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ABSTRACT

In 1995 the United States Department of Agriculture (USDA) developed the Health School Menus Initiative (HSMI) to ensure that school age children are provided meals that are consistent with dietary guidelines and current nutrition information. The USDA developed review instruments to evaluate the implementation of the HSMI nationwide. These instruments were used in Texas private schools and residential child care institutions (RCCIs). In 1997, 194 private schools and RCCIs were reviewed, and 28 were reviewed in 1998. The facilities reviewed in 1998 were selected based on their size and need for technical assistance. Most of the facilities had chosen the traditional menu planning option, with revised options much less often used. Neither the type of facility nor its location affected how successful a facility was in implementing the HSMI policy. Most facilities did not have the hardware and software necessary to conduct nutrient analyses on site. Overall, the menu planning in these schools indicates a need for standardization. There were significant improvements in facility nutritional performance in 1998, but technical assistance was still needed overall. Recommendations are made for menu planning and serving, improved nutrition analyses, and additional nutrition education and training. Two appendixes contain instruments used to evaluate the HSMI in 1997 and 1998. (Contains 8 tables and 17 figures.) (SLD)

EVALUATION OF THE HEALTHY SCHOOL MEALS INITIATIVE IN TEXAS PRIVATE SCHOOLS AND RESIDENTIAL CHILD CARE INSTITUTIONS FOR FEDERAL FISCAL YEARS 1997 and 1998

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Background

In 1995 the United States Department of Agriculture (USDA) developed the Healthy School Meals Initiative (HSMI) to ensure that school age children are provided meals that are consistent with the Dietary Guidelines for Americans and current scientific nutrition information. Regulations of the National School Lunch Program (NSLP) and the School Breakfast Program (SBP) meal pattern requirements, based on food components, were revised to reflect the HSMI. Under these regulations, specific minimum standards for key nutrients and calories were established for all school food authorities to meet.

To facilitate implementation of the established standards, local school food authorities were allowed to choose one of four menu planning systems. Two of the systems were food based and two were nutrient-based, with different patterns for lunch and breakfast.

The food based menu planning systems (traditional and enhanced) require serving food components, namely meat/meat alternate, vegetables/fruits, grains/breads and milk, in specified minimum quantities.

The nutrient based systems include Nutrient Standard Menu Planning (also termed NuMenus) and Assisted Nutrient Standard Menu Planning (also termed Assisted NuMenus). According to these systems, menus are developed based on the analysis for nutrients in menu items and foods offered over a school week to determine if specific levels for a set of key nutrients and calories are met. These nutrients are: protein, vitamin A, vitamin C, iron, calcium, total fat, saturated fat, sodium, cholesterol, and dietary fiber. The difference between the NuMenus and Assisted NuMenus options depends on whether the implementing organization conducts their nutrient analysis or seeks the assistance of an outside source.

Regardless of the menu planning system a facility chooses to implement, the HSMI policy requires menu analysis to ensure compliance with the Dietary Guidelines for Americans and the nutrient requirements.

The USDA developed review instruments to evaluate the implementation of the HSMI nation wide. These instruments were used to conduct reviews in Texas private schools and residential child care institutions (RCCIs). The purpose of this evaluation is to report the results of these reviews for the Federal Fiscal Years (FFYs) 1997 and 1998.

Findings

One hundred and ninety four private schools and RCCIs were reviewed in FFY 1997, and 28 of these facilities were reviewed in FFY 1998. The facilities reviewed in 1998 were selected based on their size and their need for technical assistance.

The evaluation attempted to answer eight questions. Following is a listing of each question and its answer.

Question 1: What is the menu planning system(s) acceptable to the majority of the facilities?

Answer: The majority of the facilities chose the Traditional Food Based Menu Planning option. Significantly less facilities chose the Enhanced Food Based Menu Planning option, and even fewer facilities chose the NuMenus and the Assisted NuMenus options.

Some of the facilities that were revisited in FFY 1998 switched to the Enhanced Food Based Menu Planning and the Assisted NuMenus Menu Planning systems, indicating an increased interest in these two systems.

Question 2. Does the acceptability of a specific menu planning system depend on the type of the facility or the county in which the facility is located?

Answer: Relatively more RCCIs than private schools selected the Enhanced Food Based and the NuMenus systems. In 1998, relatively more RCCIs planned their menus centrally and prepared their meals in central kitchens.

There was no correlation between the county in which the facility is located and the menu planning system adopted.

Question 3. Does successful implementation of the HSMI policy depend on the type, location, and/or the menu planning system a facility implements?

Answer: Neither the type of a facility nor its location affected how successful a facility was in implementing the HSMI policy. The menu planning system a facility adopted, however, seemed to be a factor in determining whether the facility followed, or did not follow, some guidelines and standards. The facilities adopting the nutrient based menu planning systems tended to offer a variety of grains and breads and the required servings of grains/breads. These facilities usually served

portion sizes appropriate to the grade/age groupings, used standardized recipes in preparing and serving menus, and maintained production records which reflected production of food items on the menus.

The results of nutrient analysis indicated that, for lunch, more calories than recommended were served to pre-school and 4-12 groupings and less calories than recommended were served to 7-12 groupings. This was true in the case of the food based menu planning systems but not in the case of the nutrient based menu planning systems.

Question 4. To what extent are the capabilities required for policy implementation (e.g.; hardware and software, production records, and standardized recipes) available in the private schools and RCCIs?

Answer: The majority of the facilities did not have the hardware and software necessary to conduct nutrient analysis and most of them did not conduct nutrient analysis on their menus prior to the reviews. Menus, production records, and standardized recipes are materials necessary to conduct nutrient analysis. In general, these materials were available in about two thirds of the facilities reviewed in FFY 1997. In 1998 the availability of production records in the 28 facilities reviewed improved but the availability of the standardized recipes declined.

Question 5: What are the most pressing needs for technical support in the different facilities?

Answer: Contrary to menus and production records, standardized recipes were less available in FFY 1998 than they were in FFY 1997. This indicates a pressing need for standardization. We need to provide a variety of standardized recipes for different group sizes and additional technical assistance on how to standardize favorite recipes.

Judging from the facilities performance in FFY 1998 there is also a pressing need for technical assistance in planning appropriate portion sizes and serving creditable food items.

The facilities which were on target with respect to serving the recommended amount of calories increased in FFY 1998. However, it seems that some facilities, in

their attempt to reduce the amount of calories that was above target in FFY 1997 went too far and switched from being above target to being below target, indicating a need for more frequent nutrient analysis than once a year, and a need for training in reading labels.

The amount of sodium in FFY 1998 menus increased, in spite of the elevated level of that nutrient in the FFY 1997 menus, indicating a need for technical assistance in how to reduce the amount of this nutrient in the menus.

Question 6: Does policy implementation depend solely on the availability of required capabilities, or on knowledge and conviction of the policy as well?

Answer: To answer this question we must compare the capabilities and performance of the facilities in 1997 with their capabilities and performance in 1998. There was an increase in the percent of facilities with adequate production records in 1998, no difference in the availability of menus, and a decline in the availability of standardized recipes. In spite of the few improvements in the facilities capabilities in FFY 1998, more facilities offered a variety of meat/meat alternates, fruits and vegetables, and grains and breads; and more facilities followed the menu planning principles.

In 1998 the percent of facilities meeting the standard set for the percent of calories from fat, even though still less than one quarter of the facilities, increased significantly from FFY 1997.

The majority of the facilities exceeded the limit set for the percent of calories from saturated fat in FFYs 1997 and 1998. However, there was a significant increase in the facilities that were able to meet the saturated fat standard in FFY 1998.

Other improvements in FFY 1998 menus were evident in the decrease in cholesterol, total fat, and saturated fat. There was a decrease in protein and increase in carbohydrates. However, fiber, iron, calcium, vitamin A, and vitamin C decreased, perhaps due to the decrease in the total calories. This decrease is of concern only in the case of fiber, since the other nutrients were above target in 1997 and remained above target in 1998.

Thus, it seems that there is no one to one correlation

between available capabilities and improvement in menu planning practices. Facilities benefited from the technical assistance provided in 1997 in certain areas that seemed to be highlighted to them.

Question 7: Are there problems that hinder policy implementation? If so what are the training and technical support needed to solve these problems?

Answer: Reviewers identification of the problem that hinders policy implementation in FFY 1997, and their recommendations as to what to do to solve these problems, may be classified under three main categories: (a) the menus prepared and served, (b)the capabilities for nutrient analysis, and (c)the training needed for improvement. Facilities needed to enhance their efforts in preparing and serving menus which offer more variety and sufficient amounts of foods. They needed to improve the capabilities necessary to conduct accurate nutrient analysis. In addition, facilities needed to train their food service personnel specifically in the amounts of nutrients that are adequate for the different grade/age groupings, in developing complete production records, in following standardized recipes, and in using the Food Buying Guide.

The goals set for the facilities in FFY 1998 were to improve the nutrients and food items on menus and to meet the nutrient needs of the different grade/age groupings. Facilities capabilities for nutrient analysis also needed improvement especially in the areas of production records and standardized recipes. Nutrition education was recommended for children and their parents and care givers.

Question 8: How does the facilities' performance in FFY 1998 compare to their performance in FFY 1997?

Answer: It is apparent from the findings mentioned above that there were significant improvements in the performance of the facilities in 1998. Relatively more facilities followed the menu planning principles. Relatively more facilities offered a variety of meat/meat alternates, fruits and vegetables, and grains and breads.

The menus of the facilities in 1998 contained less calories from total fat and saturated fat, a major national concern. Other improvements in FFY 1998 menus were evident in the decrease in cholesterol and increase in carbohydrates.

Recommendations

The following recommendations are based on the results of this evaluation:

Menu Planning and Serving

- Increase variety of food items especially fresh fruits and vegetables, grains and breads, and milk.
- Decrease processed food items especially items of high fat and sodium.
- Tailor amounts of nutrients in menus and portion sizes served to the grade/age groups served.

Capabilities for Nutrient Analysis

- Improve production records
- Develop and use more standardized recipes.
- Use standardized measurements for food preparation and serving.
- Develop and use cycle menus to improve and preserve quality with less effort.
- Put more effort toward collecting product labels and manufacturer's specifications.

Nutrition Education and Training

- Train food service personnel in menu preparation and serving, especially in the areas identified above under ***Menu Planning and Serving***.
- Train food service personnel on how to improve the capabilities for nutrient analysis, especially those listed above under ***Capabilities for Nutrient Analysis***.
- Provide nutrition education for children and parents to increase acceptability of improved menus.

In conclusion, the task of implementing the HSMI in private schools and RCCIs is of concern to the Texas community in general, and the health and nutrition organizations in particular. The SNP needs to provide the private schools and RCCIs with sources of technical assistance in their communities such as local hospitals, school districts, and food manufacturers, in addition to the SNP state and field offices, that may assist them in conducting more frequent nutrient analysis for their menus and provide guidance in menu planning and food service on a more continual basis.

II. INTRODUCTION

In 1995 the USDA developed the HSMI. The reason for the initiative was to act on the national health responsibility to provide, for school age children, meals that are consistent with the 1995 Dietary Guidelines for Americans and current scientific nutritional information.

The Special Nutrition Programs(SNP)department of the Texas Department of Human Services is responsible for the administration of the school meals programs in Texas private schools and RCCIs. Since the HSMI policy regulates two of these programs, namely the NSLP and the SBP, the SNP department oversees the implementation of the HSMI in these facilities. Two registered and licensed dietitians, Treva Whitehead, a Policy Specialist; and Deborah Simpson, Coordinator of the Nutrition Education and Training Program; managed the HSMI and acted as subject matter experts.

The purpose of this evaluation is to find out if school menus and food service practices have improved as a result of implementing the policy and develop recommendations for further improvement based on the findings.

Healthy School Meals Initiative Policy

Regulations of the NSLP and the SBP meal pattern requirements, based on food components, were revised to reflect the HSMI. Under these regulations, specific minimum standards for key nutrients and calories were established for all school food authorities participating in the NSLP/SBP to meet.

To facilitate implementation of the established standards, local school food authorities were allowed to choose one of three menu planning systems. The systems were later increased to four. Two of the systems were food based and two were nutrient-based, with different patterns for lunch and breakfast. In addition, school authorities will be allowed to develop their own menu planning systems using any reasonable approach, under guidelines to be established by USDA.

The food based menu planning systems (traditional and enhanced) require serving food components, namely meat/meat alternate, vegetables/fruits, grains/breads and milk, in specified minimum quantities.

The nutrient based systems include Nutrient Standard Menu Planning (also termed NuMenus) and Assisted Nutrient Standard Menu Planning (also termed Assisted NuMenus). According to these systems, menus are developed based on the analysis for nutrients

in menu items and foods offered over a school week (3-7 days) to determine if specific levels for a set of key nutrients and calories are met. These nutrients are: protein, vitamin A, vitamin C, iron, calcium, total fat, saturated fat, sodium, cholesterol, and dietary fiber. The difference between the NuMenus and Assisted NuMenus options depends on whether the implementing organization conducts their nutrient analysis or seeks the assistance of an outside source.

Regardless of the menu planning system a facility chooses to implement, the HSMI policy requires menu analysis to ensure compliance with the Dietary Guidelines for Americans and the nutrient requirements. The guidelines recommend that Americans:

- eat a variety of foods;
- limit total fat to 30% of calories;
- limit saturated fat to less than 10% of calories;
- choose a diet low in cholesterol;
- choose a diet with plenty of grain products, vegetables, and fruits;
- choose a diet moderate in salt and sodium; and
- choose a diet moderate in sugars.

Technical Support of Policy Implementation

Realizing the magnitude of the technical information and skills needed to implement the HSMI policy, USDA formed partnerships with agriculture, food, media, education, and health communities to promote and clarify the HSMI and its requirements.

In an effort to facilitate measurement of nutrients in menu items, USDA developed a set of standardized recipes for menu items that include the nutrients needed for balanced menus, compiled a nutrient database that includes ingredients of common food items, and reviewed and adopted software packages for nutrient analysis.

To provide state agencies and local food service operators with knowledge and skills needed to implement the HSMI policy, USDA developed and implemented a training plan. The plan included training grants for state and local authorities and a prototype train the trainer course for state staff to help build a cadre of professionals that can offer training to state and local food service personnel. During FFY 1996, SNP adapted the prototype course to local needs and designed and conducted workshops for SNP staff and contractors.

Questions Answered by the Evaluation

The objective of this evaluation is to answer the following questions:

1. What is the menu planning system(s) acceptable to the majority of the facilities?

2. Does the acceptability of a specific menu planning system depend on the type of the facility or the county in which the facility is located?

3. Does successful implementation of the HSMI policy depend on the type, location, and/or the menu planning system a facility implements?

4. To what extent are the capabilities required for policy implementation (e.g.; hardware and software, production records, and standardized recipes) available in the private schools and RCCIs?

5. What are the most pressing needs for technical support in the different facilities?

6. Does policy implementation depend solely on the availability of required capabilities, or on knowledge and conviction of the policy as well?

7. Are there problems that hinder policy implementation? If so what are the training and technical support needed to solve these problems?

