The Situational Context of Safety Culture from the Perspective of Medical-Surgical Staff Nurses and Nurse Leaders in a Hospital

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LOYOLA UNIVERSITY CHICAGO

THE SITUATIONAL CONTEXT OF SAFETY CULTURE FROM THE PERSPECTIVE OF MEDICAL-SURGICAL STAFF NURSES AND NURSE LEADERS IN A HOSPITAL

A DISSERTATION SUBMITTED TO THE FACULTY OF THE GRADUATE SCHOOL IN CANDIDACY FOR THE DEGREE OF DOCTOR OF PHILOSOPHY PROGRAM IN NURSING

BY
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CHICAGO, IL
MAY 2021
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This work is dedicated to my parents for teaching me to “do all the good you can, by all the means you can, in all the ways you can, at all the times you can, to all the people you can, as long as ever you can.” (J. Wesley)
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ABSTRACT

People enter into healthcare facilities to maintain or restore health; however, often times those seeking health are harmed during the process by avoidable medical errors. Since the Institute of Medicine report on patient harm, safety culture continues to be the largest barrier in realizing safer patient care. Nurses’ comprise the largest component of the health care workforce in hospitals and consistently have the lowest perceptions of a safety culture. Leaders who play a key role in creating and sustaining a safety culture consistently have the most favorable perception of safety culture. The purpose of this study was to explore and describe safety culture as experienced by medical-surgical staff nurses, registered nurses, and nurse leaders in a community hospital. The research proposal for this dissertation, is presented, followed by a comprehensive literature review, and the research questions proposed for this study. These chapters are followed by the study methodology, which utilized inductive qualitative description to discover the safety culture experiences within and between medical-surgical staff nurses and nurse leaders. The results of this study included six themes within staff nurses and, six themes within nurse leaders. Since the themes were similar in language, a convergence coding matrix was developed to describe the similarities and differences in meanings or subthemes between staff nurses and nurse leaders. These findings are compared to previous findings, along with unique findings from this research. The dissertation is concluded with a discussion of the strengths and limitations of this study, with recommendations for future application in nursing research, practice, education, and policy.
CHAPTER 1

INTRODUCTION

People enter into healthcare facilities to maintain or restore health; however, often times those seeking healthcare are harmed during the process by avoidable medical errors. A patient has a one in 300 chance of being harmed by avoidable medical errors compared to a one in a million chance of being harmed while traveling by airplane (World Health Organization [WHO], 2018). The Institute of Medicine (IOM, 2000), now the Health and Medicine Division of the National Academies of Sciences, Engineering, and Medicine, seminal report on preventable patient harm identified 44,000 – 98,000 people die each year from avoidable medical errors. The IOM (2000) recommended patient safety become a national priority, and the development of a safety culture to ensure that the workforce and processes are focused on improving the reliability and safety of care for patients. A safety culture is the extent to which organizational beliefs, values and norms are shared by individuals throughout the organization and influence actions and behaviors that support and promote patient safety (Famolaro et al., 2018). While there have been efforts to develop a safety culture, those efforts have not significantly impacted safety culture at a national, organization or unit level. Almost 20 years after the original “To Err is Human” IOM report, initiatives to develop a safety culture have not significantly nor consistently resulted in safer patient care. This chapter will present the ongoing impact of avoidable medical errors, the background on the national response to avoidable medical errors, and the impact of developing a safety culture in hospitals within the United States. Given the work in better
understanding the problem of avoidable medical errors and the understanding of aspects to develop a safety culture, this study will describe the complexity and reality of safety culture within one hospital.

**Avoidable Medical Errors and its Relationship to Patient Harm**

The IOM (2000) report identified patients in hospitals were being harmed by avoidable medical errors. Medical errors can be defined as the failure of a planned action to be completed as intended or the use of a wrong plan (IOM, 2000). Medical errors do not always result in harm but can cause patient harm if the error reaches the patient. Preventable harm is an injury caused by medical management rather than the underlying medical condition (IOM, 2000). Avoidable medical errors cause preventable harm to patients, which has resulted in mortality, morbidity, and higher costs of care.

**Preventable Harm Leads to Increased Mortality**

Since the seminal IOM report there have been many attempts at quantifying preventable harm related to medical errors; however, this has been challenging due to the propensity to rely on voluntary reporting. More recent estimations of death related to preventable harm have been published. Using a weighted average of several studies reporting deaths related to preventable harm, an updated estimate of 210,000-400,000 deaths attributed to preventable harm each year was proposed (James, 2013). Another report used multiple methods of estimating harm resulted in 251,454 deaths attributed to preventable harm in the United States each year, establishing avoidable medical errors as the third leading cause of death in the United States (Makary & Daniel, 2016).
Preventable Harm Leads to Increased Morbidity

The broader impact of preventable harm extends beyond mortality and significantly impacts morbidity. The seminal IOM report identified an estimated one million people undergoing medical treatment were injured by preventable harm each year in United States hospitals (IOM, 2000). Approximately 25 preventable harms per 100 patient admissions were reported in North Carolina hospitals (Landrigan et al., 2010). Despite significant efforts to improve the safety of care, 1 in 10 patients continued to experience morbidity from adverse events including healthcare-acquired infections, pressure ulcers, adverse drug events, or falls during hospitalization (Agency for Healthcare Research and Quality [AHRQ], 2014).

The methodologies underlying the quantification of preventable harm through approximations have been criticized for the estimation methods used and other epidemiologic concerns (Ranji, 2017; Shojania & Dixon-Woods, 2017). Regardless of the criticisms, the data consistently show a minimal reduction in the number of patients harmed by medical errors since the seminal IOM report publication.

Preventable Harm Leads to Increased Cost

There are significant costs associated with preventable harm. In 2008, the Office of the Inspector General (OIG) identified $4.4 billion in extra costs for Medicare beneficiaries in one year associated with adverse events and preventable harm (Department of Health and Human Services [DHHS]-OIG, 2010). The estimated cost of treating the injuries attributable to preventable harm, the lifetime wages lost because of those injuries, and the insurance costs due to disability and death was estimated at $19.5 billion a year (Shreve et al., 2010). A more recent actuarial study estimated the cost of preventable harm at $17.5 billion a year (Van Den Bos et al., 2011).
Summary of Avoidable Medical Errors and its Relationship to Patient Harm

In summary, there has been significant mortality, morbidity, and cost related to preventable harm that have not significantly changed over time. Clinicians are professionally obligated to prevent and avoid harm when caring for patients (American Medical Association [AMA], 2016; American Nurses Association [ANA], 2015). Most importantly, those seeking healthcare trust their wellbeing to those providing care and expect to be safe from preventable harm during the process of care. These statistics were and continue to be the catalyst for improvements in patient safety in hospitals.

A National Response Realized Limited Impact on Patient Safety

In response to the preventable patient harm statistics, the IOM (2000) proposed several recommendations to address patient safety catalyzing government agencies, non-governmental organizations, healthcare organizations, and individual providers to develop voluntary and mandatory safety practice changes launching a safety movement (Leape & Berwick, 2005). One recommendation was to establish patient safety as a national focus to create leadership, research, tools, and protocols to enhance the knowledge base about safety (IOM, 2000). Another recommendation charged health care organizations to develop a safety culture to align the focus of the workforce and processes on improving the reliability and safety of care for patients. However, well-intentioned national efforts to address patient safety and the development of organizational safety culture have resulted in a plethora of uncoordinated recommended initiatives to address patient safety. These uncoordinated initiatives have not resulted in a significant development of a safety culture. The continued preventable harm statistics suggest these initiatives have not had a widespread impact on safer patient care.
National Initiatives Have Realized a Limited Impact on Safe Patient Care

Following the seminal IOM report on preventable patient harm, the federal government issued an executive order instructing government agencies overseeing healthcare programs to implement proven techniques for reducing medical errors (IOM, 2000). The Agency for Healthcare (AHRQ) and the Institute for Healthcare Improvement (IHI) are two national agencies that focused on patient safety and safety culture in healthcare. These initiatives assume safety interventions that successfully reduce preventable harm in one organization will be successful in achieving safer care in another organization, however this has not been the case. These efforts made preventable harm and the status of safety culture in healthcare more visible and transparent. However, the plethora of optional interventions have not resulted in the substantial development of a safety culture and have had a minimal impact on safer patient care (Leape, 2015).

AHRQ Initiatives to Impact Patient Safety

AHRQ was charged with establishing a national focus to create leadership, research, tools, and protocols to enhance the knowledge base about safety (IOM, 2000). AHRQ led national initiatives to develop and test new technologies for preventing medical errors, create error-reporting and error-improvement strategies, and achieve a better understanding of how the environment impacts safer care. AHRQ initially focused on technology and measurement of safety culture such as the implementation of electronic health records, computer-assisted physician order entry and bar code scanning to support the right treatments to the right patients (AHRQ, n.d.). Later, AHRQ focused on evidence-based practice bundles such as interventions to prevention hospital-acquired infections, interprofessional team training through TeamSTEPPS, and team improvement initiatives through the Comprehensive
The Institute for Healthcare Improvement Safety Initiatives

The Institute for Healthcare Improvement (IHI) is an independent not-for-profit organization with a mission to improve health and health care worldwide (IHI, n.d.). The IHI makes recommendations for improving patient safety, however there has been a lack of adoption of the recommended practices in the United States.

In 2004, IHI implemented a campaign in the United States, called Saving 100,000 Lives, collaborating with healthcare organizations to reduce preventable hospital deaths by 100,000 within 18 months (IHI, n.d.). This was accomplished by encouraging organizations to implement safer systems of care such as bundles, technology, and checklists aimed at decreasing variability in individual human behavior to reduce preventable harm (IHI, n.d.). The initiative was successful in achieving 122,000 fewer preventable deaths (Baehrend, 2016).

National Policy Initiatives to Impact Patient Safety

National policy has attempted to create organizational focus on patient safety (Bates & Singh, 2018). This focus is influenced through financial penalties or incentives for hospitals to ensure patient safety becomes an organizational priority. Organizations are incentivized to provide safe care through the Centers for Medicare & Medicaid Services (CMS) Hospital Value-Based-Purchasing program that withholds and redistributes Medicare reimbursement based on safety and quality performance (CMS, n.d.). Organizations can also be penalized 1% of their total payments through CMS programs such as the Hospital-Acquired Reduction Act in which organizations performing in the bottom 25% of the nation receive reduced payments (CMS, n.d.). While this has impacted the prioritization of patient safety within organizations, organizational measurement of preventable harm is unreliable and the safety impact remains
controversial (Bates & Singh, 2018).

**Organizational Barriers in Adopting National Recommendations**

There have been many organizational barriers identified in the adoption of the national patient safety initiatives. Competing priorities for scarce resources in hospitals is a top contributor (Atkins & Cole, 2005). Other barriers noted are employee and management resistance to change, different understanding of the problem between administrators and clinicians, and local culture (Atkins & Cole, 2005). Inconsistent implementation and practice of safety initiatives remains a barrier to safer patient care (Bates & Singh, 2018).

There continues to be inconsistent participation in national patient safety initiatives and unknown sustainability of patient safety interventions. The free IHI campaign was only supported by two-thirds of hospitals in the United States (Baehrend, 2016). Organizations that supported the IHI campaign did not consistently adopt recommended initiatives to improve patient safety. The IHI campaign acknowledged a lack of awareness of the consistency and sustainability of the recommended patient safety initiatives identified in their campaign (Baehrend, 2016). In a national sample of 984 intensive care units in the United States, bundle compliance to reduce infections from central lines was only 69% (Furuya et al., 2016). In Pennsylvania, 38% of reported hospital-acquired central line bloodstream infections identified a lack of compliance with preventative bundles, in spite of knowing that hospitals with the lowest infection rates had the highest compliance with preventative bundles (Patient Safety Authority [PSA], 2010).

Finally, in spite of national efforts to reduce preventable harm, preventable harm still exists. Two focuses of the IHI 100,000 lives campaign were reducing infections from central
lines and surgical procedures (Baehrend, 2016). In 2017, 20,152 patients experienced a surgical-site infection, 21,173 patients experienced an infection related to a central line, and 24,865 patients experienced a urinary tract infection related to a foley catheter (Center for Disease Control and Prevention [CDC], n.d.). While these infections are decreasing, there remain far too many (CDC, n.d.). Patients are still being harmed by preventable medical errors at alarming rates.

Summary of the National Prioritization of Patient Safety

In summary, in spite of evidence linking safety interventions to safer patient care, safety interventions have not been fully embraced by all organizations (Bates & Singh, 2018). Therefore, national prioritization of patient safety has not resulted in a national embracement of safety interventions designed to reduce preventable harm. Despite decades of national attention, including trillions of dollars in investment, heartbreaking stories caused by preventable harm continue to be told (Pronovost et al., 2015). In addition to the devastating human consequences of preventable harm, these events burden the already limited resources of the healthcare system (Pronovost et al., 2015). Organizational culture remains the most substantial barrier to embracing safety interventions intended to reduce preventable harm (Leape, 2015).

Barriers in Organizational Efforts to Develop a Safety Culture

In addition to the national prioritization of patient safety, organizations pursued the development of safety cultures within their institutions. Healthcare borrowed the safety culture concept from the nuclear industry after the release of the IOM (2000) report. Safety culture has lacked a consistent definition across industries since its inception. However, there is substantial agreement that safety culture is a sub-culture within a larger organizational culture (Edwards et al., 2013). Not only has safety culture lacked a consistent definition across industries, there are
many different definitions of safety culture in healthcare (Halligan & Zecevic, 2011). The most commonly cited definition of safety culture in healthcare originated from the Health and Safety Commission of Great Britain (1993) and is supported by the AHRQ as depicted in Figure 1.

Figure 1. A Conceptual Model of Safety Culture

Safety culture has been used interchangeably with safety climate (Halligan & Zecevic, 2011). However, safety climate is only one dimension of safety culture representing shared perceptions, attitudes, and beliefs of the practices and processes by which those working within the environment manage and achieve patient safety (Morello et al., 2013). Safety culture is a component of organizational culture that is comprised of a product of psychological aspects, behavioral aspects, and situational aspects as depicted in Figure 1 (Cooper, 2000; Rail Safety and Standards Board [RSSB], n.d.). The interaction and reciprocal relationship between people (psychological), the work (behavioral) and the organization (situational) provides an explanation for the precursors leading to unsafe acts in organizations (Cooper, 2000).

Since there was no one prescriptive approach to developing a safety culture, organizations took individualized approaches to develop an organizational safety culture. The interventions to develop a safety culture address the situational, behavioral and psychological aspects of safety culture, however few studies or interventions address the interaction among the
three aspects (Edwards et al., 2013). This approach is based on the assumption that preventable harm is mainly caused by faulty systems, processes, and conditions in the environment (IOM, 2000). It also assumes the environment is not only a cause of errors but has the ability to shape behaviors (Longo et al., 2005). Finally, this approach is based on the assumption that developing a safety culture will result in safer patient care. The current approach to developing a safety culture has had limited impact. Safety culture remains a significant barrier contributing to the slow progression of safer care (Leape, 2015).

**Situational Aspects of a Safety Culture Face Organizational Barriers**

Safety culture is influenced by situational, or organizational, aspects represented by what the organizations has to create a safety culture including policies, procedures, regulation, organizational structures, and management systems (Cooper, 2000). Situational aspects alone have not resulted in the development of a safety culture. The situational aspect approach assumes a safety culture is created by changing characteristics within the organization through organizational systems, structures and policies (Edwards et al., 2013). The situational approach assumes safer systems of care influence safety-related actions and behaviors. Organizational barriers and lack of embracement of situational aspects have been identified. This suggests situational aspects alone can’t change characteristics within an organization.

**Regulations Have Not Resulted in a Safety Culture**

The Joint Commission (TJC), a regulatory agency, developed strategies to address patient safety. TJC requires hospitals to conduct a thorough review of sentinel events to identify and learn from the causes of the events (TJC, n.d.). A sentinel event is an adverse patient event, not primarily related to the natural course of a patient’s illness, resulting in death, permanent harm, or severe temporary harm (TJC, n.d.). After a thorough review of safety events voluntarily
reported to TJC, the most significant cause of failures in patient safety were attributed to leadership (Patient Safety Advisory Group [PSAG], 2017). Leadership failures include: insufficient support of patient safety event reporting, lack of feedback or response to staff who report safety concerns, intimidation of staff who report events, inconsistent prioritization and implementation of safety recommendations, ignorance of staff burnout, and the role burnout has on safety culture (PSAG, 2017).

TJC appointed a Patient Safety Advisory Group (PSAG) in April 2002 to identify critical and emerging patient safety issues and provide suggestions for effective methods to reduce patient safety risks (PSAG, 2018). The PSAG develops annual National Patient Safety Goals (NPSG) to help hospitals focus efforts on the most substantial patient safety issues emerging from the review of sentinel events (TJC, n.d.). As part of the hospital accreditation process, to achieve compliance with the CMS payer requirements, organizations are assessed for their response to the NPSG (TJC, n.d.).

The prioritization of NPSG have not resulted in a significant reduction in patient harm. For example, improving the safety of clinical alarms has been a NPSG for many years, created after determining inappropriate and lack of response to alarms was causing significant patient harm (TJC, n.d.). However, alarms meant to save lives continue to create alarm fatigue causing delayed or lack of appropriate response resulting in 566 deaths in the United States over a 3 year period (Jones, 2014). Patient falls has remained a NPSG for several years, however patient falls are a contributing cause of preventable harm in hospitals. Approximately 700,000 to 1,000,000 people fall each year in a hospital in which close to one-third are considered preventable (AHRQ, n.d.).
Therefore, although regulatory agencies have attempted to create regulations and policies to improve safety culture, the regulations have not resulted in safer patient care. Leadership has been identified as a significant barrier. Finally, the lack of adherence to regulatory policies suggests external regulatory bodies may not be as influential in healthcare as they are in the industries in which safety culture was borrowed.

**Systems of Care Have Not Resulted in a Safety Culture**

Organizational policies intended to provide safe care are a component of the situational aspect of safety culture (Cooper, 2000). A systems approach to error focuses on improving the systems in which individuals work while preventing blaming an individual for errors (IOM, 2000). A system of care requires many systems to work together to provide safe care to patients without exposing the patient to preventable harm (Pronovost et al., 2015). A systems approach to errors was borrowed from complex, accident-prone organizations, specifically nuclear and aviation that successfully minimized errors despite complicated and hazardous work (IOM, 2000). Safer systems of care include but are not limited to: evidence-based practice bundles, checklists to reduce practice variation, and supporting technology solutions designed to support systems of care within the complicated healthcare system (Leape, 2015). Systems of care have realized isolated reductions in preventable harm due to the lack of spread and adoption (Leape, 2015).

Safer systems of care have resulted in isolated reductions of hospital acquired infections, surgical site infections, wrong site surgeries, and medication errors (Leape, 2015). A 15-year collaborative initiative among 112 Michigan hospitals committed to preventing avoidable harm through design of safer systems, learning from avoidable harm, and building a safety culture realized a 20% decrease in several hospital-acquired infections and adverse drug events related
to anticoagulation (Michigan Health & Hospital Association (MHA) Keystone Center, 2019). This resulted in an estimated $80.6 million in cost savings (MHA Keystone Center, 2019). Another organization reduced central line associated bloodstream infections from 3 for every 1000 device days to 0 for over 19 months at the time of publication by implementing and embracing evidence-based practice bundles within an intensive care unit (Longmate et al., 2011). A national prioritization of reducing all hospital-acquired infections resulted in 1.3 million less infections over 3 years and $12 billion in cost savings over 4 years (AHRQ, 2014).

While these localized improvements are promising, there is still a significant amount of effort needed to further reduce preventable harm (AHRQ, 2014). Furthermore, safer systems of care are not widespread and have not always been embraced (Leape, 2015).

In summary, since the IOM (2000) report, organizations place greater attention on patient safety (National Patient Safety Foundation [NPSF], 2015). However, situational aspects alone have not resulted in a significant improvement in safety culture. Although national and organizational efforts have prioritized safety culture, patients are still experiencing harm while organizations and individuals are still not implementing all of the evidence-based safer systems of care.

**Behavioral Aspects of a Safety Culture Realize Unsafe Actions and Behaviors**

Behavioral aspects include what people do, specifically safety-related actions and behaviors (Cooper, 2000). Human errors are a contributing factor to the overall cause of accidents (IOM, 2000). Evidence suggests 60%-80% of errors are caused by human errors (Perrow, 1984). Although safer systems of care were developed to make it easier for people to do the right thing, and harder to make a mistake, they have not always resulted in safety actions and behaviors. The behavioral approach assumes behavior can be a result of a situation (Cooper,
People work in a dynamic environment in which behavior is self-regulated based on situational and psychological aspects (Cooper, 2000). The behavioral aspects can be assessed through many mechanisms such as reviewing an organization’s accident history and understanding power gradients, routines and rituals (Cooper, 2000). There are instances in which behavioral aspects resulted in nationally reported preventable harm in addition to organization and individual liability. The development of workarounds applied to bypass situational aspects suggests behavioral aspects alone won’t significantly impact safety culture.

**Behavioral Aspects Resulting in Patient Harm**

Behavioral aspects have not always resulted in a safety culture. A nurse in Wisconsin administered an IV anesthetic instead of penicillin during childbirth after disregarding the safe medication policy and bar code scanning technology designed to provide safe patient care resulting in the death of a teenager and felony charge for the nurse (Wahlberg & Treleven, 2006). Multiple decisions by multiple clinicians to disregard safer surgery practices resulted in permanent damage to a patient’s urinary system requiring dialysis for life and a $25.5 million settlement (Bean, 2019). Finally, a nurse was recently indicted for disregarding policies and technology designed for safe medication administration resulting in a patient receiving a paralytic instead of a routine sedative prior to a diagnostic imaging exam resulting in death (Knowles, 2019).

**Unsafe Behaviors Impact Safety Culture**

Technology in the form of electronic support for ordering and administering medications safely and decision support tools such as medication safety alerts and peer checking have been developed to positively influence safety-related behaviors (Bates & Singh, 2018). Unsafe behaviors such as bypassing safety systems, in the form of workarounds, undermine safety
culture (Bates & Singh, 2018). This may be due to time pressure and lack of perceived safety benefit (Bates & Singh, 2018). More importantly, the benefits of technology have not had the behavioral impact previously predicted (Bates & Singh, 2018).

A systematic review of workarounds in acute care identified organizational work process, patient-related, individual, social, and professional factors contributed to the proliferation of workarounds in nursing (Debono et al., 2013). The findings of the systematic review will be described. Organizational factors included staffing, workload and productivity pressures, poor leadership, and lack of nurse involvement in decision making. Work process factors included a mismatch between policies and current workflow, equipment and supply barriers, lack of availability of doctors, emergency situations, and situations in which nurses perceived the tasks as not important, appropriate, or necessary. Patient factors included the need to ensure patients received care in a timely manner. Individual clinician factors included fatigue, cognitive load, unfamiliarity with technology or policies, lack of understanding of the meaning or content of a policy, lack of approval of the policy, and a perception that following the policy carries more risk to the patient. Social and professional factors included poor communication, avoidance of professional confrontation, professional etiquette or lack of, and ignoring nurses’ input into patient’s care. Although nurses identified workarounds as risky, they are often justified as necessary for care delivery or to support what is in the best interest of the patient. Workarounds were further justified through autonomy of practice, acceptable when not jeopardizing patient safety, in an emergency, when the nurse is familiar with the patient, when the doctors’ response is predictable, and when the behavior falls within the scope of the nurse’s knowledge and skill (Debono et al., 2013).
Interruptions have also contributed to disruption in nurses’ cognitive work in acute care. On average a nurse will experience between 3.4-5.9 interruptions per hour, often while a nurse is performing patient intervention (Potter et al., 2005). Frequent interruptions include medication problems, physician orders, supply issues, staffing problems, and broken or missing equipment (Tucker & Spear, 2006).

In summary, in spite of the presence of situational aspects, behavioral aspects have not always aligned with safety-related actions and behaviors. Disregard for situational aspects has led to unsafe actions, or behavioral aspects, resulting in patient harm. Behavioral aspects alone have not significantly influenced a safety culture.

**Psychological Aspects Realize Limited Improvement in Perception of Safety Culture**

Organizational culture must encompass actions and behaviors that will embrace safer systems of care (Leape, 2015). The presence of a safety culture is measured by assessing individual, group and organization perceptions of a safety culture, or the safety climate (Cooper, 2000). These perceptions comprise the psychological aspects of safety culture, or how people feel (Cooper, 2000).

Several instruments have been created to measure the presence and strength of an organization’s safety culture; however, the Hospital Survey of Patient Safety Culture (SOPS) is a frequently cited instrument in the literature (Appendix A). The survey describes perceptions of safety culture through assessment of individual perceptions of safety culture, which are then aggregated at a unit or department, organizational, and national level (Famolaro et al., 2018). The purpose of measuring safety culture at the institutional and national level is to understand global trends in beliefs, attitudes, and perceptions to inform improvement efforts and measure the overall effect of those improvement efforts over time (Famolaro et al., 2018). This approach
assumes shared cultural norms, values, attitudes, and perceptions can be possessed by individuals and the group (Edwards et al., 2013). Trends in safety culture perception have shown little to no improvement over time. Poor nurse perception of safety culture over time and a discrepancy in safety culture perception between leaders and nurses persists. The psychological aspect of safety culture alone has not had a significant impact on safety culture.

**The SOPS Identified Lack of Improvement in Safety Culture Over Time**

There have been minimal improvements in favorable responses over time. Favorable responses are calculated using the average agree and strongly agree responses (Famolaro et al., 2018). The 2018 trending database survey, including 212,746 respondents, representing 306 hospitals contributing responses to the 2016 and 2017 database, identified less than a 1% average improvement in average favorable responses among all 12 composites among all participants (Famolaro et al., 2018).

The 2018 database of 382,834 respondents among 630 United States hospitals identified a discrepancy between leaders, including administration, managers, and supervisors (77%) and nurses, including registered nurses, licensed vocational nurses, and licensed practical nurses (63%) average favorable perception of all safety culture composites (Famolaro et al., 2018). This discrepancy in safety culture results between leaders and nurses has been consistent over time. Nurses comprise 37% of the responses of the SOPS and have had a 0% increase in average favorable responses among all 12 dimensions (63%) since 2016 and consistently remain the discipline with the lowest average favorable perception of safety culture (Famolaro et al., 2018). In addition, during the same time period, leaders consistently reported the highest average favorable responses among the 12 composites (77%) (Famolaro et al., 2018).
In summary, assessing and improving safety culture has had a limited and minimal impact on safety culture. Nurses providing the majority of direct care to patients, continue to have the lowest perception of safety culture. Nurses are critically important in ensuring patient safety as they are a constant presence at the patient’s bedside and interact with all members of the health care team (AHRQ, 2019). Discrepancies between nurses and leaders continue to emerge. Nurse leaders are a sub-set of leaders. There are unknown factors contributing to the low perception of safety culture among staff nurses and the discrepancy between staff nurse and leader perceptions.

Summary of Barriers in Organizational Efforts to Develop a Safety Culture

Initiatives to address situational, behavioral, and psychological aspects of safety culture have had a limited and localized impact on safety culture. In addition, there are differing perceptions of safety culture between nurses providing care, having the lowest perception, and leaders responsible for leading the development of a safety culture, having the highest perception. The multi-faceted nature of safety culture warrants further exploration.

Several different sub-cultures will be in existence in an organization with very few behaviors, beliefs, attitudes, or values being commonly shared by the whole organization (Cooper, 2000). Sub-cultures may either be in alignment, or at odds, with the dominating overall organizational culture (Cooper, 2000). Therefore, generalizing a culture into one universal truth will not be effective in creating a universal safety culture. Approaching safety culture without considering the reciprocal interactions between the three aspects within a specific context will not likely have a substantial impact on safety culture (Cooper, 2000).

Understanding safety culture within a specific context will uncover the overarching organizational culture as it will be reflected in the dynamic reciprocal relationships between
leaders’ and nurses’ psychological perceptions about, and attitudes toward, the situational and behavioral practices within specific environmental contexts (Cooper, 2000). This richer understanding can explain variances in the poor perception of safety culture among nurses and the discrepancy in safety culture between leaders and nurses.

**Problem Statement**

Almost twenty years after the IOM report, leadership enthusiasm to develop a safety culture in healthcare has not resulted in a significant decrease in preventable patient harm (NPSF, 2015). The adoption of safer systems of care have had poor spread and adoption outside of single units even within single organizations (Leape, 2015). Institutional culture remains the biggest barrier to creating a safety culture (Leape, 2015).

Nurses, providing the majority of direct care in hospitals, continue to have the lowest favorable perception of safety culture. In addition, there are differing perceptions of safety culture between nurses providing patient care and nurse leaders responsible for leading the development of a safety culture. Interviews and surveys have identified the situational, behavioral, and psychological aspects of safety culture. However, safety culture and providing safe care, as experienced by nurses and leaders within the situational context of a medical-surgical unit within a hospital, has not been studied.

**Purpose**

The purpose of the study was to understand, explore, and describe safety culture as experienced by registered nurses, hereafter staff nurses, caring for medical-surgical patients and nurse leaders including supervisors, managers, and directors, within the situational context of medical-surgical units in an acute care hospital. The research study aimed to (1) explore and
describe staff nurses’ experiences with safety culture and safe patient care on medical-surgical acute care units; (2) explore and describe nurse leaders’ experiences with safety culture and safe patient care on medical-surgical acute care units; (3) compare and contrast staff nurses’ and nurse leaders’ safety culture experience.

