

MARKETING TECHNIQUES APPLIED TO A
HOSPITAL EMPLOYEE CAFETERIA

A THESIS

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CHAPTER I

INTRODUCTION

For a foodservice to be successful, it must not only produce quality food and service, but it also must identify the needs of the consumer and provide food and service at a time and place convenient to the consumer. The successful exchange of money for goods and services is responsible for compensation sufficient to sustain the foodservice (1). The process of moving goods and services from the producer to the consumer is referred to as marketing (2, 3).

In the past foodservice operations in institutions such as hospitals, schools, and universities were not always self-sustaining. The cafeteria or other foodservice was considered a benefit to employees or students and was often subsidized by administration. In today's climate of cost containment, however, foodservice must be financially stable (3). As the captive audience becomes more mobile and sophisticated, the foodservice operator must determine consumer needs and expectations in order to make the operation profitable.

The strategy used to determine consumer needs and expectations is marketing techniques (1, 4). In a small

foodservice operation, the marketing function may be performed as part of the day-to-day operation by the owner/operator. In larger companies or institutions, separate departments may be created and staffed for the specific purpose of marketing. Both are fulfilling the same functions of planning and revising menus, decorating and improving the appearance of the establishment, training of staff, and instituting other appropriate measures. The ultimate goal of any marketing program is four-fold: first, to satisfy the patron; second, to analyze and increase demand; third, to identify and exploit opportunities; and fourth, in a commercial operation, to gain competitive advantages (1).

Coryell Memorial Hospital is a fifty-five bed community hospital that has been in operation at its present location since February, 1977 (Appendix I). Prior to the move to the new facility, employees received one free meal, served family-style in the dining room, as part of their benefit package. When the new facility was planned and constructed, an administrative decision was made to discontinue "free" meals and convert to a paying system. From February, 1977, through February, 1981, the foodservice available to employees and visitors was from vending machines operated and maintained, per contract, by a

vending company. In November, 1980, hospital administration and the Director of the Dietary Department decided to equip and operate a cafeteria for the convenience of employees and visitors. The cafeteria was initially opened for business to both employees and visitors on March 1, 1981.

This study was conducted to determine whether application of marketing techniques is useful in making operational decisions in institutional foodservices. Review of the literature revealed only three studies related to the application of marketing techniques in foodservice operations. Underwood (3) reported a study conducted in a hospital foodservice; Brandler (5) described a study of a military foodservice; Stephens and Shanklin (6) reported a study in a university foodservice.

A second benefit of the study was directly related to the cafeteria operation at Coryell Memorial Hospital. After identifying the needs and expectations of the people to be served, the Director of the Dietary Department planned menus and services on the basis of the results of the surveys. This knowledge and the use of merchandising increased volume of cafeteria sales.

Purpose of the Study

The purposes of this study were to determine the needs and expectations of employees who would be served by the Coryell Memorial Hospital cafeteria and the most effective arrangement of food on the cafeteria line. The objectives of the study were:

1. To identify the perceived needs of hospital employees prior to initial operation of the cafeteria
2. To determine, after a three month period of operation, the level of satisfaction among employees concerning the cafeteria
3. To evaluate the best arrangement of food items on the cafeteria line as determined by sales.

Hypotheses

The study was based on the following hypotheses:

1. There is no significant difference among responses of hospital employees and the following demographic variables: sex, age, position, and shift in relation to their needs and expectations of a hospital cafeteria.
2. There is no significant difference among responses of hospital employees and the following demographic variables: sex, age, position, and shift in relation to their present level of satisfaction with cafeteria service.

3. There is no significant difference between volume of sales and the arrangement of the cafeteria line.

McCarthy (1) states that marketing research and strategies are considered basic to most industries. Large fast food chains spend millions of dollars on marketing and market research. slogans such as "Have it your way" and "We do it all for you" are marketing strategies designed to increase profits by appealing to customers' unexpressed desires for individuality (2). Small establishments and institutional foodservices, however, have not traditionally used the marketing tools available but have relied on intuition or intensive personal involvement to maintain viable operations (3, 4). In the past, institutional food services have not been expected to conduct research to identify needs and attitudes of clients. The patron's voice was neglected and, therefore, the establishment's level and expenses were not carefully controlled, and/or employees or students had short meal times that made it impractical to go to another eating establishment (5, 6).

Marketing Activities

Marketing activities can be divided into four areas: market research, new product, service, and promotion (7). Market research reveals information about the market area.

CHAPTER II

REVIEW OF LITERATURE

McCarthy (2) states that marketing research and strategies are considered basic to most industries. Large fast food chains spend millions of dollars on marketing and customer research. Slogans such as "Have it your way" and "We do it all for you" are marketing strategies designed to increase profits by appealing to customers' expressed desire for individuality (3). Small establishments and institutional foodservices, however, have not traditionally used the marketing tools available but have relied on intuition or intensive personal involvement to maintain viable operations (7, 8). In the past, institutional foodservices have not felt obligated to conduct research to identify needs and expectations of clients. The patrons were either a captive audience, the cafeteria was convenient and inexpensive (often operating at a loss), and/or employees or students had short meal times that made it impractical to go to another eating establishment (3, 9).

