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Analysis of an Information System between the Nursing Service and the Dietary Departments

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To the Graduate Council:

I am submitting herewith a thesis written by Anna Lee Cupp entitled "Analysis of an Information System between the Nursing Service and the Dietary Departments." I have examined the final electronic copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science, with a major in Food Science and Technology.

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To the Graduate Council:

I am submitting herewith a thesis written by Anna Lea Cupp entitled "Analysis of an Information System between the Nursing Service and the Dietary Departments." I recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science, with a major in Food Systems Administration.

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ANALYSIS OF AN INFORMATION SYSTEM BETWEEN THE NURSING SERVICE AND THE DIETARY DEPARTMENTS

A Thesis

Presented for the

Master of Science

Degree

The University of Tennessee

Anna Lea Cupp

June 1974

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ABSTRACT

The analysis of an information system between the nursing service and the dietary departments of a 390 bed hospital was conducted at the East Tennessee Baptist Hospital. This study was to identify, classify, and record the frequency of the most common written and verbal communication problems occurring between the nursing service and the dietary departments.

Interviews were held with forty nursing and dietary personnel. The interviews were utilized for the identification of communication forms and problems between these departments. The problems identified in the interviews, literature research, and experience were factors used in the development of a coding system for recording and classifying telephone messages and problems which occurred in the nursing units.

Communication forms identified by the interviews were analyzed by Flow Process Charts. The elements considered in the Flow Charts were transportation, inspection and operation, delay, storage, and destroyed. Forms were handled four to twenty-four times from the origination to storage or destruction.

Telephone communications were recorded and then coded by a Problem Check List for two nonconsecutive weeks. The same Problem Check List was utilized for five nonconsecutive days on the nursing units for identification of communication problems between nursing and dietary.

The communication problems identified between nursing and dietary were classified as to timing of information, incorrect information, incomplete information, patient complaints, and duplication of information.

Seventeen or 37.8 percent of the coded messages were classified as timing of information; twelve or 26.7 percent incomplete information; fourteen or 31.1 percent incorrect information; one or 2.2 percent duplication of information; and one or 2.2 percent patient complaints.

Some recommendations include inservice meetings for improving the completeness and accuracy of information on all communication forms, and discussion of problems with supervisors and employees. Better communication and understanding between levels of personnel could be accomplished through supervisors taking more responsibility in communicating to employees under their jurisdiction. The exchange of departmental observations could be helpful in understanding and solving problems related to diet prescriptions in both nursing and dietary departments. Staff meetings with physicians to explain the functions and problems of timing of patient admittance in relation to nursing service and dietary departments could be helpful.

It is also recommended that dietary, nursing, and administration investigate several of the automated or computer type information systems that provide continuous up-to-date information. These types of computer systems could possibly help to eliminate some of the forms used to communicate information, perhaps decrease the number of employees needed to process the forms, and increase the accuracy of the information handled. Communication that provides complete, accurate, and timely information is necessary for both nursing and dietary to order and dispense a correct diet prescription to the patient.

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CHAPTER I

INTRODUCTION

A communication problem may be defined as the lack of or incorrect information which interferes with the sequence or flow of procedures for good diet care of the patient in the hospital. Identification of communication problems between nursing and dietary should be the first step in promoting better communications between these departments in the hospital.

Communication or exchange of correct information between nursing and dietary is essential for the patient to receive the correct diet prescription by the physician. The accuracy and timeliness of diet information can be of critical importance. For example, a patient must not be fed if the meal will interfere with laboratory tests, surgery, or radiology orders. The dietary department must have this information in order to hold or cancel the meal or tray at the appropriate time and to resume feeding after the tests are completed (Gravazzi and McGuire, 1972).

Various communication systems have been used and tested for the transfer of diet information from the hospital admitting office to the nursing and the dietary departments. One example of a recently developed communication system is by Gravazzi and McGuire (1972) which illustrated a computerized dietary system at the Veterans Administration Hospital, Washington, D. C. considered part of total patient information system.

Ward personnel entered the physician's orders directly from the patient's chart into the computerized system, using remote and output terminals at each nursing station. Information sent to the dietary department was printed automatically on a printer located in the main kitchen and included type of diet, admission date, beginning of the diet, meal additions, deletions, modifications, and suspensions. The information was on a continuous form of three by five inch cards which were used by service workers to carry out the orders as the food trays progress down the assembly line.

A review of the goals and objectives of both nursing and dietary departments are essential in any evaluation of present or future information system. Markowich (1971) describes a questionnaire appraising these departments' organizational structure and its effectiveness in accomplishing its goals and objectives. Some of the problems were that patients were receiving food in a cold state and they were not marking their menus in the correct manner. Frequently the patients were receiving two or three trays instead of one on admission, causing a waste of food and time. It was discovered that a breakdown in communication among food service, nursing, and admissions was causing the repetitive ordering.

The purpose of this study was to identify, classify, and record the frequency of communication problems between nursing service and the dietary department which interfere with the objectives of the dietary department.* Recommendations for possible solutions for the most commonly occurring problems were made.

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*The objective of the dietary department in the study was to promote team work in the total health care of the individual patient.

CHAPTER II

REVIEW OF LITERATURE

I. COMMUNICATIONS IN A HOSPITAL

Freilich (1970) indicated that one of the greatest needs today was effective written communication, especially in any cooperative institution such as a hospital. Communications were defined as the process by which a sender transmitted a message to a receiver. The intent of a message may have been distorted and misinterpreted because of prejudice, hostility, and conclusion jumping. The well-intentioned receiver may have difficulty in communication in that the five hundred most commonly used words have fourteen thousand definitions in the dictionary. The farther a message travels the more obstacles it has to overcome. Communication forms should be in good taste, have correct spelling, and crowded information should be avoided. The timing of communication is important, but only experience and intuition lead to the correct choice. Thus a clear statement delivered rapidly may nip a rumor in the bud, and groundless charges may be avoided by refraining from repeated communication with a hostile group.

Hopper (1968) described a communication system developed at Mount Sinai Hospital Medical Center in Chicago as improving the food service. A five by eight inch snap out card file system with a five sheet dietary form was used for dietary records. Diet Orders were printed on the card as they appeared in the hospital diet manual. The same dietary card

held the test meal, miscellaneous, and nourishment feeding information. Correct name spelling, room numbers, address, and age of patient were provided on the diet card by the address plate. Fourteen census sheets, the diet change list, a nourishment form, and a patient mealtime visitation form were discontinued by use of the snap out card file system and the five sheet diet record.

In this system, errors in recopying diet orders from nursing, confusion in terminology, problems in reading various handwriting, and wrong or incomplete diet orders had been eliminated. Dietary telephone calls to nursing units to verify information were reduced by the new system, and patient service was improved.

II. INFORMATION SYSTEMS

Automated systems are expensive and hospital policymakers need to obtain facts and utilize suitable methods of evaluating individual or one's own hospital information requirements (Kittle, 1972). A study of the hospital information handling may be accomplished by its own industrial engineering staff, but the objective viewpoint of a consultant is desirable. The specifications and needs set up for the hospital should be checked with the vendor's specification.

All of the resources of the hospital were utilized to treat the patients, and the patient was monitored and controlled from the nursing units. The elements around the nursing unit or center of the system were the medical staff, admitting, administration, hospital service operations, medical records, and the ancillary services for diagnosis

and the treatment. Each element of the hospital was viewed as a subsystem of the hospital system.

Each form used in the information system had data elements or set specific demands. Flow charts were a way of describing and showing use of the forms. The objectives were to show the flow from generation of message to final disposition together with the elements along the way.

Kittle (1972) indicated that the forms used or the method to transmit them may have little bearing on general stores. However, the communication lead time may have resulted in a high rate of lost meals because of missed hold tray orders or diet changes.

Experience has shown that it was wise to take a broad approach in design of a new food service facility or a major renovation of an existing facility (Sutton, 1966). Communication of information was important to consider in the design of efficient and economic facilities with good services. Errors were commonly made by failing to involve the personnel with experience in the planning of an information system. The personnel often were excluded until after the costly decisions were made.

III. COMPUTERIZED SYSTEMS

Research has enabled the Community Hospital of Indianapolis to improve their design for optimum computer usage in its food service operation (McLaren, 1972). The menu printing was obtained through the diet record file rather than Key Punch Cards. As diet orders were received for a new patient, the appropriate diet code was entered into the diet record file via the terminal and the patient's data were crossed

off the new admission printout to show that dietary information had been received. At set times prior to each meal service, the computer provided a list of diet changes that were entered since the previous meal. In addition, a complete diet record was printed once daily and was cross-checked for accuracy and completeness against the nursing files. Essential diet record information such as patient's name, room number, admission number, current diet order, current selective menu, and special problems such as allergies, likes, and dislikes were provided in summary. McLaren (1972) said that it was possible, that in the future, menus at Community Hospital would be distributed between 8 and 10:00 A.M. each day and that patients would select three meals beginning with lunch the same day. The intent of this change was to minimize the time elapsed between selection and actual service, and it was hoped that the menu selection change time would possibly reduce the number of diet changes.

IV. HOSPITAL INFORMATION SYSTEMS

Hospital information systems were defined as the integration of internal communications with data collections to have all of the information readily available to management to make timely decisions (Schmitz, 1971). Criteria were set up to satisfy the needs of the Deaconess Hospital in management of information systems. The criteria presented were:

1. The equipment had the potential for improving patient care by relieving staff members of chores which took more time away from the patient and provided more timely and accurate communication of messages.

2. The equipment was easy to operate since the terminal operators would not be knowledgeable about some equipment.
3. The equipment did not add to the cost of the delivery of health care.

The design philosophy was to get a suitable communication and data collection computer interfaced with a suitable business and statistical computer. The hospital contracted with one of the computer information systems to build a communication and data collection system.

The installation of a hospital-wide communication system affects many people. Meetings were held with all departments, and the inter-relationships between the various departments discussed. This series of meetings began approximately six months before the system was installed to allow important issues to be resolved before the system was implemented.

In general, employees required approximately one hour of orientation before they were physically capable of operating the system. All of the stations were operational within two weeks after the system was initiated.

Schmitz (1971) described the application of the system's procedure as in the hospital dietary department:

1. Orders for specific diets for specific patients were sent from the nursing floors.
2. In addition, special diet considerations were automatically routed to the dietary department when certain laboratory and radiology procedures were ordered for the patient.
3. Other patient communications were automatically routed to the dietary department such as admissions (so the patient was sure

to get a meal if appropriate). In case of transfers, the meal was sent to the correct place.

The persons operating the system indicated that on the average, substantially less time was required to process a requisition than was required by the previous method. The hospital utilized only one keypunch and one part-time keypunch operator for the creation of the admitting master record.

There were four points at which an error could be caught and corrected. These points included (a) when the cards were pulled and checked, (b) when the message printed out in the sending department, (c) when the cards were refiled, and (d) at the receiving department.

The information was always readable. Interpretation of illegible handwriting was no longer necessary. The information was delivered instantly to the appropriate department. The person placing the requisition no longer had to remember to call dietary when placing the radiology and laboratory procedures.

The patient stay at Deaconess Hospital was reduced by one to four days. There were a number of factors in the decline of patient stay, but this system was an important contributor because tests were accomplished more quickly. The tests were not wiped out because dietary sent the wrong meals. Also, the laboratory got the test results back to the nursing station more rapidly (Schmitz, 1971).

Reviews, discussions, and evaluations of available hospital information systems have been printed in various professional journals and in textbooks. Hospital administrators, industrial engineers, and

other hospital officials have utilized literature for the analysis of their own hospital information system, and they also have considered or investigated other information systems for improving communications between departments for better service.

CHAPTER III

PROCEDURE

The purpose of this study was to identify, classify, and record the frequency of the most common written and verbal communication problems occurring between nursing and dietary departments in a 390 bed hospital and to recommend possible solutions. Approval for the study was obtained from the Director of the Dietary Department, Nursing Service Director, and the Administrator in charge of Nursing Service and Dietary Departments at the East Tennessee Baptist Hospital, Knoxville, Tennessee.

An Interview Form was developed and interviews were held with five dietitians, five dietary transporters, five dietary clerks, thirteen nurses, and twelve nursing ward clerks (Appendix A, Figure 1). The purpose of these interviews was to identify forms used for communication between nursing and dietary, and to aid in the identification of communication problems between these departments. A communication problem may be defined as the lack of or incorrect information which interferes with the sequence or flow of procedures for good diet care of the patient in the hospital.

A coding system was developed for analysis of the communication problems between nursing service and dietary departments (Appendix A, Figure 2). This system of coding problems was utilized with the telephone communications, problems in the nursing units, and the interview summaries.

Coded Nursing and Dietary Interview Forms were classified into the following categories:

A. Dietitian

B. Dietary Transporter

C. Dietary Clerk

D. Nurse (7:00 A.M.-3:00 P.M. shift)

E. Nurse (3:00 P.M.-11:00 P.M. shift)

F. Nurse (11:00 P.M.-7:00 A.M. shift)

G. Nursing Ward Clerk (7:00 A.M.-3:00 P.M. shift)

H. Nursing Ward Clerk (3:00 P.M.-11:00 P.M. shift)

The problems recorded from the nursing and dietary interviews were summarized and numbered by the above classifications. The first problems identified or recorded by the dietitians then were represented by A_1 and A_2 depending on the number of problems. These problems were correlated to the established message code. The number of times a problem was listed on the Interview Form was totaled as frequency of the message code, and considered as possible problems in the forty interviews.

A Dietary Telephone Communication Sheet was formulated for the purpose of recording incoming and outgoing telephone calls or messages between the nursing and dietary departments (Appendix A, Figure 3). After a pilot study, the form was revised to use a rose colored form for incoming calls and a yellow colored form for outgoing calls (Appendix A, Figure 4). The incoming and outgoing calls were recorded for fourteen days or two nonconsecutive weeks for the dates of April 23 and May 7, 1973.

Telephone communications were recorded on the Daily Telephone Summary Sheet (Appendix A, Figure 5). This summary sheet consisted of

forty-six coded messages which correspond with the message codes (Appendix A, Figure 2). Additional messages were coded under number forty-six when seemingly unrelated to the other forty-five codes. The telephone messages were decoded to the nearest or most similar code, recorded by the day, time or meal, and the nursing unit. These messages were then totaled for frequency of occurrence.

A Communication Problem Check List was devised for use on the nursing units. This check sheet had the same message codes as that used for coding the interviews and the telephone messages (Appendix A, Figure 2). The Problem Check List provided a means for nursing to relate the problem or situation occurring on the unit to the message code for a specific day and meal.

After checking with the Director of Nursing, a memorandum was sent to each of the fourteen nursing units in the hospital explaining the purpose of the study and the dates for checking the forms. Rounds were made to each unit to make certain that head nurses or employees had read and understood the memorandum concerning the study. The Nursing Director requested that the nursing employees report any problems to the head nurse or to the ward clerk.

Problem Check Lists were dated, coded, and delivered to the nursing units the evening before the appointed study day. The evening shift head nurses informed the next shift that the Problem Check Lists were on the units for their use.

The observation and recording of problems between nursing and dietary were conducted for five nonconsecutive days during the same

weeks in which the telephone messages were recorded in the dietary department.

Problem Check Lists were collected from each nursing unit the morning after the observation or study. These Problem Checks Lists or message codes were totaled by the day, unit, and time or meal. This information was recorded in red ink on the top portion of the squares of the Telephone Communication Summary Sheet.

The Communication Problem Check List for nursing service and dietary departments form was used to list the totals or frequency for each message code for the forty interviews, fourteen day telephone communications, and the five day Problem Check List study on the nursing units (Appendix A, Figure 2).

Written and verbal communication problems were identified with the message codes and classified as incomplete information, incorrect information, patient complaints, duplication of information, and timing of information.

The sequence of handling each written communication form was plotted from origination to end of processing by the use of the Flow Process Charts (Appendix A). The number of times each written communication was handled, inspected, or recorded was analyzed (Table II).