**Research Question**

The research aimed to answer the following research questions: (1) What do medical-surgical staff nurses describe as their safety culture experiences in caring for medical-surgical patients? (2) What do the nurse leaders describe as their safety culture experiences within medical-surgical units? (3) What are the similarities and differences of medical-surgical staff nurses’ and nurse leaders’ experiences with safety culture?

**Significance**

This research is essential to addressing the gaps in knowledge regarding how a safety culture is understood, created, and maintained in the medical-surgical nursing acute care context. Building on what is known about the aspects of a safety culture and the perceptions of safety culture, it is critical to now explore and describe safety culture experiences of staff nurses and nurse leaders within the context of a medical-surgical unit. Through a better understanding of staff nurse and nurse leader experiences within the situational context of a medical-surgical unit, it is expected that perceptions will be better understood, behaviors described, and motivators, facilitators, barriers, and challenges identified. This knowledge is crucial for the design of safer systems of nursing care and can inform the continued development of a safety culture to improve patient safety and promote quality health care. This research will begin to develop a program of research on development of a safety culture in acute care.
CHAPTER 2
LITERATURE REVIEW

The previous chapter described the background of safety culture, problem, purpose of this research, research questions, and the significance of this research. This chapter will review the relevant literature related to safety culture including relevant theories, measurement tools, and a synthesis of research findings. The key gaps identified within the literature and the gap that will be addressed by the present study is identified.

Safety Culture Theoretical Frameworks

Several theoretical frameworks have informed the research. These theoretical frameworks attempted to explain what is a safety culture, the context of safety culture within varying levels of an organization, and the relationship between safety culture and unsafe acts resulting in preventable harm. While the frameworks are diverse, they each addressed important aspects of safety culture that together guided this research. These frameworks include the AHRQ SOPS, the Dartmouth model, Reason’s swiss cheese model of accident causation, and Reason’s stages in the development of an accident. A summary of these major theoretical frameworks will be described.

AHRQ SOPS: A Conceptual Model Defining Safety Culture

The AHRQ SOPS measures the strength and presence of a safety culture. The SOPS is grounded in a theoretical framework that describes the components of a safety culture to help
define safety culture through ten composites and two outcome composites (Sorra & Nieva, 2004). The ten composites include communication openness, feedback and communication about error, handoffs and transitions, management support for patient safety, nonpunitive response to error, organizational learning-continuous improvement, staffing, supervisor/manager expectations and actions promoting patient safety, teamwork across units, and teamwork within units. The two outcome composites include frequency of events reported and overall perceptions of patient safety. The framework will be described more thoroughly in the measurement section. A limitation to this theoretical framework is it globally assesses the perception of the presence and strength of a safety culture; however, it does not assess the cause of the strength or the actual presence of safety culture (Sorra & Nieva, 2004).

**The Dartmouth Clinical Microsystems Model**

The Dartmouth Model of Developing Microsystems proclaims that healthcare systems are made of frontline clinical Microsystems, mesosystems, and overarching macrosystems (Nelson et al., 2007). The clinical Microsystems are small, functional frontline units that provide a majority of healthcare and are formed around patients and families creating the building blocks of the healthcare system (Nelson et al., 2007). The Microsystems produce quality, safety, and cost outcomes at the frontline or sharp end of care (Nelson et al., 2007). This framework suggests outcomes of a macrosystem can be no better than the outcomes of the Microsystems of which it is comprised (Nelson et al., 2007).

There are six safety principles within the framework including (1) errors are human nature and will happen because humans are not infallible; (2) the microsystem is the key unit of analysis and training; (3) design systems to identify, prevent, absorb, and mitigate errors; (4)
create a culture of safety; (5) talk and listen to patients; and (6) integrate practices from human factors engineering into microsystem functioning (Nelson et al., 2007).

The framework recognizes the impact of local unit culture and cultural variability within a system. The framework also offers solutions to develop and support the microsystem in creating safer care. A limitation of the framework is the heavy focus on system designs to reduce the impact of errors without exploring individual behavioral choices. Another limitation is the lack of appreciation for the organizational culture on the unit culture or at a minimum the impact of the reciprocal relationship between the levels. This framework was used to provide rationale for the unit of analysis within this study. Specifically, the rationale for a richer exploration of safety culture at the microsystem, or unit, from a staff nurse and nurse leader perspective.

**Reason’s Swiss Cheese Accident Causation Model**

The Swiss cheese accident causation model (Reason, 1997) describes how errors occur in hospitals. Accidents are the result of a safety culture; therefore accidents inform the actual state of the organization’s safety culture. An assumption underlying this model is that hazards are inherent in complex, error-prone environments, such as hospitals; however, the precursors and conditions creating loss or harm are prevented by layers of defenses, depicted as the swiss cheese layers (Reason, 1997). An accident or error happens when the defenses are breached, depicted as the holes in the cheese. An adverse event occurs when the holes in the Swiss cheese, or weaknesses in the defenses, align. The breaches are caused by errors or violations committed at the sharp end of the system, called active failures, and at administrative layers in the system, called latent failures. There are three main central concepts that describe how errors occur in a complex environment. These central concepts are defenses, latent failures, and active failures.
Defenses

Defenses are the layers of swiss cheese in the mode protecting the organization from loss (Reason, 1997). Defenses to protect the organization from loss may be engineered including but not limited to alarms, automatic shut downs, and physical barriers such as personal protective equipment. Defenses may also rely on individuals, especially front-line operators such as providers, nurses, and other clinicians who determine the appropriate patient care in situations. Finally, defenses may be a result of procedural or administrative controls such as prescriptive communication handover between individuals, supervision, or safer surgery checklists. The successive layers of defenses are overlapping and mutually supportive to guard against the breakdown of the next layer (Reason, 1997).

Reason (1997) cautioned that not all defenses are created equal and defensive measures create opportunities for different kinds of human error. Warnings and alarms that have a reputation for indicating dangers where none exists are less likely to be acted upon. Defenses add additional linkages and make the system more complex (Reason, 2000). Defenses also create a reliability on automation decreasing skill sets which becomes dangerous when automation fails (Reason, 2000). In addition to the complexity created by defenses, there are weaknesses or holes in each defense. These weakness can be described as active failures or latent conditions.

Active Failures

Active failures can be considered unsafe acts (Reason, 1997). Active failures create holes in the swiss cheese compromising the barriers of protection (Reason, 1997). Active failures are errors or violations committed at the sharp end of the system by those closest to the work that are likely to have a direct and immediate impact on safety (Reason, 1997). Active
failures typically result in one error or accident. An example of this is a surgeon performing a wrong site surgery. Active failures are common in organizations and are neither sufficient nor necessary causes of harm (Reason, 1997).

**Latent Conditions**

Latent factors are unsafe working conditions within the environment (Reason, 1997). Latent failures create holes in the swiss cheese compromising the barriers of protection (Reason, 1997). Latent conditions may be present for many years before they combine with a circumstance and an active failure to cause loss or errors (Reason, 1997). Latent conditions include but are not limited to poor design, gaps in supervision, undetected defects, maintenance failures, flawed procedures, training deficiencies, or inadequate resources (Reason, 1997). An example of a latent condition resulting in the active failure of the surgeon performing a wrong site surgery is a time pressure resulting from organization focus on productivity and operating room turn-around time.

Latent conditions are always present and can result in multiple errors or accidents (Reason, 1997). Latent conditions may be a result of conflicting organizational priorities creating weaknesses in defenses due to time pressure, inadequate tools, low pay, low status, and organizational culture (Reason, 1997). Latent conditions are more likely to breakdown a system’s defenses by producing additional holes in the cheese.

In a complex system there are always hazards present (Reason, 1997). Defenses are in place to protect people and assets from the system hazards (Reason, 1997). Loss or harm occurs when weaknesses in the defenses, represented by holes in the cheese, align and create a window of opportunity for the hazards to reach the people or assets (Reason, 1997).
The Swiss cheese framework of accident causation explains how accidents happen but is limited in that it doesn’t explain why accidents happen. Reason created a subsequent model to define the stages in the development of an accident to explain why accidents happen. The framework is also limited by the inability to understand when and why weaknesses in defenses align to cause harm, and under what circumstances the holes in the defenses align to produce a loss.

**Reason’s Stages in the Development of an Accident Model**

Reason’s stages in the development of an accident model serves to explain why accidents happen. The model also serves as a mechanism to investigate accidents (Reason, 1997). Since preventable harm is an outcome of safety culture, this framework serves as a mechanism to review preventable harm to understand the actual state of a safety culture in an organization (Reason, 1997). There are three central concepts in this model. These concepts include organizational factors, local workplace factors, and unsafe acts.

**Organizational Factors**

Organizational factors are strategic decisions including but not limited to forecasting, budgeting, resource allocation, planning, scheduling, communicating, managing, and auditing (Reason, 1997). These leadership decisions create a corporate culture of the way the organization carries out its business. This manifests through unspoken attitudes and unwritten rules (Reason, 1997).

**Local Workplace Factors**

Local workplace factors are conditions associated with the immediate context of the environment in which errors occur (Reason, 1997). An example of local workplace factors include but are not limited to time pressure, inadequate tools and equipment, insufficient
training, insufficient resources, insufficient policies and procedures, poor communication, and poor management that cultivate local culture, or how the individuals carry out their work (Reason, 1997).

**Unsafe Acts**

Unsafe acts are errors committed in the presence of a potential hazard (Reason, 1997). Unsafe acts can be described as a slip, lapse, or mistake (Reason, 1997). Slips and lapses occur when the intended plan does not achieve the desired results due to a failure in execution (Reason, 1997). A slip is an attentional failure in that the intention was appropriate but the action was not. For example, a nurse knowingly intended to infuse normal saline, but selected and infused a solution with dextrose with a similar package because the nurse did not pay attention to the details on the package. A lapse is a memory failure created by forgetting or omitting planned items such as forgetting to complete a surgical time out to prevent surgical harm perpetuated by the distraction of time pressure due to a late start of the surgical case. A mistake occurs when the plan goes as intended; however, the plan is inadequate to achieve the intended outcome (Reason, 1997). This can occur by a rule-based mistake or knowledge-based mistake (Reason, 1997). A rule-based mistake can occur by misapplication of a good rule or application of a bad rule (Reason, 1997). For example, a nurse gives a medication to relieve anxiety; however, because the safe medication procedure was not followed, the patient experienced an adverse event. A knowledge-based mistake occurs when the decision for action is based on insufficient or biased knowledge (Reason, 1997). For example, a teenage patient presents to an emergency department with hematuria and the provider treats a urinary infection when the teenager has beginning signs of bladder cancer.
The central idea of the stages in the development of an accident model concludes that the underlying causal factors of errors begin as organizational factors that have consequences on local workplace factors that when combined with the natural propensity for human error produce unsafe acts. The weaknesses in defenses initiated within the organizational level are strategic decisions made by leaders. The consequences of these decisions are communicated to the organization and influence local workplace factors that may create conditions of unsafe acts (Reason, 1997). Unsafe acts are often implicated in errors, however, they are not a necessary condition (Reason, 1997). Loss or harm can occur without unsafe acts. Latent factors contribute to significant weaknesses within the defenses (Reason, 1997). While the causes of weaknesses in defenses start from the organizational factors, the investigation to identify the cause of an accident starts with the bad outcome and works backwards to identify how and when the defenses failed (Reason, 1997). Accident causation trends within an organization may be used to provide an understanding of the current state of the organization’s actual safety culture including behaviors and situational aspects of the safety culture.

There are several limitations of the framework. The lack of exploration of organizational beliefs, values, and attitudes that result in supporting or disregarding safety practices impacting safer outcomes limits the usefulness of the framework. The framework is also criticized for too much emphasis on systems without addressing individual responsibility in performing unsafe acts (Reason, Hollnagel, & Paries, 2006).

**Summary of Theoretical Frameworks Informing this Study**

In summary, the theoretical frameworks selected to inform this study addressed the conceptualization of safety culture and the role of safety subcultures within a larger organizational culture. In addition, the frameworks explained safety culture impact on
preventable harm and how studying preventable harm informs the actual state of safety culture within an organization. These frameworks helped inform the methods of the study.

**Measuring Safety Culture in Hospitals**

Understanding perceptions of safety culture informs attitudes, values, and beliefs of the organization that influence safety-related behaviors and the embracement of situational aspects within the organization designed to reduce preventable harm (Cooper, 2000). Safety culture has been measured through various instruments. The variety of instruments allow organizations to define and assess multiple dimensions of safety culture (Hudson et al., 2009). Safety culture is measured by assessing the presence and strength of dimensions or organizational practices associated with a safety culture at the individual level (Hudson et al., 2009). Results at the individual level are aggregated to define unit, department, organizational, and national safety culture results (Famolaro et al., 2018). The results are intended to raise awareness about patient safety, diagnose and assess the current status and trends of the safety culture over time, identify strengths and areas for safety culture improvement, evaluate the cultural impact of safety improvements, and conduct internal and external comparisons (Hudson et al., 2009). The AHRQ SOPS, Safety Attitudes Questionnaire (SAQ), and the Patient Safety Climate in Healthcare Organizations (PSCHO) instruments are used extensively in the literature. Each instrument has limitations in terms of validity and reliability as described in Table 1. (Sexton et al., 2006; Singer et al., 2008; Sorra & Nieva, 2004).
Table 1. Psychometric Comparison of Safety Culture Measurement Instruments

<table>
<thead>
<tr>
<th></th>
<th>SOPS</th>
<th>PSCHO</th>
<th>SAQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Participants</td>
<td>50, 513</td>
<td>21, 496</td>
<td>10, 843</td>
</tr>
<tr>
<td>Number of Items</td>
<td>41</td>
<td>38</td>
<td>30</td>
</tr>
<tr>
<td>Number of Dimensions</td>
<td>12</td>
<td>9</td>
<td>6</td>
</tr>
<tr>
<td>CFI</td>
<td>0.90</td>
<td>0.95</td>
<td>0.90</td>
</tr>
<tr>
<td>RMSEA</td>
<td>0.04</td>
<td>0.10</td>
<td>0.03</td>
</tr>
<tr>
<td>Reliability</td>
<td>$\alpha = 0.63 - 0.84$</td>
<td>$\alpha = 0.50 - 0.89$</td>
<td>Raykov’s $\rho = 0.90$</td>
</tr>
<tr>
<td>Validity</td>
<td>Expert Content; CVI = 0.56-1.0; ICC = 0.23 – 0.60</td>
<td>Expert Content; CVI = 0.20-0.77; ICC = 0.90</td>
<td>Expert Content; ICC 0.51-0.99 between; ICC 0.40-0.69 within</td>
</tr>
</tbody>
</table>

The measurement tools are all grounded in different definitions and attributes of safety culture. The SOPS will be described in more detail as it was the source for describing the problem. Each of the instruments measure different components of a safety culture. Several dimensions of safety culture were commonly measured among the instruments including top management support, safety systems, safety attitudes, reporting incidents, communication openness, organizational learning, and teamwork (Alsalem et al., 2018). Although there were common dimensions of safety culture measured by all the instruments, there were also unique dimensions of a safety culture measured within individual instrument as described in Table 2.

**Hospital Survey on Patient Safety Culture**

The SOPS measures the perception of safety culture within units, organizations, and across organizations using a conceptual model of safety culture to guide the survey (Famolaro et al., 2018).
Table 2. Unique Measured Components of Safety Culture

<table>
<thead>
<tr>
<th>SAQ</th>
<th>SOPS</th>
<th>PSCHO</th>
<th>SOS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human Factors</td>
<td>Handoffs &amp; Transitions</td>
<td>Risk-taking behaviors</td>
<td>Team-work</td>
</tr>
<tr>
<td>Job Satisfaction</td>
<td>Leadership promotion of safety culture</td>
<td>Management commitment to safety, safety systems</td>
<td></td>
</tr>
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</table>

The questionnaire assesses 41 items within 12 composites of safety culture as described in Figure 2. Results are obtained through the use of a 5-point Likert scale measuring strength of perception (1 = strongly disagree, 5 = strongly agree) and frequency (1 = never, 5 = always) (Sorra & Nieva, 2004). Respondents also provide a safety grade ranging from A-excellent to E-failing as well as the ability to share the number of safety events reported in the previous year by selecting a range of numerical choices.

The survey was developed by a private research organization, supported by the Medical Errors Workgroup of the Quality Interagency Coordination Task Force, and funded by AHRQ (Sorra & Nieva, 2004). The 41 items were selected from an extensive literature search, psychometric analyses of two existing health care safety surveys, the Medical Event Reporting Systems for Transfusion Medicine and the VHA Patient Safety Questionnaire, and through in-person and telephone interviews with frontlines staff (Sorra & Nieva, 2004). Cognitive testing was conducted including the use of think aloud to understand the respondents’ comprehension and interpretation of the terms and items (Sorra & Nieva, 2004). Respondents included nurses, nurse managers, risk managers, department clerks, dieticians, food services, respiratory therapists, pharmacists, pathologists, residents, and physicians. The draft survey was sent to researchers, regulatory agencies, physicians, and hospital administrators for input (Sorra & Nieva, 2004).
The pilot survey was comprised of 79 items measuring 14 dimensions of safety culture (Sorra & Nieva, 2004). The survey was pilot tested using a purposive sample including nurses and pharmacists working in 21 hospitals within the United States. The response rate was 29% creating a sample of more than 1,400 staff to reflect the diversity of geographic location, teaching status, hospital size, and profit status (Sorra & Nieva, 2004). An exploratory factor analysis was then conducted to eliminate the possibility of a single, unidimensional concept (Sorra & Nieva, 2004).

A confirmatory factor analysis was then conducted resulting in the final model (Sorra & Nieva, 2004). The overall model fit was confirmed through the comparative fit index, goodness-of-fit index, adjusted goodness-of-fit index, normalized fit index, and non-normalized fit index with results of .90 or greater (Sorra & Nieva, 2004). The root-mean-square error of approximation measuring the unexplained variance was .04, less than the 0.5 recommended for indicating a good fit (Sorra & Nieva, 2004). Twelve final composites were retained (Figure 2).

<table>
<thead>
<tr>
<th>Patient Safety Culture Composite</th>
<th>Definition: The extent to which...</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Communication openness</td>
<td>Staff freely speak up if they see something that may negatively affect a patient and feel free to question those with more authority.</td>
</tr>
<tr>
<td>2. Feedback and communication about error</td>
<td>Staff are informed about errors that happen, are given feedback about changes implemented, and discuss ways to prevent errors.</td>
</tr>
<tr>
<td>3. Frequency of events reported</td>
<td>Mistakes of the following types are reported: (1) mistakes caught and corrected before affecting the patient, (2) mistakes with no potential to harm the patient, and (3) mistakes that could harm the patient but do not.</td>
</tr>
<tr>
<td>4. Handoffs and transitions</td>
<td>Important patient care information is transferred across hospital units and during shift changes.</td>
</tr>
<tr>
<td>5. Management support for patient safety</td>
<td>Hospital management provides a work climate that promotes patient safety and shows that patient safety is a top priority.</td>
</tr>
<tr>
<td>6. Nonpunitive response to error</td>
<td>Staff feel that their mistakes and event reports are not held against them and that mistakes are not kept in their personnel file.</td>
</tr>
<tr>
<td>7. Organizational learning—Continuous improvement</td>
<td>Mistakes have led to positive changes and changes are evaluated for effectiveness.</td>
</tr>
<tr>
<td>8. Overall perceptions of patient safety</td>
<td>Procedures and systems are good at preventing errors and there is a lack of patient safety problems.</td>
</tr>
<tr>
<td>9. Staffing</td>
<td>There are enough staff to handle the workload and work hours are appropriate to provide the best care for patients.</td>
</tr>
<tr>
<td>10. Supervisors/manager expectations and actions promoting patient safety</td>
<td>Supervisors/managers consider staff suggestions for improving patient safety, praise staff for following patient safety procedures, and do not overlook patient safety problems.</td>
</tr>
<tr>
<td>11. Teamwork across units</td>
<td>Hospital units cooperate and coordinate with one another to provide the best care for patients.</td>
</tr>
<tr>
<td>12. Teamwork within units</td>
<td>Staff support each other, treat each other with respect, and work together as a team.</td>
</tr>
</tbody>
</table>

Figure 2. AHRQ SOPS Composites and Composite Definitions
Internal consistency reliabilities were examined for the 12 composites indicating overall acceptable reliability (Table 1). The composite with the highest reliability included management support with a Cronbach’s alpha = .85 and the lowest reliability included the staffing composite with a Cronbach’s alpha = .63 (Appendix B) (Sorra & Nieva, 2004). Staffing, which demonstrated the lowest internal consistency, was retained as evidence in the literature supports the impact of staffing on safety (Blegen et al., 2009; Sorra & Dyer, 2010; Sorra & Nieva, 2004).

Validity analysis was conducted by calculating the mean of the responses to items in each composite and then correlating the composites with one another once reverse scored items were corrected (Sorra & Nieva, 2004). Construct validity was supported by all intercorrelations (Table 1) (Sorra & Nieva, 2004). Correlations were then calculated for the 12 composites and the four outcome variables with the highest intercorrelation between overall perceptions of safety and safety grade (r = .66, p < .001) (Sorra & Nieva, 2004). A moderate intercorrelation between overall perceptions of safety and hospital management support for patient safety (r = .60, p < .001) suggests the important role leaders hold in the perceptions of safety culture (Sorra & Nieva, 2004). There were little to no intercorrelations with the number of safety events reported within the last year and the other composites, perhaps explained by the lack of events reported by a majority of respondents (Sorra & Nieva, 2004). Finally, ANOVA was conducted to understand differences in composite scores within and across hospitals identifying significant differentiating scores among all composites suggesting a good fit (Sorra & Nieva, 2004).

Follow up studies were conducted to strengthen reliability and validity of the instrument. A confirmatory factor analysis was conducted through a study analyzing results from 331 hospitals, 2,267 units, and 50,513 hospital staff respondents demonstrating construct validity (Sorra & Dyer, 2010). In a study of 454 health care staff in 3 hospitals, a factor analysis
concluded moderate to strong reliability and validity evidence except for the staffing composite, consistent with previous research (Blegen et al., 2009).

Extensive and appropriate psychometric testing during the pilot and throughout the use of the survey identified an appropriate degree of precision and accuracy supporting that the survey produces reliable and valid results. SOPS has been used in more than 100 studies in a variety of countries demonstrating high reliability and validity. A limitation to this theoretical framework is it globally assesses the perception of the presence and strength of a safety culture; however, it does not assess the cause of the strength or presence of safety culture (Sorra & Nieva, 2004). The SOPS is also limited by a lack of assessment of behavioral aspects of safety culture as the survey focuses predominantly on psychological and situational aspects of safety culture.

Summary of Measuring Safety Culture in Hospitals

In summary, various instruments are available to assess safety culture. Each of the instruments measure different components of a safety culture. The SOPS has been used extensively in the literature and produces valid and reliable results.

A Synthesis of Interventions to Improve Safety Culture in Hospitals

A review of the literature was conducted to identify strategies that were deployed to impact safety culture within hospitals located in the United States. A brief description of composite-specific trends in the SOPS informed the overall impact of specific safety interventions on specific components of a safety culture within the United States. The 2018 SOPS database survey and trending data characteristics were previously described in Chapter 1. Overall trends in the SOPS will be described to facilitate understanding of the historic and current state of safety culture as measured by the most widely used instrument in healthcare. A brief description of the impact of safety culture on safer care outcomes will be provided to
inform potential gaps in the link between safety culture and safer care. Finally, gaps in the literature will be described and the gap addressed in this study will be identified.

**Literature Search Strategy**

Studies were identified by searching Cumulative Index to Nursing and Allied Health Literature (CINAHL), Ovid MEDLINE, PubMed, and Scopus academic databases. Search terms included safety culture, safety culture and leadership, safety and leadership, and safety leadership. The search was limited to English studies published between 1998 and 2018 to reflect healthcare response to the IOM Report (IOM, 2000).

Inclusion criteria for the search were peer-reviewed studies focused on hospital patient safety culture interventions conducted to improve safety culture. The studies had to measure or address safety culture or safety climate in hospitals. Studies that focused on entities other than acute care, employee safety, students, and patient perceptions were excluded. Studies outside of the United States were excluded due to the uniqueness of the healthcare system in the United States. This strategy resulted in 30 final studies retained as displayed in Figure 3.

**Literature Search Results**

**Leadership Impact on Safety Culture**

Leadership has been consistently identified as a significant component of a safety culture and critical to improving safety through designing, fostering, and nurturing a culture of safety (Sammer et al., 2010). Leadership focus and engagement influences safe care through setting a vision for how the organization behaves, identifying the most important actions that exemplify the desired culture, creating the infrastructure that makes it possible for staff to implement the actions, and role-modeling behaviors to shape a safety culture (Swensen et al., 2013).
Although leadership dimensions are two of the more favorably perceived dimensions in the SOPS, there remains a discrepancy between leader and nurse perception (Famolaro et al., 2018). A review of the literature identified leader support and alignment of patient safety, organizational culture, leadership style, and behaviors including leadership rounds impact safety culture. Leadership was explored in this study to identify what factors are contributing to the discrepancy in perception of leadership between nurses and leaders.

**Leader support and alignment of patient safety impacts safety culture.** The foundation of delivering safe, reliable care is the ability for leaders to establish, lead, and sustain safety as a core value (Gandhi et al., 2016). Leader attention to safety by supporting and aligning patient safety priorities has resulted in improvements in safety culture. In addition, different types of organizational culture impact safety culture. Organizational culture is influenced by leadership (Gandhi et al., 2016).
A mixed methods study analyzed the results from the SOPS from 536 hospitals between 2007 and 2014 to identify the top-improving large hospitals with over 400 beds (Campione & Famolaro, 2018). The aim of the quantitative study was to use data to identify hospitals with top performing safety culture perception results as measured by the improvement in average positive response, including agree and strongly agree, over the 7-year period (Campione & Famolaro, 2018). Among the 536 hospitals that submitted data, the change in the favorable responses for all composites averaged a 1.7 percentage point increase (Campione & Famolaro, 2018). The six top-performing hospitals that were selected for the qualitative portion experienced an increase in average favorable responses of 8.6 percentage points, ranging from 6.5–10.6 percentage point increase (Campione & Famolaro, 2018). However, the significance of this increase is unknown.

The aim of the qualitative portion of the study was to identify promising practices of top performing hospitals that may have contributed to their improvement (Campione & Famolaro, 2018). Semi-structured interviews were conducted with one to three interviewees from the executive leadership team from six top-improving hospitals. A thematic analysis was conducted to identify themes and best practices among the top hospitals. The three most common themes included goal setting and strong action planning for quality improvement, implementation of well-known patient safety initiatives and programs, and rigorous survey administration methods (Campione & Famolaro, 2018). Other themes emerged including leadership support and focus on organizational culture, consistent patient safety manager, importance of middle management in safety culture, and event reporting including ease, promotion, and root cause analysis with feedback (Campione & Famolaro, 2018). These themes all strengthen the notion that leadership support and alignment impacts safety culture. This study allowed the researchers to obtain a deeper understanding of how top performing organizations have positively influenced safety
culture as described by leaders. This study was limited by not conducting a deeper exploration of non-leader perceptions of the causes of improvement in safety culture.

**Organizational culture impacts safety culture.** Different types of organizational culture had differing impacts on safety climate. A large cross-sectional survey of 92-hospitals representing small, medium and large size hospitals was conducted in the United States (Singer et al., 2009). Safety climate was measured by the PSCHO (n =18,361) and organizational culture was measured by the Competing Values Framework (n = 5,637). The types of organizational culture assessed in the study were production-oriented culture (α = .48), entrepreneurial (α = .55), hierarchical (α = .70), and group (α = .77) (Singer et al., 2009). Group culture (β = -0.241, p < 0.01), entrepreneurial culture (β = -0.279, p < 0.01), hierarchical culture (β = 0.300, p < 0.01), and production oriented culture (β = 0.0666, p = < 0.01) significantly predicted safety climate (Singer et al., 2009). This suggests that group culture and safety climate are related. Patient safety climate was better when hospitals emphasized more group participation and less hierarchy. The relationship between organizational culture and safety climate was explained by a theoretical model. This study was limited by inadequate reliability psychometric support of the culture type measurement scales. However, the study illuminated the role power gradients play in safety culture. Although power gradients are known to exist in healthcare, they are subtly exposed in safety culture measurement instruments. The existence of power gradients could be identified in a qualitative study.

**Empowering cultures impact safety culture.** Feelings of empowerment enhance feelings of support to allow decision making, which affects processes of care, increases quality patient care, and potentially improves patient outcomes (Laschinger, 1996). Empowering environments have been associated with a better safety culture.
A study in the United States (n = 257) identified a positive relationship between overall safety culture, measured by the SOPS, and empowerment (r = 0.32, p < .05) (Armellino et al., 2010). The Conditions of Workplace Effectiveness Survey (CWEQ-II), Job Activities Scale-II (JAS-II), and the Organizational Relationships Scale-II (ORS-II) instruments were used to measure empowerment (Armellino et al., 2010). The CWEQ-II contains 19 questions, plus two additional items that measure global empowerment through six components that inform perceptions of access to opportunity, information, support, and resources (α = .89) (Laschinger et al., 2001). Two additional scales, the Job Activities Scale-II (JAS-II) and the Organizational Relationships Scale-II (ORS-II) measured formal and informal power, however reliabilities were not reported. The study had a 40% response rate. In addition, the study was supported by Kanter’s theory of structural empowerment. Kanter proposes when individuals have the power, or ability to access and mobilize resources, and have opportunities within the work environment they become empowered to achieve organizational goals and effectiveness (Laschinger, 1996). Empowerment had a positive relationship with safety culture explained by structural empowerment framework. On the other hand, it is not known if empowerment is a result or a precursor to safety culture. Furthermore, the impact of empowerment and/or safety culture on safety-related decisions is not known. The study was limited by lack of psychometric testing of two scales used to assess power gradients.

