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**The Dissertation Committee for John Michael Leger certifies that this is the
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**Exerting Capacity: A Grounded Theory Study of the Perspectives of
Bedside Registered Nurses about Patient Safety in the
Adult Acute Care Environment**

Committee:

Carolyn A. Phillips, PhD, RN
Supervisor

Yolanda R. Davila, PhD, RN

M. Terese Verklan, PhD, CCNS, RNC,
FAAN

Susan Nilsen, PhD, CNM

Margaret Reiter, PhD, RN, NEA-BC

David Niesel, PhD
Vice President and Dean, Graduate School of Biomedical Sciences

**Exerting Capacity: A Grounded Theory Study of the Perspectives of
Bedside Registered Nurses about Patient Safety in the
Adult Acute Care Environment**

by

John Michael Leger, MBA, BSN

Dissertation

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Dedication

To Charles, whose unwavering support has helped me reach, yet, another goal.

To my family & friends, who encourage me to be more than I thought possible.

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John Michael Leger, PhD

The University of Texas Medical Branch, 2015

Supervisor: Carolyn A. Phillips

The concept of patient safety has become a priority focus in healthcare research since 2000 following the release of the Institute of Medicine's (IOM) (1999) report *To Err Is Human: Building a Safer Health System*. Despite the development and implementation of patient safety initiatives, there continues to be an alarming number of unfavorable clinical outcomes for hospitalized patients. The vast majority of research into the concept of patient safety uses quantitative methods; to date, there has been no qualitative exploration of those closest to the patient: bedside nurses. This Classical Grounded Theory (CGT) study explored the perspectives of bedside Registered Nurses about patient safety. CGT methods, including the constant comparative method, substantive and theoretical coding, theoretical sampling, and memoing were utilized for data analysis (Glaser, 1978, 1998, 2005, 2013, 2014; Glaser & Strauss, 1967). The substantive theory that emerged from the data, *Exerting Capacity*, explains how the bedside nurse balances her own capacity against the demands of a given situation to fulfill her duty to keep her patients safe. A theoretical understanding of patient safety

from the perspectives of bedside nurses helps to fill a gap in the existing nursing literature surrounding patient safety and establishes the groundwork for future research into the concept of patient safety.

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List of Abbreviations

ADN	Associate Degree in Nursing
AHQA	American Health Quality Association
AHRQ	Agency for Healthcare and Research Quality
ANA	American Nurses Association
BSN	Bachelor of Science in Nursing
CAUTI	Catheter-Associated Urinary Tract Infection
CCM	Constant Comparative Method
CGT	Classical Grounded Theory
CLABSI	Central Line-Associated Blood Stream Infection
CMS	Centers for Medicare and Medicaid Services
DHHS	Department of Health and Human Services
FTR	Failure to rescue
HAI	Hospital-acquired infection
HAP	Hospital-acquired pneumonia
HAPU	Hospital-acquired pressure ulcer
HSPSC	Hospital Survey on Patient Safety Culture
ICU	Intensive Care Unit
IOM	Institute of Medicine
IRB	Institutional Review Board
LOS	Length of stay
LVN	Licensed Vocational Nurse
NDNQI	National Database of Nursing Quality Indicators

NQF	National Quality Forum
NSO	Nurse-sensitive outcomes
OIG	Office of Inspector General
OSC	Organizational safety culture
PC	Personal computer
PES-NWI	Practice Environmental Scale of the Nursing Work Index
PSC	Patient safety culture
RN	Registered Nurse
TJC	The Joint Commission
US	The United States
USSR	Union of Soviet Socialist Republic
UTMB	University of Texas Medical Branch
WHO	World Health Organization

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CHAPTER 1: INTRODUCTION

This Classical Grounded Theory (CGT) dissertation explored the values, realities, and beliefs about patient safety from the perspective of bedside nurses who work in adult acute care hospital settings. Chapter one presents the introduction to the study including the goal, significance, and aims of the study and the research question. Chapter one also provides a discussion of the study methodology and research design. Chapter one concludes with a preview for the remaining chapters of this dissertation.

SIGNIFICANCE AND AIM OF THE STUDY

Improving patient outcomes has been a primary focus of research related to patient safety since the release of the IOM's (1999) report *To Err is Human: Building a Safer Health System*. The IOM report estimates between 44,000 and 98,000 people suffer from preventable deaths each year due to medical errors. Moreover, the Office of the Inspector General (OIG) and the Department of Health and Humans Services (DHHS) place the number of lethal adverse events in hospitalized Medicare patients at approximately 180,000 per year (James, n.d.). Despite the presence of evidence-based, outcomes-driven patient safety interventions, the number of unfavorable patient clinical outcomes in adult acute care hospitals continues to be an issue. Nursing research links several indicators as potential factors affecting patient safety outcomes, including cultures of safety in healthcare organizations, practice environments, and nurse staffing. The Agency for Healthcare Research and Quality (Emanual et al., 2008) defines patient safety as "a discipline in the health care professions that applies safety science methods toward the goal of achieving a trustworthy system of health care delivery" (p. 6).

Although nursing researchers have identified safety cultures (El-Jardali, 2010), practice environments (Dennison, 2005), and nurse staffing (Liu, Kalisch & Zhang, 2009) as key factors affecting patient safety, the literature to date is primarily comprised of research utilizing quantitative methods to explore the relationships among the factors. Additionally, the literature to date provides scant information about the concept of patient safety from the perspective of the healthcare worker who is closest to the patient: the bedside nurse. Understanding the concept of patient safety from the perspectives of bedside Registered Nurses (RNs) will help to gather information that is not currently available to nurse researchers.

The goal of this research study was to explore bedside RNs' perspectives of patient safety to generate a substantive theory that explained or described patient safety from the perspectives of bedside RNs. The aims of this study included (1) identification of bedside RNs' values, realities, and beliefs pertaining to patient safety, and (2) explanation and contribution to development of a substantive theory reflecting nurses' viewpoints about patient safety.

RESEARCH QUESTION

The research question for this study was focused on the perspectives of bedside registered nurses (RNs) about patient safety in the adult acute care hospital setting. The study focused on bedside RNs because nurses are the healthcare workers who are closest to the patient and yet, there is very limited qualitative data in the nursing literature about nurses' experiences with patient safety in the adult population.

METHODOLOGY

The research study utilized Glaser's CGT methodology (Glaser, 1978, 1992, 1998) to explore the perspectives of bedside RNs with respect to the concept of patient safety in adult acute hospital settings. CGT explores areas of life where a group of people define their reality through their social interactions, including how they resolved their "main concern" (Glaser, 1998, p. 18) pertaining to the phenomenon of interest. CGT is a well-established, inductive methodological approach that uses three data analysis techniques that provide the method with its scientific rigor: constant comparison, coding, and memoing (Glaser, 1978, 1998, 2005, 2012, 2013, 2014).

Grounded theory is unique in that it leads to theory development through the emergence of concepts and categories that are grounded in the data (Glaser, 1978). Glaser (2013) contends that CGT is based upon three basic assumptions:

1. The researcher has no preconceived ideas about what is happening.
2. The goal of the research is to discover what is really going on in the world of the participants.
3. A theory can be generated from the data.

RESEARCH DESIGN

The study proposal was submitted to, and approved by, the University of Texas Medical Branch (UTMB) Institutional Review Board (IRB). Purposive and snowball sampling strategies were used to recruit participants. The thirteen nurses who agreed to participate in the study were RNs who had at least two years of recent work experience as a bedside RN in an adult acute care hospital setting and, at the time of the interview, worked at least full- or part-time. Participants provided verbal consent to participate and

interviews were digitally recorded using a voice-to-transcription application software. Participants were identified by an assigned alpha-numerical code for anonymity and all transcribed data was de-identified to mitigate the potential risk for identification of a study participant. Study data included demographic data, interview data, the researcher's field notes, and memos. Analysis of the data was an ongoing and iterative process using the CGT techniques of constant comparative method, coding, and memoing (Glaser, 1978, 1998).

OVERVIEW OF FINDINGS

Exerting Capacity, the substantive theory that emerged from the research study, describes how the bedside nurse *indemnifies her duty* to keep her patients safe from loss or harm. *Exerting Capacity* is a 4-step process in which the RN reconciles her ability to coordinate and accommodate the boundaries of the intrinsic and extrinsic factors that constrain, in real time, her ability to *indemnify her duty* to her patients. The RN's ability to exert capacity comes from one of two mindsets: *me-centric* and *patient-centric*. Further, study participants identified two factors that can positively or negatively impact the nurse's capacity to do what she must do to keep her patients safe from harm: *authority* and *work milieu*.

CONCLUSION AND ORGANIZATION OF THE CHAPTERS

This dissertation presents a CGT study of the perspectives of bedside RNs in the adult acute care hospital setting pertaining to the concept of patient safety. Chapter one has introduced the study's significance, aims, methodology, and research design. Chapter two will provide a review of the current literature as it pertains to patient safety. Chapter

three will explain the design of the study through its use of CGT to explore the phenomenon of interest, patient safety from the perspective of the bedside nurse. Chapter four will discuss the findings of this CGT study including the main concern of the participants, *indemnifying duty*, and the substantive theory, *Exerting Capacity*. Finally, chapter five will offer a discussion of the study's findings, compare the findings to the extant literature, the implications of the findings as well as recommendations for future research.

CHAPTER 2: REVIEW OF LITERATURE

Chapter two of this dissertation provides a review of the current literature as it pertains to patient safety. While there is an extraordinary amount of extant literature available on the topic of patient safety, the focus of this literature review is on unfavorable patient clinical outcomes in the adult acute care environment. Chapter two begins by providing an overview of the literature supporting the significance of the problem of patient safety. The nursing research into patient safety provides evidence that suggests three root causes of unfavorable patient clinical outcomes: *organizational safety culture*, *practice environment*, and *nurse staffing*. The issue of *nurse staffing* has led scholars to consider another area of patient safety, *nurse-sensitive outcomes*, or NSOs. The significance of how each of the root causes and NSOs impacts patient safety in hospitals will be examined followed by a history of the research into these areas. Chapter two will conclude with a discussion of how the present study will help to fill the gaps in the current literature.

SIGNIFICANCE

One of the leading causes of death and injury in the United States (U.S.) is errors that occur to patients who are being treated in the healthcare system (Thomas, 2010). The IOM's 1999 report *To Err is Human: Building a Safer Health System* identifies the safety of hospitalized patients as a priority health issue. The IOM report estimates between 44,000 and 98,000 people suffer preventable deaths each year due to medical errors. This projected number of preventable deaths galvanized the public and healthcare professionals (Wachter, 2004) by shining a spotlight on the issue of patient safety.

Subsequent data, however, indicates the number of actual events may be more substantial than originally estimated by the IOM. For example, an examination of public data on Medicare patients reveals “approximately 238,337 potentially preventable deaths” (Feng, Bobay & Weiss, 2008, p. 310) of Medicare patients between 2004 and 2006. The Office of the Inspector General (OIG) and the Department of Health and Human Services (DHHS) place the number of lethal preventable deaths due to medical errors in hospitalized Medicare patients at approximately 180,000 per year (James, n.d.).

The IOM (1999) report defines a medical error as “the failure of a planned action to be completed as intended or the use of a wrong plan to achieve the aim” (p. 1) and defines safety as “freedom from accidental injury” (p. 6). The World Health Organization (WHO) defines medical error as “an adverse event or near miss that is preventable” (Hwang & Hwang, 2011, p. 3256). Both the IOM and WHO conclude that more often than not the majority of medical errors occur due to systems and process failures, not errors caused by individuals. For the first time the quality of America’s healthcare system has become a priority focus, concurrently, for consumers, providers, and accrediting organizations such as Centers for Medicare and Medicaid Services (CMS) and The Joint Commission (TJC).

Since the release of the 1999 IOM report, key stakeholders, including physicians, nurses, healthcare executives, and policymakers, have seen a surge in consumers’ expectations of accountability for improved patient outcomes. Patients began to understand the profound impact of medical errors with analogies as “deaths in the United States from medical errors would equal the downing of one jumbo jet per day” (Wachter, 2004, p. 534-535). There was an immediate surge in the number of patient safety

initiatives implemented following the release of the IOM report. Healthcare purchasing groups began to scrutinize healthcare providers and clinical outcomes from patient safety initiatives and to emphasize the importance of adopting safer patient care standards.

The release of the IOM's 1999 report has led to research focusing on improving patient outcomes by improving patient safety. Stelfox, Palmisani, Scurlock, Orav & Bates (2006) conducted an integrated review of literature published in the ten-year period between November 1, 1994 and November 1, 2004 related to topics on patient safety. The authors found a significant increase in the number of patient safety research awards, studies, and publications of research findings since the release of the IOM's 1999 report. The areas of focus most commonly found in the literature synonymous with patient safety are *organizational safety cultures* (Stelfox et al., 2006), *hospital work environments* (Ulrich, Buerhaus, Donelan, Norman & Dittus, 2005), and *nurse staffing* (Blegen, Goode, Spetz, Vaughn & Park, 2011). Nurse staffing strongly impacts nurse-sensitive outcomes (NSOs) (Stanton & Rutherford, 2004) and are frequently linked in the literature. NSOs are measurable patient outcomes that are thought to be directly impacted by nursing behaviors. Each of these topics will be addressed separately in the following sections.

Organizational Safety Cultures

A primary IOM recommendation, as well as that of the WHO, is that healthcare systems must establish organizational safety cultures (OSC) to promote patient safety (Schmidt, 2010). Nevertheless, the five years following the IOM's 1999 report saw little progress in transforming healthcare into a safe, reliable system (Wachter, 2004). In 2009, the WHO reaffirmed "that focusing on culture, additional reporting and learning from

errors” must be priorities if hospitals expect to see improvement in patient safety (Ballangrud, Hedelin & Hall-Lord, 2012, p. 345).

The term, “safety culture,” was first recognized in the literature following the Chernobyl nuclear disaster in the former Union of Soviet Socialist Republic (USSR) in 1986. The concept originated in organizations, such as the aviation and nuclear power industries, which maintain a strong commitment to safety at all levels. The aim of this commitment is to minimize the potential for adverse events within a very hazardous work environment (Feng et al., 2008). An attribute of a safety culture is its high reliability: the process in which routine tasks can be performed while reducing adverse outcomes (Clarke, 1999) while having the identifying key feature of “shared perceptions among managers and staff concerning the importance of safety” (Feng et al., p. 311).

Experts in the field of healthcare safety culture have suggested the possible positive impact on the clinical outcomes for patients when a healthcare organization’s culture is focused on safety. Components of a safety culture have been identified as management behaviors, safety systems, and employee perceptions of safety (Colla, Bracken, Kinney & Weeks, 2005). Ausserhofer, Schubert, Desmedt, Blegen De Geest & Schwendimann (2012) define safety culture as “[T]he subset of organizational culture, relating specifically to the attitudes, values, norms and beliefs towards patient safety” (p. 242). The Agency for Healthcare and Research Quality’s (AHRQ) Patient Safety Primer on “Safety Culture” (Emanual et al., 2008) identifies the key features of a culture of safety in healthcare:

- Acknowledgement of the high-risk nature of an organization’s activities and the determination to achieve consistently safe operations.

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- A blame-free environment where individuals are able to report errors or near misses without fear of reprimand or punishment.
- Encouragement of collaboration across ranks and disciplines to seek solutions to patient safety problems.
- Organizational commitment of resources to address safety concerns (paragraph 1).

Blegen et al. (2011) say that an effective organizational safety culture (OSC) includes “giving safety priority over efficiency, improving care provider communication and collaboration, and creating a system that learns about and from errors and problems” (p. 346).

Feng et al. (2008) comment that patient safety culture is a relatively new term in healthcare, a term that has not been developed fully and thus requires ongoing exploration for clarification. Feng et al. explain that a healthcare organization’s safety culture is defined by the “identity of informal concepts, attitudes, and values” (p. 311) of the healthcare organization’s workforce. Feng et al.’s analysis of the concept of patient safety culture concluded that nurses’ shared values and beliefs about patient safety is of primary importance in a patient safety culture and are central to a nursing unit’s or healthcare organization’s culture. Feng et al. criticize the “traditional blame and shame” (p. 311) philosophy that is prevalent in many healthcare organizations saying such a philosophy leads to failure to report medical errors and prevents learning from past mistakes or identifying broken processes resulting in a questionable safety culture. Feng et al.’s opinion aligns with the IOM’s contention that blaming individuals fails to identify opportunities to improve the system and prevent harm.

