

Determining the Patient Satisfaction Factors for Hospital Room Service  
& the Association of Room Service with the Overall  
Satisfaction with the Hospital Experience

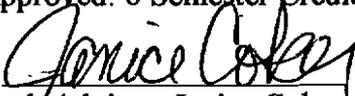
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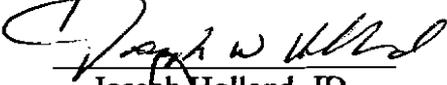
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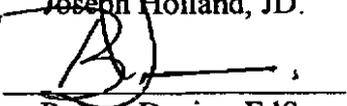
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**ABSTRACT**

Room service is a valuable asset for hospitals in improving patient satisfaction and improving patient satisfaction, clinical outcomes for patients can be improved, the health of patients restored and their recovery quickened. At the very least, room service gives patients control over one aspect of their hospitalization which improves the quality of their stay and their opinion of the overall quality of care received. Room Service provides a level of control to patients for a portion of their care that cannot be readily achieved through any other service. Room service plays a part in creating a placebo affect in patients. This may be the great “satisfier” to the patient, the one which is the measure for their overall satisfaction. Room service programs also have the potential for increasing a hospital’s market share with a concomitant increase in the hospital’s profitability.

This study, from patients in six acute care hospitals using room service as their primary patient meal delivery system, identified the critical elements of a quality room service program and the relative importance between those elements of room service from the patients' perspective, ranking which features were the most important and providing correlations of the responses between the six hospital populations surveyed. It established the association between room service and the improvement in patient satisfaction with the patients' overall hospital experience and determined the strength of the association that patients have between room service and their assessment of the overall quality of the care they receive. The study evaluated the use of room service menus as a teaching instrument on the patients' diets.

Utilizing a 13 question survey, it was determined that there was a common agreement on nine of the questions. The results of this study will enable room service programmers to incorporate the features into the room service programs that patients' desire, providing the best opportunity to maximize patient satisfaction. The study also establishes that room service plays an important role in the patients' opinion of the overall quality of care received in the hospital setting and demonstrates the relationship between room service, patient satisfaction and profitability.

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## Chapter I: Introduction

Healthcare food service touches almost every patient who is admitted to a hospital. The quality and service of the food have a significant impact on the health and happiness of the patient and the patient's family because of the importance of food in our daily lives. Nutritional intake is one of the critical elements in the recovery of the patient making the study of healthcare food service of great value.

### *Foodservice in Healthcare*

Patient meal delivery systems in healthcare have traditionally produced low patient satisfaction scores in comparison to the scores achieved by other hospital services and departments. As a result, patient food services are looked upon as poor performers in the overall patient satisfaction and the overall hospital experience of the patient. This poor performance has perpetuated the concept that patient food service was not important in the overall spectrum of the patients' care or the patients' association with food service and the overall quality of the care that they received while in the hospital. Recently, Press-Ganey a national patient satisfaction survey service provider, conducted a study of nearly 2,000,000 patients on the quality of care. The research listed in the "Satisfaction Report" of August 2003, gave the "Quality of Food" as the item with the lowest rating by patients regarding the overall hospital experience of care with an average ranking of 71.15 for correlation in relation to the food service and the likelihood that a patient would recommend a hospital for care. This compares to the highest rated aspect of care, the "Skill of the Physician" at 91.46. (pg. 1)

It has been assumed that the quality of the patient meal service had no effect on the patients' overall attitude or association regarding the total quality of their care during hospitalization. In the last several years, there has been a groundswell of media coverage and news articles on healthcare food services implementing room service style delivery systems for their patient food services. Articles on room service in hospitals have appeared in Associate Press, Food Technology Magazine, the Baltimore Business Journal, Food Service Director Magazine, Hospitals & Health Networks Magazine, and assorted newspapers ranging from the New York Times to small market newspapers such as the Buffalo News and the local Lockport Union Sun & Journal.

As healthcare food service strives to improve its patient satisfaction scores, attention has been focused on the significant increases in patient satisfaction scores that have been experienced with the implementation of room service programs as the "patient meal delivery system." Yet, for all of the information on hospitals implementing room service there remains a lack of data or study on the effects of room service for the healthcare food service industry. And has there been little examination of the factors which have generated those improvements in patient satisfaction from the patients' perspective. In other words, room service programs are being developed today without the input of their primary customer, the healthcare patient. An extensive web, media and literature search failed to produce any study providing empirical data on the effects and results of room service in relation to patient satisfaction with food service and the overall perception of the quality of care with one notable exception.

The Food & Nutrition Services Department at the renowned Memorial Sloan Kettering Cancer Center in Manhattan, issued a study on the results of its Pilot Program for Room Service. The study (McLymont, Cox & Stell, 2002) focused on the evaluation of patient meal consumption, popularity of menu items, delivery time distribution and other relevant factors. The study did examine some patient satisfaction factors such as temperature of food, etc., but not in the context of what factors were most critical to improving the scores and how they ranked with the patients.

This study, "Improving Patient Meal Satisfaction with Room Service" (2002) was the first formal look of the potential power of room service for improving patient outcomes clinically. The study showed that while patients tended to order less food than was previously sent on the conventional meal system, the patients consumed a far greater amount of the foods they did order. In pre and post room service plate waste studies it was discovered that pre-room service, "only 44.78% of the patients consumed more than 50% of their entrees compared to 88.24% who consumed more than 50% with room service". (p. 32) This is a significant increase in caloric intake. Perhaps there is a greater link presented here between the quality of food service and the patient's overall perception of their care than previously thought.

The McLymont, Cox and Stell Study (2002) did not address the reasons for the increase in patient satisfaction created by room service programs, nor was there an examination of which factors the patient feels are important in determining the quality of their hospital care conducted. In addition, the strength of patient response to room service may indicate a higher association with meals (and food service) and the quality and care in the

overall hospital experience, changing the previous perceptions when food service was poor and unresponsive to patient needs.

In spite of the lack of room service focused studies, there is a wealth of information on patient satisfaction in general which is pertinent to understanding the scope of this study. A review of this literature reveals that there has been a steady but subtle change in the perception of the importance of patient satisfaction by healthcare patient satisfaction experts because of the tremendous success of room service applications. This is a critical development for healthcare foodservice. If a correlation can be determined between the importance of room service from the patients' perspective and their association of room service with the total hospital experience, a considerable amount of support from hospital administrations could result.

#### *Problem Statement*

The growth in the number of room service programs in healthcare requires study on the importance patients place on the elements of room service programs to improve program design. Formal study is also required on examining the effects that room service has on overall patient satisfaction with hospital care and the potential impact on the financial performance of the hospital. If a relationship between the patients' perception of the quality of care, improvements in patient satisfaction and hospital profitability is established, there will be further justification for implementing room service.

#### *Applied Foodservice Technology*

In their website Room Service Technologies, a subsidiary of Romano Gatland, a food service design and management-consulting firm, currently has completed the implementation

of 38+ healthcare room service programs with a significant number of new programs in development (<http://www.roomservicetech.com>). Most of those programs have been implemented for all the patient population of the hospital clients involved, although there are some partial implementations (for a limited number of patient care units at any particular hospital). Room Service Technologies is experiencing a tremendous increase in requests from prospective clients for feasibility assessments specific to implementing room service in their hospitals, and a subsequent increase in requests for proposals (RFP's). In every instance, the implemented room service programs have significantly improved the patient satisfaction ratings for that food service and in some cases there is a provable link between room service and a subsequent increase in the overall patient satisfaction scores of the hospital.

The National Society for Healthcare Foodservice Management (HFM), the largest association for independent healthcare foodservice management professionals in North America, conducted a study (2004) to determine the number of hospitals with room service programs implemented or planned. "HFM'S recent Room Service Study reports that 26% of HFM operators are currently offering room service in their facilities and 42% have plans to implement in the future". (pg. 1) "The survey participants came from every region of the nation and Canada. Of the operators responding, 33.3% were from the Midwest; 17.1% from the Mid-Atlantic; 12.3% from Mountain Plains; 10.1% from both West and New England; and 1.3 % from Canada. Over 200 Operators responded to the survey; 68.4 % of them either already have room service or plan to implement it; 31.6% reported no plans to offer room service at this time." (pg. 1) It is clear from the HFM study data that room service programs

are becoming the benchmark for Healthcare food service operations, which generates the need for an in-depth study.

### *Purpose of the Study*

The purpose of this study is to:

1. Identify the factors most influential to patients in improving patient meal satisfaction by rating the aspects of room service for importance.
2. Rank the identified factors associated with room service to determine which are the most critical in improving patient satisfaction scores in independent operations.
3. Determine whether or not patients associate the quality of room service with the overall quality of their hospital experience.
4. Ascertain the association patients have between how they the perceived quality of their meal service and the overall quality of their hospital care.
5. Evaluate the patients' perception of the room service menu as an aide in understanding their diet, diet restrictions and its application as a tool for home menu/meal planning.
6. Ask patients to define "room service" in their own terms.

### *Hypothesis*

- Hypothesis 1: It is assumed that the implementation of room service as the primary system for delivering patient meals in acute healthcare facilities significantly improves the patient satisfaction ratings for those foodservices, regardless of what measuring system is used.

- Hypothesis 2: Certain features of room service systems in healthcare are the primary satisfiers for patients. These features should be identified and incorporated into the planning/programming of room service operations.
- Hypothesis 3: The change from conventional cook/serve or cook/chill meal delivery systems to room service results in hospital patients placing a significantly higher value on their association with quality hospital care with conventional or cook/chill systems.

### *Limitations of the Study*

1. The hospitals chosen for the study represent a “generalist” population for acuity of care with the exception of one specialized facility. That exception focuses in the care for oncology patients, who have long presented a particularly vexing problem for food service because of their special food service preferences and needs. This one hospital was used because it is an “all oncology” facility, specializing in the care and treatment of cancer. Otherwise, the generalist population was needed to establish an overall understanding of the patients’ views on room service and what association if any they feel room service has on their satisfaction with the entire scope of care received.
2. Surveys were distributed with the breakfast meals and collected throughout the day. Some patients because of illness or medication might not be able to respond appropriately to questions posed, or are simply unwilling or unable to complete a survey. Furthermore, people who are admitted to the hospital are usually there for very serious, sometimes life threatening illness or injuries, awaiting definitive answers or outcomes to their situation. There is a potential that survey results might reflect

concern for their current situation while post-admission surveys, conducted weeks and sometimes months after the hospital admission, might result in higher, more positive results.

3. The study does not account for demographics in relation to gender, age or acuity of disease state and all factors which might have an impact on patients and their food service needs.
4. The study only seeks to establish the importance of room service relative to the patients' perception of the quality and wholesomeness of the hospital experience. It does not ask patients to rank the importance of room service against other aspects of care or their hospitalization.

#### *Definition of Terms*

**Conventional Meal System** - is one that cooks foods and immediately serves them to the patient population via some type of temperature maintenance system. Conventional systems use a standard cycle menu of a set length (7 or 14 days, etc.). Conventional meal systems are also called, cook serve and traditional.

**Cook/Chill Meal System** - prepares foods in advance of service and holds the meals under refrigerated storage. Hot foods are brought to the appropriate serving temperature through the use of a "rethermalization" system while maintaining the cold food temperatures.

**Cycle Menu** - in which the menu choices are changed daily but repeat the cycle after a set number of days, 7, 14 or 21, etc.

HCIA – (Health Care Investment Analysts), a data resource company providing information databases to the health care industry. Now known as HCIA-Sachs, L.L.P., headquartered in Baltimore, MD.

Institutional Review Board (IRB) - the body of a university that evaluates and approves Human Research projects in compliance with Federal Law.

Late Tray - are meals served to patients who missed the normal, set meal time for one reason or another. Late trays usually are prepared from foods left from the previous meal. In many instances, the late tray will not present the items the patient had ordered for that particular meal and are a point of dissatisfaction.

Meal Delivery System - used by a hospital to prepare and deliver meals to its patients. These systems are usually one of two types although there are variations. Conventional meal systems are cook/serve. The food is prepared just before the meal then served hot/cold on a temperature maintenance system. Cook/chill systems prepare food or meals in advance, store them under refrigeration on “retherm carts” until just before service time. At a designated time before each meal, the cart automatically “retherms” the patient meal bringing it to service temperature of 165F.

Meal-on-Demand - a system which allows the patient to order foods from a room service menu with out restriction except those required by specified diets as ordered by their physician. Meal-on-Demand and Room Service are synonymous terms for this study.