**Power gradients identified in the SOPS.** Power gradients are subtly informed through the SOPS. In the 2018 SOPS user database, the item “staff feel free to question decisions or actions of those with more authority” only saw a 50% average favorable response (Famolaro et al., 2018). However, those results were skewed by more favorable leader perceptions (73% average favorable response) compared to nurse perceptions (48% average favorable response)
Leadership styles and behaviors impact safety culture. Leaders have different styles and behaviors. The relationships between leaders and clinicians influences a safety culture. Active leadership behaviors, through leader rounding, had an inconsistent impact on safety culture.

Transformational-transactional leadership styles. A nine hospital cross-sectional study of 41 nursing units (n = 466) in the United States found a significant positive correlation between transformational leadership and most sub-scales of the Hospital Unit Safety Climate (HUSC) scale (Merrill, 2015). The study also found significant negative correlations for laissez-faire leadership style and most sub-scales of the HUSC as assessed by nurses (Merrill, 2015). Transformational leadership had a large positive correlation with: manager support (r = 0.78, p < .01), safety emphasis (r = 0.44, p < .01), and blameless culture (r = 0.37, p < .05) (Merrill, 2015). Laissez-faire had a large negative correlation with manager support (r = -0.71, p < .01), safety emphasis (r = -0.42, p < .01), blameless culture (r = -0.52, p < .01), and a medium negative correlation with safety data (r = -0.33, p < .05) (Merrill, 2015).

The transformational-transactional leadership model encompasses transformational, transactional, and laissez-faire leadership styles. While predominance of one type is not unusual, there is a tendency to use any type depending on the situation (Bass & Avolio, 2004).

Transformational leaders are positive leaders who inspire followers to strive for higher performance by being respected, instilling pride, motivating others, stimulating creativity, and
recognizing individuals for their achievement (Bass & Avolio, 2004). A transactional leader obtains power from their formal authority and responsibility to the organization (Bass & Avolio, 2004). The main goal of the follower is to obey the instructions of the leader (Bass & Avolio, 2004). The leader motivates followers through reward and punishment (Bass & Avolio, 2004). Finally, laissez-faire leadership is a passive management style in which leaders intervene only when issues reach a critical point (Bass & Avolio, 2004). Leadership styles were shown to have an impact on safety culture. The study had several limitations including a low response rate (29.5%) and small sample sizes at the unit level. There was also a lack of reliability and validity of the instrument.

**Leader behaviors.** Nurses have described leadership behaviors that influence a safety culture. An ethnographic study describing how nursing supervisors keep nurses and patients safe was conducted with 30 nursing supervisors working in 30 different hospitals in 20 different states in the United States (Weaver et al., 2017). In addition, seven focus groups were held to explore the perspective of working with nursing supervisors on evening, night, and weekends from a staff nurse perspective. Administrative supervisors who support the off-shifts have been identified as a resource to improve safety and safety culture through trust, rounds, education, and providing support with a relationship-oriented leadership style (Weaver et al., 2017). This study provided a deeper exploration of leader behaviors that impact safety culture on the off-shifts and weekends. This study identified leader support provided by more than managers and administrators occurs to support safety culture. A limitation of this ethnographic study was the lack of observation, lack participant observations, and lack of author bracketing (Weaver et al., 2017).
Leader rounds impact safety culture. Leadership WalkRounds are a simple but rigorous management tool designed to assist hospital leaders in implementing mechanisms for promoting safety, learning about and hearing the concerns of front-line providers, supporting appropriate accountability concepts, and allocating resources to areas of greatest risk (Frankel et al., 2008). They are intentional rounds with frontline clinicians to identify safety successes and barriers preventing safe care (Frankel et al., 2008). Leader behaviors during rounds signal an executive commitment to patient safety (Solvtofte et al., 2017). Leadership rounds have had an inconsistent impact on perception of safety culture as described in the following studies.

A pre-post intervention study of clinicians (n_pre = 790, n_post = 741) among two hospitals in Massachusetts realized inconsistent relationships between leader rounds and safety climate as measured by the SAQ (Frankel et al., 2008). Hospital A included nine patient care units while Hospital B included 12 patient care units. Hospital A realized a significant increase in safety climate after implementing leader rounds (t = 2.67, p = .03); while hospital B identified no improvement in safety climate after implementing leader rounds (t = 2.06, p = .06) (Frankel et al., 2008). Another single randomized control trial of nurses in a hospital in the United States identified that Leader WalkRounds made no difference in pre and post mean scores of safety climate between control and intervention groups (p = .854) using the SCS (Thomas et al., 2005). However, nurses’ who were directly involved in Executive WalkRounds had a higher perception of safety culture (p = .02) (Thomas et al., 2005). Nurses in the intervention group demonstrated a significant difference in the odds of agreement compared to the control group when responding to certain items as displayed in Table 3.
Table 3. Nurses' Exposed to Leader Rounds Response to Survey Items

<table>
<thead>
<tr>
<th>Item</th>
<th>Odds Ratio</th>
<th>95%CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Senior leaders in my hospital listen to me and care about my concerns</td>
<td>2.15</td>
<td>1.18-3.92</td>
</tr>
<tr>
<td>Leadership is driving us to be a safety-centered institution</td>
<td>2.48</td>
<td>1.39-4.45</td>
</tr>
<tr>
<td>I would feel safe here being treated as a patient</td>
<td>2.05</td>
<td>1.31-3.19</td>
</tr>
<tr>
<td>The institution is doing more now for patient safety than one year ago</td>
<td>3.82</td>
<td>1.87–7.81</td>
</tr>
<tr>
<td>Patient safety is constantly reinforced as the priority in this clinical area</td>
<td>2.79</td>
<td>1.50–5.21</td>
</tr>
</tbody>
</table>

This study was limited by biases related to self-survey, selection threat, differences between groups, attrition threat, inability to identify if float nurses in the control group were exposed to Leader WalkRounds, and lack of control for differences in leadership style and approach during Leader WalkRounds (Thomas et al., 2005).

**Leadership dimensions are among the higher scoring dimensions in the SOPS.**

Leader support and commitment to patient safety are the more favorably perceived composites on the SOPS. The 2018 SOPS database survey identified management support for patient safety as the second highest scoring composite (82% average favorable responses) among all respondents (Famolaro et al., 2018). However managers/supervisors had the highest average favorable perception (86%), whereas nurses had the lowest average favorable perception (65%) (Famolaro et al., 2018). The supervisor/manager commitment and actions promoting patient safety were also highly favorable (72% average favorable responses), however, this composite was most favorably perceived by managers/supervisors (90% average favorable response) with nurses again having the lowest perception (77% average favorable response) (Famolaro et al., 2018). Although these are higher performing composites, the discrepancies between leader
perceptions and nurse perceptions were skewed. This suggests leader interventions may not be having the desired impact on the safety culture among nurses.

Summary of leadership impact on safety culture. In summary, leadership attention and commitment to patient safety had a positive impact on safety culture, specifically, leadership commitment and prioritization of safety interventions. Group and entrepreneurial organizational cultures had a positive impact on safety compared to production and bureaucratic organizational culture. Positive leadership styles had a positive impact on safety culture; whereas, passive leadership styles had a negative impact on safety culture. Finally, leadership commitment to safety by prioritizing time to reinforce safety behaviors through walking rounds had inconsistent results on safety culture perception. However, clinicians directly involved in rounds had a higher perception of safety culture. This suggests this intervention can have an impact on individuals, however there is less evidence of an impact at the unit or organizational level. Power gradients were identified as a factor influencing safety culture in the research and SOPS database. Discrepancies in nurse and leader perception of the leadership composites of the SOPS were explored in this study.

Staffing Remains a Barrier to a Safety Culture

Commitment to fiscal and human resources includes leadership prioritization and allocation of resources (Singer & Vogus, 2013). Human resource practices create the conditions in which the workforce is selected, trained, and the structure in which services are provided (Singer & Vogus, 2013). These resources ensure appropriate staffing policies and staffing models to provide safe care. The perception of staffing has consistently remained the least favorable dimensions of the SOPS. In addition, this literature review identified the importance of staffing and safety culture.
A cross-sectional study of 44 neonatal intensive care units in California representing 2,073 nurses, nurse practitioners, physicians, and respiratory care providers identified staffing policies and procedures that enable safe work practices by reducing burnout and positively impacting safety culture (Profit et al., 2014). A large significant negative correlation was found between burnout and a poor perception of safety climate \((r = -0.40, p = .01)\) as measured by the SAQ and the Emotional Exhaustion scale of the Maslach Burnout Inventory (Profit et al., 2014).

Another cross-sectional study of 148 nurses from a Midwestern Veteran’s Administration hospital in the United States identified burnout was associated with decreased safety culture perception (Halbesleben et al., 2000). Burnout, as measured by exhaustion, had a large significant negative correlation with safety grade \((r = -0.41, p < .01)\), safety perception \((r = -0.55, p < .01)\), and moderate significant negative correlation with near-miss reporting \((r = -0.35, p < .01)\) as measured by the SOPS and Maslach Burnout Inventory (Halbesleben et al., 2000).

**Staffing as measured by the SOPS.** The 2018 SOPS identified the staffing dimension of the SOPS as one of the lowest scoring composites among respondents, regardless of role (Famolaro et al., 2018). Nearly half of respondents report not having enough staff (52% average favorable response), staff in the unit work longer hours than is best for patient care (48% average favorable response), working in crisis mode (50% average favorable response), and use of more agency or temporary help than is best for patient care (64% average favorable response) (Famolaro et al., 2018). Favorable staffing responses have declined over time. The 2018 SOPS database trending survey identified a decrease in average favorable staffing responses by nurses from 55% favorable in 2016 to 53% favorable in 2018; whereas leaders remained stable at 63% favorable (Famolaro et al., 2018). This indicates that adequate staffing has not been improved to positively impact safety culture.
Summary of staffing impact on safety culture. Burnout has a negative impact on safety culture. In addition, the SOPS results suggest staffing is not perceived as adequate for safe care. The risk of making errors was three times higher when nurses worked shifts greater than 12.5 hours (OR = 3.29, p = .001) and increased with working overtime regardless of shift length (OR = 2.06, p = .0005) (Rogers et al., 2004). These findings identify the importance for leaders to continuously assess the environment and ensure adequate support and prioritization of resources. Staffing was previously reported as the lowest reliable composite within the SOPS, however staffing continues to surface as a concern. This study incorporated staffing ratios into the description of organizational characteristics (Rogers, et al., 2004).

Comprehensive Safety Programs Impact Safety Culture

The development of comprehensive unit-based safety programs (CUSP) to identify hazards, fix hazards, and learn from hazards have resulted in inconsistent but promising results ranging from improved teamwork, communication, and overall perception of safety culture at the unit and organizational level (Weaver et al., 2013). CUSP can be considered a change management tool, however it increases relevancy in healthcare by making it relevant for clinicians by putting the change management tools in the context of a hospital unit environment (AHRQ, 2013). CUSP is comprised of five main steps including staff education on safety science, identifying defects, engaging executive leaders, learning from defects, and implementing teamwork tools (AHRQ, 2013). CUSP engages frontline clinicians and leaders in implementing safety programs.

A systematic review identified six of eight studies found a significant association between CUSP and improved safety culture perceptions (Weaver et al., 2013). A prospective cohort study of 144 units in a large academic medical center in the United States implementing a
CUSP found a significant improvement in safety climate after the CUSP intervention ($t = -6.02$, $p < .001$) as measured by the SAQ (Paine et al., 2010).

A CUSP, comprised of the addition of an obstetrics patient safety nurse, protocol-based standardization of practice, crew resource management, or team training, and a patient safety oversight committee, was implemented within an obstetrics department in a New York hospital (Pettker et al., 2011). This pre and post study design identified significant improvements in the proportion of staff members with favorable perceptions of teamwork culture (39% in 2004 to 63% in 2009, $p < .001$) and safety culture (33% to 63%, $p < .001$) (Pettker et al., 2011). Individual roles including nurses, attending physicians, and residents also experienced significant improvements in safety climate and teamwork perception ($p < .01$) (Pettker et al., 2011). A limitation of the study was although participants were surveyed four different times throughout the five years, the participants responding were different and different methods of survey delivery were used (Pettker et al., 2011)

A quasi-experimental study in one hospital identified a significant increase in several safety climate domains after the implementation of a CUSP (Provonost et al., 2005). Clinicians in two intensive care units (Unit A$_{pre}$ n = 66, Unit A$_{post}$ n = 64; Unit B$_{pre}$ n = 23, Unit B$_{post}$ n = 21) both experienced a significant increase in multiple dimensions of safety culture ($p < .05$) as measured by the SAQ (Provonost et al., 2005). Another pre and post intervention study design including 72 Intensive Care Units in Michigan identified an improvement in safety climate over a one-year period after the implementation of a CUSP ($t = -2.921$, $p < .005$) as measured by the SAQ (Provonost et al., 2008). A prospective cohort study of 127 intensive care units in Michigan realized an association between safety culture and the implementation of a CUSP ($t = -6.21$, $p < .001$) as measured by the SAQ (Sexton et al., 2011).
Summary of comprehensive safety programs and the impact on safety culture.

CUSP addresses safety culture and safer systems simultaneously. CUSP provides a change management framework that engages leaders and frontline clinicians to collaboratively identify and improve safety concerns at the unit level. The evidence supports consistent improvements in safety culture after the implementation of a CUSP. These results were realized in individual units, hospitals, and among multiple hospitals. CUSP requires leadership engagement and support, however CUSP also influences safety-related actions and behaviors. Programs that have been implemented to improve safety were explored within this study.

Teamwork Impact on Safety Culture

Teamwork is defined as an environment in which collegiality, collaboration, and cooperation among executives, staff, and independent practitioners in open, safe, respectful, and flexible relationships is evident (Sammer et al., 2010). Improving teamwork has a positive impact on safety culture. Teamwork within units is more favorably perceived than teamwork across units (Famolaro et al., 2018).

A pre and post teamwork training intervention within one medical unit among three different California hospitals (n_prec = 434, n_post = 368) identified a statistically significant (p < .05) improvement in 10 composites of safety culture as measured by SOPS (Blegen et al., 2010). A quasi-experimental study of a teamwork training intervention for clinicians (n = 3,465) across 24 critical access hospitals with 12 control hospitals identified a significant improvement in several composites of the SOPS in the intervention group compared to the control group (Jones et al., 2013). The intervention group had significantly more favorable perceptions after training (p < .01) than did the static group in the survey composites organizational learning—continuous improvement (76% vs 71%), teamwork within departments (82% vs 80%), and teamwork across
hospital departments (67% vs 62%) (Jones et al., 2013). However, the distribution of the adoption of team behaviors varied in the intervention group from 2.8% to 31.0%.

Early adopter respondents experienced an increased odds of reacting positively to the SOPS items representing working in crisis mode (OR = 1.61, 95%CI[1.18-2.36], p < .01), mistakes have led to positive changes (OR = 1.45, 95%CI[1.05-1.99], p < .05), and a less favorable perception of problems occurring in the exchange of information across hospital departments (OR = 0.773, 95%CI[0.56-0.94], p < .05) (Jones et al., 2013). Early/late majority respondents experienced increased odds of reacting positively compared to baseline for: when one area in the department gets busy, others help out (OR = 1.32, 95%CI[1.09-1.61], p < .01), staff feel free to question those with more authority (OR = 1.26, 95%CI[1.06-1.49], p < .01), mistakes have led to positive change (OR = 1.29, 95%CI[1.05-1.57], p < .05) and it is just by mistake that more accidents don’t happen around here (OR = 1.28, 95%CI[1.06-1.56], p < .05) (Jones et al, 2013). Laggard respondents were less likely to respond favorably to important patient information is lost during shift change (OR = 0.64, 95%CI[0.46-0.90], p < .05) and problems occur in the exchange of information across hospital departments (OR = 0.71, 95%CI[0.51-0.98], p < .05) (Jones et al., 2013). The distribution of adoption suggests there were other organizational or workplace factors influencing the embracement of this intervention warranting further exploration to inform change management strategies.

A pre and post interventional study comparing two campuses, one receiving TeamSTEPPS training and a control campus, identified teams experiencing teamwork training engaged in significantly more team behaviors after attending the training, including precise operative briefings (F [1, 147] = 35.01, p < .001, partial η² = .19) and frequency of contingency plan discussions (F [1, 145] = 5.00, p < .05, partial η² = .03) (Weaver et al., 2010). A repeated
measures ANOVA analyses indicated that statistically significant gains were only found for the dimension teamwork within units as measured by the SOPS (F[1, 25] = 21.7, p < .001, partial $\eta^2$ = .19 (Weaver et al., 2010). Safety culture, as measured by the SOPS, realized a significant increase in favorable responses after training for communication (F[4, 134] = 3.15, p < .05; Wilks’ Lambda = .91; partial $\eta^2 = .09$) and mutual support (F[2,143] = 6.41, p < .01; Wilks’ Lambda = .92; partial $\eta^2 = .08$) (Weaver et al., 2010). Finally, the trained group’s perceptions of teamwork increased significantly after training (F[1, 18] = 7.05, p = .02, partial $\eta^2 = .28$); whereas the nontrained group did not statistically significantly change over time (F[1, 6] = .271, p = .62, partial $\eta^2 = .04$) (Weaver et al., 2010).

**Teamwork as measured by the SOPS.** Efforts to improve teamwork have led to favorable perceptions of teamwork (82%) as measured by the SOPS (Famolaro et al., 2018). However, teamwork across units is generally less favorable (62%) indicating opportunities to extend teamwork training across units or identify barriers in teamwork across units. Nurses have the lowest perception of teamwork across units (58%) (Famolaro et al., 2018).

**Summary of teamwork impact on safety culture.** Evidence supports that safety culture can be influenced by teamwork across many different settings. The adoption of team training behaviors influences safety culture across multiple units and organizations. Teamwork within units is perceived more favorably than across units. The opportunity to understand and improve teamwork across units requires further exploration. This important dimension guided the exploration of teamwork within units while revealing factors influencing teamwork between units.
Communication Impacts Safety Culture

Communication occurs when any and all members of the healthcare team have the right and responsibility to speak up on behalf of a patient (Sammer et al., 2010). Communication also occurs during patient handoffs. Several communication interventions have resulted in positive improvements in safety culture including speaking up and handoff communication. Handoffs and communication perform poorly in the SOPS (Famolaro et al., 2018).

Speaking up for patient safety. Speaking up has been defined as assertive communication in clinical situations that require immediate action with appropriate persistence until there is a clear resolution to prevent error or harm from reaching a patient (Premeaux & Bedeian, 2003). Reporting and voicing concerns identifies lapses in patient safety that will enable learning and changes to be made to the environment to prevent further harms (Vogus et al., 2010). The review of literature identified a multitude of organizational and individual factors influencing speaking up for safety.

Creating an environment in which it is safe to speak up also influences safety culture. A systematic review, including 26 studies, identified environmental factors impacting speaking up for safety (Okuyama et al., 2014). These factors included perceived patient risk, hospital administrative support, policies, team work, safety of speaking up, and relationships among colleagues (Okuyama et al., 2014). Individual factors including job satisfaction, responsibility toward patients, responsibility as a professional, confidence based on past experience, communication skills, and education background influenced speaking up (Okuyama et al., 2014). Physicians and nurses on an oncology unit identified protecting patients from injury as the primary motivator for speaking up, however the decision to speak up is often determined by justifying the risk to the patient with the cost of speaking up in terms of damaging relationships,
time constraints, fear of negative consequences, futility due to perceived lack of change, and hierarchical structures created by role and experience level (Schwappach & Gehring, 2014).

A multilevel Poisson regression analysis indicated that the benefits of safety organizing on reported medication errors were amplified when paired with high levels of trust in manager (β = -0.68, p < .001) or the use of care pathways (β = -0.82, p = .001) (Vogus & Sutcliffe, 2007). This was a large cross-sectional study of 1,033 nurses and 78 nurse managers working across seven states in the United States (Vogus & Sutcliffe, 2007). The nurse manager response rate (96.3%) was higher than the nurse response rate (50.6%); however, response rates overall were favorable.

Leaders can promote or hinder voicing of safety events. A metasynthesis of 11 qualitative studies identified four themes influencing nurses and other healthcare workers to voice concerns: (1) hierarchies and power dynamics negatively impact speaking up; (2) open communication is unsafe and ineffective; (3) embedded expectations of nurse behavior affect voicing concerns, (4) nurse managers have a powerful positive or negative affect on safety voice (Morrow, 2016).

**Speaking up for safety as measured by SOPS.** A systems approach to error is intended to prevent blaming an individual for human errors, while still holding individuals accountable for unprofessional conduct (NPSF, 2015). The nonpunitive response to errors dimension has remained the lowest scoring dimension over time. Improving situational and behavioral aspects is reliant on reporting and learning from mistakes to identify and mitigate preventable errors before they cause harm (NPSF, 2015). A blame culture, or set of norms and attitudes within an organization characterized by the unwillingness to take risk or accept responsibility for mistakes because of the fear of criticisms or management admonishments, is prevalent in healthcare
(Khatri et al., 2009). This lack of reporting, seeded in fear of blame, results in the inability to significantly reduce preventable harm (Gorini et al., 2012).

The 2018 SOPS database survey identified a less than favorable (47%) perception of a nonpunitive response to error (Famolaro et al., 2018). This composite has remained the lowest scoring dimension when trended over time (Famolaro et al., 2018).

A punitive culture creates under-reporting of potential or actual safety events that would inform further development of behavioral and situational aspects of safety culture. The 2018 SOPS database survey identified 55% of respondents within the previous 12 months never reported a safety event and 25% only reported 1-2 safety events (Famolaro et al., 2018). Only 2%-3% of major errors are reported in hospitals, and those reported are due to an inability to conceal the error (Leape, 1997). In a 2010 report of 189 United States hospitals, the OIG identified 13.5% of hospitalized Medicare beneficiaries experienced adverse events during their hospital stay however, only 14% of the errors were actually reported (DHHS: OIG, January 2012).

**Summary of speaking up for safety.** Leaders create the organizational structure and expectations for professional behavior within the healthcare environment. A plethora of barriers to speaking up for safety have been identified through quantitative and qualitative research. Trust in management and use of care pathways enhanced reporting of medication errors. The poor perception of speaking up and a nonpunitive environment suggest there are factors within the environment that have either not been explored, or there are significant challenges in removing the barriers. This warrants further exploration to determine the facilitators and barriers in creating an environment that supports speaking up.
**Handoff communication impacts safety culture.** Communication also occurs between clinicians to ensure the safe transition of a patient between different levels of care and through multiple handoffs between caregivers. Handoffs and transitions have not improved in perception among nurses and leaders over time (Famolaro et al., 2018).

A cross-sectional study of 515,637 respondents from 1,052 hospitals across the United States assessed perceptions about organizational factors that influence handoffs (Richter et al., 2016). The study found that perceived teamwork across units was the most significant predictor of perceived successful handoffs ($\beta = 0.83, 95\%CI[0.77,0.89], p < .001$). Perceptions of staffing (managers: $\beta = 0.21, 95\% CI[0.15, 0.28], p < .001$; clinicians $\beta = 0.18, 95\%CI[0.13,0.22], p < .001$) and management support for safety (managers: $\beta = 0.10, 95\% CI[0.15, 0.28], p < .05$; clinicians $\beta = 0.11, 95\%CI[0.13,0.22], p < .01$) were also significantly associated with perceived successful handoffs for both management and clinical staff (Richter et al., 2016).

**Communication as measured by the SOPS.** Handoffs and transitions have not improved in average favorable perception among nurses (48%) and leaders (50%) over time as measured by the 2018 user database trending survey (Famolaro et al., 2018). The composites with the lowest average favorable responses in the 2018 SOPS include communication openness (66%), handoffs and transitions (48%), and non-punitive response to errors (47%) (Famolaro et al., 2018). Communication openness average favorable perceptions have not changed over time with leaders consistently reporting the average most favorable responses (80%) and nurses reporting lower average favorable responses (64%) (Famolaro et al., 2018). The 2018 SOPS identified that healthcare workers don’t always speak up on behalf of patients. Nurses have a less favorable perception that safety issues are reported (68%) compared to the more favorable perception among leaders (75%) (Famolaro et al., 2018). In addition, working in a nonpunitive
environment supports speaking up, however nurses have a low perception of working in a non-punitive culture (48%) (Famolaro et al., 2018). Leaders have the highest perception of a nonpunitive culture (68%), however the responses are not extremely favorable (Famolaro et al., 2018). This suggests there are underlying unknown factors influencing communication and the creation of a non-punitive environment.

**Summary of communication.** Communication including speaking up for safety and communication between clinicians to ensure safe handoffs during transitions of care are associated with safety culture. Although there are many contributors to speaking up for safety, a punitive environment reduces speaking up. In addition, leadership has been identified as a consistent factor preventing speaking up. Several factors including teamwork, staffing, and management positively impact handoffs and transitions. However, handoffs and transitions continue to experience less favorable average perceptions in the SOPS. Both leaders and nurses have poor perceptions of handoffs and transitions.

The limited evidence of interventions impacting these dimensions and the lack of improvement in these low scoring dimensions suggest there are underlying factors influencing this dimension of safety culture. Understanding these contributing factors needs further exploration to facilitate an environment supportive of communication.

**Learning Impacts Safety Culture**

Learning occurs when hospitals value and learn from mistakes and seek new opportunities to improve (Sammer et al, 2010). Learning-oriented behaviors have been associated with a safety culture (Vogus et al., 2010). Efforts to increase organizational learning have successfully influenced safety culture. Organizational learning-continuous improvement is a more favorably perceived composite of the SOPS; however, opportunities to learn from
mistakes was identified (Famolaro et al., 2018). This may be related to the previously reported fear of reporting, but there may be other underlying factors preventing learning from mistakes.

Learning interventions, coupled with the implementation of technology designed from learnings from previous medication errors, resulted in decreased medication errors and improvements in safety culture (Abstoss et al., 2011). A pre- and post-intervention study in an intensive care unit identified a 25% increase in the reporting rate of medication errors, from an average of 3.16 to 3.95 per 10,000 doses dispensed (p < .01) (Abstoss et al., 2011). At the same time, the rate of medication errors resulting in harm decreased 71%, from an average of 0.56 to 0.16 per 10,000 doses dispensed (p < .01) (Abstoss et al., 2011). The post intervention assessment of safety culture (n = 85) found a statistically significant improvement in teamwork climate (p = .003) and several items within the SAQ (Abstoss et al., 2011).

Another intervention study (n pre= 585, n post = 334) found learning from nurse workarounds during medication administration positively impacted nursing perception of safety culture (p = .029) as measured by the SAQ (Tetuan et al., 2017). There was a small to medium positive correlation between the SAQ and Systems Thinking Scale ($r = 0.297$, $p < .001$) (Tetuan et al., 2017).

**Learning as measured by the SOPS.** The SOPS identified organizational learning-continuous improvement realize an average favorable response among all respondents (72%) (Famolaro et al., 2018). However, there was a less favorable average response that positive changes have occurred from mistakes (63%) (Famolaro et al., 2018).

**Summary of Learning.** Learning from errors has resulted in improvements in safety culture and safer patient care. The perception of organizational learning-continuous improvement is one of the most favorably perceived dimensions suggesting organizations have
focused on learning. However, learning from mistakes continues to perform poorly on the SOPS suggesting there are underlying factors influencing learning from harm warrants further exploration. It is necessary to understand what factors support an environment conducive to learning from failures to further inform interventions to develop a safety culture.

Summary of Review of the Literature

Although the studies to improve safety culture had several methodological weaknesses as previously described, the most concerning weaknesses among the studies were related to poorly defined constructs. Although a conceptual model and multiple theoretical frameworks defining safety culture were presented, the constructs of safety culture and safety climate were rarely defined and when defined had inconsistent definitions. Only 20 of the studies in the literature review used a conceptual or theoretical framework to guide research. Eight of the studies defined safety culture and, among those studies, there were several varying definitions of safety culture. The lack of consistency in defining the central concept and grounding the study with the support of a theoretical framework significantly limits the ability to appropriately measure and compare results across studies. Limitations of generalization include use of multiple different measurement instruments, cross-sectional, and qualitative nature of the studies.

Although none of the studies could support causality, there were evidence-based interventions identified that had strong associations with safety culture improvements as summarized within the safety culture theoretical framework in Figure 4. These interventions offer management tactics to improve safety culture. The interventions were successful in improving localized unit, facility, system, and multiple hospital safety culture. In addition, several large studies identified factors that predict or influence safety culture.
Figure 4. A Summary of the Literature

In summary, significant efforts to improve safety culture in healthcare over the past nearly 20 years have not led to a significant improvement in safety culture or safer outcomes. The research identified evidence to assist organizations in improving safety culture. However, the lack of improvement, as measured by the national SOPS survey, suggests there are gaps that remain unknown and should be explored.

Results of Safety Culture Interventions on Safety Culture and Safe Care

In spite of the activities to improve safety culture, there has been little impact on safety culture perceptions as measured by the SOPS. There has also been a limited impact of these activities on safer patient care.

