Dietary and Nutritional Status of Americans: What the Nutrition Monitoring Program Shows

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One purpose of the National Nutrition Monitoring and Related Research Act of 1990 is "to assess, on a continuing basis, the dietary and nutritional status of the people of the United States and the trends with respect to such status, the state of the art with respect to nutrition monitoring and related research, future monitoring and related research priorities, and the relevant policy implications."

We've heard in numerous presentations over the past three days how nutrient databanks and the national nutrient databank affect this purpose of the act, and the ability of the nutrition monitoring program to assess the nutritional status of the population.

Reports and publications provide a major contribution to addressing this purpose. Several publications have been produced under the auspices of the Interagency Board for Nutrition Monitoring and Related Research. The Board, which directed the development and oversees coordination of the Ten-Year Comprehensive Plan for Nutrition Monitoring, is comprised of representatives from 22 Federal agencies.

What I will do now is briefly review recent publications produced, and update you on publications underway and in planning. My intent is to not only familiarize you with what is available, but also to show you how the publications interrelate, and the significant differences between them. As users of data from the Nutrition Monitoring Program, you constitute a primary audience of Program publications, and we would like to have your input about them. We would like to know if they serve their purpose, or whether you may have suggestions for improvements or modifications that would be useful for your needs.

Major Board publications to date have included the *Directory of Federal and State Nutrition Monitoring Activities*; the *Scientific Reports* to Congress, of which there have been two; the National Nutrition Monitoring *Chartbook*; and miscellaneous technical reports, such as budget and progress reports to the President and Congress.

The *Directory of Federal and State Nutrition Monitoring Activities* is a resource guide to research activities in the Nutrition Monitoring Program. The Directory is a valuable reference tool, and provides information on surveys and research activities, including the purpose, target population, and survey design, for example. Each Program activity listed includes a contact person and agency.

The *Directory* was first published in 1989, and a revised edition was published in 1992. The original strategy was to publish the *Directory* every 3 years, but we are currently considering changing this to every 5 years. It is our thought that the activities represented in the *Directory* do not change rapidly enough to warrant the significant time and resources necessary to revise the publication every 3 years. Therefore, we believe that a five-year update would be adequate. Please let me know if you think otherwise, or if you have any suggestions for future *Directories*.

Scientific reports to Congress every 2-5 years are a mandate of the 1990 Act. Specifically, the Act calls for the government to contract with an independent scientific body, such as the National Academy of Sciences or the Federation of American Societies for Experimental Biology (FASEB), to interpret available data analyses and publish a report on the dietary, nutritional, and health-related status of the people of the United States, and the nutritional quality of food consumed in the United States.

Two such scientific reports have been produced to date: the first in 1986, and the second in 1989. Production of the Third Scientific report is now underway, and I will further discuss this in a few minutes. First, I'd like to describe a publication that is being produced interim to the scientific reports, the *Nutrition Monitoring Chartbook*.

The first chartbook on nutrition monitoring was published in September 1993. The *Chartbook* is not a mandated publication, but is a stated activity in the Ten-Year Plan. It originated based on the results of a survey of data users, particularly users of the scientific reports. The results of this survey showed that individuals wanted a more "user-friendly" source of information from the nutrition monitoring program--they suggested the use of more interpretive graphics, and less text in publications. They also wanted to be able to locate specific topics easier than past reports allowed.

The results of these suggestions have been two-fold. First, the Chartbook will be produced on a regular basis, interim to the scientific reports--every 3-5 years. Second, the format of the third scientific report will be somewhat different than the first two. I will discuss these changes in a few minutes.

Chartbook I was the first chartbook to be produced by the Board, and contains 64 one-page reports from across the nutrition monitoring program. The reports do not tell a story about the Program--they provide snapshots of specific activities or research. The focus of each report is one or two graphical charts, accompanied by brief explanatory text. Of most interest to this audience would probably be the section entitled "Food Composition and Nutrient Databases." This is one of five sections in the chartbook, and the fact that it accounts for 10 percent of the reports included is indicative of the increasing prominence and attention food composition data and nutrient databases are receiving in the Program. I would be glad to provide a copy of the Chartbook to anyone who has not received one; please leave me your business card or something with your name and mailing address. We would like to hear your impressions of the chartbook. The next one will be produced after the Third Scientific Report, probably in 1997 or 1998.

