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THE INNOVATION OF THE 2+3 MEAL PLAN
IN A 900-BED HOSPITAL

Thesis for the Degree of M. S.
MICHIGAN STATE UNIVERSITY
Sister Ancilla Domenici, S.C.
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ABSTRACT

THE INNOVATION OF THE 2+3 MEAL PLAN IN A 900-BED HOSPITAL

by Sister Ancilla Domenici, S.C.

The purpose of this study is to outline and define the implementation of a new concept in hospital food service at Good Samaritan Hospital in Cincinnati, Ohio. The new concept modified a plan initiated at DePaul Hospital, St. Louis, Missouri, which introduced "five repasts" daily for patient food service. To adequately describe the innovation in their food service schedule Good Samaritan Hospital used the title, 2+3 Meal Plan.

The schedule for the 2+3 Meal Plan is as follows:

- 7:00 a.m. Continental Breakfast, consisting of fruit juices, sweet rolls, cereals, and coffee.
- 10:30 a.m. Brunch, comprised of food selected by the patients from a non-cycled selective menu.
- 1:30 p.m. Nap Snack of fruit, milk drinks, cookies, and/or sandwiches.
- 5:30 p.m. Dinner including foods selected from a 21-day cycled selective menu.
- 8:30 p.m. Sack Snack of fruit, milk drinks, cookies, and/or sandwiches.

This study details the major organizational factors to be considered for affecting change within a limited time. The organizational steps are categorized into five divisions: (1) intra- and inter-departmental communications, (2) development of a selective menu system, (3) purchasing supplies and equipment, (4) personnel adjustments, and (5) planned evaluation procedure. In each of the areas plans are submitted which were essential to department functioning, preparation and service of food, and patient acceptance of the 2+3 Meal Plan.

The most valuable results of the implementation of the 2+3 Meal Plan were:

- Opportunity for developing individual potential by delegating responsibility for planning in specific areas to personnel.
- Promotion of intra- and inter-departmental cooperation vital to introducing such a radical change within a three-month period.
- Tedious routine food pre-preparation tasks replaced by more meaningful jobs because of the introduction of additional convenience food products.
- More efficient utilization of personnel.
- Reduced operational costs.
- Increased patient satisfaction.

THE INNOVATION OF THE 2+3 MEAL PLAN
IN A 900-BED HOSPITAL

By

Sister Ancilla Domenici, S.C.

A PROBLEM

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THE INNOVATION OF THE 2+3 MEAL PLAN
IN A 900-BED HOSPITAL

Introduction

Hospitals have established themselves as citadels of medical services in modern society. To maintain this position in a world buffeted by change, the creative hospital team is constantly praising and redefining ways and means of improving services to patients.

Adapting patients' meal schedules to fit routine nursing care and therapeutic programs has been a traditional problem. Meals served to patients at off-schedule hours following therapeutic programs have necessitated increased work for dietary departments and have caused interruptions to established routines of dietary personnel and the nursing staff. An attempt to bring the needs of the patient and the routine of the hospital into a more efficient pattern, as well as increased labor costs and shortages of personnel, have challenged dietary departments to explore new innovations in food service.

This study outlines and defines the implementation of a new concept in hospital food service at Good Samaritan Hospital in Cincinnati, Ohio. Patient food service is now

structured into a meal plan providing two main meals plus three nourishments daily.

Background Information on Good Samaritan Hospital

Good Samaritan Hospital, established in 1852, is a 900-bed general hospital, owned and operated by the Sisters of Charity of Cincinnati, Ohio. Architecturally, the hospital is an irregular cruciform design, incorporating patient and service areas in a single, four-winged, six-story structure. Included in the services provided are specialty areas in pediatrics and psychiatry.

An Administrative Council, composed of an administrator and four assistants, manages the complex affairs of the hospital which is staffed by 325 physicians and surgeons plus approximately 1,600 professional and non-professional personnel. Educational programs for medical interns and residents, student nurses, dietetic interns, x-ray technicians, medical technologists, and occupational therapists are an integral part of the organization.

Background Information on Food Service

A director plus two assistants manage and coordinate the activities of ten staff dietitians, eighteen dietetic interns, three food service management students, and one hundred and eighty employees of the dietary department.

The director is immediately responsible to one of the four assistants of the hospital Administrative Council.

Food service within the hospital includes trays for patients plus the facilities of a cafeteria and/or coffee shop for hospital employees, physicians and surgeons, and visitors. The central concern of this study is food service to patients.

The Dietary Department of Good Samaritan Hospital has previously met several challenges in patient food service. For example, decentralized food service, accomplished from a total of seventeen areas located throughout the hospital, was replaced in 1961 by a long-planned and almost custom-built, centralized service. For over a period of five years, the traditional three meals a day were served from this highly specialized system operating from two tray-lines. The dietary department assembled and delivered trays to each nursing unit, which in turn distributed the trays to the patients.

Several problems were evident in the meal plan providing three meals daily. These were:

1. High labor turnover among personnel scheduled for early morning shifts.
2. Inefficiency in the utilization of personnel because continuous 8-hour shifts resulted in schedule overlaps of many positions.