Impact of Safety Culture Interventions on Safety Culture

The most recent 2018 SOPS database, as previously described, identified that nurses, had the lowest average favorable responses of the 12 composites with minimal to no improvement over time (Famolaro et al., 2018). Leaders continued to have the highest average favorable responses of the 12 composites (Famolaro et al., 2018). One particular composite,
Overall Perception of Patient Safety, assesses the ability of systems and processes to prevent harm in addition to understanding respondents’ beliefs about the presence of patient safety problems within the organizational context (Sorra & Nieva, 2004). Trends among all participants over a seven year period in this composite indicate unfavorable perceptions with minimal to no improvement over time as depicted in Table 4 (Famolaro et al., 2018). This study uncovered factors influencing these results.

Table 4. Trends in SOPS Overall Perception of Patient Safety Among All Participants

<table>
<thead>
<tr>
<th></th>
<th>2014</th>
<th>2016</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>It is by chance that more serious mistakes don’t happen around here</td>
<td>62%</td>
<td>61%</td>
<td>62%</td>
</tr>
<tr>
<td>Patient safety is never sacrificed to get more work done</td>
<td>64%</td>
<td>64%</td>
<td>64%</td>
</tr>
<tr>
<td>We have patient safety problems in this unit</td>
<td>65%</td>
<td>65%</td>
<td>65%</td>
</tr>
<tr>
<td>Our procedures and systems are good at preventing errors from happening</td>
<td>73%</td>
<td>73%</td>
<td>74%</td>
</tr>
</tbody>
</table>

Safety Culture has an Inconsistent Impact on Safer Care Outcomes

Interventions to improve safety culture have not only had a limited impact on safety culture, safety culture has been inconsistently associated with safer patient care. Safety culture assessments merely identify how people feel within the organization about safety in isolation of actual behaviors influencing safer patient care. The inconsistent impact of safety culture on safer patient care suggests either the approach to developing a safety culture has not been successful or the theory that a safety culture results in safer care is misguided.

There have been several studies linking the strengthening of a safety culture with safer patient care. A systematic review inclusive of 62 studies identified a significant improvement in
decreased mortality, falls, hospital-acquired infections and an increase in patient satisfaction after strengthening the safety culture (Braithwaite et al., 2017). A descriptive, longitudinal study identified all hospital harm (p < .01), serious safety events (p < .001), and severity-adjusted hospital mortality (p < .001) significantly decreased as safety culture, measured by providers and employees using the SAQ, increased over the 5-year study (Berry et al., 2016). A positive safety culture has also been associated with decreased falls and compliance with fall prevention protocols, lower colon surgical site infections, decreased adverse events, and decreased costs (Brown & Wolosin, 2013; Fan et al., 2016; Thornton et al., 2017).

However, another systematic review indicated that there have been inconsistencies in the relationship between safety culture and safer patient care. A systematic review of 17 studies, using various well-established instruments to measure safety culture, identified an association between safety culture and safer outcomes (DiCuccio, 2015). The safer outcomes included decreased mortality, increased patient and family satisfaction, decreased readmissions, decreased patient safety indicators, decreased community-acquired pneumonia rates, and decreased hospital-acquired pressure ulcers (DiCuccio, 2015). However, four studies found no significant correlations or unexpected correlations with safety culture including increased hospital-acquired pressure injuries, falls, and medication errors (DiCuccio, 2015).

In summary, activities to improve safety culture have had a limited impact. There have also been inconsistent findings relating safety culture to safer care outcomes. This study explored and described staff nurse and nurse safety culture experiences.

Gaps in Research

The approach to safer care in healthcare has relied heavily on the development of a safety culture. This approach has proved challenging and has resulted in minimal improvements in
safety culture and safer care. Inherent challenges to safety in healthcare include the difficulty identifying non-events, complexity of human disease, specialization in health care, siloed thinking, agreement of harm and response to error, and routine operational failures creating workarounds (Vogus et al., 2010). Challenges in the agreement of harm and response to error and professional cultures focused on blaming and shaming individuals for errors have also emerged (Vogus et al., 2010). Additional gaps emerged out of the literature review.

**Gaps in Understanding Adherence to Safety Interventions**

While hospitals have shown some significant improvements in preventable harm through the creation of safer systems, the lack of adherence to safer systems of care including checklists, bundles, and care pathways continues to impact safe patient care. These evidence-based practices are optional for organizations to implement; therefore, gaps in implementation and adoption of these safety practices exist among organizations. Organizational and workplace factors limiting the implementation and integration of these safety strategies were identified. However, what is not known is what is being done to eliminate the barriers to support evidence-based practice. Also, what competing sub-cultures, including organizational and workplace factors, are preventing adoption of or disregard of safety practices even within single institutions.

Several publicly reported errors resulting from non-adherence to evidence-based practice were presented; therefore, it is known that there are opportunities for adherence to evidence-based systems and procedures. What is not known is what other factors influence clinicians choice to comply or to deviate from evidence-based practices, systems, and procedures or to choose unsafe behaviors. In addition, how is the choice to comply or deviate from evidence-based practices, systems, and procedures justified by the clinician or the organization? While
evidence-based practice improved safety culture perception and safer care, what is not known is the impact of standardization on critical thinking and clinician skills over time.

**Gaps in Understanding Weakness Within Defense Systems**

Weaknesses are inherent in a complex system (Reason, 1997). An understanding of when and why weaknesses in defenses align to cause harm has not been fully explored. This understanding could inform error mitigation strategies. There is also a lack of understanding of what factors influence unsafe acts. The SOPS identified opportunities to improve systems to ensure patient safety is intentional and not accidental. What is not known are the underlying weaknesses in the system or defenses that are contributing to a lower perception of overall safety culture within hospitals. Furthermore, the factors influencing the gap in perception between leaders and nurses is unknown.

**Gaps in Understanding Leadership Impact on Safety Culture**

Leadership attention, commitment, styles, behaviors, organizational culture, and leader rounds have all been associated with safety culture. While there is substantial research linking leadership to safety culture, several gaps remain. Those gaps will be described.

**Gaps in Leadership Attention and Commitment Impact on Safety Culture**

The research revealed an association between leader attention and commitment and improved safety culture. However, factors prohibiting leaders from prioritizing and committing to safety culture are unknown. Although the SOPS revealed the two leadership composites as higher performing composites, there is a gap between leader and nurse perception of leadership composites impacting safety culture. However, the factors creating the gap between leader and nurse perception of manager/supervisor commitments and actions promoting patient safety and manager/supervisor support for patient safety are unknown.
Gaps in Organizational Culture Influence on Safety Culture

One study showed a relationship between type of organizational culture and the impact on safety culture. However, the factors that facilitate or inhibit complex sub-systems from working together to create safer care have not been explored. In addition, there was a relationship between an empowering environment and safety culture, however the relationship between feelings of empowerment and safety-related actions and behaviors has not been fully explored.

Gaps in Leadership Styles and Behaviors Impact on Safety Culture

Leadership styles and behaviors showed to have a positive impact on safety culture. What is not known is the impact of negative leadership styles or behaviors on safety culture. Nurse leaders include charge nurses and off shift nursing leaders. What is not known is who, if anyone, emerges as the leader to pay attention to and prioritize patient safety in absence of the unit leader. A study showed night shift supervisors are seen as champions of patient safety, what is not known is how night shift supervisors prioritize patient safety and the impact of those efforts. The role and impact of charge nurses or informal leaders within units or departments in promoting patient safety is also unknown. Nurses often work autonomously with limited interaction with nurse leaders throughout a shift. This suggests there is a unit or department culture that while influenced by local leadership is also influenced by individuals within the culture. What is not known is the role of nurse leadership styles and behaviors and the impact on safety culture within a unit or department.

Leadership behaviors such as rounding had inconsistent results on safety culture perception. What is not known is what factors are necessary for leader rounds to positively impact safety culture. What is also not known is the dose of leader rounds and the impact on
safety culture on all shifts. Finally, the factors influencing over a 20% discrepancy between the perception of leader behaviors supporting a safety culture among nurses and leaders as measured by the SOPS are unknown.

Gaps in Staffing and Safety Culture

Although having the adequate amount and skill mix of staff have been identified as factors positively influencing safety culture, there were several gaps identified in the literature. A gap in understanding available resources was identified that may have influenced the poor perception of staffing. The factors driving the low perception of safe staffing among leaders and nurses are also unknown. Evidence is lacking as to why leaders, responsible for prioritizing and allocating resources, themselves don’t have a favorable perception of safe staffing. The previously reported low perception of the staffing composite within the SOPS among leaders and nurses suggests that there may be competing priorities that de-prioritize the commitment and prioritization of resources; however, those factors are unknown. Finally, evidence was presented that excess hours worked negatively impacted patient safety. Nurses consistently work shifts that exceed hours known to contribute to patient harm. What is not known are the underlying factors influencing nurse scheduling and work hour decisions that are conflicting with safe work hour recommendations.

Gaps in Comprehensive Unit-Based Safety Programs and Safety Culture Impact

CUSPs address safety culture and safer systems simultaneously. Although the naming convention suggests this is unit-specific, results were realized across units, hospitals, and countries. What is not known is why these programs, with strong evidence of improved outcomes, are not embraced more globally and consistently.
Gaps in Teamwork and Safety Culture Impact

Teamwork was positively associated with safety culture. There were evidence-based programs to develop teamwork within different environments. Improvements in teamwork resulted in an improved safety culture. However, discrepancies between leader and nurse perception of teamwork remain constant. The factors contributing to the discrepancy in perception of teamwork between leaders and nurses are not known. Teamwork across units is more problematic than teamwork within units. The factors contributing to the perception that teamwork across units is more problematic are unknown.

Gaps in Communication and Safety Culture Impact

Communication was determined to positively impact safety culture through speaking up. Communication between clinicians through handoff was also associated with safety culture. However, gaps remain in understanding communication to improve safety culture.

Gaps in Speaking Up for Safety

The evidence identified fear and other barriers to speaking up for safety. Nurses reported a low perception of having the ability to question the actions and decisions of those with more authority as measured by the SOPS. This suggests there are power gradients influencing safety mindsets that can’t be explored through a quantitative study; however, those factors are unknown.

Fear of punishment has been identified as a barrier to speaking up for safety. The SOPS identified a long-standing perception that the healthcare culture is punitive. A punitive response to errors has remained the lowest scoring composite within the SOPS over time. The SOPS also identified significant gaps in perceptions within this composite between leaders and nurses. A punitive culture is a deterrent to reporting safety concerns. There are tools available to leaders to
assist in guiding a standardized systems approach to errors while balancing individual accountability. For example, Just Culture is a framework that balances the need for an open and honest reporting environment to create a learning environment and safety culture with the duty to hold employees responsible for the quality of their choices (Boysen, 2013). What is not known is if and how leaders are implementing a systems approach to errors to reduce the perception of individual blame. Furthermore, what is not known are the factors influencing the perception of a punitive environment within a culture that implements a systems approach to errors. Factors underlying a long-standing poor perception of a nonpunitive environment and discrepancies between leader and nurse perception warrant further exploration.

Speaking up for safety is also accomplished through reporting of safety events. The SOPS identified a lack of reporting safety events. Lack of reporting unsafe conditions and the inability to identify dangerous latent factors without direct behavioral observation leaves a gap in understanding what latent factors are present in the environment that once aligned could result in harm. In addition, barriers to reporting safety events were described in the literature, however, what is not known is why clinicians don’t see the value in reporting errors.

_Gaps in the Impact of Handoffs on Safety Culture_

There was a plethora of evidence-based interventions to improve handoffs. What is not known is what are the organizational and workplace factors preventing the embracement of interventions to improve safe handoffs. The consistent lower favorable responses on handoffs and communication in the SOPS suggest there are deeper factors underlying the inability to apply the interventions that have shown promising results on safety culture and safety outcomes.
Gaps in Learning and the Impact on Safety Culture

Learning from errors has resulted in improvements in safety culture and safer patient care. What is not known is why there is a poor perception that positive changes are being made by learning from mistakes. The use of individual and group reflection to learn from errors was not identified in the literature review; however, reflection has been identified as a useful method to learn from mistakes (Singer & Vogus, 2013).

Gaps in Safety Culture Perception between Nurses and Leaders

The poor perception of safety culture among nurses and the discrepancy in safety culture perception between nurses and leaders were identified. The factors underlying those perceptions are unknown. There were no studies that attempted to understand the situational context of safety culture experiences in medical-surgical acute care units through the lens of staff nurses, registered nurses, and nurse leaders, supervisors, managers, and directors. This gap is addressed in this study.
CHAPTER 3

METHODOLOGY

A comprehensive review of the literature, gaps in the research, purpose of this research, significance of this research, and research questions for this study were described in the previous chapter. This chapter describes the research methodology. Research design, research setting, sample, data collection, data analysis, study rigor, and ethical considerations will be described.

Research Design

An inductive descriptive qualitative research design (Sandelowski, 2000) was used to explore and describe safety culture experiences of registered nurses, hereafter referred to as staff nurses, and nurse supervisors, managers, and directors, hereafter referred to as nurse leaders, on medical-surgical acute care units. This research provided a comprehensive description of the experiences of staff nurses and nurse leaders on medical-surgical acute care units to enrich understanding of staff nurse and nurse leader perceptions and behaviors, as well as the safety culture facilitators, barriers, and challenges to providing safe care. Description of the situational context allowed a richer understanding of safety culture while helping to prevent a misunderstanding of the meaning of events by framing individual actions and beliefs within the specific context that is influenced and influences the meaning of the situation (Miles et al., 2014). The results informed the developing science of safety culture through ways to either develop the culture and/or leverage the culture to embrace safety systems and interventions to improve safety culture.
The inductive qualitative descriptive design informed the understanding of the situational context of safety culture as thematically described by the participants. Through their own words, a richer understanding of safety culture on medical-surgical acute care units is provided. Views and attitudes of those working within the existing situational context uncovered experiences of safety culture among staff nurses and nurse leaders as well as similarities and differences in safety culture between the differing roles.

Inductive qualitative description seeks to understand the who, what, where, and why of the experience (Sandelowski, 2000) and results in a description of experiences, events, and processes that participants would agree as accurate (Creswell & Poth, 2018; Sullivan-Bolyai et al., 2005). The data portray beliefs, behaviors, and events to convey the actual reality of what is really happening (Sandelowski, 2000). The researcher sought to provide a holistic description of safety culture from the perspective of the participants engaged in the situation (Sandelowski, 2000). This holistic description, grounded in naturalistic inquiry, is described in everyday language to be understood by staff nurses and nurse leaders (Sullivan-Bolyai et al., 2005).

Despite the plethora of research, measurement instruments, definitions of safety culture and safety climate, and interventions to improve safety culture there has not been a significant impact on safety culture and safer patient outcomes. This study was a beginning to identify themes within and between staff nurses’ and nurse leaders’ safety culture experiences and factors that facilitate or inhibit providing safer care within the situational context of acute care hospital medical-surgical units. The poor penetration of safety into the health care culture suggests that the complexity of safety culture has not been fully evaluated. Given the state of the science, this inductive qualitative descriptive study was an appropriate design for this research to study experiences of medical-surgical staff nurses and nurse leaders to understand complex safety
culture experiences, events, or processes embedded within the situational context of acute care medical-surgical nursing (Sandelowski, 2000; Sullivan-Bolyai, et al., 2005).

**Research Setting**

The study site was a 147 bed community hospital located in the Midwest. The hospital, established over 61 years ago, is located in a community with a population of approximately 75,000 people and serving multiple urban and rural counties of approximately 250,000 people. The hospital became part of an integrated, not-for-profit healthcare delivery system over 30 years ago. The healthcare system includes regional and rural hospitals, ambulatory clinics, and post-acute care services and is one of the largest employers in the region, employing nearly 7,000 people.

The community built the hospital through fund-raising efforts to fill a gap in healthcare services within their community. The hospital is a tertiary referral center offering medical, surgical, and outpatient services and employs 1,184 personnel of which 387 are registered nurses in staff positions and 18 are registered nurses in clinical leadership positions.

**Organization Patient Safety Culture Strategy**

The organization hired a new CEO in 2017 who declared patient safety and quality the number one priority for the organization, encouraging leaders to change their behaviors and mindsets to support the notion that zero avoidable harm is possible. The organization implemented safety huddles in 2017 in support of a statewide collaborative initiative to improve patient safety in healthcare. The purpose of safety huddles is to create situational awareness of potential or actual safety concerns ensuring a plan to mitigate potential patient safety events in a brief 10-15 minute standing huddle (“Hospital-Wide Safety Huddles,” n.d.).

The hospital participated in the AHRQ SOPS every two years. As an outcome
measure, respondents were asked to provide a patient safety grade from A (excellent) to E (failing). The results included the percent of respondents that selected the patient safety grade. The results of the 2019 survey (n =437) for the hospital are displayed in Table 5.

Table 5. Study Site Patient Safety Grade

<table>
<thead>
<tr>
<th></th>
<th>A-Excellent</th>
<th>B-Very Good</th>
<th>C-Acceptable</th>
<th>D-Poor</th>
<th>E-Failing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital</td>
<td>16.5%</td>
<td>51.3%</td>
<td>25.3%</td>
<td>5.4%</td>
<td>1.4%</td>
</tr>
<tr>
<td>National median</td>
<td>32%</td>
<td>42%</td>
<td>19%</td>
<td>2.5%</td>
<td>0.5%</td>
</tr>
</tbody>
</table>

The organization received an acceptable or very good safety grade above the national median. However, the organization received an excellent patient safety grade less often than the national median, and received more poor and failing safety grades than the national median indicating opportunities to better understand safety culture in the hospital.

**Shared Governance**

A shared governance structure was present within the organization and hospital structure. Characteristics of shared governance include staff nurse autonomy and independence in practice, accountability, empowerment, participation, and collaboration in decisions that affect individual patient care and the practice environment (Anthony, 2004). Shared governance allows staff nurses the freedom to fully participate in the practice of nursing and shape the work environment in which patient care occurs (Anthony, 2004). Each facility was represented at the system nursing shared governance council composed of staff nurses and nurse leaders across the organization working collaboratively to make improvements within their environments. Each nursing unit within each facility had a unit shared governance council.
Sample

A purposive sample of Registered Nurse (RN) staff nurses, including unit-based and medical-surgical float nurses, were recruited voluntarily. Maximum variation sampling for staff nurses was sought to represent variations in education level, years of experience as a staff nurse, average hours worked per week, shift, and unit-based or float staff nurse role. Maximum variation sampling allowed for the exploration of common and unique manifestations of the phenomenon across a broad range of demographics (Sandelowski, 2000).

A purposive sample of Registered Nurse (RN) nurse leaders including an interim nurse director, nurse managers, and nurse supervisors working on or directly supporting the medical-surgical units were recruited voluntarily. All participants were requested to consent to 1-3 interviews, or as needed, to reach data saturation.

Inclusion criteria included staff nurses and nurse leaders working in medical-surgical units in the hospital. All participants had to have at least 6 months experience working 50% of their time on a medical-surgical unit. This timeframe allowed sufficient time for the participants to complete orientation and to gain enough knowledge about the hospital and its operations to provide informed answers. Medical-surgical units were chosen because of the lack of information in the research literature, potential large sample size, similar patient population, similar staffing model, variation in attending providers compared to specialty units that have a core group of providers, and willingness to engage in the study as championed by the nursing shared governance council chair. Other staff nurses that did not spend at least 50% of their time working in the designated units and students were excluded to provide a richer understanding of the culture from the perspective of those working within the culture. Licensed practical nurses and certified nurse assistants were excluded from the study to allow a focus on understanding
safety culture from the unique perspective of staff nurses and nurse leaders. Although safety culture incorporates collaboration between multiple disciplines, disciplines other than nursing were excluded to isolate the unique experiences of safety culture from a staff nurse and nurse leader perspective. This approach was taken to understand the long standing poor perception of safety culture that is unique among staff nurses compared to all other disciplines and the discrepancy in perceptions between staff nurses and nurse leaders.

**Recruitment of Participants**

After receiving a letter of intent from the hospital Director of Nursing (Appendix C) the research was approved by the hospital (Appendix D) and University IRB (Appendix E). The researcher posted flyers in staff lounges and followed up with a recruitment email to a list of eligible participants provided by nurse leaders using the researcher’s university email address (Appendix F). The researcher solicited support by attending unit and facility safety huddles. At the huddles, the researcher explained the study purpose, eligibility requirements, importance of confidentiality, protection of participants, and provided flyers with the researcher’s cell phone number and university email to eligible participants. Recruitment continued until data saturation was reached. Participants included 16 staff nurses and 10 nurse leaders recruited voluntarily for the study.

**Data Collection**

The proposed research aimed to answer the following research questions: (1) What do medical-surgical staff nurses describe as their safety culture experiences in caring for medical-surgical patients? (2) What do the nurse leaders describe as their safety culture experiences within medical-surgical units? (3) What are the similarities and differences of medical-surgical staff nurses’ and nurse leaders’ experiences with safety culture?
Qualitative description uses data from multiple sources to describe experiences from the viewpoint of those in the experience (Sandelowski, 2000). Data were collected through interviews and observations among the staff nurses and nurse leaders. Data were collected until data saturation was reached. Data saturation occurs when the research questions have been answered and there is no new information shared by the participants (Miles, Huberman, & Saldana, 2014). The themes were then reviewed by four nurse leaders and three staff nurses to ensure the participants agreed with the holistic description of experiences, events, and processes reflected in the results. Data were collected from February 27, 2020 through September 22, 2020.

**Informed Consent**

Informed consent was obtained prior to interviews (Appendix G). Participants were provided a detailed description of the research purpose, design, risks and benefits of participating, and voluntary nature of the study. Solicitation for follow up interviews, if necessary, was also sought during the informed consent process.

**Interviews**

The interviews consisted of semi-structured, open-ended questions to allow for discovery of the basic nature of participant experiences (Sandelowski, 2000). Interviews allowed the researcher to attempt to understand the world from the participant’s view to unfold the meaning of their lived experiences (Creswell & Poth, 2018). Prior to beginning the interview the researcher contacted the participants by phone or in person to discuss: (1) the focus of the research and intent of the interview; (2) time commitment involved and preference of location for the interview; (3) disclose that the interview would be audio taped and transcribed; (4) informed consent and process for ensuring confidentiality of each participant.
At the onset of the interview, in order to assure the rigor of the collected data, after obtaining informed consent the data collection protocol was explained, the participants were given a participant code to protect their identify, and demographic data were obtained (Appendix H). An interview guide was also developed to assure the rigor of collected data (Appendix I). The pilot interview guide was informed by the theoretical frameworks described in Chapter 2. The pilot interview guide was field tested and refined with two staff nurses and two nurse leaders who were not eligible for inclusion in the research study. The purpose of the field testing was to ensure the interview guide was soliciting information that would inform the study research questions. During the pilot, when asked exclusively about experiences with safety culture, participants offered minimal to no description of their experiences. Therefore, the researcher asked about experiences with patient safety and providing safe care in addition to their experiences with safety culture. This solicited richer descriptions of safety culture experiences among the participants. The inductive and semi-structured interview guide allowed the data to emerge and the researcher to gather richer descriptions of consistent themes by paying attention to group norms, behaviors, artifacts, expectations, and reviewing key documents.

To enhance the credibility of data collection, key policies, protocols, and documents discussed in interviews were collected and reviewed. The documents collected were used to inform the study context to better understand the variables impacting culture. Examples of key documents reviewed include safety huddle agenda templates, stat sheets, fall prevention policy, medication administration policy, and staffing ratio grids. The researcher also kept a personal journal to document immediate reactions, impressions, and perceptions experienced throughout the research process. The researcher’s experiences were also discussed weekly with the researcher’s dissertation committee chair.
Interviews were recorded with the participants’ consent to ensure accuracy of the interview. Interviews were conducted in secure locations chosen by the participants. The initial semi-structured interviews allowed the participants to share insightful information and experiences. The initial interviews lasted on average one hour. Staff nurses were interviewed before worked shifts, after worked shifts, on days off, and during other non-paid times. Several nurse leaders opted to be interviewed in their office during working hours as they work non-conventional business hours; others chose before or after normal business hours.

Three staff nurses and four nurse leaders participated in follow up interviews. These interviews were conducted to solicit further description of experiences and to solicit validation, clarification, or a richer description of the research results. The follow-up interviews lasted on average 20 minutes. An activities log to track interview activities was maintained (Appendix J).

Audio tapes of interviews were transcribed verbatim. The transcriptions were reviewed line-by-line and compared to the audio recordings to ensure accuracy and inclusion of intonations and any contextual information during the interview (e.g. interruptions). A sample of audio recordings and all transcripts were reviewed by the dissertation committee chair to validate results.

Observations

Observations occurred in the hospital setting at the unit, facility, and system huddles to allow the researcher to observe group safety behaviors. The researcher gained entry into safety huddles by obtaining the verbal approval and support of staff nurses and nurse leaders. The researcher observed as an observer-as-participant allowing the researcher to be known and recognized in the researcher role during observation periods (Angrosino, 2007). The researcher quietly observed the natural process and took notes in an unobtrusive manner to encourage
natural behaviors and routines during the safety huddles. Observations were recorded on an observation log including descriptive and reflective notes. (Appendix K). Observations of patients were not conducted. Observations also allowed the researcher to set the context for interviews and solicit participants (Angrosino, 2007). Several staff nurses took a recruitment flyer and participated in interviews.

Observations allowed the researcher to collect data on the phenomenon in the field setting through the five senses using a systematic process (Creswell & Poth, 2018). Observations allowed the researcher to gain insight into views on how, when, and with whom staff nurses and nurse leaders interact to discuss and resolve patient safety and safety culture issues between units of the facility and across the system. This facilitated the situational contextual understanding of the study site’s safety culture processes of raising and resolving patient safety concerns. For example, the researcher witnessed staff nurses and nurse managers performing safety huddles within the unit. The researcher then witnessed nurse managers escalate safety concerns and develop plans to mitigate harm with other hospital leaders at the facility safety huddle. Finally, the researcher observed the director of nursing escalate concerns from the facility safety huddle to the system safety call. The researcher also observed the director of nursing share learnings from the system safety call with the nurse managers at the facility safety huddle which were then shared by nurse managers with staff nurses at their unit safety huddles.

Conducting observations in a systematic manner and repeated over a course of time increased the reliability of the process of collecting data (Angrosino, 2007). Observations improved credibility by allowing the researcher to link the findings to the reality of what was happening within the situational context to demonstrate truth in the research. For example, the
researcher was able to cross-check and triangulate interview data and key documents with observations made in the natural setting to decrease biases from pure observations and pure interviews (Angrosino, 2007). Observations occurred between February 20, 2020 through April 9, 2020. Six unit huddle observations occurred on four different medical surgical units. Ten hospital safety huddles and seven system safety huddles were observed. Observations lasted on average one hour.

Data Analysis

Inductive qualitative content analysis was applied to analyze and summarize information to describe the phenomenon (Sandelowski, 2000). Content analysis was conducted to ensure the descriptions represented the perceptions and beliefs of the participants by staying closer to the surface of words and events (Sandelowski, 2000). Analysis occurred concurrently with data collection (Miles et al., 2014). The emerging design allowed for the researcher to modify interview probes to accommodate new data and new insights (Sandelowski, 2000). To answer the first two research questions:

(1) Staff nurses’ safety culture experiences in caring for medical-surgical patients.
   a. Please describe what patient safety means to you.
   b. Please describe your experiences working in a safety culture.

(2) Nurse leaders’ safety culture experiences within medical-surgical units.
   c. Please describe what patient safety means to you.
   d. Please describe your experiences working in a safety culture.

The following five step process was followed to conduct inductive content analysis within each participant group (Creswell & Poth, 2018; Miles et al., 2014).

(1) Managing and organizing the data: After verbatim transcription, files were organized into files labeled “RN Interviews” to capture staff nurse interview data and “RNL
Interviews” to capture nurse leader interview data. It was determined analysis would be conducted manually by hand to stay near to the data.

(2) Reading and memoing emergent ideas: Transcripts were read multiple times. Phrases or words within the transcripts were highlighted to assist in identifying initial codes. These segment memos were written in the margins for easy searchability. Researcher notes were placed in the margins. Phrases and words were placed on sticky notes for visual display to assist in sorting and classification.

(3) Describing and classifying codes into themes: In vivo coding was conducted to cluster similar data to answer the research question on patient safety and safety culture using first cycle coding. In vivo coding assured that the researcher captured, prioritized, and honored the participant’s voice within the emerging themes. Consensus of first cycle codes were agreed upon during weekly meetings with the dissertation chair. First cycle codes were continuously revised to accommodate new data. Individual documents of each first cycle code were created containing data from participant interviews, observations, and key documents review. First cycle codes were placed on sticky notes for visual display resulting in 20 codes for staff nurses and 17 codes for nurse leaders. The codes provided data condensation to illuminate the most meaningful material in readable units to be analyzed. Then, pattern codes were generated through second cycle coding to identify the emerging themes. Frequency of themes were collected to allow for analysis of consistency of language and meaning. Language was assessed through the consistency of and general manner in which words were used. Meaning was assessed through subthemes. Subthemes provided rich description of participant experiences by providing quotes, emotions, and context to ensure the voices, feelings, meanings, and actions of the participants were described in sufficient detail.

