

Background

The National School Lunch Program (NSLP) and the School Breakfast Program (SBP) are central parts of a national policy designed to safeguard the nutritional well-being of the Nation's children. The programs are administered by the Food and Nutrition Service (FNS) of the United States Department of Agriculture (USDA), operating through State agencies (SAs) that have agreements with the local school systems in their States.

Despite the progress that has been achieved over the years in enhancing the quality of school meals, results of research conducted in the early 1990s indicated that school meals, on balance, were not meeting certain key nutritional goals. In late 1993, the USDA launched a far-reaching reform of the school meals programs, a reform aimed at upgrading the nutritional content of school meals. The several elements of this reform are collectively referred to as the School Meals Initiative for Healthy Children (SMI), the principal subject of this report.

Purpose

In September 1996, FNS contracted with The Gallup Organization, with the support of PROMAR International, to conduct a three-year study of USDA's school-based child nutrition programs. The study has three over-riding objectives. They are to describe and evaluate:

- overall implementation of the School Meals Initiative for Healthy Children
- key operational characteristics of the school meals programs at both the school district and State agency level, and
- training and technical assistance activities associated with the school meals programs.

Since this is the first national study following the start of the SMI, it serves as an initial progress report on implementation of the reform.

Methodology

This report is the first in a series of reports to be issued as part of a three-year study of the USDA's school-based child nutrition programs. The report findings are based on data collected from a nationally representative sample of school food authorities (SFAs) participating in the NSLP and from the 50 State child nutrition agencies responsible for administration of the program. Data were collected during School Year (SY) 1997/98 through use of self-administered mail surveys, supplemented by telephone interviews where necessary.

The database of public school districts maintained by Quality Education Data (QED) was used in drawing the sample. Two types of school districts represented in the QED database were found to be appropriate for inclusion in the study: (1) regular public school districts and (2) school districts administered by supervisory unions. While regular school districts are coterminous with SFAs, in the case of supervisory unions it was found that more than one district was served by an individual SFA. Given this difference, regular school districts and school districts in supervisory unions were sampled separately. A sample of 2,325 districts (2,225 regular school districts and 100 supervisory union districts) was drawn.

The sample frame for the regular school districts was stratified by two levels of poverty and by the seven FNS administrative regions. The sample of 2,225 regular school districts was allocated to the 14 strata in proportion to the number of school districts in each stratum. The frame for school districts in supervisory unions was stratified by poverty level only; the sample of 100 districts was allocated disproportionately

to ensure sufficient representation of high poverty districts. Within each stratum, the sample was drawn with probability proportional to size (PPS), where size was defined as the square root of the number of students enrolled in a district.

Of the 2,325 districts in the overall sample, 2,251 (97%) qualified for inclusion in the study by their participation in the NSLP. Completed surveys were collected from 2,038 respondents, a response rate of 91%.

Findings

Key findings of the study are summarized here by the following topics, which correspond to chapters in the report:

- overall status of SMI implementation
- procedures followed in implementing SMI
- impact of the SMI
- the role of training and technical assistance
- the role of State child nutrition agencies

Overall Status of SMI Implementation

The SMI identifies four menu planning options that schools can use to meet the nutritional standards established by the USDA and the US Department of Health and Human Services in their Dietary Guidelines for Americans. The four menu planning options are Nutrient Standard Menu Planning (NSMP), Assisted Nutrient Standard Menu Planning (ANSMP), Enhanced Food-Based Menu Planning, and Traditional Food-Based Menu Planning. The purpose of this section is to determine how many school districts are using each of the menu planning systems, how far along they are in putting these systems in place, and their plans for completing the task. It should be noted that although the SMI began in School Year 1996/97, States were allowed to grant two-year waivers, so the SMI was not fully operational until School year 1998/99.

Use of Menu Planning Systems

A large majority of all school districts (81%) and schools (74%) were found to be using one of the food-based menu planning systems with twice as many districts staying with the traditional system as with the enhanced (55% vs. 27%). About 20% of all districts were using NSMP while comparatively few districts (3%) were using ANSMP. About 6% of all districts are using more than one menu planning system in their schools, at least temporarily.

Although very large school districts (enrollment of 25,000 or more) are more likely to use NSMP than are smaller districts, more than twice as many of the very large districts use a food-based approach as use NSMP.

Implementation Status

With the SMI in only its second year of operation, an impressive 35% of all districts reported that their chosen system of menu planning had been fully implemented with another 26% indicating that they were at least three-quarters implemented. On the basis of information collected by the FNS Regional Offices in SY 1996/97, it was reported that waivers had been granted to at least one-third of all SFAs. By the time of this survey in SY 1997/98, only 7% of all districts said that they had not yet started implementing their chosen method.