8. How does the facilities' performance in FFY 1998 compare to their performance in FFY 1997?

III. METHOD OF EVALUATING THE HSMI POLICY IMPLEMENTATION

Instrument

In 1996 USDA developed a review instrument to evaluate the implementation of the HSMI. The instrument consisted of items to collect data on:

- type and location of the facilities;
- the menu planning system a facility chose to implement(Traditional Food Based, Enhanced Food Based, NuMenus...etc.) and characteristics of that system(Offer vs. Serve, a la carte,...etc.);
- the type of food service a facility provides (self-operated, vended, or food service management company, central or on-site menu planning...etc.);
- the nutrient analysis capabilities available in a facility such as production records, manufacturer's specification of processed foods, and nutrient analysis software;
- whether or not a facility has conducted a nutrient analysis of its menus;
- if a facility's menus the registered dietitian analyzed before, during, and/or after a site visit met the established nutrient standards;
- problems in policy implementation such as lack of documentation and lack of accurate serving sizes; and
- recommendations and agreed upon action for improvement.

Appendix A includes a copy of the instrument used in FFY 1997. The instrument was revised by USDA for FFY 1998, to tailor it to the different menu planning systems. A summary of review findings was incorporated in the instrument to include commendations on progress the facilities may have made toward meeting the Nutrition Standards and the Dietary Guidelines, and areas needing improvement. Appendix B includes a copy of the instrument used in evaluating the HSMI in FFY 1998.

Nutrient Analysis Reviews

The HSMI policy does not contain penalties for failing to meet the established nutrient standards as long as school food authorities are making an effort to comply. The policy requires that states offer support and technical assistance to school food authorities that are having difficulty meeting the standards established in the policy. Schools and RCCIs are expected to develop corrective action plans to address the problems encountered in policy implementation.

In FFY 1997 six registered dietitians were contracted to review the private schools and RCCIs under contract with the SNP. They conducted nutrient analysis to find out how well the facilities menus complied with the HSMI and to help the facilities develop corrective action plans if necessary. The nutrient analysis was conducted between 1/8/96 and 12/7/97. The registered dietitians used the review instrument that was developed by USDA to report the results of the review.

In FFY 1998 three registered dietitians reviewed 28 private schools and RCCIs. Twenty four of these facilities were reviewed in FFY 1997 and four of them had not been reviewed before. The facilities were selected based on their size, and their need and expected benefit from the review. The nutrient analysis was conducted between 1/1/98 and 8/28/98.

Before conducting the nutrient analysis, the SNP notified the facilities and requested menus prepared for the different grade/age groupings served for a specified time period. The time period was three weeks in FFY 1997 and one week in FFY 1998. The number of menus submitted for the different age/grade groupings by the different facilities in FFY 1997 ranged from 1 to 7, with a median of 2 menus and a mode of 1 menu. The facilities were asked to submit the following items with the menus:

- meal production records for the period;
- recipes for those menus; and,
- nutrition/product labels for the food items on the menus or manufacturer's product analysis, when applicable.

The documents received from each facility were used to conduct nutrient analysis using the Lunchbyte Nutrikids Software package. After the analysis, the registered dietitians contacted the facilities to schedule an on-site visit and to observe food preparation and service. Based on the results of the nutrient analysis, the registered dietitians also provided technical assistance to the facilities during the on-site visits and helped the facilities develop improvement plans.

The registered dietitians submitted the completed instruments and supporting documentation to the SNP for project evaluation. The completed instruments were shared with the SNP contract managers, to follow-up with the results of the reviews.

During the on-site visits, the registered dietitians were asked to follow the procedures outlined below:

- arrive at the facilities on the appointed date and time;
- check in with the administrative staff and explain the purpose of the visit;
- observe production of meals and record appropriate observations;

- observe meal service and record appropriate information;
- gather/verify information on recipes, food labels,...etc;
- review with food service staff information relevant to their facility's need;
- encourage facility's staff to implement at least one recommended change;
- use or refer facility's staff to appropriate training materials (if needed); and,
- listen and positively respond to complaints and comments from facility staff.

Statistical Analyses

Data collected using the evaluation instrument were sorted into independent and dependent variables. The type of facility, the county in which a facility is located, the menu planning system implemented, and the type of food service the facility provides were considered independent variables. Frequencies and percentages of these variables were conducted to find out dominant trends.

The nutrient analysis capabilities of a facility, whether or not the facility has conducted a nutrient analysis, whether or not the facility's menus met the nutrient standards, problems in policy implementation, and needed improvements were considered dependent variables. Frequencies and percentages were conducted for each dependent variable to find out dominant trends. Chi-Square tests were conducted to test the significance of the difference in the frequencies and the interdependencies between the dependent and independent variables. The 5% level of significance was adopted.

The results of the reviews conducted in FFYs 1997 and 1998 were compared to find out if improvements were made from one year to another. Chi-Squares and T-Tests were employed to find out if the improvements, if any, were significant.

The USDA set standards, per grade/age grouping, for most of the nutrients to be analyzed in each menu. The nutrient analysis data were extracted from the Menu Summary section in the evaluation instrument. The results of analyzing the nutrients and comparing their amounts with standards set for grade/age groupings were reported in the instrument as a "% of Target". This data was used to categorize the amounts of nutrients in the menus as either "On Target" if they were 100% of the targeted amounts, "Above Target" if they were more than 100% of the targeted amounts, or "Below Target" if they were less than 100% of the targeted amounts.

IV. PROFILE OF REVIEWED FACILITIES

Type of Facility

In FFY 1997 there were 194 private schools and RCCIs reviewed. Figure 1 shows the number and percentage of each type of facility.

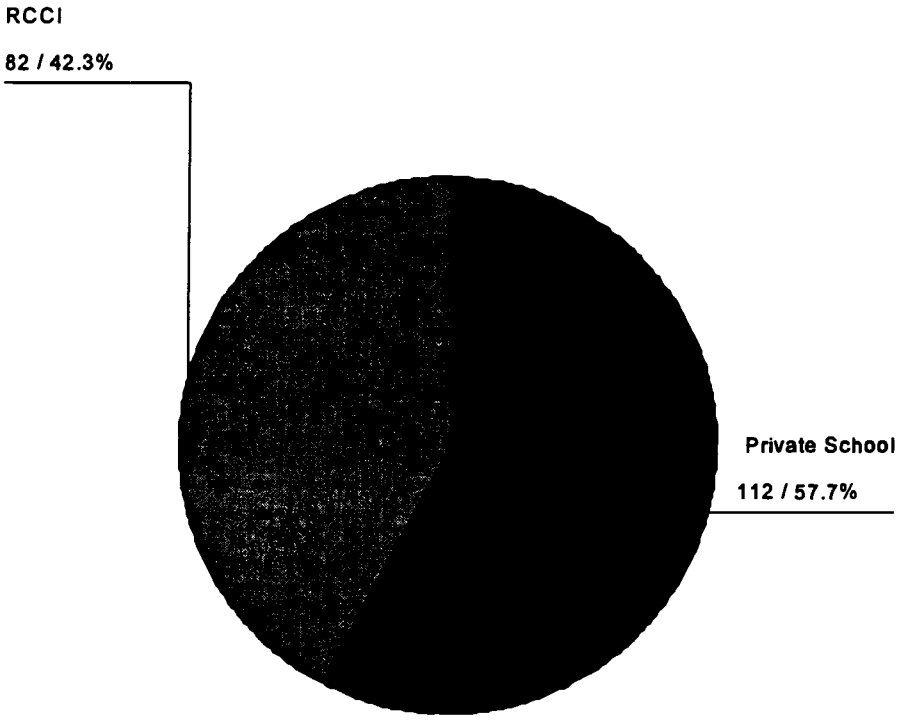

Figure 1. Type of Facility Reviewed in FFY 1997

It is apparent from Figure 1 that in FFY 1997 the private schools reviewed (112) were about 16% more than the RCCIs (82).

In FFY 1998 over two thirds (67.9%) of the facilities reviewed were private schools. Sixteen of these facilities were reviewed in FFY 1997 and three were reviewed for the first time in FFY 1998. Eight out of the 9 RCCIs were reviewed in FFY 1997 and FFY 1998.

Since the facilities that were reviewed in FFY 1998 were selected either because they were new or because they needed more technical assistance, it is safe to assume that 24 out of the 28 facilities were in greater need of technical assistance.

The Menu Planning Systems Adopted by the Facilities

As mentioned above, the facilities were given the option to choose the menu planning system to implement. Figure 2 represents the facilities that adopted each option in FFY 1997.

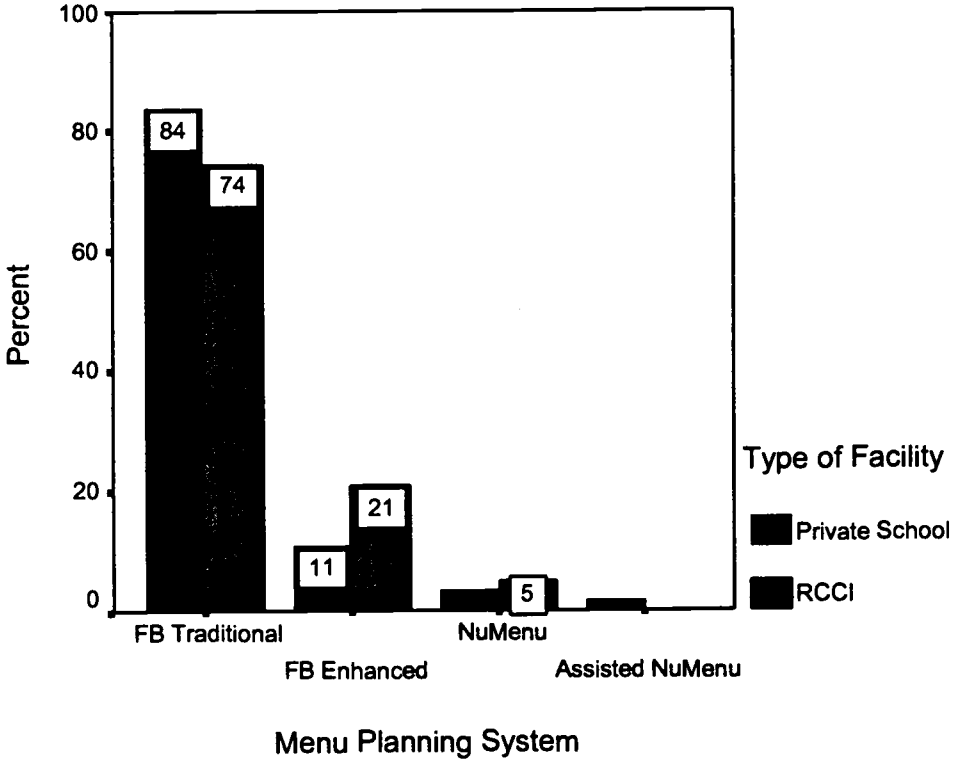

Figure 2. The Menu Planning System Adopted

Figure 2 shows that in FFY 1997 the Traditional Food Based Menu Planning system was adopted by the majority of the facilities, followed by the Enhanced Food Based system. Very few facilities adopted the systems that were based on nutrient analysis. It may be noted here that the Traditional Food Based Menu Planning system was the system in place before the implementation of the HSMI policy. The Enhanced Food Based Menu Planning system bears the most resemblance to that system. A Chi-Square test indicated that there were significant differences in the number of the facilities selecting the different options. Significantly more RCCIs selected the Enhanced Food Based and the NuMenus systems.

The facilities that were reviewed in FFY 1998 were matched with those reviewed in FFY 1997 on the basis of the contract agreement

number. The match resulted in 18 pairs of facilities. Further analysis indicated that adoption of the Enhanced Food Based Menu Planning and the Assisted NuMenus Menu Planning systems increased, but not significantly, in FFY 1998. This increase indicates a better knowledge of the available menu planning options, as a result of the technical assistance provided.

Groupings of Menu Planning Systems

The HSMI regulations require the facilities to plan the menus for groups of children in accordance with the children's age and/or grades. These groupings vary from one menu planning system to another, and from breakfast to lunch.

The age of the participants in the food programs ranged from 0 to 18 years, thus including infants and grades Pre-K to 12. When asked what groupings the facilities used to prepare their meals the facilities indicated that they used different groupings and a combination of groupings with no specific dominant trend.

Characteristics of the Facilities' Food Service

In FFY 1997 only 39% of the facilities provided Offer vs. Serve meals. It may be noted here that Offer vs. Serve is mandatory for the lunch meal for senior high school students, and optional otherwise. In addition, Offer vs. Serve is optional for RCCIs even if participants are at the senior high school grade/age level.

Over one third of the facilities (35.3%) provided a la carte meals, which are completely optional. The majority of the facilities (95.3%), however, served adult meals, which are optional. About half of the facilities (49.5%) offered special needs meals to participants who were on special diets for health reasons.

Chi-Square tests indicated that the differences in the number of the facilities which implemented these types of food service, except for the special needs meals, and the facilities that did not, were significant.

In FFY 1998, 44.4% of the matched facilities, compared to 61.1% in FFY 1997, provided Offer vs. Serve meals. Similarly, 37.5% of these facilities provided a la carte meals in FFY 1998 compared to 62.5% in FFY 1997. More adult meals (56.3%) and special needs meals (70%) were served in the matched facilities in FFY 1998 compared to 43.8% and 30% respectively in FFY 1997. Chi-Square tests indicated that only the difference in the number of facilities serving adult meals was significant.

Type of Food Program Implemented

Figure 3 represents the food programs that were reviewed in FFY 1997.

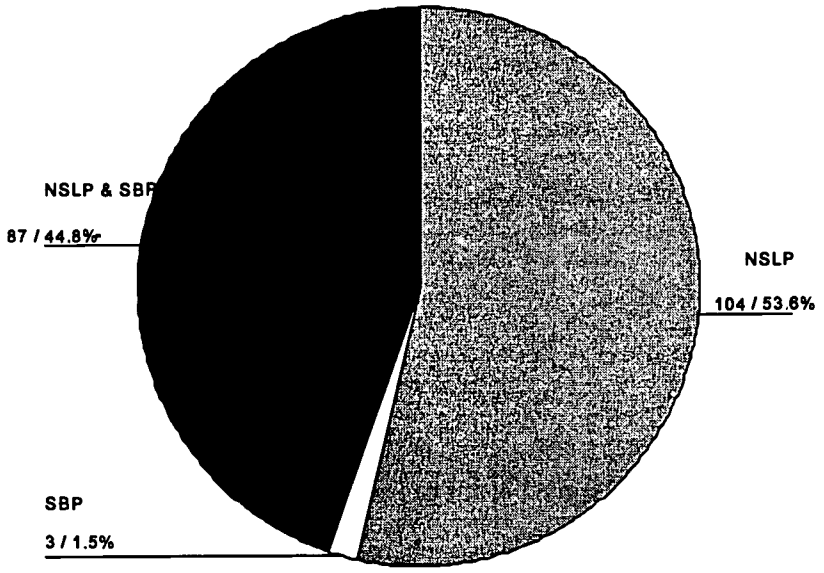

Figure 3. The Food Program Reviewed in FFY 1997

Figure 3 shows that over half of the facilities participated only in the NSLP and less than half participated in both the NSLP and the SBP. Only 3 out of 194 facilities chose to participate in the SBP and not the NSLP. A Chi-Square test indicated that the difference in the numbers of facilities participating in these food programs was significant.

