

APPRAISAL OF FOOD COST CONTROL RECORDS
IN SELECTED HOSPITALS
AS A BASIS FOR A SYSTEM IN A 200-BED HOSPITAL

by

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INTRODUCTION

The administrative functions of the hospital dietary department, aside from clinical responsibilities, are said to be the serving of nourishing, appetizing meals to patients and personnel and the provision of this service "as economically and efficiently as possible."
(41, p.1)

Dietary department expenses consume approximately one-fifth to one-sixth of the operating budget of the average hospital. (39, p.779) The dietary department is second only to nursing service in daily cost to the hospital.

The 1951 issue of the American Hospital Association's "Administrators' Guide" gives the total expense figure in 1950 for all the country's hospitals as \$3,600,000,000. On the basis of 20 per cent of this sum allotted to dietary department expenditures, the dietitians and other hospital food service managers are responsible for approximately \$700,000,000 yearly.
(13, p.112)

In 1954, the total expense figure had risen to

\$5,229,040,000. (3, p.5) On the same 20 per cent basis, dietary department expenditures would rise to \$1,045,808,000.

In the individual hospital these expenses are usually broken down into three general groups--food, labor, and operating costs. West and Wood state that: "Food is the largest controllable item of expenditure and the one subject to the greatest fluctuation in the budget of the institution food service." (42, p.480)

A recent study (33, p.112) on dietary costs in five hospitals of one city indicated the following breakdown percentages:

Raw food cost	55.3 per cent
Salaries	35.4 per cent
Other direct expenses	3.8 per cent
Allocated expenses	<u>5.5</u> per cent
Total expenses	100.0 per cent

At the 37th annual meeting of the American Dietetic Association in 1954, Dr. Albert W. Snoke, director of the Grace-New Haven Hospital and a member of the American Hospital Association Council on Professional Practice, placed the following capabilities at the head of the list for the successful hospital dietitian:
(22, p.170)

Good accounting procedures
Cost analysis and control
Business management
Purchasing knowledge

Food cost control has been defined by Radell as "scientific management used to attain the primary purpose of the nutrition department through its application to materials, methods, and personnel." (35, p.112)

Any reliable system aimed at the control of costs while simultaneously maintaining quality necessarily involves cost analysis, which in turn is dependent upon good accounting procedures.

"Food cost accounting is record-keeping relating to the procurement, storing, handling, preparation and serving of food." (29, p.379)

The place of records in control of food costs is stressed throughout all institutional food service literature.

"Records and their use are a part of scientific management and, therefore, play an important role in food cost control." (35, p.112)

The following functions of cost records have been suggested: (43, p.98)

1. Guide to current food usage
2. Information on daily food cost and per ration cost
3. Data for precosting menus

4. Amounts of individual foods required in a given period
5. Seasonal variations in use of foods and price trends
6. Means of maintaining perpetual inventory
7. Aid in prevention of loss and theft
8. Guide in planning for expenditures

The ultimate objective of the use of cost records has been stated very simply by Gillam: "Controlling costs by managerial methods means simply that every possible means for eliminating waste is considered . . ." (17, p.368)

Literature related to hospital food cost control studies can be divided into three groups:

1. Basic texts including material pertaining to the hospital food service, but not limited to that area and/or not limited to the hospital field. (2, 4, 14, 34, 42)

2. Books, pamphlets, and manuals, published by the American Hospital Association and the American Dietetic Association, dealing exclusively with the financial side of hospital food service. (1, 15)

3. Journal articles outlining basic procedures and/or describing systems developed and successfully used in individual institutions. These articles are written by dietitians, hospital administrators and

consultants, purchasing executives, and accountants. They probably represent more advanced thinking and practice in food cost control than is currently common in the hospital field. A few of the best of the papers produced between 1945 and 1949 have been compiled by the American Hospital Association in their "Readings In Hospital Dietary Administration." (16, 17, 21, 29)

Of food cost accounting procedures in general the American Hospital Association's "Food Service Manual" says:

The best method of food cost accounting is one which is simple and inexpensive to operate and which gives the information desired by management. No single system is applicable to all institutions. The system selected for the individual hospital should meet the needs of that institution and should provide usable information for controlling departmental expenditures." (2, p.262)

The purpose of this study was to determine (1) how detailed a system is most applicable to the 200-bed hospital, and (2) what forms currently in use are most adaptable to record-keeping in an institution of that size.

METHOD OF INVESTIGATION

To obtain data on current practices in food cost accounting, 18 hospitals in the states of Oregon and Washington were visited during the months of June and July, 1956. These hospitals were selected on the basis

of size and membership in the American Hospital Association.

Information on bed capacity and type of management was--unless otherwise stated--obtained from the 1955 issue of "Administrators' Guide". This book is published yearly by the American Hospital Association in connection with the journal "Hospitals."

After obtaining basic information in three hospitals, a schedule of questions was prepared as a guide for further appointments. These questions were drafted to draw out pertinent information on personnel involved and methods employed in cost control, starting with menu planning, and extending through purchasing, stockroom control, preparation and serving of food, and accounting procedures.

Special attention was given to the forms used in record-keeping.

The 18 hospitals, ranging from 93 to nearly 500 beds, were divided according to size into four groups, as shown in Tables I and II.

REVIEW OF LITERATURE ON RECOMMENDED PROCEDURES

To obtain an overall picture of the most advanced practices in hospital food cost control systems, a survey of the following journals was made, covering publications from January, 1948 to July, 1956:

"Hospitals," the "Journal of The American Hospital

Association," "Hospital Management," "The Modern Hospital," and "Journal Of The American Dietetic Association." This survey indicated the following recommended procedures:

I. Simplicity and Economy

Observance of simplicity and economy are essential while maintaining adequate control. It is of no value to spend one dollar on salaries and record forms to save ninety-eight cents in food.