Following the release of the 1999 IOM report, a number of survey instruments emerged that focus on measuring the patient safety cultures in healthcare organizations. Colla et al. (2005) performed a systematic review of the literature to identify and review surveys that measure the patient safety climate of healthcare organizations and selected nine surveys based upon their applicability to healthcare settings. Although all nine of the surveys measure patient safety climate, there are substantial differences “with regard to general characteristics, dimensions covered, psychometrics performed, and uses in studies” (p. 365). The authors concluded that patient safety climate is “a dynamic field” (p. 365) and interpretation of the results of such surveys as a predictor of the relationship between measures of patient safety climate and patient outcomes should be used with caution.

One instrument that measures the culture of safety in a hospital organization is the Hospital Survey on Patient Safety Culture (HSPSC) (Nieva & Sorra, 2003). The HSPSC is a 42-item tool used to measure hospital staff’s perception of safety culture. Saleh, Darawad & Al-Hussami (2015) used the HSPSC to examine RNs’ perceptions of patient safety in Jordanian hospitals. One aim of the Saleh et al. (2015) study was to identify the effects of nurses’ perceptions of safety culture on patient outcomes. Two hundred forty-two RNs (61% response rate) participated in the study. The nurses worked in inpatient hospital settings representing the four types of hospital organizations in Jordan: government, military, private, and teaching. The researchers used Pearson correlation coefficient to examine the relationships, if any, between ten safety culture subscales and the four safety outcome variables (perceptions of patient safety, frequency of events reporting, patient safety grade, and number of events reported) measured by the

instrument. Although the study's results do not support the hypothesis that patient safety outcomes are directly impacted by the safety culture of an organization, the results suggest that the nurses' perceptions of the safety culture of an organization impact patient safety outcomes.

Ausserhofer et al. (2012) explored the relationship between a healthcare organization's patient safety culture and patient outcomes. Previous research led the investigators to hypothesize that staff's perception of a higher level of patient safety culture would be associated with fewer unfavorable patient outcomes. The researchers used the 9-item Safety Organizing Scale (Vogus & Sutcliffe, 2007), an instrument developed to measure the patient safety culture of an organization, to collect data from 1,630 RNs working in twelve medical, surgical, and medical-surgical units in Swiss acute care hospitals. The researchers performed multilevel multivariate logistic regression analysis on the data to examine the impact that patient safety culture had on seven patient outcomes: nurse-reported medication errors, pressure ulcers, patient falls, urinary tract infections, bloodstream infection, hospital-acquired pneumonias, and patient satisfaction. Although the findings of the study were adjusted for organizational variables such as staffing, the results "did not confirm the assumption that units with higher PSC [patient safety culture] levels might have improved patient outcomes" (p. 250). Thus, Ausserhofer et al. (2012) concluded that a healthcare organization's culture of safety does not, in and of itself, impact patient clinical outcomes.

Smits, Wagner, Spreeuwenberg, Timmermans, van der Wal & Groenewegen (2012) conducted a cross-sectional observational study to examine whether patient safety outcomes on specialty units (i.e., emergency medicine, surgery, internal medicine) are

mediated by a culture of safety. The researchers used the HSPSC (Nieva & Sorra, 2003) to measure eleven safety culture dimensions on each of the twenty-eight nursing units representing twenty hospitals in the Netherlands. The researchers conducted a multi-level regression analysis to determine if a relationship existed between unit specialty, safety culture, and 1,885 adverse patient events. The findings of the study “did not demonstrate that specialties differ in performance because of their safety cultures” nor could the results “give support” (p. 3399) to the hypothesis that safety culture is a key factor in impacting patient safety outcomes.

Findings of other studies suggest that nursing unit level safety cultures can have a positive impact on patient outcomes. One study by Ballangrud et al. (2012) investigated whether RNs’ perceptions of the intensive care unit-specific (ICU) PSC had an impact on patient outcomes. The researchers found that ICUs with patient-focused safety cultures demonstrated better patient outcomes even though their patients are considered to be the most vulnerable of all hospitalized patients to succumb to medical errors. The study findings led the researchers to suggest that improving patient safety is best achieved by implementing changes starting at the nursing unit level. To date, there is inconclusive empirical evidence to support the hypothesis that patient outcomes are improved in hospitals where organizational cultures strongly emphasize patient safety.

Practice Environment

The practice environment, also known as the workplace environment, is where “the work processes, workload, work hours, and workspaces” (IOM, 2004, p. xi) of nursing care occurs. The workplace environment, like organizational safety culture, has been suggested by nursing researchers as being a key area of focus in the promotion of

patient safety. Hung, Hsu, Lee & Huang (2013) explored the relationships between macrolevel factors of a healthcare organization and patient safety outcomes, particularly medication errors and patient falls, to whether there might be a link. The researchers utilized a self-administered questionnaire to collect data from more than 1,000 RNs to examine variables in the organizational context, variables in the practice structure, and patient safety performance. The results of the study indicate that macrolevel influences, such as technology, nursing unit characteristics, and the size of the organization, appear to have both positive and negative effects on patient safety outcomes.

Identification of workplace environment issues using data collected from nurse surveys is not a new method in patient safety research. Nurse Week and the American Organization of Nurse Executives (2002) conducted a survey of 1,783 RNs across the United States to examine the RNs' views pertaining to their workplace environments. Results of the study revealed significant problems perceived by the RNs in their workplace settings. Ulrich et al. (2005) conducted a follow-up survey to determine if improvements in workplace environments had been made since 2002. Results from the Ulrich et al. study revealed some short-term solutions had resulted in improvements in the work environments; nevertheless, workplace health and safety, professional practice, and work relationships are areas requiring improvement.

Several quantitative studies have explored the relationships between nurses' perceptions of their practice environment and associated patient clinical outcomes (Coetzee, Klopper, Ellis & Aiken, 2012; Hayhurst, Saylor & Stuenkel, 2005; Kirwan, Matthews & Scott, 2012; Kutney-Lee, Wu, Sloane & Aiken, 2012; Ulrich et al., 2005). Hwang and Hwang (2011) surveyed 2,110 nurses working in Korean regional public

hospitals to examine the relationship between their perceptions of their work environments and the occurrence of all errors related to patient care. The researchers conducted a descriptive, correlational cross-sectional survey using an adaptation of the Safety Attitudes Questionnaire (Sexton et al., 2006) to measure caregivers' attitudes about patient safety. The Hwang and Hwang study results support the hypothesis that there are more errors in hospitals where nurses perceive problems in their practice environments. A similar study by Aiken, Sloane, Bruyneel, Van den Heede & Sermeus (2012) surveyed over 33,000 nurses in twelve European countries to explore whether the nurses' perceptions of their practice environments impacted their perceptions of patient outcomes. Nurses in 75% of the countries rated their hospital work environments as fair or poor; moreover, one-fourth to one-third reported hospital management's actions did not prioritize patient safety. The nurses were asked to assess the quality of care in their hospitals as it pertained to unfavorable patient outcomes, particularly in the areas of hospital-acquired pressure ulcers (HAPU), patient falls with injury, and hospital-acquired infections (HAI). The nurses blame each of these outcomes on aspects of the practice environment including management responsiveness, lack of resources, lack of nurse involvement in decision making, and overall nurse dissatisfaction.

While Aiken et al.'s (2012) study focused on the organizational level work of the healthcare environment, Kirwan et al. (2012) examined unit-level environments in hospitals and their potential impact on patient safety outcomes. The researchers used The Practice Environment Scale of the Nursing Work Index (PES-NWI) (Kramer & Hafner, 1989) to collect data on the perceptions of nurses to examine the impact of hospital unit-level factors on patient safety. The PES-NWI is a widely recognized instrument used to

ascertain characteristics of, and to measure, the nursing practice environment (Kramer & Hafner, 1989). Participants in the Kirwan et al. (2012) study were 1,397 nurses from 108 general medical and surgical units in 30 hospitals throughout Ireland. The study revealed that hospital units perceived by the nurses to have positive work environments have a higher number of reported adverse patient events presumably because nurses felt safer reporting. Higher incidence of this type of reporting has been correlated with improved patient outcomes. The results of the Kirwan et al. (2012) study support the findings of Aiken et al. (2012) that a positive healthcare work environment positively influences patient outcomes.

Other key factors relevant to the hospital work environment have been studied in order to explore whether they have an impact on patient outcomes. Manojlovich and DeCicco (2007) examined the relationships between patient outcomes in an ICU setting and nurses' perceptions of their practice environment and their communication with physicians. The study used a descriptive survey design to collect data from 462 nurses to measure characteristics of the hospital work environment. Study instruments were the Conditions for Work Effectiveness Questionnaire-II (Laschinger, Finegan, Shamian & Wilk, 2001) and the PES-NWI (Kramer & Hafner, 1989). The study findings did not provide further evidence to support the hypothesis that work environment characteristics of a hospital unit, as perceived by the nurses, predict patient outcomes. Manojlovich and DeCicco's (2007) study findings indicate that some aspects of the work environment, including in the case of their study, nurse-physician communication might be associated with nurses reporting nurse-assessed medication errors.

Coetzee et al. (2012) examined the impact of other key elements of the nurse practice environment, including nurse workloads and nurse workforce outcomes (i.e., burnout, job satisfaction, intention to leave) on patient outcomes. The study used the PES-NWI (Kramer & Hafner, 1989) to explore associations between nurse workloads, nurse workforce outcomes, nurses' perceptions of the work environment, and patient outcomes. A total of 1,187 nurses from 55 private and seven public hospitals participated in the study. The overall findings of the study support the proposed associations among nurses' perceptions of good practice environments, nurse workforce outcomes (including longer retention and higher job satisfaction), and the quality of patient outcomes.

Kutney-Lee et al. (2012) also examined the association between nurse work environments and nurse workforce outcomes including rates of burnout, intention to leave, and job dissatisfaction. The study included a retrospective two-stage longitudinal data review collected from samples of registered nurses employed in 137 Pennsylvania hospitals in 1999 and 2006. This two-period difference model provided researchers with valuable data to compare the three nurse workforce outcomes (rates of burnout, intention to leave, and job dissatisfaction) with the nurses' perceptions of practice environments. The results supported a causal connection between the work environment and nurse workforce outcomes.

Roth, Wieck, Fountain & Haas (2015) performed a cross-sectional descriptive study of 393 U.S. hospital-based registered nurses to identify nurses' perceptions of human factors that they believed were likely to lead to errors in patient care. While the nurses identified loss of focus, interpersonal deficits, and being overwhelmed as factors impacting nursing errors, an "unhealthy environment," described as a "workplace that

makes it difficult to function” (p. 268) emerged as one of the factors that is most likely to create a deficit for the nurse providing care and thus impacting her ability to perform safe patient care. While the study participants identified several work environment factors that are more likely to cause errors (dissatisfaction with the environment, poor work culture, ineffective policies and procedures, and nurse apathy), they perceived feelings of anxiety and vulnerability to be caused by an unhealthy work environment leading to an increase in the number of errors made by nurses.

Nurse Staffing

The 1999 IOM report focused the attention of nurse researchers on the impact of nurse staffing levels on patient outcomes. Clinical outcomes related to nurse staffing include staffing levels (or patient-to-nurse ratios), educational preparation of nurses within an institution, recruitment and retention strategies, and nurses’ overall job satisfaction. Although there is inconclusive research to affirm an association between nurse staffing levels and patient outcomes, there is a consensus among nurse scientists that hospitals with higher incidence of poor patient outcomes more often than not have higher patient-to-nurse ratios (more patients per nurse) when compared to hospitals with lower incidence of poor patient outcomes (Blegen, Good & Reed, 1998; Blegen, et al, 2011; Hart & Davis, 2011; Hinno, Partanen & Vehvilainen-Julkunen, 2011; Needleman, Buerhaus, Mattke, Stewart & Zelevinsky, 2002; Needleman, Buerhaus, Pankratz, Leibson, Stevens & Harris, 2011; Schubert, Clarke, Glass, Schaffert-Witvliet & De Geest, 2008; Stanton & Rutherford, 2004; Whitman, Kim, Davidson, Wolf & Wang, 2002).

Whitman et al. (2002) studied the relationships between nurse staffing and specific nurse-sensitive outcomes, in particular central line-associated blood stream infection (CLABSI) rates, hospital acquired pressure ulcer (HAPU) rates, falls, and medication errors. The study included a secondary analysis of prospective observational data across 95 specialty units in ten adult acute care hospitals in an integrated U.S. healthcare system. The study revealed a highly variable impact of nurse staffing levels on outcomes. Although the study results identified no clear relationship between nurse staffing levels and patient infections or pressure ulcers as have been reported from similar studies, the results did support the contention that increased nurse staffing levels decrease the incidence of patient falls.

Stone et al. (2007) examined a comprehensive set of working conditions and their impact on *nurse-sensitive outcomes* (NSOs) and avoidable adverse events affecting patients. The working conditions included staffing, overtime, wages, hospital profitability, and magnet accreditation. Stone et al.'s observational study of more than 15,000 elderly subjects in ICUs at 31 U.S. hospitals found that components of nurse staffing influenced patient outcomes. While increased levels of RN staffing reduced such NSOs as central line-associated blood stream infection (CLABSI), catheter-associated urinary tract infection (CAUTI), and hospital-acquired pressure ulcer (HAPU) rates, those improvements were negated if the increased staffing levels were due to increased overtime worked by the individual nurses.

Other researcher has examined the impact of nurse fatigue on adverse patient outcomes. Needleman et al. (2002) examined the relationship between nurse staffing and fourteen patient outcomes considered to be NSOs. The researchers reviewed hospital

records of more than 6.1 million patients who had been discharged during 1997 from 799 U.S. hospitals in eleven states to explore whether the fourteen adverse patient outcomes were sensitive to nurse staffing levels. The adverse patient outcomes included length of stay (LOS), catheter-associated urinary tract infections (CAUTI), hospital acquired pneumonia (HAP), and failure to rescue (FTR). The study results support the assumption that higher nurse staffing rates (fewer patients per nurse) are correlated with lower rates of unfavorable patient outcomes.

Hart and Davis (2011) explored the relationships between nurse staffing and patient outcomes including the effects of staff skill mix on patient outcomes in acute care units. Nurse staffing variables in the study included nursing hours per patient day, staffing skill mix, and the number of hours worked by temporary personnel hired from contracted agencies (agency staff hours). The results of the study identified a higher rate of HAPUs as agency staff hours increased and/or as nursing hours per patient day decreased.

The research data supporting the impact of staffing levels on NSOs goes beyond the United States. McGillis-Hall, Doran & Pink (2004) conducted a correlational study in nineteen teaching hospitals in Ontario, Canada to evaluate the effect of nurse staffing on patient falls, wound infections and urinary tract infections. The study included more than 925,000 patient abstracts from 79 hospitals in Switzerland. The study results revealed that lower rates of the unfavorable patient events were associated with higher nurse staffing levels (or lower patient-to-nurse ratios). A Swiss study by Schubert, Clarke, Aiken & De Geest (2012) examined the impact of rationing nursing care (the patient-to-nurse ratio) on hospitalized patient outcomes, specifically on inpatient mortality. The results concluded

that patients in hospitals with higher nurse rationing (i.e., higher numbers of patients per nurse) had a significantly higher likelihood of dying in the hospital.

Another component of staffing that must be considered when evaluating the impact nurse staffing levels may have on patient safety is the impact of nurses exiting the profession and the number entering the workforce each year. A study by Buerhaus, Staiger & Auerbach (2000) predicted a shortage of 800,000 registered nurses by the year 2020, a shortage that is expected due to a decline in the number of nurses entering the workforce combined with the increasing trend of nurses retiring from the profession. As a follow-up to the Buerhaus et al. (2000) study, Auerbach, Buerhaus & Staiger (2015) performed a retrospective cohort analysis to examine the impact that retirement trends would have on the U.S. nursing workforce. The study also examined the impact the projected shortage of nurses through the year 2030 might have on healthcare in the U.S. Although the study results suggest the current growth rate of new RNs entering the nursing workforce has offset the dire predictions made a decade ago, study results still predict a shortfall of 128,000 RNs by 2025.