Modified Diet - any physician ordered diet for a hospital patient who contains modifications, restrictions or prohibitions on certain foods or nutrients. For instance, a physician may order a 1,500 calorie or a 2 gram sodium diet for a patient based on the patient’s medical condition.

**Patient** - a person admitted to the hospital with “in-patient” status, (hospital stays of more 24 hours or more).

**Patient Satisfaction**- measurement of the patient’s evaluation of the quality of care received during a hospitalization. Patient satisfaction may be monitored and measured by hospital administered survey mechanism or through vendor contracted measuring and reporting services.

**Pre-determined Window of Selection** - the time “window”, set by the food service department in which patients must select foods from a menu and submit them. In many cases, menu choices from the patients are required in advance so that choices can be entered into the software used to manage the meal production. In conventional and cook/chill preparation systems, this may be up to 24 hours in advance.

**Peer Group** - categories of hospitals based on location (urban, rural), population served, bed-size etc, and other supposed operating characteristics which commercial data companies use to compare client hospitals.

**Regular Diet** - a physician ordered diet without restrictions, for a hospital patient.

**Restaurant Style Menu** – a menu of a la carte design that is commonly used for room service applications in health care settings.

**Room Service** - for purpose of this study, room service is defined only as those patient meal systems that prepare foods to order when a patient requests them from a restaurant style menu. Only full service “meal on demand” systems are qualified for this study, eliminating partial programs where 80% or less of the hospital population are on room service, and programs such as “Spoken Menus”.

Spoken Menu - a system for taking meal requests from patients in which the menu choices are “spoken” to the patient by a staff member. The order taker then transcribes the patients’ meal requests to the kitchen. This process is usually completed one or two meals in advance. For the purposes of this study, a “spoken menu” does not qualify as room service as most of these programs use a cycle menu of entrée choices, similar to a conventional menu cycle. In some cases, spoken menus only offer one entrée choice with an available substitute in the event a patient doesn’t like the main choice. Some of these systems do not offer the patient any choice in regard to any item other than the main entrée.

Specified Diet - a specified diet is the diet prescribed by a physician for a hospitalized patient. A specified diet may require compliance with a pre-determined set of restrictions such as the control of calories, sodium content or the prohibition of certain foods such as certain fats or other items. The requirements for specified diets are met in restaurant style room service menus.

Standard Cycle Menu - a menu system which offers patients a limited number of entrees assigned in a cyclical fashion for a set number of days. Entrees are pre-assigned to days and meals within the cycle so that all patients must select from the same limited number of foods offered for each meal. For instance, a cycle menu may have two or three entrees for lunch and two or three different entrees for dinner. Some cycle menus may carry over an entrée or other course choice to the next meal, but standard cycle menus offer limited selections per meal when compared to restaurant style menus common to room service.

## CHAPTER TWO: Literature Review

### *The Patient versus Customer Debate*

Years ago, there was little or no discussion on a hospital patient being a customer. The entire cultures of hospitals were based on the clinical outcome of the patient through the curing of the illness or the success of the surgery of a broken or malfunctioning part. Physicians ruled the kingdom and were considered the true customer of the hospitals. This paternalism permeated the hospital organization. Chaplin and Terninko (2000) describe the culture of healthcare in the terms of barriers to patient focused services and systems,

Healthcare has a number of historical barriers that impede the incorporation of the voice of the customer into the delivery of its services. First, healthcare has evolved within a strong paternalism-the doctor or nurse knows what is best for the patient. Informed consent as a standard practice is a relatively recent phenomenon. Twenty years ago, patients who might have had a disease such as multiple sclerosis or cancer routinely were not told that these diagnoses were suspected. Providers thought that such knowledge was not good for the patient, as it might adversely influence the patient's behavior. Page number (p. 17)

They further summarize the barriers to the customer focus in healthcare: "The net effect is to make the healthcare provider right and the patient/customer wrong." (p 17)

Such was the environment that healthcare foodservice was forced to grow in. The systems and processes were designed for the convenience of the provider, not the customer. Every patient on a nursing unit was served their meals at the same time, whether the patient was available for the meal or not. In some cases, nursing units fought with each other to get their meals from the kitchen first, to get them out of their way. Where cook/chill systems were employed, almost every patient in the hospital could be served a meal within a 20 minute window. This makes the administration of medication to patients and the process of medical treatment easy to schedule and done at the convenience of hospital staff. Even the menu

systems were for the convenience of the operator. “Selective” menus offered a few scant choices of the entrées and other items, perhaps as many as three for a meal and in some systems, only one. But these menus were tied to a cycle, often seven days in duration. As a result, meal times were setup for the ease of administering medications such as insulin. Whatever schedule was good for the nursing staff was the schedule that was set. There was little thought of customer service in healthcare 20 years ago.

Then the healthcare world began to change. And as healthcare costs have continued their upward spiral, the focus of healthcare moved from clinical outcomes to service outcomes. How much has the climate for healthcare changed regarding the move from patient to customer? Interplay, Inc. (2005) describes the number of highly educated and service demanding “baby boomers” as the new wave of consumerism and their effect on service demands:

Unfortunately, the cohorts of patients just beginning to reach majority will not likely brook poor patient experience. The Baby Boomer generation will be the number-one consumer driver of healthcare for the next 30 years. Seventy-eight million people concentrated in a 20-year time span. “This will be the fussiest, best informed group of consumers that healthcare has ever-known and probably more demanding.” (p 3)

This is a strong indication that the baby boomer generation is going to have an impact on the means by which patient satisfaction is measured and what is important in healthcare.

According to Mayer and Cates (2004), today’s healthcare consumer expects a high quality in clinical outcomes. It’s why they seek care, and excellence is the standard that clinical care is judged by. They identified that all patients expect excellent clinical outcomes as a given and stated what the second expectation was: “Your patients expect excellent

clinical care (the destination). But they also expect excellent service (the journey). The destination is assumed—the journey is usually how service is judged.” (p. 26)

In recent years, it has been discovered that overall patient satisfaction with the healthcare industry has been slipping, in spite of intense efforts by healthcare to identify and react to those key patient satisfaction components. Fottler, Ford and Heaton (2002) showed the decline in patient satisfaction.

Voluntary Hospital Association commissioned a survey that reported that public trust in healthcare institutions has markedly declined, with health plans losing more ground than physicians or hospitals, from 1993 to 1998. The decline in trust was especially pronounced among consumers age 40 to 59, whose higher income and education levels; and those who had recently changed, added, or selected a physician or hospital. Customers gave hospitals only a 67-percent satisfaction rating: compared to 31 other industries, hospitals ranked 27<sup>th</sup>. This ranking placed them just above the Internal Revenue Service and only 10 percentage points below the tobacco industry. (p. 4-5)

Note that the age group of those surveyed indicates that these are the baby-boomers.

### *The Importance of Patient Satisfaction*

Patient satisfaction is perhaps the most critical element in many facets of healthcare planning and operations. The measurement and analysis of patient satisfaction is the cornerstone of planning for every acute healthcare facility, for it indicates to the hospital administration what their perceived strengths and weaknesses are from the point of view of its most important client, the patient. In fact, the data collection and measurement of patient satisfaction and performance in healthcare is a major industry by itself. One company, HCIA-Sachs, that serves the data research and analysis market posted annual sales of \$228 million in 2005, while HCIA-Sachs over \$65 million in data research related sales for healthcare for the same time period (Employer Health.com. 2006). There are at least six national firms involved

with annual sales of millions of dollars. (p. 1) Press-Ganey, is one of the largest patient satisfaction research firms in the United States. Guardagnino (2003) related that:

The hospital industry's leading independent vendor of patient satisfaction measurement and improvement services-Press Ganey Associates, headquartered in South Bend, Indiana, specializes in producing tested and reliable surveys and national comparative databases. The firm's clients include 40% of the nation's acute care hospitals with over 100 beds and 30% of those with fewer than 100 beds, says Robert Wolosin, a Press Ganey research associate. (p. 2)

Healthcare executives readily accept the importance of patient satisfaction. Interplay (2005), states that "Over 90% of executives said patient satisfaction is critical to market share and profitability." (p.1) Patient satisfaction data is not only critical to market share and profitability, it is instrumental in the development of strategy and in the long term, the assignment of operating and capital resources by hospitals as noted:

- Establishment of cultural/philosophical change
- Budgeting-investment of resources
- Positioning for market share
- Recruitment and retention of physicians/staff

Gaudagnino (2003) also relates that:

Patient satisfaction data regarding inpatient and ambulatory care play a significant role in the strategy and tactics a hospital uses in delivering patients services says David Longnecker, M.D., a senior vice president and corporate chief medical officer of the University of Pennsylvania Health System. In a competitive health care environment, patients want and expect better healthcare services than they did in the past, and medical centers are concerned about maintaining their image, he adds. (p. 2)

#### *Correlation of Patient Satisfaction to Profitability*

According to Press-Ganey (2002), there is incontrovertible evidence that hospital patient satisfaction is in fact, directly correlated with the profitability. This finding was concretely established in a review that included 679 hospitals. Press-Ganey related that, "A

highly significant correlation was found ( $r=.23$ ;  $p \leq .001$ ) between profit and satisfaction” (p. 15-16)

The study used data collected from HCIA and demonstrated that the hospitals with the highest prior patient satisfaction scores tended to rank as the most profitable. Thus, there is a strong link between patient satisfaction and profitability. This finding also related that Moody’s Investor Services made a decision to raise the Pensacola Baptists Hospital’s bond rating based on the hospital’s patient satisfaction scores. Higher bond ratings translate to reduced costs for borrowing money. Moody’s reassessment associated the improved patient satisfaction rating with increased market shares, revenues and profitability.

Bell and Krivich (2000) cite a number of other studies which demonstrate the correlation between patient satisfaction and profitability:

Much has been written about the financial impact of patient satisfaction. Yet it appears that the healthcare community routinely ignores much of this research. In 1992, John Hartley and Robert Vraciu studied the link between quality and financial performance. In the study, 82 Health Trust hospitals found that a one-standard deviation change in the quality score represented a 2 percent increase in operating margin. In another study, Eugene Nelson et al found that 17 to 27 percent of the variation in hospital profitability could be explained by patient perceptions of quality. Their study examined data on 15,000 patients in 51 Hospital Corporation of America (HCA) hospitals. In addition, Standard and Poor’s, the New York bond-rating agency, is investigating how they can incorporate quality indicators into their rating systems. This implies that in the future, bond rating will be formally influenced by patient-satisfaction data. (p. 27-28)

This same study reported that:

One hundred thirty-three hospitals, with a sizable patient-experienced database, are being studied to understand the link between profitability, quality and satisfaction. Being in control and influencing patient satisfaction can have a positive financial bottom-line impact. For example, if a hospital’s operating margin is 4 percent and patient perceptions of quality can be improved one standard deviation, the margin can improve 2 percent. An upward movement in operating margin from 4 to 6 percent results in a significant bottom-line gain of millions of dollars. (p. 28)

The conclusion drawn is simple and direct. Improved patient satisfaction increases the operating margin of the hospital. How does this translate to healthcare room service and food service operations? Improvements in patient satisfaction through room service then can be assumed to improve the bottom-line of the hospital that implements it, establishing a clear, but as yet, unproven link between the implementation of room service, the profitability of hospitals and a return on investment to the hospital that provides room service to its patients. From a reasonable person perspective, then, improved patient satisfaction created by room service would provide a return on investment to the hospital that implements room service as its primary patient meal delivery system in the form of increased net revenues.

#### *Increased Exposure for Patient Satisfaction*

Patient satisfaction scores are expected to play a more important role than ever before in the coming years. Recent moves by the Federal government have paved the way to take the private use of patient satisfaction data by hospitals and use it to examine process improvement into the public arena. Cohaughton (2005)

When San Diego County hospitals have been asked to take part in voluntary public patient satisfaction surveys in recent years, their overwhelming answer has been “no”. But that will start to change this year—mainly because the federal government has thrown its weight behind the request, officials said recently. Officials said new, federally created patient satisfaction surveys comparing all local hospitals will become available to the general public by 2007, and people will be able to compare notes on how their neighbors felt they were treated by local hospitals—a tool that could persuade people to stay away from some hospitals and flock to others.