3. Continual recruitment of responsible part-time employees needed for increased work loads at meal times.
4. Food waste because patients chose more food from the selective menu than they actually ate when trays were served.
5. Adapting patients' meal schedules to fit routine nursing care and therapeutic programs.

A New Concept

A new concept in food service, Two-Main-Meals-a-Day, was recently introduced at DePaul Hospital in St. Louis, Missouri.¹ The meal plan for this new idea was two main meals served at 10:30 a.m. and 5:30 p.m. Interspersed between the main meals were three "snacks" served at 7:30 a.m., 1:30 p.m., and 8:30 p.m. Through this radical change in the meal plan, the dietary department theorized they would alleviate problems such as "hold" trays for patients undergoing early morning therapeutic programs; delays in early morning rounds by medical personnel while soiled dishes were cleared away from the patients' bedside; wasted food; and traffic jams in corridors and elevators resulting from the movement of trays and food carts at the busiest time of the

¹Sr. Elise, D.C., A unique meal plan - 2 meals a day. Hospital Progress, 54:124-126 (December), 1963.

day. In accordance with the new concept, patients on regular diets were served only two main meals daily plus the indicated nourishments. However, because the label, "Two-Main-Meals-a-Day," implied a decrease in the number of meals served, initial patient response was unfavorable. To counter-act this response, pamphlets stressing increased food selection from a variety of foods and introducing the concept of "five repasts per day" were distributed. Patient reaction improved. In retrospect, the DePaul Hospital Dietary Department concluded its objectives were accomplished and the results were well-worth the effort expended. Both patients and hospital personnel are enjoying the benefits of a smoothly operating program, according to the report.

Motivated by the report of the DePaul Hospital group, the Dietary Department of Good Samaritan Hospital resolved to incorporate a similar meal plan into its own operation. In appraising and evaluating the report, it was readily seen that additional innovations would be possible and beneficial to the efficient operation of their dietary department. Rather than initiate the plan into one section of the hospital at a time as the DePaul Hospital group had done, the dietary staff of Good Samaritan Hospital elected to change simultaneously the food pattern of all patients, including those on prescription diets, to a similar meal plan. To give patients an increased choice in the selection of their

food, a new type of selective menu was incorporated. Also, to more realistically represent the actual food service schedule and to avoid adverse patient reaction, this new concept in food service was given the title, 2+3 Meal Plan.

A time-schedule for serving food under the 2+3 Meal Plan was developed in accordance with the activities of the hospital. This time-schedule was:

- 7:00 a.m. Continental Breakfast, consisting of fruit juices, sweet rolls, cereals, and coffee.
- 10:30 a.m. Brunch, comprised of food selected by the patients from a non-cycled selective menu.
- 1:30 p.m. Nap Snack of fruit, milk drinks, cookies, and/or sandwiches.
- 5:30 p.m. Dinner including foods selected from a 21-day cycled selective menu.
- 8:30 p.m. Sack Snack of fruit, milk drinks, cookies, and/or sandwiches.

Prior to presenting the 2+3 Meal Plan to the hospital Administrative Council for their approval, the dietary staff of Good Samaritan Hospital thoroughly investigated the many facets of the plan. Objectives established to justify the implementation of the new food service plan to the Administrative Council were formulated. These were:

1. Extended morning rest and/or sleep for the patients because partaking of Continental Breakfast was optional.

2. Increased and uninterrupted time for early morning nursing care because dietary department personnel would serve the Continental Breakfast trays to the patients. (This procedure was later modified and one nursing service employee at each nursing unit assists personnel from the dietary department.)
3. Increased selection of food through the use of a new type of selective menu.
4. Improved physiological balance by more frequent food intake.
5. Reduced operational costs within the dietary department.
6. Reduced personnel scheduling problems through use of a reorganized schedule pattern.

The hospital Administrative Council gave their whole-hearted approval to the proposed 2+3 Meal Plan. Therefore, the dietary department proceeded to develop a scheme for implementation of the new food service system.

Intra-Departmental Communications

The implementation of a radically new food service system affects the patients and personnel of every department within the hospital. Basic to the success of innovation is an effective communications system through which the change is explicated and implemented. A viable intra-departmental communications system evolved from preliminary planning by the dietary staff for the transition to the 2+3 Meal Plan. From the intra-departmental communications system, a system for inter-departmental communications was later established. Preparations were also made to inform patients and the community-at-large of the new 2+3 Meal Plan.

Preliminary planning. The organizational plan for implementing the 2+3 Meal Plan was formulated by the director of the dietary department, aided by her assistants and staff dietitians. Many thoughts were elicited from the dietitians using the "brain-storming" technique. The appropriate ideas were incorporated into a pyramidal organizational structure. The organizational structure is illustrated in Exhibit 1.