Marketing Activities

Marketing activities can be divided into four areas: market research, menu planning, service, and promotion (1). Market research reveals information about the market area,

identifies customer demands, and defines clients' needs. This knowledge is used in decision making and planning (1, 4, 7). Menu planning develops the primary product of any foodservice, the food itself. The menu items should be based on preferences identified in market research. Service, the third segment of marketing, includes two distinct areas, the first being the distribution channel by which the food reaches the customer from the point of preparation. The second part of service encompasses the setting for the distribution method, such as service style, atmosphere, serviceware, decor, and lighting (1). The fourth part of marketing is promotion, the activity that informs the consumer about the product in order to increase his desire for it. Advertising and sales techniques emphasize the quality and value of the foodservice and its product. Promotion, therefore, is responsible for enhancing sales and profits (1, 3, 8).

Market research which is essential before other activities can be organized and decisions reached is the first step in applying marketing principals. Research should be done systematically. Internal data, an excellent starting point, will provide information on proportion of sales at different serving times, total sales, and average sales. Related data including weather conditions

and special events, such as holidays or special promotions, may be noted. Service employees and cashiers should be interviewed to obtain their insights into customer attitudes and preferences. Personnel and admission offices in healthcare institutions can provide data on the numbers of potential customers by functional group. From this data, administration can evaluate whether management has provided services which meet the needs of each group. Eating habits of physicians, nurses, students, service employees, and administrative/business office employees may vary greatly (1, 3, 7).

Secondary, or previously published, data provide another source of information that may be available either without charge or for a small fee (8). Axler (1) suggests the use of census information including population concentrations, age, sex, educational level, employment, and housing. Other sources of data are commercial publications, surveys from advertising media, foodservice suppliers, restaurant associations, and private firms. One disadvantage of secondary data is that these may be obsolete. For example, census data, collected every ten years, may be quite changed near the end of the ten-year period (1).

Methods of Collecting Primary Data

After internal and secondary data are obtained and analyzed, the need may still exist for specialized information called primary data (1, 8). Methods of gathering primary data are observation, survey, and experiment (1, 7, 8). Observation performed by a trained observer can check the location of a potential business by use of a traffic count. Observers can also investigate service by posing as customers. Surveys can be conducted using mail or telephone questionnaires. Two other methods of collecting data are product testing by panels and personal interview. Questionnaires can address factual data such as frequency of visits or attitudes and motivation. Mailed questionnaires ask the same questions in the same manner at a reasonable cost; however, they may take longer and secure fewer responses since many people tend to discard mail questionnaires (1). Telephone or personal interviews may elicit more complete information at a faster rate of time but are usually more costly.

The experimental method of gathering data is the slowest and most expensive form. It is most often used by large companies to test a new product. If favorable response is found in an experimental area, then the product or service may be extended to the whole line (1).

Surveys are often the technique chosen for data gathering. They may be in the form of a table card (7) or longer, more detailed questionnaires (5, 6, 8, 10). Table cards require little effort on the part of the surveyor but they are likely to be completed at random times only by very pleased or very unhappy customers. A better plan is to offer an incentive to all customers to get the cards completed during a preselected time (7).

Development of Survey Instruments

In developing a long questionnaire, Swinyard (11) and Layton (12) state that demographic information should be included in the survey. This allows for correlation of results with age, sex, income, educational level, job position, or other appropriate classifications (7, 11, 12).

In addition to identifying the customer profile, the questionnaire can explore attitudes, preferences, and motivation of individuals patronizing the foodservice operation and for their reasons for choosing different foods and services (5, 8, 13). Underwood (3) explored concepts of hours, menu, prices, and types of service using a survey. Brandler's (5) survey evaluated consumer concerns with speed of service, variety of food, quality of food, quantity of food, attitude of serving personnel, and general dining room environment. Surveys used in

other studies (6, 10) have also elicited information about food quality, quantity, variety, pricing, and employee attitudes and friendliness.

When structuring a survey instrument, Westbrook (14) describes four possible alternatives that can be used for measurement: Percentage Scale, Need Scale, Content Analytic, and Delighted-Terrible Scale. The Percentage Scale ranges from 100 percent (completely satisfied/agree) to 0 percent (not at all satisfied/disagree). The Need Scale asks how the product/service meets the need of the consumer, with the answer marked on a continuum scale ranging from extremely well to extremely poor. The Content Analytic Method involves coding of free responses to a series of unstructured questions into the following categories: (1) only unfavorable evaluations, (2) both favorable and unfavorable evaluations, (3) neither favorable nor unfavorable evaluations, and (4) only favorable evaluations. The fourth type of measurement scale is the Delighted-Terrible (D-T) Scale. Westbrook (14) conducted research to test the validity of this scale. Results indicated that the D-T Scale was superior over the other scales in the following ways:

1. Allowed more explicit expressions of feeling toward the product or service

2. Improved differentiation of responses at the top of the scale
3. Made allowance for respondents who may never have evaluated their satisfaction, thus reducing potential bias.

After the survey instrument is developed, the food-service operator must decide upon the method of distribution. Swinyard (11) describes market segmentation and its use. Volume segmentation is based on the fact that fifty percent of the customers consume eighty percent of the product or service; therefore, the survey would be conducted on volume customers. Alternate methods are to distribute the survey to all customers or, if the operation is large, to a sample who are representative of the group (1, 8).