Hospitals are vitally interested in testing and tracking patient satisfaction, mainly because patient satisfaction—how a patient feels they have been treated—has a direct effect on patient outcomes—how well they recover. (¶ 1)

The fact that the Federal Centers for Medicare and Medicaid Services, the largest healthcare providers in the nation, will require comparative data for hospitals' patient satisfaction to be made public should not be lost in the consideration for implementing a high quality room service program. This finding was further substantiated by a study (Sheehan-Smith, 2006) which stated that "findings indicate that foodservice quality is significantly correlated with overall patient satisfaction." (p. 581)

### *The Top Drivers in Patient Satisfaction*

Lee (2004) describes the top drivers for patient satisfaction from both Press Ganey and Gallop, two preeminent data research companies who researched the association with these factors and the patient's likelihood to recommend a hospital to others. As described (p. 11) for Press Ganey, the top 10 were as noted with the listed correlation:

How well staff worked together to care for you	.79
Overall cheerfulness of the hospital	.74
Response to concerns/complaints made during your stay	.68
Amount of attention paid to your personal and special needs	.65
Staff sensitivity to the inconvenience of hospitalization	.65
How well nurses kept you informed	.64
Staff's effort to include you in decisions about your treatment	.64
Nurse's attitude toward your requests	.64
Skill of the nurses	.63
Friendliness of the nurses	.62

For the Gallup Patient Satisfaction measurement system the top seven drivers of patient satisfaction, all of which are very similar to those listed in the Press-Ganey top ten, are:

Nurses anticipated your needs	.64
Staff and departments worked together as a team	.64
Staff responded with care and compassion	.62
Staff advised you if there were going to be delays	.61
Nurses explained about medications, procedures and routines	.60
Nurses responded promptly to pain management	.60
Nurses responded in a reasonable amount of time	.60

As seen above, neither food service quality (of the meals) nor the quality of the service aspect of meal delivery, are rated in either of the companies' top factors. In fact, further research demonstrates just how low a correlation they feel there is between a patient's "likelihood to recommend" a hospital for care and food service.

*The Ranking of Departments in Correlation of Quality of Care and Patient Satisfaction*

Currently, the major patient satisfaction monitoring service companies consider that food service is very low on the importance that patients place on food service as a reflection on the depth and quality of their overall care. For instance, *The Satisfaction Monitor* by Press Ganey (1999) ranked the issues related to overall in-hospital (inpatient) patient satisfaction. According to the Press Ganey report, the likelihood of a patient to recommend a hospital to another person based on the quality and temperature of the food, ranked just about where the ranking of whether or not the nurse call button worked. Quality of food ranked 0.54 with a correlation of likelihood of recommendation at 0.36, while the patient satisfaction with the call button was 0.55 with a likelihood of 0.40 to recommend. (p. 1)

The most important aspect of patient satisfaction and the link to the likelihood of recommendation occurs with "Staff worked together to care for you" at 0.80 and 0.79 respectively. From the acute healthcare food service perspective, this ranking, based on surveys completed in October through December of 1998 by a major study (Press Ganey 2003) which was conducted previous to the wave of room service implementations, demonstrates that food service was not important because it was, in the perception of the patient and care provider alike, bad and nothing could be done to improve it. The study, that involved nearly 1.7 million patients, determined that of all of the questions asked, those

pertaining to food service held the scores that ranked in three of the lowest five items. These low rankings compared to the highest ranking question which was “Skill of Physician” which earned a 91.46:

<i>Items with lowest ratings:</i>	<i>Average Score</i>
Quality of food	71.15
If you were placed on a special/restricted diet (How well it was explained to you)	72.34
Noise level in and around room	73.47
Temperature of the food (cold foods cold, hot foods hot)	75.26
Room Temperature	76.18

As seen, the current conventional food service systems represent three of the lowest scores of all the services and elements that the major patient satisfaction measuring companies sample. (p. 1) If the negative impact of this data on the opinion of patients toward food service is considered, it indicates that conventional and cook/chill food service systems are actually the great patient “dissatisfiers” of all hospital services, presenting the lowest scores of all services measured.

One hospital executive told a newspaper reporter what the most frequent complaints received from patients were prior to implementing room service at his two hospitals. However, the advent of room service has potentially provided a basis for the patient to relate excellence in their “on demand” meal services with the total hospital experience and the quality of the care delivered. Calos (2002) quoted the administrator:

When patients register complaints about their stay in any hospital, food and cleanliness of the room top the list, and since going live at LMH (Lockport Memorial Hospital) with the new (room service) menu in October, patient surveys show that 93 percent are satisfied with the food service compared to 76 percent before the change. (p.1)

Compared to the results of the room service programs now in place, there appears to be a disparity over the potential for room service to improve overall hospital patient satisfaction scores and what the commercial research companies hold as the current value of food service.

*Why Foodservice Scored so Low Prior to Room Service.*

The New York Times (2006) indicated that “Hospital food has become a national joke. Want to dismiss a bad dinner at a new restaurant? Just say you have had better food at a hospital.” (p. 2) Healthcare food service was seen as a necessary evil that was not important in the overall care of the patient, and more importantly, in the patients’ overall perception of the quality of care received. As a poor cousin to the rest of hospital systems, food service in the acute healthcare setting was a victim of systems, resources and technology. It was a poor performer, with little or no comprehensive change that can be found in approach for the last 40 years with the exception of cook/chill systems in the 1980’s. Focused on the convenience of the nursing staff and other care providers in the hospital, and not the needs of the patients, food service systems were unresponsive to patient needs. Menu systems required the collection and input of selections from the patients up to 24 hours in advance. Often, by the time the meal selections were to be served to a patient for any particular meal, the patient’s diet order had changed, the patient was transferred or discharged or was placed on hold for meals for tests, negating the ability to serve exactly what the patient had ordered. It was not unusual for a patient to be in a hospital for four or five days, and not receive one meal or food item that they had ordered.

Romano Gatland (1999) a national foodservice consultancy conducted a study at a major university medical center which showed how cook/chill systems, which prepare meals in advance then hold them in refrigerated storage, exacerbated the menu collection problem, sometimes resulting in a 25-33% production of patient meals that were wrong or not needed because of the diet change and patient turnover. (p. 23) Not getting the foods you order is one problem. Getting foods you did not order, do not like and do not want are dissatisfiers.

#### *Is Food Service Relevant?*

It was ascertained as seen from the comments of one hospital administrator who has not experienced room service or understands the effects of room service on hospital patients, there is a question about whether or not food service is even relevant to patient satisfaction. An example of the disassociation that exists was revealed in the Cohaughton article (2005) where the disconnection between the realities of room service, the perception of food service exists. Quoting the chief administrator of the Palomar Medical Center, “for example, satisfaction surveys could ask the patients how they like the hospital’s food—which would have little to do with providing efficient healthcare. We can improve the (hospital) food, he said, but when it comes to health care, is that relevant? We have people on low-sodium, low-fat diets. Its not like you can order what you want when you are in a hospital” (p. 2)

#### *Room Service is Relevant-It Increases Patient Satisfaction*

Room Service for patient food service is relevant. You can order what you want when you want it with a properly designed program. In addition to the anecdotal information already cited, a study conducted by Flom of the University of Wisconsin-Stout (2003)

conducted at the Myrtle Werth Hospital in Menomonie, Wisconsin, examined the effect of room service on patient satisfaction scores. Findings in her study suggest:

An in-patient focused room service style of service will increase customer satisfaction score related to food in an acute care facility. These scores are based on inpatients' satisfaction with convenience, taste, appearance and temperature of the food served. (p. 19)

The 550 bed Piedmont Hospital of Atlanta, Georgia produced a presentation to the hospital staff on the 1<sup>st</sup> Anniversary of their room service implementation which was reached on September 13<sup>th</sup>, 2006. The presentation (Salas, 2006) depicted the graphic improvement in patient satisfaction scores for food service compared to the previous "traditional" system scores and the change in the Press Ganey Peer Group percentile ranking. The report showed the department's average raw scores under the traditional cook/serve meal delivery system to be 40 (out of 100) for the quality of food with the other three categories surveyed to be lower still. After the implementation, their study revealed that all four questions on the Press Ganey survey were now rated at 100% satisfaction after the first year of operating room service. (p. 1)

A study by Room Service Technologies (2006) indicated that 30 out of 30 healthcare foodservice departments' operating room service as their primary patient meal delivery system demonstrated major increases in their patient satisfaction scores after implementing room service for their patient food service system, placing these departments at or near the top of their peer groups. (p. 4) In all cases where the hospital used an outside vendor to monitor and measure patient satisfaction, the departments scored in the upper echelon of the hospital's peer group, regardless of the company used for the patient satisfaction service. The study also revealed an average increase in the peer group rankings for patient satisfaction, for client

hospitals, demonstrated before and then after the room service program implementation for various regions in the United States (p. 4):

- South East- from the 68<sup>th</sup> to the 93<sup>rd</sup> percentile in 60 days.
- South Central- from the 75<sup>th</sup> to the 95<sup>th</sup> percentile in the first year
- North East- from the 46<sup>th</sup> to the 97 percentile in 6 Months
- North Central- from the 70<sup>th</sup> to the 95<sup>th</sup> percentile in 5 months.

These improvements in peer group rankings are remarkable, particularly for those programs that have been operating for less than six months and are considered still to be in the learning curve for their program. However, these results are consistent with the results reported in numerous anecdotal accounts of room service implementations related in professional journals. A few of the numerous examples found are cited below:

Lawrence & Memorial Hospital in New London, CT-Dinex (2005) reported,

According to Mr. Stern, the transition to room service has led to economy in staffing and production, but most importantly a significant increase in patient satisfaction. The hospitals' Press Ganey rating improved to an impressive 97%. The Food & Nutrition Department now receives numerous cards and letters thanking them for the fine food & service. Department morale is high and the employees take great pride in the quality of their product and high level of service.

Medical City Dallas Hospital, Dallas, TX-In discussing the new room service model implemented at the Medical City Hospital, Dalton (2005) noted

Patients clearly prefer the new model (room service). Medical City's scores on a patient satisfaction Gallup poll jumped from a previous all-time high of 3.08 (out of 4.0) to 3.42 the first quarter that City Gourmet (the room service program) went into effect. (p. 1)

St. Joseph's Hospital, Cheektowaga, NY-Henry Davis, a Medical Reporter for the Buffalo News (2005) describes the results of room service at the St. Joseph Hospital, "It turns out, to no one's surprise, that patients eat more, waste less, and come away more satisfied with their hospital stay when the food tastes good and is what they like." (p. 1)

Memorial Sloan Kettering Cancer Center, Manhattan, NY- Food Technology (2006)

reported that with room service,

Patient satisfaction scores have soared, and patients are consuming more food. For example, MSKCC, began using the Press-Ganey benchmarking program to measure patient satisfaction in 2001. After implementing room service, the score jumped from the 25<sup>th</sup> percentile in 2001 to the 99<sup>th</sup> percentile in 2003 (Lawn, 2003, Weisberg, 2005). (p. 36)

The Memorial Sloan Kettering Cancer Center food service still maintains the 99<sup>th</sup> percentile for its patient satisfaction.

The Riley Children's Hospital in Indianapolis, which at the time of its room service program implementation was using the "ARBOR System" to measure its patient satisfaction, scored a *perfect* patient satisfaction rating in the first full quarter of measurement after the implementation of room service (ARBOR 2005). This is a remarkable achievement with a system which measures *dissatisfaction* as its focus and considering that over 400 responses were received without a single negative indication. (p. 3)

What is now known is that room service has a dramatic effect on patients' satisfaction with their meals. What has not been determined is the effect on the patient satisfaction scores for the hospital as a whole, as a result of room service. Salas addressed this question in the Piedmont Anniversary Presentation (2006). In what appears to be the first definitive examination of the effect of room service on a hospital's overall patient satisfaction rating, the department reported the results of the implementation in 2006 at the completion of the one year anniversary of the implementation. In his presentation to the hospital, Dan Salas, department director, demonstrated how the room service program raised the percentile ranking of the department from that previous to room service to the 99<sup>th</sup> percentile for its

Press Ganey peer group after room service was implemented. Further, the report showed that the dramatic improvement in the department's patient satisfaction scores, when given a weighed factor according to the importance that patients placed on food service, resulted in a 0.6 point gain in the total hospital score. This gain was calculated using the 95<sup>th</sup> percentile as the base, not the 99<sup>th</sup> percentile that was achieved. While it is too early to determine the net effect on the financial bottom-line for the Piedmont Hospital, it appears that there will be a sizeable one, attributable to room service. (p. 2)

Room Service Technologies (2006) also reported a correlation of improvement in total hospital patient satisfaction as a result of room service for the 30 clients surveyed.