Hart states that:

However many facets there are to tap on a cost control system, the essential requisites may be summed up briefly in three points:

1. The system must be practical...that is, it must not interfere with the working routine.
2. The system must give sufficient detailed information on which to base correction measures. A good system will give summary figures on which to base action. Business pays off in action, not in figures.
3. The cost of the system must be considerably less than the saving effects.
(20, p.98)

Hedgecock criticized many of the current forms in use:

The chief criticisms of the various forms which were examined were the variety in the size and shape, the lack of uniformity of the forms, the difficulty in the keeping of the forms, and the bulkiness which must result in the filing over a period of time. The simpler the forms, the smaller the percentage of

error. (21, p.309)

II. Completeness in Organization of Cost Control Functions

Kotschevar lists five basic steps in control: menu construction, recipe interpretation, purchasing procedures, production control, accounting and records. (28, p.60)

Maschal names ten commandments of successful food cost accounting: (29, pp.379-383)

1. Complete, accurate inventories
2. Printed market quotation form
3. Record of foodstuffs received, including quality and grade
4. Matching of vendors' quotations with later charges on invoices
5. Effective requisition system
6. Record of transfers between units
7. Permanent file of recipes and records of kitchen tests
8. Meal census
9. Daily cost report
10. Pre-cost control

Radell lists the following records as needed in maintaining control: (35, pp.112-116)

1. Menu sheet
2. Quantity recipes

3. Price quotations
4. Purchase order
5. Food requisition
6. Meat tag
7. Purchase record
8. Perpetual inventory
9. Physical inventory
10. Daily food cost report
11. Special function cost sheet

III. Completeness and Accuracy of the Information Obtained From Records

Esperson states that:

The fewer direct charges there are, the more rigid the control can be and the more accurate the daily figures on costs. (11, p.69)

He insists that: ...to be of any value, the food control system must be thorough enough to show the accurate food cost for each type of meal served, rather than just an indiscriminate general average.

The foundation of such a system is the maintaining of a minimum set of records which show and control the food costs from the time of purchase through every step to the serving of the food. (11, p.69)

Sigmond suggests that:

It would even be better to have the food subclassified into storeroom items and perishables, and further subdivided into classes of food . . . (39, p.781)

Accuracy of the records of food consumption in any given period is dependent upon the basic system used in recording. A report by Robinson points out this fact:

. . . our newly installed food cost control system gave us a direct check on true food cost per month within ± 1 per cent. From the erratic nature of our own curve before the system was installed, as well as the curves of the other hospitals studied, we believe that they are not usually accurate within ± 12 per cent, and between two months can appear to vary 25 per cent for no reason at all. This great fluctuation in our case was due to all prior accounting being based on food purchased instead of food actually consumed. (37, p.112)

IV. Length of Time

The shortest possible time in making records available for use.

Killenberg says that: "The food cost per meal served should be available to the administrator and dietitian each morning for the previous day."

(27, p.112)

Esperson declares that: "If food cost accounting is to serve as a tool in the control of food costs, it must be on a daily basis. Otherwise, excessive costs, and the reason for them, may be detected only after the inefficiencies have already cost the hospital an appreciable amount of money." (12, p.114)

And Radell points out that: "When records are

kept in the nutrition department rather than in the financial office . . . they are more likely to be used instead of being looked upon merely as a part of a routine and an abstract procedure." (35, p.112)

V. Use of the Budget as a Control Measure

Gillam says:

The extent of operational control held by the dietitian determines, in large measure, the efficiency with which the dietary department functions. But control over the department is difficult unless it is linked with a device for providing this control. That important device is the budget. (16, p.385)

Scovil explains the use of a budget in the hospital:

When the usage or consumption of materials and supplies by departments and operations is predetermined on a logical and sound basis and such estimated costs are then compared with the actual costs (charges obtained from the stores requisitions) to the departments, an excellent control is effected. (38, p.93)

VI. Development of the Menu as a Primary Means of Cost Control

West and Wood state that: "Menu planning is the first and perhaps the most important step in the controlling of food costs." (42, p.484)

McKinley declares that: "The person responsible

for menu planning makes decisions which eventually determine the food to be purchased, the food to be prepared, . . . the proportion of income which will be spent for food." (31, p.847)

Kotschevar emphasizes that: ". . . the menu, in a large measure, decides what the food cost is going to be." She also believes that: "Proper menu planning requires that the menu writer know the portion cost of every item to be placed on the menu." (28, p.60)

Kahn believes that: "For basic economy and efficiency, the menu maker must be familiar with the items which are available on the market and make allowances for delivery of preferred, quality items from distant markets." (24, p.81)

VII. Meal Census

There are two schools of thought on meal census methods. One method, suggested by Kotschevar, recommends keeping of an actual count of all meals. (28, p.60) The other method is suggested by Esperson: "The number of meals served to patients should be obtained from a daily census report sent to the chief dietitian's office from the admitting office." (11, p.69)

VIII. Supervision

Adequate supervision of food production and serving procedures includes the use of standardized recipes and standardized portions.

Gleiser states the consensus in regard to supervision: "The trend in the organization of food departments is to provide continuous alert supervision as a means of reducing hidden costs." (18, p.577)

The importance of portion control is emphasized throughout food service literature.