Utilization of Market Research Data

After market research is completed and analyzed, management decisions can be made on menu and service style. The foodservice operator must next consider promotion of the service. Layton (12) states that promotion is a basic form of communication; Axler (1) concurs by defining promotion as a transfer of information from an operation to its customers. The purpose of promotion is to expose customers to a product so there will be increased demand,

leading to increased profits. Three promotion activities are advertising, sales promotion, and merchandising (1). Advertising and sales promotion are most often directed to people outside the establishment in an effort to induce them to patronize the operation. Advertising can be conducted through newspapers, magazines, mail, television, radio, outdoor signs, and directories. Sales promotion include direct personal selling and special offers (1, 15).

Merchandising is the attempt to stimulate or increase profit by promotion within the establishment (1). In order to influence the customer in his buying decisions, management can use the techniques of sales management, menu merchandising, food display, and personal selling (1, 3, 16).

Food displays can be effective ways to stimulate sales. Brandler (5) states that presentation of food on the serving line can impact acceptance and, therefore, sales. Placing food in strategic locations also increases sales (1). Merchandising should induce purchases by being novel and pleasant (16). Food display suggestions include dessert displays, tableside preparation, food used in edible decorations and garnishes, and salad bars (1, 3, 16).

Burley (17) states that nothing in a foodservice operation should happen by accident, but should be the

result of a planned, current marketing program. Food-service operators must define the market to be served, plan an operation that meets the demands of the market, and then promote that operation through effective merchandising.

CHAPTER III

PROCEDURE

The study was divided into two sections. Marketing research, the first part, was used to assess the needs and expectations of Coryell Memorial Hospital employees by use of a questionnaire. Employee satisfaction with the food-service after three months of operation was evaluated using a second questionnaire. Promotion of the foodservice was the second part of the study; different line arrangements of the food being served was used to stimulate sales.

Development of Survey Instruments

Two survey instruments were developed and administered to assess the effectiveness of market research in a health-care foodservice operation. The objective of Survey A was to identify the needs and expectations of Coryell Memorial Hospital employees prior to the initiation of cafeteria service. Questions were included to address the following: present eating arrangements, hours of service, food frequencies, special diet needs, pricing, and type of service (Appendix II). Survey A was designed for respondents to mark the appropriate answer. This made the form easy to complete and encouraged participation (7).

Survey B was designed to determine the level of employee satisfaction with the cafeteria service after three months of operation. Respondents were asked to rate quality of food, portion sizes, menu variety, pricing, hours of service, cafeteria employee performance, attitude toward serviceware, and special needs. The Delighted-Terrible Scale was used to measure the degree of employee satisfaction (14). The respondents were asked to provide suggestions if dissatisfied with any aspect of the operation (Appendix III).

Administration of Survey Instruments

Both instruments were administered via intrahospital mail. A list of the number of employees in each department was obtained from the payroll clerk. The appropriate number of instruments was delivered to each Department Director for distribution among employees in the department. All employees were sent Survey A. Employees working the 11:00 P.M. to 7:00 A.M. shift were not administered Survey B since cafeteria service was not available during their working hours. All employees were to return the completed survey to their Department Director who forwarded them to the Dietary Department. A minimum response rate of forty percent was required for data analyses.

Merchandising and Sales

The second section of the study was application of the merchandising technique of food presentation. Using a three week cycle menu, the effect of order of arrangement of food on the cafeteria line was tested. The order of arrangement was as follows: salad, entree, dessert; entree, salad, dessert; dessert, salad, entree. Sales data were recorded for lunch and supper, Monday through Friday, for a three week period of time for each line arrangement (Appendix IV).

Analysis of Survey Data

Data from Survey A were analyzed using frequency of response on all items except number six which was given as an average number. Data from Survey B were also analyzed for frequency of response. Averages were calculated for items number four, five, seven, eight, nine, eleven, thirteen, fifteen, seventeen, and nineteen. An item analysis using factor analysis was computed on each question answered on the scale of one through seven. A one-way analysis of variance was used to evaluate differences between position, shift, age, number of meals eaten, and which meals eaten as related to responses. A t-test was used to test for differences on the basis of sex. The Mann-Whitney U Test was used to determine which means were

significantly different. Items number ten, fourteen, and eighteen were tested using chi-square.

Analysis of Sales Data

A one-way analysis of variance was used to test for significant difference in volume of sales and the arrangement of the cafeteria line. If a significant difference had been found, the Neuman-Keuls test would have been calculated to determine which arrangement(s) was significantly different.

CHAPTER IV

RESULTS AND DISCUSSION

Market research was conducted to identify the profile of the potential customers. Needs and expectations of these customers were defined using Survey A. Results of Survey A were used in making management decisions about selection of menu items, pricing, service hours, staffing, and other related items.

Needs Assessment

Survey A was conducted prior to the opening of the employee cafeteria. One hundred fifty-two questionnaires were distributed; eighty-seven were returned for a response rate of 57.2 percent. Results of the demographic data are presented in Table 1.

More than one-third of the potential customers would be nursing staff, as indicated by data in Table 1. Clinical support staff and service staff were the next largest groups of potential customers. Employees in these job classifications perform jobs requiring walking, bending, lifting, and other motions. The clerical group and administrative personnel were more sedentary in their job

TABLE 1

DEMOGRAPHIC PROFILE OF POTENTIAL CUSTOMERS
RESPONDING TO NEEDS ASSESSMENT SURVEY

Demographic Variable	Number of Respondents	Percent of Total
<u>Sex</u>		
Male	11	12.6
Female	76	87.4
<u>Present Position</u>		
Administration	5	5.8
Nursing	33	37.9
Clinical Support	19	21.8
Clerical	14	16.1
Service	15	17.2
Other	1	1.1
<u>Hours Worked</u>		
7:00 A.M.- 3:00 P.M.	50	57.5
3:00 P.M.-11:00 P.M.	3	3.4
11:00 P.M.- 7:00 A.M.	2	2.3
8:00 A.M.- 5:00 P.M.	19	21.8
Other	13	14.9
<u>Age in Years</u>		
20 or younger	12	13.8
21-30	26	29.9
31-40	28	32.2
41-50	9	10.3
Over 50	12	13.8

N = 87

activities. These two classifications with different energy requirements would require different menu items.

