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Follow-up Telephone Calls: A Comparative Study of Calls Made Three Days and Ninety Days
Post Discharge and Their Effect on Patient Satisfaction and Patient Outcomes

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Abstract

A large number of patients enter hospital Emergency Departments (ED) every day for care. Health care facilities across the country consider their ED to be the front door of the hospital as 60-80% of admissions enter through these doors. Routinely ED patient satisfaction has been low as more emphasis was placed on the technical skills of staff than on customer relations and outcomes. In the current regulatory and financial environment of health care, hospitals have been forced to change their ED vision to one that focused on a high level of quality care, stellar customer service, and individual case management looking for increased patient satisfaction and positive outcomes to be the result of their efforts. The purpose of this study was to determine if early discharge calls had a direct impact on increased patient satisfaction and outcomes. The study design was a retrospective, longitudinal, quantitative experiment. The study's hypothesis that there is statistically significant positive effect with participant satisfaction and a positive participant outcome when discharge calls to ED patients are made within three days is rejected. Data reveal that there is a very positive response when participants are surveyed at day 3. The response on day 90 is remarkably opposite that of day 3 and is primarily negative. Study findings suggest that variables such as gender, insurance status, and ethnicity influenced patient satisfaction and outcomes. **Key words:** *early discharge calls, late discharge calls, patient satisfaction, patient outcomes*

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CHAPTER ONE

INTRODUCTION

Patient satisfaction in health care has become a hot topic. Satisfaction of any consumer group is very important. Satisfied customers routinely are return customers. Health care satisfaction is measured and reported by the federal government and is posted on internet web sites for savvy health care consumers to review when making choices for where they will go to spend their health care dollars. Hospitals and hospital corporations have become very interested in improving the satisfaction and outcomes of their patient population.

Emergency Department (ED) satisfaction and outcomes are the area of interest for this study. ED satisfaction is reported separately from all other modalities in a facility. Outcomes are very important in the ED as care is rendered quickly and a missed diagnosis could mean the difference of life and death for the patients that trust the ED with their care. Patients that present to an ED are in crisis, receiving quick treatment and diagnosis from unfamiliar caregivers within a very technically focused environment. In the past patient satisfaction and outcomes were not at the forefront of emergency medicine, but in this era of the ED being called the front door of the facility, customer service and satisfaction coupled with positive patient outcomes are paramount.

Problem Statement, Research Purpose, Hypothesis

Today's health care consumers demand fast, high quality, technical care that exceeds their expectations with caregiver concern, kindness, and expertise. In an attempt to close the loop on quality care, customer satisfaction, and positive patient outcomes, early discharge calls, within 3 days of the ED visit, have become a popular tool used at the local hospital level. All discharge call questions are fashioned in a way to elicit responses to allow the facility to know if key areas of patient expectations with nursing and provider care and education were met. It was

the purpose of this research study to determine if early discharge calls have a direct impact on reported positive patient satisfaction and patient outcomes and if discharge calls that come as late as ninety days after the ED visit to the same group of participants have the same level of satisfaction and outcome response. The researchers selected a control group of patients who did not receive an early discharge call and only received a late call to enable the determination of whether the early call caused the increase in patient satisfaction and reported outcome or if a call at any time is sufficient. The socio-demographic variables age, race, gender, and insurance status in relationship to patient satisfaction and outcome were also investigated. The hypothesis of this research was that there is a statistically significant positive effect with patient satisfaction and positive patient outcomes when discharge calls to ED patients are made within the first three days.

Framework

Patients present to the ED expecting to receive a high level of technical nursing care, but when a technically skilled nurse and a caring attitude with the delivery of care are combined, expectations are exceeded. Nursing as Caring: A Model for Transforming Practice proposed by Boykin and Schoenhofer (2001) serves as the framework for this study. The six major assumptions of this study as framed by this theory are persons are caring by virtue of their humanness, persons are caring moment to moment, persons are whole or complete in the moment, personhood is a process of living grounded in caring, personhood is enhanced through participating in nurturing relationships with caring others, and nursing is both a discipline and a profession (Boykin & Schoenhofer, 2001).

Within the proposed model, caring influences the global attitude of patient satisfaction (Boykin & Schoenhofer, 2001). As the model relates to ED care, the perception of the patient's

satisfaction is influenced by an environment of caring in the ED and the perception of continued caring after discharge. Nursing as Caring explains the relationship between the patient and the nurse as the dance of caring persons. This dance is the relationship in which the nurse and the patient both care, lending to both having equal responsibility in the encounter that will result in the patient's awareness that they have received nursing as caring. This caring visit will produce a satisfied, loyal customer (Boykin & Schoenhofer, 2001).

Essentially, if a hospital corporation, an individual hospital, a single department within a hospital consider Boykin & Schoenhofer's (2001) model of caring, each and every patient that enters the healthcare setting would leave with a cared for feeling. Caring is not just the technical and diagnostic information that can be provided, but has more to do with connecting with each patient in a way that lets them know that they are more than a medical record number or room number, that they are not the pneumonia or heart failure patient down the hall. Boykin & Schoenhofer (2001) believe that nurses should make their practice matter to self, to profession, and to their patient.

Conceptual and Operational Definitions

For the purpose of this study *timely discharge calls* were defined as calls made within three days to patients discharged home. *Late discharge calls* were defined as calls made between one and three months after discharge home. *Patient satisfaction* was defined by patients answering yes to the question in the survey that asked if they would recommend the facility to others. A positive *patient outcome* was defined as the a patient having a positive response to the early call question concerning their discomfort being improved and with the late calls a positive response to the question concerning their discomfort being improved and the added question of whether they feel that they have recovered from their illness.