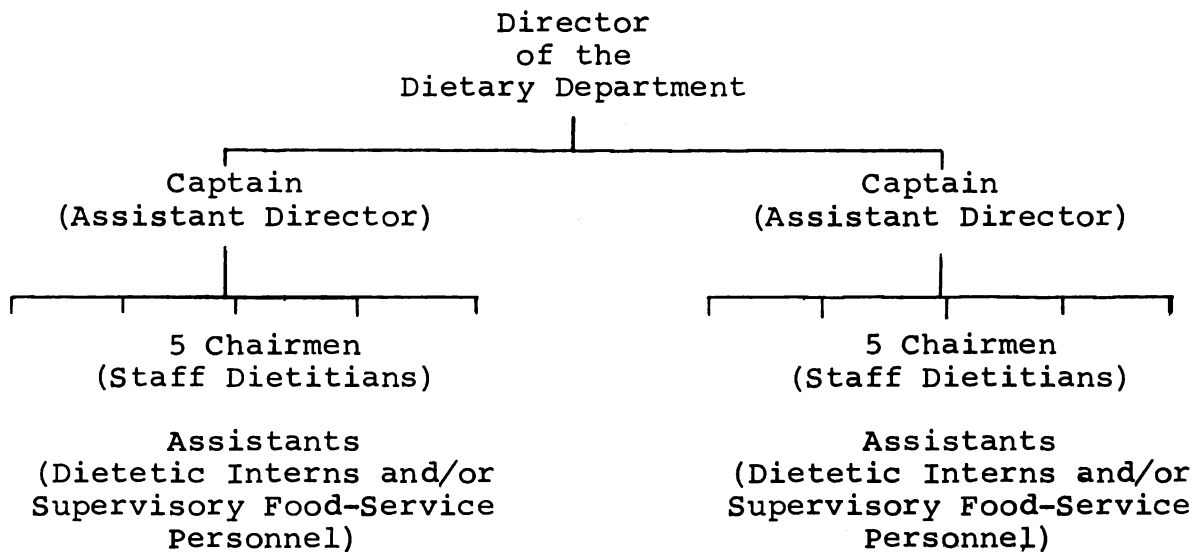


Exhibit 1. Structural organization for planning the innovation of the 2+3 Meal Plan.

The two assistant directors, designated as captains, were directly responsible to the director. The staff dietitians, designated as chairmen, were responsible to an assistant director. Each chairman was assisted by one or more dietetic interns and/or supervisory food-service personnel.

Definite assignments of areas requiring study and/or investigation were selected by each chairman according to her interest and abilities. Menus, costs, as well as preparation and service plans for Continental Breakfast, Brunch, Dinner, and the nourishments; menu format and design; intra-, inter-departmental, and patient communications systems; revision of policies, procedures, and schedules; estimated changes in man hours and equipment; public relations and in-service training programs received intensive consideration.

Frequent, regularly scheduled meetings, as well as many impromptu sessions, effected the two-way flow of information according to the channels outlined in the pyramidal organization structure. The results of the studies, as well as the new ideas which developed as plans progressed, were reviewed and eventually finalized by a steering committee comprised of the director and her two assistants.

The communications system developed for the planning stage of the 2+3 Meal Plan proved very effective. The constant flow of ideas and the results of the studies from many areas permitted simultaneous coordination of all aspects of the plan. Because both professional and supervisory food-service personnel assumed active roles in the development of the plan, enthusiasm and genuine cooperation resulted spontaneously. Improved morale within the dietary department was noted and this, in turn, supported the administrative staff in the smooth and effective implementation of the 2+3 Meal Plan.

Informing employees. After preliminary plans had been developed the employees of the dietary department were informed and instructed concerning their roles in the operation of the food service system. An eight-page policy manual was developed by revising existing policies to fit the needs of the new meal plan. Explanations of the 2+3 Meal Plan and new procedures which had evolved from preliminary

planning sessions were incorporated. The manual later became a basic guide for other departments within the hospital which were affected by the operation of the 2+3 Meal Plan.

Additional steps were taken to provide the employees with a thorough understanding of the 2+3 Meal Plan as well as the roles they would play in its operation. Articles appearing in the intra-departmental publication, "Diet Terry," informed employees of the progress made in the implementation of the new food service system. An in-service training program was conducted during a three-week period with one to three sessions held daily. Small group conferences were held and during these meetings, employees were encouraged to question staff members to clarify individual roles and their comprehension of the 2+3 Meal Plan.

Various instructional methods were used during the in-service training program sessions and group conferences. Visual materials included charts and diagrams to explain different aspects of the plan. Color-coding provided a useful tool in developing visual materials to show proper placement of foods on the tray assembly line. Role-playing by employees and mock-learning sessions stimulated interest and clarified many points. Demonstrations and group discussions were vital to the in-service training program. Individual conferences between employees and their supervisors were

essential to explain revised job analyses and clarify problems.

The results of these procedures proved advantageous. Feedback from employees indicated the in-service training program and mock-learning situations had prepared them to cope with the expected. Unexpected situations often resulted and these were met and resolved by dietitians and dietetic interns. It appeared that employees were motivated in the learning process by the information constantly available to them, insurance of continued employment within the department, the consideration given to their suggestions, and the praise given for accomplishments. The intra-departmental communications system was effective both from the practical and human relations standpoint.

Inter-Departmental Communications

The dietary employee was, in a sense, a captive audience because of his proximity to the planning activities. Informing other departments within the hospital was a more difficult and formidable problem in communications. Not only department heads, but all strata of the organizational structure--assistants, supervisors, professional and non-professional employees, auxiliary personnel--required information regarding the demands and functioning of the 2+3 Meal Plan. The departments contacted were administration, executive board, medical staff, medical education, nursing service,

nursing education, central purchasing, personnel, housekeeping, physical medicine and rehabilitation, x-ray, laboratory, maintenance, volunteers, and chaplains.