In FFY 1998 fewer facilities (38.9%) participated in the NSLP alone compared to 56.3% in FFY 1997. More facilities (61.1% compared to 44.4% in FFY 1997) expanded their participation to include both the NSLP and the SBP.

Type of Food Service

The facilities can either prepare the meals or contract with a food service management company. Figure 4 illustrates the facilities' response in FFY 1997 when asked what type of food service they used.

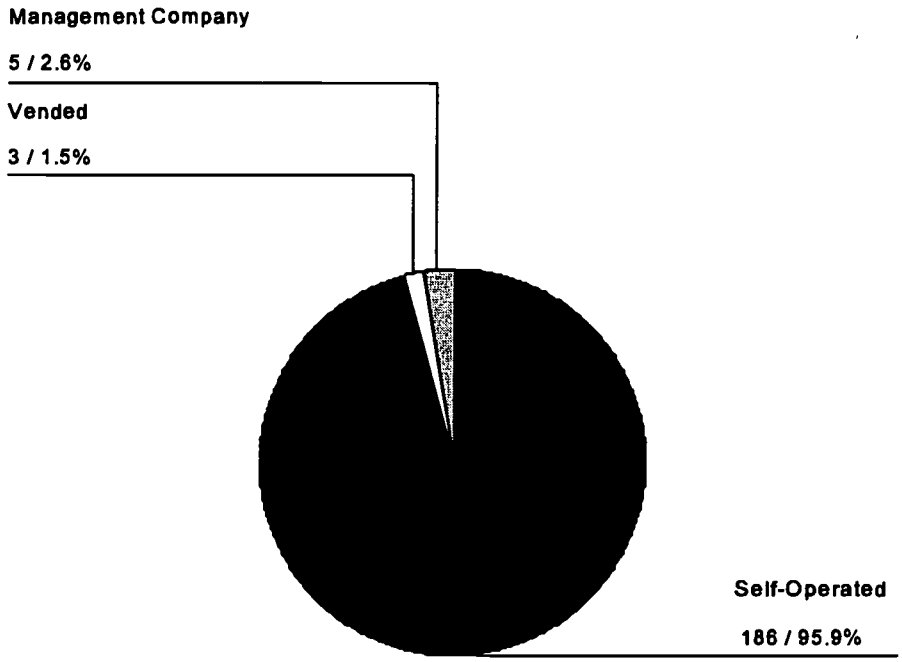

Figure 4. Type of Food Service in FFY 1997

As Figure 4 indicates, in FFY 1997 most of the facilities prepared the children's meals themselves. Only 5 facilities contracted with a food service management company and three used a vendor. A Chi-Square test indicated that there was a significant difference in the number of the facilities that used each type of food service.

In FFY 1998 the 18 matched facilities were self-operated compared to 17 of them in FFY 1997.

Site of Menu Planning

Figure 5 shows the different sites where the facilities' menus were planned in FFY 1997.

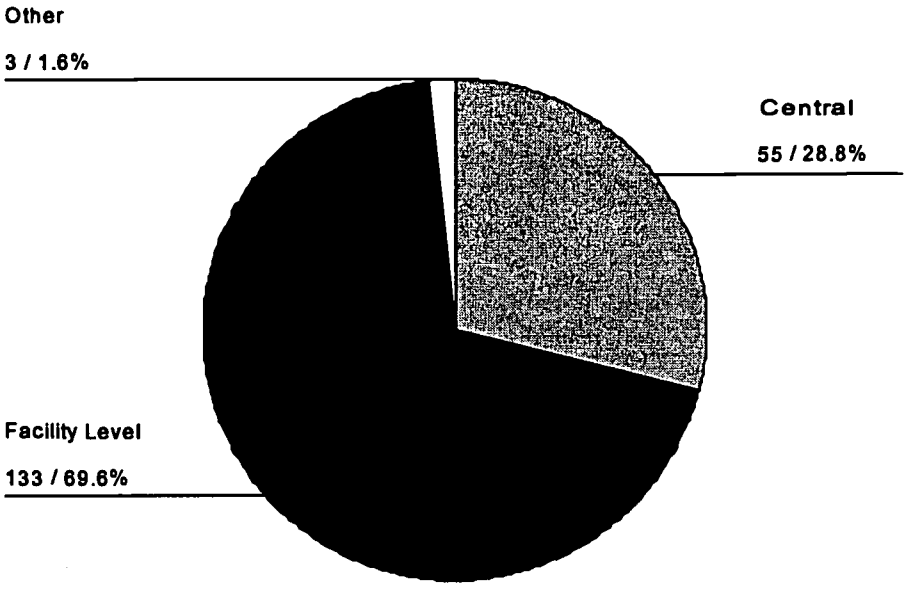

Figure 5. Site of Menu Planning in 1997

Figure 5 shows that in FFY 1997 the menus of over two thirds of the facilities were planned at the facility level. A Chi-Square Test indicated that the difference in the number of the facilities was significant. This is understandable since these facilities were private schools and RCCIs. Unlike public schools, they are not a part of a larger food service entity such as a school district. Thus they rely on their own resources, or on the resources of a much smaller entity, to plan their menus.

When comparing private schools to RCCIs in this respect, a Chi-Square test indicated that significantly more RCCIs than private schools planned their menus centrally.

In FFY 1998 three out of the matched 18 facilities decided to plan their menus at the facility level instead of centrally. Thus the same trend that prevailed in FFY 1997 was even stronger in FFY 1998.

Site of Food Preparation

Figure 6 shows the sites at which the facilities prepared the children meals in FFY 1997.

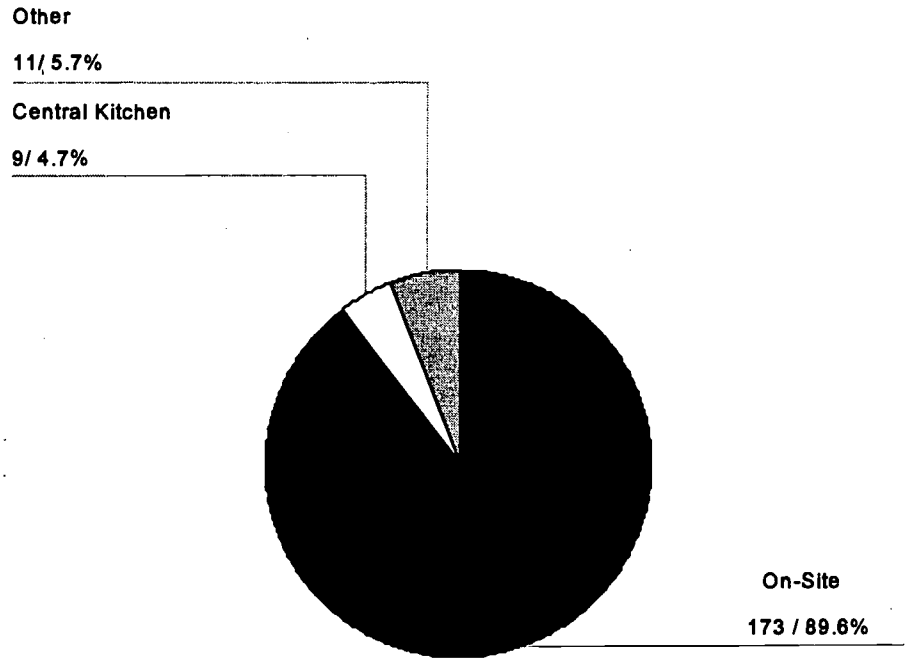

Figure 6. Site of Food Preparation in FFY 1997

It is apparent from Figure 6 that in FFY 1997 the majority of the facilities prepared their meals on-site. Only 9 facilities used a central kitchen and 11 facilities indicated that they used other sites.

A Chi-Square test indicated that the difference in the number of the facilities that prepared the meals at each site was significant. In addition, as in the case of the site of menu planning, significantly more RCCIs than private schools prepared their meals in central kitchens. This may warrant directing more technical assistance in food planning and preparation to private schools, since more of these facilities plan and prepare children meals on-site.

In FFY 1998 the number of facilities that prepared their meals on-site (17) remained the same and only one facility used a central kitchen.

V. CAPABILITIES OF THE FACILITIES FOR NUTRIENT ANALYSIS

To be able to determine if the meals offered to school children meet the nutrient standards and requirements of the HSMI, the facilities needed to: (a)plan and prepare menus according to the requirements of the menu planning system they selected; (b)complete meal production records satisfactorily to document the meals served and how these meals were prepared; (c)use standardized recipes when preparing the meals; (d)keep copies of product nutrition and ingredient labels and CN labels if using Food Based Menu Planning; and (e)keep estimates of a la carte sales. A nutrient analysis conducted using a USDA approved software is the primary indicator that a facility has the required capabilities. The instrument used for review consisted of items related to these capabilities.

Previous Menu Analysis

Figure 7 shows the response of the facilities when asked in FFY 1997 whether or not they analyzed their menus prior to the review.

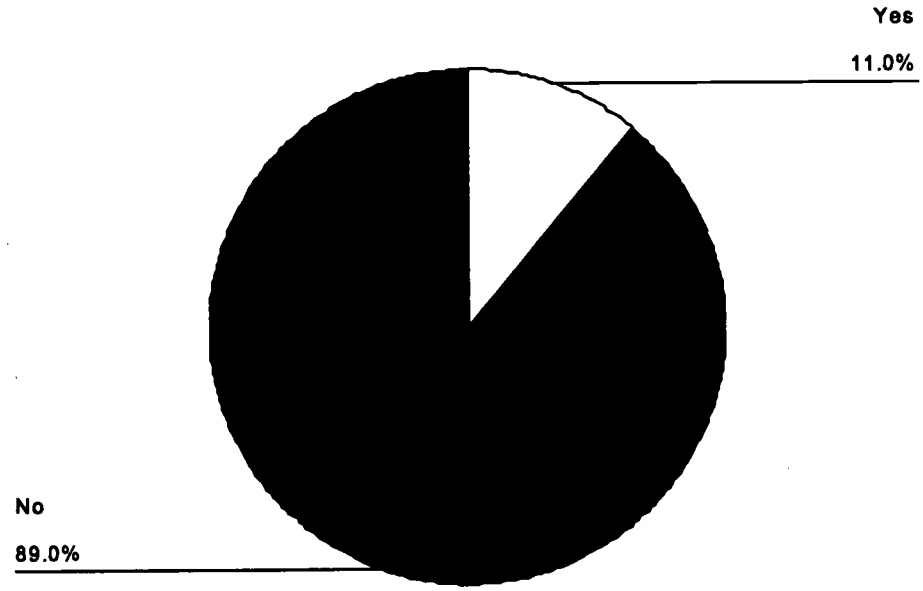

Figure 7 Whether or Not Facilities Conducted Nutrient Analysis in FFY 1997

As shown in Figure 7, only 11.0% of the facilities, probably those who implemented the NuMenus and Assisted NuMenus menu planning systems, analyzed their menus prior to the review.

In FFY 1998 83.3% (15 out of the matched 18 facilities) mentioned that a nutrient analysis was conducted. It is not clear, however, if the nutrient analysis referenced was the same as that conducted by the reviewers who visited the facilities in FFY 1997.

Software Used

Facilities that conducted the nutrient analysis in FFY 1997 were asked what software was used to analyze the menus. The Lunchbyte Nutrikids software was mentioned by 16 of these facilities; CAFS was mentioned by 2 facilities; and Cygnet Menu Management System was mentioned by one facility. Lunchbyte Nutrikids was the software that was used by the reviewers to conduct the nutrient analysis in FFYs 1997 and 1998.

Availability of Materials Necessary to Conduct Nutrient Analysis

Table 1 records the results of the FFY 1997 review of the availability of materials that are necessary to conduct nutrient analysis in the 194 facilities.

Table 1. Availability of Materials Necessary to Conduct Nutrient Analysis in FFY 1997

Are Necessary Materials Available?	% Yes	Comments
Menus	98.9	Not complete.
Production records	78.7	Somewhat complete.
Standardized recipes	69.2	No Comments.
Manufacturer's specifications	68.7	Some were available.
Estimates of a la carte sales	57.8	Some were available. Inapplicable.

As Shown in Table 1, the materials necessary to conduct nutrient analysis were available in over half of the facilities reviewed in FFY 1997. Most of the facilities had menus. Standardized recipes and manufacturer's specifications were lacking in about one third of the facilities. Significantly more private schools than RCCIs had manufacturer's specifications. Chi-Square tests indicated that there were significant differences in the number of the facilities that had, and the facilities that did not have these materials.

Few comments were made by the reviewers, basically indicating that the materials sometimes were available in the facilities but not in a complete form.

Figure 8 shows the result of comparing the 194 facilities that were reviewed in FFY 1997 with the 28 facilities that were reviewed in FFY 1998 with respect to the facilities menus.

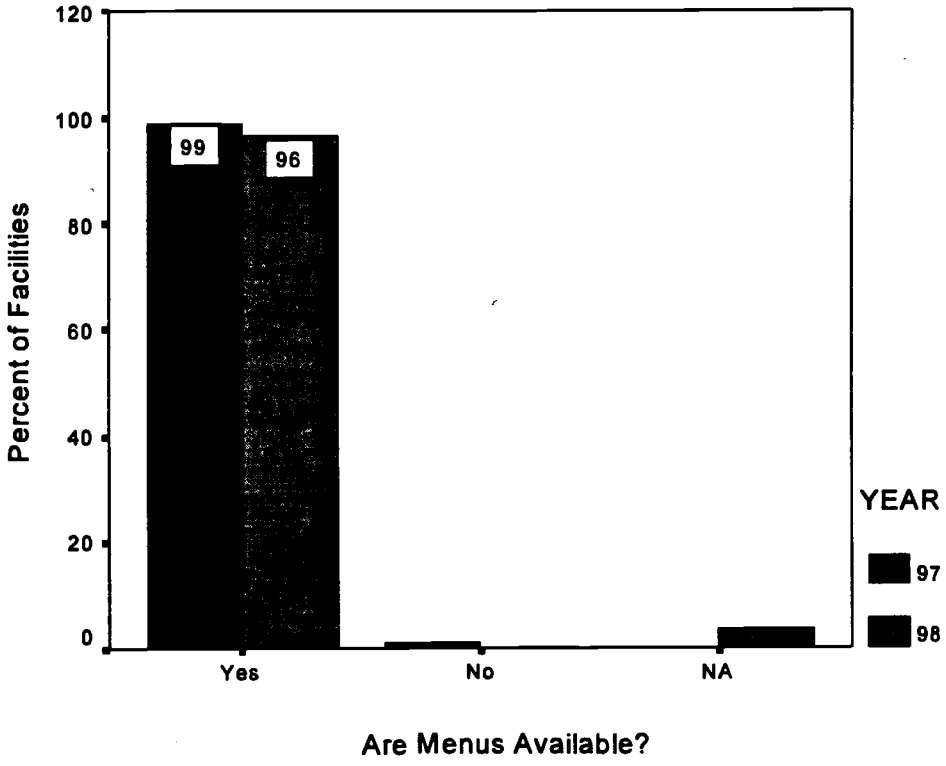

Figure 8. Availability of Menus in FFYs 1997 and 1998

Figure 8 shows that menus were available in the majority of the facilities in FFYs 1997 and 1998. The reason that the figure shows a decrease in the percent of available menus and a Not

Applicable (NA) category in FFY 1998 is the fact that the facilities which implemented the NuMenus and the Assisted NuMenus Menu Planning systems were not required to submit menus for analysis.