"To execute a complete program of food cost control, the use of standardized recipes which give accurate portion control is necessary." (32, p.306)

"Portion control is the primary factor in establishing an accurate cost accounting procedure." (6, p.120)

IX. Division of Costs Between Serving Units

Esperson points out that:

This method of food cost accounting shows the relationship of the meals served in the various divisions to the total number of meals, and also the cost of the private patient's meal in comparison with the per meal cost in other divisions. Such data are essential in judging the efficiency of the dietary department."

To obtain a breakdown of cost through such a division, accurate transfer records

must be provided." (12, p.112)

Radell describes a simple method for financial control of the cafeteria. (36, pp.116-118)

X. Purchasing

Literature dealing with the hospital food service indicates a division of opinion regarding purchasing.

West and Wood state that:

The dietitian is ultimately responsible for the quality of the product served and for the financial stability of the food service operating under her supervision. If she can give the time during her busy day to attend to all the details involved in the buying of food and related supplies, the dietitian obviously is the one to have charge of the purchase of all food and supervise its storage. However, in large organizations where this is not possible she should cooperate closely with the purchasing agent to the extent of specifying quantity and quality of foods to be purchased and reporting as to the condition of foods delivered. (42, p.487)

Kaufman says that this policy is in effect in most hospitals employing dietitians. "The hospital that is fortunate enough to have the services of a dietitian usually depends on her to determine its food needs because she is trained and experienced in institutional marketing." (25, p.292)

Eck believes that:

Menu making and buying go hand in hand since you cannot make menus without knowing what is available and what it costs, nor can

you buy without knowing what the menus call for.

The pre-costing of menus at current prices is essential in controlling food costs and precedes the purchase of food. (9, p.110)

There is, however, much to be said for centralized purchasing. Hughes calls attention to the fact that the dietitian's time can be spared by the services of a purchasing agent. (23, p.336)

Stevens states that: "Because 'decentralized' purchasing methods actually prohibit accounting controls, it follows that 'centralized' purchasing best suits the hospital anxious to establish break-even procedures . . ."

He suggests the following system in those cases in which provision can best be made for the needs of a department by an individual other than a central purchasing officer:

Centralized purchasing does not necessarily disenfranchise those experts who are best acquainted with the needs of the hospital's various departments. Central purchasing is an authorization and coordination accounting control service rather than a functional buying department. Purchases initiated by a specialized purchasing department may actually be placed by this same department after authorizations and coordinations have been effected through accounting controls . . . (40, p.78)

Carr warns that: "The question of who should determine what to buy is the cause of one of the most

serious perpetual conflicts in hospitals." (7, pp.44-70)

He names 11 major purchasing functions:

1. Determination of needs
2. Procurement
3. Receiving and checking
4. Inspection for technical compliance with specifications
5. Storage and issuance
6. Payment (only in connection with 3)
7. Product research
8. Promotion of simplification, standardization and labor saving ideas
9. Salvaging
10. Assist and advise administration on matters relating to purchasing functions
11. Organize and supervise purchasing department

A questionnaire submitted to a group of eastern dietitians indicates that of 87 who replied to questions on purchasing, 77 per cent purchased meat, and more than 50 per cent purchased staples, canned foods, fresh produce, dairy products, and baked goods.

The area in which there was the lowest percentage of dietitians doing the purchasing is in the sphere of canned fruits, vegetables and staple purchases. In this area a large percentage of the purchasing is done by the purchasing agent, the administrator, the steward, the central purchasing department of a region or city hospital council or by a central supply officer as is common in the veterans hospitals. (10, p.117)

A fact with some bearing on the problem is pointed out by Hansen:

. . . few, if any, purchasing agents in industry need as diversified knowledge as the hospital purchasing agent. He is required to purchase foods, furniture, drugs and chemicals, linens, surgical instruments and supplies, laboratory apparatus, x-ray supplies, office supplies, books, magazines and printing and many types of equipment. (19, p.102)

XI. Inventories and Stockroom Control

Throughout the literature the need for accurate physical inventories is stressed. In the main the keeping of perpetual inventories is recommended except in the very small hospital. Esperson raises a question about the value of the perpetual inventory in many hospitals:

Perpetual inventory records are maintained on food stores in many hospitals. I have seen very few instances where the benefits of this sort of record justify the time and effort put into it. Instead, an efficient stock control can be maintained by taking an accurate monthly physical inventory and reconciling it to the figure obtained by the simple formula: Beginning inventory, plus purchases, less withdrawals. (11, p.69)

West and Wood list the advantages of the perpetual inventory:

. . . to keep losses to a minimum, to minimize dead items, to aid in keeping a daily food-cost record, to keep the buyer informed of goods needed, and to provide an easily available record of total food purchases and issues for a given period. (42, p.464)

Maschal sums up current thinking on stockroom control: "It has long been established as an axiom that all items received should be carefully checked and weighed." (30, p.120)

West and Wood point out that: "Weighing of foods as they are received may make the difference between an acceptable food percentage and one that is far out of line." (42, p.462)

In regard to food issues Maschal says: "Proper storeroom control requires the installation and operation of an effective requisition system." (30, p.120)

XII. Personnel

Routine accounting procedures should be assigned to persons other than the dietitian.

Killenberg believes that:

It is not the function of a dietitian to be a clerk or bookkeeper. It is a waste of time for a person with dietetic training to be required to spend the major portion of her time developing facts and figures that could be recorded by a clerk. The dietitian has a right to expect that daily food costs and daily payroll cost will be prepared for her. (26, p.115)

The "Journal Of The American Dietetic Association" makes this distinction: "Control is the dietitian's function; accounting belongs to the business office--or in a smaller organization to a clerk working

under the dietitian." (8, p.52)

CRITERIA

Criteria used in appraising the systems surveyed were necessarily reduced to three: (1) completeness and accuracy of the record system in showing the cost and distribution of all raw foods purchased; (2) economy of time, materials, and salary expense in purchasing and record-keeping; and (3) availability of records and other pertinent information to the persons responsible for menu planning and administration.