As the first step in the inter-departmental communications, the director of the dietary department, her assistants, and/or staff dietitians met with groups of the professional and non-professional staff of the hospital. Meetings were held at any hour and on any day when a number of employees could be reached. At each meeting the 2+3 Meal Plan was explained. Discussions of the changes in policies and procedures necessary for implementation of the new food service system affecting specific departments were followed by general question and answer periods. Problems were anticipated by the dietary staff and potential solutions were voiced. Therefore, theoretical problems later became "no problem" incidents. Although some unanticipated problems did develop during the initial operation of the 2+3 Meal Plan, workable solutions and compromises were enacted through complete cooperation between departments.

Because the radical time-schedule changes of the 2+3 Meal Plan affected the nursing service, laboratory, x-ray, and physical medicine departments directly, additional contact was provided. As an outcome of joint meetings in these areas, more efficient rescheduling of personnel in all departments resulted.

Of utmost importance in the outcome of the 2+3 Meal Plan was effective communication with the medical staff. Although the medical staff unanimously supported the 2+3 Meal Plan, it was necessary to achieve a thorough understanding. In preliminary discussions, the dietary staff proposed meal time-schedule changes for only patients on regular hospital diets. However, once informed of the 2+3 Meal Plan and its many ramifications, the medical staff encouraged meal time-schedule changes for all hospital patients, including those on prescription diets. Hence, all prescription diets were reviewed and written to fit the 2+3 Meal Plan. Diets prescribed for diabetic patients were recalculated in accordance with the new food service system. Therefore, the 2+3 Meal Plan became the only food service system for the patients in the entire hospital.

The element of public relations, a governing force in all communication systems, is often under-estimated. Without a real concern for this persuasive element, little could be accomplished. A backward glance would denote public relations played an important part in all communications relating to the 2+3 Meal Plan, particularly in written material. Many tried and true, as well as new and creative, journalistic tricks were employed to attract and hold the attention of hospital personnel. A synopsis of the 2+3 Meal Plan was reported in the "Newsamaritan," the hospital publication. Also explained in the article, were the patient

benefits of the new food service system, and the role of the hospital personnel in its operation. A special pamphlet, designed by an assistant administrator to announce the 2+3 Meal Plan to patients, was distributed on three consecutive days prior to the scheduled change in food service. Pictures, posters, charts, and news bulletins appeared on bulletin boards throughout the hospital. Their effectiveness in creating interest was indicated by comments from professional and non-professional hospital personnel as well as hospital guests and salesmen. Conversations at meal-times in the cafeteria and coffee shop frequently centered around the 2+3 Meal Plan. Local publicity in the form of a newspaper article² complete with appropriate pictures, served as the avenue of introduction of the 2+3 Meal Plan to the community-at-large. The caption of the article, "Good Samaritan Hospital's New Food Fit For a King," stimulated much interest in the community.

As a climax to the communications campaign, the dietary department served two meals from the 2+3 Meal Plan to selected groups of hospital personnel. A Continental Breakfast was served to the Executive Board; supervisors and head nurses from nursing service; plus personnel from the laboratory, x-ray, maintenance, physical medicine,

²Cincinnati Enquirer, July 2, 1966.

purchasing, and dietary departments. Brunch was served experimentally to the Administrative Council of the hospital. Guests were served tray-style after selecting food from the actual patient menu. Many favorable comments about the meals were received from the participants. Also, on-the-job training was provided for involved personnel.

After the 2+3 Meal Plan had been in operation for several weeks, hospital personnel realized the need for continual communication with the patients. Therefore, an explanatory flier was designed and distributed from the Admission's Office to all in-coming patients. Thus, every new patient is introduced to the 2+3 Meal Plan prior to the service of their first tray.

The success of the 2+3 Meal Plan was partially dependent on the structure of the communications system. The managerial pyramid structure and group meetings encouraged the free flow of ideas throughout all administrative levels. Acceptance of ideas created a favorable milieu. Many suggested procedures and techniques stimulated effective teaching and motivated constructive learning in hospital personnel.

A principle relevant to the communication of change within a system touching many departments and various levels of personnel can be abstracted. The most effective teaching involves both telling and showing. Such teaching results in satisfactory employee performance and total efficient

operational function during the change; informs patients; thus eliminating possible anxiety; promotes cooperation among the entire hospital team based on an informed understanding; and creates a vital, stimulating atmosphere in which change becomes a positive factor in hospital morale. Such teaching is communication at its best.

Selective Menu System

The selective menu system was formulated during the planning stages of the new food service system. Because the menu is the heart of the 2+3 Meal Plan, extensive study and experimentation were necessary for the development of suitable menus. Menus were necessary for five food distributions: Continental Breakfast, Brunch, Nap Snack, Dinner, and Sack Snack. With each food distribution, anticipated patient response, potential problems, and possible solutions based on experience with the conventional three meals a day were considered.