The majority of the respondents worked during the daytime and would be on duty during lunch time (Table 1). Seventy-four respondents stated they would probably eat lunch in the cafeteria.

The sex and age of the customer are profiled in Table 1. The majority of the employees were female, having an average age of 33.9 years. These factors may account for, in part, the number (70.1%) who indicated a desire for low calorie foods. Only five people indicated a need for a special diet. Four of the five were on low carbohydrate and/or low calorie diets, while the fifth required a sodium restricted diet.

No distinct pattern of meal practices was indicated. Following was the employees' response as to their present method of providing their meals while on duty (average of all respondents):

three times per week, brought meal from home

three times per week, ordered food from outside establishment, and

four times per week, ate at commercial operation.

The average employee worked a five day week. The sum of all the averages exceeds five; therefore, daily eating practices seemed to vary among the employees.

Respondents' preference for hours of lunch service is illustrated in Table 2. Since the majority (45.9%) of employees preferred 11:00 A.M. - 1:00 P.M., management established these times for serving lunch. Selection of a time for lunch service which met the needs of the employees was essential since 85.0 percent of the respondents indicated they would eat lunch in the cafeteria. Management decided that a two hour period would allow adequate time for employees and visitors to be served since most of the employees had only thirty minutes for lunch and the cafeteria had a seating capacity of twenty-four.

TABLE 2

PREFERRED TIMES OF LUNCH SERVICE OF RESPONDENTS
TO NEEDS ASSESSMENT SURVEY

Time of Operation	Number of Respondents	Percentage of Total
11:00 A.M. - 12:30 P.M.	16	18.4
11:30 A.M. - 1:00 P.M.	25	28.7
11:00 A.M. - 1:00 P.M.	40	46.0
No response	6	6.9

N = 87.

Cost factors were considered when establishing the time of operation for the supper meal. The time preferred

by the majority (36.5%) was 5:00-6:30 P.M. Only twelve respondents indicated they would probably eat in the cafeteria at supper. Due to dietary employee scheduling, the longer hours would have required an additional one-half full time equivalent employee (FTE). Administration decided the additional payroll expense could not be justified, therefore, the supper meal service time was scheduled from 5:00-6:00 P.M.

Frequencies of responses for menu items are summarized in Table 3. Using the information from Table 3, a three week cycle menu was planned with the following items included:

1. A meat or meat substitute, such as cheese or dried beans, was served daily
2. Two vegetables were served daily
3. Salads served daily included chef salad, two vegetable salads, and a congealed salad
4. Baked desserts, plain gelatin (regular and diet), ice cream, and sherbet were offered daily
5. Fresh fruit and/or canned fruit were served daily
6. Soup was offered one time per week during the summer months. The frequency of serving of soup will be increased and chili added to the menu during the winter months.

7. Cold sandwiches were offered two times per week in addition to the hot entree.

Also included in the cycle were theme menus, since 82.7 percent of the employees indicated they would eat in the cafeteria on such occasions.

TABLE 3

EMPLOYEE PREFERENCES FOR SELECTED MENU ITEMS
AS INDICATED BY FREQUENCY OF RESPONSE

Menu Item	Frequency of Selection			
	Daily	3-4 Times Per Week	1-2 Times Per Week	Never
Entree/Meat	21	15	35	0
Vegetables	26	26	20	0
Salads	28	24	23	1
Chef Salads	11	14	34	6
Desserts	14	11	30	10
Fruits	14	14	30	8
Soups	3	9	38	16
Sandwiches	8	12	43	5

Eighty percent of the respondents preferred a la carte pricing to whole meal pricing. Management decided to begin the operation using a la carte pricing since most employees felt this choice gave them more control over their selections. They would not have to take a food item they did not like as part of a meal. Underwood (3) successfully implemented the a la carte method. Expensive

entrees could be introduced as "blue plate" specials offering combination pricing and smaller portions.

Employees were asked their opinions about use of disposable serviceware. The majority of the respondents (91.9%) had no objection to using all disposable serviceware; 96.5 percent of respondents did not object to the use of some disposables. To control expense, reusable plates and bowls were chosen for service. Disposable flatware, tumblers, and cups were selected to avoid excessive work load and energy expense in the dishwashing area.

The cafeteria was planned for an existing room containing eight tables. Almost three-fourths (72.3%) of the employees indicated preference for arrangements seating four or six persons. To best utilize the space available, one table to seat four was used, four tables were grouped into pairs to seat six, and three tables were grouped to seat eight people.

Acceptability Survey

After making decisions related to menu choices, pricing structure, staffing pattern, and service procedures, the cafeteria was opened for operation on March 1, 1981. On June 1, 1981, a second questionnaire, Survey B, was distributed to evaluate customer satisfaction with the food and service. One hundred twenty-four

questionnaires were distributed; sixty-seven were returned for a response rate of 54.0 percent.