This was a retrospective, experimental, quantitative research study utilizing already collected data from patients discharged from a large 41 bed, rural ED with approximately 52,000 visits a year, data were obtained from a standardized early discharge call questionnaire. The results of this early call were utilized and compared to the results that the researchers obtained during late discharge call collected from the same group of patients who received an early discharge call and from the control group of patients who did not receive an early discharge call. The conceptual thought was that early discharge calls yield a high level of satisfied ED patients with positive outcomes; that at the time of the late call a patient would verbalize a less satisfaction and less positive outcomes with their previous ED visit; and when only a late call was made patient satisfaction and outcome would be at the least favorable of all measures.

Assumptions and Limitations

This study assumed that if a patient was satisfied with their ED visit and reported a positive outcome from the visit they will be a loyal customer and recommend others to the facility for treatment. Further assumptions were the patient's satisfaction is related to the care received during the encounter. In regard to the early/late questionnaires, it was also assumed that a positive response to the question concerning recommending the facility to others would translate to a satisfied customer and a positive answer to whether their discomfort was improved or illness was resolved will translate to positive outcomes.

Limitations of the study included the use of a convenience sample collected from one local ED, frequently presenting patients, and predetermined bias against the facility. The longitudinal study design may have been influenced by mortality, morbidity, and a change in demographics. A final limitation involved the use of a forced choice (yes/no) questionnaire with no opportunity for elaboration in relationship to being satisfied or having a positive outcome.

CHAPTER TWO

LITERATURE REVIEW

The purpose of this chapter is to review pertinent and current documented research in the area of discharge telephone calls as they relate to patient satisfaction and outcomes in order for this study to reaffirm current satisfaction and outcome trends or to determine if new trends or determinants of satisfaction and outcomes are necessary. In reviewing current literature it is the hope of the researchers that limitations and barriers to this study can be reduced so that useful and current information can provide another level of statistically significant findings to help health care workers more completely understand patient satisfaction and outcomes in the ED.

The studies utilized for the literature review were all obtained through searches in the Southern Adventist University McKee Library research tools web page. The nursing databases of CINAHL and Medline were thoroughly scanned for studies related to ED outcomes, satisfaction, and the use of telephone calls to collect this information. Key words used in multiple combinations to elicit studies were healthcare, patient satisfaction, patient outcomes, dissatisfaction, expectations, discharge calls, emergency department, gender, insurance status, marital status, age, outpatient, customer service, patient relations, quality, telephone calls, and emergency nursing. Multiple queries were researched from May 2009 through August 2010 using different combinations of the keywords leading to a significant number of studies that were considered for this review once they were determined to have some significance to the researchers.

Review of Literature

There are many challenges in the current environment of ED care. ED overcrowding, use of the ED as primary care, nurse to patient and provider to patient ratios, cramped waiting and

treatment rooms, the constraints of mandated federal and regulatory guidelines, and patients' unrealistic expectations. All of these factors impact the patients' perception of quality care (Press Ganey Associates, Inc., 2008). Despite all of the listed barriers, regulatory bodies have mandated an environment of transparency forcing health care facilities to create avenues to compete for health care dollars by publicly reporting hospital quality data including patient satisfaction and patient outcomes (Press Ganey Associates, Inc., 2008).

According to Lubell & Vesely (2008) ED overcrowding is a multifaceted problem that among other things leads to a dissatisfied ED patient who may have a questionable outcome. Overcrowding of the ED has been increasing related to economic decline and fewer people with healthcare coverage with the ability to seek primary care. Hospitals are trying to maximize hospital admissions to ensure that all of the facility real estate is earning maximum dollars. These things coupled with the routine ED traffic causes congestion of the largest entry point for the hospital...the ED (Lubell & Vesely, 2008)

With more patients than ever coming to EDs across the United States (US) and the number of patients boarding in the ED increasing, little has been done to increase hospital real estate to relieve the congestion. All other industries (manufacturing, technology, etc) would be reinvesting dollars to react to the increase in demand (patients requiring hospitalization) that could afford them the ability to meet the increased need, in this case, for inpatient beds. Overall, the low operating margins reported by the majority of hospitals due to poor reimbursement by insurance carriers, charity care, and increased bad debt caused by consumers just not paying their bills make expansion impossible (Lubell & Vesely, 2008).

While the federal government has mandated the Emergency Medical Treatment and Active Labor Act (EMTALA) that very basically states that EDs must see and medically screen,

stabilize, transfer, admit, or discharge every person that presents requesting services, the government has taken no responsibility in helping fund this mandate. Lubell & Vesely (2008) also relay that the government is evaluating and grading all EDs on quality, service, and time standards, once again with no additional funding. The consequences of a substandard or failing report card is public reporting of the facility as substandard and a decrease in reimbursement for the care that was provided. All of these things have created a difficult arena for impacting improvements for patient satisfaction and outcomes, yet the challenge remains.

When looking to improve patient satisfaction and outcomes it is important to understand what the patient expected each caregiver to provide to their overall care. Staniszewska & Ahmed (1999) conducted a valuable qualitative study that affords healthcare some insight into the patient expectation. Patients expected the nurse to at all times know and speak openly about the progress of their care. They expected the nurse to anticipate their needs, advise, guide, and translate the care that the doctor gave or spoke to them about. The patient is also more comfortable with the nurse than the doctor, patients expected to get better care during the day than at night. Patients expected the doctor to make regular visits and treat every complaint. The patients expected the doctor to be professional and quick. They also expected that sometimes a doctor might make a mistake. Interestingly enough the patient saw their responsibility as asking questions of the doctor, reading about their health problem, and trying to remember what the doctor told them. Most patients wanted to know the truth even if it was bad news. In essence, patients put much more of the expectation of doing something on the nurse and the doctor and less on self. The study inferred that helping the patient into the role of active participant in their care prior to discharge was beneficial in increasing the perception, satisfaction, and outcomes (Staniszewska & Ahmed, 1999).