(4) Developing and assessing interpretation: Interpretation was iterative. Member checking allowed for intersubjective validation of interpretation of results at multiple points throughout the study. The preliminary results were reviewed during second interviews with three staff nurse participants and four nurse leader participants for credibility checks. Staff nurses stated that “this is really good, this summarizes it quite nicely, this is it, you have a good understanding of it, you captured it” (RN02). Nurse leaders responded similarly stating “this captures everything, I think this is it” (RNL02). The final results were validated by the organization’s Nurse Practice Council comprised of system staff nurses and nurse leaders. Interpretation of themes and subthemes were compared between the researcher and dissertation chair until consensus was reached.

(5) Representing and visualizing the data: Results of the final themes and subthemes were displayed in a table for each participant group and are displayed in the results section.

To answer the third question, similarities and differences of staff nurses’ and nurse leaders’ experiences with safety culture, a modified triangulation six step protocol was followed
to test for convergence and dissonance of themes between participant groups as follows (Farmer et al., 2006).

(1) Themes between groups were compared for similarities in language resulting in six shared language categories between participant groups.

(2) Convergence coding was applied to subthemes due to the variability in meaning between participant groups. Subthemes were coded as “shared” when meanings were similar between the two data sets. “Unique” was coded when meanings were only in one set of results. “Discord” was coded when there was disagreement in or different meanings between the two data sets. Results were compared between the researcher and dissertation chair until consensus of coding was reached.

(3) A convergence assessment was completed to provide a global assessment of convergence between the subthemes of each participant group.

(4) A completeness comparison of the two data sets provided a summary of shared, unique, and discord findings to answer the final research question.

(5) Analysis results were reviewed during third interviews with two staff nurse participants and three nurse leader participants for credibility checks. Staff nurses stated “I feel like you got everything”, “some of the things I might have missed other people said and it makes sense to me”, “this is exactly it, I don’t disagree with anything, I have experienced everything on here.” Nurse leaders responded similarly stating “I think you captured it well”, “you captured it all”, and “you captured it accurately.” The final results were validated by the organization’s Nurse Practice Council comprised of system staff nurses and nurse leaders.

(6) Shared themes were then compared to previous findings in the literature to seek complementarity and to ascertain convergent, unique, or divergent findings in relation to what is known in the literature.

**Study Rigor**

Rigor or credibility of the study was established by ensuring the researcher’s ability to capture the perspective of the medical-surgical staff nurse and nurse leader and portray that perspective (Milne & Oberle, 2005). Strategies to increase rigor included flexible yet systematic purposive sampling, ensuring participants had the freedom to speak, participant driven data, data triangulation, ensuring accurate transcription and data-driven coding, and on-going attention to
context (Milne & Oberle, 2005). Rigor within a qualitative descriptive study occurs when the researcher is able to describe data at the surface while capturing all the elements of an experience (Milne & Oberle, 2005). This was accomplished by selecting participants who provided in-depth information, sampling until data saturation was reached, and validating the final analysis with several participants. Rich description, validated by participants, made sure the findings were transferrable between the researcher and participants (Creswell & Poth, 2018).

Trustworthiness was ensured through bracketing the investigators personal bias and obtaining final feedback from participants (Creswell & Poth, 2018). The researcher kept a personal research journal to document the experience and discussed feelings and perceptions with the dissertation committee chair weekly to manage personal biases during data collection and analysis. For example, recognizing what is known in the literature, the journal helped the researcher ensure an inductive coding process. Methodological triangulation by using two participant groups and using multiple data sources including interviews, observations, key document review, and the literature helped enrich an understanding of the complementarity and dissonance both in language and in perspective within and between the two groups. Theoretical triangulation involved comparing the findings to previous safety culture framework findings. Investigator triangulation occurred by the researcher and dissertation chair agreeing on the findings. An analysis protocol strengthened the results of this study by ensuring transparency and replicability of the analysis.

Timely transcription, re-reading, and comparing transcribed data to audio recordings were conducted to ensure the accuracy of capturing the participants’ experiences and perceptions. In addition, the dissertation chair validated transcripts and themes to improve
credibility of the interview process, observational process, and data analysis. Auditability was ensured through an extensive, detailed audit trail kept by the researcher.

Fittingness or transferability will be determined by the reader. Rich description allows the reader sufficient detail to allow the reader to determine transferability (Creswell & Poth, 2018). The results of the study will be shared with staff nurses at the shared governance council and the facility nursing leadership team. The results will be published with careful attention to ensuring confidentiality of participants and the study site.

**Ethical Considerations**

There were several ethical considerations that were planned for if encountered during this study. The participants could have experienced a fear of retaliation limiting participation or information shared. This was addressed by ensuring confidentiality and conducting interviews in a private location chosen by the participant. Participant names were replaced with pseudonyms on all recordings and transcripts. To protect confidentiality, staff nurse results were combined into a general staff nurse grouping to limit the ability to trace results to an individual unit. All nurse leader results were combined into a general nurse leader grouping.

The researcher could have learned about threats to patient safety or nurse safety during interviews; however, no active unresolved threats to patient or nurse safety were identified. The researcher reminded the participants not to disclose any patient-specific identifiers to ensure the confidentiality of the patient when describing experiences with patient safety. Interviews could have elicited negative emotional responses from participants that would have required employee assistance program referral. Although interviews elicited emotional responses from participants, no referrals were needed.
Several steps were used to protect the confidentiality and the integrity of the data. Audio recordings were downloaded on a password protected computer. Data was entered as quickly as possible and tracked on the activity log. Paper copies were stored in a locked fire and water resistant box. Audio recordings and paper copies will be destroyed, per IRB protocol, after transcription, data validation, and publication of dissertation.

Another ethical consideration and limitation of the study was the research occurred simultaneously while the researcher was employed as a vice president of quality role that oversees overall system quality at the healthcare system corporate level. The researcher is located in an office located over 10 miles away from the study site and is not in a role of direct or matrixed authority to the participants. The researcher had limited contact with staff nurses within the specific hospital setting. Only one staff nurse identified awareness of the researcher and the researcher’s role in the organization. The researcher had occasional contact with several nurse leaders in an informal manner without authority in a supportive, consultative manner as a professional colleague. The researcher lacked decision making authority within the nursing division. While this could have created a sense of trust and willingness to share information, this may also have created bias in the data provided by the participants (Angrosino, 2007). This may also have caused the researcher to bias interpretations of the data. To address this threat, the dissertation chair reviewed transcription, coding, and analysis of the first three interviews and observations, as well as a random selection of subsequent data to validate non-biased analysis. In addition, weekly meetings and journaling encouraged sharing of perceptions and experiences to reduce researcher bias.
CHAPTER 4

RESULTS

The research method and design to support the purpose of this study were described in the previous chapter. This chapter provides a description of the contextual environment in which the participants were working at the time of the study. Detailed participant characteristics are also described. Next, the results of the following research questions are presented: (1) What do medical-surgical staff nurses describe as their safety culture experiences in caring for medical-surgical patients? (2) What do the nurse leaders describe as their safety culture experiences within medical-surgical units? (3) What are the similarities and differences of medical-surgical staff nurses’ and nurse leaders’ experiences with safety culture?

Description of Medical-Surgical Unit Environment

There were five medical-surgical units within the hospital serving adult patients with medical or surgical needs. The units each had 24 private patient rooms. The medical-surgical staffing structure and processes designed to facilitate safe care will be described. Finally, the impact of COVID-19, which occurred during data collection, will be described.

Medical-Surgical Staffing Structure

Patients on medical-surgical units received 24 hour, 7 day a week care by staff nurses. There were 115 staff nurses considered core staffing working within one of the five designated medical-surgical units. Staffing was supplemented by a designated medical-surgical float pool consisting of approximately 150 staff nurses who provided nursing services across two regional
medical centers. The float pool staff nurses were assigned daily to units based on staffing needs and individual nurse competency.

Certified nursing assistants (CNA) and licensed practical nurses (LPN) were support staff who assisted staff nurses in providing basic care such as bathing and ambulation. LPNs were licensed to administer medications to patients. Administrative assistants (AA) provided support with computer order entry, managed phone calls, greeted visitors, prepared charts, and disassembled charts upon patient discharge. The medical-surgical staffing model determined the number of staff nurses and support staff based on the number of patients on the unit as displayed in Table 6. The staff nurse and support staff to patient ratios for each unit was determined through consultation with a national comparative benchmarking agency.

### Table 6. Medical-Surgical Staffing Model

<table>
<thead>
<tr>
<th></th>
<th>Patients per Staff Nurse</th>
<th>Patients per Support Staff-</th>
<th>AA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Days: Unit A,C,E</td>
<td>4-5</td>
<td>6-8</td>
<td>1</td>
</tr>
<tr>
<td>Days: Unit B,D</td>
<td>3-4</td>
<td>6-8</td>
<td>0</td>
</tr>
<tr>
<td>Nights: Unit A,C,E</td>
<td>6</td>
<td>Up to 12</td>
<td>1</td>
</tr>
<tr>
<td>Nights: Unit B,D</td>
<td>3-4</td>
<td>Up to 12</td>
<td>0</td>
</tr>
</tbody>
</table>

Each shift had an assigned charge nurse. The charge nurse role was filled by trained staff nurses or clinical team leads. The clinical team leads were a core group of staff nurses who performed as charge nurses, took patient assignments, and supported some management functions such as staffing and scheduling, audit follow up, incident report follow up, and education support for new policy or process changes. Charge nurses were responsible for staffing, quality nursing care, and patient flow ensuring timely admissions and discharges during their dedicated shift. Charge nurses described having either no assignments, partial assignments, or full assignments. However, they described having full patient assignments more often than
not. Charge nurses made nursing assignments based on unit census, nurse staffing, and nurse competency rather than a patient acuity system.

The medical-surgical units were supported by a nurse manager (n = 4) with two units sharing one nurse manager. Nurse managers were responsible for the daily business and nursing operations within a designated unit. The nurse managers were supported by supervisors or clinical leads as described above. Supervisors were responsible for the same duties as clinical leads; however, they did not take patient care assignments. There was one nurse director responsible for nursing operations within the hospital. The house supervisor was a new role at the facility designed to offer nurse leadership on the night shift and weekends. This role was vacant; however, on occasion coverage was provided by a house supervisor from another hospital within the system. Nurse managers rotated call to support staff nurse escalations during night shift and weekends. Escalations included difficult staff and patient situations, conflicts with the plan of care, and any situation that may negatively impact staff or patient safety that can’t be resolved by those working.

Hospitalists were the attending physicians responsible for the care of the medical-surgical patient while admitted to the hospital. Hospitalists were supported by advanced practice nurses. Although hospitalists provided the majority of the medical care on the medical-surgical units, some surgeons and physicians chose to serve as the attending physician responsible for providing medical care for medical-surgical patients. For example, an oncologist may provide medical care to their patients while admitted to a medical-surgical unit in the hospital or delegate medical care to the hospitalist. However, when a patient medical emergency arises in the hospital, the hospitalist was authorized to administer care for the safety of the patient.

Patients also received care from other disciplines to support their plan of care. Some of
those other disciplines included respiratory therapists, dieticians, care managers, phlebotomists, pharmacists, wound care nurses, and rehabilitation and therapy services.

**Process Designed to Facilitate Safe Care on Medical-Surgical Units**

Staff nurses have several processes to facilitate safe care. The processes included a unit report, bedside shift report (BSR) with the off-going staff nurse, a brief huddle between the staff nurse and their nursing support staff team, and accompanying physicians on daily rounds with patients. Staff nurses had multiple processes available if they had safety concerns including calling a rapid response team, code blue, staff assist, or security assist. There were also unit, hospital, and system huddles to facilitate safe care.

**Staff Nurse Processes to Facilitate Safe Care**

Staff nurses worked 12-hour shifts that began at 0530 and 1730. The shift began with a brief unit report attended by all staff nurses. Staff nurses described reviewing the patient census, staffing, and patient safety concerns. Patient safety concerns were described as patients setting off bed alarms, frequently using the call light, at risk for self-harm, impulsive, at risk for falling, and high acuity. Staff nurses then proceeded to BSR to receive handoff on patient assignments, perform a quick patient and environmental assessment, and incorporate the patient into the plan of care for the day. Staff nurses then conducted a brief report with their teams, consisting of their assigned LPN or CNA nursing support staff, to share important information, safety concerns, and develop a plan to keep patients safe.

During their shift, staff nurses attended daily required physician-patient rounds when they were available or requested to participate. While there were no policies, standard procedures, or expectations for staff nurses to accompany physicians on patient rounds, staff nurses described some physicians actively requesting the staff nurse to participate in patient rounds. However,
they described times when the staff nurse was busy with another patient, off the unit with a patient, at break, or unaware the physician was on the unit, preventing them from accompanying physicians on patient rounds. Staff nurses described more often than not, the patient informs the staff nurse a physician rounded without the staff nurse’s knowledge.

Finally, several interventions were available to staff nurses to facilitate safe care. A staff nurse may call a rapid response team (RRT) if they have any immediate concerns about a patient’s condition. A RRT is paged overhead and brings a hospitalist, intensive care unit (ICU) staff nurse, and respiratory therapist to the patient’s bedside. Staff nurses may also call a code blue for an immediate medical emergency. A code blue brings the same help as a RRT, however, if available, an anesthesiologist, ICU physician, and pharmacist also respond. Staff nurses may call a staff assist when they need extra hands to help move or ambulate a patient to prevent harm to the staff nurse and patient. Finally, a security assist can be called if a staff nurse or any member of the healthcare team feels their own safety may be in jeopardy. A security assist will bring a member of the security team to the bedside.

Unit, Hospital, and System Huddles to Facilitate Safe Care

At around 0800, Monday through Friday, the unit nurse manager conducted a unit safety huddle on their respective unit. Safety huddles on the unit were observed being led by the nurse manager, charge nurse, or clinical lead at the charge nurse desk with unit staff nurses and support staff. All staff nurses and nursing support staff participated in safety huddles unless there was a patient care priority. For example, if a staff nurse had to take a patient for a diagnostic test prohibiting participation in huddles. Unit safety huddles took approximately 15 minutes. Unit huddle agendas prompted nurse leaders to proactively ask for safety concerns with patients, processes, equipment, or anything in the environment. Information discussed varied by unit,
however staff shared their patient and staff safety concerns for the day. For example, a staff nurse described concerns with taking an unstable patient for a diagnostic MRI. The nurse manager made sure the staff nurse had support and described she would bring the concern to the facility huddle to coordinate a safe process. The follow up process was witnessed. The nurse manager asked everyone to help “keep an extra eye” on the staff nurse’s patients when she was off the unit. Some managers reviewed policy updates and organizational updates during their unit safety huddle. For example, a nurse manager was quizzing the staff nurses on the policy to reduce bloodstream infections by asking how often central line dressings and tubing had to be changed. This policy was reviewed. Although the huddles occurred on day shift, some managers described coming in early once or twice a week to communicate in person with the night shift. This process was validated by night shift staff nurses. Information discussed was also shared by managers at regularly scheduled staff meetings or through either weekly or bi-weekly newsletters and emails to the unit staff. The newsletters that were reviewed by the researcher contained safety tips, policy changes, safety incident report trends, and follow up from concerns raised during huddles.

Following the unit safety huddle, nurse managers met in a hospital conference room at 0830 during the week with the other hospital department and executive leaders for the facility safety huddle. The huddle started with a member of the quality department sharing the number of days since the last preventable patient safety event that resulted in death, physical injury, or psychological injury to a patient. The director of nursing followed a standard agenda to facilitate the discussion and share system safety information. For example, she shared the system plan to reinforce appropriate wearing of personal protective equipment to protect staff from COVID-19.
The unit leaders shared findings and concerns from their unit safety huddles and worked together to create plans if unit concerns involved other departments or disciplines. For example, the medical-surgical nurse manager collaborated with the manager of diagnostic imaging to coordinate a safe plan to complete the MRI for the high risk patient identified at the unit safety huddle. Another nurse leader identified a high risk medication that was found stored in the wrong drawer of the automated medication dispenser. Although pharmacy was checking all the dispensers to ensure appropriate dispensing of medications, nurse managers were instructed to inform their staff nurses to pay attention to medications removed from the dispenser to prevent errors. The unit or department manager was expected to bring learnings and communication from the facility huddle back to their respective units or departments.

At 0905, an executive leader from each of the seven hospitals, clinics, transitions of care, and key system support areas including lab, pharmacy, rehabilitation services, regulatory, security, clinical engineering, infection prevention, and a member of the system executive team participated in a system safety huddle phone call. A member of the quality department started the telephone meeting by sharing the number of days since the last preventable death or harm to a patient and details of any new preventable deaths or harms to patients. Each facility reported out any safety concerns or learnings from their facility safety huddles. Leaders coordinated across the system if a safety concern impacted multiple facilities. For example, a piece of equipment had been recalled, therefore the clinical engineering department shared the information and asked each facility to remove the recalled equipment immediately and report out on the next system safety huddle call that all recalled equipment was successfully removed.
Impact of COVID-19 Pandemic

Four participant interviews were conducted prior to the COVID-19 pandemic becoming a national and organizational focus. Although the hospital did not experience a surge in COVID-19 patients during data collection and preliminary analysis, the organization enacted several measures in preparation for a COVID-19 patient surge after the March 13, 2020 Federal State of Emergency declaration in response to COVID-19 ("Proclamation on Declaring a National Emergency Concerning the Novel Coronavirus Disease Outbreak," 2020). The hospital implemented the winter influenza visitor restrictions and screening of all staff and visitors entering the building for COVID-19 symptoms. Although staff received annual training on how to properly don and doff personal protective equipment (PPE) to prevent self-contamination, a heightened awareness and reinforcement of proper donning and doffing techniques to protect staff from self-contamination became a priority. The researcher observed nurse managers at unit safety huddles share what the organization was doing to prepare for a COVID-19 surge, however there were few if any questions posed by the staff nurses during safety huddles. The few questions were validating visitor restrictions and appropriate PPE. At the beginning of April the organization assigned one medical-surgical unit as the dedicated COVID-19 unit in the event of a surge, however a surge was never experienced during data collection, analysis, or initial validation. The hospital experienced the beginning of a surge of COVID-19 patients during final validation with several participants.

Participant Characteristics

Participants included 16 staff nurses and 10 nurse leaders. Detailed participant characteristics are displayed in Appendix L. An overview of participants will be described.
Staff Nurses

Of the 16 RN staff nurse participants, (hereafter staff nurses), 87.5% (n = 14) were female and 12.5 % were male (n = 2). Hospital gender data was not available, however gender was consistent with the most recent bi-annual state RN demographic survey indicating 92.5% of all RN’s working in any field were female compared to 7.5% male. There were variations in nurse experience, education, shift, and hours worked. Staff nurses ranged in age from 25 – 43 years old. Staff nurses all worked in their current unit since they started working at the hospital. Years of experience as a staff nurse ranged from 7 months to 12 years. There were slightly more staff nurse participants with a bachelor’s degree in nursing (75%) compared to the rest of the hospital (62%) and the state (47.5%). This can be explained by an organizational initiative that financially supported staff nurses to earn a bachelor’s degree in nursing in support of the IOM recommendation to increase the number of RNs with a bachelor’s degree in nursing by 2020 (IOM, 2010).

Nurse Leaders

All 10 nurse leaders were female. The most recent state bi-annual survey indicated females were more prominent in nurse leadership roles (92.7%) than males (7.7%). Nurse leaders were younger (39.4 years) than the state average (44.7 years), ranging from 28 – 62 years of age. Nurse leaders also had a higher percentage of bachelor’s degrees in nursing (90%) and a lower percentage of master’s (10%) and associate degrees (0%) in nursing compared to the state bi-annual survey data indicating leaders had a bachelor’s degree in nursing (48.4%), associate’s degree in nursing (36.4%), and a master’s degree in nursing (10.3%). The minimum of a bachelor’s degree in nursing was a requirement for a nurse leader role at the facility. The range
of years nurse leaders were RNs was between 5 – 30, and years as a nurse leader ranged from 2-21.

Although nurse managers (n = 5) worked during the day shift, they were available to their staff nurses on off hours and weekends by telephone. Several units had nurse supervisors (n = 4) who did not take patient assignments that were included in the nurse leader sample.

**Staff Nurse Results**

The following results answered the research question describing medical-surgical staff nurse safety culture experiences in caring for medical-surgical patients. The staff nurse experience is described in six themes including: Time to “know my patient” to keep them safe, “using my gut” and nursing interventions, extra eyes on the patient, not always having what is needed to provide safe care, organization prioritizes patient safety, and learning: “Have our backs.” Subthemes are presented within each theme to support the meaning of the theme through rich description (Figure 5). Within each theme, subthemes are bolded and italicized.

<table>
<thead>
<tr>
<th>Theme</th>
<th>Definition</th>
<th>Subtheme</th>
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| Time to “know my patient to keep them safe” | The process of obtaining information about the patient and using nursing intuition, guided by experience, to understand their risks. | - Time to “Know My Patient” by Reviewing the EMR  
- “Getting Eyes on My Patient” through Bedside Shift Report  
- Bedside Risk Assessments Supported by “Going With My Gut”  
- Frequent Rounds |
| “Using my gut” and nursing interventions | Evidence-based standards of care that staff nurses apply in conjunction with their nursing gut, or intuition based on experience, to keep patients safe. | - Appropriate Nursing Interventions  
- Alarms, Warnings, Checklists, and Safety Checks  
- Workarounds |
| “Extra eyes on the patient” | A process staff nurses used get help when they were in a situation that was outside of their expertise or when the patient’s condition was deteriorating requiring immediate assistance and additional resources from others to keep the patient safe. | - Learning on Others for Their Expertise  
- Escalating to Keep the Patient Safe |
| Not always having what is needed to provide safe care | A situation when staff nurses didn’t have resources or relationships they relied on to provide safe care. | - Inadequate Staffing Contributes to Unsafe Care  
- Supplies and Working Equipment are not Always Available  
- We Don’t Always Work Together as a Team  
- “More Respect From Physicians Would Be Appreciated” |
| Organization prioritizes patient safety | A directive from the top executive of the organization that patient safety is the overarching goal for everyone working in or practicing in the organization. | - “Sharing the Numbers and Keeping Us Updated”  
- “Giving Nurses a Voice in Making Improvements” |
| Learning: “Have our backs” | A structure and process that supports staff nurses to learn in a nonjudgmental, nonpunitive environment where they feel the organization will support their decisions. | - Time to Teach and Learn from Experience  
- Learning from Mistakes  
- We Don’t Always Learn from Audits |

Figure 5. Staff Nurse Results
Time to “Know My Patient” to Keep Them Safe

The theme time to know my patient to keep them safe is defined as the process of obtaining information about the patient and using nursing intuition, guided by experience, to understand the patient’s risks and keep them safe (n = 16). Staff nurses’ subthemes described needing time to “know my patient” by reviewing the electronic medical record (EMR), “getting eyes on my patient” through bedside shift report (BSR), bedside risk assessments supported by “going with my gut” and frequent rounds to understand patient health and safety risks. “I think it's really knowing the patient, the individual patient, and then identifying risks in that patient depending on what they are here for” (RN02).

Providing safe care required “having the right amount of time to take good care of the patients” (RN01). Time emerged as the most significant barrier to “know my patient.” When staff nurses did have the right amount of time this allowed them to:

Look at the chart to understand the whole picture, spend time talking with the patient to understand more than their physical symptoms, and being able to do all our medication checks and put into place the interventions such as bladder scanning every eight hours if they [the patient] is not voiding and doing vital signs as we should be. (RN01)

Time to “Know My Patient” by Reviewing the EMR

The subtheme time to “know my patient” by reviewing the EMR is defined as resources and processes that staff nurses used to obtain information about their patient’s history and status that facilitated determining patient risk. Reviewing the patient’s history in the EMR helped staff nurses know their patient because the EMR is the “hub to gather the information you need” (RN02). “When I come in I sit down immediately and start looking up my patients and wait for the off-going nurse to give me report” (RN04). “I review the whole chart as much as I can from vitals, to I’s & O’s, to mentation” (RN05). In addition to vitals, staff nurses reviewed doctor’s notes and the patient’s history and medications. Time to sit down and look at the chart before
they do their assessment helped staff nurses prepare for interactions with the patient or family. When they had time to review the EMR “then I'm prepared when I come in so if a family member or the patient asks me questions I’m not trying to dig through their chart while I'm trying to do their assessment” (RN02). Reviewing the EMR was beneficial when the staff nurse couldn’t depend on the patient to share their history because of cognitive impairments such as “confusion because they can’t communicate with me.”

Staff nurses didn’t always have time to review the EMR because the “computers are so slow” and they had to meet the off-going staff nurse to receive bedside shift report. It was also “hard to review everything when I have a full team of 3-4 patients” (RN05). The EMR was a source to gather the patient’s history, however there were times when information was inaccurate or missing. Information was missing from the EMR because outside records from clinics or agencies may be on paper or in a different hospital EMR and the staff nurses can’t see it causing potential unsafe care. For example, RN01 discovered a situation that would have caused a patient to receive a double dose of antibiotics, “we actually had duplicate antibiotic orders put in because they [the physician] didn't know they [the patient] had already gotten them at the outside hospital.” Although the EMR offered a synopsis of the patient’s history and clinical status, the best way to know the patient and assess a patient was “being in the patient’s room and actually interacting with the patient” because “you can look at the numbers all you want, labs, vitals but going to see the patient with your eyes on that first assessment is what helps paint the picture” (RN02).

“Getting Eyes on My Patient” through Bedside Shift Report

The subtheme “getting eyes on my patient” through bedside shift report (BSR) is defined as a patient handoff process that allowed the oncoming nurse to conduct a patient assessment,
environmental assessment, and a safety assessment with input from the off-going nurse and patient to determine patient risk and understand the plan of care. “Getting eyes on my patient” was one of the most important means of keeping patients safe because it allowed the staff nurse to conduct a brief visual baseline patient assessment. Bedside shift report (BSR) helped staff nurses “get eyes on my patient.” Staff nurses needed more time for “getting eyes on my patient” to get to know their patient to understand their needs and risks.

After quickly reviewing the EMR, the staff nurse met the off-going staff nurse or the staff nurse from the transferring department at the patient’s bedside to conduct BSR. BSR helped staff nurses “get eyes on my patient” to “make sure I have the correct information and things in place” (RN10). “Just laying eyes on your patient you can tell if they look really weak, medically unstable, if they’re more of a safety risk” (RN03). Staff nurses shared “what happened over night or during the day, this is what we did, make recommendations like hey that patient was really jumpy overnight let’s put him on alarms and we’ll just continue that” (RN10). BSR also established a baseline to help staff nurses identify a change in a patient’s condition. For example, “you physically lay eyes on the patient while you’re both in there [on-coming and off-going staff nurse] and verify yes this is how it’s looked or been the entire shift, or there’s been a change all of a sudden” (RN11).

BSR also allowed the patient to be involved in their care. Staff nurses found it very helpful to involve the patient in their care. “You’re going over the plan of care with the patient so everybody’s on the same page and there’s no surprises. They can listen to the plan and how they are supposed to use their call light” (RN14). Involving the patient allowed patients to “chime in and say you forgot this about me” and allowed them to share “their plan for today, questions for the doctor, what they want to accomplish” (RN08).
Staff nurses conducted their first environmental safety assessment during BSR. “When you're in the patient’s room you can check to see that all those safety things are in place before it’s noon and you’re like oh they don't even have a fall wristband or gripper socks on” (RN03). Getting eyes on their patient early through BSR reassured staff nurses their patients were safe before they got too busy. “If you don’t get eyes on them in the morning then it’s like is that my patient, where did he go, what do they look like” (RN08).

BSR was helpful when nurses are doing it accurately. However, BSR was done inconsistently. Not conducting BSR posed a safety challenge because staff nurses weren’t “making sure we’re double checking orders or we have a full understanding and picture” before taking over care of the patient (RN04). For example, “you can catch misses or make sure they are breathing, fluids are running, or if they’re saying they are alert and oriented, you walk in and they’re droopy or mumbled, OK when did this happen” (RN06).

There were many reasons for not consistently conducting BSR. Staff nurses working various shifts described not wanting to wake up patients especially if “the patient was up all night and they finally fell asleep” (RN05). BSR took too long and potentially caused staff nurses to get behind early in the day because they could get stuck in the room if the patient needs something. “Sometimes you go into a patient's room and you wake them up and you don’t have enough staff to be in there all the time or they can suck you in for 45 minutes and you are trying to get out” (RN06). Staff nurses also had limited time to conduct BSR. “We have technically a half hour to give report and kick out the other nurse, so when you got nurses that are here for like 45 minutes or sometimes an hour after they are supposed to it’s like get out of here” (RN10).

Other reasons for not conducting BSR included: staff nurses don’t like it or are not comfortable doing it in front of the patient; the patient may not want it; staff nurses don’t want to share
confidential information or unknown diagnoses in front of the patient; the patient is in isolation; or the patient is confused. BSR didn’t always happen when a patient was being transferred from other departments within the hospital due to “workflow challenges because they are busy and trying to move patients out of their departments” (RN11). For example, a potential patient safety issue occurred when a patient was transferred to the floor from a procedure without bedside shift report between the two departments.