When analyzing the results of Survey B, the factor analysis (Table 4) demonstrated that six of the eight attitudinal variables converged on the dimension of overall satisfaction. The sum of satisfaction indicated overall satisfaction with the foodservice.

TABLE 4

FACTOR ANALYSIS OF MEAN SATISFACTION SCORES
OF THE ATTITUDINAL VARIABLES

Variable	Factor	Satisfaction Mean Score*
Quality of Food	0.40942	5.33
Portion Sizes	0.42923	4.22
Menu Variety	0.70797	4.67
Pricing	0.19867	5.11
Hours of Service - Lunch	0.60119	5.67
Hours of Service - Supper	0.55204	4.44
Employee Courtesy	0.62727	6.19
Use of Disposables	-0.03507	6.04
Mean Overall Satisfaction		5.21

*Range of 1-7 with 1 being least acceptable, 7 being most acceptable.

Using the Kruskal-Wallis one-way analysis of variance, each variable was correlated with the demographic factors. There was no significant difference in level of satisfaction by position and the following variables: quality of

food, portion sizes, menu variety, hours of service for supper, cafeteria employees, and acceptance of disposable flatware. There were significant differences ($p \leq .05$) in results for level of satisfaction by position for menu prices and hours of service for lunch (Tables 5 and 6).

The groups that were least satisfied with menu pricing were service and nursing personnel. Both of these job classifications have traditionally received lower pay. On the other hand, the office and clinical support positions, who usually have higher pay scales, were more satisfied. Lower paid groups may have been more critical of menu prices since they have less money to spend for food.

When satisfaction with hours of service for lunch was correlated with position, the clinical support group was most satisfied. The group showing the most dissatisfaction was nursing. These ratings may be a reflection of overall job satisfaction of personnel in the nursing department. Patient census fluctuated in recent months. Nursing personnel's schedule had to be altered frequently. When the census decreased, nursing staff's hours were reduced. If the census suddenly increased, the nursing staff would have extra patient care duties until the staff could be appropriately increased. This constant change

TABLE 5

MEAN SATISFACTION SCORE WITH MENU PRICING BY
POSITION USING THE MANN-WHITNEY U TEST

	P ₄ (Clerical) N=12	P ₁ (Admin.) N=6	P ₃ (Clinical Support) N=11	P ₆ (Other) N=2	P ₅ (Service) N=6	P ₂ (Nursing) N=26
Mean Satisfaction Score	5.91	5.83	5.45	5.00	4.67	4.35
	<u>5.91</u>	<u>5.83</u>	<u>5.45</u>	<u>5.00</u>	<u>4.67</u>	<u>4.35</u>

Means underlined indicate no significant difference.

$p \leq .05$

TABLE 6

MEAN SATISFACTION SCORE WITH HOURS OF SERVICE FOR LUNCH BY
POSITION USING THE MANN-WHITNEY U TEST

	P ₃ (Clinical Support) N=11	P ₆ (Other) N=2	P ₄ (Clerical) N=12	P ₅ (Service) N=6	P ₁ (Admin.) N=6	P ₂ (Nursing) N=24
Mean Satisfaction Score	6.36	6.00	5.92	5.67	5.67	5.33

Means underlined indicate no significant difference.

$p \leq .05$

could contribute to overall decrease in morale. The level of satisfaction with foodservice as reflected in nursing personnel response to Survey B may be related to the above situation.

When the variables were correlated with shift, there was no significant difference in response on any variable except satisfaction with menu prices. Employees working the 3:00-11:00 P.M. shift were the group most dissatisfied with menu prices, menu variety, and hours of service for supper. This group was predominantly composed of nursing employees, with one or two employees from the Clinical Support and Clerical classifications. This group of employees may be less satisfied with the shift they are working as it may interfere with their family and social lives. Survey B provided a means for the employees expressing their dissatisfaction with one aspect of the hospital.

Results of the one-way analysis of variance for level of satisfaction and the age or sex of respondents indicated no significant differences. There was no significant differences between the number of meals eaten in the cafeteria and the level of satisfaction for the following variables: quality of food, portion sizes, menu variety, hours of service for lunch and supper, employee performance, and

acceptance of disposable flatware. Significant differences were found between employees' rating of the quality of meals served and the frequency of eating in the cafeteria. Results indicated that the more times per week the respondents eat in the cafeteria, the higher the quality of the food was rated.

Satisfaction with menu pricing was significantly different when compared to the number of meals eaten per week. The more frequently the respondent ate in the cafeteria, the more satisfied he/she was with pricing. When the employee ate more often in the cafeteria, he/she did so by choice and was satisfied with the food and prices.

Demographic factors were correlated to portion size using chi square. The only significant difference was related to which meals were eaten. Eighty percent of the respondents who eat supper only desired larger portions. Most respondents indicated a preference for larger portions.

Employees' response to their willingness to pay for larger portions varied. No statistically significant difference was obtained but frequency of responses indicated that employees were almost evenly divided in their response concerning acceptance of increased prices. In view of this response, more expensive items might be offered occasionally but management would have to be

cautious about placing expensive food items on the menu frequently.

There were no significant differences in response to level of satisfaction in meeting special dietary needs. Employees as a group appeared mostly satisfied with the service. Approximately 52.0 percent of each demographic group responded that provision of menu items for special dietary needs was not applicable to them. Of the employees who required this service, approximately eighty percent were satisfied. The other twenty percent responded that they did not feel that their special dietary needs were being met. In Survey A, low calorie foods were requested most often. This response would indicate the need for more low calorie menu choices and education of the employees in identifying these foods. Individual attention to employees' diet problems, with the approval of their physician, could increase the level of satisfaction.