Average meal cost figures of raw food alone or of total meal cost were not used as criteria. Numerous factors affect both of these figures: the level of service and complexity of the menu, the physical plant, and the type and training of employees available. Not all hospitals include the same factors in total cost.

FINDINGS

The survey made of the system used in each of the 18 hospitals covered the following points: budget operation, menu system, method of meal census, supervision, standardization of recipes and portions, allocation of costs between patient and employee food units, facts about

purchasing, receiving, and inventory, method of issuing foods from the storeroom, preparation and distribution of monthly cost reports, and forms used in accounting.

Budget Operation

There was no relationship between size of the hospital and use of a budget in the food service. All the publicly owned hospitals operated on budgets; only one privately owned institution (Group III) used a budget to control costs. Most dietitians, however, stressed the fact that absence of a budget did not mean that food costs were permitted to go out of line.

Menu System

In all hospitals except one, basic menus were made by the administrative dietitians. One hospital employed a trained food service supervisor with extensive experience in the restaurant field. As supervisor of the hospital kitchen, one of her tasks was to make out the menus, which were checked by the chief dietitian.

Eight hospitals used a selective menu, ten a non-selective. There was no apparent correlation between size of the hospital and selective or non-selective menu. (See Table I in appendix).

Among the five hospitals in Group I, ranging from

90 to 125 beds, two used a selective and three a non-selective menu.

Among the five hospitals in Group II, ranging from 126 to 200 beds, three used a selective and two a non-selective menu.

Among the three hospitals in Group III, ranging from 201 to 300 beds, one used a selective and two a non-selective menu.

Among the five hospitals in Group IV, ranging from 301 to 500 beds, three used a selective and two a non-selective menu.

Among the privately owned hospitals eight used a selective and six a non-selective menu. None of the publicly owned institutions used a selective menu.

Meal Census

There was considerable variation in methods of obtaining the meal census. (See Table III in appendix).

In Group I three hospitals maintained a record by actual count of all meals, both patient and cafeteria. Two hospitals maintained no employee food service; of these one multiplied the patient daily census by three, and one took an actual count of patient trays during two meals--a patient present for two meals was reported as having received three.

In Group II two hospitals maintained an actual count of both patient and cafeteria meals; two maintained an actual count of cafeteria meals, but multiplied the patient daily census by three; one maintained an actual count of patient meals, but kept no record of cafeteria meals.

In Group III one hospital maintained an actual count on both patient and cafeteria meals, plus an actual count of between-meal nourishments and a record of newborn infant formulas; the total census included all of these. One hospital maintained an actual count in the cafeteria, but multiplied the patient daily census by three, and added one-fifth times the number of mid-morning free snacks to the cafeteria census, and one-fifth times the number of between-meal nourishments to the patient meal census, to make up the total meal census for the day. The third hospital maintained an actual count on cafeteria meals, but based the patient meal census on a count taken at two meals only--a patient present for two meals was reported as having received three.

In Group IV three hospitals maintained an actual count of both patient and cafeteria meals, but one of the three added one-half times the between-meal nourishment count to the cafeteria meal census. The two remaining hospitals maintained an actual count on cafeteria meals, to which one added the between-meal nourishment count;

both multiplied the patient daily census by three.

Of 13 hospitals reporting on the nourishment census, three maintained no record of nourishments; four maintained a nourishment census of which the whole or a part was added to the meal census; six maintained a nourishment census apart from the meal census.

Ten hospitals reported that the newborn infant formula room was not a part of the food service department; however, one of the ten furnished canned milk for formulas. Three hospitals reported the formula room as a part of the dietary department; in one of the three the number of daily formulas was added to the meal census (Group III, see above). Three hospitals had no obstetrical department; two did not report.

Supervision

Nine hospitals reported supervision during all but midnight meals and/or for a short period early in the morning or just before closing time in the evening. Such supervision was not concerned with the obtaining of supplies, but with food preparation and serving. The information obtained indicated that preparation and serving of all daytime meals except breakfasts (in two of the nine hospitals) were supervised in these nine

institutions.

Use of Standardized Recipes and Portions

Eight dietitians reported the use of standardized recipes; the remainder did not use them for all foods, or gave vague answers indicating that strictly standardized recipes were not in use. Some felt that they could not be enforced in a hospital situation, or could not be enforced in a particular hospital.

Only four reported the use of standardized portions in both patient and employee services; some used them in the cafeteria but allowed patients portions as desired; some felt that "feelings" in the cafeteria were more important than exact portions; some portioned meat only; one said she used standardized portions but needed "to do more work on it."

Allocation of Costs

Only the two publicly owned institutions in Group IV reported allocation of costs between patient and cafeteria services on the basis of foods used. Most institutions allocated costs on the basis of number of meals served or made no distinction between patients and cafeteria patrons. Seven reported no separation of costs; two had no employee food service; three reported that

money received in the cafeteria was subtracted from meal costs and the remainder of the expense charged to patient meals; one reported that in the past an effort to separate costs had been abandoned as not worth the time involved.

Purchasing, Receiving, Inventory

The number of hospitals visited was too small to indicate trends in the personnel concerned with purchasing.

In all of the publicly owned hospitals except one, purchasing was done by a purchasing agent or a central purchasing agency. The exception was a small publicly-owned hospital in Group I, in which the hospital administrator purchased all foods. One other hospital in Group I (see Table V in appendix) used the services of a purchasing agent to provide staples and canned goods; in the remainder purchasing was done by the dietitians. With the exception of the publicly-owned institution, all perishables in Group I hospitals were purchased by dietitians.