A patient returned from a procedure. No communication was given to the staff that the patient was up on the unit. The patient was left on the gurney, not even the regular bed. Rails up, no lights on in the room, no call light given to the patient, and the patient was just left there. They just had an amputation, a fresh surgical wound, needing post-op vital signs. The nurse bringing the patient up from surgery had called to the floor to say I’ll be coming shortly with the patient but never actually let anyone know that they had brought the patient back up. (RN04)

**Bedside Risk Assessments Supported by “Going With My Gut”**

After reviewing the EMR and BSR, staff nurses needed time at the patient’s bedside to conduct risk assessments including “head to toe assessments” and risk screens. The subtheme bedside risk assessments supported by “going with my gut” is defined as combining physical assessments and risk assessments embedded in the EMR with nursing judgment to determine the patient’s health and safety risk to guide nursing interventions. “Making sure I’m doing risks screens for fall risk, skin, head to toe assessments, looking to see if anything changed for them that I need to get a provider for” (RN04). Head to toe assessments identified a change from a patient’s baseline. However, individual patient factors such as behaviors that were “combative and aggressive because you need to keep a safe distance” prevented staff nurses from conducting a thorough assessment (RN10).

Risk screens provided an electronic patient risk score alerting staff nurses of their high risk patients when combined with nursing judgment, guided appropriate nursing interventions to
keep patients safe. “There are fall risk screens we go through within two hours of our shift that’s supposed to help us decide who’s a fall risk” (RN08). For example, risk screen scores guided nursing interventions to “ensure they have interventions in place for fall risk, for their skin when we’re doing the Braden scale, venous thromboembolism (VTE) risk” (RN06). Risk screens were conducted throughout the patient stay to determine a change in patient risk. “We look over and document whether it’s [risk screen] on admission or a change in circumstance, like an RRT or code, a transfer from another floor or procedure, so maybe before they weren’t a fall risk, but now they are” (RN10). Staff nurses continuously assess and reassess their patients for safety risks throughout their shift.

“Going with my gut” was supported with nursing experience and judgment to supplement assessments that more accurately identified patient safety risk. For example, “I have something I call the eyeball test, [pointing to stomach area] and if you don't pass it you’re in trouble. I might not know what's wrong but I see something is wrong. That triggers me to look into what could be causing issues” (RN02). Going with my gut was necessary because risk screen results had the potential to conflict with nursing judgment, causing staff nurses to over or under-utilize nursing interventions.

You do the screen and I’ve looked over it three times and I’m like nope. If they’re greater than 50 then they are considered the greatest fall risk and I've had a patient where they are consistently scoring a 35 but when you physically look at them, you are like this patient is going to fall. Sometimes that score doesn't actually match up with how they’re presenting. (RN03)

Risk assessments had a potential to provide a false sense of safety for the patient because they were “just a point in time” and couldn’t “reliably predict a fall” (RN11). For example, a patient with a low fall risk score “randomly fell by passing out in the bathroom. That couldn’t have been predicted because it was a sudden condition change” (RN11). Risk screens, at times,
prevented the development of critical thinking because staff nurses “focus on the score and don’t use their critical thinking” (RN03). Risk screens that conflicted with nursing judgment created a challenging situation because staff nurses weren’t sure if they should follow the intervention embedded in a legal policy or use their judgment to keep the patient safe.

If for instance the patient comes in and they use a walker at home but they’re independent at baseline they get scored higher on their fall risk screen because they use a walker but that doesn't mean that they’re unsafe with the walker. So they may score high enough to require a floor mat in the room, a low boy bed, a whole bunch of interventions that they may not necessarily need just because the risk screen says they need it. (RN04)

Although staff nurses needed time at the patient’s bedside to get to know their patient and complete assessments, they didn’t always have time because they “are so busy and have so much to do” (RN01). Inadequate staffing and workload contributed to being too busy. Interruptions also contributed to not having time for “getting eyes on my patient” and is why it was so important to get eyes on the patient first thing in the morning before the interruptions caused by phone calls, patients talking, and getting patients ready who are going for tests began.

**Frequent Rounds**

The subtheme frequent rounds is defined as a process nurses used throughout their shift, whenever they have extra time, by walking the halls and going into their patient rooms to check on them and make sure they were still safe. This allowed staff nurses to continue to get to know their patient by talking with them to provide and reinforce education. Frequent rounds allowed staff nurses to “get eyes on my patient” and “make sure they’re still where I left them” (RN13). Staff nurses rounded every two hours on nights and hourly on days to “make sure the patient’s breathing, the room is safe, alarms are on, you hear moaning, someone’s in pain, you hear wrestling, you prevent a fall if they’re trying to get something in the dark” (RN13). Frequent rounds kept patients safe because ”we go into the room, check the environment making sure it is
safe, ask if we can get them anything so they have everything right by their side so they don’t have to reach and then fall out of bed” (RN08). Staff nurses checked equipment and looked for safety interventions in place during frequent rounding. “I press a button to make sure the bed is in the lowest position. I look for floor mats, yellow socks, and their call light is in place” (RN16).

Frequent rounds allowed staff nurses time to talk with the patient to get to know them throughout their shift. Staff nurses liked being able to talk with their patients. “I love talking to patients, I love getting to know them” (RN10). Patients were the best source of information because “they know themselves and their body better than anyone” (RN11). Talking to patients allowed staff nurses to pick up on cues they wouldn’t otherwise see.

“You get to know them a lot when you sit and talk with them. If a patient is telling you I don’t feel right, something is not right. A lot of times we can step in and prevent something from happening before even the systems trigger from EPIC” (RN12).

Patients “have the right to be involved in their care” (RN09). Involving the patient in their care helped “make sure everyone is on the same page” (RN14). Patients served as “another set of ears” to provide “input into the safety of their care by letting us know if we missed something or correcting us if we are wrong” (RN13).

Staff nurses involved patients in their care by making sure they were educated throughout the shift because sometimes they don’t understand why they are considered a risk. For example, “they will say I was at home walking fine, well maybe but it’s a different situation when you’re here for a heart condition that causes you to become dizzy or lightheaded” (RN10). Therefore, “reiterating” and “reinforcing” the risk to the patient and family facilitated involving them in their care (RN10). Involving patients helped prepare patients for discharge. “Sometimes we’re going to send people home on antibiotic treatment or whatever so just having them understand
why we’re doing what we’re doing” helped prepare them for a safe discharge (RN01).

Continuity of care assisted in getting to know my patient because “when you have the same patients over and over you build rapport that helps make better decisions because you know the patient, their plan of care, why they’re here, and what may or may not make them safe” (RN10).

Staff nurses wished they had more time, uninterrupted time, to spend with each individual patient to get to understand more than just the physical symptoms they’re having. For example, a day shift nurse with 10 years experience explained the impact of not having time to get to know a patient.

> When I was a nurse starting out you really liked the one on one time you would get. You would hear stories of the war times and their past history. Now I don’t have time so here's your pills and if you are lucky I will see you in an hour. I don’t think that’s nursing at all. I think we should be able to pull up a chair and sit with them and talk to them. What are your goals while you're here, what are your goals when you want to get out of here, what can we do today to get you further to your goals? I don't know basically anybody’s goals other than I want to get out of here. There's no bonding, there's no communication. I mean I really miss that bonding with the patient. I just don’t think we have time to do that. (RN08)

Staff nurses got to know their patients by reviewing the EMR. Then they “got eyes on my patient” by conducting BSR. After getting eyes on their patient through BSR, they needed time at the bedside to conduct risk assessments supported by their nursing gut to determine the patient risk. Frequent rounds throughout their shift allowed staff nurses to keep “eyes on my patient.” After having time to “know my patient to keep them safe”, staff nurses “using my gut” and nursing interventions kept their patient safe.

**“Using My Gut” and Nursing Interventions**

Once staff nurses knew their patients, they applied their nursing judgment and nursing interventions. The theme “using my gut” and nursing interventions is defined as evidence-based standards of care that staff nurses applied in conjunction with their nursing gut, or intuition based
on experience, to keep patients safe (n = 16). Staff nurses’ subthemes described appropriate
nursing interventions, alarms, warnings, checklists, and safety checks, and workarounds
facilitated safe care for the busy staff nurse. Time and staff nurses being busy emerged as a
significant barrier to putting nursing interventions into place.

**Appropriate Nursing Interventions**

The subtheme nursing interventions, defined as policies and protocols, were deemed
appropriate if they allowed sufficient autonomy for staff nurses to use their clinical judgment to
make safe decisions to keep the patient safe. Nursing interventions were designed to keep
patients safe by supporting autonomous evidence-based decision making backed by nursing
clinical judgment. Nursing interventions were developed by nurse leaders and staff nurses on
shared governance councils. Policies outlined “the standards of care in place for different skills
we have to perform” (RN01). For example, when reviewed, the medication administration
policy directed staff nurses to administer medications safely by following steps to administer
medications to “the right patient, right dose, right strength, right medication, right route, so you
don’t give someone a rectum med when it should be oral” (RN10). The fall risk policy, when
reviewed, guided nursing interventions based on the fall risk score. For example, patients with
higher fall risk scores received “yellow socks and floor mats to prevent falls” (RN03). Staff
nurses looked up policies when they were “looking to do a certain care like a chest tube or trach
that we don’t see that often” (RN03). Protocols were approved by physicians to allow staff
nurses to use their clinical judgment and “autonomy to put an intervention in place without
having to call the doctor for everything” (RN10). For example, the central line removal protocol,
when reviewed, allowed staff nurses to use “clinical judgment if we don’t think they need a
catheter anymore we have the autonomy to take it out on our own to prevent a bloodstream
infection” (RN10). The foley protocol allowed staff nurses to attempt “straight cathing a patient before placing a foley catheter” to prevent urinary tract infections (RN04).

Policies and protocols readily available at the point of care facilitated safe patient care because staff nurses “can’t know everything all the time, but I need to know where my resources are so that when an issues comes I can get the answer I need quickly” (RN02). If staff nurses were unaware if a policy or protocol existed or they couldn’t find it “we use our experience or what we remember, or we reach out to a coworker to help us find it” (RN04). Although policies and protocols directed nursing interventions they weren’t always accessible or up to date, lacked nursing input, conflicted with nursing judgment, individual patient factors made interventions challenging to implement, and staff nurses lacked time to implement nursing interventions creating potentially unsafe situations.

Although staff nurses relied on nursing interventions to keep their patients safe, nursing interventions weren’t always easily accessible or up-to-date. A staff nurse with 5 years experience knew where to find information in a timely manner because he knew where to look, however “the search system isn’t intuitive, and many people [staff nurses] probably don’t know what’s out there or where to look” (RN02). The nursing intervention search engine was also slow and if a staff nurse needed to quickly pull the policy on providing “trach care you type in trach and 17 different policies show up and maybe only one applies to you and half of them haven’t been updated in 3-4 years, so how do you know which one you’re supposed to follow” (RN03).

Nursing interventions may be confusing or hazardous because they “don’t have enough staff nurse input” or may “conflict with nursing judgment” (RN06). Staff nurses described a discrepancy in “what nurse leaders think is going on and what is happening on the frontline”
resulting in the creation of nursing interventions that “add extra steps that won’t improve patient safety” (RN06). For example, during a safety huddle observation, staff nurses expressed the manager was “going too far to the extreme for safety” when the manager reviewed a 17-page falls policy (RN12). Rather, the nurse explained that “bringing it back to nursing for staff nurse input” would help because “the culture of safety for the higher ups doesn't translate very well, there's not a lot of connection to nursing opinions or thoughts. Things are implemented really quickly without discussion of how it will actually affect the floors” (RN12).

Nursing interventions designed without staff nurse input caused non-value added extra steps that contributed to staff nurse busyness without any benefits to patient safety. When nursing interventions are written to be so black and white, staff nurses had to do more or do less than the patient needed to be safe. For example, interventions actually increased risk of harm, specifically “fall mats create more of a tripping hazard for patients and staff nurses” (RN08). Not only were they a tripping hazard they were an infection concern, “we are constantly picking them up, which is gross, moving them to the side while people [patients] are getting out of bed to work with therapy, IV poles get stuck on them, they are more of a hassle than they are worth” (RN08). During a safety huddle observation, two staff nurses came out of a room giggling because they both tripped over the floor mats. An example of non-value added extra steps was a patient that was “20 years old and gets 20 points for having an IV not running or slipping on ice 6 months ago. I don’t think that’s a cause for falls [laughing]” (RN09). These scenarios increased fall risk and the patient should have been “ad lib, instead we are supposed to have floor mats and everything else” causing the staff nurse to provide extra care to an independent patient (RN09). Over-utilizing interventions contributed to not having the resources needed such as sitters.
Nursing interventions were designed to keep patients safe by supporting autonomous evidence-based decisions backed by nursing judgment. Nursing interventions conflicted with nursing judgment at times because they were written “to be so black and white” (RN12).

“Sometimes the score doesn’t actually match up with how they’re [the patient] presenting and it’s hard for people to sometimes use their critical thinking and get away from the tool because it’s nice but it’s also not black and white. You can deviate from that if you think your patient is a fall risk.” (RN03)

When nursing interventions are written to be so black and white, staff nurses had to do more or do less than the patient needed to be safe. Staff nurses perceived nursing interventions as “taking away from nurse discretion and it’s more laid out black and white but, it’s not always black and white sometimes it’s grey” (RN12). This caused staff nurses to get “zoned in on the number” and “won’t deviate from the score” to put the entire clinical picture together with the patient to determine the safest interventions (RN02). For example, following the pain assessment scale did not allow for nursing discretion and judgment. The patient had “been taking ten oxy to finally get to a controlled pain level, but then you give five of oxy based on their pain rating, their pain shoots back up and they have to wait another hour for their pain meds” (RN12).

Nursing interventions rely on nursing judgment, however nursing judgment posed challenges because “the individual [nurse] and how they go about things” or a lack of nursing judgment (RN01). Variation in nursing judgment, or the way individual staff nurses go about things, was caused by staff nurses not understanding the why behind interventions. “I think sometimes when change is implemented it’s easier to accept when you understand the “whys” (RN02). A lot of times the “whys aren’t fully explained and it just comes off as the organization is making us do this” (RN09). This contributed staff nurses not following the nursing intervention.
A lack of nursing judgment was attributed to lack of experience. For example, a staff nurse with 5 years experience attributed inexperience to a lack of nursing judgment because “newer people don’t have critical thinking or are building it, they’re too scared to say they [the patient] scored a 35 but I have all these interventions in place because I really think they’re a fall risk” (RN04). Staff nurses may also rely on the judgment of other staff nurses causing too many or too few interventions. For example, an assessment was done “5 days ago” and “I’m walking into the room not seeing what this patient needs to keep them safe, why weren’t we looking at the risk screen and double checking, we’re trusting they [previous staff nurse] did their necessary due diligence but we need to trust and also verify” (RN04).

Individual patient factors or patients not agreeing were barriers to implementing nursing interventions. Individual patient factors including patient’s on a detox protocol, aggressive, mentally disabled, cognitive issues like Alzheimer’s, dementia, or sundowners were challenges to involving patients in nursing interventions. Staff nurses “worry about them falling or pulling out their lines” (RN01) and “lack [of nursing] knowledge to care for these patient” were challenges to implementing nursing interventions (RN04). Sometimes patients “think they can do more than they can causing an unsafe situation” (RN14). Language barriers were challenging because staff nurses needed “people to understand” and that is difficult if they “don’t speak English or are mentally disabled” (RN15). Educating patients was challenging “because it takes time and you want to make sure they understand so you can’t rush something like that” however the staff nurse doesn’t have time to be in a room “for an hour” to reinforce education (RN10). Sometimes patients didn’t agree with the nursing intervention or just didn’t do it. A night shift staff nurse with 6 years experience “educates patients that don’t want to brush their teeth on how
important oral care is when you have a central line, but some patients don’t care and won’t do it” (RN14).

Staff nurses also didn’t have enough time to implement nursing interventions. Not having time to implement nursing interventions was described by a rotating shift staff nurse with 2 ½ years experience. “I don't have the time needed to focus on the amount of care the patient requires, it is not feasible, there’s just not enough time in a day” (RN01). Time barriers included phones ringing constantly, patients talking, and just endless interruptions.

Lack of time prevented staff nurses from “doing our medication checks and putting interventions such as bladder scanning every 8 hours or doing vital signs as ordered “(RN01). Being busy because of the workload contributed to staff nurse inattentiveness or forgetfulness causing staff nurses to “read orders wrong or not pay attention that a dose was already given” (RN11). For example, staff nurses were “forgetting to unroll roller clamps so antibiotics didn’t get infused on time” (RN11).

**Alarms, Warnings, Checklists, and Safety Checks**

The subtheme alarms, warnings, checklists, and safety checks is defined as system design features within the environment or embedded in the EMR that provided alerts, guides, or forcing functions to support safe decision making. These facilitated safely implementing nursing interventions when staff nurses were too busy. They also alerted the staff nurse when there was a situation increasing safety risk for the patient.

Alarms and warnings helped busy staff nurses prioritize and respond to safety risks. Alarms included “bed alarms and chair alarms” that “may not prevent a fall but it gets us in there” (RN16). Warnings were described as alerts in the computer that pop up to preventing giving a narcotic too early, Rothman index or sepsis BPA [best practice alert], new lab results,
critical lab results, and visual cues to help. Warnings helped prevent harm when there was a lack of communication. For example, “an LPN will give pain medicine but won’t tell you and you will try to give the pain medicine and the patient tells you I already had it. Now the EMAR [electronic medication administration record] will tell you it’s not time to do it” (RN15). One staff nurse cautioned that staff nurse reliance on alarms and warnings can impede the development of nursing judgment:

They've taken away nurses’ discretion so much and they put these alarms in which I think they're great because sometimes when you are pulled in different directions those alarms do trigger and they save patients. With experience you just learn that and I think with newer nurses they rely on those alarms because you don't necessarily know what those signs are yet, you haven't seen it. So I think you rely on that because everything is spelled out for you on the screen. I think people just rely a lot on it and aren’t able to connect those dots on their own with those systems in place. (RN12)

Alarms had unintended consequences such as alarm fatigue creating a situation where staff nurses don’t respond to alarms. Alarm fatigue occurred from staff nurses responding to faulty alarms or over use of alarms because “we pretty much put everybody on a bed alarm” (RN10). This contributed to alarm fatigue because “some of the interventions may be over used to the point where nobody pays attention to them” (RN10). Alarms may also give a false sense of security because staff nurses rely on them to keep patients safe but have found broken alarms, faulty alarms, alarms not turned on because staff nurses were too busy and forgot, or because the alarm was found to contribute to harm by agitating the patient.

Checklists helped busy staff nurses remember by identifying key interventions to keep patients safe and “laying out accountability for what I need to do quickly on this patient” (RN04). Checklists were “great reminders in all the craziness to remember to keep your eyes and your mind focused” to provide safe care (RN03). Checklists didn’t always facilitate the implementation of nursing interventions because staff nurses became “more focused on checking
off the checklist” and “not focused on the interventions” (RN02). Staff nurses also checked off items that were not completed which could pose a safety risk if they forgot to go back and implement the intervention.

Safety checks also facilitated the implementation of nursing interventions because they didn’t let the staff nurse proceed with an unsafe act. Safety checks such as the barcode scanning system, dual sign off for high risk medications, and pain pump double verification prevented unsafe acts when they didn’t allow the staff nurse to override the double check. Safety checks required time and in certain cases finding another staff nurse to perform a dual verification. Staff nurses didn’t always have “time to do double checks” because “everyone is so busy it’s not easy to find that second nurse to double check” (RN10).

**Workarounds**

The subtheme workarounds, or short cuts, is defined as knowingly eliminating or not following steps in an established policy or protocol. Staff nurses conducted workarounds to provide safe care in a timely manner. Time barriers and nursing interventions developed without staff nurse input placed staff nurses in a position to develop workarounds to get the patient what they needed now. For example, a day shift staff nurse believed “we always have the best intention of doing things to benefit the safety of the patient, but there are times when they [the patient] needs something now and a 7 step process for doing something won’t cut it” (RN04). When a patient needed antibiotics in a timely manner to treat sepsis, staff nurses had to complete a cumbersome “22-step process” that required staff nurses to “walk four or five times between the medication, IV pump, and patient to scan per policy” (RN04).

Staff nurses used workarounds because “at the end of the day things need to get done and you need to find a way to get things done” because staff nurses were busy and need to save time
or don’t understand the why behind the intervention” (RN02). Examples of workarounds to get through all the work done by the end of the day included not scanning the IV or saline flushes, not doing medication checks every time, not charting everything, and putting on an external catheter because we don’t have time to get the patient to the bathroom. Staff nurses also described how they “print extra patient labels or wristbands and leave it by the computer so they can just go in the room and do the scanning and not wake the patient up” (RN09). Staff nurses have “workarounds for anything” because “at the end of the day we need to get things done” (RN02).

Staff nurses were aware they were “increasing the risk to the patient” but sometimes “the process is not correct or you are either not understanding the reason or the reason isn’t good enough” (RN02). Staff nurses rationalized a workaround as “I wouldn’t do it if I thought it could potentially harm the patient” (RN01); “they don’t understand the purpose or what they are trying to prevent” so they think they are removing steps that are not valuable (RN02); and “you should skip something if you feel it’s safe to do so” (RN15).

Staff nurses described knowing their patient and understanding their risks. They then used their gut and nursing interventions to keep patients safe. Then they described leaning on others or escalating to get “extra eyes on the patient.”

“Extra Eyes on the Patient”

The theme “extra eyes on the patient” is defined as a process staff nurses used to get help when they were in a situation that was outside of their expertise or when the patient’s condition deteriorated requiring immediate assistance and additional resources from others to keep the patient safe (n = 16). Staff nurses’ subthemes described staff nurses got “extra eyes on the
patient” by leaning on others for their expertise and escalating to keep the patient safe. They escalated when they weren’t getting what they needed for their patient.

**Leaning on Others for Their Expertise**

The subtheme leaning on others for their expertise is defined as a process in which staff nurses leaned on each other for their expertise to get “extra eyes on the patient” when they were in a situation they had not previously experienced. Staff nurses learned through experience and “gathering experiences from other nurses and talking through with other nurses to try and think of new things” (RN02). Having experts to lean on guided safe care for new nurses as they gained experience. A staff nurse with 1 year experience described how he depended on others with more experience to supplement his lack of experience.

> A lot of the judgment for me comes from experience and talking to other nurses. Sometimes I might see something and yeah I’ve seen this before let’s do this, other times I’m like this is kind of murky what should we do and that’s when I lean on someone when I’ve never seen it before and everyone is always just willing to jump in and help me make that safe decision. (RN10)

Staff nurses “bounce ideas off each other” to “exhaust all our resources” before calling a physician “so we don’t get doctors angry” by paging them with something that isn’t “page-worthy” (RN14).

Staff nurses not only relied on each other for their expertise, they also relied on their charge nurses, clinical leads, nurse manager, and night shift supervisor when they had one. A night shift staff nurse with 7 months experience “pulls on the lead charge nurse and manager for extra eyes” if she doesn’t know something which helped her provide safe care because “I’m never in a situation where I can’t ask anyone because I won’t do something that I’m not 100% comfortable with” (RN15). Charge nurses and clinical leads conducted proactive rounds to get extra eyes on patients to make sure they were safe. Through safety huddles and shift report they
became aware of the high risk patients and challenging patient assignments allowing them to “get extra eyes” on those patients and assignments. For example, a day shift charge nurse, “asks each team for a brief summary of their patients, barriers for discharge, or high-risk patients safety wise so we can keep a closer eye on them, listen for their alarms, or take a peek in the room real quick” (RN03) to make sure they are safe.

However, the charge nurse, as a resource, was not always available because they were busy helping someone else or having a patient assignment. Even though charge nurses had more knowledge than less experienced staff nurses, a staff nurse with one year experience encountered challenges with “being comfortable and able to collaborate with a charge nurse based on prior experiences” (RN01). A prior negative experience included making a staff nurse “feel bad because I should already know this” when they reached out for help (RN01). Some staff nurses may not ask questions or may not know when they should ask questions. A day shift staff nurse with 12 years experience felt safer when she was training newer nurses who “ask questions” (RN05). She encouraged asking questions by sharing “we’re all learning every single day” and she “worries about new nurses that don’t ask questions” (RN05). A day shift staff nurse with 1 year experience didn’t understanding at times when he needed extra eyes or “admitting you need help” as challenges new nurses face (RN10).

Staff nurses leaned on other disciplines for their expertise. A day shift staff nurse reached out to “the experts around me when you’re not the expert” (RN02). Those experts may be pharmacists, physical therapy, occupational therapy, speech, physicians, quality coordinators, nurse practice specialists or “anyone, there are a lot of experts in areas that can help you do your job better” (RN02). A day shift staff nurse with 12 years experience leaned on pharmacists for their expertise. “I don’t really know interactions with meds but the pharmacists are a great tool
and resources especially when we’re running IV drips and different IV medications. If I have a question I'll call a pharmacist and they are always very helpful” (RN05).

**Escalating to Keep the Patient Safe**

The subtheme escalating to keep the patient safe is defined as a process staff nurses employed to get different or extra resources at the patient’s bedside when they were facing barriers in getting what they believed their patient needed or when their patient needed something immediately, such as when a patient’s condition was declining. Staff nurses escalated to nursing leadership or by calling a rapid response team (RRT). For example, “if we’re not getting what we want there’s an escalation process, we can escalate to the lead, house supervisor, it goes higher than that, it could go to the CNO but we have a nice process” (RN10). A night shift clinical lead with 5 ½ years experience identified her role and challenges when staff nurses escalated to her.

Anytime a patient is declining or [we’re] spending a lot of time [providing care], I page a provider to see the patient and get stat orders, because this one [patient] is not doing well and there can be barriers with physicians seeing the staff nurse’s perspective. (RN03)

When staff nurses were “seeing or hearing something they don’t necessarily agree with” they went the next step “reaching up the scale to find the next person they can get to help” (RN03). However, at times staff nurses “go to the charge nurse and the charge nurse says there’s nothing I can do, they reach out to the manager, the manager is not available” (RN03). When staff nurses were constantly escalating they began to “question themselves of do I need to take the next step if no one else is finding it as important as I am” (RN03).

When a staff nurse had an immediate clinical concern they wouldn’t hesitate to call a rapid response team (RRT) to get what the patient needed immediately. Staff nurses described calling a RRT when they weren’t getting what they needed to keep their patient safe usually from an
inadequate or lack of physician response. For example, a staff nurse with one year experience called a RRT because she was worried about decline in the patient’s status and called to get “more eyes on the patient” because “I felt like the doctor wasn’t too concerned” (RN01).

The staff nurse role as a patient advocate facilitated not hesitating to call a RRT. For example, a day shift staff nurse with 2 years experience used to be afraid to call a RRT but no longer hesitated because “if I need help I’m gonna get the help because everyone shows up, everyone is there for you, doesn't matter whose patient it is, some provider is going to be there and it's a great resource” (RN06). A day shift staff nurse with one year experience had a positive experience calling a RRT for a declining patient.

The patient was septic and I wasn’t getting ahold of the doctor, so our sepsis protocol allows us to call an RRT if we can’t get ahold of the doctor that’s taking care of the patient. So that automatically got a hospitalist here, they ordered the labs that were needed, they ordered the bolus of fluid, and you know we were able to at least make the patient better for the mean-time. So my experience in helping other people with their RRT it’s very good just to have that quick response of a doctor there. The admitting doctor will always get a page that says that their patient is having a RRT. Just to get that initial doctor, the more experienced personnel there, in a quick timely manner that always will prevent a patient from declining too fast then something might happen like a code. (RN10)

Sometimes staff nurses really pushed for advocating for the patient because others didn’t agree with the staff nurse. The specialties can come in and say “why are you calling this, help me understand what you feel like you need in this situation” (RN04). Staff nurses also received “pushback from the ICU trying to understand why we feel like this patient needs to be escalated to a higher level of care” (RN07). This can be challenging for staff nurses because “it doesn’t feel good when you don’t have that backup support” (RN04). Experiences with getting scolded or questioned for calling a RRT could have potentially caused staff nurses to delay or question getting extra eyes on a patient in the future. For example, a day shift staff nurse with 12 years experience noted “fear of the unknowns or a new nurse lacking confidence in their assessment
skills or critical thinking just doesn’t know if they should call or not [a RRT]” because they’ve heard “horror stories of times this nurse got yelled at or made to feel belittled or discredited” for calling a RRT (RN05).

Negative experiences with calling a RRT caused confusion in staff nurses by sending mixed messages. “If you are a new nurse you’re impressionable. We have things in place for safety, a RRT, people will call but they will get scolded or reprimanded from different people like why did you do this” (RN02). Other challenges when calling a RRT included a delay in response from other disciplines because they’re busy. “They’ll just come strolling up, not in any hurry and I’m calling a RRT because I need resources now” (RN16).

Staff nurses needed time to know their patient and understand their risks. They used their gut and nursing interventions to keep patients safe. They leaned on others or escalated to get extra eyes on their patients to keep them safe. They then described having what they needed to provide safe care.

**Not Always Having What is Needed to Provide Safe Care**

The theme not always having what is needed to provide safe care is defined as a situation when staff nurses didn’t have resources or relationships they relied on to provide safe care (n = 16). Not always having what is needed to provide safe care was described within the subthemes included inadequate staffing contributes to unsafe care; supplies and working equipment are not always available; we don’t always work together as a team; and “more respect from physicians would be appreciated.”

**Inadequate Staffing Contributes to Unsafe Care**

The subtheme inadequate staffing contributes to unsafe care is defined as the perception by staff nurses that the staffing model did not support the workload to keep patients safe.
Staffing was identified as either the most frequently experienced challenge to providing safe care or the main contributor to the most unsafe shift. “I would say at this point the general overall consensus will always be staffing. I think that will always be a theme that comes through” (RN04). This was observed during safety huddles when over 50% of safety huddles described having to force over staff nurses for four hours due to staffing shortages or sitters not available for patients who needed them. A nurse manager thanked two night shift nurses for being forced over for four extra hours in addition to their already worked 12 hour night shift. One staff nurse who was forced over was visibly concerned sharing about leaving a new puppy at home alone for 16 hours.