Patient Satisfaction- The "real" effect of patient 75% reported an improvement in the overall patient satisfaction with the hospital. Room service is proving to significantly improve satisfaction scores with the overall experience of the hospital stay. (p. 4)

Although the clients could not quantify the overall increase in total hospital satisfaction that had been experienced with room service, their responses indicated a definite association with the implementation of room service and the improvement in hospital wide patient satisfaction scores.

Patient satisfaction scores, while the obvious measure for success should not be the one and only focus of room service and the reason to implement. The true focus must be the improved care to the patient in health and well being. For it is by improving care and the perception of the quality of the care that patient is being given that produces better results for both the clinical outcomes and the total patient satisfaction the patient experiences.

Patient "satisfaction" is in fact, not the only effect on healthcare by room service. Along with room service implementations comes the realization that patient satisfaction with

services and nutritional care may actually improved clinical outcomes. The Memorial Sloan Kettering study on room service (2003) provided strong evidence of improved nutritional intake for its oncology patients, a primary approach to the treatment of cancer, in its room service pilot study. Caloric intake improved from a pre-room service consumption of 44% of the foods provided to over 80% consumption with room service. Perhaps it is the patients who most immediately recognize the value of room service in this regard, as it directly affects their health and allows them to contribute to their full recovery. (p. 32)

In an Associated Press article, Stengle (2004) describes some of the potential clinical outcomes from room service. “Freshly prepared food not only tastes better, but also could help speed recovery because a patient may eat sooner and gain more strength.” (p. 2) Stengle then relates the statement of a clinical dietitian in regard to cancer patient care:

Cancer patients often have a loss of appetite or changes to their sense of taste and smell because of radiation or chemotherapy, said Carol Frankmann, director for clinical nutrition at the M.D. Anderson Cancer Center in Houston. When her hospital began offering a menu (room) service in 2000, doctors and nurses noticed an immediate difference. “One of the things that were observed immediately was that the trays came out of the room empty,” Frankmann said. “Because our patients are ordering what they want at the moment, they’re generally eating all of it”. (p. 2)

Room service’s improvement in nutrient intake of the patients is not the only avenue that room service provides to improve clinical outcomes. Room Service offers the opportunity for food service departments to design full spectrum “heart healthy” menus such as presented by the Presbyterian Hospital of Plano (TX). The Food Service Director Magazine (2003) interviewed Nutrition Service Director Mary Spicer, RD who described the heart healthy approach.

The menu, which she (Mary Spicer) says is a source of pride for Presbyterian Hosp., is universal and heart-healthy according to American Dietetic Association guidelines,

and has been for years. There is some non-heart-healthy options-Texas favorites-on the menu, but a notice on the menu recommends that patients order those choices sparingly. (¶ 5)

While not inherent in all room service programs, the design of a new room service menu allows for the development of high quality and excellent tasting recipes that are heart-healthy, and these can be packaged as a feature of the room service program making the menu an educational tool.

A New York Times article (Severson 2006), one in series of articles on healthcare written from the patient perspective, was quite direct about current (non-room service) healthcare food services, but recognized the potential impact on healthcare that can be provided by room service:

For the sick, nourishment is a lifeline to healing. But in American hospitals, food is often the top complaint of patients and their families. In some facilities, more than a third of the food served on an average day goes untouched. Hospital food has become a national joke. Want to dismiss a bad dinner at a new restaurant? Just say you have had better food a hospital. In recent decades it has become even worse, medical experts and veterans of the hospital food service business say. A majority of hospitals have long ago abandoned their homegrown food service or have made very limited attempts to make the food experience at all palatable for the patients,” said Dr. George Blackburn, an associate professor of surgery and the director of the Center for the Study of Nutrition Medicine at the Beth Israel Deaconess Medical Center in Boston.” (p. 1)

Note that the doctor made a clear reference to the “food experience” in his statement which coincides with the move to the new healthcare consumerism being experienced. The article in the New York Times further explains the new room service vision:

But there is hope among the Jell-O cups. Dr. Blackburn and other nutritionists say the medical profession has begun to recognize that good-tasting, culturally correct food that is served at the proper temperature and when a patient is ready to eat can help people feel better faster, save on food costs and attract patients with *good insurance plans.*” (Emphasis added.) (p. 2)

The article additionally cites an estimate from the American Hospital Association regarding the number of projected room service implementations that are expected:

Rick Wade, a senior vice president of the American Hospital Association, estimated that 40% of the nearly 4,800 hospitals in the group had changed or planned to change exclusively to room-service-style food programs in five years. (p. 2)

In addition to the perceived effects of room service on the nutrition status of patients and their ability to get well, room service has a potential role in a placebo effect on patients. The placebo effect is derived from any intervention (medical, service, comfort) that the patient receives, not just in medication. Press (2002) states that “Information, interaction, perceived motives and attitudes of caregivers, concern for physical comfort, décor, symbols, machinery, medications, treatments—every experience contributes to the intervention. All of these can have an effect on the patient’s perception of the quality and effectiveness of care”.

Press admits that food also can produce the placebo effect:

The placebo effect is not limited to interactions with physicians or nurses. *Any* experience the patient has with the institution can exert a placebo effect. This applies to décor and food as well as surgical explanations or the courtesy of the IV nurse.... Patient satisfaction is a potent placebo. In sum, when patients are more satisfied, medical management and outcome are enhanced. Patient satisfaction and “actual” quality of care are not distinct phenomena. When your patients are more satisfied, *they really are getting better care.* (p. 8)

#### *Time for Review of the Food Service Questions on Patient Satisfaction Surveys*

Press-Ganey (2004) has four food service questions on their post-discharge survey, often provided to patient weeks and months after discharge (p. 1) These questions relate to the meals and foodservice but are not suited for the measurement of room services effect on total patient satisfaction. These questions are:

- If you were placed on a special/restricted diet, how well was it explained to you?

- Temperature of the food
- Quality of the food
- Courtesy of the person who served your food

Gallup Consulting, a major provider of patient satisfaction services to healthcare has only one food service related question for one level of patient satisfaction measurement which makes it difficult to measure or relate the importance of food service to other aspects of care in the measurement system. Other patient satisfaction measurement system providers do not have any food service related questions in their patient satisfaction measuring criteria, which would seem to discount any relationship between food service and patient satisfaction. The use of the current measurement systems and questions makes it difficult to accurately measure the impact of room service on the overall patient satisfaction in any hospital.

There is another situation which merits discussion. The fact that many food service departments operating with conventional and cook/chill meal delivery systems do not have the control of the delivery process because of process handoffs to other departments makes it dubious to rate the foodservice on questions pertaining to the timeliness of meals or the courtesy of the server. One would have to agree that the failure of other departments to pass meals on a timely basis would cause degradation in both the quality of the food and the temperature it is served at. Further, is it appropriate to rate foodservices for the courtesy of the staff members passing meal trays, if the food service department does not have a direct reporting relationship with that staff? Does the CEO who reads the patient satisfaction survey results and makes decisions allocating resources based on these results, know who passes meal trays in the hospital? An effective room service program eliminates those concerns. One of the primary elements in an effective room service program is that the food service

staff must be responsible for the distribution of meal trays. Schirg (2003) identified this issue in establishing that true room service requires that there be no handoffs of responsibility in the meal distribution in room service if patient satisfaction goals are to be met. (p. 1) The professionalism of the service provider is recognized by the patient. This service provider must be professionally trained, trays must be distributed as a priority of care, and the guaranteed delivery times must be met. When these conditions are adhered to, food temperatures are usually more than adequate and for the most part, the courtesy of the service is guaranteed.

The importance of having the service provider for meals, trained to the professional level is captured by Lee (2004):

In the battle for the supremacy of perceptions in the patient's mind, our competition is anyone the patient compares us to. Unfortunately they do not usually compare us to other hospitals. People don't make an exception by saying, 'Compared to other nurse's she's okay but she couldn't cut it as a waitress or any other service provider' Nine out of the ten top drivers of satisfaction could apply to how a person is treated anywhere. (p. 10-11)

The establishment of the perception of quality of care with the patient is also a key in creating loyalty with the patients. Patients place such importance on their perception of quality that Lee further asserts that a different focus is needed by hospitals;

After many years of collecting data on patient satisfaction and loyalty, we now know quantitatively what we have always known intuitively—patients reserve their good word of mouth and loyalty for hospitals where they feel their needs were anticipated and met by a courteous, caring staff. When one reads through the list of top drivers of patient satisfaction and loyalty from two of the largest organizations that do hospital surveys, it is clear that often what hospital managers focus on, namely clinical and process outcomes, is not where the battle for the consumer's mind is being waged.

When hospitals spend most of their efforts in clinical results and process improvement, their data are defined by *outcomes* and therefore can be measured objectively. The *patient*, however, judges quality by his or her *perceptions*, something

that is subjective and cannot be verified in the same way as outcomes. The patient is judging the overall *experience* of being in a hospital. (Emphasis added.) (p. 12)

The factors Lee cites as creating patient satisfaction and loyalty are all evident in a properly designed room service program. Room service is the only patient meal system which possesses those “system attributes” and is believed to contribute to the overall patient experience in a positive manner.

Perhaps it is time for the review of the questions that patients are asked on their post-discharge satisfaction surveys regarding food service and room service specifically. As a point of discussion, why not ask the patient to rate their association between the quality of their food service and the overall quality of care given? At the very least, the survey questions should be made to assist with an audit of performance objectives.

For instance, it would be beneficial to hospital survey clients who operate room service programs to determine some of the following from the survey process if those facilities were to engage in meaningful process improvement. Some examples of appropriate and relevant questions might be:

- Was your meal served within the timeframe guaranteed?
- Was the meal provided as you ordered it?
- Do the menu selections allow you to comply with your diet restrictions and food preferences?
- Was the person who served your meal helpful in assisting you as necessary with your meal selections and was the meal ordering process explained to you appropriately?
- Do you feel the quality of your meals reflects the quality of your overall care?

Appropriate questions for foodservice and room service in particular have the potential of providing data more reflective of current foodservices in healthcare and would perhaps allow for a thorough audit process. Correspondingly, information obtained from more appropriate food service questions would empower management to respond quickly to any service problems and to develop ways to avoid such service issues in the future. Better surveying would relate to improved service recovery mechanisms which would in turn, produce better patient centered results.

#### *The Change to Healthcare Consumerism and the Role of Room Service*

There is strong evidence that changes being experienced in healthcare are consumer oriented and that room service may be a piece of the service puzzle needed to meet the new service demands. Throughout the healthcare industry, there is agreement that as the surge of “baby-boomers” reaches retirement, the change in approach by healthcare providers is required to meet the new consumerism that the boomers require. No longer is the hospital patient a simple, willing and unwitting subject for treatment and care. The hospital patient is no longer just a patient. He has become an educated and determined customer whose service expectations must be met.

Hospitals now have an intense focus on improving and delivering the hotel-style services they provide. One of if, not the most notable moves of hospitals in improving the hospitality services provided to their patients is room service. Room service which started with implementations by a few brave pioneers such at Seattle’s Swedish Medical Center in 1998 and the Memorial Sloan-Kettering Cancer Center of Manhattan, New York in 1999 (Pilot Program), has become a tidal wave of change for the acute care food service industry.

HFM (the National Society for Healthcare Foodservice Management) the largest national society for independent healthcare foodservice executives in the United States, in its recent study (Fall 2004), found “That 26% of all HFM operators are currently offering room service in their facilities and 42% have plans to implement it in the future.” (p. 1) Although the study related that the total number of responses was only 200, the survey results did reflect a representation of all hospital sizes and from all regions of the country.

Room service is beginning to play a major role in hospitals’ marketing efforts. One healthcare system, Hendricks Regional Health (Herder, 2006) is using its room service program as the feature describing quality care at the system in 30 radio commercials airing in Indianapolis. The script reads:

At Hendricks Regional Health, one of the ways we treat people better is (Sound effects: knock, knock, “room service!”) Patients can now order from an extensive menu for breakfast, lunch and dinner. Whether you’re up for a made to order omelet, a fajita wrap or chicken Marsala, we’ll fit your dietary needs and deliver your meals when you want to eat.