Group II included no publicly-owned institutions; in three hospitals all food was purchased by the dietitians; in one all foods were purchased by the purchasing agent; in the remaining hospital, food was purchased by either dietitian or head cook, while the administrator reserved the right to make decisions

regarding any change of brands.

Group III included one publicly-owned institution; of the remaining two hospitals all food in one was purchased by the dietitians, and in the other by the dietitians and the food service supervisor, to whom a part of the function had been delegated by the chief dietitian.

Group IV included two publicly-owned hospitals. In one of the privately-owned hospitals all food was purchased by the dietitians; in the remaining two, perishables were purchased by the dietitians, staples and canned foods by the purchasing agent.

Exact procedures used in receiving foods were not determined because of the number of departments involved in the hospitals visited. The information obtained from the dietitians indicated that each of the 18 hospitals employed some means of ascertaining the quantity and quality of foods received, but that in some of the institutions this phase of supervision was inadequate.

Information obtained on inventory procedures was necessarily incomplete in those hospitals in which purchasing was done by a centralized purchasing department.

Eight of the hospitals reported a perpetual inventory on canned foods or on canned foods and staples. Three reported that they kept no perpetual inventory; one dietitian said she was working toward maintaining an

inventory; one said she maintained a rather informal and not wholly accurate inventory for her own use.

Five hospitals reported taking a monthly physical inventory; ten reported only annual or semi-annual physical inventories.

In the three remaining hospitals physical inventories, other than of perishables and day stores, was not a function of the dietary department, and no information was obtained.

Method of Storeroom Issues

Methods of issuing foods varied among the 18 hospitals.

Requisitions were required and/or issued from the main stockroom made only by authorized personnel in all institutions in which foods were purchased by a purchasing agent or through a central purchasing department. However, in one of these hospitals kitchen stores were open to all food service personnel, and in one they were open to all hospital personnel. These two hospitals were therefore classified (Table V in appendix) as maintaining loose control.

A total of eight hospitals required requisitions to the main stockroom; in seven, foods were issued by authorized personnel without requisitions; in two,

personnel were allowed to obtain their own supplies but were asked to list all foods taken; one allowed daily replenishing of the kitchen stock shelves by the warehouseman without authorization for issues.

Classification--by the terms strict, limited, loose--was made according to actual control of supplies, including kitchen stores. (See Table V in appendix).

Nine hospitals observed strict control of all food supplies, with issues from the main stockroom made only by requisition and/or by authorized personnel; five hospitals maintained limited control with locked storerooms, but allowed some or all personnel at times to obtain the keys; four hospitals maintained little actual control (loose control) over supplies since, if the main stockroom was inaccessible, a liberal supply of daily stores was available to all employees.

To obtain information regarding the accuracy of cost reports the following question was asked: "Do you differentiate food used from food purchased and/or issued in case lots?"

All hospitals in Group I reported food issued only as needed; in Group II one hospital made no distinction, three issued only as needed, one did not report, in Group III one made no distinction, one issued only as needed, one was credited for unused quantities returned to

the storeroom; in Group IV two made no distinction, two issued only as needed, and one required employees to record all food used.

Thus 13 hospitals had the means for an accurate cost record; four had no such means; one did not report.

Preparation and Distribution of Reports

In nine hospitals the dietitian prepared monthly financial statements for her department; in eight hospitals the accounting office prepared these statements. In one hospital the dietitian was uncertain whether any statement was prepared.

In two hospitals in which statements were prepared in the accounting office, the dietitian saw these statements only upon her request to do so, and in a third hospital only if the administrator wished to discuss the report with her.

Accounting Forms

As a whole, the forms studied were disappointing. A number of inventory and stock record forms were noted. Two daily cost sheets and one cafeteria cost sheet were received. Miscellaneous forms, developed for individual situations, were studied. Most monthly reports were typed on plain paper. Some records of importance,

including purchase records and monthly inventory, were maintained on multiple-column bookkeeping or graph paper.

It became apparent, from a study of these forms-- many of which were homemade, that the hospital wishing to develop its own cost control system could easily produce many of its own food cost accounting forms if it wished to do so.

The most common printed forms in use were purchase order forms, requisitions, and stock record forms. Typical of these stock record forms are four shown in Figures 1 to 5 in appendix.

DISCUSSIONS

None of the hospitals carried out all of the currently recommended procedures. However, most of them provided at least one example of control in one or more particular areas.

Hospital 1 was one of the two institutions having a daily cost sheet. The dietitian explained that she had developed the form herself and that it provided the information she wished to use. (See Figure 6 in appendix). This information included a breakdown of direct purchases into food groups, the value of foods received in the storeroom and of foods issued from the storeroom, the value of supplies in the storeroom and issued from the

storeroom, the value of foods issued to other departments, the meal census with a breakdown into patient and employee meals, the cash receipts and the payroll expense. It did not include any information on the between-meal nourishment census nor on the cost of these nourishments.

Hospitals 2 and 5 were among the smallest in Group I. Neither included any employee food service unit. Hospital 2 employed a part time dietitian, who worked about 30 hours a week. Hospital 5 was unable to obtain the services of even a part time dietitian. A head cook supervised the department and assumed responsibility for modified diets. The administrator purchased all foods on the basis of orders submitted by the supervisor. The supervisor stated that she issued all foods from the storeroom, including advance supplies needed in her absence. The administrator remarked that when that system went into effect "we were able to cut down about a third on the amount of food we purchased."

Hospital 3 divided the meal census into solid and liquid meals. The raw food cost of nourishments was calculated and a formula devised for recording the number of "nourishment-meals."