Nurse-sensitive Outcomes

The primary focus of research on patient outcomes associated to NSOs has been on the impact of nurse staffing. NSOs frequently are linked in the literature to patient-to-nurse ratios, also called workload or nurse staffing. NSOs are patient outcomes impacted directly by nursing behaviors; NSOs are measurable, relevant to the patient's welfare, and represent the effects of nursing care (Hart & Davis, 2011; McGillis-Hall et al., 2004). Although clinical outcomes that are deemed to be nurse sensitive have been the primary focus of nursing research related to patient safety since the release of the IOM's 1999

report *To Err Is Human: Building a Safer Health System*, there is an ongoing discussion within, as well as outside of, nursing as to what constitutes a NSO. The AHRQ has defined NSOs as “variable patient or family caregiver state, condition, or perception responsive to nursing intervention” (Stanton & Rutherford, 2004, p. 2). The American Nurses Association (ANA) released its set of NSOs in 1995. The patient outcomes the ANA determined to be nurse-sensitive and used to evaluated nursing care at the unit level were: nursing hours per patient day, patient falls, patient falls with injury, pressure ulcer prevalence, RN satisfaction, skill mix (percent of total nursing hours supplied by RNs, licensed vocational nurses (LVNs), Unlicensed Assistive Personnel, and proportion of total nursing hours supplied by agency staff), nurse vacancy rate, and CLABSI (Montalvo, 2007). Since the publication of the ANA’s quality indicators that propose to reflect nursing care on patient outcomes, other quality organizations such as AHRQ, the National Database of Nursing Quality Indicators (NDNQI), the National Quality Forum (NQF), and the American Health Quality Association (AHQA) have published their own sets of quality measures considered to be nurse sensitive (Hart & Davis, 2011; Montalvo, 2007; Stanton & Rutherford, 2004). Examples of NSOs include CAUTIs, patient falls, wound infections, HAPUs, and CLABSIs (Hart & Davis, 2011).

Filling a Gap in the Literature

The majority of the research into the concept of patient safety has used quantitative approaches. While current research findings provide a hint of plausible causes for adverse patient outcomes in the adult hospital setting, there is a lack of consensus by researchers as to a clear causation of adverse patient events. Much of the focus of nursing researchers has been on three areas identified as having the most

significant impact on patient safety: *hospital organizational safety culture*, *hospital work environment*, *nurse staffing*, and *nurse-sensitive outcomes*. Although some researchers have sought nurses' opinions about patient safety, those researchers have done so using quantitative methods, such as surveys and questionnaires, all of which reflect preconceived ideas about factors associated with poor patient outcomes. No research studies have been identified that ask those closest to the patient, the RNs at the bedside, what they think is necessary in order to keep patients safe. Moreover, there are no extant theories addressing the perceptions of bedside nurses about patient safety. The present study is innovative because it used CGT (Glaser, 1978, 1992, 1998, 2005, 2012, 2013, 2014) methodology to explore the perceptions of bedside RNs in adult acute care hospitals about patient safety. That exploration led to the development of a substantive theory reflecting the concerns and experiences of bedside nurses who work in adult, acute care hospitals and their perceptions of how to keep their patients safe.

SUMMARY OF CHAPTER TWO

Chapter two has provided a review of the literature addressing unfavorable patient clinical outcomes in the adult acute care environment. The chapter began by presenting a review of the literature addressing the significance of the problem of patient safety and continued with a discussion of factors linked to adverse patient clinical outcomes: *organizational safety culture*, *practice environment*, *nurse staffing*, and *nurse-sensitive outcomes*. The chapter concluded with an analysis of the gaps in the current literature leading to the need for the present study.

PLAN FOR THE REMAINING CHAPTERS

Chapter three will provide a discussion of CGT (Glaser, 1978, 1998), the method selected for the present study including techniques specific to CGT and application of those techniques in this study. Chapter four will present the findings of the study including the substantive theory that emerged from data analysis. Chapter five will present a discussion of the study and its findings.

CHAPTER 3: METHODS

Chapter three explains the design of the study through its use of CGT methodology (Glaser, 1978, 1998, 2005, 2011, 2013, 2014) to explore the perspectives of bedside registered nurses (RNs) with respect to patient safety in adult, acute care hospitals. The chapter begins with a description of CGT and its appropriateness for use in this research study. The chapter then will provide a description of the study sample recruitment, inclusion criteria, setting, data collection and data management procedures. Finally, the chapter presents a discussion of Glaser's (1978, 1998) criteria for trustworthiness in a CGT study and how the study findings met those criteria. The chapter ends with a discussion of the issues related to the study and the techniques that protected the rights of the human subjects who participated in the study.

DESCRIPTION OF CGT

Grounded theory was first introduced by Glaser and Strauss (1967) in *The Discovery of Grounded Theory*. Grounded theory is, as Glaser (1998) describes, “the systematic generation of theory from data acquired by a rigorous research method” (p. 3). The purpose of grounded theory is to do more than merely describe a phenomenon; it is to generate a theory that is derived from the data collected in the research about “what is actually going on” (p. 21) in the area being studied. Glaser went on to define and develop the methodology (1978, 1998, 2005, 2011, 2012, 2013, 2014) into what is now referred to as CGT. While CGT uses an inductive approach like other qualitative methods, it differs in its two hallmarks for concept generation. The first hallmark of CGT is to find the core variable which is the “main concern” (Glaser, 1998, p. 18) and resolution of this concern

by the participants (Glaser). The second hallmark of CGT is for the researcher to “stay open and let patterns emerge from the data” (p. 78) by not allowing preconceptions to mask the emerging concepts. These hallmarks of CGT allow the researcher to remain “sensitive to the data” (Glaser, 1978, p. 3) and to avoid bias.

CGT explores areas of life where little is known, gathering data to explore how a group of people define their reality through their social interactions (Glaser, 1992). CGT was used in this study to explore the perspectives of bedside RNs with respect to patient safety in adult, acute care hospitals. CGT is a well-established, inductive methodological approach that uses three data analysis techniques that provide the method with its scientific rigor: constant comparison, coding, and memoing (Glaser, 1978, 1998, 2005, 2012, 2013, 2014). The goal of this study was to use CGT in order to generate a substantive theory that is grounded in the data to explain behavioral processes of those who experience the phenomenon of interest (Glaser, 1978, 1998, 2005, 2011, 2012, 2013, 2014; Glaser & Strauss, 1967). Based on the lack of qualitative research into the topic of patient safety from the perspective of the bedside RN, CGT is an appropriate research method in order to answer the question “what is really going on?” (Glaser, 1998, p. 12) through the exploration of social processes at work.

CGT is unique in that it leads to theory development through the emergence of concepts and categories that are grounded in the data (Glaser, 1978). Glaser contends that CGT is based upon three basic assumptions:

1. The researcher has no preconceived ideas about what is happening.
2. The goal of the research is to discover what is really going on in the world of the participants.

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3. A theory can be generated from the data.

Thus, the goal of CGT is to gain an understanding of a particular group's defined reality in a specific setting, including how they resolve their "main concern" (Glaser, 1998, p. 18) pertaining to the phenomenon of interest. In this study, the phenomenon of interest was patient safety from the perspective of the bedside RN. The emergence of the main concern will be further described later in this chapter.

RECRUITING, SAMPLE, AND SETTING

The study proposal was submitted to, and approved by the UTMB IRB (See Appendix A). Once IRB approval was obtained, the researcher began recruitment of bedside RNs who met the study inclusion criteria. The study utilized both purposive and snowball sampling strategies to recruit participants. According to Streubert and Carpenter (2011), purposive sampling is selecting informants based on their "first-hand experience" (p. 28) with the phenomenon of interest. The researcher asked study participants to share information about the study with other nurses who have similar experiences, a process known as snowball sampling (Streubert & Carpenter, 2011).

Participants in the study were licensed RNs who had at least two years of recent work experience as a bedside RN in an adult, acute care hospital setting. At the time of the interview, the RN must have been employed full- or part-time and been willing to participate in at least one face-to-face interview lasting up to 90 minutes. There were no exclusions of participants based upon age, ethnicity, gender, or level of formal nursing education. A total of 13 bedside RNs volunteered to participate in the research study; there was no compensation for participation in the study. Data saturation occurred at study participant #10, but additional participants were scheduled for interviews at that

time; thus, the interviews with subjects were completed as scheduled. The additional data confirmed saturation when no new concepts were revealed through data analysis.

Recruiting

Recruitment flyers (Appendix B) were disseminated via email to various RNs in the researcher's professional and personal networks. The email asked the recipients to forward the recruitment flyer to any RN who might be interested in participating in the study and who met the inclusion criteria. In addition, the recipients were asked to post the recruitment flyer in places where potential study participants might view it. The recruitment flyer briefly described the topic of the study, participant inclusion criteria, and provided the researcher's email address. This method of recruitment yielded two bedside RNs who met the participant inclusion criteria and agreed to participate in the study. The remaining eleven participants were recruited through snowball sampling through e-mail, face-to-face, or text messaging from the researcher's professional and social contacts.

Nurses who emailed or texted the researcher received a response employing the same method of contact initiated by the nurse (See Appendix C). The recruiter thanked the respondent for her (Since all but one of the study participants were female, female pronouns will be used throughout this document.) interest and requested contact information in order to schedule a brief telephone meeting to discuss the study. The researcher sent an email or text message (See Appendix D) to the potential study participant confirming the date and time of the telephone meeting. During the telephone meeting, the researcher introduced himself and confirmed with the RN that completing the call was convenient for the RN. The telephone meeting provided an opportunity for

the researcher and RN to discuss the study and what participation in the study entailed. If the RN maintained an interest in participating, the researcher reviewed the study participant criteria to verify the RN's eligibility.

The researcher informed the RN that the interview would be recorded digitally and any data included in the study reports would be coded, or masked, so it could not be linked back to the RN. Although the researcher offered to answer any questions or concerns the RN may have had about participating in the study, none of the potential study participants had any questions or concerns. One potential participant decided not to participate in the study due to scheduling conflicts. If the RN agreed to participate in the study, the researcher and the RN scheduled a data collection (interview) session at a mutually agreed upon date, time, and location for the face-to-face subject consent process and data collection.

Sample

The study sample included thirteen participants who identified themselves as bedside RNs who provided care for adult patients in acute care hospital settings. The study sample will be discussed in greater detail in Chapter four.

Setting

The face-to-face interviews occurred at a location that was convenient and acceptable to the RN and the researcher. The selected location provided comfort for the duration of the interview and allowed sufficient privacy to allow for minimal distractions while protecting the participant's confidentiality. Settings included study participants' homes, a hospital office, and hospital break rooms.

DATA COLLECTION PROCESS

One week prior to the scheduled interview date, the researcher sent a message via email or text message to the RN reminding her of the pending interview appointment date, time, and location in order to confirm the scheduled meeting (See Appendix E). At the agreed upon date, time, and location for data collection, the researcher introduced himself and spent a few minutes conversing with the RN in order to put her at ease and gave the RN an additional opportunity to ask any questions. None of the study participants had additional questions and none voiced any concerns. The researcher used the narrative detailed in Appendix F to obtain the RN's verbal agreement to participate in the study. In addition, the researcher informed the study participant about the process for maintaining confidentiality and reiterated that the interview could be stopped at any time the study participant wanted; none of the participants stopped their interview prior to completion of data collection. Once the RN consented to participate in the study, the researcher turned on the recording device and asked the RN to reiterate her consent to participate in the study and offered the participant an additional opportunity to ask questions.

Data collected for the study included demographic data, interview data, the researcher's field notes, and memos. The researcher asked each RN to complete a demographic data collection form (See Appendix G), which included the following data elements:

- Age
- Gender
- Race/Ethnicity

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- Number of years as RN
- Number of years as bedside RN
- Highest level of completed formal nursing education
- Current shift (primary) worked
- Type of unit (primary) worked
- State in which the participant's current worksite is located
- Size of the hospital (number of licensed beds)
- Size (i.e., number of beds) of the unit to which the RN is primarily assigned to work most often, and
- Type of unit (i.e., telemetry, medical/surgical) to which the RN is assigned to work most often.

The interviews utilized an interview guide (See Appendix H) developed for the study. The researcher began the interview with the grand tour question, “*What does patient safety mean to you?*” and used follow-up open ended questions to encourage sharing thoughts and perceptions, what Glaser (1998) has referred to as “instill a spill” (p. 111). Although Glaser (personal communication, May, 2015) does not recommend that the CGT researcher take notes during the interview, this novice researcher handwrote field notes during the data collection process in order to record reminders of key terms, phrases, and ideas imparted by the study participant in order to follow up for more details. The note taking also allowed the researcher to formulate questions that may not have otherwise been asked during the interview. The researcher used prompts, such as “tell me more about that” and “what do you mean by that?” to encourage ongoing communication of the participant’s thoughts and beliefs about patient safety.

At the conclusion of each interview, the researcher asked the RN if she had any questions, comments, or additional thoughts about the topic. Each participant was asked if the researcher might contact her should questions arise following the interview. Further, the RN was asked to communicate via email with the researcher to share any questions or ideas she might have about the topic. While none of the study participants contacted the researcher with additional questions, comments, or ideas, the researcher did communicate with one study participant via email to verify what was considered to be an emerging pattern in the data.

Data Management

Interviews with the study participants were digitally recorded during the face-to-face interviews using a voice-to-transcription application software on the researcher's tablet device. The interviews ranged from 28 minutes to 73 minutes in length ($M = 49$ minutes). The audio-recording saved on the automated recording-to-transcription application software was identified using a participant code (e.g., SP1, SP2) and uploaded directly to a professional transcription service through its confidential (See Appendix I), secure website within one hour of completing the interview. The service transcribed the interviews into a Microsoft Word document per the researcher's formatting instructions. The researcher was notified of the completed interview transcription via email communication within 72 hours of receipt of the audio-recording. The transcription was then available to be downloaded from the service's secured company website. The researcher reviewed the transcription for accuracy by reading the transcription while simultaneously listening to the digital recording. Once the researcher verified the

accuracy of the transcribed interview he notified the transcription company that their copies of the recording and transcript could be deleted.

One copy of the original, unedited transcript was saved with an assigned alpha-numerical code on the researcher's password-protected personal computer (PC). The codes and the associated participants' names were maintained in a spreadsheet saved on the researcher's PC. The PC was designated solely for this research project and no other users had access to the data stored on the PC. In addition, a back-up copy of the unedited transcript was saved on a password-protected portable hard drive. A second copy of the transcript, used for data analysis, was de-identified masking any information that could in any way be linked to the participant. The de-identified copy of the transcript was stored on the researcher's PC and a separate, dedicated portable hard drive. The researcher's PC and the hard drives were stored in separate, locked cabinets in the researcher's office. All information on paper related to the study and all study-related electronic data will be destroyed when the study and all reports are completed.

Data Analysis

Analysis of data in a CGT study "starts right off with regular daily data collecting, coding, and analysis" (Glaser & Holton, 2004, p. 9). CGT data analysis is an ongoing and iterative process (Glaser, 1978, 1998) using three data analysis techniques: the constant comparative method, coding, and memoing (Glaser 1978, 1998, 2005, 2012, 2013, 2014). The application of these techniques led to the emergence of the study participants' main concern, *indemnifying duty*, and the substantive theory, *exerting capacity*.

CONSTANT COMPARATIVE METHODOLOGY

The constant comparative method (CCM) involves a continuous iterative process whereby the data is analyzed line-by-line and category-by-category in order to identify relationships among the emerging concepts (Glaser, 1978, 1998). CCM is a systematic, inductive process that continuously compares incidents to incidents and incidents to categories throughout all stages of the study – data collection, data analysis, and writing the theory – to produce a “richer yield of concepts and relationships (Glaser, 1998, p. 24). CCM allows meaningful properties of categories to emerge through the continuous comparison of incidents and categories; it promotes identification of patterns in the data through “examining, categorizing, and coding the collected data” (Nilsen, 2013, p. 31).

CODING

Coding is a central process in CGT methodology; coding guides the researcher to formulate relationships among categories. Glaser (1998) identifies two types of coding in CGT data analysis: *substantive* coding and *theoretical* coding.

Substantive coding reveals patterns among incidents in order to “conceptualize the empirical substance of the area of research” (Glaser, 1978, p. 55). Substantive coding includes two phases, open coding and selective coding. Open coding begins with the line-by-line analysis of the data (Glaser, 1998) with the goal of identifying potential links among categories by answering questions such as “What is this data a study of?” “What categories does this indicate?” and “What is actually happening in the data?” (Glaser, 1978, p. 57). Data analysis through open coding continues until a core category, or the main concern of the study participants, is identified. *Selective coding* is initiated at this point in the process allowing the analyst to focus coding on those categories that relate to

the core category (Glaser, 2005). Selective coding allows the researcher to identify the emergence of patterns among the remaining categories, how these categories relate to one another, allowing the theory to begin to emerge from the data.