Patient satisfaction is often associated with quality patient care. ED satisfaction routinely rates as the lowest area of satisfaction within a health care facility. Patient satisfaction with the nurse is directly related to their ultimate satisfaction with service. Speed of service or overall length of stay is also a very important indicator of whether a patient will be satisfied with their ED visit. Acuity level, ethnic background, age, and gender are also shown to influence patient satisfaction. Despite all of the listed indicators influencing ED patient satisfaction, the one element that may have the most significant impact is nurse caring (Elder, Davis, Almes, Whitley & Littlepage, 2004).

Davis and McCrory (2007) reported on the ability to retrieve information concerning patient condition and compliance with discharge instructions on post-operative patients by making a telephone call to the patient between forty-eight and seventy-two hours of discharge. It was concluded that the calls reduced errors by patients in the immediate discharge period and increased satisfaction and the perception of great care by the facility. The study then considered discharge calls in the ED setting. The majority of ED patients who received a discharge call within three days verbalized satisfaction with their care, but had questions about their home care and follow up which had to be answered. It was reported that less than two percent of patients call back to the ED if they are not sure that they are correctly caring for themselves at home. This information alone makes the early discharge call a great tool to reinforce care and to provide instruction for great outcomes. This early call completes the visit. The expected result would be long term patient satisfaction and outcome (Davis & McCrory, 2007).

Telephone calls to patients discharged from the ED are a valuable tool for collecting information regarding satisfaction with overall care. When staff perform the discharge call patients get the sense that the ED cares. The call causes the discharged patient to perceive that

their health and visit outcome are important to the facility. The discharge call gives the staff the opportunity to reinforce the positive aspects of the encounter. The conversation opens the lines of communication for any unanswered questions to be answered, reinforces discharge instructions, therefore closing the loop on the patient encounter. All of this discharge dialogue cumulatively fosters client loyalty and increases the probability of a return visit of a satisfied customer (Setia & Meade, 2009).

Interestingly, Elder, Davis, Almes, Whitledge, & Littlepage (2004) found that patients who had true emergency medicine needs rated satisfaction with their care and their caregivers as low. The very ill patients from the survey had the least compliance with returning the mailed survey. It was concluded that while improvements needed to be made in the area of improving satisfaction across the continuum of ED patients, focus should be placed on urgent and non-emergent patients. The researchers found that the emergent patient may never be satisfied with their care as they may be too overwhelmed and too sick to understand the need for a more technical approach to lifesaving intervention that they could not perceive as caring (Elder, Davis, Almes, Whitledge & Littlepage, 2004).

Findings from surveys regarding ED patient satisfaction with care routinely shows that patients are satisfied overall with their ED care. This information is important as caregivers often report that their care is not always perfect (Staniszewska & Ahmed, 1999). When considering transparency, facilities are turning toward efforts to "...capture patients' hearts, rather than just their hospital charges" (Huff, 2007, p. 1). Setting the goal to capture the survey result response of very satisfied patients is the focus of health care leaders today to retain loyal customers and generate a larger clientele (Huff, 2007).

In the current fast track emergency room setting failure to identify patient expectations can lead to dissatisfaction with ED care, lack of compliance, and inappropriate utilization of healthcare resources. Qidwai & Baqir (2005) surveyed young married men and women, who were well educated and better socio-economically placed regarding their ED experience. The study outcome infers that patients who have a clear idea of what they expect from their visit to the ED are more satisfied. Their satisfaction equals increases in the likelihood that they will recommend the facility, they will report that they had a good experience, and they will report being happy with the staffing in the ED that provided them with care.

The satisfaction of each patient's hospital confinement is strongly driven by his or her ED experience. Many say the ED is the front door of the hospital. A research study by Magnusson (2000) focused on patient satisfaction as an indicator of the quality of care provided by ED staff. The end result of this study is that any patient's satisfaction level with their previous ED visit will drive their desire to return to or recommend to others that ED or hospital. Key themes emerge, such as wait times or overcrowding, that play a pivotal role in ED satisfaction.

Over and over again overcrowding and wait times have an impact on ED patient satisfaction. So how do ED patients know this information? What is being done or not done, said or not said that is causing the patients to be unsatisfied with the care in the ED? Veronesi (2005) uses humor to convey the message that while EDs are overcrowded and boarding patients, treating patients well and caring equally for the ED patient as well as the boarder is not only the right thing to do, but if it is done right, the reward is great patient satisfaction. When the patient begins to think that they have caused a burden on the caregiver, patient satisfaction decreases. When the patient overhears conversation by staff concerning the lack of caring by a co-worker or another department in the hospital, ED satisfaction decreases. According to

Veronesi (2005), to increase ~~your~~ ED satisfaction ~~your~~ employees must recommit to their role of treating patients and peers with respect. The ED must stay engaged with admitted patients and improve patient and intradepartmental communication. Each employee must choose their attitude and leaders should choose employees in the same manner. Facilities and leaders are all accountable.