Figure 9 illustrates the availability of production records in FFYs 1997 and 1998.

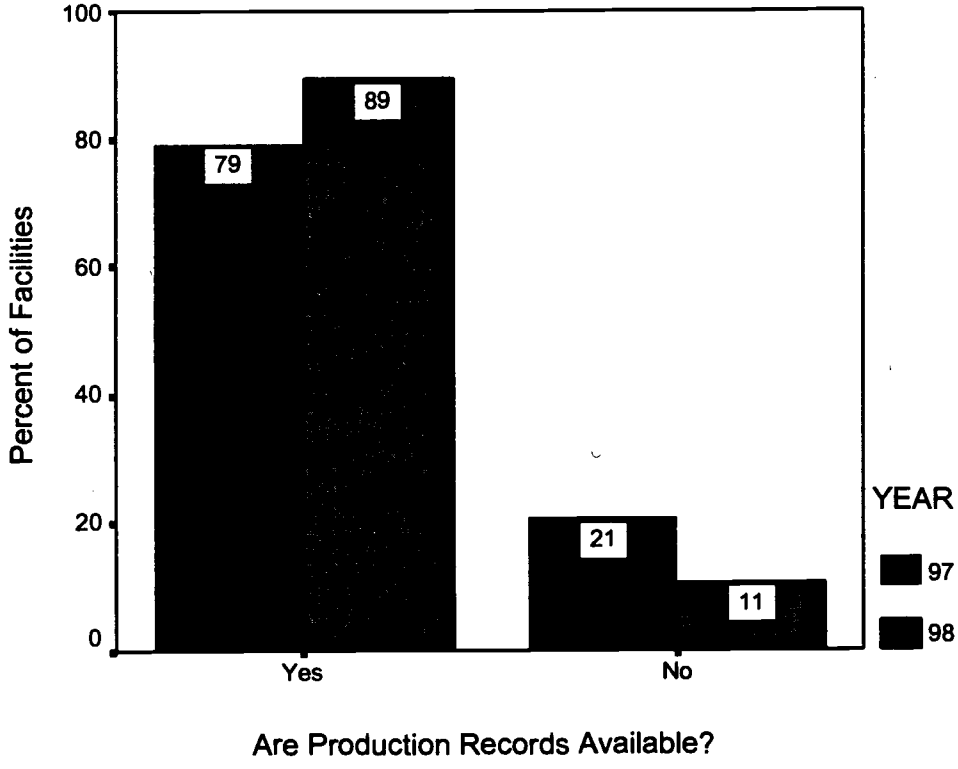

Figure 9. Availability of Production Records in FFYs 1997 and 1998

Figure 9 shows an improvement in the availability of production records in FFY 1998, indicating that some of the facilities that were revisited in FFY 1998 benefited from the technical assistance provided to them in FFY 1997.

Figure 10 compares the availability of standardized recipes in the facilities visited in FFYs 1997 and 1998.

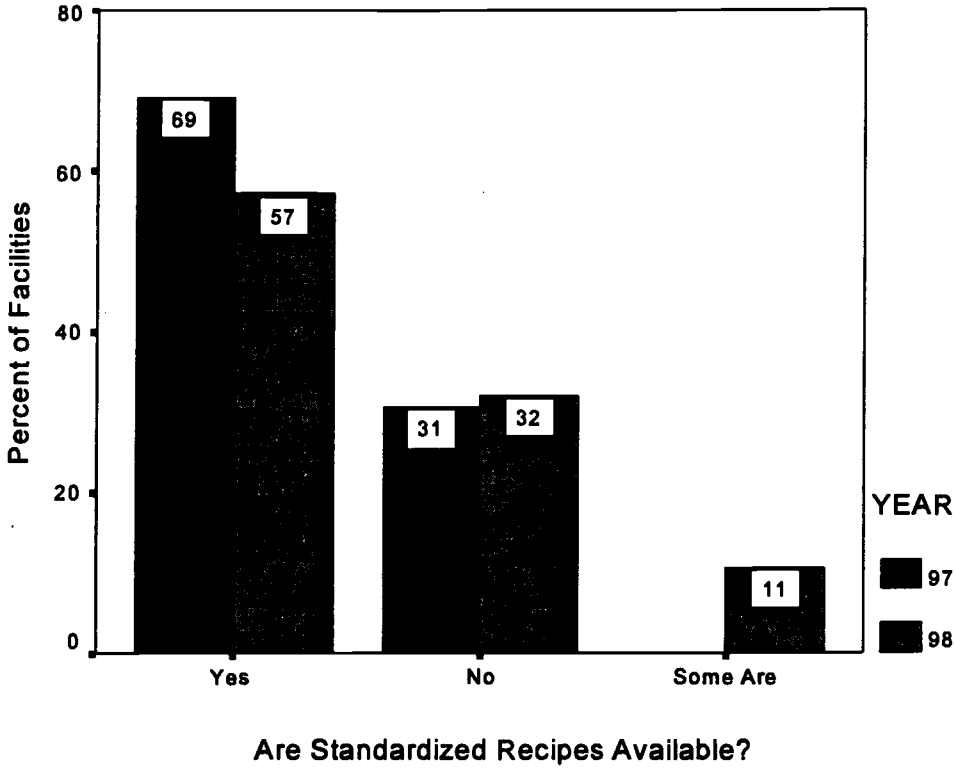

Figure 10. Availability of Standardized Recipes in FFYs 1997 and 1998

Figure 10 shows that contrary to menus and production records, standardized recipes were less available in FFY 1998 than they were in FFY 1997. This may indicate a need to provide a variety of standardized recipes for different group sizes. Training on standardized recipes was provided on-site in FFYs 1997 and 1998. Additional training may be provided on how to standardize the facilities' favorite recipes.

Can a Nutrient Analysis Be Conducted

Figure 11 includes FFYs 1997 and 1998 responses of the facilities that implemented the food based menu planning systems to the question "Based on available information, can a nutrient analysis be conducted?"

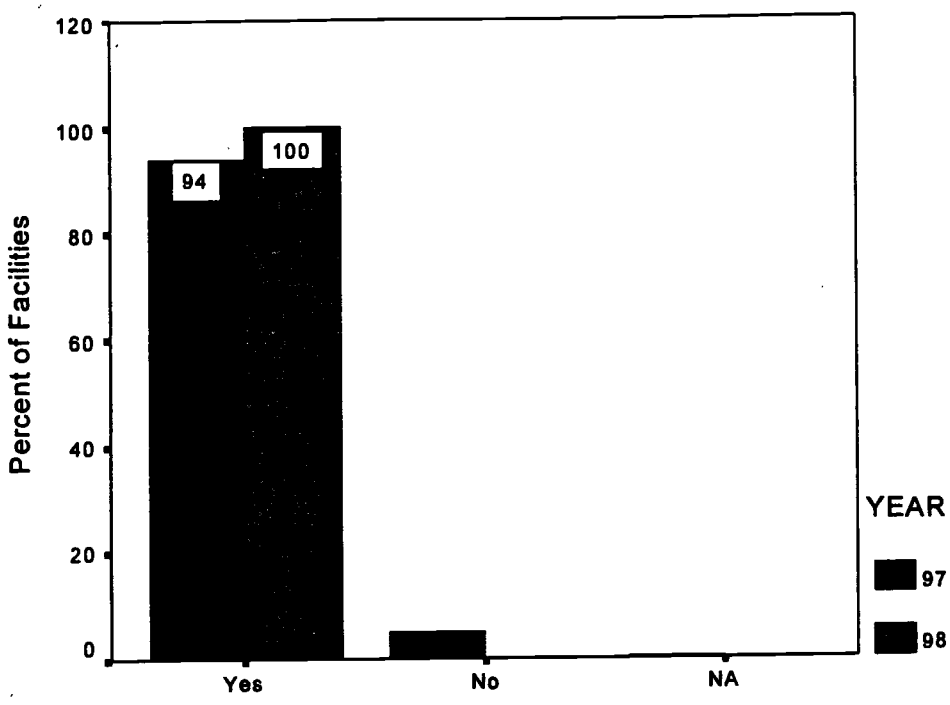

Figure 11. Availability of Information Necessary to Conduct Nutrient Analysis in FFYs 1997 and 1998

Figure 11 indicates that, according to the registered dietitians who conducted the nutrient analysis in FFYs 1997 and 1998, the information necessary to conduct the analysis was available in all the facilities in FFY 1998, an improvement over FFY 1997.

Evaluation of Menus Observed During the On-Site Visits

In addition to the production records and standardized recipes the facilities were asked to submit with their menus for nutrient analysis, the registered dietitians reviewed the production records, standardized recipes, and menus on the day of the on-site visits to the facilities. Table 2 reflects evaluation of menus the reviewers observed during their on-site visit.

Table 2. Reviewers Evaluation of Menus on the On-Site Visit in FFYs 1997 and 1998

Based on the Menu	%Yes in 1997	%Yes in 1998	Most Frequent Comments
Were planned portion sizes appropriate for grade groupings?	90.0	87.5	**FFY 1997:** Big for young children and small for older ones. Too big/too small. Some sizes were not noted. **FFY 1998:** Incomplete portions. All grades served the same portions. Some foods were lacking.
Were portion sizes served as planned?	86.2	95.8	**FFY 1997:** Were not recorded. Were not standardized. Utensils were not accurate. **FFY 1998:** Utensils utilized to serve accurately. Lasagne not cut initially. Some may be larger.
Were all food items/components used to satisfy meal pattern requirements creditable?	93.8	79.2	**FFY 1997:** Unable to determine for lack of product specs. Some items were not portioned in creditable amounts. **FFY 1998:** Some meals/foods did not meet requirements. Did not meet requirements for some grades.
Was no more than one grains-based dessert offered to meet the grain/bread component for the day?	97.2	95.9	**FFY 1997:** Not applicable. To some extent. **FFY 1998:** Menus required more grains/breads. No bread at lunch. No dessert.

As Table 2 shows, reviewers approved of how the majority of the facilities they visited followed the recommended menu planning principles. Most of the facilities planned appropriate portion sizes and served portion sizes consistent with what they had planned. The food items the facilities planned and served were creditable. When asked if no more than one grains-based dessert was offered to meet the grain/bread component for the day, the reviewers indicated that the question was not applicable in most cases.

Chi-Square tests indicated that there were significant differences in the number of facilities which followed, and the facilities which did not follow the recommended principles.

Data in Table 2 also indicates that a larger percentage of the facilities that were reviewed in FFY 1998 served portion sizes as planned. A smaller percentage of the facilities, however, planned appropriate portion sizes and served creditable food items in 1998. It may be noted in this context that there were only 28 facilities reviewed in 1998. Most of these facilities were reviewed because they were in greater need of technical assistance.

Evaluation of Production Records Observed During the On-Site Visits

Table 3 records the results of reviewers evaluation of the production records they observed during their visits to the 194 facilities in FFY 1997 and the 28 facilities in FFY 1998.

Table 3. Reviewers Evaluation of the Production Records on the On-Site Visit in FFYs 1997 and 1998

Production Records	%Yes in 1997	%Yes in 1998	Most Frequent Comments
Were adequate production records maintained?	63.4	80.0	**FFY 1997:** Were incomplete. Using the wrong forms. Completed after meal service. **FFY 1998:** Improvement made but still needed. Some items were left off. Using the wrong form.
Did production records reflect production for the day, including menu items, condiments, and portion sizes?	68.0	87.5	**FFY 1997:** Some condiments omitted. Butter was not noted. **FFY 1998:** Some or all condiments were omitted. Substitution omitted. Need to ensure that production sheets and menu agree or note reason.
Were substitutions correctly recorded on the production records?	77.8	Not Asked	**FFY 1997:** Seldom necessary. There was some inconsistency. Not clearly recorded.
Were foods, including processed products, consistent with those analyzed during the period of the analysis?	94.8	Not Asked	**FFY 1997:** Not applicable. To some extent.

Table 3 shows that over one third of the facilities in FFY 1997 needed to improve their production records. The production records of many facilities were not adequately maintained, did not reflect production for the day, and did not correctly record substitutions. When responding to the last item in the table asking if foods on the production records were consistent with foods analyzed during the period of the analysis, the majority of the reviewers thought it did when applicable.

The menu planning system a facility adopted seemed to be a significant factor in determining whether a facility maintained production records which reflected production for the day, including menu items, condiments, and portion sizes; and recorded substitutions correctly. The facilities that adopted the

nutrient based menu planning systems were better in this respect.

Two out of the four items concerning production records were included in the FFY 1998 evaluation instrument. A Chi-Square test indicated that there was a significant improvement in the production records of the facilities in FFY 1998 with respect to both items.

Evaluation of Standardized Recipes Observed During the On-Site Visits

Table 4 includes data on the standardized recipes that were observed on the date of the on-site visit. The percentages are based on a total of 194 facilities in FFY 1997 and 28 facilities in FFY 1998.

Table 4. Standardized Recipes Used to Prepare the Menu For the Day of the On-Site Visit

Standardized Recipes	%Yes in 1997	%Yes in 1998	Most Frequent Comments
Was the food prepared according to the recipe standardized for the school?	77.3	70.8	**FFY 1997:** Recipes were not properly standardized. Not all recipes were standardized. No recipes were needed for the day. **FFY 1998:** Not all recipes were standardized. No recipes were needed for the day. Still building recipe file and was encouraged to do so.
Was the food served according to the recipe standardized for the school?	79.4	76.0	**FFY 1997:** Not all recipes were standardized. No recipes were used. More accurate portioning was required. **FFY 1998:** Food served according to their recipes. No recipes were used. Were not cutting according to recipe.

Data in Table 4 indicates that over one fifth of the facilities in FFY 1997 did not prepare or serve foods according to

standardized recipes during the on-site visit. As indicated in the reviewers comments, however, some of the facilities prepared and served foods that did not require standardized recipes. Relatively fewer facilities prepared and served food items according to standardized recipes in FFY 1998.

As in the case of production records, the menu planning system a facility adopted seemed to be a factor in determining whether the facility used, or did not use, standardized recipes in preparing and serving menus. The facilities adopting the nutrient based menu planning systems performed better in this respect.

VI. FACILITIES EFFORTS IN ACHIEVING THE HSMI GOALS AND STANDARDS

Working Toward the Goals and Standards

Table 5 includes percentages of the facilities that were working toward the realizations of the dietary guidelines and standards and comments made by the reviewers in FFYs 1997 and 1998. The percentages in the table are based on the total of 194 facilities in FFY 1997 and 28 facilities in FFY 1998, except for the last two items which are related to the Enhanced Food Based menu planning system. The two items are based on a total of 24 facilities in FFY 1997 and 2 facilities in FFY 1998.