Future Intentions Regarding the Adoption of NSMP

About half (51%) of those school districts using food-based systems in SY 1997/98 said that they were either working toward adoption of NSMP or planned to do so. This share was highest for elementary schools in mid-size districts (55%) and lowest for middle/secondary schools in the largest districts (32%).

Availability of Documentation

A variety of documentation is required for analyzing the nutritional content of school meals. This analysis is required of all schools,

regardless of the menu planning system they use. While schools using food-based menu planning systems are not required to conduct nutrient analysis, the information is required by their State agencies when they conduct this analysis. Two-thirds or more of all districts report that a majority (11 of 17) of the documentation useful for purposes of conducting nutritional assessments are routinely available. The documentation that is most frequently not available is information on the number of a la carte, adult, and special meals served, which are required for conducting weighted analysis. While there is a statutory waiver for weighting until 2003, when the information is available, districts are encouraged to continue conducting weighted analysis.

Operational Procedures

Use of Grade/Age Categories

To help match menus to the nutritional requirements of children of different ages, FNS has established different groupings for use by school districts using the new menu planning systems. The span from pre-kindergarten through 12th grade has been divided into four categories with the grade boundaries dependent on the menu planning system.

Survey results indicate that, in practice, districts use a far wider range of grade/age groupings than prescribed by USDA. It would appear that the vast majority of districts use groupings that differ from those specified in FNS guidelines, perhaps because most district schools are organized by different grade groupings and therefore find it difficult to use them for purposes of menu planning.

Nutritional Analysis

In addition to the ongoing nutritional analysis that is required of NSMP/ANSMP schools, one-third of the districts that are using food-based planning systems are conducting nutritional analysis. This means that nearly half of all districts (47%) are subjecting their menus to nutrient analysis. Of those districts conducting nutrient analysis, over three fourths conduct a

weighted analysis weighting foods on the basis of their relative importance in reimbursable meals.

Most districts (83%) that are conducting nutritional analysis have had to re-analyze their menus, usually on a monthly basis. This has been necessary for a combination of reasons with "achievement of nutritional targets" most frequently cited followed by pursuit of an "incremental approach to accomplishing the targets" as the next most important.

Of the 15 software systems approved by FNS at the time of the survey, over 80% of all districts conducting computerized analysis were using one system: the NUTRIKIDS package from Lunch Byte Systems.

A significant share (38%) of those food-based districts that are conducting nutrient analysis are doing so by hand.

Assisted Nutrient Standard Menu Planning

Comparatively few school districts (3.4%) are using the ANSMP option. At the time of the survey, only 15 State agencies were actively providing ANSMP support. For those districts that are using ANSMP, the nutrient analysis is most frequently conducted by their State agency (35%), with analytic support also provided by food service management companies (18%), consultants (14%), and other school districts (14%).

Actions of Food-based Districts not Conducting Nutrient Analysis

For those school districts that do not have the benefit of nutritional analysis to guide their menu planning, achievement of the SMI nutritional objectives poses a special challenge. Survey results indicate that over 90% of these districts are taking a combination of actions to achieve the desired outcome. Among the actions taken are: the use of more nutritious preparation techniques (81%), offering additional servings of more nutritious foods (77%), and substituting more nutritious foods and ingredients (77%).

Publicizing the Nutrient Content of Menus Most districts (83%) do not publicize the nutrient content of their menus, though a substantially larger share of NSMP/ANSMP districts do so compared to the others (36% vs.12%). For those districts that publicize nutrient content, the most frequently used methods are postings and handouts aimed at students and parents.

Impact of the SMI

We begin by looking at the impacts of the SMI on only those schools that are using nutrient standard menu planning. This is followed by an appraisal of the impact of the SMI on all school districts, regardless of the menu planning system in use.

Impact of Nutrient Standard Menu Planning

Ease of Implementation

There are a number of tasks to be performed in implementing nutrient standard menu planning. Most of the more demanding tasks are associated with the start-up phase though some continue beyond start-up. For 10 of the 14 tasks identified in the survey, a majority of the survey respondents characterized them as a "minor burden." The remaining four tasks were characterized by a majority of the school foodservice directors as a "major burden." The latter include: entering and analyzing recipes, obtaining missing nutrient information, entering and analyzing menus, and obtaining information for weighted analysis. It is noted that these tasks are core components of NSMP, though most of the work associated with the first three occurs during initial implementation. As noted above, the requirements for conducting weighted analysis have been held in abeyance until 2003. Thus, it is expected that the level of burden associated with nutrient standard menu planning will decline for most districts as implementation is achieved.