As the theory begins to emerge, *theoretical sampling* is utilized to focus the researcher's data collection and analysis efforts on the emerging theory in order to avoid collecting "the same data over and over" (Glaser, 1978, p. 157). Theoretical sampling is used to guide the researcher to "where to go next" (Glaser, 1978, p. 37) and "provides the synchronization and direction for concurrent data collection, coding, analysis, and ultimately, category saturation" (Nilsen, 2013, p. 33).

The patterns emerging from data analysis ultimately led the researcher to the identification of a theoretical code when the researcher begins to "conceptualize how the substantive codes may relate to each other as hypotheses to be integrated into the theory" (Glaser, 1978, p. 55). Thus, the theoretical code assimilates the categories into a theory by establishing the relationships among the codes and categories. Glaser (1998) refers to theoretical coding as the emergence of "the latent structural patterns of the substantive theory" (p. 26).

MEMOING

Memoing is central to CGT and occurs throughout data collection and analysis. Memoing is a free-style process of note making that allows the researcher to capture ideas throughout the study (Glaser, 1978). Glaser considers memoing to be the "core stage in the process of generating theory" (2014, p. 13); memoing aids the researcher in the discovery of the core categories, to conceptualize the data, and to begin to define the data operationally in order to lead to connections among categories that will generate a

theory (Glaser & Horton, 2004). Memoing provides the researcher with a process “where the emergent concepts and theoretical ideas are generated and stored” (p. 2) throughout the study process to “put it all together into a grounded theory” (p. 14).

DATA ANALYSIS PROCESS

The data analysis process for the study followed the prescribed, yet fluid, steps of the CGT method. The analysis began once the first interview was transcribed and any information that could identify the study participant was masked. The researcher employed CCM, coding, and memoing in an ongoing and iterative process throughout analysis of the data, exploring each transcribed interview line-by-line in order to identify conceptual abstractions within the data. The use of open coding allowed concepts identified within the data to emerge. Every concept was compared to every other concept and to any new concepts that emerged from the ongoing data analysis. Throughout the analysis process, the researcher used memoing extensively to document his thoughts and questions related to the emerging patterns within the data. This process of analysis was repeated as each interview was conducted and transcribed.

CCM was utilized throughout the analysis of the data collected for this research study. CCM is an iterative process that allowed the data to be examined, categorized, and coded (Glaser, 1992). Open coding is a repetitive analysis of the data whereby the researcher attempted to answer the question “what is this data a study of?” (Glaser, 1978, p. 57). Ongoing CCM, coding, and memoing of the data through the 5th interview led the researcher to conclude that the bedside RN’s ultimate concern is what she must do to keep her patients safe from harm. Substantive coding was initiated to code for the main concern and the categories and patterns related to the participants’ main concern. Further

exploration of the concepts and their relationships led the researcher to label this main concern *indemnifying duty*, which he perceived to be the most appropriate phrase to reflect the main concern of the bedside RN: *Duty* is the responsibility the RN accepts when assuming the care of the patient; *indemnifying* describes the actions taken by the nurse in order to insure or protect from actual or probable harm to the patients in her care. Thus, *indemnifying duty* can best be described as an action or task that is required by the nurse's responsibility to protect those in her care from actual or anticipated harm.

Identifying the main concern of a group of people who share the experiences of a common phenomenon of interest is a key step in the CGT method. Once the researcher identified what he believed to be the main concern, the selective coding process helped to isolate how the participants resolved their main concern, which Glaser (1978, 1992, 1998, 2005, 2011, 2012, 2013, 2014) calls the core category. The researcher identified what he thought to be the resolution to the participants' main concern: *improvisational bridging*. Nevertheless, new concepts emerged from interviews with study participants 6 and 7, leading the researcher to conclude that theoretical saturation had not been achieved. Therefore, the data collection process continued in an effort to seek "theoretical completeness" (Glaser, 1978, p. 125) through the use of theoretical sampling. Glaser (1998) describes theoretical sampling as the "where next" in data collection, the "for what" in the emerging codes, and the "why" from the data analysis (p. 157). Theoretical sampling during continuing data collection and analysis allowed the researcher to identify and confirm links among the emerging categories. It was not until the interview with study participant #10 that the resolution to the main concern clearly emerged from the data and theoretical saturation occurred with no new properties emerging from the data.

Theoretical saturation is the phase of qualitative data analysis in which the researcher has continued sampling and analyzing data until no new data appear and all concepts in the theory are well-developed. In addition, a new and different core category emerged that accounted for the variations in how the bedside RNs resolved their main concern of *indemnifying duty*, which was by *exerting capacity*. The researcher selected the term, *exerting capacity*, to label the core category because it includes characteristics, beliefs, and behaviors of the bedside RN as she accommodated and coordinated her knowledge and actions to meet her goal of *indemnifying her duty* to her patients.

Once the potential core category, *exerting capacity*, was identified, the researcher used the CGT methods of theoretical sampling and selective coding to review the data and his memos from prior interviews. This review verified that *exerting capacity* was, indeed, the core category of the study. Interviews 11-13 validated the core category and assured that theoretical saturation had occurred.

Glaser (2014) describes memoing as being central to CGT and is considers it to be the “core stage in the process of generating theory” (p. 13). Memoing allowed the researcher to make notes in a free-style format and think about his data more conceptually rather than in a descriptive manner. Having memos in a format that allowed sorting was crucial in conceptualization of the data; it helped the researcher to vary the relationships among the categories and to identify “what is actually happening in the data” (Glaser, 1978, p. 83) thereby guiding him to the main concern and core category. It was during subsequent memoing that a theoretical code from the “paired opposites” (Glaser, 2005, p. 29) family of theoretical codes emerged: balancing. Balancing describes how people handle complex decision making when they are facing “many variables at

once. . .[and are attempting to] achieve a resolution" (Glaser, 2005, p. 29). The RN "balances" her capacity against the demands of the situation in order to fulfil her duty to keep her patients safe for a given period of time. This balancing of a multitude of simultaneously occurring dynamics easily describes the decisions a bedside RN must make when faced with keeping her patients safe. The nurse approaches this balancing act from the standpoint of one of two mind-sets of Exerting Capacity: me-centric or patient-centric.

Continued utilization of CGT data analysis techniques led the researcher to conclude that the *work milieu* and *authority* directly or indirectly influence the nurse's capacity to keep her patients safe. The substantive theory, *Exerting Capacity*, which explains how the bedside nurse indemnifies her duty to her patients by keeping them safe will be discussed in detail in chapter four.

TRUSTWORTHINESS

Any research study must demonstrate scientific rigor to be deemed of scientific merit. Representing the experiences of a study's participants is the goal of trustworthiness, or rigor, in qualitative research and is "demonstrated through the researcher's attention to and confirmation of information discovery" (Streubert & Carpenter, 2011, p. 48). Trustworthiness is the term that most often is used when referring to the credibility or plausibility of a qualitative study and is comparable to validity in quantitative research (Glaser, 1978). Glaser (1978, 1998) describes four criteria that should be met for a CGT study to demonstrate scientific rigor. These are: 1) fit, 2) work, 3) relevance, and 4) modifiability. The categories of a theory must fit, work,

and have relevance as they pertain to the research of the main concern of the participants (Glaser, 1978, 1998).

- *Fit* means that the categories of the theory “must fit the data” (Glaser, 1978, p. 4).

Categories and the theory must not be forced into preconceived conceptualizations (Glaser, 1978, 1998) but arise from the data itself. CCM helps to sharpen *fit* in order to adequately express the patterns identified in the data, thus the data *fits* the substantive area. *Exerting Capacity*, the substantive theory, emerged from the patterns in the data and, therefore, *fits*.

- *Work* describes a theory that can “explain what happened, predict what will happen and interpret what is happening” (Glaser, 1978, p. 4). Systematically analyzing and categorizing the data is how *work* is accomplished. The theory, *Exerting Capacity*, works because it emerged from the data as it explained and predicted patterns of behavior of bedside RNs who are attempting to protect their patients from harm.
- *Relevance* is achieved when problems and processes are identified and pulled together through data collection and analysis of the essential evidence. Glaser (1998) contends that *relevance* is what gives CGT its “grab” (p. 18). CGT brings relevance to the study of basic science by allowing “core problems and processes to emerge” (Glaser, 1978, p. 5) to reflect the main concerns of those involved (Glaser, 1978, 1998). Not only did the theory, *Exerting Capacity*, emerge from the study using the processes of the CGT method, but it reflected *indemnifying duty*, the main concern of the study participants.

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- *Modifiability* occurs through constant comparison of the data as well as constant comparison of the emerging theory to new data (Glaser, 1978, 1998). Glaser cautions the CGT researcher that theory is ever-changing and must not force the data but, instead, constantly evolve through its constant comparison with new, emerging data or verificational research (Carr, 2013; Glaser, 1978). *Exerting Capacity* may be applicable to other areas as a substantive theory; further, as new data emerges, it is feasible that the theory may be *modified* and ultimately be developed to the level of a formal theory.

HUMAN SUBJECTS

The research study presented no more than minimal risk to human subjects. The study procedures entailed no physical risks that could have occurred as a result of participation in this research. There were, however, potential risks for the participants in the study, those included loss of confidentiality and psychological distress. In an effort to mitigate the potential for breach of confidentiality, the researcher used participant codes as subject participant identifiers throughout the data collection, transcription, and analysis processes for those who consented to participate in the study. The researcher maintained one copy of the original, unedited transcript on his password protected personal computer that was designated solely for this research study. In addition, a back-up copy of the unedited transcribed was saved on a dedicated, password protected portable hard drive. A second, de-identified copy of the transcript was stored on the same personal computer, in a separate data file, as well as on a separate, dedicated portable hard drive. Both hard drives and the password protected tablet with the audio-recording application were stored

in locked cabinets in the researcher's office. Although all efforts were made to prevent such exposure from occurring, the risks remained.

The participant was provided with multiple opportunities to ask questions of the researcher regarding the verbal Consent to Participate and the study itself. Details of the privacy and confidentiality potential risks were disclosed prior to beginning data collection. The processes to ensure confidentiality of all de-identified data were discussed at length. The researcher was willing to respond to any concerns regarding confidentiality the participants may have had prior to the start of the interview, although none were identified by any of the participants.

The research topic of patient safety may have caused the participants some discomfort as they recalled certain events. The researcher, a RN, approached the interview process as an opportunity for the participant to speak freely about the topic. If the interview process had become uncomfortable for the participant, the researcher would have suspended the interview until the RN was able to resume it. Nevertheless, at no time during any of the data collection did study participants ask for, or require, temporary suspension of data collection due to discomfort.

SUMMARY

Chapter three has provided the reader with an overview of the CGT methodology (Glaser, 1978, 1998, 2005, 2011, 2012, 2013, 2014; Glaser & Strauss, 1967) utilized for this study exploring the perspectives of bedside RNs regarding patient safety in the adult, acute care environment. This chapter has described the study design including the procedures for study participant recruitment and sampling; the data collection, management, analysis processes, as well as how CGT analytic procedures were applied in

the study. This chapter also has described how this study adhered to the rigor of a scientific study and ethical considerations for the protection of human subjects.

PLAN FOR REMAINING CHAPTERS

Chapter four will provide a detailed description of the study findings, the substantive theory, *Exerting Capacity*. Chapter five will provide a discussion of the study.

CHAPTER 4: FINDINGS

Chapter four discusses the findings of this CGT study that explored the perspectives of bedside RNs regarding patient safety in adult acute care hospitals. Two specific aims of the study were:

1. To identify bedside RNs' values, realities, and beliefs pertaining to patient safety; and,
2. To explain and perhaps contribute to the development of a substantive theory reflecting bedside nurses' viewpoints about patient safety.

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The chapter will begin with a description of the study sample followed by a description of the main concern of the participants, *indemnifying duty*; then, a discussion of the two mindsets of capacity, *me-centric* and *patient-centric*; and, the two factors, *authority* and *work milieu*, that influence the RN's capacity to keep her patients safe from harm. The discussion will include a description of the substantive theory, *Exerting Capacity*, which emerged from data analysis utilizing CGT procedures (Glaser, 1978, 1998, 2005, 2011, 2012, 2013, 2014). At times, the report of the findings and the discussion of the substantive theory, *Exerting Capacity*, will be illustrated using quotes from study participants. Quotes will be cited using "SP," to indicate which participant made the statement, and "L," indicating the location of the line in the transcript.

The study sample consisted of thirteen RNs who provided bedside care for adult patients in acute care hospital settings. Twelve of the study participants were female, one was male (therefore, this document will use feminine pronouns to refer to the study participants). Table 4.1 summarizes the participants' demographic information. The age

range of the participants was 28 – 54 years ($M = 40.7$ years) at the time of the study. The number of years the participants had practiced as a bedside RN ranged from 3 – 19 years ($M = 10$ years 5 months) at the time of data collection. Six (46.2%) of the participants had earned a Bachelor of Science in Nursing (BSN) while seven (53.8%) had earned an Associate Degree in Nursing (ADN). Three (23%) of the study participants practiced as LVNs prior to becoming a RN and three (23.1%) of the participants were pursuing a BSN degree at the time of data collection. Seven (53.8%) of the study participants worked primarily on hospital units that provided critical care; the remaining six (46.2%) worked on medical/surgical/telemetry units.

Table 4.1: Study Sample Demographics

Age	Gender	Race	# of Yrs/Mos as Bedside RN	Education
39	F	Cauc	8.7	ADN
39	F	Cauc	10.0	ADN
45	F	Cauc	19.11	BSN
54	F	Cauc	4.8	ADN
43	F	Asian	12.0	BSN
47	M	Cauc	11.0	ADN
38	F	Cauc	15.1	BSN
43	F	Cauc	15.0	BSN
40	F	Hisp	13.0	BSN
41	F	Black	10.2	ADN
40	F	Black	3.0	ADN
32	F	Asian	5.5	BSN
28	F	Cauc	3.6	BSN

All thirteen of the study participants worked in hospitals located in Southeast Texas at the time of the data collection. Table 4.2 summarizes the participants' work settings. Seven (53.8%) of the RNs primarily worked the 7am – 7pm shift; four (30.8%) primarily worked 7pm – 7am; one (7.7%) worked the 3pm – 11 pm shift; one (7.7%) identified her primary shift as "Other." The nurses worked at hospitals ranging in size from 157 – 850 licensed beds; the hospitals were located in the community and large major medical centers. The capacity of the nurses' patient care units ranged from 10 to 36 beds.

Table 4.2: Participants' Work Settings

Identifiers	N	%
Current Shift		
7AM – 7PM	7	53.8%
7PM – 7AM	4	30.8%
3PM – 11PM	1	7.7%
Other	1	7.7%
Type of Unit		
Critical Care	7	53.8%
Med/Surg	5	38.5%
Telemetry	1	7.7%
Capacity of Unit		
Up to 20 beds	5	38.5%
21 – 30 beds	7	53.8%
31 beds and up	1	7.7%
# of Licensed Beds in Facility		
Up to 300	6	46.2%
301 – 500	6	46.2%
501 beds and up	1	7.7%

While the area of interest of this study is patient safety, the hallmark of CGT is to identify the main concern, and resolution of this concern, by participants who share a common experience of the phenomenon being studied (Glaser, 1998). The researcher asked each study participant to describe what patient safety meant to her. The nurses' definitions of keeping the patient safe included "to avoid any type of injury while they're inpatient at our facility" (SP4, L15) and "help them get well without any further injury" (SP2, L32-33).

Each of the RNs conveyed types of harm their patients might suffer while hospitalized. These included falls, HAPUs, urinary tract infections, CLABSIs, and injuries caused by medication errors. In addition, the study participants described interventions available to them that guarded against such harmful events. The interventions they described included utilization of special equipment (bed alarms, chair alarms, bed rails, restraints), implementation of processes (weekly dressing changes, routine turning-and-repositioning of patients, hospital-approved treatment protocols), and human resources (sitters and staffing ratios).

The nurses clearly communicated the importance of their roles in protecting their patients from adverse safety events. The nurses described their roles as "advocating for the patient" (SP7, L12) and the "last line of defense" (SP7, L846) against harm. Although unspoken by the study participants, the data reflected the RNs' distinct awareness of their duty to their patients. Thus, the main concern, *indemnifying duty*, describes the RN's obligation to her patient: guarding or securing against anticipated loss or harm to a patient in her care. *Exerting Capacity* is how the bedside nurse resolves her main concern, *indemnifying duty*; it is what the nurse must do to keep her patients safe. *Exerting*

Capacity is a 4-step process in which the RN reconciles her ability to coordinate and accommodate the boundaries of the intrinsic and extrinsic factors that constrain, in real time, her ability to indemnify her duty to her patients.