CHAPTER IV

RESULTS AND DISCUSSION

Communication problems between nursing service and the dietary department which interferred with objectives of the East Tennessee Baptist Hospital Dietary Department* were identified, listed, classified by type, and analyzed for frequency of occurrence. Recommendations were suggested for improving the most commonly occurring problems.

I. IDENTIFICATION OF PROBLEMS

Nursing and dietary interviews identified the following communication forms used between these two departments (Appendixes A and B, Table V).

Diet Order Sheet

Diet Slip Admission

Guest Tray Slip

Nourishments

Label Cards for Nourishments

Selective Menu Form

Memorandum Form

Diet Instruction Form

Menu Instruction Form

The Diet Order Sheet was a long white form which was used by the nursing units for written transcribed diets taken from charts, making

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*The objective of the dietary department in the study was to promote team work in the total health care of the individual patient.

diet changes, transferring patients, dismissing patients, and ordering nourishments. The Diet Order Sheet was prepared by nursing for dietary three times per day at 5:30 A.M., 10:00 A.M., and 3:00 P.M.

The Diet Slip Admission was a small pink slip which nursing employees took directly to the main kitchen to obtain a late diet prescription or an item not ordered previously by a patient. Diet Slip Admission Forms were filled each meal but the frequency increased for the evening meal.

Guest Tray Slips were used for ordering a tray for someone visiting or staying with a very ill patient. These forms were not used very often since the visitors were allowed to eat in the hospital cafeteria at a lower cost.

The Nourishment form was prepared from the Diet Order Sheet information to prepare patient nourishments. This Nourishment form was sent with the nourishments to the nursing units for the nursing employees to check before delivering nourishments to the patient. The Label Card for nourishments was used to label the foods, especially tube or other special feedings.

Menu Forms were prepared from a cycle menu for the different diet prescriptions. The patient selected his choice of food for the diet prescribed by marking the Menu Form with a special black pencil. Nursing employees encouraged patients to mark their menu so that the patient would receive all the items necessary for a complete tray. If a menu item such as bread was not marked on a general diet, the dietary department did not send the bread as it was assumed that the patient did not desire bread. If the patient had forgotten to mark the bread, a nursing employee then

needed to take a Diet Slip Admission Form to the main kitchen to obtain the bread.

Memorandums were written forms of communication from one department to another, especially dietary to nursing. The dietary department sent requests for changes in procedure or other items of information to the Director of Nursing Service and to each nursing unit.

Diet Instruction Sheets were written copies of diet prescriptions. These were prepared for the patient to read, understand, ask questions about, and to take home for referral.

The Menu Instruction Form included instructions to the patient to aid in the marking of a menu for a modified diet such as a Bland IV. These forms were delivered to the patient by a diet clerk.

Interdepartment memorandums were written forms of communication from one unit to another within the dietary or nursing service departments. The posted memorandums were helpful to remind employees of information to improve procedures for better patient service.

Interviews did not identify the dietary Kardex as a form of communication between these two departments although it was used. Each nursing unit received a labeled dietary Kardex with the breakfast trays only. The dietary Kardex was prepared from the Diet Order Sheets sent from nursing. The nurse in charge or the nursing ward clerk checked the diet Kardex with the nursing Kardex which is kept up to date from the patients' charts. Nursing transcribed all diet changes or any additional information to the Diet Order Sheet. The dietary department made all of the changes in their Kardex. The patient's name, diet order, room number,

bed number, any special information such as extra feedings, allergic to certain items, likes and dislikes of food, and other pertinent information was recorded in the diet Kardex.

A small pink slip from the x-ray department indicating a patient had completed a test was used for obtaining a hold tray, and this form of communication was not signed by nursing service personnel (Appendix A). Diet office clerks or dietitians pulled the Menu Forms ordered as hold and sent them separately to the main kitchen for later use following the tray line. Nursing obtained hold trays by phoning the main diet kitchen and then submitted a small pink slip from the x-ray department. When a regular or soft diet was called to the main kitchen, dietary employees served the tray as long as the pink slip was submitted. Kitchen employees did consult the diet office when a calculated diet was requested as a hold tray and they did not have a hold Menu Form. Kitchen employees said they often prepared several hold trays* for which they had no Menu Forms. At the same time they had Menu Forms left which had been held or not used.

From the Interview Sheet Summary, agreement of understanding between the two departments for the procedure of ordering and receiving a patient's diet prescription was indicated (Appendix B, Table III). All dietitians, all dietary clerks, seven out of thirteen nurses, and nine out of twelve nursing ward clerks agreed that the physician wrote the diet prescription on the patient's chart and the nurse or ward clerk transcribed the diet prescription to the Diet Order Sheet and nursing Kardex.

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*Instruction to withhold a patient tray until further notice.

Four out of five dietitians, two out of five dietary clerks, and two out of thirteen nurses indicated that the diet office clerks or the dietitians added or changed the diet prescriptions in the dietary Kardex and placed corrected Menu Forms on the serving line (Appendix B, Table III. Dietary employees recognized their function of diet information transfer more than nursing. Perhaps this illustrated a lack of nursing employees' understanding of the correct dietary procedures necessary in the diet office to obtain a correct diet prescription or tray on the nursing unit.

The diet instruction for the patient was requested by the physician. The current hospital procedure for requesting a diet instruction for a patient was seemingly well understood by both nursing and dietary (Appendix B, Table IV).

Seventeen out of thirty-five or 49 percent nursing and dietary employees responding to interviews were positive that dietary and nursing problems were discussed at staff meetings of each department (Appendix B, Table VII). Twelve out of thirty-five or 33 percent nursing and dietary employees indicated uncertainty of problem discussion at staff meetings. One out of ten or 10 percent dietary, and five out of twenty-five or 20 percent nursing employees responding said that problems were seldom discussed at staff meetings. Eleven employees out of forty interviewed, five transporters, five ward clerks, and one nurse, did not respond to this question. A greater percentage of employees should have been assured that the problems between nursing and dietary departments were discussed at staff meetings. Discussion of problems at nursing and dietary staff meetings with possible solutions and lines of communication between the two

departments could provide for better understanding of procedures and requests made by each department. It is recommended that the line of communication continue from the department heads to the clerks and other employees for providing needed information and a feeling of being a part of the organization.

Twenty-seven out of thirty-five interviewed indicated that the Diet Order Sheet contained sufficient space while seven said there was usually sufficient space on the Diet Order Sheet for needed information (Appendix B, Table VII). One nurse and one diet clerk noted that a separate and specific place was needed on the Diet Order Sheet for nourishments. A review of the Diet Order Sheets indicated that the nourishments often were mixed in with the diet orders. Nourishments mixed in with a series of new diet orders could be confusing and time consuming to the dietary department. This mixing of diet orders and nourishments on the Diet Order Sheet allows more chance of error in diet changes. Diet orders written in sequence would prevent searching up and down the Diet Order Sheet for the diet changes. This procedure would cause less eye strain, possibly speed the time for diet changes to be completed, and help in preventing errors or omissions of diet orders. Diet orders separated from the nourishments would provide speed in checking by nursing and dietary.

II. CLASSIFICATION OF PROBLEMS

Problems identified in the forty-five telephone message and Problem Check List codes were classified (Appendix A, Figure 6) as to timing of information, incorrect information, incomplete information, patient

complaints, and duplication of information. Seventeen or 37.8 percent of these coded messages were classified as timing of information, fourteen or 31.1 percent incorrect information, twelve or 26.7 percent incomplete information, one or 2.2 percent duplication of information, and one or 2.2 percent patient complaints.

Telephone code number forty-six (Appendix A, Figure 7) listed twenty-one different "open end" messages which were different from the forty-five discussed above. Out of these messages two or 9.5 percent were classified as timing of information, thirteen or 61.9 percent incomplete, and five or 23.8 percent incorrect information. Only five different messages were coded under code number forty-six for the Problem Check List on the nursing units.

Timing of Information

The problem message codes related to timing of information were (Appendix A, Figure 6):

Diet Order Sheet not ready on time.

New patient admitted after diet changes were obtained.

Patient discharged after diet changes were obtained.

Patient diet changed after diet changes were obtained.

Patient was transferred after diet changes were obtained.

Selective Menu Forms not collected on time.

Selective Menus not marked on time for general pickup.

Patient complaints about temperature of food.

Trays late being picked up from rooms.

Dietary early in picking up dirty trays from units.

Dietary late in picking up dirty trays from units.

Insufficient time for patient to eat.

Use of pink Diet Slip Admission Form.

Patient sick when tray comes.

Cannot leave tray on heated cart when more than one patient needed to be fed because diet kitchen came too soon for Uni-tray cart.

Inadequate time request for diet instruction or copy of diet.

Ordering of test diets after diet changes.

Timing of information was important to the smoothness or sequence of operation for both nursing and dietary departments. Diet Orders coming through the system after 5:30 A.M., 9:45 A.M., and 2:45 P.M., resulted in nursing making phone calls to dietary and causing dietary to receive calls. Diet orders received after established times resulted in extra work by both nursing and dietary. When diet changes came after the tray line was closed, nursing had made a mistake, or diet office was closed, then nursing filled in a Diet Slip Admission Form and took it to the main diet kitchen for the tray ordered or items needed.

Phone calls to the diet kitchen after diet changes had begun, resulted in the dietitian or diet clerk stopping the routine function to answer the telephone. The phone calls caused a transfer of thought from one situation or problem to another. This interference slowed down the procedure of changing diets or fulfilling routine procedure for serving the correct diet prescription.

Nursing and dietary departments were not always able to perform on an exact time schedule due to circumstances such as patient admittance

time, time of the physician rounds, patient dismissals, time the patient actually went home, Admitting Office routines, and Housekeeping Department having rooms available for the patient on arrival. The hospital did not have a set time for patients to be admitted for routine hospitalization.

The Admitting Office and Housekeeping had jurisdiction over room assignments and patient transfers. The functions of these departments also depended on the time that the physician admitted or dismissed the patient, and when the family brought or went for the patient after the dismissal from the hospital.

Selective Menu Forms not marked or collected on time often depended on whether the patient was in x-ray or in the Laboratory Department for testing. Late Menu Forms caused the dietary ordering of food for the next day to be slowed down or not to proceed as orderly as desired.

Requesting of diet instructions twenty-four hours in advance of instruction depended on the physician ordering this far in advance of patient dismissal. The dietitian in charge of the therapeutic diet office suggested phone calls regarding diet instructions prior to the Diet Order Sheet pickup time to assist her to have sufficient time to work the instruction into her routine schedule.

Incorrect Information

The problem message codes related to incorrect information were (Appendix A, Figure 6):

Tray was not canceled but should have been.

Patient received two trays.

Patient diet canceled but received a tray.

NPO* patient tray comes on heated cart.

Patient made NPO and diet was not changed.

Patient on Hold received a tray.

Incorrect diet order for a test.

Nourishments ordered in large quantity for number of patients.

Patient received incorrect diet for his prescription.

Patient received tray that belonged to another patient.

Items omitted from tray though marked clearly.

Patient receiving food from an outside source.

Diet kitchen gets two patients' trays mixed up.

Dietary frequently calls concerning more than one patient in a bed or three patients in a semiprivate room or to clarify information

Incorrect ordering or receiving of diet prescription orders generally were attributable to the lack of double checking nursing Kardex before sending the Diet Order Sheet or checking the carbon copy of Diet Order Sheet before calling the diet office. Not cancelling a diet that should have been, occurred fourteen times. Failure to cancel diet prescriptions could have been a serious problem. Some of the diets not canceled may have been NPO for surgery or tests, but most likely they were dismissed patients. When the patients did not know for sure when they would leave the hospital, nursing probably thought it best not to cancel the tray. If a dismissed patient did not go home before meal time, nursing had to obtain a tray by the Diet Slip Admission Form. Some of these failures to cancel trays could have been due to a lack of cancellation or not carrying the dismissals all the way through the dietary procedures. If the patient

*Nothing postoperatively or by mouth.

was discharged on the 9:45 A.M. Diet Order Sheet, a dietary employee failed to change the diet Kardex or pull the Menu Form for that meal or the next meal, the tray was possibly served.

The problem of a patient receiving two trays occurred ten times (Appendix B, Table VIII, Code No. 9). This problem probably occurred most often from a phone call after diet changes were picked up or more especially after the tray serving line began. The second shift of nursing often called in new patients diet orders before checking the Diet Order Sheet carbon filled in by the previous shift. Failure to check the Diet Order Sheet often resulted in duplication of diet orders. Occasionally nursing overlooked trays on the Unitray cart and called the diet office to say they did not receive a tray for a patient. After preparing another tray, the former tray was frequently found on the cart. Use of the Diet Slip Admission Form for new trays also allowed some duplication of trays.

Seven patient trays were received that were cancelled, six NPO diets were received on heated carts, four patients listed "Hold" received a tray, three patients received incorrect diets for their prescriptions, and three patients received a tray that belonged to other patients (Appendix B, Table VIII). These problems could have resulted from the checking of the Diet Order Sheets in the diet office before the diet Kardex was changed. The Menu Forms were placed in sequence by the Kardex prior to diet change time, and only the changes on the Diet Order Sheet were made with the Menu Forms at that time. In other words, the Menu Forms were not checked with the corrected diet Kardex. Some errors could have been made due to phone call interruptions, speeding to get the Menu Forms to

the tray line to begin tray service, or several people handling the Diet Order Sheet at an approximate or similar time.

Fifteen occurrences of items being omitted that had been clearly marked on the Menu Forms (Appendix B, Table VIII, Code No. 29) was most possibly due to speed in serving on the tray line. It was possible that some food items were not ordered from the diet kitchen, a failure of the main or diet kitchen to prepare the items needed, or perhaps the food was not available from the stores or market. The lack of double checking each tray before placing the tray in the Unitray cart was another possible reason for marked items being omitted from the patient's tray.

There were eighteen recordings of diet kitchen calling to the units to check on the correct information as to how many patients were in one bed or in a room (Appendix B, Table VIII, Code No. 41). These calls indicated that there was need for accuracy in the information provided by nursing on the Diet Order Sheets. Nursing employees complained about dietary calling units between 6:00 A.M. and 7:00 A.M. during the shift change to ask questions about Diet Order Sheets. The diet office often found it necessary to get the correct name, diet and room number because the patient may have been a transfer instead of a new patient. In the event that the patient was a transfer, this information prevented extra work in the diet office and allowed the patient to receive the food he had personally selected. When the diet Kardex had a patient listed for a bed that was ordered for another patient, this resulted in dietary checking the last Diet Order Sheet. If this check did not clear the issue, then a call to the unit was necessary to obtain the correct name of the patient,

room and bed number, and the diet prescription. Obtaining the correct information prevented sending two trays and perhaps a patient from receiving an incorrect prescription. Incorrect information caused both the nursing and dietary departments extra work and chance of error.

Incomplete Information

The problem message codes relating to incomplete information were (Appendix A, Figure 6):

Incomplete information on Diet Order Sheet (lack of room and bed number or complete name when needed).

Patient did not receive a tray though on Diet Order Sheet.

Poor legibility of handwriting on Diet Order Sheet.

Patient was transferred and did not receive a tray.

Poor legibility of handwriting on selective menus.

Patient desires more food than marked on menus.

Nourishment delivered to unit but not received by patient.

Nourishments ordered but not received on the unit.

Nourishments requested consisted of substitutions.

Guest trays requested but did not arrive.

Diet trays not served or overlooked on heated carts.

One nursing shift did not order sufficient nourishments for the next shift or two.

Complete information regarding the patient's name, unit, room number, and diet prescription were especially important to dietary. This information was needed to send the correct selective Menu Form for the diet prescription, for preparing the dietary Kardex, and sending the nourishments

to the units. Incomplete information could result in a patient not receiving the correct diet prescription, not receiving the Menu Form he personally selected, or nursing thinking a diet was not sent for a patient when actually the tray was on the cart. Incomplete information on the Menu Form for the patient could have caused a tray to be given to the wrong patient.