Hospital 4 was one of the smallest hospitals in Group I, but had developed a strict system of inventory control. All issues were made by the dietitian.

A thorough monthly inventory was taken.

Hospital 6 had one administrative and three therapeutic dietitians. Stockroom issues were made solely by the administrative dietitian or, in her absence, by one of the therapeutic dietitians. The dietitian checked menus daily with the food preparation staff, at which time issues were determined. These issues were recorded in a small spiral bound notebook, and later transferred to the stock record cards which were filed in a kardex drawer file. The administrative dietitian stated that she received some criticism for the amount of time spent on routine stock control. She believed, however, that because she was the purchaser for her department, the time was well spent, since it gave her a constant store of information on the raw foods in her control.

The system here was very simple, and the number of forms was at a minimum, since control was centered wholly in one person. With one dietitian per 45 beds, it was possible for the administrative dietitian to handle the work involved. A hospital with fewer dietitians would probably have to employ a clerk, or divide the responsibility among several people. Such a division of responsibility would reduce the effectiveness of the control system.

Hospital 7 maintained no record of employee meals.

In Hospitals 8 and 9 cooks were allowed to purchase some of the foods.

Hospital 10 had developed several time-saving features. The chief dietitian purchased staples and canned foods twice monthly. All storeroom items were listed on mimeographed sheets, in the order of their location in the storeroom. Twice monthly the storeroom was checked, with one of these mimeographed lists, for items in minimum supply, and from the storeroom check list a list of "shorts" was typed by the clerk. On this list the dietitian entered the desired amounts of each item, and the lists were submitted informally to salesmen who entered their bids on the sheets. From these informal bids the dietitian made out her purchase requisitions. Orders were then typed and mailed to the firms from the administrator's office. An initial purchase order to firms supplying perishable products covered future verbal or telephone orders from the dietitian, until such time as the initial purchase order was withdrawn.

Hospital 11 had only two dietitians for 275 beds. The administrative dietitian explained that after five years of work her food cost accounting system was still not fully developed. Her inventory cards were filed in a folding kardex file; this type of file seemed the most convenient to handle of any of the files studied, as long

as the total number of cards was not over 200.

Hospital 12 was the only privately owned hospital in the survey to report budget operation.

Hospital 13 had one problem not found in any of the other institutions in the survey. It provided all the food for another hospital serving 9,000 to 12,000 meals monthly. Although one hospital used a selective menu and the other did not, food costs and/or charges were merely allocated on the basis of number of patient-days in each institution.

Hospitals 14 and 16 divided their food costs between the patient service and the cafeteria, according to the foods used. The system in hospital 16 was bulky and time consuming. Hospital 14 provided two daily food cost sheets, one for the patient service and one for the cafeteria. The baker, who produced foods for both units, estimated the amounts used in the cafeteria and in the patient service, and the two units were charged accordingly.

At the time of the interview, hospital 15 was installing a new stock control system. The materials used were suitable for machine bookkeeping, but one of the dietitians was doing the work by hand. The system was simple and time saving, but the materials appeared to be rather space-consuming.

Hospital 17 provided a usable form for recording

bids. The purchasing agent in this hospital stated that she seldom went into the stockroom, because she wished to impress upon the stockroom clerks the importance of allowing no one among the stores.

Hospital 18, one of the largest of the group, had only one administrative dietitian. This was the only hospital in which actual dissatisfaction with the purchasing department was expressed by the dietitian. She complained that, although she specified a particular quality of food in ordering, she did not always receive it.

No attempt has been made to determine the one best system among the 18 hospitals. The purpose of the survey was rather to determine the trends in cost control procedures, and to select those most applicable to the 200-bed general hospital.

RECOMMENDATIONS

A prototype study, on a national basis, of the 200-bed non-profit, general hospital indicates the average number of qualified dietitians to be four, and the average day's meal census to be 451 to 465 patient meals and 505 to 519 non-patient meals. Three hospitals in five use a selective menu. All recommendations made on the basis of this survey include a consideration of these statistics.

As a result of the survey of food cost control practices in 18 selected hospitals, the following procedures are recommended as applicable to the 200-bed hospital:

1. There should be a selective menu. The actual number of choices offered need not be many, nor expensive, but the sick patient should be allowed at least a minimum number of choices, including choice of vegetable, light or dark bread, beverage, and dessert.

2. The meal census should be maintained on the basis of an actual count of patient and cafeteria meals. This meal census should not include patient between-meal nourishments nor free employee snacks. These items, as well as newborn infant formulas, should be maintained as "nourishment census" or "cost of between-meal nourishments" and "number of newborn infant formulas." Those nourishments and tube formulas which replace normal meals in the patient's diet should be included as one group in the meal census. This group might also include the liquid diets.

3. There should be continuous supervision, by a dietitian or trained food service supervisor, of food preparation and service throughout the day, with the exception of midnight supper.

4. A complete file of standardized recipes should be developed. The recipe form should include both unit

and total cost columns. (See Figure 7 in appendix).

5. A complete standardized portion list should be posted to be used as a guide. Portions adjusted to the patients, within the limits of the patient's appetite and physical condition, are a necessary variation in the hospital.

Cafeteria service of standardized portions on meats and on all foods which are placed on the serving dishes in advance of the meal should be enforced. Whether hot foods served to the moving line should be served strictly on a standardized portion basis or not is a problem of the individual cafeteria. It was the opinion of some of the dietitians interviewed that the feelings of the employees were of more importance to the institution than strict enforcement of standardization, and this attitude would seem to have some logical basis in a non-profit service to personnel. Serving utensils should, however, be standardized for each item in each institution.