Ease of Meeting Nutritional Objectives

About half of all school districts using nutrient standard menu planning report difficulty in meeting the total calories goal, both for lunch

and breakfast. In terms of nutritional challenge, this is followed by about 45% of the districts reporting difficulty in meeting the percent of calories from fat and saturated fat goals in their lunch menus. A substantially smaller share (25%) of the districts report difficulty in meeting these goals with their breakfast menus.

Comparatively few districts (16%) have gone the next step in establishing standards for carbohydrates, sodium, and cholesterol. For those that have, the standard for sodium is the most difficult to achieve with 40% reporting difficulty meeting it in their lunch menus.

Other Impacts

For those districts using nutrient standard menu planning, 70 to 80% report that their menus are "somewhat different" than before SMI. Two-thirds (66%) of the NSMP/ANSMP districts report spending more time planning breakfast menus and over three-quarters (76%) spend more time planning lunch menus than before SMI. Again, for many districts, much of this additional time is thought to be associated with program start-up. Of course, to the extent districts change their menus, more menu planning time could be required in the future too.

Most of the NSMP/ANSMP districts report "no change" in a la carte sales, either in elementary schools (84%) or in middle/secondary schools (63%). To the extent school districts report a change in their a la carte sales, nearly all report increased sales. For all middle/secondary schools, 35% reported an increase while nearly half (49%) of all middle/secondary schools in the largest districts experienced increased a la carte sales.

Overall Impact of SMI on all School Districts Ease of Performing Tasks

The vast majority of all school foodservice directors view the tasks required by SMI as not posing any major difficulty. Of 10 key tasks that all districts must execute, seven were viewed by a majority of districts as posing "no difficulty." The remaining three – adhering to standardized

recipes, substituting nutritionally comparable foods, and documenting last minute substitutions – were found to present at least "some difficulty" to a majority of the districts. While a slight majority of directors said that the task of maintaining food production records provided "no difficulty," this was also the task most frequently cited (by 11% of directors) as being of "major difficulty."

Menu Changes

Many school foodservice directors report making numerous changes in the menu-related features of their programs. This includes: increased number of fruit and vegetables offered (76% of all districts), increased number of new menu items (71%), increased portion sizes (54%), increased variation in menu items (42%), and an increased number of menu choices for reimbursable meals (36%).

Food Procurement and Preparation

Many school foodservice directors report making widespread changes in procurement and preparation practices as a result of SMI. For example, many report increased purchases of low-fat/reduced-fat foods (81%) and fresh fruits and vegetables (75%). In addition, most districts are requiring more information on nutrition from their vendors (84%) and are increasing their use of product specifications (70%).

Program Costs

Over three-quarters (79%) of all districts report that their overall program costs have increased since implementation of the SMI, driven largely by increased food costs. Increased food costs are reported by a large majority of districts in all size and menu planning categories.

Interestingly, a majority of districts in all menu planning categories (including NSMP) reported no change in administrative costs following implementation of the SMI, despite the fact that a majority of NSMP districts also reported spending more time planning menus.

Plate Waste

To the extent plate waste was affected by the SMI, it appears to have been a positive impact. A majority of directors reported no change in food waste. However, to the extent there was change in the amount wasted, more respondents felt that there had been less waste rather than more (with the exception of cooked vegetables). NSMP districts performed slightly better than the others in terms of reducing waste.

Overall SMI Performance and Acceptance

School foodservice directors report that the SMI has generally had a neutral-to-positive impact on program performance. While a majority of all directors report "no change" in performance, about 30 % report a positive impact on such measures as: program participation, student and adult acceptance, and the acceptability of menu choices.

School foodservice directors report that major stakeholders in the school meals program—students, parents, administrators, cooks, cashiers, financial staff, and kitchen managers—have a decidedly positive attitude toward the SMI. School foodservice directors themselves are strongly supportive with nearly 70% indicating a "somewhat positive" or "very positive" attitude toward the program. For those directors using NSMP or ANSMP, nearly 80% had a positive attitude toward the SMI.

The Role of Training and Technical Assistance

Familiarity with USDA Training and Technical Assistance Materials

School foodservice directors were asked about their familiarity with USDA training and technical assistance materials and, for the materials they were familiar with, their assessment of its value. At least two-thirds of all directors reported familiarity with 4 of 9 references identified in the survey. Of the school foodservice directors indicating familiarity with the materials, a large majority found them of

"some use" while a significant minority found them "very useful".

Sources of Training and Technical Assistance

While school districts receive training and technical assistance related to their food program from several sources, the principal source by a wide margin is the State child nutrition agency. Nearly 80% of all districts reported receiving assistance related to the SMI from this source. Other key sources include: the USDA Food and Nutrition Information Center, professional associations, computer/software vendors, and the National Food Service Management Institute. The assistance provided through each of these sources was given relatively high marks, with that provided by State agencies, consultants, and computer/software vendors rated particularly high.