The problem of the patient not receiving a tray though requested was classed as incomplete information and was possibly attributable to some breakdown in communication. This problem was recorded primarily on the Five Day Problem Check List on the nursing units. The nursing department could have omitted the ordering of the diet on the Diet Order Sheet, the dietary department could have missed one of the procedures in diet changes, or two Menu Forms may have adhered together when they were placed on the serving trays. The trays could have been placed on incorrect unit carts, but there were few recordings of trays on the wrong carts.

Poor legibility of handwriting on Diet Order Sheet led to incomplete information when there was danger of misspelling the name of the patient. This problem was recorded three times. Clear, legible handwriting was necessary for the patient to receive his correct diet prescription.

The fact that the patient was transferred and did not receive a tray was recorded one time. The dietary department requested that the nursing unit transferring the patient list the information on the Diet Order Sheet and the nursing unit receiving the patient record the same information. A double check of transfer patients revealed only one occurrence from one unit failing to record the needed information to transfer the patient properly.

The patient desiring more food than marked on menu was listed under incomplete information, such as a patient had not in full marked what he desired. The lack of food desired on the trays caused nursing twelve extra trips to the main kitchen, and the kitchen employees had to take extra time to obtain the food or items desired. This incomplete information caused extra work, time, and took personnel away from routine duties.

Eleven occurrences of nourishments ordered but not received on the unit resulted in some nursing employees feeling that nourishment requests were not being honored by dietary. Two recorded nourishment substitutions, and one recording that one nursing shift did not order enough nourishments for the next shift indicated that ordering and receiving of nourishments is a problem relating to incomplete information.

There were four occurrences of nourishments being delivered to the unit but not to the patient. The nursing department was responsible for delivering the nourishments to the patients. The nourishments could have been omitted by dietary, forgotten, or the nourishment could have disappeared from the unit refrigerators. When the nourishment ordered failed to make the complete round of routine procedure or did not reach the patient, the information was considered incomplete.

Patient Complaints

The problem message code related to patient complaints was a complaint about menu selection (Appendix A, Figure 6). Twelve occurrences of patient complaints about menu selection were recorded. A selective menu provided two selections for most menu items. The problems of menu selection were

to be written on the Diet Order Sheet or if needed, a phone call made to the diet office.

Duplication of Information

The problem message code related to duplication of information was a diet called in and the diet was already on the Diet Order Sheet (Appendix A, Figure 6). This problem occurred ten times, and occurred mostly when a shift coming on duty called in orders for a new patient without checking the carbon copy of the Diet Order Sheet on the unit. Checking the sheet could have prevented the call as well as the possibility of the patient receiving two trays.

III. IDENTIFICATION OF SIGNIFICANT PROBLEMS

After noting the frequency for each coded message for the combined fourteen day Telephone Communication Sheets and the five day Problem Check Lists (Appendix B, Table VIII), a frequency of four occurrences for each separate code was arbitrarily selected as being a significant communication problem between nursing and the dietary departments.

The following significant problems include:

Diet Order Sheet not ready on time.

*Incomplete information on Diet Order Sheet (lack of room number, bed number, name, etc.).

*New patient admitted after diet changes were obtained.

Patient discharged after diet changes were obtained.

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*Ten major problems selected from twenty-six significant ones.

*Patient was transferred after diet changes were obtained.

*Patient diet changed after diet changes were obtained.

Tray was not canceled but should have been.

Patient received two trays.

Patient diet canceled but received a tray.

*Patient did not receive a tray though requested.

NPO patient tray came on heated cart.

Patient on Hold received a tray.

Patient complains about menu selection.

Patient desires more food than marked on menu.

Patient complains about temperature of food.

Nourishments ordered but not received.

Nourishments delivered to unit but not received by patient.

Items omitted from tray though marked clearly.

Dietary early in picking up tray cart.

*Use of pink Diet Slip Admission Form.

Patient receiving food from an outside source.

*Dietary frequently calls units concerning more than one patient in a bed or three patients in a semiprivate room.

*Requesting diet instruction or a copy of diet.

Diet called in and was already on Diet Order Sheet.

*Ordering of test diets after diet changes.

*Miscellaneous statements.

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*Ten major problems selected from twenty-six significant ones.

One of the ten major problems selected on the basis of highest frequency of occurrence included incomplete information on Diet Order Sheet which occurred twenty-nine times or 4 percent (Appendix B, Table VIII). All twenty-nine occurrences dealing with incomplete information were due primarily to dietary calling the nursing units for clarification of information on Diet Order Sheets. The time for the phone calls took away from the normal routine and interfered with the speed and accuracy of the system. In order to be accurate in dispensing the diet prescription for patients, the diet office needed the correct name, room number, bed number, and diet for each patient. When two patients with the same last name were on the same unit, it was most important to have the full name or at least the initials. This precaution was a safety measure for both the dietary department and the nursing department. Complete name on all forms increased the possibility of receiving the correct diet. Receiving an incorrect diet could be disastrous if one of the patients were NPO for surgery or was a hold for a test. The patient could aspirate and expire when fed prior to surgery. The patient who ate breakfast by mistake when on a test could be required to remain in the hospital another day or so due to food interfering with the test procedure.

New patients admitted after diet changes were obtained from nursing units occurred two hundred three times or 28 percent (Appendix B, Table VIII). One hundred sixty-nine of the occurrences were phone calls and indicated that diet changes were made after Diet Order Sheets were obtained from the units. Patients admitted late in the afternoon and

early evening resulted in extra phone calls in the diet office. The diet office closed at 5:00 P.M., and this resulted in the main kitchen having more phone calls. These calls caused some problems as the tray line for serving patients was still going. If the supervisor was busy, someone on the tray line had to answer the phone or request a transporter to do so. Telephone calls in the diet office and main kitchen took away from the speed and efficiency of routine procedures.

Patient diet changed after diet changes were obtained from the unit had an occurrence of ninety-four or 13 percent (Appendix B, Table VIII). Physicians often made rounds near or after diet change times. The nursing personnel may or may not have had time to write the orders on the Diet Order Sheet before it was picked up. The nursing personnel could easily get involved with other procedures and not get the diet orders written in time for the established diet change time.

The problem of the patient being transferred after diet changes were obtained from the unit occurred twenty-one times or 2.9 percent (Appendix B, Table VIII). Patients desiring to transfer rooms were transferred when other patients were dismissed and the rooms were cleaned by housekeeping. These activities of other departments did not always accommodate the diet order change times.

The patient not receiving a tray though requested had a frequency of eighteen or 2.5 percent (Appendix B, Table VIII). This problem was reported fourteen times on the Five Day Problem Check List, and the recorded phone calls listed the problem as occurring four times. Nursing and dietary had an agreement that if nursing made an ordering mistake that

nursing would come to get the tray, and if the mistake was made in dietary, they would take the tray to the unit.

The problem of dietary frequently calling concerning more than one patient in a bed or three patients in a semiprivate room or to clarify information occurred eighteen times or 2.5 percent (Appendix B, Table VIII). A part of this problem is due to incomplete information or similar to Message Code 2 (Appendix A). Nursing employees had complained about dietary calling during the early morning shift changes. The dietary department called the nursing units when they had questions concerning the information on the Diet Order Sheets. If the diet Kardex and the Diet Order Sheet did not correlate as to the number of patients that could be in a room, then dietary called to clarify the information. These phone calls took time from both departments, but could have avoided serious mistakes and extra trays going to the floor.

Requesting diet instruction or a copy of diet occurred nineteen times or 2.6 percent (Appendix B, Table VIII). This message was recorded completely from the Telephone Communication Sheets. The main problem in this message was the time involved in the phone calls, and the interruptions of routine procedures. Diet instruction requests were to be made twenty-four hours in advance, so a written request would be advantageous for planning of work and provide a receipt of request.

Ordering of test diets after diet changes occurred twenty times or 2.8 percent (Appendix B, Table VIII). This problem was completely recorded from Telephone Communication Sheets. New patients were not required to be in the hospital at any particular time for tests so this

accounts for some test diets being requested after Diet Order Sheet pickup. Patients were probably entering the hospital at nurse shift change time, and this caused some of the delay in sending orders to the dietary department.

The use of Diet Slip Admission Forms occurred thirty-three times or 4.6 percent (Appendix B, Table VIII)., A study of the use of the Diet Slip Admission Form was conducted during the fourteen day telephone message recording period. After the diet office closed at 5:00 P.M. on April 23, 1973, twenty-four Diet Slip Admission Forms were filled or honored in the main kitchen by 6:30 P.M. The information on one of the Diet Slip Admission Forms had been called to the diet office at 3:00 P.M. The patient received two trays, dietary failed to place the order in the tray line, or something else happened to the tray. One hundred eighty-four Diet Slip Admission Forms did not list the hour or meal, and ninety-six did not list a date and twenty did not list a diet order (Table I). A daily average of sixteen Diet Admission Slips was used during the study. The forms which did not list the hour, date, or diet order indicated a communication problem for dietary. Main kitchen employees needed the diet order or prescription written on the forms to assess the patient's dietary needs or diet requested. Main kitchen did not have access to the diet Kardex for information needed to honor Diet Slip Admission Forms. Complete information was needed for checking with phone messages or Diet Order Sheets in the diet office for duplication of orders or other facts.

Message code number forty-six was recorded forty-eight times or 6.7 percent (Appendix B, Table VIII). There were twenty-three different problems recorded under miscellaneous or problems different from the

TABLE I

TYPES OF INCOMPLETE INFORMATION ON DIET SLIP ADMISSION FORMS

Date	Total Forms Collected Per Day	No Hour Listed	No Name Listed	No Diet Order Listed	No Nurse Signature
4/27/73	8	8	0	2	0
4/28/73	2	1	0	0	0
4/29/73	15	9	1	0	0
5/1/73	15	14	0	1	0
5/2/73	6	6	0	1	0
5/3/73	5	2	0	0	0
5/4/73	4	2	0	0	0
5/5/73	4	2	0	1	0
5/6/73	13	12	0	1	0
5/7/73	18	10	0	0	0
5/8/73[a]	12	9	0	2	1
5/9/73	10	6	0	0	1
5/10/73[b]	13	9	0	1	0
No Dates[c]	96	93	0	11	5
Totals[d]	221	184	1	20	7

[a]Two Admission Slip Forms filled out in same day for same patient.

[b]One tray was sent to an O. B. physician at lunch.

[c]No date on the Admission Slip Form is a major problem for identification or any correlation or checking against the Diet Order Sheet.

[d]The total Admission Slip Forms collected extended over a period of fourteen days.

first forty-five. The main problems of significance were telephone calls regarding change of diet and transfer, calling for hold trays, and calls requesting various types of soft and diet drinks. The calls regarding these beverages could have been ordered on the Diet Order Sheet for tray service or as nourishments. The problem may have been that patients did not request these items in time for the Diet Order Sheet change times.

Sequence and handling of each written communication form was plotted from origination to the end of processing by use of the Flow Process Charts (Appendix A). The number of times each written communication was handled, inspected, or recorded was analyzed (Table II).

The Diet Order Sheet originated on the nursing units (Appendix A, Figure 8). Handling of the Diet Order Sheet on the nursing unit would depend on the number of new diets, diet changes, transfers or discharges that occurred from one diet change time to the next, and this information would be different for each of the fourteen nursing units in the hospital.

The breakfast Diet Order Sheets were collected and taken to the switchboard by a nursing orderly. These Diet Order Sheets were then collectively taken to the diet office. The breakfast Diet Order Sheets were actually handled nine times from origination to storage in the diet office. The nine handling processes for the breakfast Diet Order Sheets were classified by elements of handling and totaled (Table II).

Lunch and dinner Diet Order Sheets were obtained by a diet clerk going to each of the fourteen units and returning them to the diet office (Appendix A, Figure 9). The Flow Process Chart represented these occurrences as one occurrence or handling process. Eight handling

TABLE II

FLOW PROCESS CHART[a]

Forms	Total Times Handled	Elements of Handling and Frequency of Occurrence							
		Operation	Transportation	Inspection and Operation	Storage and Transportation	Transportation and Inspection	Delay	Storage	Destroyed
Diet Order Sheet									
Breakfast	9	1	2	4			1	1	
Lunch and Dinner	8	2	1	4				1	
Dietary Kardex	12	3		8			1		
House Menu Form	20	6	6	3		1	1		3
Modified Menu Form	24	7	8	5			1		3
Nourishments	18	3	6	6					3
Diet Slip Admission Form	4	2	1						1
Hold Tray Form	5	1	2	1					1
Guest Tray Slip	6	3	1		1			1	

[a]Summary of handling elements or processes from flow process charts (Appendix A).

processes for the lunch and dinner Diet Order Sheets were classified and totaled (Table II).

Thus, the breakfast, lunch, and dinner Diet Order Sheets from the fourteen nursing units were handled twenty-five times each day. These Diet Order Sheets were stored in the diet office after each meal and by the day. After one month, the Diet Order Sheets were destroyed. Nursing units stored the carbon copies of the Diet Order Sheets for one month and then destroyed them also.

The dietary Kardex originated in the diet office from information received on the Diet Order Sheet (Appendix A, Figure 10). Dietary Kardex was handled twelve times during each day, and could occur more often depending on the number of requests or checking on information over and above the usual diet change times (Table II). The dietary Kardex was an ongoing form of information, and it was not stored except between diet changes for short periods of time and overnight.

Nourishments originated in the diet office from the information in the diet Kardex (Appendix A, Figure 13). Nourishments were issued to nursing units by dietary three times per day. Eighteen handling processes for the Nourishments were classified by elements of handling and totaled (Table II). The number of times the form titled Nourishments was handled on each nursing unit was not analyzed. The frequency of handling these forms on the units would depend on the number of nourishments and how many different nursing personnel were assigned to deliver them. The forms used for nourishments were destroyed on the nursing unit.

Selective House Menu Forms originated from dietary files and they were placed on the breakfast trays for the patient to select his menu for

the next day (Appendix A, Figure 11). The Menu Forms were stored overnight in the diet office before being used for tray service. Twenty handling processes for House Menu Forms were classified and totaled (Table II). These House Forms were retained by the patient or were thrown away following each meal time.

Selective Modified Menu Forms originated from dietary files by diet Kardex information. Dietary clerks took the Modified Menu Forms to the patient to select his menu for the next day. The Modified Menu Forms were stored overnight for use in serving trays the next day. The elements or handling processes for the Selective Modified Menu Form totaled twenty-four (Table II). The Selective Modified Menu Forms were retained by the patient or were thrown away following each meal.

Menu Instruction Forms originated in the diet office for use with the Selective Modified Menu Forms. If the patient came in after other menus had been collected for the day, the Menu Instruction Form was pulled and placed in a basket until the next morning. Diet clerks were used to deliver the Menu Instruction Form with the Selective Modified Menu Form to the patient to help him in his food selection for the next day. The Menu Instruction Form was handled approximately three times, and it was left with the patient for his use and disposal.

Diet Slip Admission Form was originated by the nursing units for new patients or items desired but not ordered by the patient (Appendix A, Figure 14). The Diet Slip Admission Form was handled four times from origination to the tray being served to a nursing employee in the diet kitchen (Table II). The Diet Slip Admission Form was thrown away by dietary following the service of the tray or items requested.

The form used for Hold Tray Form originated in the X-ray Department with nursing receiving the form when the patient was brought back to the unit or the test had been completed (Appendix A, Figure 15). Nursing took the small pink X-ray Form to the diet kitchen to obtain a hold tray. Five handling processes for the Hold Tray Form were classified (Table II, page 37). The form used for Hold Trays was thrown away following the tray being served to a nursing employee.

Guest Tray Slip or Miscellaneous Form originated from a patient or a guest request for a tray on the nursing unit (Appendix A, Figure 16). The handling processes or elements for the Guest Tray Slip totaled six occurrences (Table II). One copy of the Miscellaneous Charge for a tray was sent to the business office and one copy was retained in the secretary's office in the Diet Department.

The sequence and handling of written communication forms was an important factor in obtaining the communication or information needed between the Nursing and Dietary Departments of the East Tennessee Baptist Hospital. The forms requested information required to order and dispense a correct diet prescription.