Exerting Capacity describes how the bedside RN balances her own capacity against the demands of a given situation to fulfill her duty to keep her patients safe. The bedside RNs *exerted capacity to indemnify their duty* to protect their patients from loss or harm by balancing the safety of their patients against harm through their actions and decisions. The nurses' ability to exert capacity comes from one of two mindsets: *me-centric* and *patient-centric*.

ME-CENTRIC

The *me-centric* nurse places herself at the center of her decisions and actions as she fulfills her duty to keep her patients safe from harm. *Me-centric* nurses are reactionary when identifying problems that might lead to patient safety issues. The nurses who approach *exerting capacity* from the *me-centric* mindset are more task-oriented in their approach to keeping patients safe. The *me-centric* nurses describe their own ability to keep the patient safe as doing so to the “best of my ability” (SP4, L31). *Me-centric* nurses can identify a patient in distress and can solve the problem before the patient suffers harm; nevertheless, they admit they are still learning how to prioritize the many factors that impact patient safety. *Me-centric* nurses appear to have less of a “big picture” view as it applies to the healthcare organization as a whole. The ability of *me-centric* nurses to solve a patient safety issue relies heavily on their knowledge of their organization’s policies and procedures, primarily the policies and procedures specific to

their unit, or the knowledge from other members of the nursing staff whom they revere as dependable, trustworthy resources.

PATIENT-CENTRIC

The nurse who has a *patient-centric* mindset places her patients at the center of her decision-making process. *Patient-centric* nurses spend their time planning how to prevent patient safety issues by anticipating the problems that might occur. They formulate an intervention based upon an anticipated awareness of the potential for harm or injury to their patients. The *patient-centric* nurse demonstrates actions that reflect someone using critical thinking to prevent a patient safety issue from occurring and describe their actions as coming from “intuition” (SP6, L555-561), “that sixth sense” (SP2, L456) and going “with your gut” (SP7, L766-767). They intervene based upon the recognition of a potential problem rather than waiting for their patients to become more at risk. The *patient-centric* nurse’s viewpoint goes beyond her patient unit to include a comprehension of what is going on in other areas of the hospital. In addition, *patient-centric* nurses are more likely to question a policy and procedure if it does not fit the circumstances of the patient who is at risk.

FACTORS IMPACTING CAPACITY

Two factors – *authority* and *work milieu* – have the ability to positively or negatively impact the nurse’s capacity to do what she must do to keep her patients safe from harm. *Authority* includes formal leadership and the RN’s self-awareness. *Work*

milieu includes equipment and technologic resources, as well as practice patterns and communication.

Authority

Authority encompasses the healthcare organization's formal leadership structure as well as its informal leadership. *Authority* also includes the nurse's capability to demonstrate characteristics of empowerment. *Me-centric* nurses recognize issues related to *authority* that are or can be problematic for them and for their patients, but tends to avoid communicating with formal leaders about issues. Thus, they are likely to avoid opening lines of communication with organizational leaders as the *me-centric* nurse maintains a focus on their respective patient unit and is less likely to have an awareness of prioritization dilemmas from other areas of the organization facing leaders. The *me-centric* nurse provides examples that indicate she is aware of edicts that are a result of the decision-making process at the leadership level that can, and do, impact patient safety (i.e., staffing levels, patient-to-nurse ratios, availability and maintenance of bedside patient equipment). Nevertheless, she believes leaders' priorities are misaligned because while there is an "extreme push" (SP1, L28) by leadership to provide patients with a safe environment, leaders "push back" (SP1, L41) when nurses ask for resources that are necessary to keep patients safe.

Although *me-centric* nurses can provide examples of healthcare organizational processes that have been initiated by the hospital's leaders to improve safety, the examples they provide are strategies that appear to have minimal immediate effect on patient safety. One nurse's example is her hospital's policy of differentiating clinical staff by the colors of scrubs worn. Another nurse's example is the use of annual clinical skills

validation as sufficient proof that a nurse will provide safe patient care. *Me-centric* nurses tend to see potential issues as “things outside of our control” (SP1, L458-459). Further, they do no perceive the gap between their capacity to perform their role and the expectations placed upon them by their patients and by the organization’s leaders as anything of significance.

The *patient-centric* nurse is persistent and comfortable in communicating with all levels of leadership; she does not hesitate to make the needs of the patient, as well as her own needs, known. She does not fear overstepping organizational lines of reporting authority if she believes her patient’s safety is in jeopardy. One nurse describes herself as “persistent” (SP2, L88) while another contends she is “comfortable” (SP7, L365) bringing up her concerns to members of her hospital’s management team when communicating her concerns with them. Further, the nurse with a *patient-centric* mindset is more cognizant of the gap between the expectations of patients and leaders, as well as her own capabilities. The *patient-centric* nurse is aware of the limitations that may interfere with her requests, but she finds ways to circumvent barriers so she can keep her patients safe until her requests can be met.

Work Milieu: Equipment/Technology, Practice Patterns, Communication

Work milieu, according to the study participants, also has the ability to directly or indirectly impact the nurse’s capacity to what she must do to keep her patients safe from harm. *Work milieu* includes equipment and technologic resources, practice patterns (policies and procedures), and communication (culture and practice environment).

EQUIPMENT/TECHNOLOGY

The *me-centric* nurse relies heavily on equipment and technology that she uses for patient safety. She knows how to use equipment designed to protect patients from injury or self-harm in the adult acute care environment. The *me-centric* nurse understands this equipment should be tested prior to use to be sure it is working and she recognizes that failure to confirm proper functioning of a piece of patient equipment can cause failure in *indemnifying duty* to her patients. The *me-centric* nurse knows there is a procedure in place and has a strong expectation that the equipment will not fail. Further, the *me-centric* nurses are prepared for how to respond in the event of scheduled or unscheduled equipment and technology downtime. The *me-centric* nurse is very comfortable with trends in technology that are implemented to improve patient safety and knows that implementing new technology is not easy (SP5, SP13). She relies heavily on technology as the primary method to keep her patients safe. She is highly dependent on the equipment being available, well maintained, and accessible when it is needed. Equipment such as bed alarms, electronic medical records, and barcode scanners for medication administration provide “a blanket of comfort” (SP5, L407) to the *me-centric* nurse. When that equipment is not immediately accessible, the *me-centric* nurse recognizes that the time she spends searching for equipment delays care but she believes the equipment is necessary to keep her patients safe. Although the *me-centric* nurse relies heavily on equipment and technology that is intended to improve patient safety, she avoids use of proven behaviors, processes, and actions routinely used by nurses that she views as time consuming although those above behaviors can have a positive impact on patient safety (i.e. “six rights” of medication administration).

The *patient-centric* nurse respects technological interventions, but considers them to play more of a supportive role (SP7, SP8) in the care of her patients; she also knows that equipment, by itself, cannot be trusted to prevent patients from suffering adverse events. The *patient-centric* nurse is less likely to rely on technology to avoid adverse patient safety events, although she incorporates it as an adjunct to promoting her patient's safety. Implementation of technology does not cause the *patient-centric* nurse to abandon her work practices that will protect her patients (i.e., "six rights" of medication administration). Moreover, she sees over-reliance on the use of technology is "dumbing things down" (SP9, L248) that impedes nurses' critical thinking and as a potential inhibitor of face-to-face communication among the team. She also contends that technology causes the nurse to spend less time with her patients.

The *patient-centric* nurse understands the rationale for ongoing equipment maintenance in addition to routine checks by the nurse; although she does not tend to rely merely on others who also are responsible for the ongoing maintenance of patient safety equipment. The *patient-centric* nurse is aware of the defined process for handling disabled equipment, but she is more likely to bypass this process in order to meet the immediate needs of her patient. She sees the workflow process of managing disabled equipment as an added responsibility for nursing and blames others for failing to own up to their respective roles in the maintenance of patient equipment to keep patients safe. Finally, the *patient-centric* nurse can deal with equipment and supplies that are not readily available by implementing workarounds to avoid a delay in keeping her patients safe. Although there are processes in place to correct such failures, the *patient-centric*

nurse is more likely to handle the situation on her own and is less likely to report the problem to management because she has experienced slow or no response and resolution.

PRACTICE PATTERNS

The *me-centric* nurse views the policies and procedures of the organization as how she should provide safe patient care. At the same time, she admits that she does not bring to the attention of leadership the actual practice patterns that contradict policy. While the *me-centric* nurse admits to knowingly making exceptions to the policies and procedures, she is more likely to see this behavior as a decision that makes her ability to provide care to the patient easier. Some examples of policies and procedures *me-centric* nurses acknowledge they may not strictly follow include hourly rounding (seeing each patient every hour to assess needs are met), use of double patient identifiers (the use of two patient identifiers as a means of identity verification prior to medication administration or beginning a procedure), and the time out process prior to a procedure (the point in time when the team stops to verify that they are about to perform the correct procedure on the correct patient). She does not view her failure to follow the process as an action of right or wrong, but to improve her care to the patient. The *me-centric* nurse fears retaliation by leaders and being blamed (SP1, SP4, SP6) for occurrences of failed patient safety. While the *me-centric* nurse is likely to report an actual safety issue, particularly if it is an anonymous process, she is more apt to report such issues to a more seasoned nurse because she believes that nurse is less likely to make her feel at fault when a patient issue occurs. Finally, the *me-centric* nurse also is likely to blame patient safety issues on a faulty process rather than a personnel error or omission. She believes

that process issues require reeducation of the nurse involved instead of disciplinary action.

The *patient-centric* nurse recognizes the importance of having policies and procedures for patient safety, but she also recognizes their inherent flaws. Moreover, she knows that resources to support successful implementation of some policies and procedures may be lacking. The *patient-centric* nurse sees policies and procedures as lacking consistency across an organization and as reactionary rather than proactive for keeping patients safe. She sees policies as being more a reflection of the culture and leadership rather than a reflection of actual nursing practice. In addition, she contends the policies lack the perspectives of bedside RNs because policies presume that patient safety can be achieved with a one-size-fits-all approach. The *patient-centric* nurse believes a nurse who does not adhere to a known policy or procedure has made a conscious decision between right and wrong.

The *patient-centric* nurse knows there are more potential compliance and/or patient safety issues that go unreported when nurses work in a punitive or retaliatory work environment. They believe that fear of retaliation contributes to non-collaboration, lack of communication, and a higher incidence of patient safety incidents because broken processes are not reported and, therefore, not corrected. The *patient-centric* nurse believes that retaliatory environments will tend to find the bedside nurse at fault and the nurse ultimately “takes the fall” (SP1, L180-181) for the outcome whether the patient safety issue was the fault of the nurse or a broken process. Further, the *patient-centric* nurse believes that adverse patient safety events may not be investigated fully

demonstrating a lack of support from organizational leadership for failing to find the root cause of the occurrence.

COMMUNICATION

The *me-centric* nurse demonstrates an awareness of the unit's and organization's goals pertaining to patient safety, but she is more focused on the results of her patient unit. The *me-centric* nurse knows the importance of patient safety initiatives, but she considers them additional steps in her routine for providing patient care. She believes these additional step are disruptions to her workflow and such disruptions in her routine can lead to errors. Further, the *me-centric* nurse is more likely to turn to technology for answers to her questions and she is less inclined to follow the organization's chain of command when she cannot find answers to her questions at lower levels. She also is less likely to verbalize her concerns about staffing levels, especially her own assignment, fearing she may be seen as admitting her own lack of skill and knowledge. Finally, the *me-centric* nurse is less likely to seek feedback from leaders following the investigation of an unsafe patient event on her unit instead choosing to wait for feedback. She is more likely to participate in employee surveys that seek feedback about the status of the organization's patient safety culture but she may not see attendance at staff meetings as important as these disrupt her workflow patterns.

The *patient-centric* nurse recognizes concerns about staffing levels and assignments based on patient acuity and she is more likely to raise her concerns to a manager. She has fewer reservations about utilizing the organization's chain of command if she believes there is a patient safety issue. While she recognizes the chain of command, she does not hesitate to overstep the reporting structure which she knows can create

tension with lower level leaders on the leadership hierarchy. The *patient-centric* nurse does not hesitate to publicly identify a co-worker who does not participate actively as a member of the team. She quickly recognizes the lack of team work on a unit and attempts to lead by example (SP7) in an effort to improve the safety of the patients. The *patient-centric* nurse often believes there is inadequate feedback provided to staff following an investigation of an incident; she wants debriefing to occur following an incident so the nursing staff can learn from the outcome and mitigate a repeat of the incident. Finally, the *patient-centric* nurse identifies a lack of credit (SP2) received by nurses for good patient safety results as a failure of management; at the same time, she believes too much transparency of patient safety data is not good for the bedside nurse as it can become overwhelming at times.

FOUR STEPS OF EXERTING CAPACITY

Exerting Capacity is how the bedside nurses resolve their main concern, *indemnifying duty*, to protect their patients from loss or harm. The nurse's capacity to protect her patients is constrained by her interpretations of her own abilities (intrinsic) and what is available to her in the work environment (extrinsic); the nurse only can act within the boundaries of these intrinsic and extrinsic capacities as she understands them. The nurse exerts her capacity in a four step process in which steps 2-4 each depends upon the nurse's actions in the prior step. The nurse *exerts her capacity* by:

1. Information gathering
2. Interpretation of the information
3. Recognition of responsibility
4. Response to recognition

Step 1: *Information gathering* is the nurse's ability to recognize that her patient is at risk for harm. She incorporates objective findings (i.e., a physical symptoms, fall risk score, environmental threats) and findings from the patient's subjective accounts (i.e., level of pain, abnormal symptoms) to identify the threat of harm to the patient.

Step 2: *Interpretation* is the nurse's ability to recognize and to know that the information gathered in Step 1 indicates the patient is at risk for harm. Interpretation has two components:

- A. The ability of the nurse to accurately interpret the data as being outside of the accepted range for her patient and knowing it poses a risk of harm to the patient; and,
- B. Recognition of the magnitude of the patient's risk.

Step 3: *Recognition of responsibility* is the nurse's ability to recognize the urgency of the situation and her responsibility to react to the risk of harm and protect her patient.

Step 4: *Response to recognition* is the nurse's decision making process to determine what she needs to do and whether she has what she needs (e.g., patient equipment) to protect her patient from the identified risk of harm. Also occurring in this step is the extent of action the nurse takes to respond to the recognition of the risk of harm by obtaining the necessary equipment.

Based upon the data that emerged from this study, the *me-centric* and *patient-centric* nurses have different capacities in their abilities to *indemnify their duty* to keep their patients free from harm.

SUMMARY OF CHAPTER FOUR

Chapter four has provided an in-depth review of the findings from the CGT study aimed at exploring the perceptions of bedside RNs regarding patient safety in the adult, acute care hospital setting. The chapter began with a review of the study sample followed by a discussion of how the main concern, the core category, two categories of emerging capacity, and two main sources of influence on capacity emerged through the use of the CGT analysis techniques CCM, coding, and memoing.

PLAN FOR REMAINING CHAPTER

Chapter five will provide a discussion of the study.

CHAPTER 5: DISCUSSION

INTRODUCTION

This research study focused on patient safety from the perspectives of bedside RN working in the adult acute care environment. CGT (Glaser, 1978, 1992, 1998, 2005, 2012, 2013, 2014) was used to explore the study participants' values, realities, and beliefs pertaining to patient safety, and data analysis led to the development of a substantive theory reflecting these nurses' viewpoints. In addition to offering an overview of the study findings and the substantive theory, Chapter five will provide an overview of how the methodology was used to answer the research question. Chapter five will also offer a comparison of the substantive theory to the extant literature. The chapter continues with a discussion of future research arising from the substantive theory, *Exerting Capacity*, as well as implications of the theory and other study findings for healthcare organizations, nursing leaders, and bedside nurses. Chapter five continues with a discussion of the significance of the study findings, strengths and limitations of the study, and the study conclusions.