Effect of Cafeteria Line Arrangement Study

After approximately six months of cafeteria operation, promotional activity was undertaken in an effort to stimulate sales. As the three different cafeteria serving arrangements previously described were used (Appendix IV), total sales figures for each period were recorded and are shown in Table 7. The data were analyzed using

repeated measures of analysis. There was no statistically significant difference in sales based on the order of cafeteria line arrangement. There was information gained, however, that would help make operational decisions. Sales for the total period using Arrangement III were the greatest. This increase in revenue is the ultimate goal of any foodservice operator's promotional efforts. Based on sales data, the most profitable arrangement was presentation of menu items in the following order: dessert, salad, entree.

TABLE 7
SALES TOTALS FOR TEST PERIODS BY
CAFETERIA LINE ARRANGEMENT

Arrangement*	Week	Total Sales (dollars)		
		Lunch	Supper	Total
I	1	\$332.00	\$161.29	\$ 493.29
	2	412.18	146.84	559.02
	3	358.58	126.04	484.62
				\$1536.93
II	1	381.99	125.19	507.18
	2	448.16	155.12	603.28
	3	352.89	142.84	495.73
				\$1606.19
III	1	491.12	115.08	606.20
	2	393.74	118.76	512.50
	3	378.59	129.96	508.55
				\$1627.25

*I = salad, entree, dessert; II = entree, salad, dessert; III = dessert, salad, entree.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

Use of a preliminary survey prior to initiation of a cafeteria foodservice was beneficial to the foodservice operator. By identifying the needs and expectations of the potential customers, management had a factual basis on which to make decisions. Otherwise, planning would have been haphazard and mistakes costly.

All ventures should be evaluated for degree of success after a period of operation. By using a survey instrument, overall satisfaction with the cafeteria foodservice at Coryell Memorial Hospital was acceptable (5.21 on a scale of one to seven). Problem areas identified were the 3:00-11:00 P.M. nursing shift who eat supper only. Activities could be designed to increase their acceptance and rating. Possible promotions could be free desserts or special menus. Any activity to make this group feel special would help their overall attitude, probably resulting in increased participation and acceptance of the cafeteria.

Testing different cafeteria line arrangements can also benefit a healthcare foodservice. Increased sales

result in a financially stable foodservice and greater credibility. As management strives to improve services provided for patients, employees, and visitors, more effective planning and implementation of varied services should be investigated.

APPENDIX I

PERMISSION TO COMPLETE STUDY

Coryell Memorial Hospital

P. O. Box 659
1507 West Main Street
Gatesville, Texas 76528
817-865-8251

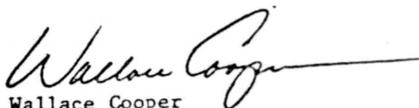
March 10, 1981

Dean, Graduate School
Texas Woman's University
Denton, Texas 76204

Dear Sir:

Janda Coward, an employee of Coryell Memorial Hospital and a graduate student at Texas Woman's University, has permission to conduct research in the cafeteria at Coryell Memorial Hospital that will enable her to complete the requirements for her degree.

Sincerely,



Wallace Cooper
Administrator

WC/se

TEXAS WOMAN'S UNIVERSITY
 Box 23717 TWU Station
 Denton, Texas 76204

HUMAN SUBJECTS REVIEW COMMITTEE

Name of Investigator: Janda Coward Center: Denton
 Address: 104 Creek Cliff Drive Date: April 14, 1981
Gatesville, TX 76528

Dear Janda Coward,

Your study entitled Marketing Techniques Applied to a Hospital
Employee Cafeteria

has been reviewed by a committee of the Human Subjects Review Committee and it appears to meet our requirements in regard to protection of the individual's rights.

Please be reminded that both the University and the Department of Health, Education, and Welfare regulations typically require that signatures indicating informed consent be obtained from all human subjects in your studies. These are to be filed with the Human Subjects Review Committee. Any exception to this requirement is noted below. Furthermore, according to DHEW regulations, another review by the Committee is required if your project changes.

Any special provisions pertaining to your study are noted below:

Add to informed consent form: No medical service or compensation is provided to subjects by the University as a result of injury from participation in research.

Add to informed consent form: I UNDERSTAND THAT THE RETURN OF MY QUESTIONNAIRE CONSTITUTES MY INFORMED CONSENT TO ACT AS A SUBJECT IN THIS RESEARCH.

The filing of signatures of subjects with the Human Subjects Review Committee is not required.

Other:

No special provisions apply.

cc: Graduate School
 Project Director
 Director of School or
 Chairman of Department

Sincerely,

Marilyn Hinson

Chairman, Human Subjects
 Review Committee

at Denton

TO:

FROM:

SUBJECT:

DATE:

APPENDIX II

SURVEY A

As a part of the research program of the Department of Health, Education and Welfare, the National Center for Human Resources Development is conducting a survey of the health care needs of the elderly. The purpose of this survey is to determine the health care needs of the elderly and to identify the factors which influence these needs. The results of this survey will be used to develop health care services for the elderly.