The handling of these communication forms could be viewed in relation to timing of information, further information needed, and the number of processes required in relation to number of employees and patients.

IV. RECOMMENDATIONS

As a result of this study, the problems of timing of information, incomplete, incorrect, duplication of information, and patient complaints

were identified. Since the timing, incomplete, and incorrect information occurred most frequently the following recommendations are made.

The changing of meal serving hours and especially the hours of the Diet Order Sheet pickup for diet changes are highly recommended. If the designated time for changing Diet Orders could be advanced one-half to one hour at lunch and dinner meals, perhaps there could be increased time for making the physicians rounds and orders, patients to be finished with tests, and for discharged patients to make arrangements for leaving the hospital. The advance Diet Order Sheet pickup time in the afternoon could allow the afternoon shift increased time to receive and check the diet orders for new incoming patients. Perhaps the later diet change times could help decrease the use of the Diet Slip Admission Forms which included nursing trips to the kitchen.

The admitting office could be an asset to the diet office and to nursing units late in the afternoon. If the nurse in the admitting office could be requested to call or send the necessary diet information to the diet office, time could be saved by nursing units not having to call the diet office or make extra trips to the kitchen for late trays. This procedure could allow the patient to receive his allowed dinner meal soon after his hospital admittance, and would permit nursing and dietary to proceed with other routine duties.

The handling procedures and number of trips from the diet office to the nursing units could possibly be reduced by sending the Modified Menu Forms along with the Menu Instruction Form on the breakfast tray line as the House Menu Forms are being sent. Nursing personnel could be requested

to especially caution those patients with the Modified Menu Forms to read the Menu Instruction Forms to mark their menu, and to advise the nursing service if they needed any assistance from the dietary department. Diet clerks could continue to check with the patient when they collect the Menu Forms for the next day. Many patients are unable to mark their menu or to place the Menu Form on the outside of the door, so they will require the assistance of nursing service or the dietary department.

In addition to the recommendation for the present system, it is suggested that the nursing department, dietary department, and the administration consider an information system which transfers diet information at the same time other hospital requests are being made. Several information systems provide constant up-to-date printed diet orders to the diet office as the patient comes into hospital or has a change in orders. This type of system allows nursing to insert the proper cards for diet orders while they are executing other routine admittance procedures, and would also prevent nursing from filling out Diet Order Sheets three times per day. Perhaps an automated information system would decrease the number of phone calls between the two departments.

When diet orders are fed to a computer or machine as patients come in, the diet office would be continually making diet changes instead of rushing to complete diet changes three times per day. Diet clerks would not be picking up diet changes, and more time for carrying through procedures could be utilized. These information systems are planned to meet the needs of the hospital as much as possible. Information concerning the tests for the next day are usually available to the diet office if the physician requests such. The first card known as the sender card

would have the correct identification numbers, complete name, name of diet, test diet orders, room number, bed number, or the nourishment desired, and this information would be printed out on a machine in the diet office. Dietary personnel would need to be present to take the orders off the machine, but different systems can be worked out for the individual situations.

The complete, legible, accurate information given in sufficient time for adequate planning would be an asset to the dietary department and to the nursing department. Correct and complete information is necessary for the serving of a correct diet prescription to the patient.

Inservice education meetings in or between nursing and dietary are recommended to provide examples and motivation for clearly written and complete information on Diet Order Sheets and other written communication forms. Legal implications involved in illegible, incomplete, or incorrect information could be presented. Illustrations could consist of an illegible or incomplete Diet Order Sheet, and illegible name on a Menu Form, the possible problems involved when a patient received an incorrect diet order; a patient received two different trays; or nursing thinking they did not receive an order.

It is suggested that the Diet Order Sheet contain a specific and well-marked place for Nourishments for the nursing units. Nursing employees could quickly spot check the Diet Order Sheet for Nourishment Orders before diet change times. The diet office should be able to order Nourishments from the kitchen with more accuracy and speed if all units used the same space on Diet Order Sheet for Nourishments.

Nursing personnel could bring the completed Diet Slip Admission Form to the diet office for approval before going to the main kitchen for the diet or items. This suggestion is made primarily because the main kitchen did not have access to the official diet orders, and it would be less disturbing to the personnel serving on the tray line. Diet Slip Admission Forms could be utilized for totaling the actual number of late trays served each day and the total meals served per day, month, and to check diet orders for the next day.

There would be fewer telephone calls to the diet office, if diet instruction requests were written on the Diet Order Sheet twenty-four hours before the patient dismissal. Fewer telephone calls or interruptions during the diet change time could provide increased accuracy and faster service to the patients. The written message would provide a receipt of the order, and would then advise the dietitian as to how much time she had for planning the diet instruction to the patient or his family.

There could be a new hold tray form prepared which would have the title "Hold Tray". The Hold Tray Forms could provide a place for the name of the patient, date, meal, diet prescription, and the signature of the nurse in charge. A form could be prepared which fits the present addressograph. This type of form could eliminate some written work for nursing, provide accurate and complete information to the dietary department, and reduce the duplication of orders. A change in procedure for nursing to obtain a hold tray is recommended. The diet office could keep the hold Menu Forms in the diet office, and nursing could bring the Hold Tray Forms to the diet office for approval and the Menu Form before taking

the form to the kitchen for preparation. There are various procedures which could be worked out concerning the hold tray, but the main objective is to have complete information before serving the tray. The main kitchen did not have access to the diet Kardex, and this is the main reason behind the suggested change in procedure.

Based on summaries of interviews (Appendix B, Tables III and IV) there seems to be a need for nursing employees to better understand the use of the Diet Order Sheet or the procedures followed by dietary to send correct diet prescriptions to the nursing units. Nursing service and dietary departments could provide a means for nursing employees to observe an entire day or two of dietary procedures for patient tray service. If direct observations are not feasible in scheduling for all employees, other forms of communicating dietary procedures could be used. Perhaps one employee from each nursing unit could participate in direct observation and report to the employees on that unit. Dietary employees could exchange observations with nursing service to aid in a better understanding of the problems in each department.

A continued effort to communicate problems related to diet at both the nursing and dietary staff meetings is recommended. Special emphasis should be given to the supervisory capacity in the relaying or dissipation of information to all levels of employment for better understanding and communication. Employees could be allowed to state problems with possible solutions to the department heads for discussion at the staff meetings of both departments. The directors of nursing service and dietary departments could share these discussions and consider methods for solving the problems stated.

Many problems related to communication between nursing and dietary depend on the physicians. Staff meetings with the physicians to explain the functions and problems of timing of patient admittance in relation to Nursing Service and the Dietary Departments could be helpful. One problem of main concern would be the admittance time of most routine hospital patients. If the majority of patients could be admitted prior to the serving of dinner trays, two of the most frequent occurring problems could be reduced. The problems include the number of patients admitted and the ordering of test diets after diet change time.

If the above suggestion cannot be implemented, it is suggested that the diet office remain open until the serving line is closed at the dinner or evening meal. This will prevent the kitchen employees having to answer the phone while working on the receiving line.

Regardless of the information system used, Nursing Service and Dietary Departments will need to continue a workable communication system. Inservice meetings or staff meetings should be utilized to provide information and to discuss communication problems. Memorandums and other communication media to provide complete and well-timed information will be most helpful in ordering and dispensing a correct diet prescription.

CHAPTER V

SUMMARY

The analysis of an information system between the nursing service and the dietary departments of a 390 bed hospital was conducted at the East Tennessee Baptist Hospital. The objective of this study was to identify, classify, and record the frequency of written and verbal communication problems between these two departments.

Forty interviews were held with nursing and dietary personnel. The interviews were used to compare the understanding of routine procedures for ordering diets, dispensing diets, identifying communication forms and identification of possible communication problems.

Twenty-five nursing personnel interviewed listed fifty-three communication problems. The communication problems most frequently described by nursing were two trays being served for the same patient. Fifteen dietary personnel identified thirty-seven communication problems, which included illegible and incomplete information.

A Problem Check List was formulated from the nursing and dietary interviews, literature search and experience. This Problem Check List was used for message coding for the fourteen day Telephone Communication Sheet recordings in the diet office and the five day problem check on the nursing units. The Daily Telephone Communication Sheets and the Problem Check Lists were totaled by the unit, day, meal, and the most appropriate message code or problem.

The coded communication problems were classified as timing of information, incorrect information, incomplete information, patient complaints, and duplication of information. One occurrence of poor timing, incorrect or incomplete information could prove fatal to a patient or be the cause of an extended hospital stay.

Significant communication problems between nursing service and the dietary department were arbitrarily selected as four occurrences. Twenty-five out of the forty-five classified codes had occurrences of four or more. Ten out of the seventeen problems related to timing had a frequency of four hundred twenty-nine occurrences. Fourteen out of forty-five message codes were classified as incorrect information. Eight out of fourteen incorrect problems were in the significant range, and the frequency of incorrect information occurred eighty times. Five out of twelve incomplete information codes were of significance with an occurrence of seventy-nine. One message code was classified as patient complaint, and had a frequency of twelve occurrences. One message code was classified as duplication of information. The frequency of occurrence for duplication of information was ten, and was therefore considered a significant problem.

The message code number forty-six contained different problems than covered in the first forty-five codes. These problems were classified as were the first forty-five.

The ten most frequently occurring problems were:

Incomplete information on Diet Order Sheet (lack of room number, bed number, name in full or initials when needed).

Patient admitted after diet changes were obtained from unit.

Patient transferred after diet changes were obtained from unit.

Patient did not receive a tray though requested.

Use of pink Diet Slip Admission Form.

Requesting diet instruction or a copy of the diet.

Dietary frequently called nursing concerning more than one patient in a bed or three patients in a semiprivate room or to clarify the information.

Ordering of test diets after diet changes.

Miscellaneous problems not coded.

Patient diet changed after diet changes obtained from unit.

The nursing and dietary interviews, telephone communication recordings in the diet office, and the five day Problem Check List utilized on the nursing units were used for identifying, classifying, and recording the frequency of communication problems. The Flow Process Charts were used in analysis of sequence and handling of nine communication forms between nursing service and dietary departments. The total number of times the forms were handled from origination to storage ranged from four to twenty-four.

Some recommendations were made for improving the information system between nursing service and dietary departments for the 390 bed hospital studied. A suggestion was made for dietary, nursing, and administration to investigate several of the automated or computer-type information systems that provides continuous up-to-date information. These types of computer systems could possibly help to eliminate some of the forms used

to communicate information, perhaps decrease the number of employees needed to process the forms, and increase the accuracy of the information handled. Communication that provides complete, accurate, and timely information is necessary for both nursing and dietary to order and dispense a correct diet prescription to the patient.

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BIBLIOGRAPHY

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APPENDIXES

APPENDIX A

COMMUNICATION FORMS

EAST TENNESSEE BAPTIST HOSPITAL

DIET ORDER SHEET

DATE _____ FLOOR _____ MEAL _____

PATIENT'S NAME PATIENT'S ADDRESS	RM. NO. DOCTOR	REG.	LIGHT	SOFT	LIQ.	SURG. LIQ.	OTHER DIET AND/OR REMARKS
Transfers:							
Dismissals:							
New Orders:							

DIET ORDER SHEET MUST BE SIGNED BY CHARGE NURSE _____

NOTE: Keep carbon copy of each diet change on floor for 24 hours so the next shift will not duplicate orders

Patient's Name _____ Room _____

_____ has been completed

_____
X-Ray Department

HOLD TRAY FORM

DIET SLIP
ADMISSION

DATE _____

NAME _____ HOUR _____

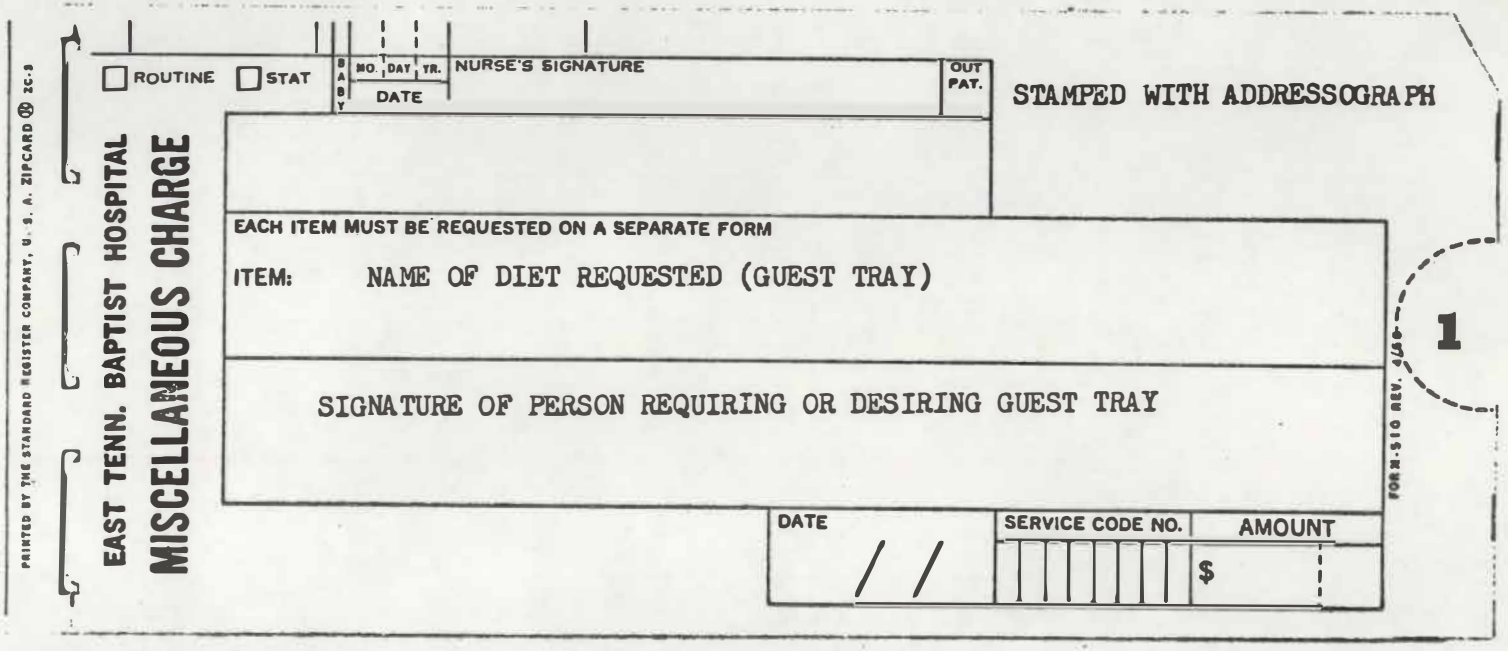
ROOM No. _____

DIET _____

DOCTOR _____

NURSE _____

DIET SLIP ADMISSION FORM



GUEST TRAY SLIP

EAST TENNESSEE BAPTIST HOSPITAL

NOURISHMENTS

Floor _____ Date _____ Time – 10_____ 2_____ 8_____

ROOM NUMBER	NAME	Juice	2 Orange Je—Cup	Sweet Milk	Skim Milk	Buttermilk	Chocolate Milk	Crackers—Pk.	Crackers—Sq.-3	Graham Cras.—Sq.-2	Sugar Cookie	Coca-Cola	Gingerale	Seven-Up	Diet—	Bland Mix	Tube Feeding	Custard—Spoon	Jello—Spoon	Vanilla—Spoon Ice Cream	Sherbet—Spoon	Spoon Strained Fruit	Cereal—Bowl-Spoon	Sugar	Cream	Cup/Saucer/Spoon	Diabetic Sandwich	Eggnog	Milkshake	Sunlages	Qt. 2 Orange Je.				
	TOTAL																																	

TUBE FEEDING

ROOM NUMBER _____

NAME _____

DATE _____

CC'S PER DAY _____

STIR WELL BEFORE USING
WARM EACH FEEDING.
DO NOT BOIL.