As I indicated, the scientific reports mentioned are much more comprehensive than the Chartbook--they do tell a story, not only about the data, but about the extent to which the Program is able to monitor the health and nutritional status of the entire U.S. population. One of the objects of the report is to identify gaps or weaknesses in the Program. Differences in the reports, from the first to the third, show the extent of the progress made in the Program, in terms of monitoring capabilities and improvements in coordination and comparability across Federal and state governments. For example, if we look at the data sources that were used in production of the first two reports, and that are being used currently to produce the third report, we see evidence of significant progress.

The first scientific report, published in 1986, included data mainly from USDA's Nationwide Food Consumption Survey (NFCS) and DHHS' National Health and Nutrition Examination Survey (NHANES). The report represented the first time that data from these two major cornerstones of the nutrition monitoring program had been examined so thoroughly in concert. It was also the first extensive effort to integrate these data into a single evaluation of the nutritional status of the population. In the process of examining the data, the effort helped to identify the strengths and weaknesses of these major surveys in measuring the nutritional and health status of the population. It also highlighted certain problems of comparability, such as differences in sample designs, and the use of different age groupings for reporting and analyses. These differences limited the ability to compare the data and to draw conclusions across them.

Since the first (1986) report, the NNMRRP has become more integrated. The reporting of data and the coordination and comparability of data have been improved.

As shown in this slide, while the primary data sources--the major surveys--remained essentially the same, 8 additional surveys and surveillance systems were used as data sources for the second (1989) report. Even more significant is progress reflected in the data sources for the Third report. The two nationwide surveys are still the primary data sources, but comparability between the two has improved, as well as among the 35 additional data sources contributing to the evaluation.

Eleven Federal agencies have provided data for analysis and interpretation by the contractor, from the Departments of Agriculture, Health and Human Services, Defense, and Labor. A total of 1500 data tables has been delivered to the contractor to date, and certain additional re-analyses have been requested by LSRO and the Expert Consultants who are contributing to production of the report.

Production of the 3rd report began in September 1993, when a contract was competitively awarded to the Life Sciences Research Office (LSRO) of the FASEB. LSRO also produced the second scientific report. LSRO staff primarily involved in report production are Dr. Ken Fisher, the Director of LSRO, and Dr. Sue Anderson, Associate Director; and Janet Waters, LSRO Staff Scientist.

LSRO has convened a group of 8 expert consultants and one alternated to examine and interpret the data for report production and analyses. The consultants were chosen for their expertise in disciplines essential to the Program and the evaluation underway. Dr. Kent Stewart is the consultant with expertise in food science and technology who provides expertise to the panel in the area of food composition and related issues.

The specific charge to LSRO for production of the Third Scientific Report is to: (1) build on the foundation, philosophical approach, and intent established in the first report (1986) and further developed in the second report (1989); (2) conduct a scientific review and assessment of data and information available through the NNMRRP, on the nutritional status of Americans, and the nutritional quality of food consumed in the United States; and (3) deliver the findings, conclusions and recommendations in two reports--a comprehensive report, and a separate executive summary.

Based upon the findings of the user's survey I briefly discussed, we have asked LSRO to change somewhat the format of this report. Compared to the first two, it will utilize graphics and charts to a greater extent; text will be briefer; and we are considering printing the report in two colors, rather than black and white. Extensive use of cross-referencing and indexing will be used to assist readers looking for specific information. Data tables will appear in appendices for reference.

Also contributing to the comprehensiveness of the report and its conclusions is the fact that, to the extent possible, all data contributed was run using comparable demographic and cut-off variables, as recommended by a working group of USDA and HHS staff. That is, the same age groupings were used; definitions and cut-offs

for poverty and income were standardized; guidelines for reporting data by race and ethnicity were standardized, and statistical and reporting guidelines were issued for data analyses.