Training Provided and Remaining Needs

A majority of all school districts have received training on most key aspects of the SMI. Nearly all participants in the training programs find them of at least "some use" and for many of the topics treated in these programs a majority find them "very useful". Despite the fact that 80% of all districts had received some SMI training, 40% to 60% of all districts reported that they had not received training on several key aspects of the SMI. As further evidence of this need, when asked if their operations would benefit from additional training on a list of 10 topics related to the SMI, a large majority responded in the affirmative on all but one of the topics.

The Role of State Child Nutrition Agencies

All 50 State child nutrition agencies (SAs) were surveyed. Information was obtained regarding: the menu planning system used by school districts within their States, SA involvement in training and technical assistance, the status of nutrition compliance reviews, and any problems encountered in implementation of the SMI.

Menu Planning Systems

Within most states, two or more menu planning systems are being used. In only 3 States were all districts within the State reported to be using the same approach to menu planning. There are several States in which one or more of the menu planning options were not being used by any of the State's districts. This includes 28 states with no ANSMP districts, 10 with no traditional food-based, 8 with no NSMP, and 7 with no enhanced food-based. Fifteen SAs were providing or preparing to provide an ANSMP system to school districts in their States. Of these, 9 were using outside expertise to develop the system; the other 6 were being developed in-house.

For reasons that are not evident, there is a large difference in the percentage of districts reported by SAs to be using the enhanced food-based and traditional food-based systems, compared to the estimates obtained from the survey of school districts. While the SAs report a 57%/43% split between enhanced and traditional, results of the district survey indicate a 33%/67% split.

Training and Technical Assistance

All 50 SAs reported that they were engaged in providing training in support of the SMI in their respective States in SYs 1995/96 and 1996/97. In all but 5 States, at least half of all districts within the State were represented in these sessions. Also, all but 5 SAs reported that they had provided on-site technical assistance related to the SMI during this period.

At least three-quarters of the SAs indicated that they had covered all or nearly all of 19 key topics in their training sessions. Nutrient analysis and marketing of the SMI were among the few topics that were not universally covered.

The SAs generally gave high marks to the quality of USDA training materials and technical assistance, though a significant minority found the information "less than adequate". Their most frequent criticism was that the information was not provided in a timely

fashion, was not current, and was not sufficiently relevant to their needs.

Compliance Reviews

SAs are required to conduct periodic reviews of school districts to determine if they are complying with SMI nutrition standards. Initially, these reviews were to be conducted on a 5-year cycle though the USDA has recently proposed that the initial cycle be 7 years.

At the time of the SA survey, 14 of the 50 SAs had not conducted any reviews. Of those that had started conducting reviews, 22 had conducted them for fewer than 20% of their school districts. This is indicative of the fact that several SAs were still in a "start-up" phase in terms of training State and district personnel, combined with the uncertainty of the review schedule.

Of the compliance reviews conducted during the first 1½ to 2 years of the SMI, nearly half (47%) resulted in the issuance of improvement plans. SAs reported widely varying outcomes in this regard. Ten SAs reported that their reviews had resulted in no improvement plans while 21 of the SAs reported that they had required improvement plans for 40% or more of all districts reviewed.

Results of the SA survey indicate that compliance reviews are requiring widely varying amounts of time to conduct. The median number of person-hours ranged between 14 and 24 per site, depending on the menu planning system being reviewed and whether the school served lunch only or both lunch and breakfast. Since a

separate analysis of breakfast menus is not required unless a different menu planning system is being used for breakfast, it is not clear why these districts are requiring more time unless it is due to the influence of those few districts that are using a different planning system for their breakfasts.

Problems of SMI Implementation

SAs were asked to identify any problems they had encountered in obtaining information required in monitoring SMI implementation. They were also asked to identify any problems the school districts in their States might be having in implementing the SMI. While SAs reported that they encountered little trouble in obtaining most information, a significant share of all SAs reported having a "major" problem with the following: missing standardized recipes (56%), missing nutritional information from the manufacturer (46%), incomplete production records (42%), and lack of a la carte and adult sales information (26%).

For most of the tasks that have to be performed by districts in implementing the SMI, SAs reported there were few, if any, problems. The three exceptions for which at least 20 SAs indicated there was a "major problem" were: adhering to standardized recipes, data entry for menu analysis for NSMP and ANSMP schools, and obtaining nutrient information from manufacturers. These tasks are integral to the success of SMI and therefore of particular importance.

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