When determining patient satisfaction related to healthcare several variables must be considered. Quintana, Gonzalez, Bilbao, Aizpuru, Escobar, & Esteban (2006) confirmed the varying importance of socio-economic variables, length of stay, and timing of response to satisfaction questionnaires. This study found that older patients rather than younger patients were more satisfied overall with their healthcare encounters. The study also showed that patients with higher levels of education also rated their healthcare experiences higher than their counterparts without a high school education. Also, a trend toward higher satisfaction for those who responded more timely to the questionnaire was noted (Quintana, Gonzalez, Bilbao, Aizpuru, Escobar, & Esteban, 2006).

Healthcare leaders have worked long and hard to identify the underlying framework of patient satisfaction over the decades. Aragon & Gesell (2003) focused on whether gender has any influence on ED patient satisfaction with their care. The study was based on the Primary Provider Theory of Patient Satisfaction. The results of the investigation found that the structural relationships were static across the sample of male and female emergency department patients. These results demonstrated that gender was not influential in the area of emergency department satisfaction.

Newacheck, Stoddard, Hughes & Pearl (1998) compared insured and uninsured patients with respect to a variety of indicators of access to and use of the ED as primary care. The study

concluded that there is a major affect on access and use of non -urgent, primary care health care and with satisfaction of this care based on whether an individual is insured or not. Health insurance is a powerful predictor of the degree of access to and use of primary healthcare, including such aspects as entry into the healthcare system, identification of a regular provider, level of satisfaction with care, whether care is delayed or missed, and the amount of provider's services received. Noninsured families were noted to have at least one aspect of care that caused dissatisfaction (Newacheck, Stoddard, Hughes, & Pearl 1998).

Summary

This review of the pertinent literature concerning ED patient satisfaction and outcomes reinforced the importance of why making a great first impression in the ED is so important. Many people in ~~you're~~ the community have their first experience with the local hospital through an ED visit. If the first experience is one of a slow, overcrowded ED with uncaring personnel, the satisfaction and outcomes might be low. That same ED can have great satisfaction and outcome results despite being overcrowded with long wait times if the patients are kept informed of their progress and feel that the providers care. The literature indicates that insured, older patients with a high level of education were the happiest ED patients.

Another key point was when patients received an early discharge call after their visit; this call may not only measure satisfaction or outcomes of the visit, but also actually increase the perception of satisfaction and outcome, as the call itself showed continued care. The call, if conducted well, was seen as an extension of the visit by the reinforced information the patient was given. The goal of this research was to see if the satisfaction and outcome level identified by a discharge call at three days from one large ED was sustainable across a 90-day time span that is given for the regulatory agencies to collect their patient satisfaction information from ED

patients. There was no current literature available that looked at a 90-day follow-up call to any population of patients that were discharged from any area of healthcare.

CHAPTER THREE

METHODOLOGY

The purpose of this retrospective study was to look for statistically significantly greater patient satisfaction in the ED based on information on satisfaction obtained from timely discharge calls regardless of socio-economic factors. A retrospective, longitudinal, quantitative, experimental, descriptive design was used to analyze the early/late call results and demographic data collected for this research. The study examined the causal relationship between early and late discharge calls and patient satisfaction and outcomes through a longitudinal design.

Research Design

For many years one rural, very busy ED in the Southeast had no idea how well they were satisfying their customers with the care they were providing day in and day out. Over the last five years with governmental regulation and oversight, random companies were hired to call and query patients discharged from EDs concerning their satisfaction with their care. Routinely these surveys were conducted sixty to ninety days after the ED visit. Routinely EDs across the country performed below average in the eyes of their patients. Over the last couple of years this ED, like many other EDs, realized that the ED could not continue to be an area with low satisfaction scores as the ED is the main point of entry of any community to their local health care facility. Poor perception of care and customer service became a focus and all aspects of the ED visit are as important as the life saving interventions that routinely take place.

The retrospective study used information that had already been collected from early discharge calls. Early discharge call results show a very satisfied patient that reports a positive patient outcome. The problem results when random calls are made to get the same information at 90 days and the satisfaction and perception of outcome has changed significantly. The

researchers began the data collection work with a group of patients that had already received their three-day call. From the collected data, 200 patients were identified that would be called again at ninety days, and queried using a post-test questionnaire, a slightly modified version of the original early call questionnaire. A totally separate group of patients who never received an early call served as a control group.

The study was quantitative and experimental as researchers were looking for a causal relationship between the early call and no early call groups rather than trying to identify what makes them different and the intricate details on why they are different. The experiment identified the three-day call as the independent variable seen only in the group of patients that received early and late calls. The control was the second group of patients, who only received a ninety-day call, as all of the discharged patients receive discharge calls by an independent company.

The researchers realized that there would be some loss in the number of patients that received an early call either through change in phone number, loss of ability to maintain the cost of a telephone, or lack of patient willingness to be involved in a second call from the facility due to any reason.

Sample and Setting

All discharged patients that chose to participate were included in the study. The sample was obtained from discharged patients from a rural ED in the Southeast. Data collection is an automated process that pre-populates demographic and other information into a forced choice standardized questionnaire. On a daily basis every discharged ED patient has an equal opportunity for participation in the study as during the triage process each patient is asked if they would like a discharge telephone call to ask questions about their care. Only patients that are

discharged from the ED that answered yes they would like calls are dropped into the automated queue for a call. Three calls were made over a three-day time period to facilitate participation in the study.

The goal of the query was to obtain a sample of two hundred participants for the early discharge calls. Calls were made daily until the sample size was achieved. Late data collection from the same sample was done three months after discharge by the same method used in the early calls, using a modified version of the same forced choice questionnaire.

Participant exclusion criteria included any patient under the age of eighteen, a final diagnosis of a psychiatric disorder, miscarriage, sexual or physical assault, and diagnosis of sexually transmitted disease. Once contact was made, if the participant chose exclusion, their desire to not participate was honored and no further contact was pursued.