Table 5. Percent of the Facilities Working Toward the Goals and Standards in FFYs 1997 and 1998

Guidelines and Standards	%Yes in 1997	%Yes in 1998	Most Frequent Comments
Was a variety of meat/meat alternate offered?	95.3	96.4	**FFY 1997:** Can offer more variety. Over reliance on specific items. **FFY 1998:** Need to increase variety. Appears insufficient. No meat for religious reasons.
Was a variety of fruits and vegetables offered?	87.5	92.9	**FFY 1997:** Can offer more variety. Over reliance on specific items. Variety limited some weeks. **FFY 1998:** Need to increase variety. Excellent variety. May consider offering fruits daily to increase calories.
Was a variety of grains and breads offered?	91.5	92.9	**FFY 1997:** Need more breads. Bread types and portions are limited. Grains/breads are lacking some weeks. **FFY 1998:** Need to increase variety. Selection is limited.
Was a variety of milk choices offered?	77.0	74.1	**FFY 1997:** Only 2% milk. Only whole milk. Only 1% milk. Choices were not offered at every meal. **FFY 1998:** 1% and 2% milk only. Changing to lower fat milk. Whole milk only.

Table 5. (continued)

Guidelines and Standards	%Yes in 1997	%Yes in 1998	Most Frequent Comments
Were acceptable menu planning principles followed?	88.6	92.6	**FFY 1997:** Some food components do not meet requirements. Menu sheets lack amount and portion. Recipes need standardization. **FFY 1998:** Calories high but children not obese. Some menus missed components. Some recipes could be modified to reduce fat not quality.
Were portion sizes appropriate for grade grouping?	84.9	82.6	**FFY 1997:** Big for young children and small for older ones. Too big/too small. Inaccurate measurements. **FFY 1998:** Insufficient for some grades. Met requirements but calories did not meet standards. Too big.
Planned required servings of grains and breads for the week	76.6	69.6	**FFY 1997:** Short some days. Short for some grades. Unknown due to lack of product information or CN labels. **FFY 1998:** Bread servings were insufficient on some days. Insufficient for some grades. Lacking in some areas.
(Enhanced Food-Based only) Was no more than one serving of grain-based dessert credited per day for grain/bread component?	100.0	95.5	**FFY 1997:** Not always. **FFY 1998:** Substituted with carrot cake.
(Enhanced Food-Based, K-6 only) Were the required servings of fruits and vegetables planned for the week?	85	79.2	**FFY 1997:** No comments. **FFY 1998:** Did not meet requirements on some days. Need an increase in size and variety.

It is apparent from Table 5 that over three quarters of the schools were working toward the goals and standards, except for offering a variety of milk choices and planning the required servings of grains and breads for the week in 1998. It must be

noted here that some RCCIs, such as juvenile detention facilities, are not required to offer a milk choice. Chi-Square tests indicated that there were significant differences in the numbers of the facilities which followed the guidelines and standards and the facilities that did not.

The menu planning system a facility adopted seemed to be a factor in determining if the facility offered a variety of grains and breads, the required servings of grains/breads, and served portion sizes appropriate to the grade/age grouping. The facilities adopting the nutrient based menu planning systems performed better in this respect.

Comparison between the performance of the facilities in FFY 1997 and FFY 1998 indicates that, in FFY 1998, more facilities offered a variety of meat/meat alternate, fruits and vegetables, and grains and breads; and more facilities followed the menu planning principles. The number of facilities which followed the rest of the menu planning guidelines and standards declined, especially in planning the required servings of grains/breads for the week.

Results of the Nutrient Analysis

The USDA set standards, per grade/age grouping, for most of the nutrients to be analyzed in each menu. Averages were set for calories, protein, calcium, iron, vitamin A, and vitamin C. Acceptable levels of fat and saturated fat were set as percentages of calories. No specific standards were set for cholesterol, sodium, or fiber. The Dietary Guidelines recommend limiting the daily value for cholesterol in the diet to 300 mg, and the daily value for sodium to 2,400 mg. The Guidelines recommends a diet rich with a variety of fiber-containing plant foods.

Considering FFY 1997 as a base year for school menus, the results of the nutrient analyses conducted in FFY 1997 are compared with the results of FFY 1998. Improvements in the FFY 1998 school menus over 1997 menus would indicate relative effectiveness in implementing the HSMI in Texas private schools and RCCIs.

Data reported in this section are extracted from the Menu Summary section in the evaluation instrument. The results of analyzing the nutrients and comparing their amounts with standards set for grade/age groupings were reported in the instrument as a "% of Target". This data was used to categorize the amounts of nutrients in the menus as either "On Target" if they were 100% of the targeted amounts, "Above Target" if they were more than 100% of the targeted amounts, or "Below Target" if they were less than 100% of the targeted amounts.

Calories

Figure 12 compares the percent of facilities in FFYs 1997 and 1998 with respect to the amounts of calories in their menus.

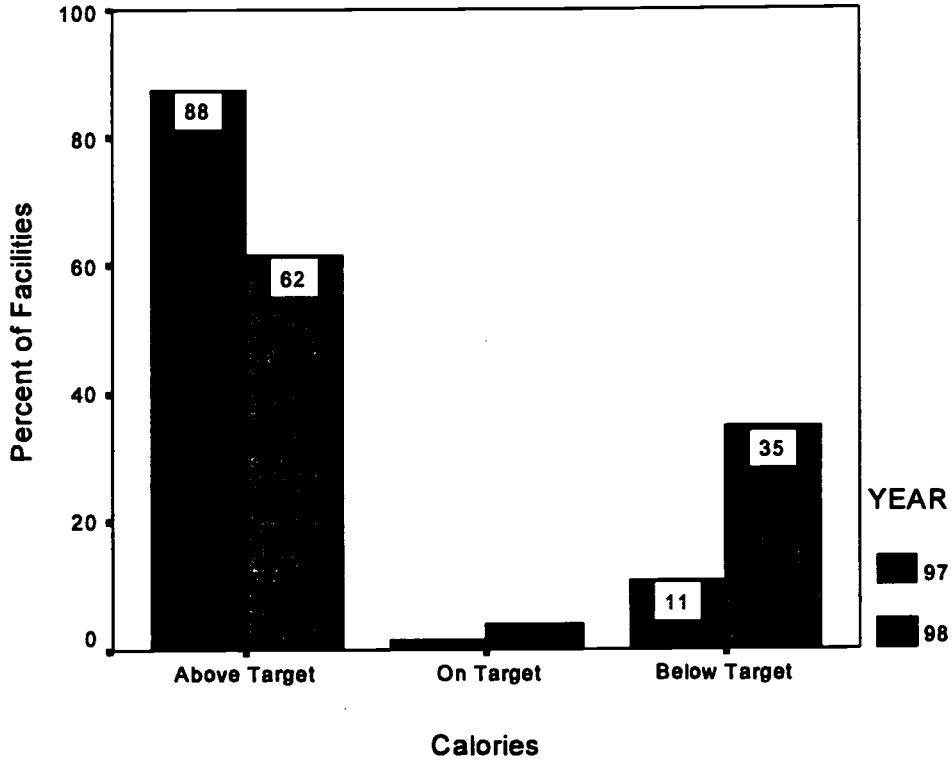

Figure 12. Calories in FFYs 1997 and 1998 Menus

As Figure 12 indicates, the percent of facilities which were on target with respect to the amount of calories recommended increased in FFY 1998. However, it seems that some facilities attempted to reduce the amount of calories that was above target in FFY 1997 but went so far as to switch from being above target to being below target.

Chi-Square tests were conducted to find out if there were differences in the amount of calories due to the menu planning system adopted or the grade/age grouping served in FFY 1997. The results indicated that more calories than recommended were served to pre-school and 4-12 groupings for lunch. Less calories than recommended were served to the 7-12 grouping for lunch (Enhanced Food Based Menu Planning System). This was true in the case of the food based menu planning systems but not in the case of the nutrient based systems.

Iron

Figure 13 illustrates the percent of facilities in FFYs 1997 and 1998 that were on, below, or above target with respect of the amount of iron in their menus.

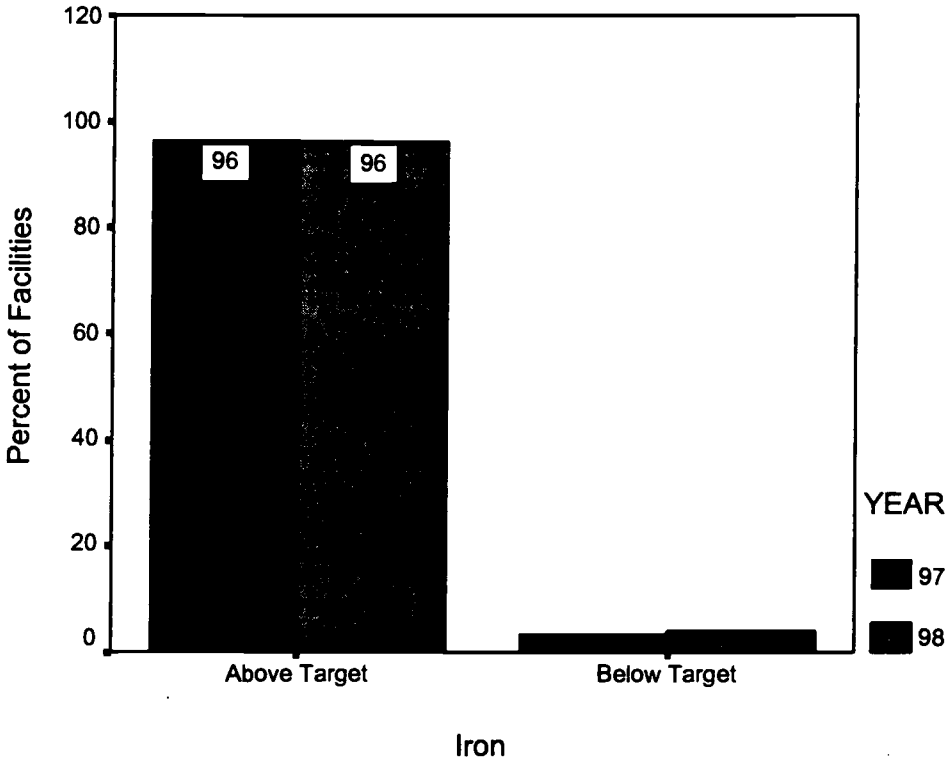

Figure 13. Iron in FFYs 1997 and 1998 Menus

Figure 13 shows that there was no change in the percent of menus which were either above or below the standard set for iron in the FFYs 1997 and 1998 menus. The majority of the facilities in both years served menus that had amounts of iron that exceeded the recommended amount. None of the facilities were on target with respect to iron in both years.

Chi-Square tests were conducted to find out if there were differences in the amount of iron due to the menu planning system adopted or the grade/age grouping served in FFY 1997. The results indicated that more iron than recommended was served to pre-school and K-12 groupings, and less than recommended was served to 7-12 groupings. This was true in the case of the food based menu planning systems but not in the case of the nutrient based menu planning systems. These results coincide with the results found with respect to calories, suggesting that increased calories could have resulted in increased amounts of iron.

Vitamin A

Figure 14 compares the percent of facilities in FFYs 1997 and 1998 which served menus on, below, or above target with respect to the amount of vitamin A.

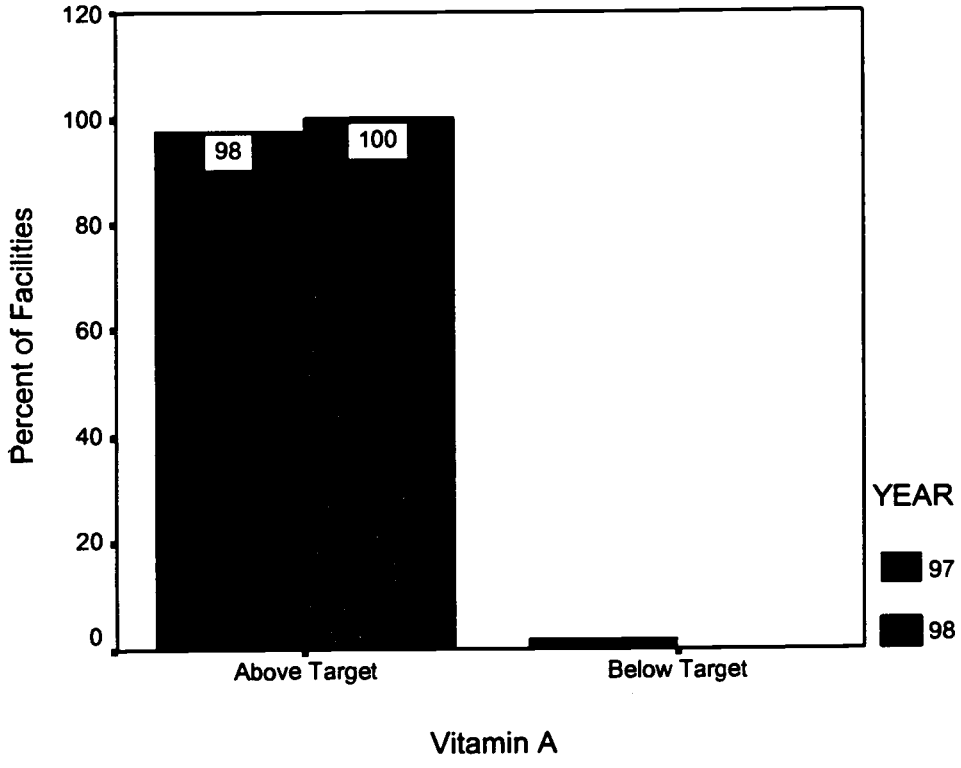

Figure 14. Vitamin A in FFYs 1997 and 1998 Menus

As Figure 14 indicates, there was an improvement in the amount of vitamin A in FFY 1998 menus, as none of the facilities was below target with respect to this nutrient. None of the facilities was on target both years.

Vitamin C

Figure 15 shows the percent of facilities in FFYs 1997 and 1998 that had menus with vitamin C on, below, or above the targeted standard.

