

Chapter 9

Evaluating and Modifying Menus and Recipes to Achieve the Nutrient Standards

CHAPTER OBJECTIVES

After reading this chapter, you will understand how to:

- Evaluate how well current menus meet appropriate nutrient standards.
- Evaluate the menus for variety
- Modify the menus to meet the nutrient standards
- Include substitutions in the analysis.
- Decide when to adjust future menus.

Evaluate menus

The final process of nutrient analysis is to evaluate the menus and modify accordingly to meet the nutrient standards.

Review printed daily and weekly nutrient analyses.

1. Review the menus for variety

- Are a variety of meat/meat alternates (including non-processed varieties), offered?
- When choices are not offered, are higher fat entr e items limited to once a week?
- Are a variety of fruits, and vegetables offered daily, especially fresh fruits and vegetables?
- Are grains, including frequent servings of whole grains, offered daily?

2. Evaluate how well the current menus meet the appropriate nutrient standards.

- How do the menus compare to the nutrient standard for the age/grade group(s)? What areas need changes? Which areas are okay?
- Do the menus have sufficient calories, when averaged over the week and on a *daily* basis? Compare each day — look for daily menus that are out of line with the others.
 - ☒ If menus are insufficient in calories, can additional menu items be added or portion sizes increased?
- Are the menus too high in total fat and/or saturated fat? If so, evaluate menus for appropriate changes.
 - ☒ Review recipes for adjustments in fat and saturated fat levels. Could a lower fat ingredient be exchanged for a higher fat ingredient?

- ¥ Can a popular high fat item be served less frequently in a menu cycle or school week?
 - ¥ Can the total number of low-fat or low unsaturated fat food or menu items be increased?
 - ¥ Can the quantity of a high fat ingredient in a recipe be reduced or changed to a lower fat ingredient?
 - ¥ Is a low fat or nonfat fluid milk offered each day?
- Are the menus low in calcium, iron, vitamin A, or vitamin C?
 - ¥ Are more high vitamin A or high vitamin C foods needed? Are fruit and/or vegetables included in each breakfast and/or lunch menu?
- Evaluate menus for sodium, cholesterol, and fiber.
 - ¥ Compare with the last nutrient analysis to see if improvements are being made.
 - ¥ If applicable, compare with the State agency or national guidelines.
 - ¥ Are too many high sodium items, such as processed foods, offered frequently?

3. Review the portion or serving sizes

After making adjustments to how often foods are served, recheck the nutrient analyses. If there are still discrepancies, look at the **portion size** of problem foods next.

- Can a smaller serving of popular high fat, saturated fat foods, or foods high in sodium be offered?
- Can the portion size of a low-fat, nutrient dense food such as fruits, vegetables, and whole grains be increased to meet the nutrient standards?

Using the Nutrient Food Source List

If the nutrient standards have still not been met, search the **Nutrient Food Source List** in the software program to find ideas for menu modification.

KEY

As the percent of calories from fat is lowered, *maintenance of calories* probably becomes the most important nutrient standard. Menu planners need to ensure adequate, consistent calorie levels to meet children's energy and growth needs by keeping daily calories close to the standard. Serving too much food and too many calories one day and too little food and too few calories on another day may average out, but a real disservice is done to students whose energy and growth needs cannot be met on days when too few calories are offered.

This list suggests foods that might be added or substituted in menus in order to increase the amount of a particular nutrient found to be below the nutrient standard in the week's breakfasts or lunches. For example, if your weekly menu is still high in fat and low in iron, a database search may be conducted for a list of vegetables that contain less than 3 grams of fat and also at least two milligrams of iron.

When replacing a food, be sure that the levels of the other nutrients in the menu are maintained. After deciding which foods to change and/or which foods to add to the menu, nutrient values need to be recalculated and compared to the nutrient standards.

Reprint Appropriate Reports for Re-analysis

After modifications have been made, print out the appropriate reports to review the new nutrient analyses. If nutrient targets have still not been met, continue the process described above until the nutrient standards have been met.

Re-analysis of Menus for Substitutions for NSMP and ANSMP

Substitutions

Occasionally it may be necessary to make a substitution to a planned menu due to various reasons such as food shortage, improper delivery from vendors, or effective use of leftovers. This is a concern because:

- Substitutions *change* the nutrient content; and
- Meals *may or may not* continue to meet the nutrient standard(s).

When food substitutions are made due to an emergency situation (e.g., food shortage), it may be impractical for menu planners to revise menus and recalculate nutrient amounts, especially if the emergency arises just prior to the menu being prepared. For this reason, USDA regulations require a school district or school on NSMP to reanalyze **if the substitution is known prior to two weeks before the menu is served**. If the SFA is on one of the food-based menu planning systems but conducts its own nutrient analysis **and** wants the State agency to accept the SFA's nutrient analysis for the SMI review, it too must follow the two-week window guideline.

Two-Week Window

If the need to serve a substitute item or leftovers occurs prior to a two-week window before the day the original menu item is to be served, the week's menus *must* be re-analyzed to determine if the nutrient standards will be met with the substituted item, or if other changes will be needed to meet the nutrient standards.

When using NSMP or ANSMP to plan reimbursable meals, SFAs are expected to make substitutions only due to unforeseen circumstances. Remember, reimbursable meals are based on the ability to meet the nutrient standard(s). Some examples include:

- Food shortage (food not delivered);
- Improper delivery (incorrect product delivered),
- Crop failure (food unavailable);
- Significant cost increase in food items; and
- Effective use of leftovers (see discussion on page 106 of this chapter).