Ethical Considerations

Permission to perform the study was obtained from hospital administration at the rural ED. Internal Review Board approval from Southern Adventist University was also obtained. All ED patients were queried at the time of triage regarding consent to participate in the study. All patients were given the opportunity to provide a recommended telephone number for contact. No compensation was offered to participants. Patients who did not desire to be in the study were excused and received the reinforcement that their care would be unaffected by their choice.

Instrumentation

The forced choice questionnaire being used for the early call was a six question close-ended tool. The participants were asked to agree or disagree with the opinion expressed by each statement. After all questionnaires had been scored the responses for each of the six questions were coded for preparation of analysis using Predictive Analysis SoftWare (PASW) 18.0

software. PASW is a powerful data analysis program used to run a variety of tests on the collected data from a study after all the data has been entered into the program and properly coded. Output results from PASW can show frequency, significance, causal relationships, and internal validity to name a few and can be resulted in charts and graphs (Cronk, 2008).

The corporation that owns the hospital where the research was conducted created the pre-test questionnaire that was used in the early telephone calls (see Table 1, Appendix). The tool was created specifically for use of the collection of forced choice responses from ED survey participants to evaluate patient compliance, satisfaction, and outcomes. Care had to be taken by the corporation to follow the regulatory guidelines for discharge calls that included not asking questions that could hinder or coerce the participants' answers to the regulatory company survey. The survey was piloted for six months in eight EDs across the country and was reevaluated and reconstructed after the pilot results were compiled, then approved for use to help measure ED patient satisfaction and outcomes in every ED throughout the corporation. The researchers did not have the freedom to alter this questionnaire.

The forced choice questionnaire being used for the late calls was a revised version of the early call survey expanded by the researchers for the purpose of the study (see Table 2). The 200 participants from the early call group were contacted by telephone a second time at 90 days post ED visit and were asked the post-test questions concerning their satisfaction with their previous ED visit. The late call survey was also utilized with the patients that only received a late call. All information was coded into PASW 18.0 software for analysis in the same manner as the early call results.

Data Collection

Each participant who was pre-populated into the questionnaire query and who did not fall into the exclusion criteria was contacted. Contact attempts took place between nine o'clock in the morning and seven o'clock in the evening over a three-day period until the participant was either queried or until the time limitation of greater than three days post discharge was exhausted. When contact was made with a participant, the data collector read each of the six questions verbatim and recorded responses as given. The data collector terminated data collection once the sample of 200 questionnaires from early discharge calls was obtained. These data were secured and utilized again for the collection of data for the evaluation of patient satisfaction from late discharge calls. The data from early and late discharge calls were then coded for analysis.

Data Analysis

The data from this study were analyzed once the late discharge calls were completed. Data analysis began by synthesizing demographic information using PASW 18.0 software to identify any statistically significant differences in marital status, ethnic background, age, or gender in relation to ED patient satisfaction. Data collected from the six forced choice questions were coded into PASW format and analysis of the data was made using the chi-square test for independence, frequency analysis, and the non-parametric McNemar's test looking at two related populations who get queried twice over a period of time. The dependant variable of ED patient satisfaction was analyzed to evaluate whether the two independent variables of early and late discharge calls were significantly different from one another. The findings were considered statistically significant if $p < .05$.

Dissemination of Findings

The findings of this study were disseminated to Southern Adventist University School of Nursing faculty and students. Publication in a peer-reviewed journal is planned. Skyridge Medical Center quality employees, administrative personnel and ED staff were also presented with the statistical data outcomes.

CHAPTER FOUR

RESULTS

Participation and Demographic Characteristics

This study used the non-parametric Chi-Square test to investigate the hypothesis that there was a statistically significant positive effect with patient satisfaction and positive patient outcome when discharge calls to ED patients were made within the first three days. Study participants were randomly selected from an automated list of emergency room discharged patients until a final sample of 400 patients was achieved. These participants were placed into two groups with an equal number of participants. Participants in Group A received two calls, one early call at three days and one late call at 90 days. Of the 200 participants in Group A, 47 (24%) participants did not respond to the late call. The 200 participants in Group B received only a late call at 90 days.

Group A and B were compared using the chi-square test, which revealed no significant differences between the demographic and characteristic variables of the groups. Table 3 presents the demographics and baseline variables of the participants. Ages of participants ranged from 16 to 92 with a median age of 42. Gender was almost equal with 205 (51.2%) of the 400 participants being male. The majority of the participants were White ($n = 230$, 57.5%) or Black ($n = 112$, 28%). Of the 400 participants 236 (59%) of them were insured. More than 211 (52%) of participants were single, with 134 (33.5%) married and 22 (6%) widowed.

Instrument Reliability

The two forced choice questionnaires used in this study were an accumulation of questions that demonstrated reliable, consistent, answers throughout a six-month pilot study that questioned thousands of participants who were discharged from eight different hospital

emergency departments in eight different states. To determine internal reliability a Cronbach's Alpha test was conducted with the pre and post forced choice questionnaires. The six questions that comprised the pre-test questionnaire demonstrated a Cronbach's Alpha of 0.291, revealing a poor internal consistency. A Cronbach's Alpha test was once again utilized to measure internal consistency of the ten post-test forced choice questions. The post-test questionnaire demonstrated good internal consistency with a Cronbach's Alpha of 0.787.

Analysis of Hypothesis

This study was developed to determine if a relationship existed between early discharge calls and patient satisfaction and outcomes. Four hundred participants were placed into two groups and evaluated at 90 days. One group receiving an early call and the other group did not receive an early call. Data were gathered and analyzed from a forced choice pre and post questionnaire to demonstrate that an early call significantly influences participant's satisfaction and outcomes.