In developing the new selective menu system, the type and variety of nutrients required for each of the five food distributions was determined. Based on the necessary nutritive requirements, menus were written for the general and light-soft hospital diets. These menus provided an overview of the total 2+3 Meal Plan and presented the possibility of uncomplicated extension into the seven prescription diet catagories: restricted sodium, restricted fat, calorie

restricted (diabetic), gastric IV, pureed, pediatric, and calorie restricted with restricted sodium. Therefore, the basic master menu was expanded to include foods required for the prescription diets. This eliminated the necessity of much of the preparation for specialty items for the modified diets.

The large variety of foods available on the newly written selective menus provoked investigation in two additional areas. More equipment was needed, resulting in the purchase of additional stainless-steel insets for electrically heated serving carts. The menu also initiated recipe testing and evaluation to determine the most acceptable products.

Continental Breakfast. The first food served to the patient each day is Continental Breakfast. Unlike the conventional breakfast tray which reached the patient between 8:00 and 8:30 a.m., the Continental Breakfast was served at approximately 7:00 a.m. The menu consists of a 7-day cycled menu offering a selection of fruit juice, sweet rolls, beverages, and additional items required for prescription diets. This service has several unique characteristics: (1) patients are served directly on each floor from a completely equipped serving cart, (2) trays and dishes are totally disposable, (3) less dietary personnel hours are utilized for preparation and service, and (4) the number of nursing

service personnel required for tray service is reduced, thus releasing more nursing personnel for morning patient care.

Because a full, traditional breakfast, including fruit, protein, cereal, and beverage, has almost disappeared in American society, a favorable response to Continental Breakfast was anticipated. The fact that only three conventional breakfast trays were served on the first morning of the 2+3 Meal Plan operation substantiated the projected favorable response. Patient acceptance may also be attributed to the effective instruction before implementation of the new food service system. Adverse patient reaction resulted not from the food served at the Continental Breakfast but from a technicality. White disposable tray service was used. Patient contact and communication through nursing service indicated the use of colored tray service would improve the psychological response of the patients. Colored tray service was subsequently introduced.

An added patient service was experimentally instituted in the x-ray department. Continental Breakfast was served to patients in this department following x-ray treatment. Thus the patient ate immediately, rather than waiting to receive his tray in his room. However, the experiment proved to be neither satisfactory nor profitable. Relatively few patients took advantage of this service. Therefore, the former procedure of serving patients in their rooms following x-ray treatment was restored.

Brunch. The first tray to be served from the tray assembly line and the second food distribution of the day at 10:00 a.m., is Brunch, a combination of breakfast and lunch. Foods are selected from a permanent, uncycled menu. Varieties in the food categories include a selection of eight to ten fruits or fruit juices; six to eight hot or cold cereals; twelve to fourteen entrees; four to six breads or sweet rolls; and four to six beverages. Evaluation of patient reaction indicated that although patients found a satisfactory variety of foods, the addition of soup du jour and a chef salad bowl would be beneficial, accommodating especially the diabetic patients.

Dinner. The most easily implemented section of the 2+3 Meal Plan was Dinner, the second tray served from the tray assembly line. Because the serving time at 5:30 p.m. coincided with the previous system, no personnel schedules for the dietary department or nursing service were radically affected. Moreover, as in Brunch, the dietary department retained the responsibility for tray delivery to each nursing unit, which in turn distributed trays to each patient. Dinner service, a 21-day selective cycled menu, offers a choice of two appetizers, soup or juice; six entrees including items such as beef stroganoff, stewed chicken with dumplings, beef tips in wine sauce, Swiss steak normandy, shrimp or lobster newburg, Swedish meat balls, veal cutlet parmesan,

and soft cooked egg or cottage cheese; five vegetables including two starch varieties; four salads; five desserts including cakes, fresh fruit, puddings, and frozen desserts; as well as a variety of breads and beverages.

The dinner menu was overwhelmingly accepted, probably because of its originality and variety. This factor can be credited to the staff dietitians and dietetic interns. The numerous menus required in a 3-meals-per-day system, tax the creative potential because of the necessary expansion of possibilities over menus for three meals. In 2+3 Meal Plan, however, dietitians were able to concentrate their creativity and expertise in a single main-meal-per-day, thus presenting a fantastic variety and selection each day of the 21-day cycle. Happily, no basic changes in the dinner menu following the implementation of the 2+3 Meal Plan were necessary.

Snacks. Completing the 2+3 Meal Plan were two snacks: the Nap Snack served at 1:30 p.m. and the Sack Snack served at 8:30 p.m. These snacks were designed to complete the 2+3 Meal Plan calling for small and frequent feedings throughout the day. The development of the menus for the nourishment system fell into two phases. Based on the nourishment system used in conjunction with three meals a day, a variety of milk and fruit juice drinks was provided for the Nap Snack. Cookies were offered in addition to the

Nap Snack menu for the Sack Snack. Patient reaction was immediately adverse because foods with increased satiety value were desired by many patients. Consequently the nourishment menus for both snacks were rewritten and more foods were incorporated. In the revised plan a 31-day rotation menu for nourishments featured milk and fruit beverages, sandwiches, fresh fruits, potato chips, cookies, and cake. Patient reaction indicated one remaining problem. Requests for hot beverages were received. At the onset of the new food service system, these were excluded from the nourishment menus because no provision in personnel schedules was made for their delivery. This request is still under consideration and may eventually be realized.