STATEMENT OF THE PROBLEM

The IOM's 1999 report *To Err is Human: Building a Safer Health System* identifies the safety of hospitalized patients as a priority health issue. The number of lethal adverse events in hospitalized patients range from 44,000 to as many as 180,000 each year (IOM, 1999; James, n.d.). The IOM (1999) report synthesized the existing research addressing patient outcomes in an effort to stimulate further exploration into the potential factors that may contribute to unfavorable patient clinical outcomes. Improving

patient outcomes has been a primary focus of research related to patient safety since the release of the 1999 IOM report. Despite the implementation of evidence-based patient safety initiatives, the number of unexpected, unfavorable patient clinical outcomes in the hospital setting continues to be an issue. While nursing research identifies several indicators as potential factors affecting patient safety outcomes, a review of the literature revealed the vast majority of research into the concept of patient safety has been without the qualitative exploration of the perspectives of bedside RNs. Prior to this study, there has been no qualitative research utilizing the CGT methodology to examine the perspectives of bedside RNs about patient safety. Moreover, prior to this study, no extant theories have described patient safety from the perspectives of bedside RNs.

REVIEW OF THE METHODOLOGY

The study utilized Glaser's CGT methodology (1978, 1992, 1998, 2005, 2012, 2013, 2014) to explore the perspectives of bedside RNs with respect to patient safety in adult acute care hospitals. CGT is a well-established, rigorous, inductive methodological approach to explore areas of life where little is known, gathering data to explore how a group of people define their reality through their social interactions (Glaser, 1992). The goal of CGT, and of this study, is to gain an understanding of "what is really going on" (Glaser, 1998, p. 12) with a group of participants (bedside RNs) experiencing a common phenomenon (patient safety) in a particular setting (the adult acute care environment), including how they resolve their "main concern" (p. 18) (*indemnifying duty*) pertaining to the phenomenon of interest (patient safety) leading to the emergence of a substantive theory (*Exerting Capacity*).

Study participants were recruited through purposive and snowball sampling methods with the latter strategy providing the majority of participants. Thirteen bedside nurses who self-identified as RNs with at least two years' experience working at the bedside in adult acute care hospitals were interviewed for the study. Interviews were performed face-to-face, audio-recorded and transcribed by a professional transcription service. De-identified transcriptions were utilized, along with the researcher's memos, for data analysis. Data analysis incorporated three techniques unique to CGT that guide and are guided by the emerging theory: CCM, coding, and memoing (Glaser, 1978, 1992, 1998, 2004, 2012, 2013, 2014). Theoretical sampling guided the researcher as to "where to go next" (Glaser, 1978, p. 37) to collect data to the point of category saturation (Glaser). Selective coding allowed the researcher to identify the emergence of patterns among categories which led to the identification of a theoretical code. CGT employs an ongoing and iterative process (Glaser, 1978, 1992, 1998) that led to the identification of the participants' main concern, *indemnifying duty*, and the core category, *Exerting Capacity*. The substantive theory, *Exerting Capacity* is how the bedside nurses resolve their main concern, *indemnifying duty*, to protect their patients from loss or harm.

STUDY FINDINGS: THE SUBSTANTIVE THEORY, EXACTING CAPACITY

Exerting Capacity, the substantive theory that emerged from the research study, describes how the bedside nurse *indemnifies her duty* to keep her patients safe from loss or harm. Analysis of the data identified two mindsets in the nurse's ability to exert her capacity to protect her patients: *me-centric* and *patient-centric*. The nurse with *me-centric* tendencies places herself at the center of her decision-making processes regarding how to keep her patients safe; the *patient-centric* nurse's decisions revolve around what is best

for her patient. The *me-centric* nurse is more reactive to problems that might cause harm to her patient rather than demonstrating proactive decision responses as does the *patient-centric* nurse. In addition, the nurse with the *me-centric* mindset does not share the “big picture” perspective of the *patient-centric* nurse pertaining to how patient safety impacts and is affected by an entire organization. Furthermore, whereas the *patient-centric* nurse is capable of trusting her knowledge and skills to keep her patients safe, the *me-centric* nurse relies more heavily on her unit’s policies and procedures or the knowledge received from the *patient-centric* nurses she works with on the unit.

Both the *me-centric* and *patient-centric* nurses exert their capacity in a four-step process in which steps 2-4 depend upon the nurse’s actions in the prior step(s). These steps are: information gathering, interpretation of the information, recognition of responsibility, and response to recognition.

Step 1: *Information gathering* is the nurse’s ability to recognize that her patient is at risk for harm by incorporating objective and subjective findings to identify the threat of harm to the patient exists.

Step 2: *Interpretation* is the nurse’s ability to recognize and to know that the information gathered in Step 1 indicates the patient is at risk for harm.

Step 3: *Recognition of responsibility* is the nurse’s ability to recognize the urgency of the situation and her responsibility to react to the risk of harm and protect her patient.

Step 4: *Response to recognition* is the nurse’s decision-making process to determine what she needs to do, whether she has what she needs, and the extent of action the nurse needs to take to respond to the recognition of the risk of harm.

Two concepts were identified by the study participants as having the potential to directly or indirectly impact the nurse's ability to *exert her capacity*: *authority* and *work milieu*. *Authority* encompasses the organization's formal leadership structure, its informal leadership, and the nurse's capability to demonstrate characteristics of empowerment. *Work milieu* includes equipment and technologic resources, as well as practice patterns and communication.

COMPARISON TO EXANT LITERATURE

A cornerstone of the CGT method is that the research must be performed with an open mind by the researcher to prevent preconceptions and his own bias (Glaser, 2013) from influencing the study. Glaser warns CGT researchers that "preconceived questions, problems, and codes all block emergent coding" (p. 14). Therefore, Glaser strongly recommends that CGT researchers avoid a review of the current literature prior to the study to prevent preconceptions that can bias the researcher's interpretation of the data. Contrary to the traditional dissertation process, in which the researcher conducts a literature review prior to the start of the research study, the CGT researcher performs a review of the extant literature following the emergence of the study's substantive theory. Glaser (1998) wants CGT researchers first to analyze the data and identify the grounded theory, "then weave in the literature" (p. 73). In order for this researcher to follow the recommendation of the traditional dissertation process and be as true to the CGT method as possible, a literature review was conducted prior to IRB approval of the research study then put aside and not reviewed again until after the emergence of the substantive theory. The lapse in time between the initial literature review and the analysis of data was sufficient to avoid researcher bias during data interpretation.

The following section will provide a discussion of the study's findings compared to what is available in the extant literature. The ultimate goal of patient safety is to prevent harm from occurring to the individual while being treated as a patient. For the purposes of this research study, patient safety will be defined as recommended by Angood, Colchamiro, Lyzenga, and Marinelarena, (2009) at the National Quality Forum:

The prevention and mitigation of harm caused by errors of omission or commission that are associated with healthcare, and involving the establishment of operational systems and processes that minimize the likelihood of errors and maximize the likelihood of intercepting them when they occur (p. 4).

The extant literature provides a plethora of quantitative research examining the outcomes of patient safety and what some researchers believe are potential root causes of adverse patient outcomes. Nursing researchers have focused primarily on three areas that are suspected to be influential in the root causes of unfavorable patient clinical outcomes: *organizational safety culture, practice environment, nurse staffing*. The following sections will provide a brief overview of the literature related to each of these topics, including a discussion comparing and contrasting the findings of the present study and the study's contributions to the literature.

Safety Culture

The WHO (2009) emphasized the importance of a hospital's focus on its *safety culture* as an essential component of preventing or reducing errors in patient care. Nieva and Sorra (2003) suggest that patient safety in health care can adapt a definition of safety culture from the one used by The Advisory Committee on the Safety of Nuclear Installations. In part, that definition includes "Organizations with a positive safety culture are characterized by communications founded on mutual trust, by shared perceptions of the importance of safety and by confidence in the efficacy of preventive measures" (p.

ii18). While there is extensive research into the implications that a healthcare organization's safety culture may have on its patients' clinical outcomes (Armstrong & Laschinger, 2006; Ausserhofer et al., 2012; Clarke, 1999; Colla et al., 2005; Feng et al., 2008; Nieva & Sorra, 2003; Smits et al., 2012; Wang et al., 2014), a qualitative perspective from the view of the bedside nurse is missing from this body of research. The findings of the present study, which used a qualitative approach to explore the perspectives of bedside nurses about patient safety, revealed that components of a safety culture are important for bedside nurses to *exert capacity* to keep their patients safe. Nurses in the present study identify communication as a critical element in their ability to *exert capacity*. The *me-centric* nurse is less likely to communicate with organizational leaders including following the organization's chain of command on the topic of patient safety. The *me-centric* nurse fears being made to feel less competent in her ability to provide safe patient care and that her own skill or knowledge may be judged for reporting such concerns. The *me-centric* nurse's reluctance to communicate with her leaders also impairs her initiative to ask questions of organization leaders; her reluctance to seek clarification of communications received from the leadership indicates to the organization leaders that their messages have been received and understood. The *me-centric* nurse is left with her questions unanswered because she did not voice them. Nevertheless, she is likely to perceive the situation as a lack of priority by leaders on the issues of patient safety. The *me-centric* nurse concedes to utilize technology or another nurse she deems as a reliable resource to answer questions or respond to concerns she may have about a patient safety issue. The *patient-centric* nurse is more likely to communicate with leaders when patient safety is an issue, although she does not expect quick corrective action.

because of past experiences. While the *patient-centric* nurse is capable of understanding the perspective of hospital leaders regarding the importance of patient safety, she readily admits that there is a gap between the levels of importance perceived by the bedside nurse compared to that of the leaders.

Practice Environment

The *practice environment*, or work environment, also is believed to have an impact on patient safety, particularly as it is perceived by the bedside nurse. Lake (2002) defines the nurse practice environment as “the organizational characteristics of a work setting that facilitate or constrain professional nursing practice” (p. 178). Nursing researchers have examined the relationships between nurses’ perceptions of their practice environments and patient outcomes (Aiken et al., 2012; Boev, 2012; Boswell, Lowry & Wilhoit, 2004; Brooks & Anderson, 2004; Hayhurst et al., 2005; Kirwan et al., 2012; Manojlovich & DeCicco, 2007; Stone et al., 2007;) including failure to rescue, length of stay, falls and hospital-acquired infections. The majority of this research was performed using the Practice Environment Scale of the Nursing Work Index (PES-NWI) instrument (Kramer & Hafner, 1989; Lake, 2002) “to gauge the state of nursing practice environments” (Warshawsky & Havens, 2011, p. 17). Although some studies have explored the perceptions of bedside nurses using the PES-NWI, such research omits qualitative data exploring the perspectives of bedside nurses that can enrich the quality of the findings.

An important aspect of the practice environment is the impact that a perceived punitive or retaliatory environment has on bedside nurses. As demonstrated by Feng et al.’s (2008) dimensional concept analysis of patient safety, management support,

including “a non-blame and forgiveness environment” (p. 313) is a key component in an environment of patient safety. Such an environment leads to “open communication of errors and fair analyses of causes” (p. 314). An organization with a punitive and retaliatory practice environment is unable to learn from its mistakes and can inhibit bedside RNs from reporting patient safety concerns, thus perpetuating the reoccurrence of unresolved patient safety issues. *Me-centric* nurses in this study confirmed that a punitive or retributive work environment negatively impacted their willingness to openly communicate errors to leaders. Further, the *me-centric* nurse believes patient safety issues more often are due to faulty processes rather than personnel errors. Thus, she supports reeducation, rather than disciplinary action, following adverse patient events. The *patient-centric* nurse acknowledges that fear of retaliation contributes to non-collaboration between bedside nurses and hospital leaders causing patient safety issues to go unreported. The *patient-centric* nurse wants to know the outcome of investigations into adverse patient events; when such feedback is not shared with nursing staff, the *patient-centric* nurse perceives that the investigation was incomplete or inadequate.

Nurse Staffing

Nurse staffing, the third of the three suspected root causes for patient outcomes, can be traced back in the nursing research literature to 1960 (Blegen et al., 1998). Nevertheless, despite its history in the research into patient safety, there are disagreements as to the most appropriate method to measure nurse staffing levels. For example, Blegen et al. (2011) utilized total hours of nursing care per day as its measure of nurse staffing level. Hart and Davis (2011) included nursing (RN) hours per patient day and percent RN hours by agency staff as operational variables in their study. Schubert et

al. (2012) measured patient-to-nurse ratios in their study of staffing level and its relationship to impatient mortality. Other studies of staffing level and its impact on patient clinical outcomes (Buerhaus et al., 2000; Holden et al., 2011; Needleman et al., 2002; Schubert et al., 2008; Whitman et al., 2002) offer various, and sometimes contradictory, findings regarding the impact that nurse staffing levels have on NSOs, or clinical outcomes that are considered to be quality indicators responsive to nursing intervention (Stanton & Rutherford, 2004). To date, research findings with respect to staffing levels and their relationship to NSOs are inconclusive. Nurses in the present study did not perceive nurse staffing as a primary factor in keeping their patients safe. Instead they saw nurse staffing as another extrinsic factor bedside nurses deal with when taking care of their patients. While both the *me-centric* and *patient-centric* nurses agreed that lower patient-to-nurse ratios improves their ability to care for their patients, they did not view nurse staffing as a primary factor in keeping their patients safe.

This study's findings revealed the theory of *Exerting Capacity* is more about the bedside nurse rather than the influences external to the nurse. The key factor for the nurse indemnifying her duty to keep her patients safe is her ability to do what she must do in order to keep her patients safe. The theory of *Exerting Capacity* reveals a typology of two types of bedside RNs based on how they meet the demands of keeping their patients safe from harm: *me-centric* and *patient-centric*. It is important to note the descriptions of these two nurses are a typology and must not be confused with the levels of professional nurse skill performance and development described by Benner (1982). The *me-centric* nurse is self-focused in her decision making and actions that keep her patients safe. She is more reactionary to potential patient safety issues; it is important to note that the *me-centric*

nurse is able to identify a patient in distress and can recognize the problem before the patient suffers harm. Several of the characteristics that are described of the *me-centric* nurse in the *Exerting Capacity* substantive theory can be compared to Benner's (1982) Competent level. Benner explains that the Competent Nurse has "...difficulty grasping the current patient situation in terms of the larger perspective...[and] as a test of their abilities and the demands of the situation placed on them rather than in terms of the patient needs and responses" (Brykczynski, 2006, p. 145). Further, like with the *me-centric* nurse, Benner's Competent level nurse "is supported and reinforced institutionally, and...[the] standardization and routinization of procedures most often reflect the competent level of performance" (Benner, 1982, p. 405).

The *patient-centric* nurse, in contrast, places the patient at the center of her decision making and anticipates problems before they occur. The *patient-centric* nurse demonstrates actions that exhibit the capacity to identify the potential for a patient injury to occur versus waiting for the patient to be at risk and then responding. The *patient-centric* nurse typology of the *Exerting Capacity* theory reveals several of the attributes Benner (1982) uses to describe the Expert Nurse. For example, Benner states that the Expert Nurse "...no longer relies on an analytical principle (rule, guideline, maxim) to connect her/his understanding of the situation to an appropriate action" (p. 405). Furthermore, Benner contends the Expert Nurse "...has an intuitive grasp of the situation and zeroes in on the accurate region of the problem without wasteful consideration of a large range of unfruitful possible problem situations" (p. 405). The difference between the two nursing typologies in *Exerting Capacity* and Benner's application of the Dreyfus Model of Skill Acquisition (1980) is that Benner's model "offers guidelines for career

and for knowledge development in clinical nursing practice” (p. 407). *Exerting Capacity*, on the other hand, explains how the bedside nurses think about patient safety; how they process their thoughts, knowledge, and environment; and, finally, how they react to the situation to keep their patients safe. The mindset of the nurse as *me-centric* or *patient-centric* does not depend upon the level of the practitioner according to Benner’s model.

IMPLICATIONS

Exerting Capacity, the substantive theory that emerged from the study of what the bedside RN believes she must do in order to keep her patients safe, describes:

- The abilities the bedside nurses believe are necessary to accommodate and coordinate their knowledge and actions to *indemnify their duty* to their patients; and,
- How the bedside nurse balances her *capacity* against the demands of a given situation to fulfill her duty to keep her patients safe from loss or harm.

This section will discuss the implications of the substantive theory, *Exerting Capacity*, as well as suggestions for future research, and will explore implications for healthcare organizations, hospital nursing leaders, and bedside nurses. Suggestions for future research include instrument development to identify capacity, measuring the gap of awareness of patient safety between hospital leaders and nurses, and how nurses are impacted by the healthcare organization’s milieu.