Charge nurses attempted to proactively plan for safe staffing by using a staffing algorithm to determine staffing needs. It was helpful when “the shift before you says it was really busy, I got you an extra support person or I made smaller teams” (RN03). Charge nurses also attempted to create safe patient assignments by right sizing teams to distribute acuity across the teams so “nurses with high acuity patients had smaller teams” (RN03). A day shift staff nurse suggested right sizing teams doesn’t always occur. “I have had times where I have had the easiest assignment, just the easiest, and one of my coworkers is drowning all day because they drew the short end of the stick. I know I've advocated that this team needs to be split up” (RN06). Charge nurses worked with staffing resources and bed placement to coordinate safe staffing and patient assignment, however the process was described as frustrating at times for charge nurses. “It’s frustrating when you talk to staffing and you give up a nurse for night shift and hang up the phone and 15 minutes later you are getting two transfers” (RN09). Even with proactive staffing, staff nurses didn’t always have the right staffing resources creating decision challenges.
There’s been a few times when our staffing hasn’t been even to where it is supposed to be and we’ve had patients that had been confused and needed a sitter. We either pull the staff that we have on the floor, helping all the call lights, helping all the other patients and have them sit with the patient or we just try to do frequent checks. It puts you in the do I do this and risk all these other patients or do I risk this patient and see if they are stable enough or do I let the family in the room watch the patient, are they qualified to do that, are they smart enough to do that, are they safe enough to do that? (RN08)

Staff nurses were put in an unfair situation when having to make decisions based on rationing resources as they felt they were jeopardizing safe care. “There’s a lot of judgment calls that are grey and if you don’t have the staff for it it’s your decision. I don’t think that’s fair and we would be yelled at if the decision turned out poor” (RN08).

A day shift staff nurse felt “inadequate staffing set the tone for the day” and was “visible the minute you step off the elevator” to start your shift when “call lights are in overtime and you’re thinking you just know census is high, more patients and fewer nurses, then it feels like it's not as safe” (RN05). A day shift staff nurse with 8 years experience felt high needs and high acuity patients, lack of support staff, and the geographical placement of her patient assignment contributed to her worst patient safety experience.

If I am looking at a full team of patients, they have multiple two assist or let’s say they are a hooyer lift or even an easy stand, those all require multiple staff members to be involved in that care. If I have someone who was a complete feed so that takes time and you have to be in that room. Usually when they are a total feed they have a reason for that, either they can't mechanically do it or there is something with their swallowing that’s an issue. If I have patients who have significantly high risk medications that they're running that can all add up to the acuity of the team. If maybe you were spread a little thin if we don't have the support staff or a good ratio so two nurses maybe they are taking half a floor. If my patients are distributed across a larger unit in multiple areas so I have to run further distances to take care of them. If I am in an area that I can’t hear their call light from across the unit that would be a concern for me. (RN05)

High needs patients and high acuity patients will be described.

**High needs patients.** High needs patients that posed a staffing challenge were confused, combative, impulsive, detox because “they may pull their lines out or get hurt and we have to constantly monitor them” (RN04). Physically hard to move, admissions “because there’s so
much to do and a lot of documentation to answer all those questions” (RN02), incontinent patients, and a complete feed posed challenges because they required time and staffing resources that weren’t always available. Supplies to help manage incontinence saved staff nurses time and were helpful to keep patients dry. Patients frequently on call lights consumed a lot of nursing time. Patients that are on the call light every half hour and “you constantly go in there and you’re like do you need anything else and they’re like no and you go sit down at the computer and they’re already putting on their call light because now they need water. It’s time-consuming” (RN04).

Staff nurses relied on support staff to assist with high needs patients. Support staff was defined as either a CNA or LPN. Patient companions helped with impulsive patients. They were “not CNAs but extra hands to help” (RN10). Having inadequate support staff made caring for high needs patients challenging. Inadequate support staff occurred even when the unit was fully staffed because everyone was busy. For example, a day shift staff nurse with 10 years experience had a situation she will never forget:

I had a patient who fell and broke his head. The patient was very anxious and confused and we were short staffed too or maybe the patient needed to be a one to one and he wasn’t put on one at that moment, which it could happen if we were not short-staffed. It was at the time we were doing meds, everybody was in a different room. I think that’s what contributes more when everybody is in a different room. I think that falls happen between shift change or when we’re giving meds, or the CNA’s are washing people and nobody is on the floor, or the moment you can’t leave what you’re doing and run if you hear a bed alarm because you’re trying to get another patient to the bathroom. So if you leave that patient, that patient can fall. I guess sometimes it’s just inevitable. (RN15)

Inadequate support staff impacted staff nurse “ability to perform as a registered nurse because I’m doing hygiene or getting them to the bathroom” (RN01). This left staff nurses feeling unsupported and contributed to “missed interventions” and “feeling like a crummy nurse” (RN10). When staff nurses didn’t have the support of a CNA or LPN they got “easily in over
their heads” (RN10). “A lot of times you can’t do certain things like you want to walk them just see how their ambulation is but if you’re so busy you just start prioritizing things and certain things are always going to hit the bottom of the totem pole” (RN10). Extra staff to answer high risk alarms and call lights were beneficial. Night shift staff nurses had unique challenges to managing high needs patients because “higher staffing ratios on night shift” means they had “less staff available to help compared to day shift” (RN13).

The time required to care for high needs patients impacted staff nurses’ ability to provide the care they felt their other patients required. For example, when caring for a high needs patient a staff nurse can be in their room “four or five hours of the day” and you finally get into a different room and “it makes you feel like crap because I haven't been there for you all day, or the sweetest patient ever and their light is in overtime for five minutes trying to just go to the bathroom because no one’s available” (RN06).

**High acuity patients.** Patients requiring many interventions, intense monitoring, or were borderline ICU status were described as high acuity patients due to the intensity and frequency of nursing care delivered to keep them safe. “You can have one person firing for sepsis, one person tanking, and most likely you have somebody getting a blood transfusion product. If you are having a good day, you only have two people tanking at once” (RN08). Stable patients that “turn into your heavy, most critical patient” posed a different challenge because the staff was not prepared to handle the increased workload, especially “on night shift because we can’t call anyone in to help” (RN11). A night shift charge nurse with 6 years experience shared the impact of acuity changes. “Status changes quickly, they’re good then something happens because their pressure goes way down, and now we’re doing drips things like that” (RN14).
In addition to the increased amount of care high acuity patients required, staff nurses also had to take the time to facilitate or negotiate getting the patient to a higher level of care. Although a charge nurse described “doing a pretty good job of expediting patients out to a higher level of care” (RN05) staff nurses didn’t necessarily agree. Sometimes patients couldn’t be sent to a higher level of care because there were no beds or competent staff available to receive the patients or the physician lacked capacity to see the patient because they were admitting a patient or providing care to a high acuity patient. A full-time night shift charge nurse described the time and effort it required when escalating to a physician that a patient required a higher level of care as “trying to persuade somebody here’s all the evidence” (RN14).

There was a lack of consistent agreement on criteria for level of care between staff nurses and physicians. “I don’t think the patient is safe for this floor but the physician does” (RN03). Night shift staff nurses perceived physicians who “don’t want to pull the trigger on night shift and then all of a sudden they get whisked to the ICU on day shift” (RN11).

Staff nurses also experienced the ICU not seeing the patient as sick as the medical-surgical staff nurse did “giving pushback because they see higher acuity patients all the time” (RN07). However, staff nurses also pushed back when they needed to because they felt they had more knowledge of what the patient needed. This required them to have to push for interventions because physicians don’t have as much knowledge as the staff nurse due to the disproportionate time a physician spent with a patient compared to a staff nurse. A day shift staff nurse described this as “pushing for something that you are seeing throughout your shift or throughout your stretch of shifts that the doctor might not see in his five minutes of being in the room” (RN06). A day shift charge nurse described lack of physician knowledge on what level of interventions medical-surgical nurses can and can’t do on the floor because each floor is different
as the barrier. “They don't know we have five patients. If you tell them I have four other patients I can't be in this room all the time sometimes they're like then they do need that more individualized care” (RN03).

The labor-intensive time spent with one or two high acuity patients created an environment in which staff had an “inability to provide safe care to their less acute patients placing their other patients at a safety risk because they won’t be able to get eyes on their other patients” (RN06). This situation made staff nurses feel really bad. Inadequate staffing due to high acuity patient demands also caused missed care because when there wasn’t enough staff “falls happen, infections happen, you’re missing things, not giving good baths. I feel really bad when I walk into a patient’s room and they didn’t even know I was still here” (RN06). A day shift charge nurse with 8 years experience described the challenges with having high acuity patients on the floor and her most unsafe shift because “I have four other patients to take care of, maybe the doctors aren’t responding or we call a RRT and the patient ends up staying on the floor, you still don’t have resources for five patients and one is acute” (RN07).

**Supplies and Working Equipment are not Always Available**

The subtheme supplies and working equipment are not always available is defined as a situation when staff nurses didn’t have patient care supplies or working equipment used to deliver or support care readily available at the bedside to keep the patient safe. Staff nurses needed supplies and working equipment at the bedside to provide safe care. Staff nurses used equipment such as low boy beds, hoyer lifts, bladder scanners, and pain pumps to provide safe care. A day shift charge nurse described her safest shift:

Having all the correct supplies. Going into an isolation room there's gowns, there's the big isolation garbage right next to the door, the stop sign is out. Having the correct supplies at the bedside like in our servers and not having stuff missing. Having the gait belt and the walker if it's an impulsive patient in case if they do start getting up without
you they at least have that assistive device there. It’s not always the best for them to get up without you but at least if they do it’s there. I think that’s when you just know it's going to be a good day when you don't have to run all over the unit to find these things when they are already set up for you when you walk in. (RN03)

A safe day was also “having the right syringes in the nurse sever readily available, briefs readily available when I’m trying to change someone quickly if they are impulsive” (RN04). Not having supplies at the bedside placed patients in an unsafe situation because “if I can’t get to those supplies immediately they are at risk for falling before I can get them what I need” (RN04). Staff nurses got the supplies and equipment they needed, however supplies and working equipment were not always readily available at the bedside. For example, sometimes there wasn’t enough equipment because “everyone is a fall risk” (RN10). “If I have a fall risk patient coming in I have to search the entire floor for a chair alarm and sometimes when I’m busy I don’t have time to do that” (RN16). Broken equipment put patients and staff at risk. For example, hoyer lifts provided a safe mechanism to lift patients to prevent staff nurse and patient injury, but “when we go to use them and their batteries are dead, they are not useable. Even though there are eight machines, not one works” (RN08). Alarms not working or the inability to distinguish where the alarm was coming from posed challenges for a timely response to the patient. The control panel on the beds were often broken. Staff nurses needed supplies from other departments sometimes causing an unsafe situation. There was a delay in receiving medications due to internal safety check processes such as “needing lab or pharmacy to do their checks before we can get a medication” (RN01) causing delays in treating patients. Searching for equipment and supplies took nurses away from the bedside and patient care because they “constantly go in and out of the rooms for supplies that aren’t at our fingertips” (RN02). This created an unsafe patient situation.
I can’t tell you how many times that they shuffled these things with no clinical input and you can’t find the things you need when you need them. A patient who is in an emergent situation but we can’t find stuff to start an IV, we can’t find tele pads to hook them up to the defibrillator those things delay care. Someone is aspirating and they’re seizing and we can’t find a working suction regulator, that causes issues. It comes down to availability and accessibility. If we can’t find it when we need it, it doesn’t matter if we have 500 of them sitting in our basement somewhere. (RN02)

**We Don’t Always Work Together as a Team**

The subtheme we don’t always work together as a team is defined as a situation when staff nurses didn’t receive the help they relied on and needed from their colleagues to assist in keeping patients safe. Working together as a team on the unit contributed to the best safety culture experience. “The big thing is coworkers, especially on our floor, you become a really tightknit group because you have to rely on each other for everything, I rely on my coworkers a lot” (RN12). A night shift staff nurse with 1 year experience relied on “the people who are around me, if you ask for help it’ll get done, I always feel like someone has my back and can help me” (RN13). Working together as a team on the unit alleviated staffing and workload challenges helping staff nurses get through the day. “The nurses on our floor are great. If you get in a bind, you call anybody, they'll drop what they’re doing to help. If we didn’t have such great nurses and everybody pulling their weight, it wouldn’t happen” (RN08).

Staff nurses “communicate and set expectations with my team” because “good teamwork is communication” and without it “you can’t advance the patients plan of care” (RN10). Their team consisted of either a CNA or LPN when they had one. Communication occurred by doing a team huddle or a “brief huddle with my team and other nurses on the unit after the previous shift leaves” (RN04). Team huddles helped a staff nurse understand “my team is this way, their team is that way and we need to look out for each other” (RN04). Team huddles increased safety by ensuring everyone knew the high risk patients on the floor and helped “identify important safety
information missed during handover” (RN04). Team huddles also helped charge nurses set expectations with the entire team. “We have high risk patients, I don’t want anyone to fall so answer the call lights or fall alarms. That might not be your patient but that nurse might be taking care of other patients or stuck in another room” (RN03). The huddle with their team consisted of sharing with the CNA or LPN “how we are going to keep our fall risk patients safe, who’s going to take turns sitting outside the room, somebody is impulsive so everyone knows and is aware” (RN11).

Attitudes or the mood of co-workers impacted working together as a team predominantly by day shift staff nurses. Attitudes that facilitated teamwork were described as a good work ethic and a positive attitude. Conversely, attitudes and moods such as cranky, not open, and negative were challenging. Co-workers with a crabby attitude were not perceived as available to help others as well as deterred a staff nurse from wanting to help them. “As you walk into a day and you’re the craggiest person on earth you are not going to be a delight to work with. I know you're not gonna help me, it's gonna make it harder for me to help you” (RN06).

Having an established relationship with or trust “with staff co-workers we’ve already worked with” facilitated working together as a team because this allowed staff nurses to know who is going to help out and who they can lean on and trust (RN05). A day shift staff nurse with one year experience had to get to know people to build relationships and understand who would work together as a team because “when I first started there was a few I was intimidated by” (RN16). “Just getting to know them. I’ve been on the unit for one year working with the same staff and nurses, you get to know them, their work ethic, the things they are good at and things they struggle with” (RN16).
Staff nurses relied on teammates that are willing to get up and help. Teammates that are willing to get up and help allowed the staff nurse to remain and focus on a patient when they were busy in a patient’s room and not worry if their other patients were unsafe. For example, “If you have teammates that are willing to get up and move, if you're in a different room and you hear a bed alarm going off you’re confident that somebody else is getting that bed alarm and you can stay in the room” (RN03). However, this was not consistent and “sometimes she is worried” so if she heard an alarm go off she would leave the patient she was caring for to go check on another patient whose alarms was going off.

The most challenging day was “not having what I need from the rest of the team” (RN04). The impact of not having the team working together was “more stressful, it definitely adds a lot more stress. You walk on to the floor and you’re like okay well I guess I’m in this by myself tonight [laughing]” (RN12). There were times when coworkers were unwilling to help, especially if it wasn’t their patient. “That’s not my job” was a point of contention for staff nurses (RN09). Most staff nurses were willing to answer other nurses’ call lights, however the same few rarely will help.

Staff nurses were “being encouraged to confront people” who weren’t helping or answering call lights by nurse leaders (RN16). They struggled with this because working together as a team and answering call lights should be known expectations. For example, “when I came here it was an expectation that when the light goes up I help out” (RN06). Two staff nurses had challenges with having conversations with their co-workers if they were not working together as a team because they wanted to maintain personal relationships. The difficult balance between “wanting to be friends” and “needing to make sure everyone is doing their job” was “hard to do” (RN03), however “doing it in real time is better.” A night shift charge nurse with 5
½ years experience described a typical conversation as “hey I know 704 isn’t your patient but the call light was in green and I walked by and you were sitting there, was there a reason that prohibited you from helping to answer that” (RN03). She also acknowledged she wouldn’t have been comfortable having those conversations when she was new.

A lack of follow up and accountability from nurse leaders caused staff nurses to believe it was a “waste of time” for staff nurses to address co-workers who are not working together as a team or answering alarms and call lights because “it’s the same people and their behaviors don’t change” (RN06). “I know we’re all adults and we should be able to handle this in an appropriate way, but it’s always the same people and you tell them over and over but it doesn’t change” (RN16). There were many reasons attributed to preventing working together as a team on the unit (Figure 6), busy and tired will be described.

![Reasons Attributed to Not Working Together as a Team](image)

Figure 6. Reasons attributed to not working together as a team
Staff nurses too busy or tired to work together as a team. Being busy was a barrier to working together as a team due to “high acuity and not having extra hands to help out” (RN12). Staff nurses were so busy with “their own list of a million things to do” that they couldn’t always answer call lights or it would “put me behind” (RN09). Staff nurses “they’re tired, I’m tired” prevented working together as a team because “we are just done” (RN08). Shift length and number of shifts in a row contributed to being tired. “Twelve hour shifts can be a long time day after day, a couple in a row, it’s exhausting” (RN08). Staff nurses were tired because of the physical, mental, and emotional impact of providing nursing care. “When everyone leaves here everyone is exhausted mentally, emotionally, physically. I am 32, I have a 45 minute drive, some days when I got out of my car I can barely move, I have bursitis in my hips, my shoes are worn out, it’s just physically demanding” (RN12). Not having staff available to help or nurses that were new or new to the floor contributed to being busy and tired because “either they are new or they’re not used to this floor or they just don't understand how to care for certain patients” (RN10). Staff nurses would not lean on staff nurses they didn’t trust to “do the job to my standards” (RN16).

“More Respect From Physicians Would Be Appreciated”

The subtheme “more respect from physicians would be appreciated” is defined as disrespectful interactions between staff nurses and physicians that inhibited staff nurses from providing safe care by increasing the staff nurse workload or by not incorporating the staff nurse perspective into the plan of care. Although staff nurses worked collaboratively with many different disciplines, they all specifically described a lack of respectful, collaborative relationships with physicians as impacting their ability to provide safe care. Staff nurses felt “more respect from the physicians would be appreciated.” Staff nurses responded by pounding
their fists and rolling their eyes as they explained being frustrated when physicians were not being there for the patient like they are there for the patient, as well as not respecting the staff nurse’s knowledge about the patient and patient needs.

**Be there for the patient like I’m there for the patient.** Staff nurses expected physicians “to be there for the patient like I’m there for the patient” (RN06). Staff nurses had to “really push” physicians to “oversee and initiate” care for the patient (RN01). Staff nurses were frustrated with feeling like physicians were relying on them to double check and remind physicians to put in orders wondering who is “owning the buck here” (RN04). A day shift staff nurse shared a post-procedure patient situation that really bothered her.

When the patient returned the orders were put in on the wrong patient, so I didn’t have post-op orders, when that was fixed he orders incorrectly and some orders were missing, so I had to page over six times, multiple different nurses from the cath lab, the provider from cath lab, and the provider who was overseeing the patient on the floor, which also had a midlevel so there were two of those providers to try to get the situation sorted out. Meanwhile the patient is on the floor and they need care pre-op and post-op so a ton of barriers, a ton of confusion, and just overall these providers are missing a lot of orders. Then we have to cover and check constantly to say okay we don’t have this and I need this and they are literally asking us well do these orders look correct. (RN04)

This caused staff nurses to take extra time to follow up with missing orders. A day shift staff nurse made an error when she was new because she didn’t know it was her role to remind a physician to put in an order to hold anticoagulation before surgery because usually the doctor doesn’t do it. “I made the mistake when I was first on the floor because they have heparin, I gave it, they were going to pull the epidural but they didn’t tell me so I feel like that’s a barrier, but after that I learned” (RN15).

Night shift staff nurses were frustrated with having to wait until day shift to address patient needs because non-urgent patient needs didn’t get addressed on night shift instead being told we’ll wait until the morning. For example, “they have a headache at two in the morning and
this patient is still here and you're still on call as a doctor so you need to address it” (RN12).

RN09, a day shift staff nurse, was frustrated with pushing physicians because she was “unable to give the patients what they need because it is not in her scope of practice.” She can’t “put in orders, I don’t know how to intubate, I can’t say what they need, all I can do is push and try to get the help they need.” For example, this caused night shift nurses to have to “get creative” to meet their patients’ needs and “give ice chips instead of medication for pain” (RN12).

Staff nurses advocated for the patient or pushed to get what the patient needs; however, the amount of push seemed “too much” (RN01). “It’s fine that we have to ask for interventions, it’s our job to be knowledgeable, but it’s also their job to oversee their care and initiate things” (RN01). Staff nurses were really bothered by poor relationships with physicians; however, focusing on the role as a patient advocate helped staff nurses cope with their disappointment and frustration. “I’ve gotten to the point where it doesn’t bother me anymore. I'm here to do my job. I'm here to provide safe care to my patients and advocate for my patients and so I’ll get what I need” (RN16). “Building thick skin” (RN01) or “having a backbone” (RN06) helped staff nurses build courage to question a physician to advocate for their patient. A day shift staff nurse didn’t question an intervention because it was coming from the doctor and realized she should have questioned him because her gut told her not to give the medication causing patient harm.

[The patient] was already on a nitro drip and I had given him hydralazine about five minutes earlier and he said give this Nitro. I learned a lot from that situation because I now know just because they are telling me to do something, I know in my gut I shouldn't do it and that was a good experience for me because I learned just because they are telling me to do something I’m not going to do it in the future and I think that's a good teaching point for new nurses is you can have a backbone and I should've had a better one in that situation. (RN06)

The ability to question a physician develops over time; however, it was stated that “some nurses just won’t question physicians” (RN07). A day shift staff nurse learned over time to
question physicians and this prevented an intervention error. “One day I had sepsis protocol come up on my patient and I paged the doc asked did you just see this person because I saw him 20 minutes ago and they were fine, [the doctor said] oh my God I ordered that on the wrong person” (RN08).

Rounding with physicians facilitated being there for the patient like I’m there for the patient. When physicians got to the floor they could “call and say hey I’m going to see 503 do you have time” (RN09). This helped make sure everyone understood the plan because sometimes physicians “sneak in and out and you have no idea unless the patient says something, there’s no note, you have no idea. He said I can eat, really, how do I know” (RN09). When physicians asked staff nurses to round with them it “significantly reduced questions, the pages, issues with providing patient care” (RN04). “You don’t feel dismissed when you have a clear plan, they validate your concerns, and you know what we’re doing, you know when to call back with clear parameters” (RN11). Rounding with physicians can be challenging when physicians are rounding at the same time preventing the staff nurse from participating.

Physicians don’t respect staff nurses. Staff nurses did not feel respected by physicians when they didn’t get a response or they got an inappropriate response. Inappropriate physician response or lack of response to staff nurse suggestions made them feel “bad about our actions as a nurse in trying to keep our patients safe” (RN01). “If you're asking for certain things, I understand they are not always necessary, but just to have more of a willingness from them to be more involved” (RN01). Staff nurses didn’t feel as if they were taken seriously by physicians even though “we’re at the bedside more than them, we see more than them, so I guess maybe we advocate a little bit more for them than the doctors” (RN01).
Not getting a response from physicians when staff nurses had questions contributed to staff nurses not feeling respected. Although there were multiple communication tools to contact physicians, they didn’t know if the physicians were even getting the message because they didn’t always respond. Staff nurses used “secure chat only because you can at least see if they read the message” (RN07). RN10 didn’t repeat pages because “I am assuming they just look at it and they are like no this can wait until morning and they don’t respond so as a nurse you just kind of sit in limbo.” Other staff nurses repeatedly tried to contact the physician “making them [the physician] angry” (RN11). Although staff nurses were unsure of why physicians didn’t respond they may have had the wrong number, physician was busy or forgets, or the physician was sleeping were potential reasons the physician didn’t respond. Staff nurses contacted physician assistants and nurse practitioners because they knew they would get a response.

Inappropriate physician responses contributed to staff nurses not feeling respected. There were certain physician’s staff nurses wouldn’t call because “they know they are going to get screamed at or hung up on” (RN11). Lack of respect was described as being “looked down on by physicians as one of those intimidation things” (RN10). “They are a doctor and I’m [puts up quotation signs and rolls eyes up] just a nurse” acknowledging “more respect from the doctors would be appreciated from the nurses” (RN06). A day shift staff nurse witnessed a recent experience with an inappropriate physician response.

Just yesterday there was a newer nurse on the floor and this patient just came back from getting a heart cath and she’s complaining of left flank pain and then tele called and she was in some junctional rhythm so I said okay page the doctor who did the cath. She wasn’t getting back to her and she just wanted to make sure that everything was okay because she is still complaining of this pain. So I said well page the hospitalist that’s on. So she did and then the hospitalist responded by paging the doctor who did the heart cath and then that doctor called that nurse and reamed her out for why would you page the hospitalist. I thought it was fair game and I told her she should do it because she needed the confirmation on what to do and she wasn’t getting it so I think the escalating is appropriate. (RN06)
Newer nurses in particular don’t feel respected by physicians. A new day shift staff nurse described:

There’s a lot of providers that come in and almost look down and not just me but other nurses as well and I don't know if it’s because I’m a newer nurse or if it's just a personality. I don't really know but I feel like I've gotten to the point where it doesn't bother me anymore. (RN16)

Physician behaviors weren’t always addressed “same doctors, same poor behaviors” (RN11). “It’s like you don’t feel like you’re part of a team, you start to feel like you’re the annoying nurse and it’s the almighty doctor” (RN09). Showing respect was also listening, however listening wasn’t always respectful. A day shift staff nurse described the differences in how physicians listen to staff nurses:

Some of them show great I'm looking at you. I think honestly the lack of eye contact has a lot to do with it. There’s tons of the doctors who you will be talking to them, they won't look at you, are they even listening to me, I don’t know, watching cartoons on their phone, mutual respect needs to be had in order to have good communication.” (RN06)

Staff nurses wanted to be trusted as the eyes and ears for the physicians. A day shift staff nurse with 5 years experience acknowledged it’s nice when “the provider is available and responsive and is actually listening to what I’m telling you. Some providers trust nursing. Responsiveness is relying on me as your eyes and ears, don’t walk in here like you know it all” (RN09). Building rapport and trust facilitated respectful, collaborative physician relationships. Trust and rapport within the nurse-physician relationship developed over time. For example, “I feel like it's getting a lot easier, they know me. In the beginning it definitely was a barrier, they don't know who you are, the lack of trust, the lack of building that rapport is a barrier” (RN16).

Staff nurses’ fear of physicians resulted from lack of staff nurse confidence because they were “unsure of what I know, my knowledge of things, and not confident in what I wanted to ask them for” (RN06) and afraid of physician response based on experiences with “getting yelled at”
An experienced day shift charge nurse worried about the impact on safety when staff nurses were afraid to collaborate with physicians:

It doesn’t go anywhere and then it just makes you feel really uncomfortable too. I mean especially providers they talk down to you. It makes you feel like you don’t want to call them for things and that is a big barrier. Especially new nurses will ask me as the charge nurse before they call the doctor. Do you really think I should call them about this? And I will say yeah you need to even though they might yell at you. Certain doctors they’ll page about anything, other doctors they won’t because they’ve had terrible experiences with them, hanging up on them, telling them not to page for that anymore and stuff like that. (RN09)

Consequently, staff nurses “delay calling so they won’t get the doctors angry” (RN14).

Staff nurses described needing time to “know my patient to keep them safe”, “using my gut” and nursing interventions to keep patients safe, and leaning on others or escalating to get “extra eyes on the patient.” They described not always having what they needed to provide safe care. They then described needing the organization to support patient safety as a priority.

**Organization Prioritizes Patient Safety**

The theme organization prioritizes patient safety is defined as a directive from the top executive of the organization that patient safety is the overarching goal for everyone working in or practicing in the organization (n = 16). Safety culture began with the “CEO setting the tone that patient safety is an organizational priority” (RN02). The CEO shared the organization vision that zero harm to patients was possible. Zero harm was communicated as a “nonnegotiable” (RN02). Sharing the vision of no harm changed how staff nurses though about patient safety by putting it in the forefront and changing their thought process.

Every open-heart patient had a triple lumen in from when they got into the OR to when they went home and we just draw right off it. No one was trying to create harm but when we were having CLABSIs [central-line associated bloodstream infections]...hey maybe we should get these lines out earlier. That question wasn’t asked because quality and safety wasn’t in the forefront at that time and just getting to that point is a huge increase in the quality of care and safety we are providing to our patients. (RN02)
Staff nurses received the message that patient safety was a priority when the organization communicated about safety all the time as described by the subtheme “sharing the numbers and keeping us updated.” Then the organization tried to better itself by having a proactive plan around safety as described by the subtheme “giving nurses a voice in making improvements.”