The entire nourishment system is essential to the 2+3 Meal Plan and demands detailed, concentrated organization. In fact, the patient acceptance of these nourishments determines the success or failure of the entire plan. The nourishment system and menus for meals must be planned simultaneously and demand equal consideration.

The nutritive value of the entire menu system--Continental Breakfast, Brunch, Nap Snack, Dinner, and Sack Snack--was calculated. The results showed the standards for nutritional adequacy for all patients could be met by selecting a variety of foods from the menu. Patients could select foods based on their understanding of the basic four food groups or knowledge of nutritional requirements.

The menus developed for the 2+3 Meal Plan proved satisfactory in terms of patient satisfaction and nutritional adequacy. Planning, production, and service were other factors in the successful implementation of the selective menu system.

Purchasing

As preliminary investigations evolved for the implementation of the 2+3 Meal Plan, the vital contribution of the central purchasing department became apparent. Therefore, the dietitian in charge of purchasing worked closely with central purchasing in developing specifications, locating supply sources, and procuring the items required for the operation of the new food service system. Serving equipment and supplies, convenience food items, and printed selective menus were needed.

Because the decision to change from three meals a day to the 2+3 Meal Plan was made several months after the annual budget for the dietary department had been determined, no provision had been made for the purchases deemed necessary. Administrative approval of the 2+3 Meal Plan permitted, a priori, the purchase of needed equipment and supplies. Before any purchases were made many alternative items were considered. Efficiency and economy were the main criteria upon which purchasing decisions were based.

Serving carts. Equipment requirements for the efficient service of Continental Breakfast depend on the structure of the hospital. At Good Samaritan Hospital, eight serving carts were deemed necessary for adequate, effective service. The space requirements for serving carts were calculated. Stainless-steel carts supplying the necessary space were available through a local wholesaler. Each cart was equipped with two stainless-steel thermos beverage dispensers of two- and five-gallon capacities and an ice chest. The two and one-half tiers of each cart provided sufficient storage space for transporting the disposable tray service and food to the serving areas. A pull-out shelf at the side of each cart furnished an area for assembling the trays. The hot cereals needed for prescription diets were dispensed from insulated stainless-steel pitchers. For more functional service, the carts were equipped with small cutting boards, serrated bread knives, and serving tongs.

Disposable tray service. Only a limited selection of disposable tray service items was available through local wholesalers. Tray service items included an oblong tray, 8" x 4-1/2" in size; paper napkin; 8-ounce styrofoam hot drink cup; 5-ounce cold drink cup; individually wrapped plastic tableware; and styrofoam hot cereal bowl. Depending upon the menu selection, and hence upon the number of items served, cost per tray service ranged from five to nine cents.

A comparison with previously used china service indicated a savings of \$450.00 per month, attributable solely to the elimination of employees scheduled to work the early morning shift in the central dish room.

Convenience food items. The dietary department had served a limited number of convenience food items to patients for several years. The dietitian in charge of purchasing investigated the increased use of these items. The simultaneous preparation of food for both cafeteria and coffee shop schedules featuring three meals a day and the 2+3 Meal Plan for patient food service had posed a food production problem. Two possible solutions were: (1) employment of additional personnel for food production, or (2) the introduction of additional convenience food items. Investigation of costs and availability as well as evaluation of food products led to a decision in favor of the latter.

Contrary to the usual menu-writing procedure, menus were written prior to the completion of the investigations on convenience food items. This procedure was undertaken because of limitations in time. When investigations were completed and the information was available to the dietitians in charge of menu-writing, items were selected and incorporated into the menus. These changes in the menus preceeded the implementation of the 2+3 Meal Plan, retaining the original basic framework of the menus.

Chef-o-Bag³ brand entree products were selected because of their similarity to food products prepared from standardized recipes. These items are ready to serve after heating in the boil-in-bags. Other convenience food items including fresh fruits and vegetables were ordered in prepared form, according to the intended use. Items such as pre-peeled, cut potatoes and carrots; cleaned, trimmed, and cut celery; cleaned, sliced radishes, green peppers, onion, and cabbage; citrus sections; fruit salad; and fresh pineapple were used. Convenience food dessert items included such items as cheese cake, apple dumplings, eclairs, strudels, turnovers, and assorted pies.

Convenience items, it should be added, affected both immediate and long-range plans of the dietary department. The purchase of prepared fruits and vegetables permitted the immediate elimination of the central food pre-preparation room. Future plans for remodeling in the dietary department will include additional freezer storage space in the main kitchen area.

Menu printing. The central purchasing department undertook the printing of trial selective menus. Following a three-month experimental period and evaluation by patients and dietitians, the menus were revised to incorporate

³Chef-o-Bag, Holiday Industries, Inc., Minneapolis, Minnesota.

suggestions. The printing of the menus was ultimately contracted to an outside firm. It should be noted, however, that only a three-month supply of menus is requisitioned at one time, thus allowing for continuous revision to utilize newly developed convenience foods as well as the suggestions of patients and dietitians.

Operation of the 2+3 Meal Plan has indicated a future development in the central purchasing department. Because of the close contact between the purchasing dietitian and central purchasing which evolved out of the 2+3 Meal Plan, it became apparent that the duties of the purchasing dietitian could be efficiently transferred to central purchasing.