DIABETIC SANDWICH

ROOM NUMBER _____

NAME _____

DATE _____

INGREDIENTS:

_____ GRM SLICE FF

_____ SLICE BREAD

_____ TSP MAYONNAISE

_____ LETTUCE AND TOMATO IN SEPARATE SARAN WRAP

LABEL CARDS FOR NOURISHMENTS

ROOM NUMBER _____

NAME _____

ROOM NUMBER _____

NAME _____

DIETETIC GELATIN
(SUGAR FREE AND SALT FREE)

ROOM NUMBER _____

NAME _____

VANILLA WAFERS

CRACKER SQUARES

GRAHAM CRACKER SQ'S

LABEL CARDS FOR NOURISHMENTS

ROOM _____ NAME _____ ROOM _____ NAME _____ ROOM _____ NAME _____

L. Na - 1 gm SODIUM - L. Na

1	*1/2 GRAPEFRUIT	SPECIFY SERVINGS ☐ SMALL ☐ MEDIUM ☐ LARGE	1	L. Na CHICKEN NOODLE SOUP	SPECIFY SERVINGS ☐ SMALL ☐ MEDIUM ☐ LARGE	1	L. Na VEGETABLE SOUP	SPECIFY SERVINGS ☐ SMALL ☐ MEDIUM ☐ LARGE
2	ORANGE JUICE		2			2		
3			3	*L. Na PRIME RIBS OF BEEF au Jus		3	*L. Na WHITE MEAT TURKEY	
4	PUFFED RICE		4	L. Na GROUND BEEF		4	L. Na CHOPPED SIRLOIN STEAK	
5	SHREDDED WHEAT		5			5		
6			6	*L. Na BUTTERED WHIPPED POTATOES		6	*L. Na BUTTERED DICED POTATOES	
7	*L. Na OATMEAL		7	*L. Na BUTTERED PEAS		7	*L. Na BUTTERED GREEN BEANS	
8	L. Na CREAM OF WHEAT		8	L. Na BUTTERED TURNIP GREENS with Vinegar		8		
9			9			9	*LETTUCE AND TOMATO SALAD	
10	POACHED EGG (1)		10	L. Na COLD SALMON with Lettuce and Tomato	☐ *COFFEE ☐ *CREAM 1 T. ☐ DECAF. COFFEE ☐ HOT TEA ☐ ICE TEA ☐ LEMON	10	SLICED ORANGE AND PLAIN PRUNE SALAD	☐ COFFEE ☐ CREAM 1 T. ☐ DECAF. COFFEE ☐ HOT TEA ☐ ICE TEA ☐ LEMON
11	BOILED EGG (1)	☐ *COFFEE ☐ *CREAM 1 T. ☐ DECAF. COFFEE ☐ HOT TEA ☐ LEMON	11	L. Na COTTAGE CHEESE with Tomato Salad		11	LETTUCE WEDGE	
12	*SCRAMBLED EGG (1)		12	*L. Na VINEGAR SLAW		12		
13	FRIED EGG (1)		13	LETTUCE WEDGE		13	PEACH NECTAR	
14		☐ *SWEET MILK ☐ SKIM MILK	14	ORANGE JUICE	☐ SWEET MILK ☐ SKIM MILK	14	PRUNE JUICE	☐ *SWEET MILK ☐ SKIM MILK
15		☐ *L. Na. TOAST ☐ 1 ☐ 2	15	DIETETIC PEAR HALVES (2 Halves)	☐ *L. Na. BREAD ☐ 1 ☐ 2 ☐ L.Na. CRACKERS	15	DIETETIC PEACH HALVES (2 Halves)	☐ *L. Na. BREAD ☐ 1 ☐ 2 ☐ L.Na. CRACKERS
16			16	FRESH PEAR		16	DIETETIC CHERRY GELATIN (L. Na)	
17		☐ *L. Na. MARGARINE ☐ 1 ☐ 2	17	*CANNED PEACHES	☐ *L. Na. OLEO ☐ 1 ☐ 2	17	SHERBET (1/2 Cup) = (1/4 Cup Milk)	☐ *L. Na. OLEO ☐ 1 ☐ 2
18		☐ *L. Na. JELLY	18	DIETETIC LIME GELATIN (L. Na)	☐ L. Na. JELLY ☐ VINEGAR ☐ OIL	18	*STRAWBERRIES in Season	☐ L. Na. JELLY ☐ VINEGAR ☐ OIL
19		**NO SALT**	19	SHERBET (1/2 Cup) = (1/4 Cup Milk)	☐ L. Na. MAYO.	19	APPLESAUCE	☐ L. Na. MAYO.
	USE SPECIAL PENCIL ONLY TO MAKE MENU SELECTIONS MARK AS DARK AS POSSIBLE WITH AN X WITHIN BOX ONLY		20		**NO SALT**	20		**NO SALT**

SELECTIVE MENU FORM

MEMORANDUM

EAST TENNESSEE BAPTIST HOSPITAL

From _____

To _____

Subject _____

MEMORANDUM FORM

NUTRITION SERVICE

EAST TENNESSEE BAPTIST HOSPITAL ROOM NO. _____

DIET - BLAND IV NAME _____

DATE _____

INSTRUCTED BY _____

DIETITIAN'S PHONE _____

This diet consists of three meals with milk or milk-containing foods between meals and at bedtime.

Juices are allowed on this diet. Patients should be instructed to drink juice at the end of a meal. If juices are not tolerated, the diet may be deficient in ascorbic acid.

APPROXIMATE COMPOSITION

Protein	120 gm.
Fat	145 gm.
Carbohydrates	304 gm.
Calories	3000

SAMPLE MEAL PATTERN

Breakfast	Dinner	Supper
1 egg	3 oz. meat or substitute	Same as dinner.
1/2 cup cereal	1/2 cup potato or substitute	
1 slice toast	1/2 cup cooked vegetable	
2 tsp. butter	1 slice bread	
1 cup milk	2 tsp. butter	
1/2 cup juice (if tolerated)	1/2 cup fruit or dessert	
1 cup decaffeinated coffee	1 cup milk	
1 Tbsp. sugar		

Mid-morning	Mid-afternoon	Evening
1 cup milk	Milkshake	1 cup milk
Crackers		Crackers

DIET INSTRUCTION FORM

DIET - BLAND IV (continued)

FOOD	PERMITTED	AVOIDED
Beverage*	Decaffeinated coffee, postum, milk, milk beverages.	Coffee, cocoa, tea, carbonated beverages, alcoholic beverages.
Bread	Refined, enriched white bread, plain rolls, biscuits, spoon bread, Swedish rye bread, soda crackers, saltines, rusk, melba toast, zwieback.	Breads and rolls with seeds. Cornbread, whole grain bread and rolls, bran bread.
Cereal	Refined, enriched cream of wheat or rice, grits, quick-cooking oatmeal; prepared corn and rice cereals, plain or sugar-coated.	Whole grain cereals, cooked or ready-to-eat.
Cheese	Mild American, Cheddar, cream or cottage cheese.	Sharp-flavored or spiced cheese.
Dessert	Plain custard, junket and gelatin dessert; cornstarch rice and tapioca pudding; vanilla ice cream, plain sherbet* (allow to melt in mouth); fruit whips from allowed fruits; pie crust made with refined flour, vegetable fat or oil.	Any containing nuts, dried fruit, coconut, chocolate or raw fruit except ripe banana. Rich pastries and doughnuts.
Egg	Boiled, poached, baked, shirred, scrambled or soft cooked.	Any other.
Fat	Butter, margarine, cream, plain sour cream, vegetable shortening and oils, crisp bacon, mayonnaise.	Any other.
Fruit	Ripe banana. Cooked or canned applesauce, baked apple, apricots, Royal Anne cherries, peaches, pears, pineapple, plums, prunes. (Remove skins if possible.) Citrus fruit without membranes. Nectars. Any fruit juice if tolerated and taken at end of meal.	Raw fruits except ripe banana and citrus fruit without membrane. All fruit with seeds. Juices not tolerated.

*Avoid extremes in temperatures.

DIET INSTRUCTION FORM

DIET - BLAND IV (continued)

FOOD	PERMITTED	AVOIDED
Meat, fish, poultry	Tender whole cuts or ground: beef, liver, lamb, lean pork, veal, poultry, rabbit, squirrel, quail, salmon, tuna, shellfish. Smooth peanut butter. Meat, etc. should be baked, boiled, broiled or creamed.	Smoked or processed meats such as sausage, ham, bologna, frankfurters, potted meat, duck.
Potato or substitute	White potato without skin. Potato may be baked, boiled, creamed or mashed. Strained sweet potato. Grits, rice, plain noodles, macaroni or spaghetti.	Any other.
Seasonings and food accessories	Salt, vanilla, lemon and almond extract, allspice, cinnamon, nutmeg, mace, paprika, thyme, carob.	Pepper, other spices, chocolate, cocoa, catsup, mustard, horseradish, popcorn, nuts, potato chips, pickles, coconut, vinegar.
Soup	Cream soups made from allowed ingredients.	Commercially canned soups, meat and poultry stock soups and broth, bouillon, other meat extracts.
Sweets	In small amounts: sugar, syrup, strained honey, jelly, hard candy, marshmallows.	Any other.
Vegetables	Young, tender cooked or canned asparagus, green beans, wax beans, beets, carrots, mushrooms, green peas, spinach, pumpkin, winter squash. Tomato paste or puree unspiced. Shredded lettuce. Tomato juice.	All other vegetables. All raw vegetables except lettuce. Other vegetable juices.

DIET INSTRUCTION FORM

ROOM NO._____

NAME_____

DIRECTIONS FOR MARKING YOUR_____CALORIE MENU

1. THE MENU THAT YOU MARK WILL BE FOR THE FOLLOWING DAY.
2. PLEASE MARK YOUR MENU AS SOON AS POSSIBLE.
3. MARK YOUR SELECTION WITH THE SPECIAL SHORT BLACK PENCIL THAT IS KEPT IN THE DRAWER OF YOUR BEDSIDE TABLE.
4. MARK YOUR CHOICE HEAVILY WITH AN [X] IN THE SQUARE.
5. BE CERTAIN TO ENTER YOUR ROOM NUMBER AND NAME ON EACH SECTION OF THE MENU.
6. IF YOU HAVE A QUESTION OR NEED ASSISTANCE IN MARKING YOUR MENU, THE DIETARY REPRESENTATIVE WILL HELP YOU WHEN SHE PICKS UP YOUR MARKED MENU.

SPECIAL NOTES:

1. YOUR MEAL PATTERN IS ON PAGE II.
2. IF YOUR MEAL PATTERN INCLUDES MORE THAN 3 MEALS PER DAY, THEY WILL BE SERVED TO YOU BY YOUR NURSE. IF YOU DO NOT RECEIVE THIS FEEDING, PLEASE CHECK WITH THE NURSE.
3. CERTAIN ITEMS ON YOUR MENU ARE "FREE" OR PRACTICALLY CALORIE "FREE" AND MAY BE "X" IF DESIRED. EXAMPLES ARE DECAFFEINATED COFFEE AND DIETETIC GELATIN.
4. THIS DIET IS A BLAND DIET AS WELL AS A SPECIFIED NUMBER OF CALORIES. THEREFORE, ALL RAW FRUITS (EXCEPT RIPE BANANA) AND ALL RAW VEGETABLES ARE NOT ALLOWED. ALL FRUITS AND JUICES MUST BE UNSWEETENED. CREAMED MEATS AND VEGETABLES ARE NOT ALLOWED. SUGAR AND PEPPER ARE OMITTED.
5. ONLY THE SPECIFIED AMOUNTS ON YOUR DAILY MENU PATTERN WILL BE ALLOWED. KEEP THIS SHEET IN THE DRAWER OF YOUR BEDSIDE TABLE, ALONG WITH THE SPECIAL MENU PENCIL, SO YOU CAN MARK YOUR MENU CORRECTLY EACH DAY.
6. AS YOU MARK YOUR MENU, GO STRAIGHT DOWN EACH MEAL PATTERN AND CHECK YOUR SELECTION. THIS WILL AVOID MISTAKES.

MENU INSTRUCTION FORM

Department_____ Job Title_____

Employee Code No.___ Length of employment_____

Date_____ Shift_____

Interviewee_____

List each specific procedure for ordering and receiving a patient's diet prescription or tray in the hospital_____

_____

_____

List procedures for requesting a diet instruction for a patient_____

_____

Write names of forms used for communication between nursing and dietary

_____

CHECK THE FOLLOWING QUESTIONS WITH AN "X" UNDER THE APPROPRIATE ANSWER

	YES	NO	SELDOM	USUALLY
Are dietary and nursing problems discussed at staff meetings of each department?				
Do you feel sufficiently informed of new changes in procedure?				
Does Diet Order Sheet contain enough room for communication needed?				
Do you feel that diet changes should be made prior to every meal?				

LIST ANY PROBLEMS THAT YOU HAVE OBSERVED BETWEEN NURSING AND DIETARY

_____

_____

_____

Figure 1. Interview sheet.

Department_____ Date_____

Unit:_____ Circle Meal B L D N

Check appropriate time of frequency for each statement

Code No.		1 Time	2 Times	3 Times
1.	Diet Order Sheet not ready on time	_____	_____	_____
2.	Incomplete information on Diet Order Sheet (Lack of Room No., Bed No. or Name)	_____	_____	_____
3.	Poor legibility of handwriting on Diet Order Sheet	_____	_____	_____
4.	New patient admitted after diet changes obtained from nursing unit	_____	_____	_____
5.	Patient discharged after diet changes obtained from nursing unit	_____	_____	_____
6.	Patient diet changed after diet changes obtained from unit	_____	_____	_____
7.	Patient was transferred after diet changes obtained from unit	_____	_____	_____
8.	Tray was not canceled but should have been	_____	_____	_____
9.	Patient received two trays	_____	_____	_____
10.	Patient diet canceled but received a tray	_____	_____	_____
11.	Patient did not receive a tray though requested	_____	_____	_____
12.	Patient was transferred and did not receive a tray	_____	_____	_____
13.	NPO* patient tray comes on heated cart	_____	_____	_____

Figure 2. Communication problem check list for nursing service and dietary departments.

*Nothing postoperatively or by mouth.

Code No.		1 Time	2 Times	3 Times
14.	Patient made NPO and diet was not changed	____	____	____
15.	Patient on Hold receives tray	____	____	____
16.	Incorrect diet order for test	____	____	____
17.	Selective menus not collected on time	____	____	____
18.	Selective menus not marked on time for general pickup	____	____	____
19.	Poor legibility of handwriting on selective menus	____	____	____
20.	Patient complains about menu selection	____	____	____
21.	Patient desired more food than marked on menu	____	____	____
22.	Patient complains about temperature of food	____	____	____
23.	Nourishments ordered but not received on floor or unit	____	____	____
24.	Nourishments ordered in large quantity for number patients	____	____	____
25.	Nourishments delivered to unit but not received by patient	____	____	____
26.	Nourishments requested consists of substitutions	____	____	____
27.	Patient received incorrect diet for his prescription	____	____	____
28.	Patient received a tray that belongs to another patient	____	____	____
29.	Items omitted from tray though marked clearly	____	____	____

Figure 2 (continued)

Code No.		1 Time	2 Times	3 Times
30.	Guest tray requested but did not arrive	____	____	____
31.	Trays late being picked up from rooms	____	____	____
32.	Dietary early in picking up dirty tray carts	____	____	____
33.	Dietary late in picking up dirty trays from unit	____	____	____
34.	Insufficient time for patient to eat	____	____	____
35.	Diet trays not served or overlooked on heated carts	____	____	____
36.	Use of pink Diet Slip Admission	____	____	____
37.	Patient receiving food from an outside source	____	____	____
38.	Diet kitchen gets two patients' trays mixed up	____	____	____
39.	Patient sick when tray came	____	____	____
40.	Cannot leave tray on heated cart when we have more than one patient to feed because diet kitchen comes for Unitray cart too soon	____	____	____
41.	Dietary department frequently calls concerning more than one patient in a bed or three patients in a semi-private room or to clarify the information, i.e., the patient has been listed as a new patient when in actuality he was a transfer, or the Kardex does not agree with Diet Order Sheet	____	____	____
42.	Requesting diet instruction or a copy of diet	____	____	____

Figure 2 (continued)

Code No.		1 Time	2 Times	3 Times
43.	One nursing shift does not order sufficient nourishments for the next shift or two	_____	_____	_____
44.	Diet called in and was already on the Diet Order Sheet	_____	_____	_____
45.	Ordering of test diets after diet changes	_____	_____	_____

Figure 2 (continued)

Date _____
Month Day Year

INCOMING CALLS TO DIETARY DEPARTMENT FROM NURSING UNITS

TIME (HOUR)	PATIENT NAME	ROOM NUMBER	CONTENT OF MESSAGE	CALLER	RECEIVER

Figure 3. Dietary telephone communication sheet--incoming.