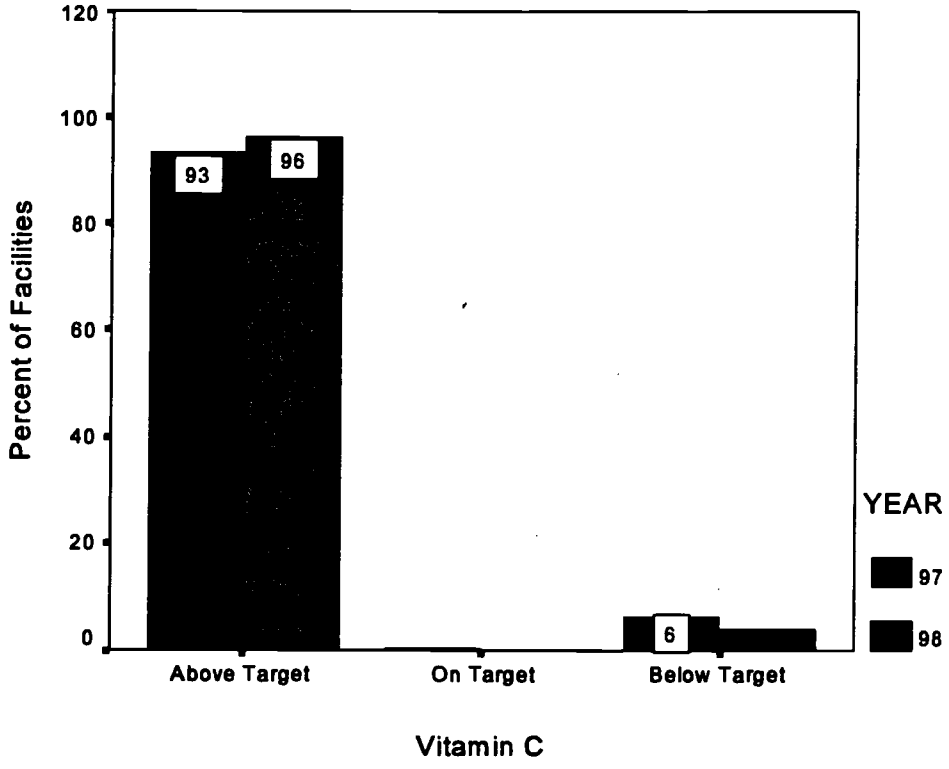

Figure 15. Vitamin C in FFYs 1997 and 1998 Menus

Figure 15 indicates that, as in the case of Vitamin A, smaller percentage of the facilities were below target in the amount of Vitamin C in FFY 1998 than in FFY 1997.

Total Fat

The Dietary Guidelines for Americans and the HSMI standards set the acceptable level of total fat at 30% or less of the total calories in the week's menus. Figure 16 illustrates the percent of the facilities in FFYs 1997 and 1998 which had acceptable or unacceptable levels of total fat in the menus.

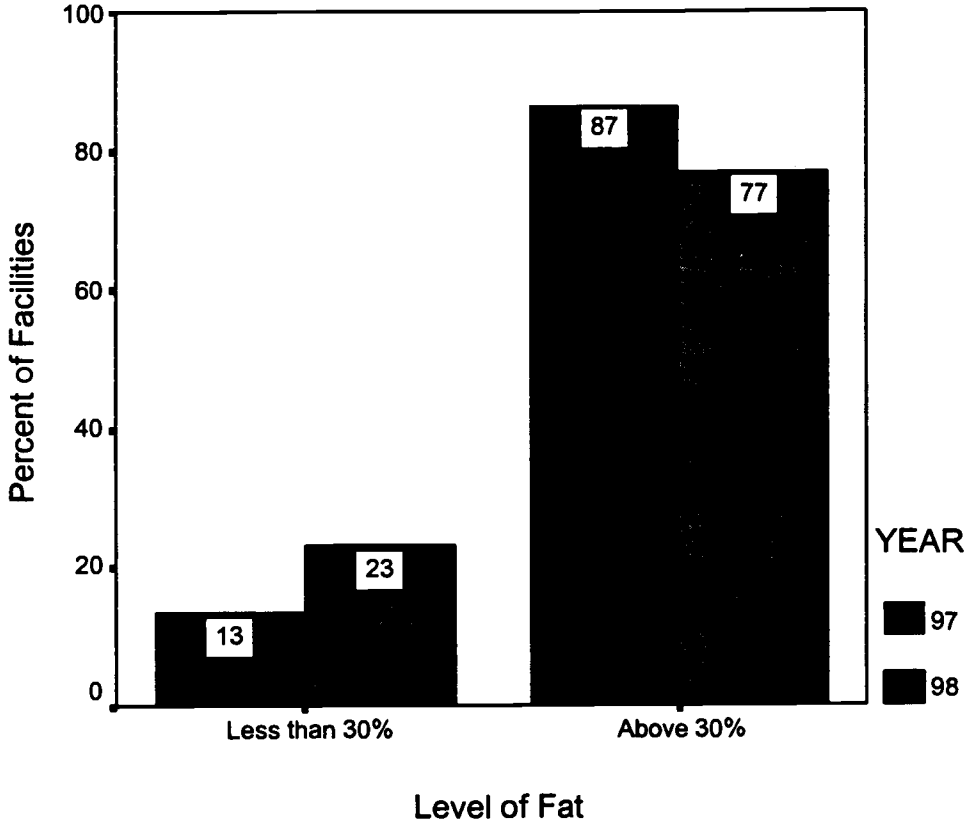

Figure 16. Percent of Calories From Fat in FFYs 1997 and 1998 Menus

Figure 16 shows that there was a successful effort of lowering the percent of calories from fat in FFY 1998 menus compared to FFY 1997. The percent of facilities meeting the standard set for this nutrient, even though still less than one quarter of the facilities, increased significantly than their percent in FFY 1997.

A comparison between the 18 pairs of facilities that were revisited in FFY 1998 indicated that a significant number of these facilities succeeded in lowering the level of fat in their menus to acceptable levels.

Saturated Fat

The Dietary Guidelines for Americans and the HSMI set the standard for the percent of calories from saturated fat at less than 10%. Figure 17 shows the percent of facilities in FFYs 1997 and 1998 which met this standard.

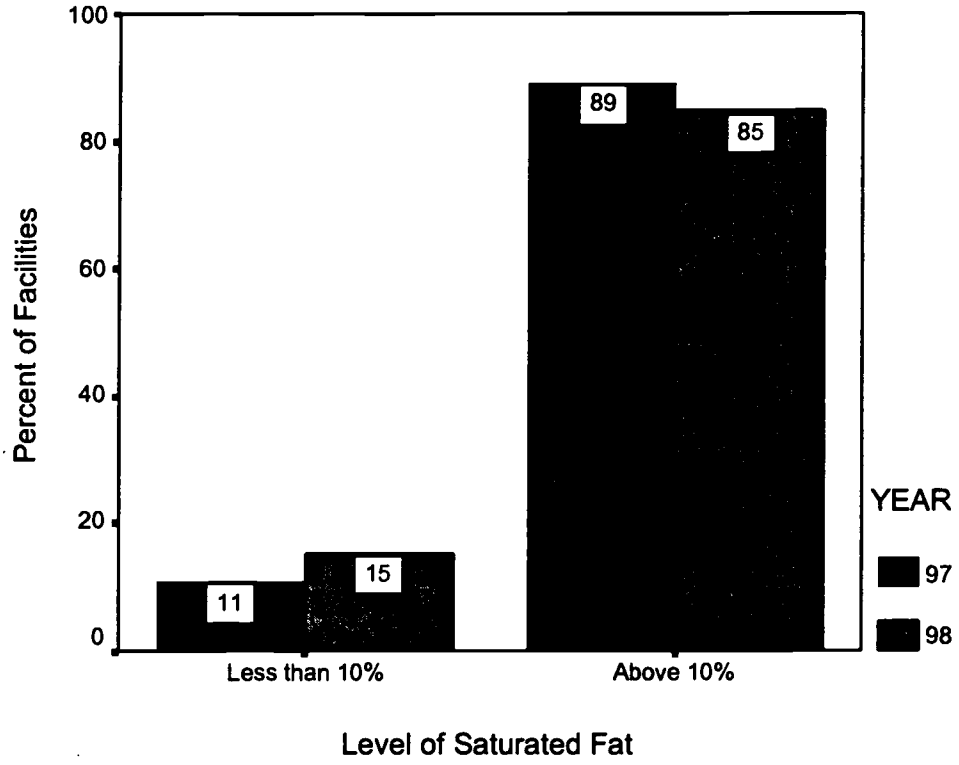

Figure 17. Percent of Calories From Saturated Fat in FFYs 1997 and 1998 Menus

As apparent from Figure 17, the majority of the facilities did not meet the standard for saturated fat in FFY 1997 or FFY 1998. However, the figure indicates that there was an improvement in the percent of facilities that were able to meet the saturated fat standard in FFY 1998. A Chi-Square test indicated that this improvement is significant. Another Chi-Square test comparing the 18 pairs of facilities that were revisited in FFY 1998 yielded the same results.

Nutrients Means

A comparison between the means of nutrients in FFYs 1997 and 1998 menus is shown in Table 7. The comparison is based on the menus of the 18 facilities that were visited in FFY 1997 and revisited

in FFY 1998. It may be noted that one of these facilities switched to the Assisted NuMenus Menu Planning system and was not required to submit a menu for nutrient analysis in FFY 1998. As mentioned above, the values for calories, iron, calcium, vitamin A, vitamin C, and total protein are the % of target. Cholesterol and sodium values are in mg and fiber in grams.

Table 6. Means and Standard Deviations of the Nutrients in FFYs 1997 and 1998 Menus of Revisited Facilities

Nutrient	Year	Number of Facilities	Mean	Std. Deviation	Std. Error of the Mean
Calories % of Target	97	18	109.95	14.09	3.32
	98	17	102.55	14.71	3.57
Cholesterol (Mg)	97	18	96.92	46.41	10.94
	98	17	80.67	30.17	7.32
Sodium (Mg)	97	18	1213.74	397.83	93.77
	98	17	1317.72	549.00	133.15
Fiber (G)	97	18	6.36	1.88	.44
	98	17	5.85	1.62	.39
Iron % of Target	97	18	138.28	27.38	6.45
	98	17	123.05	18.84	4.57
Calcium % of Target	97	18	160.26	18.10	4.27
	98	17	156.40	20.25	4.91
Vitamin A % of Target	97	18	218.79	103.45	24.38
	98	17	195.21	60.71	14.72
Vitamin C % of Target	97	18	226.07	108.18	25.50
	98	17	213.71	77.23	18.73
Protein % of Target	97	18	295.32	45.66	10.76
	98	17	273.46	40.74	9.88
Protein % of Calories	97	18	17.01	1.61	.38
	98	17	16.73	1.92	.46
Carbohydrate % of Calories	97	18	49.74	5.95	1.40
	98	17	50.66	4.76	1.15
Total Fat % of Calories	97	18	35.38	3.08	.73
	98	17	33.50	4.35	1.05
Saturated Fat % of Calories	97	18	13.26	2.16	.51
	98	17	12.82	2.24	.54

Data in Table 6 show an improvement in FFY 1998 menus evident in the decrease in the means of cholesterol, total fat, and saturated fat. There was a decrease in the mean of protein and

increase in carbohydrates. However, the mean of fiber, iron, calcium, vitamin A, and vitamin C decreased, perhaps due to the decrease in the total calories. The mean of sodium increased in spite of the elevated level of that nutrient in the FFY 1997 menus. The high value of the standard deviation indicates that facilities varied greatly in the amount of sodium in their menus.

VII. RECOMMENDED GOALS AND ACTIVITIES FOR IMPROVEMENT

Recommendations for Facilities in 1997

Table 7 includes recommendations for program improvement the reviewers suggested to the 194 facilities they reviewed in FFY 1997, arranged by the number of facilities in a descending order.

Table 7. Recommendations Suggested in FFY 1997

Recommendation	Number	%
Record all necessary information on the production records	76	38.8
Lower percent of calories from fat	70	35.7
Keep labels or ask for product analysis	69	35.2
Standardize the process of food preparation and service	51	26.0
Obtain nutrient analysis for all processed foods	48	24.5
Develop standardized recipes	46	23.5
Additional training is needed on meal components for different groups	41	20.9
Introduce whole wheat bread and other whole grains	39	19.9
Review amounts prepared to ensure sufficient quantities	28	14.3
Offer more variety of fresh fruits	27	13.8
Develop cycle menus	25	12.8
Additional training is needed on production sheets	25	12.8
Additional training is needed on standardized recipes and the Food Buying Guide	22	11.2
Use accurate serving utensils when measuring portion sizes	17	8.7
Offer more variety of lower fat milk	15	7.7

The recommendations in Table 7 may be classified under three main categories: (a) the menus prepared and served, (b) the capabilities to conduct nutrient analysis, and (c) the training needed for improvement. Facilities needed to enhance their

efforts in preparing and serving menus which offer more variety and sufficient amounts of foods. There was also a need to improve the capabilities necessary to conduct accurate nutrient analysis. The facilities needed to train their food service personnel specifically in providing the amounts of nutrients that are adequate for the different grade/age groupings, in developing complete production records, in following standardized recipes, and in using the Food Buying Guide.

Recommended Goals for Improvement in 1998

Table 8 lists the goals recommended for the facilities that were reviewed in FFY 1998.

Table 8. Goals and Activities in FFY 1998

Goal	Activities	Number
Improve production records	Work on completeness and accuracy.	15
	Do it in advance and adjust later.	3
	List portions by grade.	2
	Include all food items on menu.	1
	Use menu item name to identify claimed item.	1
	Acquire copies of records and begin to use.	1
Standardize Recipes	Standardize so many each month/week.	6
	Work to accomplish during summer months.	4
	Use USDA's recipes as a guide.	3
	Modify to reflect changes/substitutions.	2
	Prepare and serve foods based on standardized recipes.	1
	Training is needed.	1
Improve nutrient % in menus	Substitute with low fat alternatives.	6
	Use modified menus as a guide.	2
	Bake instead of frying.	2
	Test monthly to determine acceptability.	1
	Adjust calories in menus.	1
Collect information needed for nutrient analysis	Acquire product analysis/labels from manufacturer.	7
	Maintain a file of product labels and analysis sheets.	4
	Reanalyze menu and plan menu/servings based on the analysis.	1

Table 8. (Continued)

Goal	Activities	Number
Prepare cycle menus	Select most popular menus and develop into a cycle.	5
	Print daily menus and develop into a cycle.	3
	Determine how many weeks are in a cycle.	2
	Plan food items, list on menu, and document.	1
Meet children's nutrient needs	Adjust menus and/or calories.	7
	Include larger portions.	1
	Review and determine if needs are met.	1
Increase nutrition education	Include one nutrition education class per grade.	2
	Educate parents and care givers.	1
Change the menu planning system	Contact your contract manager for consultation on changing system.	1
	Discuss with consultant a menu revision to complete analysis.	1
Provide adequate portion sizes	Ensure each menu meets requirements for reimbursement.	1

Table 8 indicates that, similar to what was recommended for the facilities in FFY 1997, the goals set for the facilities in FFY 1998 were to improve the nutrients and food items on menus, and to meet the nutrient needs of the different grade/age groupings. Facilities capabilities for conducting nutrient analysis also needed improvement especially in the areas of production records and standardized recipes. Nutrition education was recommended for children, and their parents and care givers.

General Recommendations

The following recommendations are based on the results of this report:

Menu Planning and Serving

- Increase variety of food items especially fresh fruits and vegetables, grains and breads, and milk.
- Decrease processed food items especially items of high fat and sodium.

- Tailor amounts of nutrients in menus and portion sizes served to the grade/age groups served.

Capabilities for Nutrient Analysis

- Improve production records
- Develop and use more standardized recipes.
- Use standardized measurements for food preparation and serving.
- Develop and use cycle menus to improve and preserve quality with less effort.
- Put more effort toward collecting product labels and manufacturer's specifications.

Nutrition Education and Training

- Train food service personnel in menu preparation and serving, especially in the areas identified above under ***Menu Planning and Serving***.
- Train food service personnel on how to improve the capabilities for nutrient analysis, especially those listed above under ***Capabilities for Nutrient Analysis***.