And don’t worry about the tipping. We know one way to speed recovery is to serve meals prepared especially for you and that is thanks enough. Hendricks Regional Health.....Treat people better. (p. 1)

The stature of healthcare food service has been raised to the level of service excellence as room service programs are now the center of focus on advertising the clinical excellence a hospital’s services to its current and potential customer base. Healthcare room service has become a key element in the quest for service excellence in healthcare.

## CHAPTER THREE: Methodology

### *Methodology*

This study was designed to assess the patients' satisfaction levels with the room service programs and measure (rate) the factors that patients perceive as the reasons for improved satisfaction with room service. The study was also to determine the association patients have between their perceptions of the quality of their meal service with the quality of their entire hospital experience. This required a design of an instrument to study both areas.

The survey instrument specifically designed for this study focused on understanding patient ranking and rating of features room service as their meal program during hospitalization. A survey was designed for this study that had thirteen scaled questions. At the end of the survey, patients were invited to provide any statements or words they wished to describe their association between room service and their quality of care.

### *Site Selection*

Site selection was based on studying a general range of patient populations with a varying degree of acuity of care and the sites' willingness to conduct a patient survey for this research and their proximity to each other. There were 30 potential sites available for this research project. Out of the 30 potential hospital sites, six hospitals agreed to participate in this research and the surveys were submitted to each facility for pre-approval through their designated process.

Three of the facilities were affiliated with universities and required approval of the research by their Institutional Review Board. The other hospitals approved the research and surveys through their designated process. Surveys were distributed to the patients of six acute care hospitals, three in New York and three Indiana, all of which, with the exception of one, had been operating their room service program for more than 12 months. One site exception was a hospital that had been operating its room service program for 2 months. Another survey site was chosen because its patient population was only oncology patients who present unique needs for food service.

One of the qualifiers for the site selections was the design of the patient room service menu. Each site provides menus specific to a minimum of nine menu bases covering the following diet regimens such as regular, cardiac, sodium controlled, carbohydrate controlled, soft, and dysphagia, full liquid, clear liquid and low residue. This provided each patient with a menu that did not contain any foods that were prohibited for that particular diet.

The operating length of the other programs ranged from 1 to 3 ½ years. It was felt that a minimum of twelve months of operating was needed for the majority of the programs to avoid bias that might be experienced with the initial success that room service programs often experience with newly implemented programs. Two of the six facilities serve rural populations and the other four serve urban areas.

All hospitals were acute care hospitals with a general patient population. There were varying length of stays and with a mix of male/female patients of various ages, social backgrounds and employment. This study group presented a “generalist” population which was required for general room service and representative of the populations on room service

programs. One exception to the generalist population was made to include a high demand and difficult to serve patient population, oncology. This hospital was chosen because it is an “all oncology” facility which presented “higher demand” patients for room service because of their particular food and nutritional needs for cancer care. The desire to include one oncology hospital in the research was to provide the opportunity to see if the oncology patients’ perspective on room service varied from general patients. Oncology patients have a more pronounced requirement for food and nutrition, making it important to measure the effects of room service on their perception of quality of care.

The six facilities used in the research all exhibited the prescribed traits for a quality, comprehensive room service program:

- Restaurant style menu with extensive choices (40+) for entrees & main courses
- Open meal times throughout the day (12-13 hours of operation)
- Specially trained Room Service Ambassador (server) staff
- Call Centers where patients place their orders by phone
- Single use patient menus designed to be taken home if the patient so desires
- A minimum of nine modified diet bases
- A ratio of regular or “house” diets to modified diets in the range of 50/50% to 65/35%.

#### *Instrumentation and Research design*

The instrument was a self-designed survey containing 13 questions. (see appendix for the survey document). Using a Likert scale of 1-5, respondents were asked to indicate the degree of importance they placed on the first 13 questions, rating their answers for “Most Important” rating a 5, and “Not at all Important” rating of 1. The survey also provided a

space for the respondents to make comments about the room service. The research design was setup to allow for the ranking of the critical elements of room service, to determine the importance of room service in the patients overall evaluation of the quality of care, and to provide insight into the effectiveness of room service menu design in understanding their diets. The survey's 13 questions represented the three areas of hypotheses being presented. Questions 1-8 related to the design elements of the room service which were common to all of the research sites. Questions 9-11 examined the patients' attitudes about room service toward their overall hospital experience and the effect of room service on their opinion of total quality of care. Questions 12 & 13 were designed to study the importance of menu design and home meal planning. Question #14 was an open question allowing patients to express in their own words, their description of room service.

### *Subjects*

Slight variations existed among room service programs where the research was conducted. Each program was tailored to meet the specific and individual requirements of that hospital's unique operation and their particular patient population. However, all six programs used in this research shared the common required traits as described in the section above. Subjects for the survey were primarily chosen based on their willingness and ability to participate. In some cases, room service staff read the survey to patients who because of infirmities, inability to read or, failing eyesight could not fill out the surveys, and recorded their verbal responses. In a few cases, third party caregivers are the principle players in the room service program for loved ones, for instance, parents ordering meals for pediatric patients. This limitation for their personal preference over the individual patient's choice was

accepted with the assumption that the caregiver was familiar with the patient's food preferences. In the latter case, the factors for satisfaction with room service will not come directly from the patient. The study defines the "qualification" of the participants as patient or primary care giver, for in the case of children or dependent patients, those closest to the patient also measure the quality of care.

The surveys were presented to patients willing to participate in the research without regard to gender, race, illness or any other qualifier other than their ability to freely participate in the research. Surveys were distributed to subjects with their breakfast trays. The hospitals' room service staff provided each participant with a survey form and a University of Wisconsin-Stout IRB approved Consent Form and asked that the patients complete the survey before the lunch meal. Staff then returned the completed survey forms to the surveyor or a designated member of the food service department's management team. In a few cases, department staff read the survey to patients and recorded the patients' verbal responses. Each hospital mailed completed surveys which were not picked up on the day(s) of distribution.

#### *Data Collection*

Data was collected from six hospitals over a five day period. Participation was on a voluntary basis and only those patients who had a written diet order were provided the survey instrument. In some cases, the hospital chose to distribute surveys once at the beginning of the week and again later in the week to catch new admissions. No patient was allowed to complete more than one survey. Data collection was delayed or interrupted for three of the hospitals when the region experienced a severe and unseasonable blizzard. Two of those facilities (Hospitals B & C) were placed on emergency status during the survey collection

process. This undoubtedly reduced the number of surveys distributed and subsequently returned for those facilities.

#### *Data Analysis*

The SPSS program was used to tabulate the results of the study for the 326 surveys returned. The ranking of questions 1-13 were first established by tabulating the number of "5" & "4" responses for each question to determine the level of importance assigned by the respondents to each question. In turn the questions were then ranked according to the statistical relevance determined between all respondents. Correlations for each question for all other questions were established by the analysis software. A statistical analysis of variance (ANOVA) was also applied to the data.

#### *Limitations*

Some respondents did not answer every question. In two cases, the survey hospital distributed the surveys without changing the name of the hospital used in the sample survey in the "open comment section". This may have reduced the total number of open comments received from respondents for this section from those hospitals.

## CHAPTER FOUR: Results

*Ranking of the critical factors of room service*

The purpose of this study in part, was to gain an understanding of the importance that patients place on the factors that are inherent in a comprehensive room service program. A total of 326 surveys were returned from the six hospitals that participated in this research. The study revealed that patients have some strong opinions in regard to a number of those factors and there was found a significant correlation between responding groups for a number of questions. Table 1 represents the number of surveys received from each hospital and the percentage of the total.

**Table 1**Number of Surveys by Hospital by Frequency, Percent

Hospital	Frequency	Percent	Valid Percent
A	26	8.0	8.0
B	56	17.2	17.2
C	67	20.6	20.6
D	49	15.0	15.0
E	76	23.3	23.3
F	52	16.0	16.0
Total	326	100.00	100.0

To understand the responding population and the correlation between hospital groups found within this research study, an ANOVA: Analysis of Variance was applied to the data. The statistical application determined that there was a strong concentration of answers

indicating significance for nine of the thirteen questions. The analysis validates the service concept "hotel service" and its importance to the patient. Questions, 1,3,4,6,8,9,11,12,and 13 indicated .001, .01 and .05 indicating a strong concentration between groups. The survey questions were specific to three areas of study. The first eight questions examined the importance of a specific feature of room service from the patients' perspective. The questions and responses to them are reported below.

Questions 1-8 of the 13 question survey, pertaining to the critical factors of room service were designed to examine the importance that the patients assigned to each aspect or critical element of a room service program. Table 2 lists a summary of the mean scores for survey questions 1-8 and the significant correlations between responses of the hospital patients from the SPSS analysis.

**Table 2**

Summary of Mean Scores by Survey Question for Questions 1-8 and Correlation between Hospitals. N=number of responses

Survey Question	Mean	Likert Scale	Correlation	N
1. The ability to order meals when I want them.	4.45	5.0	*	325
2. The ability to order what I want for each meal.	4.68	5.0		324
3. Setting my own meal times	4.31	5.0	**	323
4. Having breakfast items available all day long.	3.70	5.0	***	318
5. The variety of choices on my menu.	4.53	5.0		322
6. I prefer having my entrée, potato and vegetable presented as a combination.	3.20	5.0	*	313
7. I prefer having my entrée presented as a separate choice from my potato and vegetable items.	3.51	5.0		315
8. Assistance provided by the room service Ambassador/server.	4.45	5.0	**	319

\* = correlation <.05 between hospitals

\*\* = correlation < .01 between hospitals

\*\*\* = correlation <.001 between hospitals

*An examination of the study results by question, questions 1-8*

*Question 1: The ability to order meals when I want them.*

The surveys revealed that the patients perceive the ability to order their meals when they want them as a highly valued feature of a room service program with a mean of 4.45 on the five point Likert scale. Tied for the third highest mean value in the survey, this question showed a strong correlation (<.05) between the responses of the six hospitals. The freedom of

patients to order meals at any time to their liking indicates that room service programs must be designed to incorporate a wide time frame for the availability of meals for the patient population being served. It can be deducted that the open order times are one of the most important aspects for patient satisfaction produced by room service and that a quality room service program would provide as wide a range of service times as feasible. Patients want to be able to order their meals at anytime, not just when it is convenient for the facility to accept those orders.

*Question 2: The ability to order what I want for each meal.*

Question 2 produced a mean of 4.68. This question received the highest value from patients of all the questions on the survey, yet there was no significant correlation found between the groups on the ANOVA. However, with the strength of the mean being the highest relative score, the patients view the ability to order from a restaurant style rooms service menu was the most important factor of the factors tested. Therefore, the ability to make personal food choices instead of restricted or limited choices common to conventional menu systems must be the focus of a room service program. This finding indicates strongly that patients should not be presented with menus that contain restrictions or prohibitions for their diets. The room service menu should be designed specifically for the various diets offered, providing as much openness as possible.

*Question 3: Setting my own meals times.*

The responses to this question produced a mean score of 4.31 on a 5 point Likert scale, with a correlation between the responses from all of the study sites of .01. With a high mean score and a strong correlation, this aspect of room service reflects the value that patients place

on being able to control this part of their hospital experience. The results of this question on this element of room service, allowing the patient to set their own meal times, translates to keeping the operating hours of room service programs as open as possible.

*Question 4: Having breakfast foods available all day long*

The benefit of having breakfast foods available all day long produced a mean score of 3.71 out of a 5 point Likert scale, and demonstrated the strongest correlation between the patient responses for the six hospitals for the group of questions studying the features of room service programs. While this feature of room service was not the most important feature of rooms service from the perspective of the mean score ranking, the very strong correlation between the responses of the six groups indicates that the desirability of this room service element was the most consistent among all the respondents.

*Question 5: The variety of choices on my menu.*

Although this question earned a mean score of 4.5 out of 5 points on the Likert scale used, it did not produce a significant correlation between hospital groups. Still, the mean score is an indication of desirability for a variety of foods on the menu that patients like. This score should not be overlooked in spite of a lack of correlation between all of the hospital groups and requires that room service programs address the provision of meaningful variety to the patient population and the diet regimens that the hospital serves.