Date _____
Month Day Year

OUTGOING CALLS FROM DIETARY DEPARTMENT TO NURSING UNITS

TIME (HOUR)	PATIENT NAME	ROOM NUMBER	CONTENT OF MESSAGE	CALLER	RECEIVER

Figure 4. Dietary telephone communication sheet--outgoing.

DAILY TELEPHONE SUMMARY SHEET

TIME:

MESSAGE CODE NUMBERS

UNITS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
ICU																																															
CCU																																														
STSC																																														
IMCU																																														
3W																																														
4E																																														
OB																																														
5W																																														
5E																																														
6W																																														
6E																																														
7W																																														
7E																																														
8W																																														
8E																																														

TOTAL CODE NUMBERS:

ADDITIONAL MESSAGES:

Figure 5. Daily telephone summary sheet.

CODE NO.		CLASSIFICATION OF INFORMATION
1.	Diet Order Sheet not ready on time	Timing*
2.	Incomplete information on Diet Order Sheet (Lack of Room No., Bed No., or Name)	Incomplete*
3.	Poor legibility of handwriting on Diet Order Sheet	Incomplete
4.	New patients admitted after diet changes obtained from nursing unit	Timing*
5.	Patient discharged after diet changes obtained from nursing unit	Timing*
6.	Patient diet changed after diet changes obtained from unit	Timing*
7.	Patient was transferred after diet changes obtained from unit	Timing*
8.	Tray was not canceled but should have been	Incorrect*
9.	Patient received two trays	Incorrect*
10.	Patient diet canceled but received a tray	Incorrect*
11.	Patient did not receive a tray though requested	Incomplete*
12.	Patient was transferred and did not receive a tray	Incomplete*
13.	NPO** patient tray comes on heated cart	Incorrect*
14.	Patient made NPO and diet was not changed	Incorrect
15.	Patient on Hold receives a tray	Incorrect*
16.	Incorrect diet order for test	Incorrect
17.	Selective menu not collected on time	Timing
18.	Selective menus not marked on time for general pickup	Timing

Figure 6. Classification of problems.

*Frequency of occurrence was significant.

**Nothing postoperatively or by mouth.

CODE NO.		CLASSIFICATION OF INFORMATION
19.	Poor legibility of handwriting on selective menus	Incomplete
20.	Patient complains about menu selection	Patient Complaint*
21.	Patient desired more food than marked on menu	Incomplete*
22.	Patient complains about temperature of food	Timing*
23.	Nourishment ordered but not received on floor or unit	Incomplete*
24.	Nourishment ordered in large quantity for number of patients	Incorrect
25.	Nourishments delivered to unit	Incomplete*
26.	Nourishments requested consists of substitutions	Incomplete
27.	Patient received incorrect diet for his prescription	Incorrect
28.	Patient received a tray that belongs to another patient	Incorrect
29.	Items omitted from tray though marked clearly	Incorrect*
30.	Guest Tray requested but did not arrive	Incomplete
31.	Trays late being picked up from rooms	Timing
32.	Dietary early in picking up dirty tray carts	Timing*
33.	Dietary late in picking up dirty trays from unit	Timing
34.	Insufficient time for patient to eat	Timing
35.	Diet trays are not served or overlooked on heated carts	Incomplete
36.	Use of pink Diet Slip Admission Form	Timing*
37.	Patient receiving food from an outside source	Incorrect*

Figure 6 (continued)

*Frequency of occurrence was significant.

CODE NO.		CLASSIFICATION OF INFORMATION
38.	Diet Kitchen gets two patients' trays mixed up	Incorrect
39.	Patient sick when tray came	Timing
40.	Could not leave tray on heated cart when more than one patient to be fed because diet kitchen came too soon for the Unitary Cart	Timing
41.	Dietary department frequently calls concerning more than one patient in a bed or three patients in a semiprivate room or to clarify the information, i.e., the patient has been listed as a new patient when in actuality he was a transfer, or the Kardex does not agree with the Diet Order Sheet	Incorrect*
42.	Requesting diet instruction or a copy of the diet	Timing*
43.	One nursing shift does not order sufficient nourishments for the next shift or two	Incomplete
44.	Diet called in and was already on the Diet Order Sheet	Duplication*
45.	Ordering of test diets after diet changes	Timing*

Types of problems and frequency

Incomplete information	12
Incorrect information	14
Timing of information	17
Duplication of information	1
Patient complaint	1

Figure 6 (continued)

*Frequency of occurrence was significant.

CODE NO.		CLASSIFICATION OF INFORMATION	OCCURRENCE
46.	Miscellaneous		
a.	Items discovered on unit after calling diet kitchen	Incomplete	1
b.	Regarding change of diet and transfer	Incorrect	3
c.	Unit called diet in twice (one diet was incorrect)	Incorrect	1
d.	Hold tray information	Timing	5*
e.	To cancel tray for surgery	Incomplete	1
f.	Calling for a guest tray	Incomplete	1
g.	Patient's desiring Shasta, grape drinks, diet drinks	Incomplete	11*
h.	Patients placed in isolation	Incomplete	3
i.	Patients need to mark menu	Incomplete	3
j.	Call to make diet select	Incomplete	1
k.	Patient is unhappy	Patient Complaint	1
l.	Unit called diet kitchen to see if patient dismissed	Incomplete	1
m.	Diet kitchen calls unit about patient who said they would be going home, but was not on discharge sheet	Incomplete	2
n.	Tray went to wrong floor	Incorrect	1
o.	Requests for nourishments	Incomplete	2
p.	Patient desiring to see the dietitian	Incomplete	3

Figure 7. Classification and frequency of miscellaneous problems.**

*Frequency of occurrence was significant.

**Code No. 46 on Telephone Problem Check List.

CODE NO.		CLASSIFICATION OF INFORMATION	OCCURRENCE
46.	Miscellaneous (continued)		
	q. transfer after diet changes	Timing	1
	r. Ordering birthday cake	Incomplete	1
	s. Need for another tray due to allergy	Incomplete	1
	t. Same diet called twice one meal	Incorrect	1
	u. Diet kitchen called unit (two diets in one order)	Incorrect	1

Types of problems and frequency

Incomplete information = 13
Incorrect information = 5
Timing of information = 2
Patient complaint = 1

Figure 7 (continued)

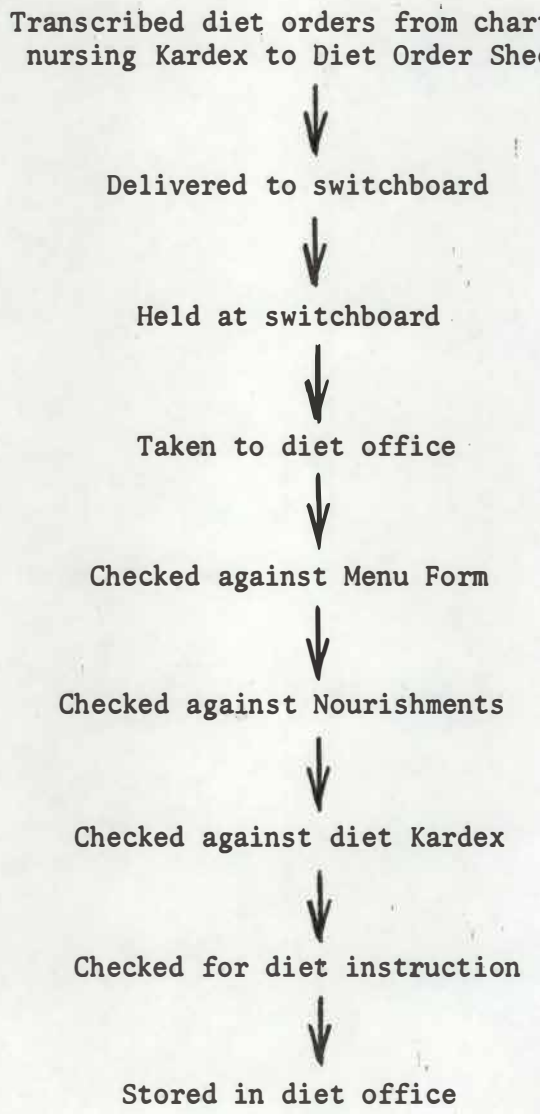


Figure 8. Flow process chart--breakfast diet order sheet.

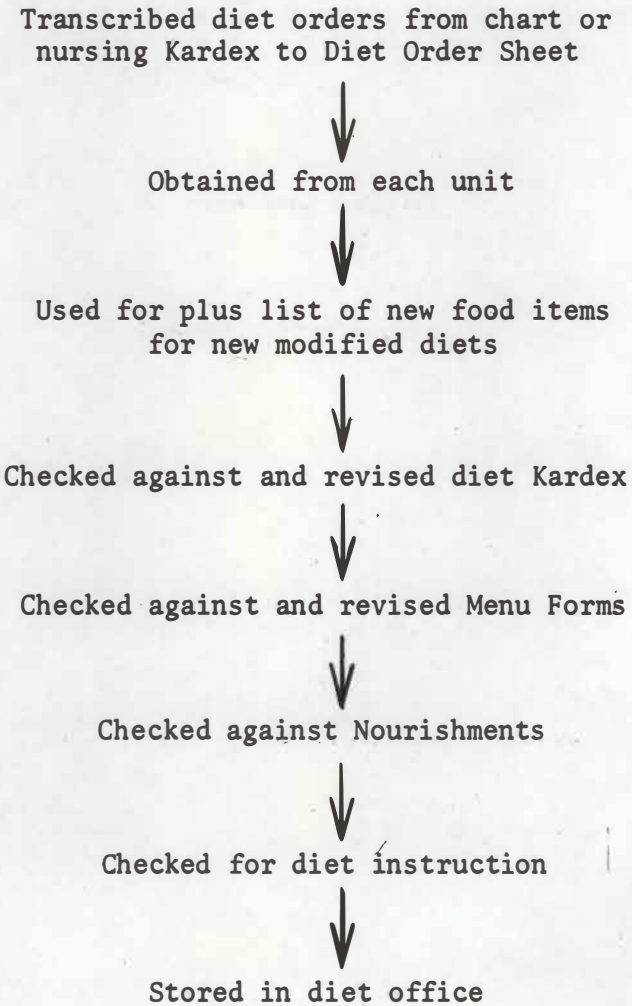


Figure 9. Flow process chart--lunch and dinner diet order sheet.

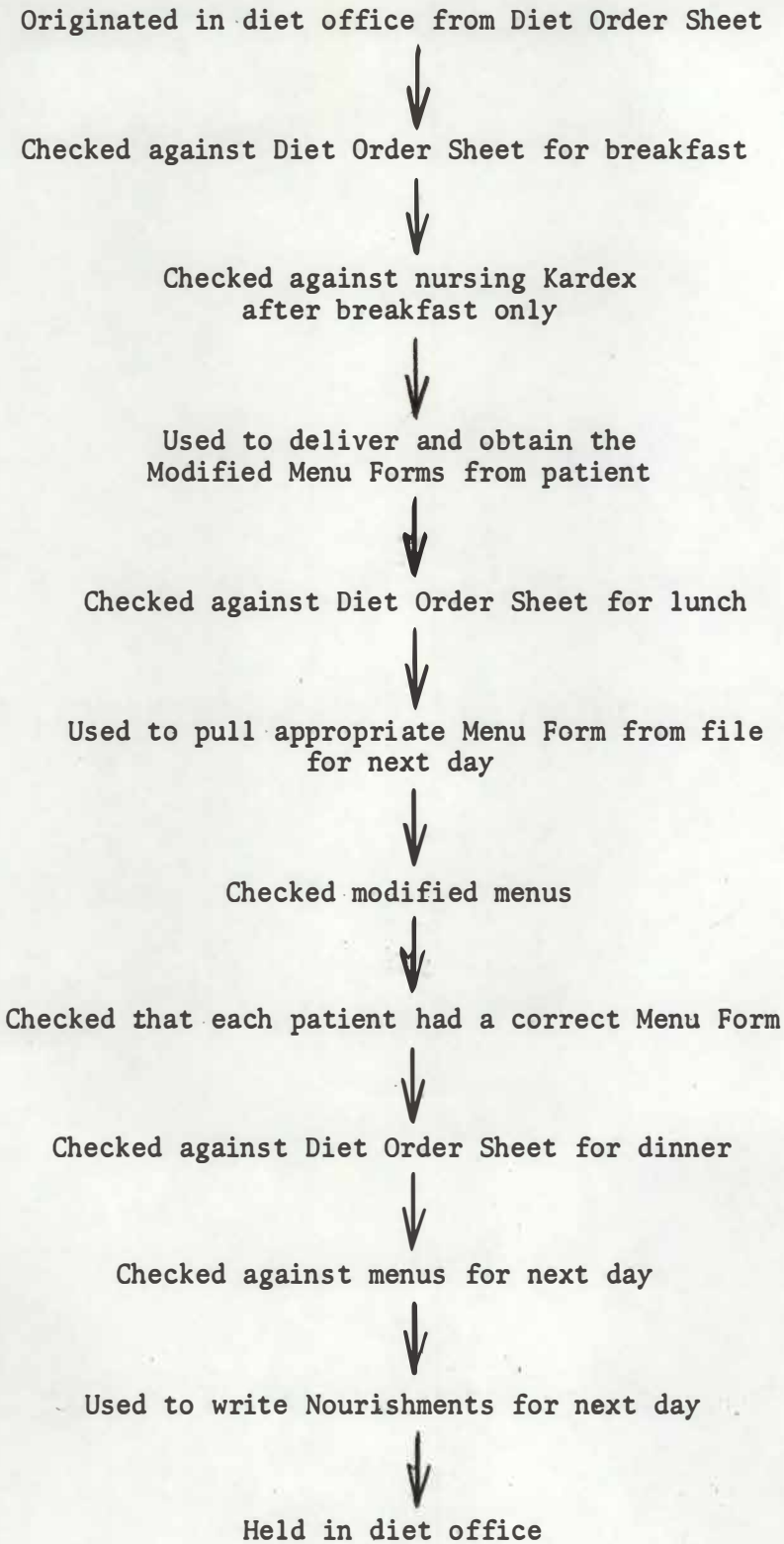


Figure 10. Flow process chart--dietary Kardex.