- Provide nutrition education for children and parents to increase acceptability of improved menus.

In conclusion, the task of implementing the HSMI in private schools and RCCIs is of concern to the Texas community in general, and the health and nutrition organizations in particular. The SNP needs to provide the private schools and RCCIs with sources of technical assistance in their communities such as local hospitals, school districts, and food manufacturers, in addition to the SNP state and field offices, that may assist them in conducting more frequent nutrient analysis for their menus and provide guidance in menu planning and food service on a more continual basis.

APPENDICES

APPENDIX A

INSTRUMENT USED TO EVALUATE THE HSMI IN 1997

1. SFA:	Agreement Number:
Type of Meal Planning System	Number of Schools in SFA using System:
Enhanced Food Based	
Traditional Food Based	
NSMP	
Assisted NSMP	
Other _____	
Total number of schools	

1. Contact Name/Title: _____
   Address: _____
   Telephone Number: _____
2. Menu Planner(s): _____ ☐ Centrally ☐ School Level
3. Reviewer(s): _____

Food Based (Traditional or Enhanced)

1. School: _____
2. Contact Name/Title: _____
   Address: _____
   Telephone Number: _____
3. Menu Planner(s): _____ ☐ Centrally ☐ School Level
4. Meal Planning Option Used: ☐ Enhanced Food Based ☐ NSMP ☐ Traditional Food Based ☐ ANSMP
5. Reviewer(s): _____
6. Period of Analysis: _____ 7. Date of On-Site Visit: _____
8. Type(s) of Food Service Program
   ☐ Self-Operated
   ☐ Vended _____
   ☐ Management Company _____
9. Type of Site Where Food is Prepared
   ☐ On-Site Preparation
   ☐ Central Kitchen
   ☐ Other _____
10. Ages/Grades Participating in NSLP/SBP _____
11. Age/Grade Grouping(s) Used in School _____
12. Program Reviewed NSLP ☐ SBP ☐
13. Combined B/L Analysis Yes ☐ No ☐
14. Offer vs. Serve Yes ☐ No ☐ (If yes, see instructions.)
15. A La Carte Available Yes ☐ No ☐
16. Adult Meals Yes ☐ No ☐
17. Special Needs Meals Yes ☐ No ☐

Food Based (Traditional or Enhanced)

SFA/School:

Before Nutrient Analysis	Yes	No	Comments
1. Has a nutrient analysis been conducted on the school's menus?			
↳ If yes, was USDA approved software used?			Software _____
2. Are necessary materials available?			
Menus			
Production records including grades/portion sizes			
Standardized recipes			
Manufacturer's specifications/nutrition information of processed foods			
Estimates of a la carte sales and adult meals			
3. Based on available information, can a nutrient analysis be conducted?			

FA/School:

Conduct the nutrient analysis of a minimum of one school week (3-7 days) as defined in gulations. Complete the chart below or attach a copy of computer generated analysis.

NUTRIENT ANALYSIS Date analysis conducted:

Nutrient	Average for Grades K-6	Nutrient Standard for Grades K-6	Nutrient Stahdard for Grades 7-12	Average for Grades 7-12	Nutrient Standard for _____	Average for _____	Meets standard	Needs improvement	Needs significant improvement
Calories (KCal)		664	825						
Protein (g)		10	16						
Calcium (mg)		286	400						
Iron (mg)		3.5	4.5						
Vitamin A (RE)		224	300						
Vitamin C (mg)		15	18						
Total fat		≤ 30%	≤ 30%		≤ 30%				
Saturated fat		< 10%	< 10%		< 10%				
Cholesterol(mg)									
Sodium (mg)									
Fiber (g)									

Comments:

FA/School:

Conduct the nutrient analysis of a minimum of one school week (3-7 days) as defined in gulations. Complete the chart below or attach a copy of computer generated analysis.

NUTRIENT ANALYSIS Date analysis conducted:

Breakfast

Nutrient	Average for Grades Pre Sch	Nutrient Standard for Grades Pre Sch	Nutrient Standard for Grades K-12	Average for Grades K-12	Nutrient Standard for Grades 7-12	Average for Grades 7-12	Meets standard	Needs improvement	Needs significant improvement
Calories (KCal)		388	554		618				
Protein (g)		5	10		12				
Calcium (mg)		200	257		300				
Iron (mg)		2.5	3.0		3.4				
Vitamin A (RE)		113	197		225				
Vitamin C (mg)		11	13		14				
Total fat		≤ 30%	≤ 30%		≤ 30%				
Saturated fat		< 10%	< 10%		< 10%				
Cholesterol(mg)									
Sodium (mg)									
Fiber (g)									

Comments:

SFA/School:

Based on the menus and production records for the period of analysis, determine the following.

Working toward the Goals of the Dietary Guidelines and Nutrition Standards	Yes	No	Comments
1. Did the school:			
offer a variety of meat/meat alternates?			
offer a variety of fruits and vegetables?			
offer a variety of grains and breads?			
offer a variety of milk choices?			
2. Were accepted menu planning principles followed?			
3. Were portion sizes appropriate for grade groupings?			
4. Were the required servings of grains and breads for each grade group planned for the week?			
5. (Enhanced Food-Based only) Was no more than one serving of grains-based dessert credited per day for the grain/bread component?			
6. (Enhanced Food-Based, K-6 only) Were the required servings of fruits and vegetables planned for the week?			

SFA/School:

Obtain and record the planned menu(s) for the day of the on-site visit.

Menu of the Day	Grades Served _____

Based on the menu,	Yes	No	Comments
1. Were planned portion sizes appropriate for grade groupings?			
2. Were portion sizes served as planned?			
3. Were all food items/components used to satisfy meal pattern requirements creditable?			
4. Was no more than one grains-based dessert offered to meet the grain/bread component for the day?			

Review the production record and observe preparation the day of the on-site visit.

Production Records	Yes	No	Comments
1. Are adequate production records maintained?			
2. Do production records reflect production for the day, including menu items, condiments and portion sizes?			
3. Are substitutions correctly recorded on the production records?			
4. Are foods, including processed products, consistent with those analyzed during the period of analysis?			

Review a copy of the recipes used in preparing the menu for the day.

Standardized Recipes	Yes	No	Comments
1. Based on reviewer observation:			
a. Was the food prepared according to the recipe that has been standardized for the school?			
b. Was the food served according to the recipe that has been standardized for the school?			

Interview school staff about nutrition education activities.

Nutrition Education	Comments
1. Describe what is the school/SFA is doing to promote a healthy lifestyle for their students.	
a. Training efforts For school staff For Child Nutrition staff	
b. Nutrition education for students	
c. Team Nutrition?	
d. Outreach efforts (including community, parent organizations, school boards)	
e. Nutrition disclosure?	

SFA/School:	Period of Analysis: Date of On-site Visit:

Recommendation for Program Improvement	Agreed Upon Action for Improvement	Dates

1. SFA:	Agreement Number:
Type of Meal Planning System	Number of Schools in SFA using System:
Enhanced Food Based	
Traditional Food Based	
NSMP	
Assisted NSMP	
Other _____	
Total number of schools	

1. Contact Name/Title: _____
   Address: _____
   Telephone Number: _____
2. Menu Planner(s): _____ ☐ Centrally ☐ School Level
3. Reviewer(s): _____

NSMP (NuMenus and Assisted NuMenus)

1. School: _____
2. Contact Name/Title: _____

   Address: _____

   Telephone Number: _____
3. Menu Planner(s): _____ ☐ Centrally ☐ School Level
4. Meal Planning Option Used: ☐ Enhanced Food Based ☐ NSMP ☐ Traditional Food Based ☐ ANSMP
5. Reviewer(s): _____
6. Period of Analysis: _____ 7. Date of On-Site Visit: _____
8. Type(s) of Food Service Program
   - ☐ Self-Operated
   - ☐ Vended _____
   - ☐ Management Company _____
9. Type of Site Where Food is Prepared
   - ☐ On-Site Preparation
   - ☐ Central Kitchen
   - ☐ Other _____
10. Ages/Grades Participating in NSLP/SBP _____
11. Age/Grade Grouping(s) Used in School _____
12. Program Reviewed NSLP ☐ SBP ☐
13. Combined B/L Analysis Yes ☐ No ☐
14. Offer vs. Serve Yes ☐ No ☐ (If yes, see instructions.)
15. A La Carte Available Yes ☐ No ☐
16. Adult Meals Yes ☐ No ☐
17. Special Needs Meals Yes ☐ No ☐

NSMP (Nu Menus and Assisted Nu Menus)

SFA/School:

Before Reviewing Nutrient Analysis	Yes	No	Comments
1. Is USDA approved software being used?			Software _____
2. Are necessary materials available?			
Nutrient analysis for school week			
Nutrient analysis for each day			
Menus			
Production records including ages/grades/portion sizes			
Standardized recipes			
Manufacturer's specifications/nutrition information of processed foods			
3. Were a la carte sales, adult meals and special needs meals excluded from the analysis?			
4. **(Assisted NSMP only)** Did the State approve the initial menu cycle, recipes and other specifications to determine that required elements were incorporated?			
5. **(Assisted NSMP only)** What entity is conducting the nutrient analysis for the SFA/school?			Entity _____

SFA/School:

Review a printout of the nutrient analysis for the period of analysis. Complete the chart below or attach a copy of computer generated analysis.

NUTRIENT ANALYSIS									
Nutrient	Average for Grades	Nutrient Standard for Grades	Nutrient Standard for Grades	Average for Grades	Nutrient Standard for _____	Average for _____	Meets standard	Needs improvement	Needs significant improvement
Calories (KCal)									
Protein (g)									
Calcium (mg)									
Iron (mg)									
Vitamin A (RE)									
Vitamin C (mg)									
Total fat		≤ 30%	≤ 30%		≤ 30%				
Saturated fat		< 10%	< 10%		< 10%				
Cholesterol(mg)									
Sodium (mg)									
Fiber (g)									

Comments:

FA/School:

Conduct the nutrient analysis of a minimum of one school week (3-7 days) as defined in gulations. Complete the chart below or attach a copy of computer generated analysis.

NUTRIENT ANALYSIS

Date analysis conducted:

Breakfast Nutrient	Average for Grades Pre Sch	Nutrient Standard for Grades Pre Sch	Nutrient Standard for Grades K-12	Average for Grades K-12	Nutrient Standard for Grades 7-12	Average for Grades 7-12	Meets standard	Needs improvement	Needs significant improvement
Calories (KCal)		388	554		618				
Protein (g)		5	10		12				
Calcium (mg)		200	257		300				
Iron (mg)		2.5	3.0		3.4				
Vitamin A (RE)		113	197		225				
Vitamin C (mg)		11	13		14				
Total fat		≤ 30%	≤ 30%		≤ 30%				
Saturated fat		< 10%	< 10%		< 10%				
Cholesterol(mg)									
Sodium (mg)									
Fiber (g)									

Comments:

SFA/School:

Based on the menus and production records for the period of analysis, determine the following.

Working toward the Goals of the Dietary Guidelines and Nutrition Standards	Yes	No	Comments
1. Did the school:			
offer a variety of entrees?			
offer a variety of fruits and vegetables?			
offer a variety of grains and breads?			
offer a variety of milk choices?			
2. Were accepted menu planning principles followed?			

Based on the nutrient analysis for the period of analysis, answer the following questions.

	Yes	No	NA	Comments
1. Are the age/grade groupings used by the school appropriate?				
2. a. Are weighted averages being used?				
b. If yes, are they being used correctly?				
3. Were all menu and food items, including condiments and any food of minimal nutritional value served as part of a menu item, analyzed?				
4. a. After comparing the menu and production records, were any substitutions made?				
b. If yes, were substitutions made with similar foods?				
c. When applicable, were menus reanalyzed when substitutions were made?				
5. Are menus being reanalyzed based on changes in student selections?				
6. Does the data on the nutrient analysis (portion sizes, weights, etc) appear reasonable?				

SFA/School:

Obtain and record the planned menu(s) for the day of the on-site visit.

Menu of the Day Ages/Grades Served _____

Meal Service	Yes	No	Comments
1. Do the serving sizes correspond to the portion sizes analyzed?			
2. Is Offer vs. Serve correctly implemented?			

Review the production record and observe preparation the day of the on-site visit.

Production Records	Yes	No	Comments
1. Are adequate production records maintained?			
2. Do production records reflect the production for the day, including the required menu items (entree, fluid milk and at least one other item)?			
3. Are substitutions correctly recorded on the production records?			
4. Are foods, including processed products, consistent with those analyzed during the period of analysis?			

Review a sample of recipes and locally purchased products used in preparing the menu of the ay and/or during the period of analysis.

Standardized Recipes	Yes	No	Comments
1. Based on reviewer observation: a. Was the food prepared according to the recipe that has been standardized for the school? b. Was the food served according to the recipe that has been standardized for the school?			
Data Entry			
1. Have locally purchased products been correctly entered into the database?			
2. Have the school's standardized recipes been correctly entered into the database?			

Interview school staff about nutrition education activities.

Nutrition Education	Comments
1. Describe what is the school/SFA doing to promote a healthy lifestyle for their students. a. Training efforts For school staff For Child Nutrition staff b. Nutrition education for students c. Team Nutrition? d. Outreach efforts (including community, parent organizations, school boards) e. Nutrition disclosure?	

SFA/School:	Period of Analysis: Date of On-Site Visit:

Recommendation for Program Improvement	Agreed Upon Action for Improvement	Dates

APPENDIX B

INSTRUMENT USED TO EVALUATE THE HSMI IN 1998

School Food Authority Profile

1. SFA: _____

Agreement Number: _____

Type of Meal Planning System	Number of Schools in SFA using System:
Enhanced Food Based	
Traditional Food Based	
NSMP	
Assisted NSMP	
Any Reasonable Method (Describe)	
Total number of schools	

1. Contact Name/Title: _____

   Address: _____

   Telephone Number: _____

2. Menu Planner(s) Name(s): _____

   Menu Planning Conducted: Centrally __ At School Level __

   By a Consultant __

3. Reviewer(s) Name(s): _____

   _____

School Profile

1. School: _____

2. Contact Name/Title: _____

   Address: _____

   Telephone Number: _____

3. Menu Planner(s) Name(s): _____

   Menu Planning Conducted: Centrally __ At School Level __

   By A Consultant __

4. Menu Planning Option Used:

   ☐ Enhanced Food Based ☐ Traditional Food Based

   ☐ NSMP ☐ ANSMP ☐ Any Reasonable Method

5. Reviewer(s) Name(s): _____

6. Period of Analysis: _____

7. Date of On-Site Visit: _____

8. Type(s) of Food Service Program:

   Self-Operated __ Vended: All __ Part __ Management Company __

9. Type of Site Where Food is Prepared:

   On-Site Preparation __ Central Kitchen __

   Satellite Kitchen __ Other __

10. Ages/Grades Participating in NSLP/SBP _____

11. Age/Grade Grouping(s) Used to Plan Menus in School _____

12. Program Reviewed NSLP __ SBP __

13. Weighting Yes __ No __

14. Simple Averaging Yes __ No __

15. Combined B/L Analysis Yes __ No __

16. Offer vs. Serve Yes __ No __ (If yes, see instructions)

17. A La Carte Available Yes __ No __

18. Adult Meals Yes __ No __

19. Special Needs Meals Yes __ No __

Food Based Menu Planning - Nutrient Analysis

SFA/School: _____

Before Nutrient Analysis	Yes	No	N/A	Comments
1. Has a nutrient analysis been conducted on the school's menus? If yes, was USDA approved software used?				
2. Are necessary materials available? Menus Production records including grades/portion sizes Standardized recipes Processed foods information (CN Database/Nutrition Facts Label/Nutrient Analysis Data Form) Food Product Information/Specifications Estimates of a la carte sales and adult meals				
3. Based on available information, can a nutrient analysis be conducted?				

