

For cost-effective program operations, programs providing meals to older individuals need to know the total cost of the meals they are serving to their participants. There is much confusion relative to meal cost with the following terms: “total meal cost,” “food cost,” “reimbursement rate,” “contracted rate,” and “negotiated rate.” Often these terms are used incorrectly. Even when the terms related to meal cost are used correctly, there is inconsistency in how programs calculate their meal costs. Accurate meal cost calculations are not only necessary for efficient use of available resources, but they are also needed if programs wish to sell meals to other organizations or programs.

BACKGROUND

Calculating accurate costs for both program food costs and total meal costs is important for successful long-term program operations in today’s competitive environment. As the population throughout the United States continues to age, there will be increasing demand for both congregate and home-delivered meal services as more older individuals will want to stay in their homes.

Programs are facing challenges on two fronts. As the demand for their services is increasing, many programs are finding that the government funding that they have relied upon is increasingly limited, relative to the number of participants they need to serve. At the same time, the increased demand for services is drawing for-profit firms into this market. Thus, programs are now operating in a competitive market and are needing to “bid” for the right to provide meal services to the older individuals in their communities. To be competitive in this market, programs must have accurate costs and must understand the relationship of the costs they incur to the meal services they are providing, or hope to provide, to program participants.

Inaccuracies in meal cost accounting can potentially lead to:

- ✓ Inaccurate budget planning.
- ✓ Shortfalls in projected revenue resources.

- ✓ Inability to meet the community need for services.
- ✓ Poor operating controls needed to identify inefficiencies and product waste that contribute to excessive meal costs.
- ✓ Inability to compete with other non-profit or for profit on nutrition service contracts.

These inaccuracies and inefficiencies may also lead to the failure of a program when the program costs consistently exceed the funding resources available to the program. Not only will a program lack the funds needed to prepare and serve meals, but poor management of costs is also likely to contribute to lower meal quality and lower client satisfaction with the program. When programs are trying to “stretch” their funds, the tendency is to try to save on costs by buying lower quality products and/or by “cutting” portion sizes for the meals to try to make the available food “go further.” Such actions significantly impact meal quality and participant satisfaction and often cause persons to withdraw from the program or loss of contracts.

As calculating food and meal costs correctly requires good communication between the persons managing the food operations and the program’s accounting personnel, a common understanding of basic accounting terminology is necessary when calculating food and meal costs.

FOOD COST CALCULATIONS

Food cost is the cost of only the food used to prepare meals served to a program’s participants.

- ✓ A program preparing its own meals would include ONLY food, and not any other costs, such as the cost of packaging or cleaning supplies, when calculating food cost.
- ✓ A program purchasing prepared meals would use the per meal cost paid to the meal provider as their “food cost” when calculating their total meal cost.

To calculate food costs, a program needs to inventory their food supplies and calculate the value of that inventory on a periodic basis, such as a month. Computer-based inventory management systems are recommended, though the inventory will also need to be periodically taken manually so that the actual physical inventory on hand can be reconciled with the computer-based inventory.

The inventory should be valued on the basis of any one of the standard valuation methods accepted by the Internal Revenue Service. The program's accountant should be able to determine the most appropriate valuation method for a particular program's operations. A detailed discussion of inventory valuation methods can be found in the text by Dittmer & Keefe, 2009 (see reference list).

$$\text{FOOD COST} = \text{Beginning Inventory} + \text{Program Purchases} - \text{Ending Inventory} +/\text{- Adjustments Inventory}$$

Adjustments would include anything that is either added to the food supply for participant meals or which reduced the supply because the food was used for other purposes. Examples of adjustments would be food used for employee meals or served to volunteers. Contributions of foods to the program would also be an adjustment. Food lost to spoilage or waste would be included in food cost. Such loss is NOT an adjustment to food cost. Careful inventory management and control of food production operations are important ways for programs to manage their food costs.