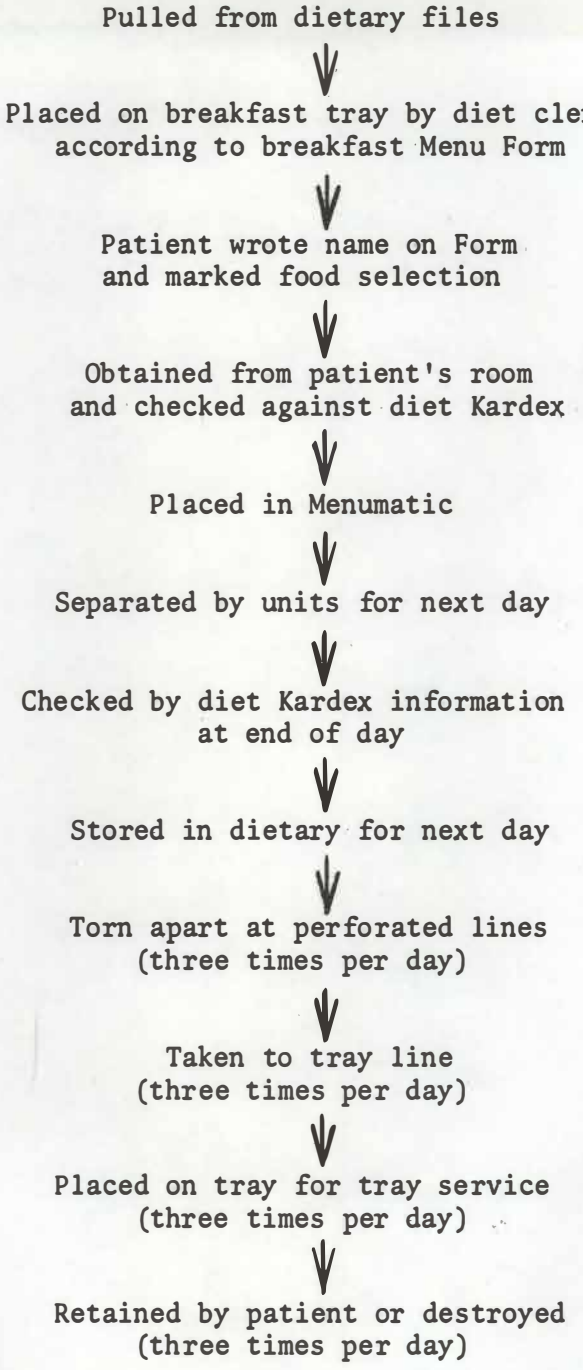


Figure 11. Flow process chart--house menu forms.

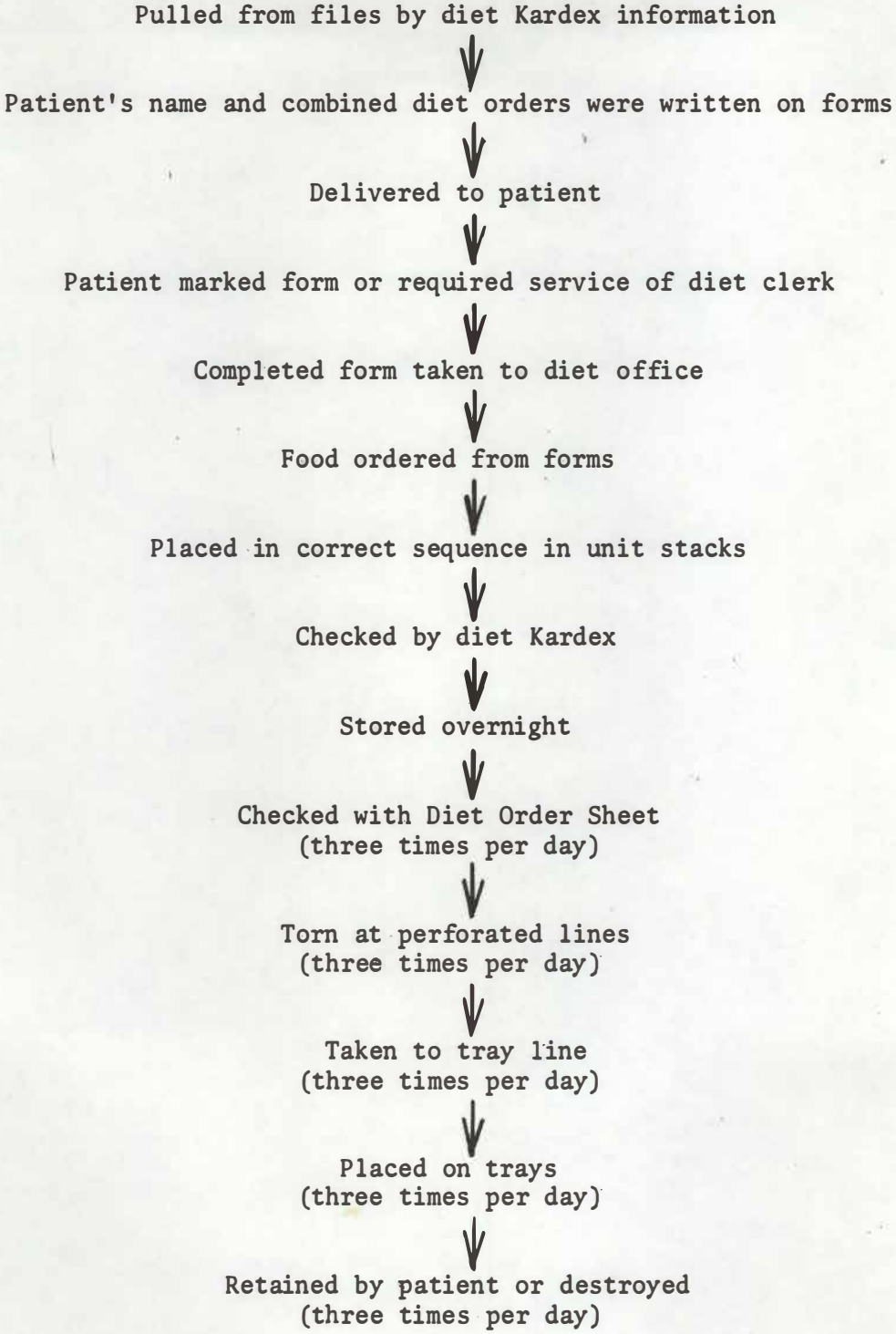


Figure 12. Flow process chart--modified menu form.

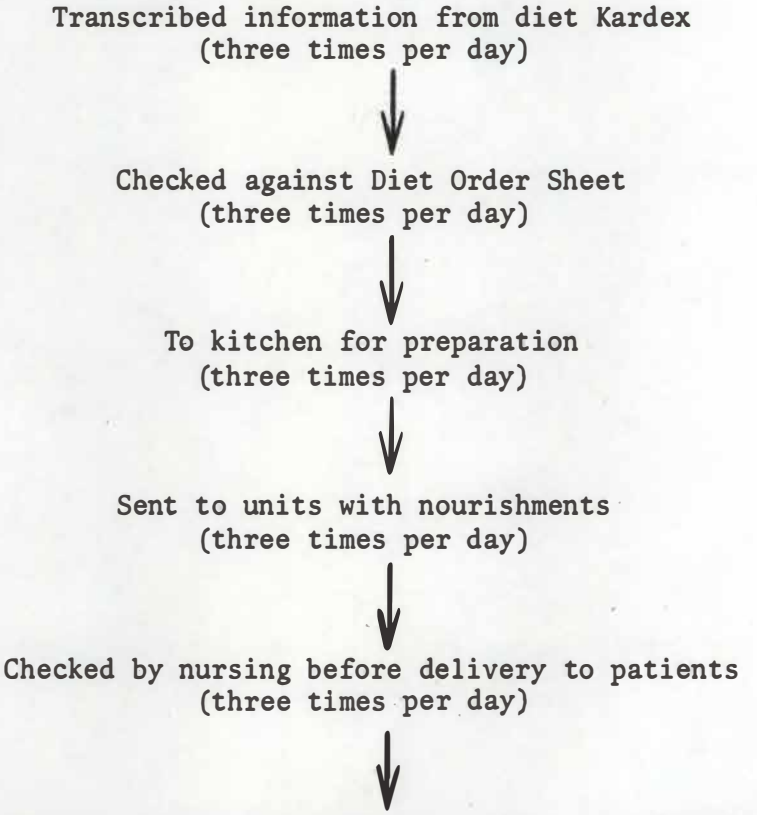


Figure 13. Flow process chart--nourishments.

Figure 14. Flow process chart--diet slip admission form.

Figure 15. Flow process chart--form used for "hold" trays.

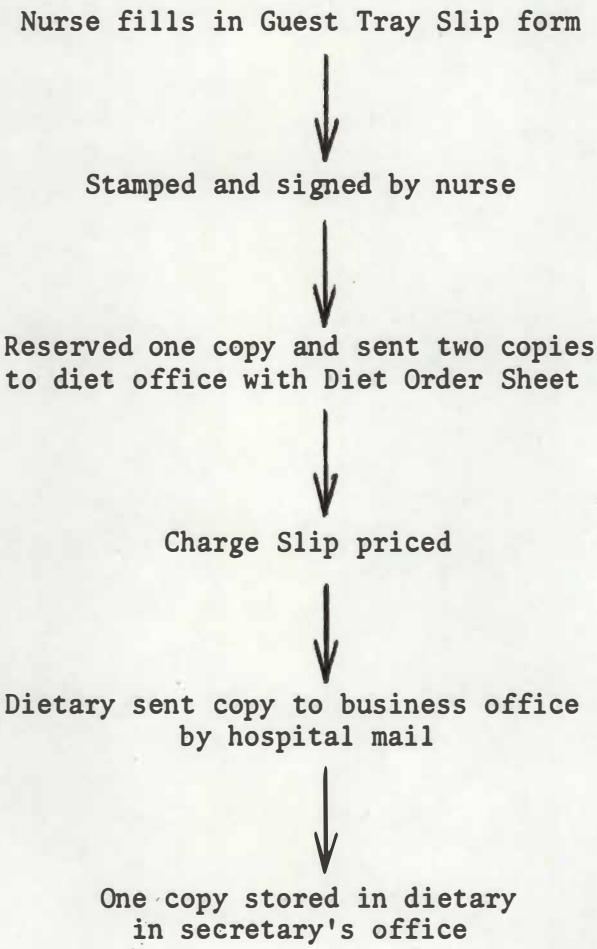


Figure 16. Flow process chart--guest tray slip or miscellaneous charge.

APPENDIX B

IDENTIFICATION AND FREQUENCY OF DATA

TABLE III

INTERVIEW SHEET SUMMARY--SPECIFIC PROCEDURE FOR ORDERING AND RECEIVING A PATIENT'S DIET PRESCRIPTION OR TRAY IN THE HOSPITAL*

Department	Frequency of Occurrence
Dietary Department. Job title-Dietitian (5)**	
Physicians write the diet order on patient chart	5
Ward clerk or nurse writes the diet order from the chart to the Diet Order Sheet	5
Diet office clerk or dietitian changes diet order in the dietary Kardex and places corrected menu in line or sequence for tray service	4
For new patient, diet order placed through the telephone, and the nursing employees come to diet kitchen with pink Diet Slip Admission Form signed by nurse on unit	1
Menu sent down tray line	1
Tray to Unitray Cart	1
To appropriate floor or unit	1
Job title-Diet Clerk (5)**	
Doctor would order diet on the patient's chart	5
Nurse sends order to diet office by way of Diet Order Sheet	5
Diet office transfers diet order from Diet Order Sheet to the dietary Kardex	2
Diet remains in diet Kardex until changed or the patient is discharged	1
Nursing Service. Job title-Nurse-7:00 A.M.-3:00 P.M. (6)**	
Depending on the time, a new admission is called in and placed on the next Diet Order Sheet	1

TABLE III (continued)

Department	Frequency of Occurrence
Job title-Nurse-7:00-3:00 P.M. (6)** (continued)	
If diet is needed between meals, Diet Slip Admission Form is used	1
The Diet Order Sheet contains diet along with the patient's name, room number, and correct diet	1
For one tray, fill out Diet Slip Admission and take to the kitchen for tray	1
Phone calls	2
Order received from doctor	3
New diet placed on Diet Order Sheet	3
Dietary placed diet in Kardex in dietary and this diet Kardex is checked by nursing each morning by nursing Kardex	2
If Diet Order Sheet has gone down for next meal, call dietary and request for that meal	1
Always place diet change on Diet Order Sheet	2
Trays brought to floor by dietary personnel	1
If patient has a delayed tray, floor personnel must go to kitchen to get the tray when x-rays are completed. A small pink slip must be taken to kitchen for hold tray	1
Job title-Nurse-3:00 P.M.-11:00 P.M. (5)**	
Order for diet received from doctor	2
Transferred to Diet Order Sheet	4
Call diet office if too late to write orders	2
If past hours, nursing personnel takes Diet Slip Admission Form to diet kitchen for tray	2
New admission requires use of Diet Slip Admission Form	2

TABLE III (continued)

Department	Frequency of Occurrence
Job title-Nurse-3:00 P.M.-11:00 P.M. (5)**	(continued)
Telephone dietary if before tray service time	1
Job title-Nurse-11:00 P.M.-7:00 A.M. (2)**	
Doctor orders specific diet for the patient	2
Nurse then places diet order on Diet Order Sheet prior to each meal time	2
Diet orders may also be telephoned to dietary prior to each meal time	1
Use Diet Slip Admission Form if too late to call	1
If special diet, call diet office so it can be calculated	1
Job title-Ward Clerk-7:00 A.M.-3:00 P.M. (7)**	
Copy diet from doctor's orders onto Diet Order Sheet and place the diet on the nursing Kardex	4
If diet changes have been picked up, call the diet office	1
List patient's name and room number and type of diet on Diet Order Sheet, call extension 261 regarding the diet the doctor ordered	1
Trays are brought to the unit by dietary, and they are given to patient by nursing personnel	1
If a special diet is needed, notify diet office and then pick up in diet kitchen	1
If the tray line has started serving, send a Diet Slip Admission Form to kitchen for tray needed	1
Diet Order Sheet	1
Telephone orders	1
Diet Slip Admission Form	1

TABLE III (continued)

Department	Frequency of Occurrence
Job title-Ward Clerk-3:00 P.M.-11:00 P.M. (5)**	
Transcribe diet order from doctor's order sheet to the nursing Kardex and then place on Diet Order Sheet with name and other information	5
If patient is new admission and trays have already come to the unit, fill out a Diet Slip Admission Form, and take the Admission Form to kitchen to obtain the tray to give to the patient	4
If before 4 o'clock, call diet kitchen	1
If after 4 o'clock, make out a Diet Slip Admission Form and go to obtain the tray	1
If patient arrives on floor 4:15 to 4:20 P.M., call the diet office, give needed information and ask that tray be sent with other trays	1
If the patient somehow misses his tray during regular hours or after 6:00 P.M., two diet slips must be signed by supervisor along with the patient information, then check to see what the patient desires for dinner and obtain the food from the coffee shop	1
Order diet for breakfast if a new patient or if there is a change	1

*Interview question. **Number interviewed.

TABLE IV

INTERVIEW SHEET SUMMARY--PROCEDURE FOR REQUESTING A DIET INSTRUCTION*

Department	Frequency of Occurrence
Dietary Department. Job title-Dietitian (5)**	
Physician writes the order for instruction on the patient's chart	5
Ward clerk or nurse notifies dietary via telephone and follows the order with written information on Diet Order Sheet	4
Should be twenty-four hours' notice before patient is dismissed	2
Job title-Diet Clerk (5)**	
Request is taken care of as the specific diet order	2
The doctor requests through the head nurse twenty-four hours before dismissal	2
Requires twenty-four hours' notice	1
Nursing Service. Job title-Nurse-7:00 A.M.-3:00 P.M. (6)**	
Request called down and then written on the Diet Order Sheet for the next meal	3
Either call dietitian, giving patient name, room, doctor's name, diet order or place the same information on Diet Order Sheet	1
Place request for diet instruction on Diet Order Sheet--call diet office so they can prepare the instruction forms	1
Telephone	1
Listing on Diet Order Sheet	1

TABLE IV (continued)

Department	Frequency of Occurrence
Job title-Nurse-3:00 P.M.-11:00 P.M. (5)**	
Physician writes the order for the instruction on the patient's chart	4
List request on Diet Order Sheet	3
Telephone before 5:00 P.M.	1
Job title-Nurse-11:00 P.M.-7:00 A.M. (2)**	
Doctor orders the diet instruction	1
Nurse then requests instruction for diet on Diet Order Sheet	1
Telephone diet instructions to diet office	1
Call dietitian's office, order diet instruction, and then write on the Diet Order Sheet	1
Job title-Ward Clerk-7:00 A.M.-3:00 P.M. (7)**	
Copy from doctor's orders to Diet Order Sheet and then call diet office	2
Call therapeutic diet office and list on Diet Order Sheet	2
Call extension 261, and tell them to instruct the patient	2
Notify diet office twenty-four hours in advance by phone and/or write on Diet Order Sheet	1
Job title-Ward Clerk-3:00 P.M.-11:00 P.M. (5)**	
Write request for diet instruction on Diet Order Sheet	1
Place on Diet Order Sheet for next meal; if the patient is leaving, call the diet kitchen	1
Request on the Diet Order Sheet with needed information	1

*Interview question. **Number interviewed.