6. Division of costs between patient and cafeteria services should be made by the following method:

- (a) All food supplies except direct purchases of the cafeteria should be charged, at the time, to the kitchen.
- (b) All foods prepared by the kitchen for the cafeteria should be charged to the cafeteria on the basis of pre-costed recipes.

- (c) All foods issued from the storeroom to the cafeteria should be maintained in a day store area separate from kitchen day stores.
- (d) The administrative assistant or supervisor in charge of food production should determine, after consultation with the cafeteria supervisor, the amounts of food to be prepared for each unit. The amounts should be determined on the basis of selective menu orders, number of modified and restricted diets, and cafeteria requirements. Once determined, these amounts should be charged to the respective units, regardless of the effect of a decrease in the patient meal census on the final distribution.

(The above recommendations on cost allocation are made after due consideration of the fact that only two hospitals in the group reported a division of costs on the basis of foods used, and that one hospital had discarded the system after a trial. Daily employee meals totaling 500 or more justify an accurate record of costs.)

7. The person responsible for menu making should also be responsible for purchasing of food. This person preferably should be the chief dietitian, who bears the overall responsibility for food costs and food cost control. In her absence the administrative assistant should assume the responsibility.

8. The following purchasing system restrains impulse buying, and does not divorce the purchasing function from a centralized purchasing department, while

at the same time retaining the function in the hands of the person best qualified to handle it.

- (a) An original purchase order for perishables is forwarded by the purchasing department to the selected firm, authorizing acceptance of verbal and telephone orders from the chief dietitian and the administrative assistant, for a specified length of time. At the end of this specified period the authorization is either renewed or withdrawn. All verbal and telephone orders for perishables, made in accordance with this system, are recorded in a confirming record on file in the office of the dietitian.
- (b) Canned foods and staples are ordered on a monthly basis, after receiving a series of informal price quotations. Orders for these items are placed on purchase forms and signed by the chief dietitian and mailed to the selected firms via the central purchasing department.
- (c) All supplies used in common with other hospital departments are ordered through and requisitioned from the central purchasing department. For this purpose the requisition forms used by other departments of the hospital are used by the dietary department also.

9. One person among the kitchen personnel should be appointed to receive incoming goods. This employee should be trained to count, weigh, inspect, and otherwise check all foods received. (It is also recommended that perishables be inspected as soon as possible, after receiving, by the dietitians.

Meats purchased for locker storage should be inspected, weighed, and tagged upon receipt.

10. Daily issue of storeroom foods should be made by one person only (except for relief). Issues should be determined, preferably by the administrative assistant, after consultation with the food production staff and on the basis of a 24-hour period.

These issues should be recorded on a food issue sheet, to be transferred later to the perpetual inventory. There should be issue of unit or case amounts as needed, but over-supply rather than under-supply should be the rule, to avoid any necessity for the obtaining of emergency supplies by unauthorized personnel. Unused units should be returned after the meal to the storeroom, preferably once daily.

11. The following inventories are recommended:

- (a) Perpetual inventory on stockroom items.
- (b) Complete monthly physical inventory of stockroom to form the basis of a monthly food cost report prepared by the accounting office.
- (c) Quick physical inventory daily on perishables to determine current orders.

12. Three reports are essential to control:

- (a) A daily kitchen and food production cost sheet.
- (b) A cafeteria daily report.

- (c) Monthly reports based on beginning stockroom inventory, plus purchases, minus ending inventory.

In none of the 18 hospitals did the accounting office prepare a daily cost sheet. It is suggested that the dietary department prepare daily reports and the accounting department prepare monthly reports.

13. No basis for recommendations regarding the budget was obtained. In three of the four publicly-owned institutions, the budget was obviously regarded by the personnel interviewed as a restriction on needed supplies and materials. However, it may have been the limitations imposed on the budget making function, rather than the budget itself, which produced this attitude.

Some of the personnel responsible for food purchasing in the private hospitals believed that at times they could buy canned foods at lower rates by purchasing a year's supply. The publicly-owned institutions were unable to purchase on this basis because of scarcity of funds during a given period. This particular drawback was not imposed by the fact of the budget itself, but by the system of allocating funds, a system beyond the control of the individual institution.

It seems logical that informal budget procedures should be used in the amounts of specific food groups to be purchased. This method will assure the availability

of sufficient meat, dairy products, green and yellow vegetables, citrus fruits, and cereal products in the daily dietaries of the hospital's captive clientele.

Since development of a food budget is largely dependent upon records of past food consumption, the records included in the system outlined above should provide adequate information to the hospital administrator or dietitian wishing to establish a budget.

The contribution made by the budget to food cost control in the privately-owned hospital is suggested as a topic for further study.

Further study might also be given to greater simplification of the accounting forms used in food cost control.

14. An effort has been made to hold at a minimum the number of personnel directly involved in cost control activities. The following persons would be essential:

Chief dietitian
Administrative assistant
Cafeteria cashier--clerk
Stockroom man--receiver
Accounting office personnel

15. Needed forms include:

- (a) Menu forms.
- (b) Standardized recipe forms--a 5 x 8 card including, along with complete directions, columns for unit and total cost of ingredients and a standardized portion size.