The central purchasing department played a major role in the implementation of the 2+3 Meal Plan. This department not only investigated sources and supplied items essential to the efficient operation of the plan, but was able to do so within a limited time.

Personnel

The introduction of the 2+3 Meal Plan radically affected both the number and the scheduling of personnel. The total man-hours needed for the tray assembly line and central dish room were decreased while the work load in food production areas was increased during certain hours of the day. Positions on the tray assembly line and the central

dish room were deleted. The increased work-load in food production areas resulted from the simultaneous operation of the 2+3 Meal Plan for patients and three meals daily for non-patient food service in the cafeteria and coffee shop. By rescheduling personnel assignments, the peak serving periods in both food service plans were effectively manned for the service of 800 to 850 patient trays, approximately 1,700 cafeteria meals, and 600 to 700 coffee shop customers daily.

In planning total personnel needs several factors required attention. As a first step in determining the number of personnel, the tasks pertinent to the effective functioning of the 2+3 Meal Plan were incorporated into existing job descriptions and time-activity schedules. In some cases, the tasks were embodied into existing positions and in other instances, new positions were created. Thus, the number of necessary positions was established. Time-activity schedules detailing daily tasks for each position were then written. Planning resulted in the restructuring of twenty-five time-activity schedules in the food production area, twelve in the central dish room, and fifteen in the tray assembly line.

From the time-activity schedules, on-duty and off-duty schedules were drafted. As a result thirteen full-time personnel on a four-week rotation schedule, replaced nineteen full-time personnel who had rotated on a nine-week basis for the tray assembly line. In the central dish room,

two part-time personnel on a four-week rotation schedule, replaced ten part-time personnel who had rotated on a nine-week basis. The ten full-time positions in the central dish room remained constant in number, but the tasks in each were drastically revised. In the food production area only two full-time positions and one part-time position were deleted and rotation schedules remained on a four-week basis. The resulting rotation schedules assured all dietary personnel a free weekend each month.

Each food distribution of the 2+3 Meal Plan required personnel adjustments. Continental Breakfast eliminated the breakfast tray assembly line. With the introduction of the new food service plan, personnel formerly engaged in the breakfast service, either worked on the Continental Breakfast or were transferred to a later shift on the tray assembly. Only one cook was necessary to prepare special diet foods, special food requests, and the cafeteria breakfast service as compared to three cooks on the former meal plan. The most radical schedule change occurred in the central dish room because disposable tray service was used. By using a late straight shift, the majority of the early morning full-time employees eliminated the evening part-time employees.

Brunch presented a major complication and hence a challenge for efficient use of food production personnel. Patients' Brunch service overlapped with food preparation

for the cafeteria noon meal. Consequently, careful planning of the cooks' schedules was necessary. It was evident in the planning that an additional cook would be required to effect the selective menu system or, use of additional convenience food items would obviate the need for increased personnel. The latter alternative was chosen. The majority of the cooks were scheduled for this overlapping peak service time. The tray assembly line personnel reported for duty in time for the brunch service, permitting them as part of their time-activity schedule, to also assume responsibility for the dinner tray service. Therefore, one, rather than two full-time shifts, assumed responsibility for both brunch and dinner tray service.

Because the dinner schedule corresponded in time and menu for both patients' and cafeteria service, only minor adjustments in personnel were necessary. Convenience food items made it possible to increase variety and selection, and simultaneously eliminate the pre-preparation room. The full complement of personnel from the pre-preparation room were transferred to salad, beverage, or bakery areas.

Nap Snack and Sack Snack were two entirely new food distributions offered to all patients. In the planning stages new tasks were foreseen. These were absorbed into established positions in the beverage unit and the tray assembly line. The dietary department prepared both snacks, but distributed only the Nap Snack. Nursing service

personnel distributed the Sack Snack. The Nap Snack distribution was incorporated into four established positions for personnel assigned to the tray assembly line. No established personnel positions existed to absorb the task of distributing the Sack Snack. Rather than establish part-time positions, nursing service personnel assumed the tasks. When evaluation of the 2+3 Meal Plan indicated that additional food with high satiety value was required for the Nap Snack, catered sandwiches were used rather than hire additional personnel to prepare the sandwiches.

As a result of the intensive planning, the total number of man-hours required for the function of the dietary department was greatly reduced. Estimated annual savings in man-hours were 15,834 for the tray assembly line, 674,300 in the central dish room, and 8,944 in the food production area. Hence, the initial planning resulted in a savings of approximately 700,000 man-hours annually. Selection of personnel to be retained by the dietary department was based on tenure, efficiency, loyalty, and adaptability. It was necessary to terminate only four employees who had unsatisfactory chronological work records. Retirements, labor-turnover, and transfers to other departments were the means of handling the thirty-three positions deleted during the implementation of the 2+3 Meal Plan. For the most part, all part-time shifts were eliminated.

The reduction in the number of dietary personnel decreased total wage expenditures. Increased supervisory efficiency resulted by lessening recruitment burdens as well as employee orientation and training hours.