TOTAL MEAL COST CALCULATIONS

Total meal cost includes ALL costs associated with the production and service of meals to program clients. Both direct costs (e.g., food, packaging) and indirect costs (e.g., administration costs, insurance) must be included in these calculations. The costs to be included will vary with each program.

All direct costs, such as raw food or the cost of purchased meals, are included in the total meal cost calculations. If a nutrition program

offers only one nutrition service, e.g., only home-delivered meals, then all of the cost incurred by the program are direct costs and are incorporated into the total meal cost calculation.

However, most nutrition programs offer more than one service (offering both congregate and home-delivered meals). When more than one service is part of a nutrition program's operations, the indirect costs must be allocated proportionately to the services offered by the program. There are several ways that this allocation might be done, such as on the basis of the number of program participants or on the proportion of the building square footage used. Not all of the indirect costs need to be allocated on the same basis. For example, utilities costs might be allocated on the basis of square footage since the more square footage used, the more heating/cooling or electricity (lights) might be used. Other costs, such as management time or computer costs might be allocated on the basis of participant proportion. Programs should work with their accountant to determine the best basis for cost allocation for each of the indirect expenses incurred by the program.

Many programs fail to include the value of volunteer labor or donations received when calculating their total meal cost. However, if these items are not included, the calculated meal cost is less than the actual cost would be if the program had to employ paid labor to do the work done by the volunteers or purchase the items that were donated to them. When the total meal cost is calculated to be a lower amount than it actually is, the program is less likely to be able to negotiate a rate with funding agencies that allows them to recover, or nearly recover, their full cost of providing that meal. The situation becomes even more serious if the program contracts to provide meals to another entity and sells the meals at a price which is less than the sum of their direct and relevant indirect costs to produce the meals. In this situation, the program will be subsidizing the other entity's operational costs with funds they have acquired to produce and serve meals to their own participants.

COSTS TO BE CONSIDERED IN TOTAL MEAL COST CALCULATIONS

- ✓ A program purchasing prepared meals would use the per meal cost paid to the meal provider as their “food cost” when calculating their total meal cost.
- ✓ Raw Food (program prepares its own meal)
- ✓ Purchased meal cost (program purchases prepared meals)
- ✓ Paid food service labor (including labor for meal transport)
- ✓ Utilities
- ✓ Kitchen supplies
- ✓ Kitchen equipment
- ✓ Meal packaging supplies (include cost of meal transport containers)
- ✓ Building costs (rent, mortgage, repairs, maintenance)
- ✓ Management costs (management and other non-foodservice staff salaries and benefits)
- ✓ Operating costs (office supplies, insurance, taxes, office equipment, computers, communications)
- ✓ Professional fees (consultants – dietitian, legal, tax/accounting, other professional costs)
- ✓ Transportation (including any program vehicles)
- ✓ Training – staff development
- ✓ Donations (food supplies and any other donations)
- ✓ Volunteer labor value

To calculate the value of volunteer labor, it is first necessary to determine what an equivalent job title or description would be for the work the volunteer is doing. Then the local prevailing hourly wage for that job title needs to be determined. Once that information is available, the value of volunteer labor hours can be determined using the following formula. The value of donated food, supplies, equipment or space would be valued at the current retail value for the donated item.

REIMBURSEMENT RATES

CONTRACTED OR NEGOTIATED

It is important to remember that a program’s total meal cost is NOT the same value as the program’s reimbursement (contracted, negotiated) rate. While the total meal cost should be an accurate reflection of what it actually costs a program to produce and serve a meal to a participant, the reimbursement (contracted, negotiated) rate is the amount that a program negotiates with a funding source (usually a government agency, but may also be a private funding source). This rate is not likely to be the same amount as the program’s total cost per meal and will permit a full cost recovery.