TABLE V

INTERVIEW SHEET SUMMARY--NAMES OF COMMUNICATION FORMS USED BETWEEN NURSING SERVICE AND DIETARY DEPARTMENTS*

Department	Frequency of Occurrence
Dietary Department. Job title-Dietitian (5)**	
Diet Order Sheet	5
Diet Slip Admission Form	2
Guest Tray Slip	2
Job title-Diet Clerk (5)**	
Diet Order Sheets	3
Diet Slip Admission Forms	4
Guest Tray Slips	1
Nourishments	3
Diet Instruction Form	1
Selective Menu Form	1
Label cards for nourishments	1
Menu Instruction Form	1
Nursing Service. Job title-Nurse-7:00 A.M.-3:00 P.M. (6)**	
Diet Order Sheet	3
Diet Slip Admission Form	4
Memorandum	1
Selective Menu Form	1
Guest Tray Slip	1

TABLE V (continued)

Department	Frequency of Occurrence
Job title-Nurse-3:00 P.M.-11:00 P.M. (5)**	
Diet Slip Admission Form	3
Diet Order Sheet	4
Memorandum	2
Job title-Nurse-11:00 P.M.-7:00 A.M. (2)**	
Diet Order Sheet	1
Diet Slip Admission Form	1
Job title-Ward Clerk-7:00 A.M.-3:00 P.M. (7)**	
Diet Order Sheet	5
Diet Slip Admission Form	5
Guest Tray Slip	3
Job title-Ward Clerk-3:00 P.M.-11:00 P.M. (5)**	
Diet Order Sheet	5
Diet Slip Admission Form	5
Guest Tray Slip	1

*Interview question. **Number interviewed.

TABLE VI

INTERVIEW SHEET SUMMARY--PROBLEMS OBSERVED BETWEEN NURSING SERVICE AND DIETARY DEPARTMENTS*

Department	Frequency of Occurrence
Dietary Department. Job title-Dietitian (5)**	
Some ward clerks do not use appropriate columns for ordering on the Diet Order Sheet, they write all the way across the sheet which makes it difficult to read.	1
Dietary administration feels it would help public relations if the nursing units would check to see who (dietary or nursing) really made the error before calling that the dietary failed to do such and such. This places the dietary employee on the defensive.	1
Nursing does not always transfer patient from one room to another which confuses dietary.	1
Many times dietary is not provided with a twenty-four hour notice to instruct patient on a specific diet.	1
Failure to write complete detailed information for a combination or very complicated diet on Diet Order Sheet and this causes dietary double work.	1
Handwriting is not clear and is often difficult to read.	1
Need first name of patient when two or three patients have the same name on that unit.	1
Need patient discharges each meal.	1
Too many calls during tray line confuses dietary.	1
Failure to follow established procedures in ordering some diets (i.e., test diets).	1
Job title-Diet Clerk (5)**	
Need for accurate ordering of test diets such as not ordering NPO (nothing by mouth) in place of Hold Breakfast.	1
Need for twenty-four hour notice in advance for diet instruction.	1

TABLE VI (continued)

Department	Frequency of Occurrence
Job title-Diet Clerk (5)** (continued)	
Floor or unit should check their carbon copy of Diet Order Sheet before calling diet office for a diet.	1
Not transferring a special diet. If a unit places diet in as a new patient, there is much work and waste of time that occurs.	1
Not dismissing patients on 3:00 P.M. Diet Order Sheet as should.	1
Ordering too many bulk nourishments.	1
When tray is taken to a new patient in the A.M., person delivering the tray should tell the patient to mark and keep selective menu until diet clerk comes to pick it up or to hang the menu on the door. Sending unmarked menu back on dirty tray causes an unhappy patient as well as expense and time.	1
Misunderstanding on both sides.	1
Diet change time is our busy time.	1
Two diet change times are shift change time for nursing so if you call about a problem you get someone in a hurry to go home.	1
Not enough continuity between nursing and dietary, nursing figures it is our problem. They probably don't realize that they are responsible for "x" number of patients on their floor alone and we are responsible for every patient in the hospital.	1
Need for complete information (Name, Room Number, Bed Number, and Diet Order), i.e., Jane Smith (blank). We do not know if R. N. (nurse) forgot to finish the information or patient just returned from surgery and is NPO, is a Catholic and doesn't trust our food or is eating in the Coffee Shop with her boy friend. Incomplete information results in phone calls, and seven times out of ten, she (Unit personnel) snaps at us to find out where she came from and so on and on.	1
Not being able to know the correct spelling of patient's name	1

TABLE VI (continued)

Department	Frequency of Occurrence
Job title-Diet Clerk (5)** (continued)	
Need the unit transferring a patient to give the information and the unit receiving the patient to give the information in order for the special marked menu to be moved and go to the correct place. This keeps patient happy with his menu selection and prevents extra work of new diet or sending two trays.	1
Names are not written clearly.	1
Job title-Transporters (5)**	
Nursing is slow in picking up trays, especially 4 West.	1
Have difficulty getting or picking up carts on floors.	1
Nurses want us to wait so they can get the meat off trays for their dogs.	1
Nurses said to bring another cart to the floor for dirty trays.	1
Had to take tray from heated cart to nurses desk.	1
Floor personnel complaining of coffee being spilled on trays as arriving on the floor.	1
Floor personnel complaining of dietary picking the Unitray Cart up too soon.	1
Floor personnel say patients complain of food being cold.	1
Floor personnel leave Unitary Cart door open too long when delivering trays to the patients.	1
Floor personnel complain about where carts are pulled to or left on the floor.	1
Have noticed employees eating nourishments on the floor.	1
Floor personnel complain about not getting enough nourishments.	1

TABLE VI (continued)

Department	Frequency of Occurrence
Nursing Service. Job title-Nurse-7:00 A.M.-3:00 P.M. (6)**	
One nurse (RN) said there were no problems.	1
Very few problems if any.	1
I would like to see dietary deliver all of the trays. It is very difficult to go get trays from diet kitchen when unit secretary is not available or off.	1
Dietary is very good checking with the patients and their families regarding diets; they are quick to come to discuss problems.	1
I feel there is a good relationship between the two departments; at times we can't quite understand what it is we want between each other.	1
Sometimes, you have to talk with three or four people to find out what you want to know.	1
Wrong type diet on cart.	1
Two diets for some patients.	1
Rudeness from diet department, personnel and nurses.	1
Long time span for special diet instructions for discharge patient.	1
Some good relations, too.	1
Diet change made on Diet Order Sheet not made on dietary Kardex.	1
Not receiving exact number of items ordered for Nourishments.	1
As the RN was being interviewed, a Ward Clerk added "yes, I have had my nourishment orders cut in half."	1

TABLE VI (continued)

Department	Frequency of Occurrence
Job title-Nurse-3:00 P.M.-11:00 P.M. (5)**	
Dietary is usually most cooperative.	1
Need space on Diet Order Sheet for blands because they are so frequently ordered.	1
Need more space on the Diet Order Sheet (Two or more lines for transfers).	1
Dietary department should make up and send nourishments to the patients without nursing personnel having to pick them up.	1
Sometimes after a patient discharge is noted on Diet Order Sheet and the patient is gone, the tray still comes.	1
Sometimes, when a diet is changed two trays come.	1
Coffee is frequently turned over on the trays and this is a mess.	1
Job title-Nurse-11:00 P.M.-7:00 A.M. (2)**	
Failure to transcribe diet properly to Diet Order Sheet.	1
Failure to place discharged or transferred patients on the Diet Order Sheet.	1
Failure to make patient NPO for special meal as ordered.	1
Dietary sending wrong diet to patient when correct diet has been ordered on Diet Order Sheet	1
Failure in getting Diet Order Sheet to dietary department in time for the next meal.	1
Not enough carts for dirty trays.	1
Job title-Ward Clerk-7:00 A.M.-3:00 P.M. (7)**	
Names are incorrectly spelled on diet Kardex and Menu Forms.	1
Kardex from diet kitchen has liquid even though a regular diet was ordered.	1

TABLE VI (continued)

Department	Frequency of Occurrence
Job title-Ward Clerk-7:00 A.M.-3:00 P.M. (7)** (continued)	
Carts are handled carelessly and coffee is spilled all over trays and silverware gets soaked.	1
Only getting half of nourishments ordered.	1
Failure to receive carts for dirty trays.	1
None--dietary is very cooperative with nursing service.	1
Nursing service forgets to put patients on diet changes and this involves someone going to the kitchen to get the tray.	1
Incorrect diet on nourishments being brought to floor repeatedly or nourishment items omitted.	1
Substitutions for nourishments ordered on the children's unit resulted in an over-supply of strained pears.	1
Not enough carts for dirty trays.	1
Diet kitchen should be responsible for all trays being delivered from the kitchen to the patient.	1
Nursing personnel should not be allowed to enter kitchen.	1
The time in going to the kitchen for trays takes away from the patients on the unit.	1
Job title-Ward Clerk-3:00 P.M.-11:00 P.M. (5)**	
As a Ward Clerk, I receive no communication regarding staff meeting discussion.	1
Often times some of our nourishments are not brought up at night.	1
Diet office is sometimes rather hostile when we see that we need unit stock and call down requesting it be placed on the nourishments.	1

TABLE VI (continued)

Department	Frequency of Occurrence
Job title-Ward Clerk-3:00 P.M.-11:00 P.M. (5)** (continued)	
Two trays often come for the same patient.	1
Sometimes, dietitians will ask that I bring a Diet Admission Form down on a new admission rather than putting the request through with the other trays. This occurs even when there is fifteen minutes before the trays are served.	1
When the 7:00 A.M.-3:00 P.M. shift doesn't stock the refrigerator with cokes, milk, etc., and the diet office will not put it on with the nourishments, the kitchen personnel sometimes do not give me these items without demanding that such a request be written on the Diet Order Sheet by the previous shift. They do not seem to realize that it is not the fault of the shift that needs the items but the previous shift, and that all we can do is ask them to send the items or we will not have that which the patient desires.	1
If a patient comes in after 6:00 P.M., I have to make out two Diet Slip Admission Forms, have the supervisor sign them, and then go to the coffee shop for food.	1
When kitchen is notified, sometimes the tray does not come up for the patient.	1
Many times trays are sent up after a patient has been discharged.	1
Occasionally, a guest tray for a patient is not sent as ordered.	1
Coffee and liquids have often been found spilled on the entire tray which ruins everything.	1
Occasionally, two trays are sent up on a patient after a previously ordered diet has been changed.	1
Only individual mistakes, i.e., Nursing forgetting to place a diet order for the diet office or the diet office overlooking an order.	1

TABLE VI (continued)

Department	Frequency of Occurrence
Job title-Ward Clerk-3:00 P.M.-11:00 P.M. (5)** (continued)	
When a patient has been transferred, a mix-up in trays or the patient does not receive a tray.	1
Items are occasionally omitted from tray though marked on menu.	1

*Interview question.

**Number interviewed.

TABLE VII

INTERVIEW SHEET SUMMARY

Questions*	Dietary Department			Nursing Service				
	Dietitians (5)**	Diet Clerks (5)**	Transporters (5)**	Nurses 7AM-3PM (6)**	Nurses 3PM-11PM (5)**	Nurses 11PM-7AM (2)**	Ward Clerks 7AM-3PM (7)**	Ward Clerks 3PM-11PM (5)**
Are dietary and nursing problems discussed at staff meetings of each department?								
Yes	2	1		3		1	3	1
No								
Seldom	1			2	2	1		
Usually	2	2		1			1	
Do Not Know		2			2			2
Do you feel sufficiently informed of new changes in procedures?								
Yes	1	3		5	2	1	6	2
No		1		1		1		
Seldom								
Usually	4	1		1	2		1	2
Do Not Know								
Does Diet Order Sheet contain enough room for communication needed?								
Yes	4	4***		4***	1	2	4	2
No		1		1	2		1	1
Seldom								
Usually	1			1	1		2	1
Do Not Know								

TABLE VII (continued)

Questions*	Dietary Department			Nursing Service				
	Dietitians (5)**	Diet Clerks (5)**	Transporters (5)**	Nurses 7AM-3PM (6)**	Nurses 3PM-11PM (5)**	Nurses 11PM-7AM (2)**	Ward Clerks 7AM-3PM (7)**	Ward Clerks 3PM-11PM (5)**
Do you feel that diet changes should be made prior to every meal?								
Yes	5	4		5	4	2	7	3
No				1				1
Seldom								1
Usually								
Do Not Know								

*Interview questions.

**Number interviewed.

***One nurse and one diet clerk indicated a need for space for nourishments on Diet Order Sheet.

TABLE VIII

FREQUENCY OF COMMUNICATION PROBLEMS BETWEEN NURSING SERVICE AND DIETARY DEPARTMENTS

Problem Code Number	Interviews (Nursing and Dietary)	Number of Occurrences			Percent Frequency*
		Telephone Messages	Problem Check List	Total Frequency	
1	1	4	2	6	.84
2	5	29	0	29	4.07
3	3	2	1	3	.42
4	0	169	34	203	28.51
5	0	10	8	18	2.52
6	0	73	21	94	13.20
7	0	11	10	21	2.94
8	0	4	10	14	1.96
9	5	0	10	10	1.40
10	0	1	6	7	.98
11	0	4	14	18	2.52
12	0	0	1	1	.14
13	0	0	6	6	.84
14	0	0	2	2	.28
15	0	1	3	4	.56
16	2	0	3	3	.42
17	0	0	1	1	.14
18	1	0	3	3	.42
19	0	0	0	0	--
20	0	0	12	12	1.68
21	0	2	15	17	2.38
22	2	0	7	7	.98
23	4	4	7	11	1.54
24	1	0	1	1	.14
25	1	0	4	4	.56
26	2	0	2	2	.28
27	0	3	0	3	.42
28	0	0	3	3	.42
29	1	7	8	15	2.10
30	1	0	1	1	.14
31	2	0	2	2	.28
32	1	0	9	9	1.26
33	0	0	3	3	.42
34	0	0	2	2	.28
35	1	2	0	2	.28
36	0	1	32	33	4.63
37	0	0	6	6	.84
38	0	0	1	1	.14
39	0	0	1	1	.14
40	0	0	2	2	.28

TABLE VIII (continued)

Problem Code Number	Interviews (Nursing and Dietary)	Number of Occurrences: Telephone Messages	Number of Occurrences: Problem Check List	Total Frequency	Percent Frequency*
41	0	17	1	18	2.52
42	0	19	0	19	2.66
43	0	1	0	1	.14
44	0	10	0	10	1.40
45	2	20	0	20	2.80
46	57	43	5	48	6.74
Added messages	=	16			
Totals	92	453	259	712	99.42

*Percent frequency was based on a combined total of seven hundred and twelve problems from Telephone Messages and Problem Check List.

VITA

Anna Lea Cupp entered The University of Tennessee in the fall of 1948. She received the Bachelor of Science Degree in Home Economics with a major in Institution Management at The University of Tennessee, Knoxville, in June, 1952.

A dietetic internship was completed at the Vanderbilt University Hospital, Nashville, Tennessee, in August of 1953. After that time, she was employed as therapeutic dietitian at the Knoxville General Hospital in October, 1953. The author is a registered dietitian. For the past twelve years, she has been employed as Nutrition and Diet Therapy Instructor on the East Tennessee Baptist Hospital School of Nursing Faculty.

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The author is the daughter of Mr. and Mrs. Ralph A. Hawkins, Sr., and wife of Alfred L. Cupp. She is the mother of two sons, Phillip and Lynn.