Figure 1, uses a bar chart analysis to illustrate participant responses to question five, "would you recommend our hospital to others if they needed emergency care?" As identified in Figure 1 the majority of participants, 189 (94.5%), had a positive response to question 5 of the early call questionnaire. Conversely Figure 2 showed that at 90 days only 39 (25.5%) of the participants from this Early Call group still had the same level of satisfaction as shown by their lack of willingness to recommend a local rural ED in the South to others. Forty-seven (23.5%) participants were excluded from the study because they could not successfully be contacted at 90 days for a response.

As Figure 3 illustrates, 96 of the 200 (48%) participants in the "No Early Call" group answered that they would recommend a local rural ED in the South to others who needed

emergency care. Essentially these findings illustrate that participants who received an early call were satisfied with the care they received, but the early call did not have a positive influence on the number of satisfied participants by 90 days. Actually, satisfaction at 90 days was higher in the group, which received no call at 3 days.

Again a frequency bar chart analysis was constructed in PASW Statistics 18 to examine positive outcomes of study participants. A positive outcome was measured by a “yes” answer to pre/post question 3 “following your recent ED visit, if you had any discomfort is it better?” In the Early Call group, participants receiving a call within three days of discharge from the ED had a positive outcome as shown in Figure 4, One hundred and eighty one of the 200 participants, or 90.5%, answered that their discomfort was better at 3 days. On the other hand, when that same Early Call group was questioned at 90 days only 114 of the 153 (74.5%) Early Call group participants successfully contacted reported that their discomfort had improved. Similarly, participants who received no 3-day call also reported an improvement in discomfort; however, these participants demonstrated a lower percentage of improvement, 135 of 200 (67.5%), compared to those participants who received an early call.

A comparison of groups through the utilization of the Chi-square test of independence was calculated to determine if a relationship existed between the “early” call, the “no” early call for 90-day calls and patient satisfaction. At 90 days the early call group was far less satisfied with their ED care than the late call group ($X^2(1) = 18.597, p < 0.05$ or $= 0.001$). Further analysis revealed no significant relationship between either group of participant outcomes ($X^2(1) = 2.050, p > 0.05 = 0.152$).

Additional Findings

Further analysis of research data revealed that there were some demographic components that showed a significant relationship with questionnaire answers, and these relationships may have had a substantial impact on study findings. For example, when marital status and post questionnaire 1, “did you make and keep a follow-up appointment with your doctor,” were analyzed via the Pearson Chi-Square test, a significant relationship was determined. This relationship demonstrated a significant interaction ($X^2(1) = 30.341, p < 0.05$ or 0.001), with married participants (74.5%) more apt to make and keep a follow-up appointment than single participants (45.7%). Furthermore, when marital status was queried with post-forced question 4, “did you understand the discharge instructions that were provided to you” a significant interaction was found, ($X^2(3) = 8.346, p = < 0.05$); Widowers were 56% more likely to deny understanding the discharge instructions that were provided. No significance was evident when marital status and the remainder of the forced questions were statistically analyzed.

Based on further study findings gender had a significant statistical impact on some forced study questions; in fact, a relationship existed between gender and six of the forced answer questions. Gender influence was identified when Post question 1, “did you make and keep a follow-up appointment with your doctor,” was analyzed comparing gender with frequency of “yes” answers to question 1. A significant gender difference was found ($X^2(1) = 38.687, p = 0.001$). Men (65.5%) were more likely to keep a follow-up appointment with their doctor than women (34.5%). Post question 3, demonstrated a marginal statistical difference, ($X^2(1) = 3.508, p = 0.051$), with men (55.8%) reporting an improvement in the level of their discomfort compared to women (44.2%). In response to Post question 4, ($X^2(1) = 6.156, p = 0.013$), more men (58.9%) than women (41.1%) stated that they understood the discharge instructions

received. When Post question 5, “would you recommend our hospital to others if they needed emergency care,” and gender were analyzed, a difference was found, ($X^2(1) = 53.564$, $p = 0.001$); men (76.3%) were far more likely than women (23.7%) to recommend the ED to others. Again a statistical significance was identified when comparing the response of men and women to Post question 6, ($X^2(1) = 46.027$, $p = < 0.001$). Men (73.4%) were more willing to mention an outstanding caregiver by name than women who only mentioned someone by name 26.6% of the time.

When looking at the comparison between insured participants and non-insured participants, only one Post question demonstrated statistical significance. The Pearson’s Chi-Square test was calculated comparing insurance and post question 3. A significant interaction was found ($X^2(1) = 9.150$, $p < 0.05$). Insured participants (62.7%) were more likely to report an improvement in their level of discomfort than non-insured (37.3%).

With the use of the Pearson Chi-Square test ethnicity played a significant role in responses to post questions 1, 5, and 6. Responses to Post question 1 ($X^2(3) = 29.494$, $p = 0.001$) showed that a greater percentage of Whites (68.3%) compared to Blacks (51.8%), and Hispanics (28.3%) made and kept a follow-up appointment with their doctor. In contrast to positive responses to Post question 1, Post questions 5 and 6 elicited negative responses, with Hispanics (73.9%) more likely than Whites (65.1%) or Blacks (52.7%) to not recommend others to the ED or mention someone by name that provided them with outstanding care. Again, Hispanics (73.9%) were less likely to mention a caregiver by name than Whites (60.8%) or Blacks (53.6%).