*Question 6: I prefer having the entrée/potato and vegetable presented as a combination.*

The study results produced a mean score of 3.20 out of a 5 point Likert scale with a strong correlation between hospital respondents of  $<.05$ . A mean score that is considerably lower than that of the other features of room service leads to the interpretation that this feature

is not important to all respondents as some of the other questions. In fact, this question scored the lowest mean score of all of the 13 survey questions and this score was consistent among all of the hospital groups. It can be concluded that this feature is not as important to patients when compared to the other features of room service, but may still warrant some consideration in programming. The value of grouping the entrée/starch/vegetable on the menus enables the menu planners to provide an esthetically pleasing appearance, aroma, texture and flavor combination to the patient that the patient might not otherwise think of and order if those items are listed in an a la carte fashion. It can be assumed that patients feel they are capable of putting together their own pleasing combinations from the menu items presented. This is verified in the results of Question 7, which are presented below.

*Question 7: I prefer having my entrée presented as a separate choice from my potato and vegetable items.*

The mean score for this question was 3.51, giving it a slightly higher degree of importance than the previous question, but there was not significant correlation between the respondents of the six hospitals as one might expect. Relative to room service menu design, the mean scores would indicate that there is no clear cut preference or correlation between these two design elements, leaving the question open as to what style of menu offerings (combinations versus a la carte) patients prefer. Perhaps the best approach to this unanswered question is to provide choices in both styles to some degree on the room service menu.

*Question 8: How important is the assistance provided by the room service ambassador/server.*

This question produced the third highest mean score of 4.45 out of a 5 point Likert scale (tied with Question 1) and there was a very strong correlation  $<.01$  between the

respondents of all of the survey hospitals. In the patients' view, the assistance provided by the Ambassador/server for room service is one of the strongest features that room service programs offer. The concept of having a professionally, trained hospitality style server responsible for meal service and assistance with meals, menus and the room service program is verified by these study results. The effect on patient satisfaction from this important service feature would most assuredly be lost if the meal service was assigned to personnel who do not have a direct stake in the coordination, service and support of the patient.

*Rating the importance of room service with the hospital experience and overall quality of care.*

The second purpose of the study was to examine the correlation patients place on patient satisfaction with room service, the overall quality of care and the total hospital experience as related in questions 9, 10 & 11. The results of the ANOVA application to the responses for these three questions were very revealing, demonstrating that the patients do in fact associate a quality room service program with the overall hospital experience and that they use room service as part of the measurement of their overall quality of care. Two of these questions showed a very strong correlation between the survey sites, with Question 9 showing a correlation of  $<.01$  and Question 11 with a correlation of  $<.001$ . The results are significant as presented in the Table 3.

**Table 3**

Summary of Mean Scores by survey Question for Questions 9-11 and Correlation Between Hospitals. N=number of responses

Survey Question	Mean	Likert Scale	Correlation	N
9. The room service program makes my hospital experience more pleasant.	4.44	5.0	**	319
10. Room service affects my opinion on the quality of care I receive.	4.15	5.0		317
11. Room service is an indication of the overall quality of care provided by the hospital.	4.13	5.0	***	319

\* = correlation <.05 between hospitals

\*\* = correlation < .01 between hospitals

\*\*\* = correlation <.001 between hospitals

In examining the patients' association between room service and their overall hospital experience and quality of care, (questions 9, 10 & 11) the patients showed strong statistical correlations between the questions 9 and 11. The patients placed great significance on the aspect of room service making their hospital stay more pleasant. Question 10, which probed the relationship that patients associate between room service and quality care did not associate a strong correlation between room service in the direct quality of care received (perceived to be medical care). This is in contrast to the responses to Question 11, which patients assigned a high correlation between room service and the overall quality of care received. The results for each question in this section are examined. Yet, questions 10 and 11 were almost identical in mean scores of 4.15 and 4.13 respectively.

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Question 9: *The room service program makes my hospital stay more pleasant.*

Question 9 produced a mean score of 4.44 out of a 5 point Likert scale and a very strong correlation ( $<.01$ ) between the various patient groups in the six hospitals surveyed, the patients feel that the implementation and operation of a room service program does make their hospital experience better than with the conventional styles of patient meal delivery systems, verifying that patient satisfaction is positively influenced in patient attitudes by room service.

Question 10: *Room Service affects my opinion on the quality of care and service I receive.*

Producing a mean score of 4.15 on a Likert scale of 5.0, but with no strong correlation between the study groups, it appears that the patients in the study did not consistently relate room service to the direct care that they receive (perceived to be medical and nursing care). However, the mean score value is high enough to warrant consideration that room service is a highly desirable program from the patients' viewpoint in most cases and that it is viewed as a positive element in their overall treatment and care. This is demonstrated in the study results for Question 11.

Question 11: *Room service is an indication of the overall quality of care provided by the hospital.*

Coupled with the results of Question 9, the results of the study for this question demonstrate that room service does in fact affect the patients' perception of the overall quality of care provided at a hospital. With a mean score of 4.13 out of 5 on a Likert scale, it placed just below in value compared to question 10 but demonstrated a high correlation between the comparison study groups. Patients perceive that room service is as an indicator of the overall quality of care given at a hospital which underscores its role in improving patient satisfaction

outcomes for the hospital as a whole. The correlation between the perception of room service providing a high quality of care and the patients' association between room service and an increased level of satisfaction with the overall hospital experience is undeniable. This aspect of room service should be noted by hospital administrators as well as healthcare foodservice professionals. In an environment of intense competition between healthcare providers and a customer base with increasingly higher expectations for quality of care, room service appears to be a placebo for patient and hospital alike. Room service is making an indelible mark on healthcare.

#### *The Use of the Room Service Menu as a Guide*

The third section of the survey, Questions 12 and 13, sought to determine the importance the patients place on the use of the room service menu style used by the six hospitals regarding the menu use as an educational model for their diet regimen and as a guide for the planning of their meals at home. These questions reflected the lowest number of responses at 306 and 303 respectively, which is in keeping with the knowledge that 50-65% of the patients surveyed were on regular diets. Patients on regular diets would not need the menu to serve as an educational tool or home resource for meal planning. However, for those patients that the questions did pertain to, there was a very strong correlation in the six hospitals leading to the conclusion that for those patients who need these tools, the menu design is an important feature of room service for tool for understanding their diet and for planning diet compliant meals at home. Table 4 presents the study data on questions 12 and 13.

**Table 4**

Summary of Mean Scores by Survey Question for Questions 12 & 13 and Correlation between Hospitals. N=number of responses

Survey Question	Mean	Likert Scale	Correlation	N
12. I find the menu helpful in understanding and explaining my diet restrictions.	4.11	5.0	***	306
13. The menu will be a useful take home tool for planning my meals in the future.	3.60	5.0	***	303

\* = correlation <.05 between hospitals

\*\* = correlation < .01 between hospitals

\*\*\* = correlation <.001 between hospitals

*Question 12: I find the menu helpful in understanding and explaining my diet restrictions.*

In the six hospitals surveyed, the menu form itself contained the values of certain nutrients. For example, the carbohydrate value was listed for each food item, which served as an aid to the patient in estimating the amount of carbohydrates, ordered for each meal. With a mean score of 4.11 with a very high correlation (<.001) between the six patient groups, it is evident that the application of the menu as a teaching tool for diet compliance for those patients on restricted diets fulfills a need.

*Question 13: The menu will be a useful take home tool for planning my meals in the future.*

Producing a lower mean score (3.60) than Question 12 (4.11) but with a similar correlation between hospitals as Question 12, it is evident that the use of the room service menu as a take home meal planning tool is not as important to the patient as the menu use as a teaching tool in understanding their diet restrictions. When it is considered that a large (but unknown) portion of the patients were on regular menus and did not require at home meal planning support, the mean score indicates that this feature is important to those patients that need such support. This element should therefore be kept as a part of the planning process for the effective design of the room service menu.

*Room service rated in their words.*

The final section of the survey provided the patient with an open space to describe in their own words, how they would rate the room service program they were experiencing. The vast majority of the comments were enthusiastically positive, and in some cases the patients went so far as to describe how room service allows them to manage their illness better and how room service makes their day worth looking forward to. The word "excellent" was used 30 times. The term "very good" was used 27 times. Others described room service in the Likert scale rating used in the survey as a "5". The term "great" was used 10 times and some respondents indicated how much they "love" the room service system. Perhaps the most telling comments were the patients who indicated that the room service staff was wonderful and brought "much happiness to my heart" and the one who stated that room service took his mind off of his troubles. These short, personal anecdotal comments on room service from the patients themselves provide a revealing look into their feelings. What is perhaps the most important outcome one can ascertain from reading these personal comments is the positive

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affect that a patient meal service can have on the patients' satisfaction with the overall hospital experience from something as basic as a "quality meal service". These comments, taken as direct insight to the patients' feelings about room service provide a strong argument for implementing room service as the patient meal delivery system of choice. The benefits of room service are spread among administrators, physicians, care givers and the patients. Room service is good medicine, all by itself. The complete listing of comments sorted by each hospital in the study is available in the Appendices of this report.

*The perspective on room service of the oncology patient compared to other acute care patients.*

One hospital was chosen because it specialized in the care and treatment of seriously ill oncology patients. The inclusion of this group of patients with their highly specialized needs and care provided the opportunity to examine, although on a very limited basis, whether or not differences in their perspective from other acute care patients existed.

Table 5 represents the responses of the 13 questions in comparison to the responses from the patients of the other five hospitals.

**Table 5****A Comparison of Mean Scores between the Oncology Hospital and the Acute Care Sites**

Survey Question	<u>Mean Scores</u>		
	Oncology Site	Other Hospitals	Variance + or (-)
1	4.20	4.45	(.25)
2	4.65	4.68	(.03)
3	3.96	4.31	(.35)
4	3.27	3.70	(.43)
5	4.71	4.53	.19
6	2.72	3.20	(.58)
7	3.37	3.51	(.14)
8	4.65	4.45	.20
9	4.04	4.44	(.40)
10	3.75	4.15	(.40)
11	3.75	4.13	(.38)
12	3.34	4.11	(.77)
13	2.10	3.60	(1.50)

All mean scores are based on a Likert scale of 5. The patients from the oncology hospital represent 15% of the total responses. The reader should note that oncology patients were present in all of the survey site hospitals, but the study did not distinguish them from the rest of the patient population.

As evident in Table 5, the oncology patients' responses were below the mean of the total population of respondents in 9 out of the 13 questions and higher in the mean in the other two (questions 5 and 8). The oncology patients rated Question 5, regarding the variety of the menu choices, with a 4.71 on the 5 point Likert scale. The mean score for this question for all the hospitals was 4.53. The 4.71 score was the highest score by any hospital group for any

question. It provides a clear directive from oncology patients that a good variety of foods in an essential part of their need. Oncology patients require variety and choice.

Of these two questions, Question 8 holds a significant correlation ( $<.01$ ) between the responses for all hospitals. Question 8 asked the patient to rate the importance of the assistance provided by room service Ambassador/server. With the oncology patients mean score for this question to be tied with Question 2 (The ability to order what I want for each meal), it appears that the two other most important aspects from the oncology patients viewpoint is the assistance they receive with their meals and the empowerment to order what they want (as opposed to cycle menus or other limited/restricted selection systems).

The fact that the known oncology patients' responses were lower than the mean for 11 of the 13 questions compared to the mean for all hospitals is important, but many of the variances (8 of 11) fall in the range of (.03) to (.58) on a 5 point scale. The remaining two, Questions 12 and 13, which addressed the importance of the menu as an educational tool and home meal planning guide are of much greater significance at (.77) and (1.50) respectively. These two features of room service appear to have little importance to oncology patients.

## CHAPTER FIVE: Conclusions

### *Summary-General*

The research was designed to provide definitive information on the importance that hospital patients place on the critical features of a comprehensive room service program and to determine the value that patients place on room service in making their hospital stay more pleasant. The study also focused on determining whether or not the patient places an importance on the quality of the care they receive in the hospital setting because of room service, and examined if patients perceive room service as an overall indicator of the quality of care provided by the hospital. The study also examined the value of room service menus as an educational tool in understanding diet restrictions and whether or not the room service style menu assists patients with home meal planning.

The summary of the results is presented first by hypothesis, then in the same groupings as the groupings of the questions on the survey, i.e., 1-8, 9-11, 12 -13 and finally, the open responses from the patients. The survey questions have met the objectives of this study defining the role of room service food service within the selected hospitals. In review of the study hypotheses all three are accepted.

- Hypothesis 1: It is assumed that the implementation of room service as the primary system for delivering patient meals in acute healthcare facilities significantly improves the patient satisfaction ratings for those foodservices, regardless of what measuring system is used.