Return of the completed questionnaire to your Department Director is requested. The questionnaire will be coded and the results will be analyzed. It is requested that you advise the Director of any changes in the questionnaire which may be necessary. The results of this survey will be reported to the Department of Health, Education and Welfare and to the National Center for Human Resources Development.

Thank you for your cooperation in this project.

TO: All Hospital Employees

FROM: Janda Coward, R.D.
Director, Dietary Department

SUBJECT: Survey on Cafeteria Services

DATE: February 1, 1981

As Coryell Memorial Hospital prepares to open a cafeteria food service, knowledge of your preferences and expectations will help in planning and implementing the facility. Please complete each question on the survey form by checking () the appropriate answer or filling in the blanks.

Return the completed questionnaire to your department director by February 10, 1981. All responses will be coded and remain confidential. Please be advised that THE RETURN OF THIS QUESTIONNAIRE CONSTITUTES YOUR INFORMED CONSENT TO ACT AS A SUBJECT IN THIS RESEARCH. Also understand that YOU MAY WITHDRAW FROM THE STUDY AT ANY TIME. No medical service or compensation is provided to subjects by the University as a result of injury from participation in research.

Thank you for your interest and help.

CORYELL MEMORIAL HOSPITAL
SURVEY ON CAFETERIA SERVICES

SECTION A: DEMOGRAPHIC DATA

1. Present position:
 - (1) Administration
 - (2) Nursing
 - (3) Clinical Support (R.T., P.T., Lab., Pharmacy, X-ray)
 - (4) Clerical (Business Office, Medical Records)
 - (5) Service (C.S., Housekeeping, Maintenance, Dietary)
 - (6) Other (Specify: _____)
2. Shift:
 - (1) 7-3
 - (2) 3-11
 - (3) 11-7
 - (4) 8-5
 - (5) Other (Specify: _____)
3. Sex:
 - (1) Male
 - (2) Female
4. Age:
 - (1) 20 or younger
 - (2) 21-30
 - (3) 31-40
 - (4) 41-50
 - (5) Over 50

SECTION B: CAFETERIA SERVICES

5. What meals would you probably eat in the cafeteria?
 - (1) Lunch only
 - (2) Supper only
 - (3) Lunch & supper
6. How many times each week do you presently
 - (1) bring your meal from home?
 - (2) order food from an outside establishment?
 - (3) leave the building to go eat?

17. What hours would you prefer lunch to be served?
 (1) 11:00-12:30
 (2) 11:30- 1:00
 (3) 11:00- 1:00

18. What hours would you prefer supper to be served?
 (1) 5:00-6:00
 (2) 5:30-6:30
 (3) 5:00-6:30

9. How often would you eat the following?

	Every Day	3-4 Times per Week	1-2 Times per Week	Never
(1) Entree/Meat				
(2) Vegetables				
(3) Salads				
(4) Chef Salads				
(5) Desserts				
(6) Fruits				
(7) Soups				
(8) Sandwiches				

10. Would you like to see low calorie foods available?
 (1) Yes
 (2) No

11. Would you like food for any special diet needs? If yes, specify type of diet.
 (1) Yes; Type of Diet _____
 (2) No

12. Would you prefer meals to be priced
 (1) individual (a la carte)?
 (2) whole meal?

13. Would you object to all disposable serviceware?
 (1) Yes
 (2) No

14. Would you object to part disposable serviceware?
 (1) Yes
 (2) No

15. What table arrangements would you prefer?
- (1) Seating for four persons
 - (2) Seating for six persons
 - (3) Seating for eight persons
16. Would you participate in special (theme) menus, i.e. Mexican or Italian menu?
- (1) Yes
 - (2) No

TO:

FROM:

SUBJECT:

DATE:

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APPENDIX III

SURVEY B

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Unit
research

Thank

TO: All Hospital Employees
FROM: Janda Coward, R.D.
Director, Dietary Department
SUBJECT: Survey on Cafeteria Services
DATE: June 1, 1981

As the operation of the Coryell Memorial Hospital cafeteria is assessed at the end of the first three months of operation, knowledge of how the cafeteria has met your preferences and needs will help in the evaluation. Please complete each question on the survey form by checking (✓) the appropriate answer or filling in the blanks.

Return the completed questionnaire to your department director by June 15, 1981. All responses will be coded and remain confidential. Please be advised that THE RETURN OF THIS QUESTIONNAIRE CONSTITUTES YOUR INFORMED CONSENT TO ACT AS A SUBJECT IN THIS RESEARCH. Also understand that YOU MAY WITHDRAW FROM THE STUDY AT ANY TIME. No medical service or compensation is provided to subjects by the University as a result of injuries from participation in research.

Thank you for your interest and help.

SECTION A

CORYELL MEMORIAL HOSPITAL

SURVEY ON CAFETERIA SERVICES

SECTION A: DEMOGRAPHIC

1. Present position:
 - (1) Administration
 - (2) Nursing
 - (3) Clinical Support (R.T., P.T., Lab., Pharmacy, X-ray)
 - (4) Clerical (Business Office, Medical Records)
 - (5) Service (C.S., Housekeeping, Maintenance, Dietary)
 - (6) Other (Specify: _____)
2. Shift:
 - (1) 7-3
 - (2) 3-11
 - (3) 11-7
 - (4) 8-5
 - (5) Other (Specify: _____)
3. Sex:
 - (1) Male
 - (2) Female
4. Age:
 - (1) 20 or younger
 - (2) 21-30
 - (3) 31-40
 - (4) 41-50
 - (5) Over 50
5. How many meals do you eat in the cafeteria each week?
 - (1) None
 - (2) 1-3
 - (3) 4-5
 - (4) More than 5
6. Which meals do you eat in the cafeteria?
 - (1) Lunch only
 - (2) Supper only
 - (3) Lunch & supper