The foremost implication of this study is that more research is needed into the substantive theory, *Exerting Capacity*. The substantive theory, *Exerting Capacity*, explains how the bedside nurse balances her own *capacity* through actions and decisions against the demands of a given situation to fulfill her duty to keep her patients safe

against harm. Two factors, *authority* and *work milieu*, directly or indirectly impact the nurse's *capacity* to do what she must do to keep her patients safe from harm. *Authority* includes formal leadership as well as the nurse's capacity to demonstrate empowerment. *Milieu* includes equipment and technologic resources, practice patterns (e.g., policies & procedures), and communication (including work environment and culture). *Capacity* describes the phenomenon of what the nurse must do, through her thoughts and actions, to keep her patients safe, but stimulates the question: how does one identify the nurse's *capacity*? There currently is no objective indicator of *exerting capacity*, therefore further research into the development of an instrument for identifying *capacity* may be one aim of a future study.

Healthcare Organizations

The substantive theory, *Exerting Capacity*, has several implications for healthcare organizations and their leaders. Although keeping patients safe is important to the healthcare organization as a whole, patient safety goes beyond merely supplying the latest-and-greatest technology and equipment. It is imperative for healthcare leaders to recognize that nurses are the most crucial factor in keeping patients safe. This study's findings revealed the theory of *Exerting Capacity* is more about the nurse rather than factors external to the nurse. The key issue for the bedside nurse keeping her patients safe is her ability to do what she must do in order to keep her patients safe.

The substantive theory, *Exerting Capacity*, reveals that healthcare leaders' perceptions of what is needed to promote patient safety is very different than what nurses believe is necessary for keeping patients safe. *Me-centric* nurses perceive that healthcare are concerned about the outcomes of patient safety, but are not concerned enough to

make themselves aware of what the bedside nurse must have and do to keep her patients safe. She identifies this as a misalignment of the leaders' priorities. The *patient-centric* nurses saw a gap of awareness between the hospital leaders' demand for better patient outcomes while providing fewer resources to ensure the objectives are met. This, the *patient-centric* nurse believes, is caused by the conflicting priorities that healthcare leaders face at all levels of management: attaining the expected clinical outcomes but doing so within fiscal constraints.

Another implication of the study findings for healthcare organizations, which may serve as a suggestion for future research, is how the nurse is impacted by the *milieu* of the healthcare organization. As stated above, the work *milieu* includes equipment and technologic resources, practice patterns (e.g., policies & procedures), and communication (including work environment and culture). How does the environment in which the nurse functions impact her *capacity* to keep her patients safe? The extant literature indicates a possible causal relationship between a nurse's perception of her work environment and patient safety outcomes (Boswell et al., 2004; Hwang & Hwang, 2011; Stone et al., 2007). The results of this study revealed positive and negative attributes of the work *milieu* that impact the nurses' capacity to keep their patients safe but did not explicate the direction of that impact. One example of how milieu impacts the nurses' capacity to keep their patients safe is the availability and use of technology and medical equipment designed to promote patient safety. Both the *me-centric* and *patient-centric* nurses readily incorporate innovative technology and medical equipment into the care of their patients. However, the *patient-centric* nurse is less likely to be dependent on that technology or equipment for keeping her patients safe. The *me-centric* nurse will forego proven nursing

processes that promote patient safety (e.g., the six rights of medication administration) when technology such as barcode scanners is available; instead the *patient-centric* nurse adds the technology to long-standing processes designed to keep patients safe.

Practice patterns, such as policies and procedures, are an important element in hospital organizations' efforts to provide safe patient care. Healthcare leaders should be aware that bedside nurses' perceptions of policies and procedures may not be congruent with how policies and procedures are perceived by organizational leaders. Although the *me-centric* nurse may be aware that actual practice patterns contradict policy, she is not likely to bring this discrepancy to the attention of hospital leaders. Instead, she will knowingly make exceptions to the policies and procedures to make her workflow easier. The *patient-centric* nurse recognizes inherent flaws in the organization's policies and procedures; she believes the policies and procedures are a reflection of the organization's culture and are more reactionary than proactive for keeping patients safe. Moreover, the data from the study indicates that she believes policies lack the perspectives of bedside nurses.

Other researchers (Ausserhoffer et al., 2012; Smits et al., 2012; Wang et al., 2014) have suggested a causal relationship between nurses' perceptions of hospital workplace culture and patient outcomes. Hospital leaders must be aware of the healthcare organization's culture, both actual and perceived, with regard to patient safety and clinical outcomes. How a bedside nurse perceives her organization's or unit's culture impacts what she may or may not report to leaders regarding patient safety issues. A *me-centric* nurse is more likely to report a patient safety issue to a more seasoned nurse, particularly if she believes it will help her to avoid a punitive response from leaders,

whether the issue was caused by an individual or a process. She also is a proponent of reeducation in lieu of disciplinary action in response to an adverse patient outcome. The *patient-centric* nurse recognizes that fear of retaliation contributes to a non-collaborative, non-transparent workplace which tends to lead to a recurrence of patient safety issues. She also casts doubt on the investigation process into the root causes of adverse patient safety events. Thus, *milieu* factors may maximize, or constrain, the nurse's ability to *exert her capacity* and, as a result, impact the nurse's ability to keep her patients free from harm. More qualitative research into nurses' perspectives about their work environments is warranted to enhance understanding of the possible causal relationship between the work environment and patient outcomes.

Nursing Leadership

The substantive theory, *Exerting Capacity*, provides information to nursing leaders that can assist leaders to help keep their patients safe. The theory describes the bedside nurse's capacity to protect her patients within the boundaries of her capacity as she understands them. The boundaries of capacity may be intrinsic (the nurse's own abilities) and extrinsic (authority and work milieu). *Exerting Capacity* explicates two typologies of nursing mindsets, the *me-centric* nurse and the *patient-centric* nurse, as well as a four-step process in which the nurse exerts her capacity. Nursing leaders should recognize how, and why, the ability of bedside nurses to *exert their capacity* is important for them to protect the safety of their patients. Moreover, nursing leaders should understand the four-step process and how each type of nurse successfully accomplishes each step.

Nursing leaders need to recognize what the bedside nurse perceives as constraints or facilitation of her ability to fully exert her capacity. Communication, for example, can promote or impede the bedside nurse's ability to keep her patients safe. The *me-centric* nurse is less likely to verbalize her concerns about patient-to-nurse ratios to nurse leaders for fear that it might be perceived as an admission of her lack of skill or knowledge. Further, she does not identify staff meetings as an ideal platform to learn about patient safety issues. The nurse leader's management style also may be perceived as supportive of, or a barrier to, the nurse's ability to *exert her capacity* to keep her patients safe. Once such example is provided by the *patient-centric* nurse who believes that failure to provide positive feedback to nurses is perceived as non-supportive by nursing leaders of bedside nurses.

The nursing leader who is aware of the differences and preferences between the *me-centric* and *patient-centric* nurses can then identify the type(s) of nurses she employs on her nursing unit and consider the optimal mix of nurses on the unit. Is the *me-centric* or *patient-centric* nurse a good fit for the type of unit and the types of patients primarily treated on the unit? Does the type of patient require nurses to perform from a more task-oriented perspective (*me-centric*) or should the nurses have a greater comprehension of workflow processes in other areas within the organization (*patient-centric*)? If the unit has a mix of the two types of nurses, does the nursing leader employ a sufficient number of *patient-centric* nurses who are available for the *me-centric* nurses to seek out as resources? Awareness of differences and preferences between the two types of nurses will help the nursing leader to identify how each type of nurse will *exert her capacity* to keep her patients safe.

A nurse leader understanding of the four steps of exerting capacity – information gathering, interpretation, recognition of responsibility, and response to recognition - can contribute to identifying the ongoing educational needs of, and performance improvement by, bedside nurses. Nurse leaders can identify bedside nurses' strengths and weaknesses within the four-step process of exerting capacity through:

- Assimilation of observations and feedback by preceptors of the bedside nurse,
- Quantitative data analysis of the bedside nurse's patient outcomes,
- Qualitative data analysis of feedback from physicians, patients, and other ancillary staff; and,
- Analysis of patients' medical records.

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Such data can provide the nurse leader with information to assist her to modify communication and management style to help each nurse foster an enhanced understanding of her capacity to keep her patients safe.

Bedside Registered Nurses

Finally, nurses need to understand the implications of the study's findings and what the theory, *Exerting Capacity*, might tell them about how they keep their patients safe. It is important for the bedside nurse to be aware that the study results do not indicate that either the *me-centric* or the *patient-centric* nurses provide better patient care than the other. These two types of nurses are distinguishable by their commitment and behaviors in keeping their patients safe. Each type of nurse is able to do what is needed to keep her patients safe; the difference is the approach they use. Recognizing the type of nurse she is also may help the nurse to understand if she is working for a healthcare organization and/or nursing unit that is compatible with her particular typology of *Exerting Capacity*.

She must ask herself if she is suited to work in the existing culture of the nursing unit or healthcare organization. Further, her nursing leader's management and communication styles will impact the nurse's ability to *exert her capacity* to keep her patients safe.

SIGNIFICANCE

This qualitative study exploring the perceptions of bedside RNs in the adult acute care environment is the first of its kind in two ways. First, it is the first study to use CGT to explore patient safety from the perspective of the bedside RN. Second, it is the first qualitative study to conceptualize patient safety from the perspectives of bedside RNs through development of the substantive theory, *Exerting Capacity*. The study findings have implications for healthcare organizations and its leaders, nursing leaders, and bedside nurses who care for patients. The substantive theory, *Exerting Capacity*, provides other nursing researchers with a conceptual framework from which a formal theory can be developed. *Exerting Capacity* lends itself to Glaser's (1978, 1998) fourth criterion for a qualitative study to demonstrate scientific rigor: modifiability. *Exerting Capacity* may be modifiable by application to other professions in which an individual must balance the demands of a given situation within the constraints of his/her *capacity* to accommodate and coordinate knowledge and actions to meet the demands of the role or a situation. The study results also identify a gap between the perceptions of the bedside nurse and those of healthcare leaders pertaining to patient safety. For the healthcare leader, keeping patients safe is primarily an objective value measured by clinical outcomes. From the perspective of the bedside nurse, patient safety is measured by successfully reconciling situational events that present in real time as she provides care to her patient. Finally, the results of

the study are significant because they identify another key element of patient safety that may have been overlooked: the perspective of the bedside nurse.

STRENGTHS AND LIMITATIONS

This CGT study has several strengths and limitations. Strengths include the use of an inductive methodology that allowed the researcher to focus on the data and gain a fresh, unbiased perspective on an important healthcare issue: patient safety. Perceptions prior to the data collection and analysis in a CGT study can lead to bias on the part of the researcher giving the researcher a blank slate from where to begin his work. Although the researcher was a novice to this methodology and qualitative interviewing, he placed his trust in the method. He also relied on his Research Advisor, an experienced CGT nurse researcher, to monitor his research process for bias as well as allowing the methodological process to work. The results of this CGT study are an attestation that the method does work as it is intended; the emergence of the substantive theory, *Exerting Capacity*, is an exemplar of the method.

Some elements of this study may be seen as potential limitations of the study. These include the number of study participants ($n=13$), the limited geographic area from which the study participants were recruited (Southeast Texas), and the fact that study participants self-selected. Nevertheless, the qualitative researcher focuses on the detail offered by the individual. Creswell (2016) discusses the value in focusing on a small number of participants in qualitative studies, commenting, “If we studied a large number, we would lose the richness of learning from a few and lose the depth of understanding specific individuals” (p. 7). Glaser (1978, 1992, 1998, 2005, 2011, 2012, 2013, 2014) contends that demographics are less important than the concepts and categories that

emerge from a CGT study. Instead, Glaser (1978) believes a CGT study should have “grab” (p.4), or be interesting; the findings should “fit”; and explain the data or “work” (p.4). Moreover, a CGT study must be modifiable as new data emerge.

CONCLUSION

Patient safety has been at the forefront of nursing research since the release of the IOM’s (1999) report on the number of adverse patient events in hospital settings, yet no research to date has incorporated the perspectives of the bedside nurse. This CGT study explored the perceptions of bedside registered nurses in adult acute care hospitals regarding patient safety. Interviews with the thirteen study participants and the researcher’s memos comprised the study data. The study data was analyzed using three techniques unique to CGT: the constant comparative method, coding, and memoing (Glaser, 1978, 1992, 1998, 2004, 2012, 2013, 2014). This study is the first of its kind to use CGT to explore the perspectives of bedside nurses about patient safety thereby resulting in a substantive theory, *Exerting Capacity*, which explains bedside nurses’ thoughts and actions in *indemnifying their duty* to their patients. The substantive theory has implications for healthcare organizations and its leaders, nursing leaders, and bedside nurses; it also has indications for future research into the topic of patient safety.

APPENDIX A: IRB APPROVAL LETTER



Working together to work wonders.™

12-Nov-2014

MEMORANDUM

TO: John Leger,
MBA,BSN/Carolyn
Phillips, PhD,RN Graduate
School

Andrea Mkiag

FROM: Michael Loeffelholz, PhD
Institutional Review Board,
Chairman

RE: Initial Study Approval

IRB #: IRB # 14-0390

TITLE: The Bedside Registered Nurse's Perception of Patient Safety: A Grounded Theory Study

DOCUMENTS: Protocol, Oral Consent Script, Recruitment flyer, Nurse Research Council Email, Nursing staff email, Potential Study Participant Email, Courtesy Telephone Appointment Reminder, Courtesy Appointment Reminder Email, Data Collection Sheet, Interview Questions

The UTMB Institutional Review Board (IRB) reviewed the above-referenced research protocol via an expedited review procedure on **30-Oct-2014** in accordance with 45 CFR 46.110(a)-b(1). Having met all applicable requirements, the research protocol is approved for a period of 12 months. The approval period for this research protocol begins on **12-Nov-2014** and lasts until **30-Oct-2015**.

Written documentation of consent is waived in accordance with 45 CFR 46.117(c).

The research protocol cannot continue beyond the approval period without continuing review and approval by the IRB. In order to avoid a lapse in IRB approval, the Principal Investigator must apply for continuing review of the protocol and related documents before the expiration date. A reminder will be sent to you approximately 90 days prior to the expiration date.

The approved number of subjects/specimens to be enrolled/utilized for this project is **30**. If the approved number needs to be increased, you first must obtain permission from the IRB to increase the approved sample size.

If you have any questions related to this approval letter or about IRB policies and procedures, please telephone the IRB office at 409-266-9475.

APPENDIX B: STUDY RECRUITMENT FLIER

Are your patients safe?

As a bedside Registered Nurse, what are

YOUR THOUGHTS/BELIEFS about patient safety in the hospital?



Study volunteers are needed for a research study exploring the perceptions of bedside Registered Nurses (RN) in the adult, acute care environment about patient safety.

Study participants should:

- be a registered nurse
- with at least the most recent two years of experience working as a bedside/staff RN in an adult, acute care hospital setting
- be willing to participate in at least one face-to-face interview lasting up to 90 minutes

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Interested? Contact Michael Leger at jmleger@utmb.edu

APPENDIX C: EMAIL TO INTERESTED STUDY PARTICIPANT

Email to Interested Study Participant

Dear Colleague:

Thank you for your interest in my research project “The Bedside Registered Nurse’s Perception of Patient Safety: A Ground Theory Study.”

If you are interested in sharing your insights and perspectives into patient safety, and believe you meet the inclusion criteria, I would like to schedule a time for a brief telephone call to discuss the study with you. Please respond to this email with the following information

1. A preferred telephone number in order for me to contact you.
2. At least (3) options for dates and times you are available for a 10 minute telephone conversation.
3. Include the time zone you will be in at the time of the call (if other than Central Standard Time).

I greatly appreciate your interest in my study and look forward to speaking with you.

Sincerely,

J. Michael Leger, MBA, BSN, RN

Principle Investigator

jmleger@utmb.edu

Text Message to Interested Study Participant

Thanks for your interest in my study. I’d like to schedule a 10-min call with you to discuss the study, etc. What dates/times might be good for me to call you to discuss?

APPENDIX D: CONFIRMATION EMAIL OF TELEPHONE APPOINTMENT

Confirmation Email of Telephone Appointment

Dear Colleague:

Thank you for your interest in being a study participant in my research project "The Bedside Registered Nurse's Perception of Patient Safety: A Ground Theory Study."

This email is a confirmation of our appointment to discuss the study:

Date:

Time

Number to Call:

If for any reason this date/time/telephone number is no longer correct, please notify me via email at your earliest convenience. Again, I greatly appreciate your interest and look forward to speaking with you.