Food Based Menu Planning - Nutrient Analysis (Continued)

SFA/School: _____

Conduct the nutrient analysis of a minimum of one school week (3-7 days) as defined in regulations. Complete the chart below or attach a copy of computer generated analysis.

Nutrient Analysis								Date analysis conducted
Nutrient	Nutrient Standard for Grades K-6	Average for Grades K-6	Nutrient Standard for Grades 7-12	Average for Grades 7-12	Nutrient Standard for K-3	Average for K-3	Nutrient Standard for Grades 4-12	Average for Grades 4-12
Calories (KCal)	664		825		633		785	
Protein (g)	10		16		9		15	
Calcium (mg)	286		400		267		370	
Iron (mg)	3.5		4.5		3.3		4.2	
Vitamin A (RE)	224		300		200		285	
Vitamin C (mg)	15		18		15		17	
Total fat	≤30%		≤30%		≤30%		≤30%	
Saturated fat	<10%		<10%		<10%		<10%	
Cholesterol(mg) *								
Sodium (mg) *								
Fiber (g) *								

*There are no RDA standards established for these nutrients.

Comments:

SFA/School:

Conduct the nutrient analysis of a minimum of one school week (3-7 days) as defined in Regulations. Complete the chart below or attach a copy of computer generated analysis.

BREAKFAST NUTRIENT ANALYSIS							Date analysis conducted:		
Nutrient	Average for Grades Preschool	Nutrient Standard for Grades Preschool	Nutrient Standard for Grades K-12	Average for Grades K-12	Nutrient Standard for Grades 7-12	Average for Grades 7-12	Meets standard	Needs improvement	Needs signific improv
Calories (KCal)		388	554		618				
Protein (g)		5	10		12				
Calcium (mg)		200	257		300				
Iron (mg)		2.5	3.0		3.4				
Vitamin A (RE)		113	197		225				
Vitamin C (mg)		11	13		14				
Total fat		≤ 30%	≤ 30%		≤ 30%				
Saturated fat		< 10%	< 10%		< 10%				
Cholesterol(mg)									
Sodium (mg)									
Fiber (g)									

Comments:

Food Based Menu Planning - Menu Evaluation

SFA/School: _____

Based on the menus and production records for the period of evaluation, determine the following:

Working toward the Goals of the Dietary Guidelines and Nutrition Standards	Yes	No	N/A	Comments
1. Did the school: Offer a variety of meat/meat alternates? Offer a variety of fruits/vegetables? Offer a variety of grains/breads? Offer a variety of milk choices?				
2. Were accepted menu planning principles followed?				
3. Were portion sizes sufficient for established grade groupings?				
4. Were the required servings of grains/breads for each grade group planned for the week?				
5. Was no more than one serving of grains- based dessert credited per day for the grain/bread component? (Enhanced Food Based Only)				
6. Were the required servings of fruits/ vegetables planned for the day? For the week? (Enhanced K-6 only)				

Food Based Menu Planning - On Site Menu Evaluation

SFA/School: _____

Obtain and record the planned menu(s) for the day of the on-site visit

Menu of the Day	Grades served:

Based on the menu and meal service	Yes	No	N/A	Comments
1. Were planned portion sizes sufficient for the established grade groupings?				
2. Were portion sizes served as planned?				
3. Did planned food items/components satisfy meal pattern requirements?				
4. Was no more than one grains-based dessert planned to meet the grain/bread component for the day?(Enhanced food based only)				
5. Is offer versus served correctly implemented?				

Review the production record and observe preparation the day of the on-site visit

Production Records	Yes	No	N/A	Comments
1. Are adequate production records maintained?				
2. Does production record reflect actual production for the day, including menu items, condiments and portion sizes?				

Review a copy of the recipes used in preparing the menu for the day

Standardized Recipes	Yes	No	N/A	Comments
1. Based on reviewer observation:				
a. Was the food prepared according to the recipe that was standardized for the school?				
b. Was the food served according to the recipe that has been standardized for the school?				

Interview school staff about nutrition education activities

Nutrition Education	Comments
1. Describe what the school/SFA is doing to promote a healthy lifestyle for students.	
a. Training efforts : For school staff For school district staff	
b. Nutrition education for students	
c. Team Nutrition activities	
d. Outreach efforts (including community, parent organizations, school boards)	
e. Nutrition information displayed in cafeteria	

Summary of Review Findings

SFA/School: _____

Period of Analysis: _____

Commendations: Progress made toward meeting the Nutrition Standards and the Dietary Guidelines
Areas Needing Improvement:

School/SFA: _____ ____

Improvement Plan for School Meals

Date: _____

Directions:

Column 1: Develop an improvement goal for each finding. ***Column 2:*** Develop specific activities for each goal to improve meal qualities. ***Column 3:*** Identify person(s) responsible for implementing each activity listed in column 2. ***Column 4:*** Set timeframe for accomplishing each activity. ***Column 5:*** Indicate how achievement of each activity will be ascertained.

Goal for Improvement	Activities	Person(s) Responsible	Timeframe	Verification

I have reviewed and agree to this Improvement Plan _____

Signature/SFA

Date

CONTINUATION PAGE (Use as needed)

School/SFA: _____

Page ____ of ____

Goal for Improvement	Activities	Person(s) Responsible	Timeframe	Verification

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ADDENDUM TO ORIGINAL IMPROVEMENT PLAN

School/SFA: _____

Page ____ of ____

Goal for Improvement	Activities	Person(s) Responsible	Timeframe	Verification

I have reviewed and agree to this Improvement Plan _____

Signature/SFA Date

CONTINUATION PAGE (Use as needed)

School/SFA: _____

Page ____ of ____

Goal for Improvement	Activities	Person(s) Responsible	Timeframe	Verification

School Food Authority Profile

1. SFA: _____

Agreement Number: _____

Type of Meal Planning System	Number of Schools in SFA using System:
Enhanced Food Based	
Traditional Food Based	
NSMP	
Assisted NSMP	
Any Reasonable Method (Describe)	
Total number of schools	

1. Contact Name/Title: _____

   Address: _____

   Telephone Number: _____

2. Menu Planner(s) Name(s): _____

   Menu Planning Conducted: Centrally __ At School Level __

   By a Consultant __

3. Reviewer(s) Name(s): _____

   _____

School Profile

1. School: _____
2. Contact Name/Title: _____

   Address: _____

   Telephone Number: _____
3. Menu Planner(s) Name(s): _____

   Menu Planning Conducted: Centrally __ At School Level __

   By A Consultant __
4. Menu Planning Option Used:

   ☐ Enhanced Food Based ☐ Traditional Food Based

   ☐ NSMP ☐ ANSMP ☐ Any Reasonable Method
5. Reviewer(s) Name(s): _____
6. Period of Analysis: _____
7. Date of On-Site Visit: _____
8. Type(s) of Food Service Program:

   Self-Operated __ Vended: All __ Part __ Management Company __
9. Type of Site Where Food is Prepared:

   On-Site Preparation __ Central Kitchen __

   Satellite Kitchen __ Other __
10. Ages/Grades Participating in NSLP/SBP _____
11. Age/Grade Grouping(s) Used to Plan Menus in School _____
12. Program Reviewed NSLP __ SBP __
13. Weighting Yes __ No __
14. Simple Averaging Yes __ No __
15. Combined B/L Analysis Yes __ No __
16. Offer vs. Serve Yes __ No __ (If yes, see instructions)
17. A La Carte Available Yes __ No __
18. Adult Meals Yes __ No __
19. Special Needs Meals Yes __ No __

Nutrient Standard Menu Planning - Nutrient Analysis

SFA/School: _____

Before Reviewing Nutrient Analysis	Yes	No	N/A	Comments
1. Is USDA approved software being used?				Software
2. Are necessary materials available? Nutrient analysis for school week Nutrient analysis for each day Menus Production records including ages/grades/ portion sizes Standardized recipes Processed foods information-CN Data Base, Nutrition Facts Label or Nutrient Analysis Data Form Food Product Information/Specifications				
3. Were a la carte sales, adult meals and special needs meals excluded from the analysis?				
4. (Assisted NSMP only) Did the State approve the initial menu cycle, recipes and other specifications to determine that required elements were incorporated?				
5 (Assisted NSMP only) What entity/individual is conducting the nutrient analysis for the SFA/school?				Entity/ Individual:

Nutrient Standard Menu Planning - Nutrient Analysis (Continued)

SFA/School: ______________________________

Review a printout of the nutrient analysis for the period of evaluation. Complete the chart below or attach a copy of computer generated analysis.

Nutrient Analysis					Date Analysis Conducted:			
Nutrient	Nutrient Standard for Grades K-6	Average for Grades K-6	Nutrient Standard for Grades 7-12	Average for Grades 7-12	Nutrient Standard for	Average for	Nutrient Standard for	Average for
Calories (KCal)	664		825					
Protein (g)	10		16					
Calcium (mg)	286		400					
Iron (mg)	3.5		4.5					
Vitamin A (RE)	224		300					
Vitamin C (mg)	15		18					
Total fat	$\leq$30%		$\leq$30%		$\leq$30%		$\leq$30%	
Saturated fat	< 10%		< 10%		< 10%		< 10%	
Cholesterol (mg) *								
Sodium (mg) *								
Fiber (g) *								

*There are no standards established for these nutrients.

Comments:

SFA/School:

Review a printout of the nutrient analysis for the period of analysis. Complete the chart or attach a copy of computer generated analysis.

Breakfast	NUTRIENT ANALYSIS						Date analysis conducted:		
Nutrient	Average for Grades Pre Sch	Nutrient Standard for Grades Pre Sch	Nutrient Standard for Grades K-12	Average for Grades K-12	Nutrient Standard for Grades 7-12	Average for Grades 7-12	Meets standard	Needs improvement	Needs significant
Calories (KCal)		388	554		618				
Protein (g)		5	10		12				
Calcium (mg)		200	257		300				
Iron (mg)		2.5	3.0		3.4				
Vitamin A (RE)		113	197		225				
Vitamin C (mg)		11	13		14				
Total fat		≤ 30%	≤ 30%		≤ 30%				
Saturated fat		< 10%	< 10%		< 10%				
Cholesterol(mg)									
Sodium (mg)									
Fiber (g)									

Comments:

Nutrient Standard Menu Planning - Menu Evaluation

SFA/School: _____

Based on the menus and production records for the period of analysis, determine the following.

Working Toward the Goals of the Dietary Guidelines and Nutrition Standards	Yes	No	N/A	Comments
1. Did the school: Offer a variety of entrees? Offer a variety of fruits/vegetables? Offer a variety of grains/breads? Offer a variety of milk choices? 2. Were accepted menu planning principles followed?				

Nutrient Standard Menu Planning - Menu Evaluation (Continued)

SFA/School: _____

Based on the nutrient analysis for the period of evaluation, answer the following questions:

	Yes	No	NA	Comments
1. Are the age/grade groupings used by the school appropriate?				
2. a. Are weighted averages being used? b. If yes, are they being used correctly? c. If simple averages are being used, are they being used correctly?				
3. Were all menu and food items, including condiments and any food of minimal nutritional value served as part of a menu item, analyzed?				
4. a. After comparing the menu and production records, were any substitutions made within a 2 week window?				
b. If yes, were substitutions made with similar foods? c. If similar foods were not substituted, were menus reanalyzed? d. If substitutions were made outside the 2 week was a reanalysis conducted?				
5. Are menus being reanalyzed based on changes in student selections?				
6. Does the data on the nutrient analysis (portion sizes, weights, etc.) appear to be correct?				

Nutrient Standard Menu Planning - On Site Menu Evaluation

SFA/School: _____

Obtain and record the planned menu(s) for the day of the on-site visit.

Menu of the Day	Ages/Grades Served:

Meal Service	Yes	No	N/A	Comments
1. Do the actual serving sizes correspond to the portion sizes analyzed?				
2. Is Offer vs. Serve correctly implemented?				
3. Are cashiers correctly identifying reimbursable meals?				

Review the production record and observe preparation the day of the on-site visit.

Production Records	Yes	No	N/A	Comments
1. Are adequate production records maintained?				
2. Does production record reflect the actual production for the day, including the required menu items (entree, fluid milk and at least one other item)?				
3. Are foods, including processed products, consistent with those analyzed during the period of analysis?				

Nutrient Standard Menu Planning - On Site Menu Evaluation (Continued)

Review a sample of recipes and locally purchased products used in preparing the menu of the day and/or during the period of evaluation.

Standardized Recipes	Yes	No	N/A	Comments
1. Based on reviewer observation: a. Was the food prepared according to the recipe that has been standardized for the school? b. Was the food served according to the recipe that has been standardized for the school?				
Data Entry				
1. Have locally purchased products been correctly entered into the database?				
2. Have the school's standardized recipes been correctly entered into the database?				

Interview school staff about nutrition education activities.

Nutrition Education	Comments
1. Describe what the school/SFA is doing to promote a healthy lifestyle for its students. a. Training efforts: For school staff For school district staff b. Nutrition education for students c. Team Nutrition activities d. Outreach efforts (including community, parent organizations, school boards) e. Nutrition information displayed in the cafeteria	

Summary of Review Findings

SFA/School: _____

Period of Analysis: _____

Commendations: Progress Made Toward Meeting the Nutrition Standards and the Dietary Guidelines
Areas Needing Improvement:

School/SFA: _____ _____

Improvement Plan for School Meals

Date: _____

Page ____ of ____

Directions:

Column 1: Develop an improvement goal for each finding. ***Column 2:*** Develop specific activities for each goal to improve meal qualities. ***Column 3:*** Identify person(s) responsible for implementing each activity listed in column 2. ***Column 4:*** Set timeframe for accomplishing each activity. ***Column 5:*** Indicate how achievement of each activity will be ascertained.

Goal for Improvement	Activities	Person(s) Responsible	Timeframe	Verification

I have reviewed and agree to this Improvement Plan _____

CONTINUATION PAGE (Use as needed)

School/SFA: _____

Page ____ of ____

Goal for Improvement	Activities	Person(s) Responsible	Timeframe	Verification

ADDENDUM TO ORIGINAL IMPROVEMENT PLAN

School/SFA: _____

Page ____ of ____

Goal for Improvement	Activities	Person(s) Responsible	Timeframe	Verification

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I have reviewed and agree to this Improvement Plan

CONTINUATION PAGE (Use as needed)

School/SFA: _____

Page ____ of ____

Goal for Improvement	Activities	Person(s) Responsible	Timeframe	Verification

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