Summary of findings

After careful analysis this study's findings revealed that the hypothesis, that there is statistically significant positive affect with participant satisfaction and a positive participant outcome when discharge calls to ED patients are made within three days, is rejected. Data reveal that there is a very positive response when participants are surveyed at day 3. The response on day 90 is remarkably opposite that of day 3 and is primarily negative. Data also reveal that gender, insurance status, and ethnicity have effects on patient satisfaction and outcomes.

CHAPTER FIVE

DISCUSSION

This analysis of data from 400 randomly selected individuals shows the effects of early discharge calls versus no early discharge calls to influence patient satisfaction and outcomes. With this randomized selection no significant differences between the groups were witnessed with age, gender, race, insurance, or marital status that could skew the test results. The sample size was relatively small considering the number of ED visits from this larger ED and the number of Ed visits nationally. While this sample size gave good information it may not be representative and totally conclusive of all ED visits across the country. While this sample was relatively small it proved to be consistent with the demographics that presents to this large rural ED in the Southeast, not only daily but also year after year. The number 200 represents a day and half or 30 hours of ED visits from this large rural ED in the Southeast that was selected.

The pretest questionnaire (see table one) is the early discharge call tool developed by the corporation for this ED. The researchers could not alter this forced choice questionnaire, due to corporate oversight of the discharge program. The internal consistency utilizing Cronbach's Alpha was poor. Internal consistency could be improved on the pretest questionnaire by incorporating a Likert-Type one to ten scale or open-ended questions with an opportunity for discussion. Use of this tool as it was represented a significant study limitation. The tool demonstrated poor reliability and required use of more nonparametric statistics.

The researchers expanded the posttest questionnaire. This posttest tool demonstrated better internal consistency. The additional questions were still forced choice type questions but were added in three areas of the posttest to obtain more detailed patient information related to

satisfaction and outcome. The researchers believe that utilizing a Likert-type questionnaire or allowing for open-ended frank discussion type questions could improve the posttest.

The conceptual idea was that early discharge calls yield a high level of satisfied ED patients. The early discharge call came within three days of the participant's ED visit. The researchers speculate that the satisfied participant views this call as an extension of their ED visit. They view this call as the hospital caring. The researchers believe that the call reinforces the discharge instructions and need for follow up care. The patient possibly perceives that this closes the loop on their entire ED experience.

Late calls in general revealed much lower rates of participant's satisfaction with their ED visit and outcome than at the three-day call. While the forced choice questionnaire did not allow for detailed information on why this occurred, one can only infer that numerous things could be the influencing factors. The researchers contemplate that the test results could be lower because the patient had received their bill, or maybe the symptoms returned, or they kept their follow up appointment but received a different diagnosis or treatment from their primary care provider, or they returned to the ED for the same symptoms within the 90 days due to no relief. The researchers speculated that the three-day call forced a higher expectation in group A participants and higher level of satisfaction and outcome of the ED experience. Any of the dissatisfiers listed above could be the reason for the lower overall satisfaction of group A late calls as compared with group B participants. Once again the forced choice questionnaire only allowed the researcher to speculate. The real question may be which assessment represents the reality of satisfaction with outcomes. Or does either survey truly represent the reality of ED patient satisfaction and outcomes? The answer to these questions can only be found with further research.

The 90-day late call forced choice tool revealed that married participants were the most likely marital status to make and keep a follow-up appointment as recommended by the ED provider. It was further noted that widowers were the least likely group to keep follow up appointments. The researchers believe that the widowers lacked the support systems and resources to focus on follow-up recommendations from the ED necessary to maintain their health. Research showed that with the 90 calls, gender had an impact on the perception of a good outcome. Men demonstrated that they, more than women, would keep a follow up appointment and recommend the ED to others if they needed emergency care. The researchers speculated that men seek confirmation that they are ill and expected that the care they received was appropriate.

The 90-day late call also revealed significant differences in the responses between the insured and uninsured participants. The calls showed that insured participants reported a greater improvement in their level of discomfort. The researchers contemplated that insured participants may be more savvy, better educated health care consumers with set expectations on what care an ED can deliver. The insured population most likely was less stressed about the ED bill as they had a benefit plan to help with cost. They may have been more able to purchase prescriptions to aid in recovery. Analysis also revealed that ethnicity played a significant role in participants keeping follow up appointments. When reviewing ethnicity, whites were far more apt to keep a follow up appointment with their primary care physician than other groups. Researchers could only speculate that financial constraints, insurance and social and cultural mores could be the influencing factor with this phenomenon.

Implications for Nursing

Nursing is a fast paced, exhausting, healthcare profession. There is not ample time or opportunity to absolutely ensure that all patients will have positive ED outcomes and satisfaction. Many factors related to satisfaction with ED visits are personal and not within the realm of control of nursing. This study broke down and clarified who, by demographics or population, had positive satisfaction and outcomes after their ED visit in one hospital setting. A significant problem was noted in patient satisfaction 90 days past their ED visit. Additionally, some subgroups seemed at risk for poor outcomes. If no satisfaction was noted, analysis revealed which groups were not satisfied and future researches could target these areas. For example (Elder, Davis, Almes, & Littlepage, 2004), note that patient satisfaction is directly related to the perception of nurse as caring. Huff, (2007) suggests that hospitals and nurses capture patients' hearts rather than just hospital charges. Implying that loyal customers are repeat customers. It could be that positive outcomes and satisfaction found in this study in the immediate post visit period were due to satisfaction with nursing and perception of caring on the part of the nursing staff.

Ultimately more research is required to determine how ED patients perceive nursing care and how nursing activities contribute to overall satisfaction. The findings of this study do little to illustrate this.