Another major difference in this report will be its organization. The report outline developed by LSRO and Expert Consultants, which has received approval by the Steering Committee for the Third Report, is based on the conceptual model shown in this slide. Note that highlighted areas are the 5 component areas of the NNMRRP; much of data will concentrate on these areas. Some of the other areas listed here are also becoming increasingly important, such as away-from-home food--both economically and nutritionally accounting for more of our diets today than at any time in the past. Supplement use is also an area receiving greater interest, and has been a topic of discussion among the consultants.

I will briefly go through these major component areas and review some of the topics that have been discussed by the consultants in their meetings to date. These areas will likely be focal points in the Third Report. To date, the consultants have had 4 2-day meetings in Washington, beginning in November of 1993. All members were present at these meetings, and they entailed methodical reviews of available data by sources, with some cross-comparisons of similar data from other sources. Just this month they began meeting in smaller groups, to concentrating on specific topics of interest according to their areas of expertise.

In the area of Food Composition, Dr. Stewart has led discussions, focusing on many of the topical areas that Betty mentioned on Sunday as heavily influencing database activities at this time. For example, methods for imputing nutrient values based on similar foods, and even the relative contribution of imputed nutrient values to total nutrient intakes of individuals in the food consumption surveys. The interrelationship of the HNIS data base systems, which Betty showed a graphic depiction of, has also been discussed. We are encouraged by the discussions to know that the area of food composition and nutrient data bases will receive greater attention and bigger play in the third scientific report and future reports, and we are looking forward to this particular section in the 1995 report. Hopefully, many of the issues being discussed here at this conference will be addressed, or receive recommendations for future activities.

In the area of food and nutrient consumption, intakes of food energy and dietary fat have received some attention. As shown by this slide, the nationwide surveys have shown gradually decreasing intakes of fat as a percent of total calories since the mid 1960s. The 1965-66 NFCS estimated mean fat intakes at a little over 40 percent of calories, and the latest surveys, the CSFII 1988-91 and the NHANES III, Phase One, both show mean one-day intakes of the population at about 34 percent of calories.