- Hypothesis 2: Certain features of room service systems in healthcare are the primary satisfiers for patients. These features should be identified and incorporated into the planning/programming of room service operations.
- Hypothesis 3: The change from conventional cook/serve or cook/chill meal delivery systems to room service results in hospital patients placing a significantly higher value on their association with quality hospital care with conventional or cook/chill systems.

*Conclusions regarding Hypothesis 1:*

It is concluded that the implementation of room service as the primary system for delivering patient meals in acute healthcare facilities significantly improves the patient satisfaction ratings for those foodservices, regardless of what measuring system is used. In support of this conclusion is the evidence presented in the literature review, which cited numerous examples of improved patient satisfaction from the implementation of room service programs. These programs used a number of different vendors and systems to monitor and measure hospital wide patient satisfaction with food service as one measured component. No examples of “no improvement” or a decline in patient satisfaction with room service were discovered. The study of the patient responses indicates that room service is positively accepted by the general patient populations of acute care hospitals with strong Likert Scale weights of 4’s and 5’s on a 5 point scale being the most consistent responses. Further, there are significant correlations between the study-cite populations for 9 of the 13 questions presented indicating that the majority of the responses are global to the patient populations studied.

The descriptors used by patients to rate room service in their own terms parallel the consistent high ratings of room service programs in patient satisfaction described in the literature review. The 225 written responses received on the surveys are lead by the most frequent comments such as Excellent, Great, Outstanding, Very Good, and Wonderful of which represent over one third of the comments. But the single comments are even more direct and in some case, quite poignant. Patients relate that they “feel cared for”, “find room service a relaxing service”, “a stress reducer”, “something nice to look forward to”, “better than hotel service”, “love it very much”, “superb and refreshing” and “the staff bring happiness to my heart”. These personal expressions are ample proof that room service has a positive effect on the patients and is definitely part of the “placebo effect” described by the nation’s largest healthcare patient satisfaction monitoring service, Press (2004). As seen in the literature review, a letter from one patient to the CEO of a hospital providing room service demonstrated how room service allowed her to gain an entirely new focus to understanding her diet and to make a new commitment to improving her health.

The success of room service as demonstrated through this study, allows the prediction that the questions on such patient satisfaction survey instruments such as used by Press-Ganey, hospital food service will soon represent some of the highest scores in patient satisfaction in contrast to some of the lowest scores that are currently experienced with conventional and cook/chill delivery systems. The influence exerted by room service goes far beyond the patient’s bedside. The ripples will extend to all areas of hospital care when measured through the overall patient satisfaction and their perception of the quality of care.

*Conclusions regarding Hypothesis 2:*

The patient ratings in the survey questions demonstrate that there are distinct patient satisfiers common to the room service programs studied. These satisfiers appear very strong, eliciting high mean scores from the patients which contradict the food service ratings from the national survey companies described in the literature review. The contradictions exist however because those scores are primarily a result of surveys conducted at sites where conventional and cook/chill food service systems were in use. In particular, if a weighed Likert score of 3.0 out of 5.0 is found acceptable, the following features of the room service programs studied stand out as the best patient satisfiers as they all weigh in at scores of 4.3 or higher:

- The ability of the patients to set their meal times.
- The empowerment of the patient to select the foods that they want, when they want them.
- The assistance provided by a professionally trained room service staff.
- The variety of choices on the menu.

*Conclusions Regarding Hypothesis 3:*

Hospital executives understand that patient satisfaction is critical to their market share and profitability as expressed by Interplay. (2005) (p. 3) Press Ganey (2002) has found incontrovertible proof that patient satisfaction is directly related to profitability. (p. 23) Guardagnino (2003) found that HCLIA relates that the most profitable hospitals are those with the highest patient satisfaction scores. (p. 2) Bell and Krivich (2000) found that 17 to 27

percent variation in hospital profitability was attributable to patient satisfaction. Improved patient satisfaction increases the operating margin of the hospital. (p. 27)

From the patient responses in this study, it is now known that the patients associate room service with the overall quality of their care (4.13 of a 5 point Likert scale), they report that room service affects their opinion on the quality of care that they receive (4.15 of a 5 point Likert scale) and they express that room service makes their hospital stay more pleasant (4.44 of a 5 point Likert scale). Press Ganey (2002) describes the placebo effect and states that every experience can influence the patient's perception of the quality of care. (p.5, 8) The patients themselves see room service as a welcome and comforting service that improves the quality of their care; serves as an indicator of the quality of their care and improves their overall satisfaction with the hospital experience.

Room Service Technologies (2006) reported that 30 out of 30 clients experienced increases in overall (hospital) patient satisfaction scores after implementing room service compared to the scores of their conventional or cook/chill systems used previously. (p. 4) Piedmont Hospital (2006) was the first to quantify the improvement in the overall (hospital) patient satisfaction resulting directly from room service, demonstrating that room service increases patient satisfaction scores overall. (P. 2) Room service then will result in gains in market share and improve the bottom line finances of those hospitals that implement room service as their primary patient meal delivery system.

#### *Summary of Findings for Questions 1-8*

Relative to the objectives established at the beginning of this study, a brief review of specific study findings is required to meet those objectives as related in the above summaries.

For questions 1-8, a descending weight of importance based on the Likert scores for each question is presented in Table 6:

**Table 6**

Mean Likert Scores for Questions 1-8 in Descending Order by Score Weight (all six study hospitals).

<u>#</u>	<u>Question</u>	<u>Mean</u>
2	Ability to order what I want for each meal.	4.68
5	The variety of choices on my menu.	4.53
1	The ability to order my meals when I want them	4.45
8	How important is the assistance provided by the room service Ambassador/server	4.45
3	Setting my own meal times	4.31
4	Having breakfast foods available all day long	3.70
7	Preference for having entrée, potato and vegetable presented separate on the menu.	3.51
6	Preference for having entrée choices separate from potato/ vegetable.	3.20

*All weights are based on a 5.0 Likert scale.*

Room service program designers should include those features that are relevant to the needs of the unique patient base. Oncology patients have expressed stronger Likert scores for the variety of the menu and the service provided by the room service ambassador. These two critical elements would best be served with a specialized focus for oncology room service programs in their design.

For the purpose of developing a room service program for an acute care hospital, the most important factors to be addressed and provided for within the program are to allow the patients as much freedom of choice as possible for ordering their meals, providing open meal service times and a variety of foods choices. The surveyed patients demonstrated a very significant correlation for these responses between hospitals.

The room service server (question 8) also plays a major role in the patients' perception of importance and in statistical significance found. The role of the ambassador is such that it is the one visible food service entity that the patient relates to, and depends upon, for assistance with meals and room service program information. The training of the ambassador/server takes on a significant importance with this information.

The professionalism and competency of this staff is paramount to conducting a quality room service program which would demand specific skill sets and training for customer service to be effective. The ambassador/server must be focused on room service.

#### *Summary of Findings Questions 9-11.*

The study produced insights into the aspects of developing room service programs. Perhaps most important is the realization that in the opinions expressed by the respondents

and in the statistical analysis, each trait of room service contributes to the sum. Almost all of the elements identified are ingredients to a successful room service program, and it is evident that room service does in fact, carry a potential for improving the overall satisfaction of the patient regarding their hospital care.

The results of these findings for these three questions are very important. There appears to be far greater importance placed on the patients' association of improving the hospital experiences and in evaluating the quality of care received (in total) because of room service than found to exist with conventional or cook/chill meal delivery systems. Patients showed a strong correlation between room service and the improvement of the hospital experience and the question has a strong statistical significance among the other questions. This is a significant finding. People who are admitted to the hospital today are indeed in need of acute and definitive care. Some face life changing illnesses or conditions that are stressful for them and their families. The ability of the food service program to reduce stress and to improve the pleasantness of the hospitalization is solidly demonstrated and coincides with the placebo effect.

The effect of a quality food service program on the overall opinion of the quality of the care received from the patients' viewpoint appears to be more important than previously thought, provided the food service program is room service. There is a distinct association in the patients rating of high quality room service with their perception of the pleasantness of the hospital experience and room service's indication (measure) of the overall quality of care that the patient receives. These are remarkable results from the food service perspective, as the evidence suggests that the implementation and use of room service as the patient meal service

program makes patients happier (significantly more satisfied) with the total hospital experience and has the potential for improving clinical outcomes. Room service may have the potential for improving the financial health of the hospital as well.

Patients participating in the study did not place importance on room service in forming their opinion on the quality of care received (i.e. medical care or nursing care per se). Patients relate to the fact that if the hospital can provide high quality, good service and attention to their needs in something as basic as their meals, then the remainder of the care spectrum must also be good. However, it is not “directly” related to other aspects of their hospital care. Patients responded that room service is an indication of the overall quality of care received and the significance of the question was .033, making this a strong and important finding. This importance should not be overlooked by any hospital administrator or commercial patient satisfaction data/analysis provider. While there was little correlation with Question #10, (Room Service affects my opinion on the quality of care and service I receive) room service does highly correlate with the patients’ opinion of the overall quality of care provided by the hospital.

For hospitals looking to improve total patient satisfaction then, room service may offer the opportunity to improve total patient satisfaction through a redesign of the food service operating program by implementing a room service. If the implications of improved patient satisfaction through implementation of room service are determined through further study, the energy behind the room service wave will increase.

*Summary of Findings, Questions 12-13.*

The third area to be examined in the survey was the patients' perception of the application of a room service menu (a la carte style) to help in understanding their diet restrictions and the use of the room service menu as a home tool for menu planning. Regarding the effectiveness and importance of using the restaurant style menu design as an adjunct for understanding diet restrictions and for use as a home guide for meal planning, (questions 12 & 13), these factors are far more important than first understood in the research development process. The study indicates that these two questions hold the most statistical significance at .001 each. Keeping in mind that a sizeable portion of the patients surveyed were on regular diets (no apparent diet restrictions) the importance placed on these factors by the respondents may be measured. In a number of cases, the respondents indicated that these were not rated as important or did not respond to those questions because they were not on a restricted diet therefore it did not matter or pertain to them. However, 233 of those patients that responded to these questions placed a very high degree of importance on finding the menu helpful in understanding their diet and the menu as a take home meal planning tool. The indications are that room service menus should be designed as take home guides for meal planning as the patients place a very high significance on their personal use of the menu for understanding their diet and planning for it at home. The statistical evidence also points to the importance of incorporating "education aids" into the room service menu and putting the menu into a format that can be utilized by the patient as a take home meal planning guide.

Regarding the menu design and format, it can be concluded that the menu should contain diet information either in the form of sodium values or carbohydrate counts for the

patient. Using a single menu format which lists all diets on one form, with indicators to what diets cannot have a designated item would not meet the needs of the patient in the home setting.

There is solid indication that room service menus aid the patient on special or restricted diets in understanding their diet restrictions, as the number of responses of “very important/important” coincide with the experience that the ratio of modified diets to regular diet orders in acute care hospitals are split about 60/40%.

*Do oncology patients view room service differently from other acute care patients?*

The oncology patients (Hospital D) represent 49 of the 326 respondents or 15% of the total population responding to the surveys. To measure differences in their responses from the non-oncology patient base, it is necessary to compare responses between the two groups which are presented below in Table 7, demonstrating the compared responses.

**Table 7****A Comparison of Mean Scores between the Oncology Hospital and the Acute Care Sites**

Survey Question	<u>Mean Scores</u>		
	Oncology Site	Other Hospitals	Variance + or (-)
1	4.20	4.45	(.25)
2	4.65	4.68	(.03)
3	3.96	4.31	(.35)
4	3.27	3.70	(.43)
5	4.71	4.53	.19
6	2.72	3.20	(.58)
7	3.37	3.51	(.14)
8	4.65	4.45	.20
9	4.04	4.44	(.40)
10	3.75	4.15	(.40)
11	3.75	4.13	(.38)
12	3.34	4.11	(.77)
13	2.10	3.60	(1.50)

All mean scores are based on a Likert scale of 5. The patients from the oncology hospital represent 15% of the total responses. The reader should note that oncology patients were present in all of the survey site hospitals, but the study did not distinguish them from the rest of the patient population.