Recommendations for Future Research

This research study utilized forced choice questions, which limited the opportunity for open honest discussion and dialogue. Utilizing closed ended questions limited the patient's opportunity to provide care specific feedback. Further research should utilize a Likert- type tool to allow for a broader range of response. Alternatives would also include focus groups and

qualitative interviews to elicit detailed information regarding patient experiences in the ED; what aspects of their experience contributed most to feeling of well being and satisfaction with care, and what factors were considered barriers to satisfaction and positive outcomes. This research team would recommend the Quality Improvement Committee sanction a sub-group to focus on and investigate “what would it take for our ED population to recommend our ED to others for emergent care?” Staff could be educated on using key words at key times to trigger responses to any regulatory survey care questions. The quality data would not only benefit the ED staff but also improve publicly reported Healthy Communities Access Program scores. An additional area of focus could include why the uninsured more frequently visited the ED with claims not considered relevant to the ER, and the impact of barriers to access to general healthcare providers on patient satisfaction and outcome. Examination of the relationship of other socioeconomic variables to ED outcomes would also be worthwhile.

The emergency room is an amazing life-saving adjunct to the healthcare system, which is responsible for saving many thousands of lives in many different circumstances. However, research indicates limited effectiveness of these ED centers in some respects. Therefore it is important to assess and utilize data for higher quality service and thus increased patient satisfaction and outcomes.

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Appendix

Table 1

Pretest Questionnaire

**Early Call Survey Questionnaire-Pretest
For Discharged Patient Satisfaction**

1. Do you plan to make a follow-up appointment with your doctor?
2. If you were given prescriptions, have you filled them?
3. Following your recent ED visit, if you had any discomfort is it better?
4. Did you understand the discharge instructions that were provided to you?
5. Would you recommend our hospital to others if they needed emergency care?
6. Is there anyone during your recent ED visit who provided you with outstanding care that you would like to mention by name?

Table 2

Post-test Questionnaire

**Late Call Survey Questionnaire-Post-test
For Discharged Patient Satisfaction**

1. Did you make and keep a follow-up appointment with your doctor?
- 2a. Did you fill your prescriptions from the ED?
- 2b. If so, did you take the medication as it was prescribed?
- 2c. Did you take all of the medication?
- 3a. Following your recent ED visit, if you had any discomfort is it gone?
- 3b. Are you completely recovered from your illness?
- 4a. Did you understand the discharge instructions that were provided to you?
- 4b. Were your discharge instructions helpful to you?
5. Would you recommend our hospital to others if they needed emergency care?
6. Is there anyone during your recent ED visit who provided you with outstanding care that you would like to mention by name?

Table 3

Demographics of study participants

Demographic	Total Participants	Percent of total participants
Insurance Status		
Insured	236	59%
Uninsured	164	41%
Race		
White	230	57.5%
Black	112	28%
Hispanic	46	11.5%
Other	12	3%
Gender		
Male	205	51.2%
Female	195	48.8%
Marital Status		
Single	211	52.8%
Married	134	33.5%
Divorced	33	8.3%
Widowed	22	5.5%



Figure 1. Percent of participants at 3 days post ED visit who would recommend the hospital to others.



Figure 2. Percent of participants at 90 days who did receive and early call who would recommend the hospital to others.



Figure 3. Percent of participants at 90 days who did not receive an early call who would recommend the hospital to others.

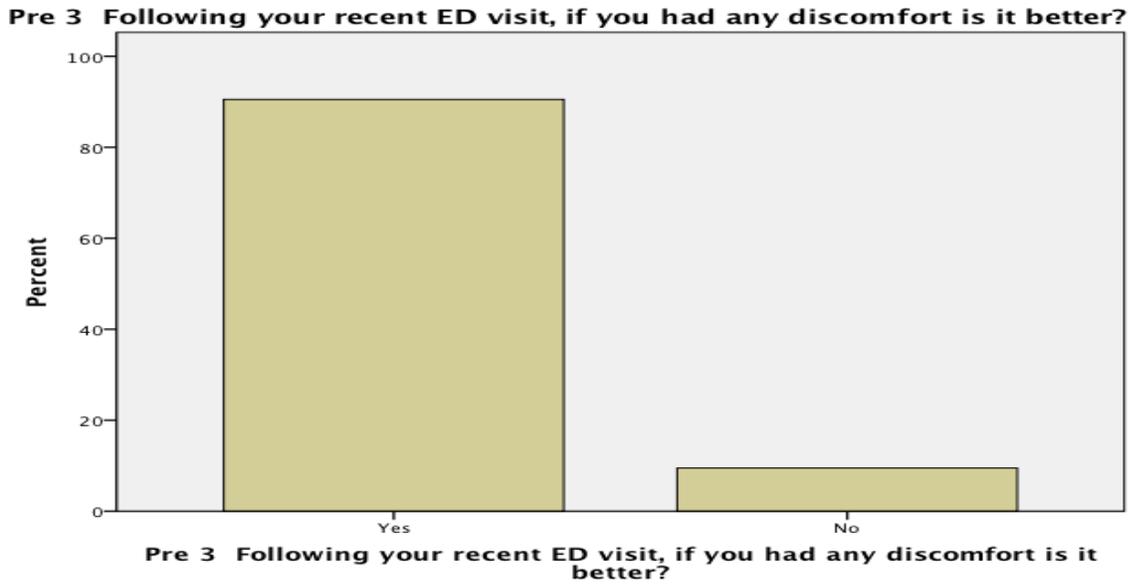


Figure 4. Percent of patients at 3 days post ED discharge who reported improvement in symptoms – a positive outcome.