- (c) Monthly meal census--preferably an 8½ x 11 sheet suitable for placing in a looseleaf binder. The nourishment count should be included on this record. In terms of cost, the division of meals into solid, liquid, and weighed would provide sufficient information. (The therapeutic diet office should maintain a record of modified diets by types).
- (d) Cafeteria daily food cost report--only one form for this purpose was received in the survey. This form was less satisfactory than one suggested by Radell and Irwin (36, pp.116-118) which includes the following information: date, totals of storeroom and kitchen orders, direct purchases, total food cost and total sales both today and to date.
- (e) Price quotation sheets--several good quotation sheets were found in the survey; needed information includes the items, specifications, and as many columns for prices as there are vendors making quotations.
- (f) Purchase order and requisition forms--these will be in use throughout the hospital, and should be printed. They will be in triplicate, and will include the name of the hospital, a purchase order or requisition number, space for date, items, quantity, specifications, and signature of person ordering. In addition, the purchase order form will have space provided for terms of sale, shipping and delivery instructions, and the address of the hospital. Several purchase order forms were studied; not all of them included these items.
- (g) Food issue sheet--this will replace the requisition required in institutions in which food purchasing is done by a centralized purchasing

department. Some of the hospitals visited used a requisition for issues of foods stored within the department; if issues are determined by a fully qualified and authorized person the food issue sheet should provide a sufficient record. Two food issue sheets were studied; neither contained space for sufficient information. The following columns are needed: unit, size, number of units issued, number returned, number used, unit and total costs.

- (h) Perpetual inventory card--most of the commercially prepared forms studied were satisfactory; the simplest form is illustrated in Figure I in appendix. Since this card allows more space for vendors than would be needed in the 200-bed hospital, it is suggested that the last two spaces be altered to record maximum and minimum amounts. Several of the printed forms included spacing for recording dates of ordering and receipt of goods. It is suggested that one copy of the purchase order be used for this purpose.
- (i) A 12-column physical inventory record--one hospital used ordinary bookkeeping paper for this purpose; the dietitian found it impossible to take the monthly physical inventory directly onto this size sheet. A looseleaf binder using cut sheets has been used elsewhere, and appears to require less time for recording.
- (j) Daily cost sheet--See Figure 6 in appendix.
- (k) Catering cost sheet--some institutions use the regular hospital requisition forms to order catering service. This, however, is of no help as a permanent record of division of costs. No catering cost sheets were found in any of the hospitals.

- (1) Typed monthly report--no special form needed. This report should be provided by the accounting department.

Of the above recommended forms the ones maintained in more or less permanent form would include: the menu form, the meal census, the recipe, the cafeteria daily report, perpetual inventory card, daily cost sheet, catering cost sheet, and typed monthly report. This involves the filing of two sizes of material--5 x 8 and 8½ x 11.

A fact summed up by Radell must always be kept in mind: "Records in themselves have little value. They must be constantly interpreted and the results used by the dietitian in planning for future operation." (35, p.112)

SUMMARY

Information on food cost control systems was gathered from the dietary departments of 18 selected hospitals in the states of Washington and Oregon. Fourteen privately-owned and four publicly-owned institutions were visited. Special attention was given to the food cost accounting records in current use.

From the information obtained, recommendations have been drawn up as given on pages 35 to 45, outlining a food cost control system applicable to the average 200-bed, privately-owned, general hospital.

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A P P E N D I X

TABLE I

HOSPITALS INCLUDED IN THE SURVEY

Hospitals		Type and Size		No. Dietitians*		Menu
No.	Location	Ownership	Beds	Adminis- trative	Thera- peutic	**
1	Ore.	Private	110***	1½		S
2	Ore.	Private	93	1		S
3	Wash.	Private	116	1	2	N
4	Ore.	Private	100	1		N
5	Wash.	Public	100	0		N
6	Wash.	Private	171	1	3	N
7	Ore.	Private	176	1	1	S
8	Ore.	Private	138***	1		S
9	Ore.	Private	140	1	1	N
10	Wash.	Private	187	3	2	S
11	Ore.	Private	275	1	1	N
12	Wash.	Private	210	2	4	S
13	Wash.	Public	220	1	1	N
14	Wash.	Public	475	3	?	N
15	Wash.	Private	330	4	4	N
16	Ore.	Public	310***	3	3	N
17	Ore.	Private	447	3	4	S
18	Ore.	Private	460	1	4	S

* Where total number of dietitians was less than two, they were classified as administrative.

** S--selective; N--non-selective.

*** Information on number of beds was supplied by dietitian.

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TABLE II

CLASSIFICATION OF HOSPITALS ACCORDING TO SIZE

Group	Beds	No. Hospitals in Group
I	90-125	5 (1- 5)
II	126-200	5 (6-10)
III	201-300	3 (11-13)
IV	301-500	5 (14-18)

TABLE III

METHOD OF MEAL CENSUS

Method	No. Hospitals	
	Patient	Careteria ⁺
Actual count	10	13
Census x 3	7	0
Includes		
nourishments	1	2
No census	0	1

* Two hospitals had no employee food service.

TABLE IV

PREPARATION OF MONTHLY FINANCIAL REPORT
OF THE DIETARY DEPARTMENT

Group	No. Hospitals In Which Reports Are Prepared By	
	Dietitians	Accounting Department
I*	3	1
II	2	3
III	0	3
IV	3	2

* No information on monthly reports could be obtained in one hospital. The dietitian, who had been employed in the institution two years, had never seen a report.

TABLE V

PURCHASING AND STOCKROOM CONTROL

Group	No. Hospitals In Which Foods Are Purchased By				Stockroom Control		
	Staples ¹	Perishables	Staples ¹	Perishables	Strict ²	Limited ³	Loose ⁴
I	4	5	2	1	2	2	1
II	3	3	2	2	2	1	2
III	2	2	1	1	1	1	1
IV	1	3	4	2	4	1	0

¹Canned foods are included.

²Food issued only in response to formal requisitions and/or by authorized personnel.

³Locked storerooms, but employees allowed access to obtain supplies.

⁴Open storerooms.