SECTION B: CAFETERIA SERVICES

7. Rate your satisfaction with the quality of the food by circling the appropriate number:

7	6	5	4	3	2	1
Delighted	Pleased	Mostly Satisfied	Mixed (About equally satisfied & dissat.)	Mostly Dissatisfied	Unhappy	Terrible

A - Neutral (Neither satisfied or dissatisfied)

B - Never thought about it

8. Compare the quality of the food to other eating establishments in Gatesville.

(1) Better quality

(2) Same quality

(3) Poorer quality

9. Rate your satisfaction with portion sizes.

7	6	5	4	3	2	1
Delighted	Pleased	Mostly Satisfied	Mixed	Mostly Dissatisfied	Unhappy	Terrible

A - Neutral

B - Never thought about it

10. If you rated portion sizes at 4 or below on the scale, should sizes be

(1) Smaller

(2) Larger

11. Rate your satisfaction with menu variety.

7	6	5	4	3	2	1
Delighted	Pleased	Mostly Satisfied	Mixed	Mostly Dissatisfied	Unhappy	Terrible

A - Neutral

B - Never thought about it

12. If you rated variety at 4 or below on the scale, what suggestions do you have?

13. Rate your satisfaction with menu prices.

7	6	5	4	3	2	1
Delighted	Pleased	Mostly Satisfied	Mixed	Mostly Dissatisfied	Unhappy	Terrible

A - Neutral

B - Never thought about it

14. Would you be willing to pay more if higher priced items were added to the menu?

(1) Yes

(2) No

15. Rate your satisfaction with the hours of service.

(1) Lunch

7	6	5	4	3	2	1
Delighted	Pleased	Mostly Satisfied	Mixed	Mostly Dissatisfied	Unhappy	Terrible

A - Neutral

B - Never thought about it

(2) Supper

7	6	5	4	3	2	1
Delighted	Pleased	Mostly Satisfied	Mixed	Mostly Dissatisfied	Unhappy	Terrible

16. If you rated hours at 4 or below, what hours do you suggest?

(1) Lunch _____

(2) Supper _____

17. Rate your satisfaction with employees' courtesy and promptness in providing service.

7	6	5	4	3	2	1
Delighted	Pleased	Mostly Satisfied	Mixed	Mostly Dissatisfied	Unhappy	Terrible

A - Neutral

B - Never thought about it

18. If you have any special dietary needs are they being met by the menu?

(1) Yes

(2) No

(3) Not applicable

19. Rate your acceptance of the use of disposable flatware and cold cups.

7	6	5	4	3	2	1
Delighted	Pleased	Mostly Satisfied	Mixed	Mostly Dissatisfied	Unhappy	Terrible

A - Neutral

B - Never thought about it

20. Comments or ideas for the future: _____

Arrangement
August 1, 1958			
August 2			
August 3			
August 4			
August 5			
August 6			
August 7			
August 8			
August 9			
August 10			
August 11			
August 12			
August 13			
August 14			
August 15			
August 16			
August 17			
August 18			
August 19			
August 20			
August 21			
August 22			
August 23			
August 24			
August 25			
August 26			
August 27			
August 28			
August 29			
August 30			
Total			
Total			

APPENDIX IV

CAFETERIA LINE ARRANGEMENTS

SALES DATA COLLECTION FORM

Arrangement I - Salad, entree, dessert

	<u>Lunch</u>	<u>Supper</u>
August 3, 1981	\$ _____	\$ _____
August 4	_____	_____
August 5	_____	_____
August 6	_____	_____
August 7	_____	_____
August 10	_____	_____
August 11	_____	_____
August 12	_____	_____
August 13	_____	_____
August 14	_____	_____
August 17	_____	_____
August 18	_____	_____
August 19	_____	_____
August 20	_____	_____
August 21	_____	_____
Total	\$ _____	\$ _____
Total of lunch and supper		\$ _____

SALES DATA COLLECTION FORM

Arrangement II - Entree, salad, dessert

	<u>Lunch</u>	<u>Supper</u>
August 24, 1981	\$	\$
August 25		
August 26		
August 27		
August 28		
August 31		
Sept. 1		
Sept. 2		
Sept. 3		
Sept. 4		
Sept. 7		
Sept. 8		
Sept. 9		
Sept. 10		
Sept. 11		
Total	\$ _____	\$ _____
Total of lunch and supper		\$ _____

SALES DATA COLLECTION FORM

Arrangement III - Desserts, salads, entree

<u>Date</u>	<u>Lunch</u>	<u>Supper</u>
Sept. 14, 1981	\$ _____	\$ _____
Sept. 15	_____	_____
Sept. 16	_____	_____
Sept. 17	_____	_____
Sept. 18	_____	_____
Sept. 21	_____	_____
Sept. 22	_____	_____
Sept. 23	_____	_____
Sept. 24	_____	_____
Sept. 25	_____	_____
Sept. 28	_____	_____
Sept. 29	_____	_____
Sept. 30	_____	_____
Oct. 1	_____	_____
Oct. 2	_____	_____
Total	\$ _____	\$ _____
Total of lunch and supper		\$ _____

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