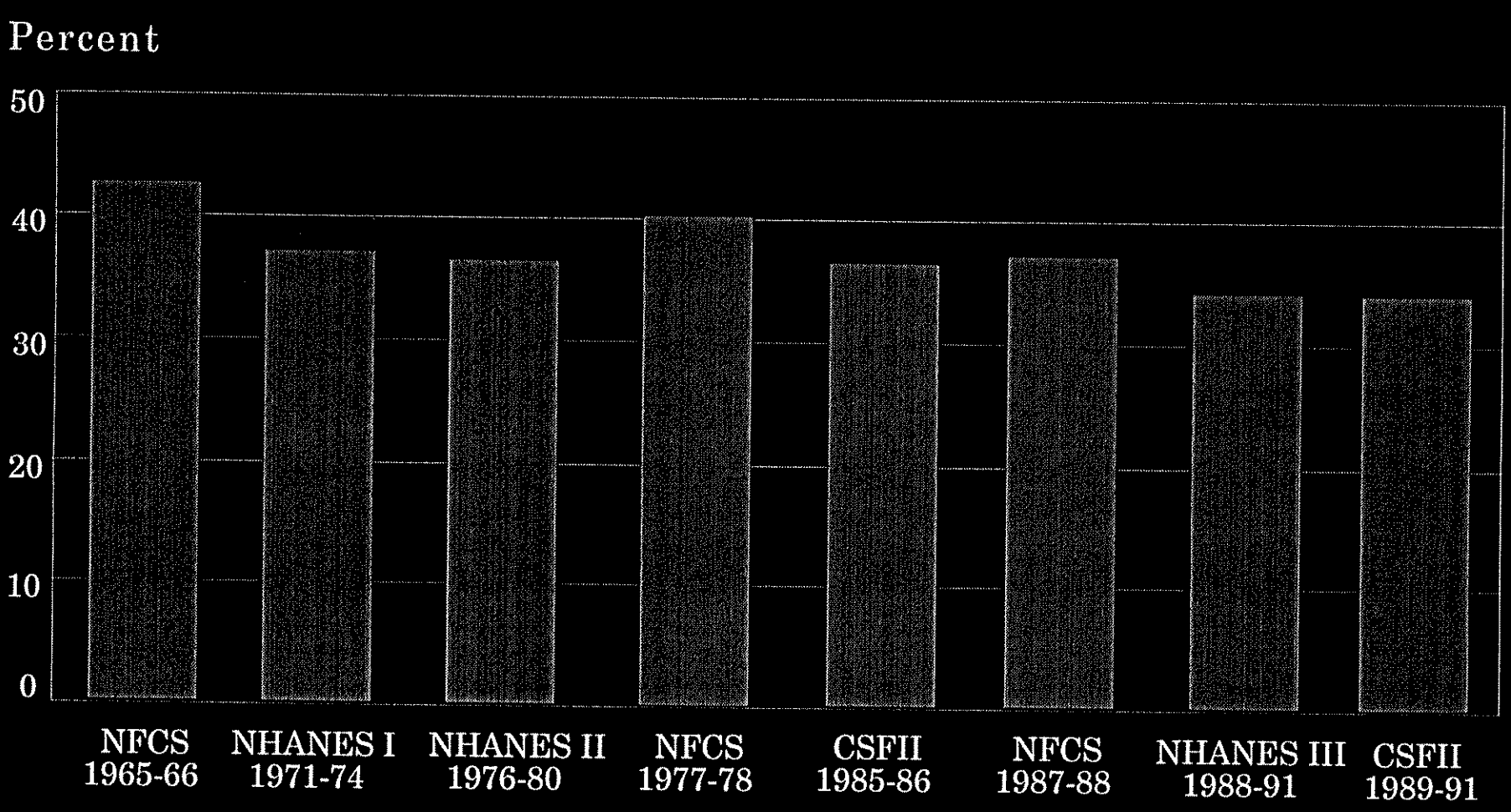
If we look back at the area of Nutrition and Related Health Measurements, overweight is a topic of interest. Overweight was identified in the first and second scientific reports as an issue of public health significance. The first report estimated that the prevalence of overweight in surveys conducted in 1960-62, 1971-74 and 1976-80 showed that about 28 percent of the adult population was overweight. In all three surveys, the prevalence was higher among females than males, and highest among black females. In the second report, HHANES (1982-84) was the only source of new data since the 1st report, and this showed a high prevalence of overweight in three hispanic groups - from 26 to 42 percent. Again, the prevalence was higher in females than in males across all age groups. Not surprisingly, data contributed to the latest report show an increase still in the prevalence of overweight in adults of all ages, especially among females.

Serum cholesterol levels are another topical area. Data released from NHANES III show an overall drop in mean serum cholesterol levels. Trends in hypertension and growth/stunting in children have also received a lot of attention, and will likely be covered in the report. Finally, a recently expanded role for the monitoring program--knowledge, attitudes, and behaviors. The consultants have lately focused on data from the Diet and Health Knowledge Survey, or DHKS, and similar data available from the Health and Diet Survey, for example. As we heard on Sunday from Dr. Stillings and Dr. Sherr, there is more concern from consumers, and presumably

greater awareness, about the nutritional quality of their diets, and the effects of diet on health. The consultants are looking for behavioral effects linked to awareness and attitudes. Some of the links, for example, between fat intakes and associated health outcomes, seem more apparent to consumers than others.

A first draft of the Third Scientific report will be presented to the Steering Committee and members of the Interagency Board on August 1 of this year. The final report will be published in 1995. At present, we are considering developing slide packages of selected topical areas for availability of data users such as yourselves. We invite your feedback on whether slides would be of utility to you. Please feel free to contact me about this or any of the other items I have mentioned. Thankyou, and I will answer any questions that I can.

Percent of Food Energy From Dietary Fat



(1-day intakes)