Sincerely,

J. Michael Leger, MBA, BSN, RN

Principle Investigator

jmleger@utmb.edu

Text Message to Interested Study Participant

Thanks for your interest in my study. We are scheduled to talk by telephone on DD-MM-YY at HH:MM AM/PM. I am to call you at this number. If you need to change date/time/number, please let me know. Thanks.

APPENDIX E: CONFIRMATION EMAIL OF DATA COLLECTION APPOINTMENT

Confirmation Email of Data Collection Appointment

Dear Colleague:

Thank you for your interest in being a study participant in my research project "The Bedside Registered Nurse's Perception of Patient Safety: A Ground Theory Study." This email serves as a reminder of our scheduled appointment. During the appointment, I will discuss the study, obtain your verbal agreement to participate, and collect demographic and interview data.

Date:

Time:

Location:

If for any reason this date/time/location is no longer convenient for you, please notify me via email at your earliest convenience. Again, I greatly appreciate your interest and look forward to meeting you.

Sincerely,

J. Michael Leger, MBA, BSN, RN

Principle Investigator

jmleger@utmb.edu

Text Message to Interested Study Participant

Thanks for your interest in my study. We are scheduled to meet at LOCATION on DD-MM-YY at HH:MM AM/PM to complete the interview. If you need to change date/time/location, please let me know. Thanks.

APPENDIX F: NARRATIVE TO OBTAIN ORAL CONSENT

Narrative to Obtain Oral Consent

You are being asked to participate in my research project “The Bedside Registered Nurse’s Perception of Patient Safety: A Grounded Theory Study.” I am currently a student in the nursing PhD program at the University of Texas Medical Branch in Galveston, Texas.

I am interested in exploring the bedside RN’s perceptions, values, and beliefs pertaining to patient safety in the adult, acute care hospital setting. You have identified yourself as a bedside RN in the adult, acute care environment. There are minimal risks for participate in the study; these are loss of confidentiality and emotional distress. To protect your privacy, a Participant ID will be used instead of your name and any information that might possibly identify you will be removed or masked.

The data I will ask you to provide includes demographic information and your responses to interview questions. This interview should last no longer than 90 minutes. You might be asked to participate in one additional interview, but it will not exceed 45 minutes.

There are no benefits and no reimbursement for participating in this study; there is no cost for participating.

You can stop the interview or withdraw from participating in the study at any time. You have the right to refuse to answer any question you are asked.

Do you have any questions about the study or your participation? (At this point, the researcher will answer any questions you may have. Once your questions have been answered to your satisfaction, the researcher will ask the next question.)

Are you willing to participate in this study? Your verbal assent will allow me to turn on the recording devices and begin collecting data.

APPENDIX G: DEMOGRAPHIC DATA FORM

SP Code: _____
Interviewer: _____ Date of Interview: _____

DEMOGRAPHIC DATA

1. Age: _____
2. Gender: M F
3. Ethnicity: _____ Non-Hispanic/Latino _____ Hispanic/Latino
4. Other Racial Data:
 - a. American Indian or Alaska Native
 - b. Asian
 - c. Black or African-American
 - d. Caucasian
 - e. Native Hawaiian or Other Pacific Islander
 - f. Other: _____
5. Number of years/months as RN: _____ years _____ months
6. Number of years/months as Bedside RN: _____ years _____ months
7. Highest level of formal nursing education completed:
 - a. ADN/Diploma
 - b. BSN
 - c. MSN
 - d. PhD/DNP
8. Current shift worked (primarily):
 - a. 7a – 7p
 - b. 7p – 7a
 - c. 7a – 3p
 - d. 3p – 11p
 - e. 11p – 7a
 - f. Other (Please describe): _____
9. Type of unit worked (primarily):
 - a. Medical
 - b. Surgical
 - c. Medical/Surgical
 - d. Telemetry
 - e. Critical Care Type: _____
 - f. Other: _____
10. Location (state only) of current worksite: _____
11. Size of the organization/hospital (Number of licensed beds): _____
12. Size of the unit worked (Primarily) (Number of licensed beds): _____

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APPENDIX H: INTERVIEW QUESTIONS

Interview Questions

Grand Tour Question: What does patient safety mean to you?

Probing Questions – To be utilized during the interview to encourage increased transparency of the Study Participant’s responses to the Grand Tour Question.

1. What do you mean when you say “_____”?
2. Tell me more about _____.
3. What makes you say “_____”? Can you provide me with specific examples?
4. What makes you use terms like X, Y, and Z to describe patient safety?

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Open-ended Questions – The researcher may utilize these open-ended questions as indicate to stimulate the participant’s discussion.

1. How do you define patient safety?
2. Based on your experience, what elements are necessary in order for a hospital environment to be considered safe for patients?
3. What do you think is the RN’s role in promoting patient safety?
4. What are some of the things that you do, as a nurse, to promote patient safety that might be different than from what other RNs do?
5. How do you know you are making a difference in patient outcomes?

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At the conclusion of the interview, the researcher will ask the RN if s/he has any questions or comments and will inform the RN to communicate to the researcher any additional ideas or questions via email.

APPENDIX I: CLIENT NON-DISCLOSURE AGREEMENT

CLIENT NON-DISCLOSURE AGREEMENT

This **CLIENT NON-DISCLOSURE AGREEMENT**, effective as of the date last set forth below (this “Agreement”), between the undersigned actual or potential client (“Client”) and **Rev.com, Inc.** (“Rev.com”) is made to confirm the understanding and agreement of the parties hereto with respect to certain proprietary information being provided to Rev.com for the purpose of performing translation, transcription, video captions and other document related services (the “Rev.com Services”). In consideration for the mutual agreements contained herein and the other provisions of the Agreement, the parties hereto agree as follows:

1. Scope of Confidential Information

1.1 “Confidential Information” means, subject to the exceptions set forth in Section 1.2 hereof, any documents or other text supplied by Client to Rev.com for the purpose of performing the Rev.com Services.

1.2 Confidential Information does not include information that: (i) was available to Rev.com prior to disclosure of such information by Client and free of any confidentiality obligation in favor of Client known to Rev.com at the time of disclosure; (ii) is made available to Rev.com from a third party not known by Rev.com at the time such availability to be subject to a confidentiality obligation in favor of Client; (iii) is made available to third parties by Client without restriction on the disclosure of such information; (iv) is or becomes available to the public other than as a result of disclosure by Rev.com prohibited by this Agreement; or (v) is developed independently by Rev.com or Rev.com’s directors, officers, members, partners, employees, consultant, contractors, agents, representatives or affiliated entities (collectively, “Associated Persons”).

2. Use and Disclosure of Confidential Information

2.1 Rev.com will keep secret and will not disclose to anyone any of the Confidential Information, other than furnishing the Confidential Information to Associated Persons; provided that such Associated Persons are bound by agreements respecting confidential information. Rev.com will not use any of the Confidential Information for any purpose other than performing the Rev.com Services on Client’s behalf. Rev.com will use reasonable care and adequate measures to protect the security of the Confidential Information and to attempt to prevent any Confidential Information from being disclosed or otherwise made available to unauthorized persons or used in violation of the foregoing.

2.2 Notwithstanding anything to the contrary herein, Rev.com is free to make, and this Agreement does not restrict, disclosure of any Confidential Information in a judicial, legislative or administrative investigation or proceeding or to a government or other regulatory agency; provided that, if permitted by law, Rev.com provides to Client prior notice of the intended disclosure and permits Client to intervene therein to protect its interests in the Confidential

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Information, and cooperate and assist Client in seeking to obtain such protection.

3. Certain Rights and Limitations

- 3.1 All Confidential Information will remain the property of Client.
- 3.2 This Agreement imposes no obligations on either party to purchase, sell, license, transfer or otherwise transact in any products, services, or technology.

4. Termination

- 4.1 Upon Client's written request, Rev.com agrees to use good faith efforts to return promptly to Client any Confidential Information that is in writing and in the possession of Rev.com and to certify the return or destruction of all Confidential Information; provided that Rev.com may retain a summary description of Confidential Information for archival purposes.
- 4.2 The rights and obligations of the parties hereto contained in Sections 2 (Use and Disclosure of Confidential Information) (subject to Section 2.1), 3 (Certain Rights and Limitations), 4 (Termination), and 5 (Miscellaneous) will survive the return of any tangible embodiments of Confidential Information and any termination of this Agreement.

5. Miscellaneous

- 5.1 Client and Rev.com are independent contractors and will so represent themselves in all regards. Nothing in this Agreement will be construed to make either party the agent or legal representative of the other or to make the parties partners or joint venturers, and neither party may bind the other in any way. The Agreement will be governed by and construed in accordance with the laws of the State of California governing such agreements, without regard to conflicts-of-law principles. The sole and exclusive jurisdiction and venue for any litigation arising out of this Agreement shall be an appropriate federal or state court located in the State of California, and the parties agree not to raise, and waive, any objections or defenses based upon venue or forum non conveniens. This Agreement (together with any agreement for the Rev.com Services) contains the complete and exclusive agreement of the parties with respect to the subject matter hereof and supersedes all prior agreements and understandings with respect thereto, whether written or oral, express or implied. If any provision of this Agreement is held invalid, illegal or unenforceable by a court of competent jurisdiction, such will not affect any other provision of this Agreement, which will remain in full force and effect. No amendment or alteration of the terms of this Agreement will be effective unless made in writing and executed by both parties hereto. A failure or delay in exercising any right in respect to this Agreement will not be presumed to operate as a waiver, and a single or partial exercise of any right will not be presumed to preclude any subsequent or further exercise of that right or the exercise of any other right. Any modification or waiver of any provision of this Agreement will not be effective unless made in writing. Any such waiver will be effective only in the specific instance and for the purpose given.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed below by their duly authorized signatories.

CLIENT

Print Name: John Michael Leger

Name: John Michael Leger
Title: Client
Date: 11-17-2014

Address for notices to Client:

9319 Bearden Creek Lane
Humble, TX 77396

REV.COM, INC.

 By:
Cheryl Brown

Name: Cheryl Brown
Title: Account Manager
Date: 11/16/14

Address for notices to Rev.com, Inc.:

251 Kearny St., Suite 800
San Francisco, CA 94108

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VITA

John Michael Leger, PhD(C), MBA, BSN, RN

PRESENT POSITIONS & ADDRESSES:

Assistant Professor (Full Time)
UTMB School of Nursing, Graduate Program
jmleger@utmb.edu

RN Consultant – Project RED Program (Per Diem)
CHI St. Luke's Health System
jleger@stlukeshealth.org

Course Facilitator (Adjunct)
University of Phoenix, College of Health Care Sciences
Jmleger1@email.phoenix.edu

BIOGRAPHICAL:

DOB: May 11
Birthplace: New Orleans, LA
Citizenship: United States
Home Address: 18711 Shaman Road, Galveston, TX 77554
Telephone: 713-702-7716

EDUCATION:

September 2006 – May 2007
University of Texas – El Paso El Paso, TX
Certificate: Nurse Educator

August 1997 – December 1999
Our Lady of the Lake University Houston, TX
Master of Business Administration: Healthcare Administration

LICENSURE INFORMATION:

PROFESSIONAL EXPERIENCE:

August 2015 – Present	University of Texas Medical Branch – Galveston, TX Assistant Professor, Graduate Nursing Program
May 2013 – Present	CHI St. Luke's Health System – Houston, TX RN Consultant – Project RED Program
January 2014 – August 2015	University of Texas Medical Branch – Galveston, TX Clinical Instructor, Undergraduate Nursing Program
July 2014 – Present	University of Phoenix – Houston, TX Course Instructor, Undergraduate Program: Healthcare Sciences
April 2007 – Present	PTRN Consulting, LLC – Houston, TX President/Managing Partner Small business healthcare consulting, chart reviews/auditing
April 2007 – May 2013	Select Medical – Mechanicsburg, PA Vice President, Clinical Operations / Chief Nursing Officer
August 2007 – May 2009	Lone Star College – Houston, TX Adjunct Faculty / Clinical Instructor
February 2006 – April 2013	HealthHelp, LLC – Houston, TX Consultant / Vice President, Clinical & Client Services
May 2003 – February 2006	Tenet Healthcare – Houston, TX Plaza Specialty Hospital: CEO / Chief Nursing Officer
January 2000 – May 2003	CHRISTUS Health System – Dallas, TX Associate Administrator / CNO / Regional Senior Specialist

1997 – 2000	UTMB Healthcare Systems – Galveston, TX Director, Care Management Program Analyst
1995 – 1997	Concentra Managed Care – Houston, TX & Seattle, WA Regional Supervisor, Case Management Services
1990 – 1996	St. Elizabeth Hospital – Beaumont, TX Charge RN / Staff RN

RESEARCH ACTIVITIES:

Areas of Research

October 2014 – December 2015: Exerting Capacity: A Grounded Theory Study of the Perspectives of Bedside Registered Nurses about Patient Safety in the Adult Acute Care Environment – Doctoral Dissertation

October 2013 – May 2014: Transition to Event-Based Repositioning in the Intensive Care Unit – Project Coordinator

February 2013 – Present: Effects of Immediate Post-Acute Care Management on 30-day Re-hospitalization Rates – Project Coordinator

Grant Support

Catholic Health Initiatives (CHI) Mission and Ministry Foundation

“Care Transitions for Vulnerable Populations”

\$1.53M for time period July 2015 – June 2018

Sigma Theta Tau International Alpha Delta Chapter

Exerting Capacity: A Grounded Theory Study of the Perspectives of Bedside Registered Nurses about Patient Safety in the Adult Acute Care Environment

\$500 for time period June 2015 – May 2016 (*Matching grant received from John Sealy Foundation Discretionary Fund)

Texas Nurses Association, District 9

Exerting Capacity: A Grounded Theory Study of the Perspectives of Bedside Registered Nurses about Patient Safety in the Adult Acute Care Environment

\$2,000 for time period November 2015 – October 2016

TEACHING RESPONSIBILITIES:

Teaching Responsibilities at UTMB

Teaching: School of Nursing (SON):

GNRS 5373: Theoretical and Research Foundations for Advanced Nursing Practice

GDNP 6327: Advanced Nursing Leadership and Management

GNRS 5349: Informatics and Quality Improvement

GNRS 5122: Clinical Nurse Leader Practicum II

GNRS 5329: Evidence-Based Management (Course Coordinator)

Teaching Responsibilities at Other Universities

Teaching: University of Phoenix: Course Instructor, Undergraduate Program – College of Healthcare Sciences

COMMITTEE RESPONSIBILITIES:

American Association of Colleges of Nursing (AACN) inaugural Graduate Nursing Student Academy (GNSA) Leadership Council (October 2013 – September 2015)

Texas Nurses Association District 9 – Nominations Chair (2014 – 2015)

Chamberlain College of Nursing Advisory Board – Houston, TX Campus (2010 – 2014)

CHI St. Luke's Health Project RED – System Project Coordinator (2013 – Present)

MEMBERSHIP IN SCIENTIFIC SOCIETIES/PROFESSIONAL ORGANIZATIONS:

American Nurses Association; Texas Nurses Association; AACN Graduate Nursing

Student Academy; Sigma Theta Tau International, Alpha Delta Chapter; UTMB Alumni Association; Lamar University Alumni Assoc.

HONORS:

John P. McGovern Distinguished Professorship Award (2015, 2014, 2013)

NASA/Texas Space Grant Fellowship Award (2014 – 2015)

Promise of Nursing Regional Faculty Fellowship Program (2014 – 2015)

Edgar and Grace Gnitzinger Scholarship (2014)

Healthcare and Nursing Educational Foundation Scholarship (2014 – 2016)

The UTMB School of Nursing Alumni Association Award (2013)

Hattie Mae Jackson Scholarship Award (2013)

Salute to Nursing Scholars Award (2012)

Florence Thelma Hall Distinguished Professorship in Nursing Award (2011)

ADDITIONAL INFORMATION:

Journal/Article Reviewer for Journal of Professional Nursing (2014 – Present)

Grounded Theory Institute International Workshop – Participant & Presenter (May 2015)

PUBLISHED:

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Poster presentation – 2015 STTI Alpha Delta Chapter Research Day (June 2015)
Podium presentation – 2015 UTMB Evidence-Based Practice National Conference (April 2015)
Poster presentation – 2015 UTMB Evidence-Based Practice National Conference (April 2015)
Poster presentation – 2015 American Nurses Association National Quality Conference (February 2015)

Permanent address: 18711 Shaman Road, Galveston, Texas 77554

This dissertation was typed by John Michael Leger