CONCLUSIONS

In today’s rapidly changing environment, accurate calculations of total cost per meal is essential to a program’s long-term “survival” and its ability to effectively meet the needs of an ever-growing number of participants. Accurate costs are needed for negotiating contracts with Area Agencies on Aging and/or other government agencies, as well as non-governmental funding organizations such as healthcare payors. Accurate costs are also related to the support of outcomes measures. If accurate costs are not known, programs cannot determine ways in which cost savings might be realized and/or cannot evaluate the extent to which actions taken have resulted in cost savings to outcomes measured.

Programs are encouraged to review their current food and total meal cost accounting practices. Where appropriate, programs should take steps to modify those practices, as needed, to enable them to have accurate cost information.

CALCULATING THE VALUE OF VOLUNTEER LABOR HOURS

(Prevailing Hourly Wage for Job + [Hourly Wage x Program’s Fringe Benefit Rate]) x Total Volunteer Hours for This Job

STANDARD FOOD SERVICE DEFINITIONS

Food Costs - The actual cost of just the food used to provide participant meals.
Food Cost = Beginning Inventory + Purchases - Ending Inventory +/- Any Adjustments
(Adjustments might be items such as food used for employee meals or donated foods.)

Total Meal Cost - The cost of all expenses associated with the production and service of meals to program participants. Costs would include the cost of food, labor, supplies, and an appropriate portion of all other program operating costs.

Food Cost Per Meal - The food cost/meal = the total food cost for a time period, such as a month, divided by the total number of meals prepared during that time period. (Note: The total food cost is divided by the total number of meals PREPARED, not the total number of meals SERVED.)

Total Meal Cost Per Meal - The total meal cost/meal = the total meal cost for a time period, such as a month, divided by the total number of meals prepared during that time period.

REIMBURSEMENT RATES

CONTRACTED OR NEGOTIATED

The amount per meal which a government funding agency or other funding source will pay to a program for each qualifying meal SERVED by the program. The contractor may or may not reimburse a program based on total cost, but may base it on what they consider a reasonable rate. This is an important distinction that providers must consider when agreeing to a reimbursement rate.

FOR MORE INFORMATION

Dittmer, P.R. & Keefe, J. D. *Principles of Food, Beverage, and Labor Cost Controls*. 9th Ed., Hoboken, NJ: John Wiley & Sons, Inc., 2009.

Identifying and Valuing In-Kind. Technical Assistance Memorandum AAA-TA200. Texas Department of Aging and Disability Services. <http://www.dads.state.tx.us/providers/AAA/communications/TechnicalAssistance/AAA-TA200.pdf>

Laube, J. & Shuster B.K. *Uniform System of Accounts for Restaurants*, 8th Ed. Washington, D.C.: National Restaurant Association, 2012.

Tools for Community Based Organization. The SCAN Foundation. <http://www.thescanfoundation.org/tools-community-based-organizations>

STANDARD ACCOUNTING TERMS

Variable Costs - Costs that increase or decrease with changes in volume. *For example: Food or meal packaging costs and some labor costs.*

Fixed Costs - Costs that are not affected by the volume of goods or services produced. *For example: Building or equipment costs; the program manager's salary.*

Direct Costs - Costs that are easily traced to a specific product or product line. *For example: Food or meal packaging costs or the costs of kitchen cleaning supplies.*

Indirect Costs - Costs that are incurred for multiple projects/programs and not easily attributed to a specific project/program. These costs must be allocated in some way to each project/program. *For example: Site manager's salary or utility costs.*

Overhead - Term commonly used to refer to fixed or indirect costs, depending on the situation.

Sunk Cost - Existing expenses that will be incurred regardless of whether or not the opportunity to market meals or services to other agencies or organizations is implemented by a program. *For example: Building costs or executive administrator's salary.*

Relevant Costs - Future expenses that will be incurred only if the opportunity to market meals or services to other agencies or organizations is implemented by a program. *For example: New food purchases or additional packaging.*

Margin - The difference between the total cost of an item, such as a meal, and the selling price of that item. The margin is the "profit" that is earned on the sale of each item (meal). It is the amount earned from the sale which can be used in support of the program's primary mission.