KEY

The two-week “window” is the two-week period before the day of the menu item substitution. Example: Creamed corn is planned for the menu to be served on Wednesday, November 19. The two-week window for this menu will begin on Wednesday, November 5.

The two-week window is defined as when the *menu planner* becomes aware of the need to make a substitution. For example, the two-week window is from the date the SFA is made aware by a vendor that a food item will not be delivered to schools. If a food item is shorted upon delivery to a school, without notifying the central office, the two-week window occurs whenever the school learns of failure to deliver. It is recommended that SFA staff include immediate notification of inability to deliver in the general conditions of the food bid.

Re-analysis Protocols:

- If the need for a substitution is known more than two weeks before the menu date, or **outside the two-week window**:
 - ☒ Re-analyze; and
 - ☒ Meet the nutrient standards

- If the need for a substitution occurs **within the two-week window**:
 - ☒ No re-analysis is required; and
 - ☒ Substitute with a similar food.

KEY

If a food is substituted that is not a similar food— even within the two-week window—a re-analysis should be done.

Similar Foods for Substitution Within the Two-Week Window

For the purposes of NSMP, a similar food will mean that the substitution meets both the following criteria:

- Plays the same role in the meal, for example:
 - ☒ Entree
 - ☒ Other menu items (side dishes)**and**

- Is from the same food group (breads, fruits, vegetables, etc). Every effort should be made to substitute a like food within a food group, i.e., a citrus fruit for a citrus fruit, a leafy green vegetable for a leafy green vegetable, etc.

Menu planners are encouraged to monitor substitutions and re-analyze the menu if, in their judgment, the nutrient standards would no longer be met. If the standards are not being met, additional training with staff should be done to reduce substitutions.

All USDA-approved software has a nutrient food source search capability that can be used to search for foods with comparable nutritional contributions. For example, if there is a need to substitute a food for one that served as a high source of vitamin C, with fat limitations, the user can search for a new food with specified milligrams of vitamin C, and less than specified grams of fat.

Theme Bar Substitutions

When substitutions occur on a theme bar, the same rules apply as for a regular lunch, that is, the two-week window applies to substitutions of food items on a theme bar. If knowledge of the need for a substitution occurs prior to two weeks before the service of the menu, the recipe must be modified to reflect the substituted ingredient and the modified recipe used in the menu analysis. If the need for a substitution occurs within the two-week window prior to the meal service, no re-analysis is required; but the substituted item should be similar to the planned item.

Documentation of Substitutions

SFAs must document the date the need for the substitution was known and what was substituted, so State agencies may determine during an SMI review, if the SFA followed the requirements for re-analysis based on the two-week window. Some SFAs work out a system for having schools document substitutions directly on the printed menus. SFAs may also want to consider development of a substitution form for documenting substitutions or using the sample substitution form included in Appendix L.

KEY

It is recommended for SFAs on NSMP/ANSMP, that training be conducted to stress the importance of not substituting unless an emergency arises. Many SFAs require prior approval from the central office before a school can make a substitution.

The substitution list should be maintained at the school level(s) and at the central office. The central office would record instances where notification was received from the supplier that the food product would not be delivered to the schools.

Leftovers

Leftovers also can change the nutrient content so that meals may no longer meet the nutrient standards if there are frequent leftovers that are offered in subsequent menus. Menu planners are reminded that NSLP regulations require schools to consider participation trends in order to *provide one reimbursable lunch* for each child each day. Every effort should be made to reduce the amount and frequency of leftovers. A challenge for schools is to make effective use of leftovers while maintaining the integrity of the nutrient analysis.

Suggestions for Leftovers:

If the quality can be maintained, leftovers may be frozen and used when the menu item is *on the planned menu again*. If not, the leftovers may need to be served within the school week by substituting for another menu item or may be used as a substitute at a later date. The same two-week window rules apply to leftovers as apply to substitutions.

Schools are cautioned that any leftover not frozen for reuse should be discarded or used within a safe period. Bacteria continue to grow even under refrigeration.

Documentation of Leftovers

A simple way to document leftovers is to indicate the leftovers directly on the menu production record or on a special form such as the substitution form. Documentation should include amount of leftover(s) such as number of servings, numbers of pans, etc.; how leftover was dispensed (frozen for later use, thrown away, served next day, etc.).

Adjusting Future Menus

The menus have now been planned, evaluated and modified as needed. Before the menu is used again, SFAs using NSMP and ANSMP may need to re-analyze/re-adjust the menus for weighted analysis if there are significant changes in participation or projected production. The actual participation and the actual number of menu items served in reimbursable meals (recorded on the production record, with a la carte and adult meals subtracted) should be compared to the numbers planned. If the differences are such that production numbers need to be adjusted, then the menu should be re-analyzed using the new numbers.

Additionally, menus need re-analyzing whenever:

- Menu/food items change;
- Food products change, including commercially prepared products;
- Recipes change; or
- There is any change that will affect the nutrient content of the meals, such as a change in foods selected, which changes the weighting.

Getting Help

Any questions that may arise about food items, recipe analysis, and/or menu analysis that have not been addressed in this manual should be communicated to your State agency.

SFA TIP

At a minimum, your schools' food production records should be aggregated at least twice a year to see if the weighting is still reflective of what's actually being selected.