What is interesting about the information in Table 7 is the indication that the oncology patient responses were moderately lower than the remainder of the patient population for most questions. The responses were lower mean scores in 9 of the 13 questions with the scores falling in the range of (.03) to (.58) on a 5 point Likert scale. In contrast however, two of the answers from the oncology patients were notably stronger in their rating over the acute care counterparts, providing an indication of what special needs the oncology patients require. These two elements of room service are the variety of choice on the menu and the assistance provided by the room service Ambassador/server. These higher ratings were .19 and .20 respectively with the oncology mean for those questions at 4.71 and 4.65. On a 5.0 Likert scale, these are very strong responses and are significant results.

There are three responses to the survey questions from the oncology patients which fell well below the mean for the five acute care facilities. These were for the questions (6, 12 and 13), pertaining to the preference of having menu items presented in combination, the use of the menu as a planning guide for diet compliance and as a take home menu planning tool. With mean scores of 2.72, 3.34 and 2.10 respectively, it is clear that these room service program features are not important for oncology patients. These features do not need to be a part of the room service program for oncology patients.

### *Conclusions*

Room service improves the patient's perception of the overall quality of care received. It provides a placebo effect for a common, basic human service that enhances the satisfaction of the total hospital experience for the patient and the patient's satisfaction with the hospital itself. Ultimately, the use of room service holds the potential for hospitals to increase their

market share and improve their profitability as found in research. Room service systems improve patient nutrient intake and assists in their recovery and regaining of their health. These are far reaching implications and should be a major consideration in a hospital's assessment on implementing and operating a quality room service program. If the results of room service with improved patient satisfaction, increased patient loyalty and improved financial outcomes to be derived from room service are further quantified, there is a previously unrecognized and potentially significant return on investment for room service. As the association between room service, patient satisfaction and profitability becomes more evident, there will be provable and verifiable justification for programming and implementing room service programs in most hospitals.

The implementation of room service meets the rising healthcare consumer demand for more and better customer based care and services that is anticipated throughout the healthcare industry because of the "baby-boomers". Room service can serve as the cornerstone for a hospital to build a major program of quality "hospitality services" that hospitals can provide, and within the scope of that investment, achieve improved clinical outcomes as well. It is hard to distinguish another service-oriented healthcare component that can provide as many benefits for such limited expense as room service provides. This should serve as a direct impetus to hospital administrations for allocating funds in the hospital budgets for implementing room service programs.

#### *Change in priorities for program development*

For room service itself, the study demonstrates the need to provide as much flexibility and choice for the patients as possible for meal service and the style of menu offerings. The

critical role that the ambassador/server plays in the value of the room service program must also be recognized and the training process for this valuable staff must be kept to the highest professional standards because it is evident that their work directly influences the patient's opinion on the quality of care received.

#### *Recommendations for Further Study*

This effort demonstrates the critical need for formal study on the outcomes derived from room service on the profitability and market share for hospitals using room service. As time goes on, more and more hospitals are implementing and operating room service, which is creating the opportunity to quantify the results of room service implementations in terms of patient satisfaction results and hospital profitability. A significant need exists for professional patient satisfaction measurements and reporting firms to develop appropriate food service/room service questionnaires on their patient satisfaction surveys to address the room service impact. There appears to be a solid opportunity for these firms to provide hospital decision makers with this pertinent information. Confirmation of the first findings of the room service/patient satisfaction and profitability correlation will provide a strong rationale in the decision whether or not to implement room service, although the evidence already suggests that the benefits are substantial. Proving that room service improves profitability will provide a cost justification as well. There is a great need for continued study because there is a growing base for comparison as more hospitals join the swelling tide of room service implementations.

The need for further in-depth study into the needs of specialized groups of patients is also evident from the study, as the comparison of responses from the oncology group was notably different from the other five hospitals studied.

### *Summary*

Room service is a valuable asset for hospitals in improving Patient Satisfaction and by improving patient satisfaction, clinical outcomes for patients can be improved, the health of patients restored and their recovery quickened. At the very least, room service gives the patient control over one aspect of their hospitalization which improves the quality of their stay and their opinion of the overall quality of care received. Room service provides a level of control to the patient for a portion of their care that cannot be readily achieved through any other service. This may be the great “satisfier” to the patient, the one which is the measure for their overall satisfaction.

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APPENDICES

## Appendix A

### Generic Survey Form

As you are aware, the (Add Name of Hospital) provides its patients with room service for meals. We would like to ask you to tell us what factors of the program are important to you, and how important room service is in the overall quality of your hospital care. Please take a few moments to answer the following questions. Your room service ambassador/server will pick up the completed survey at the next meal. Thank you for your cooperation!

Please rate the following factors with 5 being "VERY IMPORTANT" and 1 being "NOT AT All IMPORTANT".

1. The ability to order my meals when I want them.  

5	4	3	2	1
---	---	---	---	---
  
2. The ability to order what I want for each meal.  

5	4	3	2	1
---	---	---	---	---
  
3. Setting my own meal time.  

5	4	3	2	1
---	---	---	---	---
  
4. Having breakfast foods available all day long.  

5	4	3	2	1
---	---	---	---	---
  
5. The variety of choices on my menu.  

5	4	3	2	1
---	---	---	---	---
  
6. I prefer having my entrée, potato and vegetable presented as a combination.  

5	4	3	2	1
---	---	---	---	---
  
7. I prefer having my entrée presented as a separate choice from my potato and vegetable items.  

5	4	3	2	1
---	---	---	---	---
  
8. How important is the assistance provided by the room service Ambassador/Server?  

5	4	3	2	1
---	---	---	---	---

Quality of Care

9. The room service program makes my hospital experience more pleasant.

5                    4                    3                    2                    1

10. Room service affects my opinion on the quality of care and service I receive.

5                    4                    3                    2                    1

11. Room service is an indication of the overall quality of care provided by the Hospital.

5                    4                    3                    2                    1

Explanation of Diet or Diet Restrictions

12. I find the menu helpful in understanding and explaining my diet restrictions.

5                    4                    3                    2                    1

13. The menu will be a useful take home tool for planning my meals in the future.

5                    4                    3                    2                    1

What word or words would you use to rate the room service program at the (Add Name of Hospital)?

---



---

Thank you for your assistance with our survey!

## Appendix B

### Quotation Bank

The following pages contain the comments made by the patients in response to Question #14:

*What word or words would you use to rate the room service program at the \_\_\_\_ hospital?*

Some of the responses have been edited to remove references to specific hospitals or hospital staff and to remove comments made in regards situations pertaining to other items than room service, and to correct spelling errors.

The responses for each hospital participating in the research are listed on a separate page.

#### Hospital A

Very good

Very nice, Thank you

Wonderful

Excellent

Wonderful

Excellent-Its nice to be able to order whatever you want.

Excellent

Very nice-good job

Great

Very attentive, nice and prompt

It's very good, I guess

The food is very good-make ½ orders available

Super excellent

Good

I like the old way to fill three menus ahead-

I'm not hungry and too sick. Don't care about eating.

Very good

Great, but they could work on making food warmer. I think it's a pain to have to call my meals in and to try to remember to call.

Excellent

Hospital B

Very polite and Excellence service provided

Very good

Excellent

Very efficient, Food is delicious and prepared on time

Excellent

Excellent

I think it's excellent

Call service should be improved. Food was very good. Great staff is always cheerful and I separate meal service from health related or nursing services

Excellent

Toast burned, otherwise good

Very, Very good

Excellent idea and very good follow thru

That it's great!

Very courteous and professional

It's nice having a choice. It helps take your mind off of your troubles.

Excellent. Thank you for caring.

Food presentation. The food comes in looking appetizing and is very tasty and good.

Excellent!

Never had good room service like this.

Very good! Food Service!

Excellent

Excellent

Very good servers. 100%

Love it. Food excellent

#5

It was good. I enjoyed it for the most part. Better food than most hospital food.

Greatly improves a required hospital stay.

Excellent-Ambassadors are neat and courteous

Excellent

Good

Good

Very good & very busy

Hospital C

My room service ambassador was excellent

Excellent

Excellent-great variety-good flavor-excellent options for people with allergies

Real Good

Pleasant. Need more variety.

Very good

Quality of service and food has been good.

Excellent

Simply Wonderful

Outstanding

Food warmer

A OK!!

Very good

Good

Excellent

Very good

I appreciate the way the food service was conducted. Very professional yet personal too. It helped to make the hospital stay more comfortable.

Excellent

Good! Good!

Food service excellent - 5. Hospital service 3. To long for someone to answer the service light.

Good-but more variety i.e.-beef & warmer food

Outstanding

Very good to excellent especially salmon/dill dinner-very nice

Ambassador/server assistance

My server is the best

Very good

Good

Nice to have choices

Like eating in a 5-star restaurant plus very good service

Excellent!

Excellent and attractive to the eye

The room service is good or better than anywhere

Very good

Excellent

Good

Your staff is wonderful and brings much happiness to my heart!

Good

Food is very good. Nice to know when it will be served. Great variety

Very useful

Very good  
Very good  
I like being able to choose and love the service

Overall OK  
Pleasant diversion from "traditional" hospital food service!  
Very good. The servers are every polite.  
Superb & refreshing  
The food and the service are excellent  
Very good  
Very satisfactory  
V.G.  
Good Good Good  
My ambassador has been very helpful and pleasant  
Real Good!  
More than satisfactory, which is an excellent review in a hospital atmosphere  
Very helpful to begin the day off right.  
The Ambassador on the MRU is the best. Thank you!  
Excellent for a diabetic like myself. Thank you!  
Quality excellent, extremely helpful

Hospital D

Fast and friendly

Very good

Two Thumbs up!

Very good. Much better than the old foodservice

Great

I look forward to my meals. It makes my stay much nicer.

I just love it. They are so nice and helpful.

Food was real good.

Good

Better than most.

Everyone is so helpful and pleasant. Nice smiles, chow is delicious.

Good

Can't always get through on the phone. Otherwise, it's okay

I like it. It's really very, very good. Nice people, great service.

Liked the old way better when they would just send a tray and you didn't have to call. Food is better though.

Room service has really made a difference. Much, much nicer service then when I was here six years ago.

Pt. was on a special diet. It was nice to know how many carbs were in an item. Likes room service very much. Glad we got rid of that other stuff.

Wonderful

Pretty good for hospital food. Service not bad, like the uniforms.

Good

Patient liked old way better, that was if sleep(ing) or at test, pt. still got something to eat.

Food however is much better. (Researcher's note: Checked with food service director and patient can order food anytime from 7 AM to 8 PM).

Pretty good

Service is great. Best hospital food ever had.

Patient doesn't like to phone orders. Doesn't always feel like it. (Researcher's note: Checked with food service director. Patient can place orders in advance if desired.)

Considering that on low sodium diet, food was exceptionally good and service was great.

Restaurant quality

Much better than room service at home

Doesn't like to order everything like ketchup, mustard, lettuce, tomatoes, etc. Times of day can't get through & have to wait too long for a call back. (Written by a care provider)

Good food, nice people.

Trays too big for tables (overbed tables). Just want ambassadors to sit items off trays. Need space.

Lines always busy. Seems like most of the time can't get anybody. Sometimes it's closed.

Outstanding!!!

Good

Service was very professional.

Pretty Good. Really good. Don't need Ambassadors to be too overly helpful.

Hospital E

Doing a great job

Very good

Really grateful and helpful a whole lot

It's wonderful. Love it very much.

They are very respectful and caring. Always a smiling face upon entering my room. Room

Service was good. Thank you.

Good

Very good

Good most of the time

Service good. Usually early. Nice servers

Helpful

Good

I would rate it an 8.

OKAY

I feel there can be some improvement in room service but overall its fine.

The food service overall is very good.

Very good

Very Good

Good

Very good

Great

Excellent!

Convenient, good choices

The service we have received has been great. The food is very, very good. The staff that takes the orders on the phone are great. Keep up the great work. God bless all of you.

Good

Excellent

Good

Very good

Good

Good job

OK

Very good job

Hospital F

Great food, nice variety

Very nice

Much improved

Room service is wonderful for the patient.

Love it!!

Satisfactory

Fine

Good

Excellent

Wonderful and the people are very helpful and pleasant

Food is a whole grade above previous hospital food in general. Great job!

Very good service. People friendly here

Very good

Good

Excellent!

Room service is a good program.

Wonderful, helpful, easy to use.

Very good food, very convenient

Great comfort for patients!

Good

Good

I feel I am special and not in a hospital, which is relaxing.

5

Excellent

A long needed improvement-impressive change. Thanks.

Great!

Very nice

I would like to thank your staff for all of the good care they have given me.

Fair

Good

Good. Convenient

Efficient

Great-Outstanding!