Evaluation Procedure

Evaluation was perhaps the most valuable tool in the initial implementation of the 2+3 Meal Plan. Provisions were made in the planning stage for an immediate three-day evaluation period. It had been decided that changes would be instituted only following group evaluation by the dietitians. To assure prompt action, meetings were thought the best vehicle for this procedure. Immediate communication and continuous change was thereby guaranteed.

Acting in accordance with this built-in evaluation concept, the director and staff of the dietary department met twice a day during the initial three days of the plan, once a day for approximately three weeks, and once a week for the remainder of the first three months of operation. Although the later stages of evaluation should not be minimized, the first three days, concurrent with the initiation of the plan, were of special import for they accounted for the solidification of the entire operation.

From these meetings, several major factors became evident. It was obvious that the 2+3 Meal Plan as determined by Good Samaritan Hospital was workable and required

no major alterations. Certain areas demanded attention, however, for the improvement and smooth functioning of the operation. First, although personnel performed well in their new routine, time and motion studies were thought advisable to increase speed, and thus meet pre-determined time schedules. Second, Nap Snack and Sack Snack acceptance could be improved as previously indicated. Third, because only a small number of patients were served Continental Breakfast in the x-ray department, this feature could be eliminated. Fourth, although communications between nursing service and the dietary department had been relatively effective, it became evident during the first three days of the operation of the 2+3 Meal Plan that additional instruction was needed for nursing service personnel. Cooperation of the nursing service personnel was vital to patient acceptance of the 2+3 Meal Plan. Fifth, diabetic patients required immediate and thorough personal instruction in the meal plan. Finally, pediatric patients required attentive service on an instructional level. Because of the frequent evaluation meetings, each of the above factors was discussed and adequate solutions were made effective in the shortest possible time.

During evaluation sessions the director of the dietary department concluded the objectives established during the three-month planning stage of the 2+3 Meal Plan had been met. Patient reaction is increasing in favor of the

new food service system. As continual improvements are made from evaluation the 2+3 Meal Plan becomes both more effective and efficient.

Summary

Any food service plan must be adapted to the needs and physical structure of individual hospitals. Nonetheless, from the experience with the 2+3 Meal Plan at Good Samaritan Hospital, certain principles and guidelines applicable to similar situations can be abstracted.

Prerequisites to the introduction of any hospital change is total administrative approval, evident not only in the dietary department but communicated to the entire hospital. Administrative approval encourages cooperation and involvement of all departments concerned and thus guarantees the climate favorable to the introduction of change.

Secondly, a communication network must be effected. All concerned in hospital services--patients, doctors, nurses, other hospital staff, and the public-at-large--must be fully and efficiently informed and instructed. The entire staff must assume the continual responsibility to inform patients of this concept in food service, always new to incoming patients. Of particular concern is the thorough instruction of the medical and nursing staff, given the weight of their opinion in the patients' mind.

Thirdly, an appropriate menu, preferably selective, is imperative. It must, of course, remain within the allotted budget, yet attempt increased patient satisfaction through optimum reliance on the creativity of dietitians. From the menu system evolves the reorganization of work schedules. The completion of menus is also the signal for the activation of the purchasing department, which must provide necessary equipment and supplies while controlling expenses.

Fourthly, positions and man-hour requirements must be determined, and from these, personnel schedules planned. This requires the judgment and experience of the professional staff. Maximum efficiency results from proper use of personnel.

Finally, the involvement of a maximum number of personnel in a significant and vital manner is of the utmost importance. Only when the majority of personnel is permitted to contribute and participate can radical organizational structure be modified within a limited time. Such planning maintains and creates the high morale so essential to any human operation. And from high morale flows the participation and enthusiastic cooperation which propels the entire plan.

What, one might ask, would become of the traditional hospital meal plan were it to receive the thought and planning expended on the radically new 2+3 Meal Plan? Certainly,

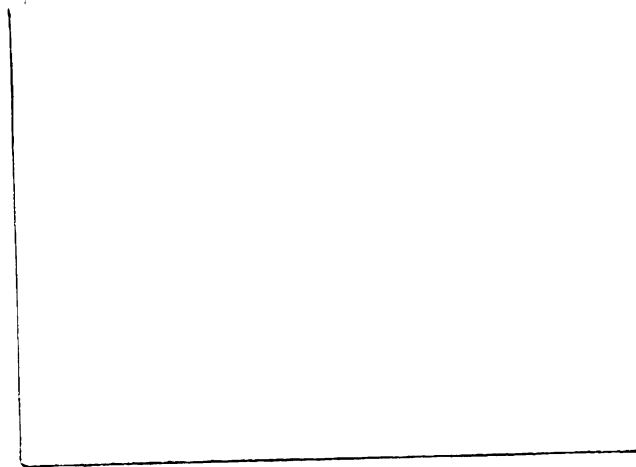
improvements could be instituted within the traditional format. In any case, however, the traditional plan lacks the flexibility and on-going potential of the 2+3 Meal Plan. In fact, the most positive and appealing feature of the 2+3 Meal Plan is its very flexibility and contemporaneity. It must be remembered, however, that the flexibility of the 2+3 Meal Plan itself, cannot be implemented apart from intense and absolutely thorough organizational procedures. This achieved, the operative structure of the 2+3 Meal Plan is such as to permit it to be as effective in 1987 as in 1967.



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