothing from the past century of research on nutrition and health.

NOTES

11. NRC, Diet and Health.
13. National Research Council, Nutrition Education in U.S. Medical Schools (Washington,

14. Ibid.
34. Ibid.