“Sharing the Numbers and Keeping Us Updated”

The subtheme “sharing the numbers and keeping us updated” is defined as a process in which the organization provided transparency of patient safety data and new interventions deployed to keep patients safe with all members working and practicing within the organization. Sharing the numbers to provide transparency of data helped staff nurses understand the current state of patient safety. For example, RN02, a day shift staff nurse with 5 years experience reflected on his thought process prior to learning of stories and the number of preventable patient harms shared by the executive leadership team. “I assumed we were providing the best care in the country” because they had “no way of knowing any better because we hadn’t heard otherwise” (RN02). This was observed during unit, facility, and system safety huddles when the number of days since the last preventable harm event were discussed and posted on unit bulletin boards. The nurse manager also shared the number of preventable harm events. For example, the nurse manager shared a patient was diagnosed with a hospital-acquired catheter-associated urinary tract infection on their unit. She reviewed the misses in peri-care and lack of documentation of the daily catheter indication that could have contributed to the infection. Staff nurses described challenges with patients refusing peri-care. The nurse manager asked staff nurses to share different successful approaches they used to encourage a patient to participate in peri-care. One staff nurse described explaining to the patient why peri-care was important to prevent an infection. The nurse manager informed the staff nurse she was going to ask the legal
team if patients should sign a refusal to participate in care document. She wrote the follow up on a sticky note and placed it on the bulletin board under the commitment section to provide transparency and accountability for the follow up.

“Sharing the numbers” not only helped staff nurses understand the current state of safety, it also helped them understand expectations of “where they needed to go and what is most important to prioritize” (RN04). “Laying out the expectation of what quality metrics we need to follow to ensure we’re putting the patient first and getting those metrics met has been a huge impact” (RN04). For example, at daily safety huddles “we share our goals of preventing central line infections and foley catheter infections, and we are aware of the progress we’ve made” (RN13). Staff nurses were observed sharing nursing intervention misses that could have caused a patient harm during safety huddles. For example, they shared missed daily baths that were outlined on the checklist to prevent surgical site infections. They shared a lack of support staff as the reason and brainstormed solutions with the manager to prioritize daily baths by using the bath kits to save time.

While “sharing the numbers” was important to staff nurses, leaders using the numbers to make policy decisions without understanding what is going on at the frontline was explained as “pure frustration” for staff nurses (RN06). A day shift staff nurse described frustration with leaders creating a RRT protocol for sepsis patients to improve sepsis mortality outcomes “adding extra steps we don’t need” because “it’s so hard because it's a double-edged sword, they are seeing the numbers and the statistics and we’re not seeing necessarily that but we are seeing the real-life what is going on” (RN06). The protocol required staff nurses to call a RRT for a patient “firing a sepsis alert in the EMR” to initiate sepsis care quicker. However, this was “a waste of resources, you don’t need all those resources there” and when you really need a RRT people
were going to “take their sweet time because it’s another sepsis RRT and RRT needs to be reserved for when you need it” (RN06). The protocol was reviewed and the requirement for staff nurses to call a RRT for a sepsis alert was validated.

In addition to knowing the numbers, staff nurses needed the organization to keep them updated on “everything we are trying to do to fix” patient safety (RN03). For example, the organization shared new interventions to prevent harm from patient falls including “gait belts and walkers” at the patient’s bedside (RN15). The organization shared “when people are catching incidents before they become incidents, so near misses, and they give people incentives for putting that in and looking more closely for them” (RN07). For example, during a safety huddle a staff nurse reported finding a medication in the wrong drawer of the pyxis that could have caused a patient harm if they were busy or didn’t follow the medication administration policy. The drawer was immediately checked to make sure the drawer had the correct medication and the nurse manager brought the near miss to the facility huddle for pharmacy to follow up. Surveys were identified as another method of how the organization communicated about safety by one staff nurse, however noted “I don’t ever really know what they do with those surveys” (RN12). The unit safety culture results were posted on the unit improvement boards.

Staff nurses described “appreciation” for the organization sharing daily updates on what “they are doing to keep us and patients safe from COVID” by reinforcing the appropriate personal protective equipment and enforcing the influenza season visitor restriction policy (RN03). “They are trying to provide us with the most up-to-date information and making a good plan to provide safe care to everyone” (RN05). When the organization communicated with staff by “providing information to help us make sure we can take care of our patients the best, safest,
and easiest way possible” it made a day shift staff nurse feel like “they care, they’re doing something, and they’re actually listening” (RN03).

Staff nurses described emails or newsletters, website, meetings, videos, safety huddles, and executive rounds as effective communication methods to keep them updated about safety issues and new interventions. Safety huddles were observed as a 10-15 minute standing meeting with unit staff and unit leaders where they openly talked about patients that were most at risk for harm, plans to keep patients safe, staffing concerns, and policy reviews. For example, staff nurses shared having multiple impulsive patients that should have sitters per the falls policy. However, there were no sitters available so they brainstormed how to geographically place the patients so staff nurses could try to observe the patients while charting in the nurses station to mitigate patient falls. The nurse manager discussed calling around to try to find sitters to help staff nurses keep their impulsive patients safe.

Huddles focused on “anything going on, updates on current situations, changes to policies or procedures, and any new information, which is nice to all be on the same page” (RN10). For example, a nurse leader was observed reviewing a new fall intervention policy that required the use of floor mats for high risk patients. The staff nurses described their concerns with placing floor mats as patients and staff were tripping on them. The nurse leader supported staff nurses by asking them to use their clinical judgment to keep patients safe until the nurse manager could escalate their concerns with the new falls policy to the facility safety huddle. The nurse manager then shared the staff nurse concerns with the director of nursing at the facility safety huddle. The director of nursing referred the concern to the system falls committee for resolution. When staff nurses perceived leaders as actually listening, understanding their perspective, and helping them
work through their barriers it “significantly helps in the way that we feel and the way that we are able to provide care for the patients that is safe” (RN04).

Although staff nurses “liked” huddles, huddles longer than 10-15 minutes “cause anxiety” that they were missing something in patient care (RN04). “Lack of leadership follow up” when “things are brought up but you never know what the follow up is or they will take it off-line. How are the rest of us supposed to learn from that” (RN09) were barriers. For example, when staff nurses escalated concerns to their manager at huddles “sometimes we hear feedback but a lot of times we don’t, our manager tries to bring it back to our meetings or put it in our newsletters, but that’s only occasionally” (RN16). Night shift staff nurses identified huddles didn’t occur on night shift, but information gets passed along to night shift through email or the charge nurse.

Staff nurses who experienced executive rounds felt they were effective mode of communication because it “connects staff nurses with upper leaders.” “The CEO comes to the floor, we discuss our goals and what we’ve accomplished. It’s great out of their busy days they come to the floor, get to know who works on this floor, hears what’s going on, and asks what can we do for you” (RN13).

Staff nurses relied on nurse leaders to keep them updated suggesting “the organization does a really good job of getting out there and spreading information” (RN10), however communication caused confusion for staff nurses and prevented them from understanding the whys. This was caused by communication that was frequently changing, inconsistent messaging by managers, and “ineffective delivery so we don’t know the whys” (RN04). For example, “when they released the expectations for CHG [skin preparation to reduce surgical site infections] the information changed six times within less than one year” (RN04). This created a
barrier for staff nurses “wanting to do the right thing, wanting to make sure we were using on the right patients at the right time, but then constantly having to readjust and rethink does this patient qualify or not” (RN04). In addition to the frequent changes causing confusion, inconsistent messaging by managers created confusing, mixed messages as described by a float pool nurse:

Directives that they [the managers] get sent down, every single manager interprets and applies that differently and that causes a lot of problems especially when you have nurses that go to multiple floors. They are needed on this floor and then they are not needed on this floor, well are they needed? What’s best for the patient? So when you don’t have a clear and concise message that causes issues and sends mixed messages. (RN02)

Ineffective delivery was also described by staff nurses because “a lot of time those whys aren’t fully explained and it just comes across as the organization is making us do this now” (RN09). A part-time night shift nurse had concerns with ineffective delivery of messages because night shift doesn’t hear about “new things coming out as much as days” causing her to potentially “not be doing something correctly or per policy or protocol” (RN12).

“Giving Nurses a Voice in Making Improvements”

The subtheme “giving nurses a voice in making improvements” is defined as involving staff nurses in improvement teams to proactively design interventions that kept patients safe. The organization prioritized patient safety by sharing the vision, numbers, and communicating about safety regularly. Then the organization used that information to try to better itself by having a proactive plan around safety and “giving nurses a voice in making improvements.”

“It’s one thing that I’ve always liked about the organization. There's always change and they’re always looking to improve on things to better safety for patients” (RN12). Having a proactive plan around safety was the organization coming up with new ways to keep patients safe. For example, “they try to come up with new things to avoid the patients to fall and from the beginning when I first started working here we didn’t have the floor mats” (RN15). The
organization came up with new ways of improving patient safety through nursing governance councils and improvement teams. These councils and teams “give nurses a voice” into improvement interventions (RN02).

Nursing governance councils and improvement teams had representation from the nursing units. The nursing governance council was described by a night shift staff nurse with 7 months experience as a “system wide council with unit representatives, not exactly sure how it works, but they attend monthly meetings talk about this stuff [patient safety issues] and our representative comes back to our floor and discusses it with everyone, hears our concerns, and brings them back to the group” (RN14). Nursing governance talked about “patient safety numbers, issues, and how we are going to fix things all the time” (RN02). RN05 shared her experiences as a previous member of nursing governance, “they talked about safety, staff injury, and patient falls.”

Improvement teams reviewed quality data, evidence-based practice, and provided staff nurses input into interventions to improve safety and quality data. For example, the falls improvement team “evaluates falls, the risk, what happened, and what we should be doing” (RN15). The unit falls team champion “tries to stay on top if it [falls prevention] and reads up on articles” and then they “implement things to prevent falls” (RN08). A day shift staff nurse with 8 years experience was “fortunate to participate in shared governance” as it allowed her to “reach out to other councils for questions or answers” (RN04). Specifically, when she had concerns about the new falls policy she was able to “talk extensively with the falls committee about the risk screen and what the expectations and barriers are.”

Although staff nurses described nursing governance councils and improvement teams as a method to give staff nurses a voice in making improvements, staff nurses didn’t have time to
participate in councils, councils don’t prioritize important things, and needed more staff nurse input. A day shift staff nurses stated “I’m personally not on any nurse councils so I shouldn’t be complaining because I could have a voice but I don’t have time” (RN06). Nurse governance councils were not perceived as always focusing on what is most important. For example, councils prioritized “colored scrubs for nurses” without addressing “not enough staff to handle the workload” explaining “what good is nurses wearing the same colored scrubs when we don’t have enough nurses to take care of patients” (RN06). “I really wish we had more staff nurse input” on nursing governance councils was communicated by a day shift staff nurse who served as a unit representative on nursing governance (RN04).

Staff nurses got to know their patients to understand their risk and used their gut and nursing interventions to keep patients safe. They didn’t always have what they needed to provide safe care. The organization prioritized patient safety. Finally, staff nurses described needing time to teach and learn in a nonpunitive environment.

**Learning: “Have our Backs”**

The theme learning: “Have our backs” is defined as a structure and process that supported staff nurses to learn in a nonjudgmental, nonpunitive environment where they felt the organization would support their decisions (n = 16). Staff nurses’ subthemes were described as time to teach and learn from experience, learning from mistakes, and we don’t always learn from audits as mechanisms by which they learn.

**Time to Teach and Learn from Experience**

The subtheme time to teach and learn from experience is defined as having time for experienced staff nurses to teach new staff nurses and time to learn from each other by sharing experiences. Other nurses’ experiences built nursing experience and judgment because staff
nurses learn from their experiences. Lack of experience was described as potentially unsafe because they don’t know or understand. Staff nurses learn through conditioning. “Last time I had a person whose pressures were in the 70s, we didn’t do anything about it so I’m going to apply that to all the scenarios because that’s what I’ve learned from what they have taught me” (RN02). This put staff nurses at risk for “bad outcomes” (RN02). A day shift staff nurse with 1 year experience described why learning through experience was so important. “This position is a lot of learn on the job versus school, school prepares you to be a nurse, but it doesn’t prepare you for real life experiences and I will always be learning” (RN10). Staff nurses learned from experience especially when it was supported by education or “making sure I have all the necessary information” and “reinforcement” (RN10). Fundamental barriers to learning started in nursing school by “not sharing wrong answers or mistakes” to facilitate learning because “if you never got corrected how do you know, how will you fix that for the next time? The only reason I knew that I wasn’t doing anything wrong was because no one pulled me into their office so it's very hard to learn from your mistakes” (RN02).

Staff nurses debriefed and reflected as methods to learn from experience. Debriefing in real time or as close to real time as possible created learning by “going through this chart, their oxygen needs went from X to Y what do we do differently, what did you do, nothing, now it’s the next morning they are on 12 liters on the oxymask, what happened” (RN02). Reflection helped new nurses build nursing judgment because after they have had a few experiences “a new nurse should be able to reflect back and say I have seen this before I see where this is going and what to do to mitigate harm to the patient” (RN02). Time and stress prevented learning from experience especially when helping newer staff nurses “build those foundational skills and critical thinking to foster and develop those skills in them” (RN02). A charge nurse, out of
adrenaline, kicked a new nurse out of a code because “during a code there’s no time so we go for quick fixes as opposed to taking time to build foundational knowledge. We don’t debrief or replay those scenarios close enough real-time where people can actually reflect” (RN02).

**Learning from Mistakes**

The subtheme learning from mistakes is defined as a process in which nurse leaders provided timely, nonjudgmental, nonpunitive follow through and shared learnings from reported safety events. Sharing safety events helped staff nurses learn from mistakes. This learning began when nurses’ had a willingness to report safety incidents. Staff nurses reported safety incidents through the incident reporting system or at huddles. Staff nurses needed to believe their nurse leaders “have our backs” and “fight for us a lot” to encourage reporting (RN09). “If you feel comfortable to voice a concern around here it gets somewhere” (RN13). However, fear of repercussions was a perception that a staff nurse would get in trouble based on “incidental stories heard on the unit or in nursing school” (RN09). A day shift staff nurse experienced fear of incident reporting because:

> I don’t know why everyone thinks that they're going to get in trouble. I know that is a big thing with nursing. I don't know if it comes from years back where you did something wrong you were punished or if it's like the horror stories that you hear in nursing school of nurses who hang the wrong thing and then they kill somebody and then they are on trial and losing their license. I don’t know if it's like a combination of all of that or if it's just the being responsible for somebody else’s life probably plays a big role into it. (RN09)

Staff nurses, as previously reported, needed to maintain relationships with their colleagues to support working together as a team. Staff nurses feared jeopardizing those relationships because of “repercussions for reporting somebody or having those things come back on me.”

A focus on fixing the process and not blaming the person facilitated learning, especially because “everyone is doing their best to provide safe care” (RN02). Not blaming occurred by
“listening, making sure it’s not going to get written down, it’s safe, it’s confidential, and she’s going to take care of it and get back to me” (RN03). When staff nurses were not afraid they gained “confidence to be able to talk about patient safety with anyone” and “empowerment to feel like you can bring things forward without repercussion” (RN04). Root cause analysis focused on fixing the process, however it was also perceived as punitive. A day shift staff nurse had a positive experience being part of a root cause analysis after she made a mistake:

> When I was fairly new I had a patient on a PCA. I programmed the pump incorrectly. There was another nurse there that verified the pump with me and signed off on it. It went over night and I came in the next day I found out that it was programmed incorrectly and the patient’s respirations were down to like six and she needed Narcan and I was like oh my God I almost killed her. It scared the crap out of me and I beat myself up about it but this organization didn’t. This organization made me feel like they were going after the process and the equipment. You can have accidents, we’re all humans, humans make accidents, and to not feel like you’re being targeted or discriminated against for making a mistake. They changed the settings on the PCA and we do PCA vitals every four hours now, licensed staff are the only ones who can do that because they had found from that that CNAs were going in and taking vitals and just charting them and walking away and not even really noticing the trends sooner. So there’s some good things that came of it. (RN09)

However, RN08, a day shift charge nurse, was involved in a root cause analysis that she felt was “punitive” because she was “new” at the time even though she “learned that you need to look at patient histories” and the organization “improved the double verification process for PCA pumps.” Positive learning experiences from reporting also facilitated continued reporting.

“When you put in an incident it’s a positive learning experience. Nobody feels like they can't put incident reports in or feels like I’m going to get fired. If they make a mistake they realize that it’s more of a learning thing” (RN11).

After a staff nurse reported safety concerns, they needed leaders to listen, do something about it, and share learnings with the whole floor as loop closure and feedback. A day shift staff nurse described “good feedback from our leaders as to what we should be doing differently,
certain incident reports, make sure not to call out individuals but make sure those things aren’t reoccurring, bring those forward so that all staff is aware” (RN01). A “friendly” approach to feedback facilitated a positive feedback experience (RN14). Staff nurses needed to be “willing to accept feedback to improve” and described developing “thick skin to accept feedback and experience” to learn (RN01). RN06 needed leaders to provide “anonymous” feedback because she felt “everyone just slides right by.” However, RN10 felt staff nurses needed to have follow up conversations with each other “to ensure safety.”

Leaders didn’t always follow up. For example, after a staff nurse entered a safety incident, “I don't really know what becomes of them after we put them in [laughing], I don’t know what anyone does about anything, especially if it’s behavior-wise with a doctor” (RN08). Lack of leader follow up was “discouraging” and after time with no follow up you stopped reporting because “I would identify safety things and nothing was done and there was no loop closure so I didn’t feel like I was being heard so after a while what ends up happening is you stop saying stuff [looking down and shaking head]” (RN02).

We Don’t Always Learn from Audits

The subtheme we don’t always learn from audits is defined as a process in which nurse leaders have charge nurses or clinical leads audit nursing interventions to identify staff nurse compliance with nursing interventions to facilitate learning and compliance. Experienced staff nurses did not find value in audits. Staff nurses didn’t believe nurse leaders followed through with audits to facilitate learning and compliance.

Nurse managers had staff nurses and charge nurses complete audits for learning. Audits helped because “then the manager can follow up with the staff nurse so it is not a nurse on nurse thing (RN01).” A day shift charge nurse described how charge nurses used audits to facilitate
learning. “If there's any themes we are seeing a lot of, for example a lot of missing I’s & O’s documented, going back and saying this is what happened, this is the result, that makes people think about things in a different perspective” (RN02). “Talking through audits as a conversation helped make sure the behavior was repeated and became second nature” (RN14). Two staff nurses, with 1 year or less of experience, found value in audits because the charge nurse would double check and make sure they were doing what they were supposed to and gave feedback to improve. Audits also helped hold staff nurses accountable because “it keeps everyone accountable for you didn’t do it, what can we do to make this better or why are we not doing it, what are the barriers of doing it” (RN13). However, charge nurses identified inaccuracy of how the audits were being completed because they “can see things clearly haven’t been addressed” (RN07). Charge nurses witnessed staff nurses being more focused on completing the audit than using it as a learning tool or understanding why the intervention was so important.

I remember as a new nurse they would get preoccupied with things that were being audited. So what people would be concerned about was whether there was stat locks on IV’s and I never really understood it because I wasn’t worried about that I'm not sure why you are. Now looking back the ultimate goal of that was to prevent that IV from moving and to have it in place and to keep it stabilized but if you would have asked anyone I don't think any of the nurses could've told you why they were doing it. (RN02)

Nurse leaders didn’t doing anything with audits preventing staff nurses from learning because “many nurse leaders struggle holding nurses accountable” (RN04). For example, “like today the missing ID bands I talked about. That is very dangerous and it frequently comes up on our audits, but why does it keep happening? People need to be held accountable” (RN04).

Summary Staff Nurse Results

In summary, staff nurses’ experiences with safety culture were described in six themes. Staff nurses needed time to “know my patient to keep them safe.” “Using my gut” and nursing interventions were applied after knowing the patient to keep patients safe. They leaned on others
or escalated to get “extra eyes on the patient” when they weren’t getting what they needed for their patient. They didn’t always have what they needed to provide safe care. They needed the organization to prioritize patient safety. Finally, learning: “Have our backs”, they needed time to teach and learn in a nonpunitive environment.

**Nurse Leader Results**

The following results answered the research question describing nurse leader safety culture experiences within medical-surgical units. The nurse leader experience is described in six themes including: making sure staff nurses are keeping patients safe, making sure nursing interventions are in place, making sure staff nurses have what they need to provide safe care, “I expect staff nurses to stop things or escalate when they feel uncomfortable”, organization prioritizes patient safety, and making sure staff nurses are learning and growing. Subthemes are presented within each theme to support rich description. Within each theme, subthemes are bolded and italicized (Figure 7).

<table>
<thead>
<tr>
<th>Theme</th>
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| Making sure staff nurses are keeping patients safe   | Setting expectations and holding staff nurses accountable for gathering information from and about their patients and ensuring a collaborative plan to proactively keep patients safe. | • Knowing the Patient by Reviewing the EMR  
• RSR to Know the Patient and “Catch Things Upstream”  
• Making Sure there is a Clear Plan to Keep the Patient Safe |
| Making sure staff nurses have nursing interventions in place | Setting expectations and holding staff nurses accountable for conducting assessments to guide nursing interventions and implementing the nursing interventions to keep patients safe | • Nursing Interventions “For Nurses to Follow” to Keep Patients Safe  
• Setting Expectations and Holding Staff Nurses Accountable  
• Alarms, Warnings, Checklists, and Safety Checks to Help Busy Nurses  
• Workaround to Keep Patients Safe |
| “I expect staff nurses to stop things or escalate when they feel uncomfortable” | Nurse leader expectations that staff nurses stop anyone from doing anything unsafe immediately and reach out to others with more expertise when they are in an unfamiliar situation or when the patient’s condition warrants additional immediate support | • I Expect Direct Conversations About Safety  
• Get the Right Eyes on the Patient |
| Making sure staff nurses have what they need to provide safe care | The role of the nurse leader in securing appropriate resources to keep staff nurses at the bedside while cultivating collaborative relationships to ensure safe patient care. | • Balancing Financially Responsible Staffing with Patient Needs is Challenging  
• Supplies and Working Equipment Aren’t Always Available to Keep Staff Nurses at the bedside  
• The Whole Team Doesn’t Always Work Together to Keep the Patients Safe  
• We Don’t Have Great Relationships With our Physicians |
| Organization prioritizes patient safety               | A shared understanding by all departments and members of the healthcare team that patient safety is the overarching priority supported and reinforced by communicating, listening, and responding | • Establishing Goals and Providing Transparency  
• Communicate, Listen to Understand, and Respond to Staff Nurse Concerns |
| Making sure staff nurses are learning and growing     | A structure and process to support learning from internal foci on patient safety and through formal programs to develop skills of the staff nurse. | • Nonpunitive Response and Follow Through  
• Support Staff Nurse Knowledge and Education |

Figure 7. Nurse Leader Results
Making Sure Staff Nurses are Keeping Patients Safe

Nurse leaders made sure staff nurses were keeping patients safe (n = 10). The theme making sure staff nurses are keeping patients safe is defined as setting expectations and holding staff nurses accountable for gathering information from and about their patients and ensuring a collaborative plan to proactively keep patients safe. Nurse leaders’ subthemes were described as knowing the patient by reviewing the EMR, BSR to know the patient and “catch things upstream”, and making sure there is a clear plan to keep patients safe.

Knowing the Patient by Reviewing the EMR

The subtheme knowing the patient by reviewing the EMR is defined as the process staff nurses used to make sure patients were safe by gathering information about the patient by reviewing the EMR. “We have access to outside [patient] records which helps with patient safety” (RNL01). Even though there was “more compatibility with the way computer systems speak” (RNL05), the EMR to know the patient had challenges. The EMR wasn’t always working properly and it slowed the nurses down. There’s a lot of information in the EMR, however it required the staff nurse to do “a lot of digging around to find information” (RNL01), “information doesn’t flow from the clinics” (RNL05), and computers were slow. Information not flowing from the clinic to the hospital posed safety issues. “A patient had implanted an intrathecal medication that was administering and the nurse didn't know that the patient even had one and there's nothing on the EMR [from the clinic] that would help show that they had this medication” (RNL05).

Inefficiencies in the EMR and documentation burden took the staff nurses’ focus away from the patient. There was a “plethora of patient information” in the EMR, however staff
nurses were “so focused on documenting at the computer and not focused on the patient” (RNL10).

**BSR to Know the Patient and “Catch Things Upstream”**

The subtheme making sure patients were safe required knowing the patient through BSR. This is defined as a handoff process between staff nurses and the patient to support patient involvement in the plan of care while allowing the staff nurse to conduct a baseline assessment of the patient and environment to catch care that was missed to prevent an error. A nurse leader with 2 years experience as a nurse leader described why BSR was so important:

It makes a big difference because you [staff nurse] can look in a computer and do bedside handover outside, they [the patient] can look like junk on the computer and then you can go and it’s like wow they’re walking independent, they are doing great or it could be the opposite they look great in the computer and then after your handover is done you know not at the bedside you go in and they’re not looking good. So doing bedside handover lets you check the environment, there’s not spilled water on the floor, they have their bed arms on, the white board is updated because that is what other people who answer our call lights would go to, can the patient have water, can they walk, what are they here for. So making sure the whiteboards are checked and then checking the medications that are running, that’s bedside handover because you can’t do that at the computer. Is it the right medication, is it actually connected to the patient, and is it running what it’s supposed to. So you are doing all your double verifications on the patient which is all safety things. They are not going to fall, they are getting the right meds and they know the plan of care. If the patient knows the plan of care with the two nurses and what is expected on the next shift they’re [the patient] not gonna try to get up out of bed because you just said you can’t get out of bed on your own but you walked with one assist, you just told the nurse that so I think it prevents a lot of errors moving forward and helps with safety. (RNL07)

BSR caught things upstream before they could cause patient harm. “When we receive a patient we have expectations that things are done by the book and if they are not we stop it right there at handover, try to address it” (RNL02). For example, “a patient didn’t have a DNR band on and performing our handover at the bedside to standard and catching it right away and say how do we not miss a step to catch it upstream” (RNL05). Not conducting BSR could have posed challenges for the staff nurse because “if you don’t do handover and the IV rate is wrong,
you have an infiltrated IV the previous nurse maybe was part of and now you can’t even ask those questions and you’ve got to try to explain the situation” (RNL05).

Nurse leaders described BSR as being conducted inconsistently and not to standard. Reasons staff nurses didn’t conduct BSR included staff nurses were busy and didn’t have time for a needy patient, they didn’t understand the why or the benefit, not wanting to wake up the patient, staff nurses didn’t like change, or were not comfortable in front of the patient. Staff nurses not comfortable doing BSR in front of the patient was because they lacked competence or confidence they wouldn’t know the answers. “I think a lot of it is honestly confidence. I think they think if I'm saying this in front of the patient I don't want to be corrected or I don't want to use my notes in front of the patient” (RNL09). Time pressure to move patients quickly from the post-anesthesia care unit to the floor to keep patient flow moving was a barrier because “if the room is not clean they sit there [in hall] and something can happen to them while in the hall and you miss handover because they are rushing to get out of here” (RN03).

Nurse leaders ensured BSR was conducted by holding staff nurses accountable and sharing stories to help staff nurses understand the why, or benefit, because staff nurses learn through experience. Sharing stories helped staff nurses because “we explain it, audit it, but they [staff nurse] haven’t walked into a room and the patient was dead or their IV isn’t hooked up. We can preach and say it’s important, but until they’ve had an event they don’t believe it” (RNL07). RNL01 shared stories to help staff nurses understand the importance of BSR:

A big thing too is helping people see the why. One example would be handover. Recently the rest of the inpatient managers have really wanted to make this a clear expectation which I’m totally onboard with and they sent out an email with all the whys [giggling] about why we should do this to share with our team which was great but like I said we were already there so I was just previewing what they had sent out and the bullets are about expectations and you will be placed in corrective action and came down that path and less time spent on could we talk about a story where somebody didn’t do handover and what happened to the patient. I remember a story where a nurse didn't do
Making Sure there is a Clear Plan to Keep the Patient Safe

Nurse leaders made sure staff nurses knew their patients through the EMR. They then made sure staff nurses were conducting BSR to know their patient and “catch things upstream.” Then nurse leaders made sure there was a clear plan to keep the patient safe. The subtheme making sure there is a clear plan to keep the patient safe is defined as a collaborative plan of care with a clear understanding of that plan between the patient, nurse, and all members of the healthcare team to prevent harm to the patient. The safest care was described by a nurse leader with 10 years of leadership experience:

I feel like the best is when the patient is admitted there is collaborative, effective communication with all care team members from the provider to care management to nursing, pharmacy, the patient to understand really what is the plan of care along with expected time to stay in the hospital, so everybody can do their work with the patient to accomplish that. There's a plan of care to also keep the patient safe whether it's preventing falls, preventing any kind of harm from an SSI [surgical site infection], VTE [venous thromboembolism], CAUTI [catheter-associated urinary tract infection], CLABSI [central line-associated bloodstream infection]. To make sure that we have the best standards in place to prevent that from that patient. (RNL04)

These were the days RNL01 didn’t worry about patient safety.

It’s when we have the hospitalist team doing rounding and conversations are [happening] with input from the doctor, input from the nurse, this is what we want to do, these are the expected outcomes. I know there’s a clear plan. I know the nurse understands the plan and knows what outcomes to look for. (RNL01)

A safe day for RNL02 was when “the nurse and provider created a clear plan, this is what we are going to do, the nurse and the patient understood the plan. At handover the nurse, patient, and oncoming nurse, knew where we were and what was happening.” Everyone involved in the plan also included “security, physician therapy, other disciplines really pulling together and having a really good plan” to keep the patient safe (RNL01). A clear plan included following orders and
policies. Lack of relationships with physicians, unclear physician orders, and rounds on a need to know basis only made having a collaborative plan challenging. The multidisciplinary team was also not open to collaborating. For example, “it requires close collaboration using evidence-based care and I think there's a lot of opinions among the healthcare team along the entire way and that's where our barriers come into play” (RNL10). Staff nurses being busy and not having time made collaborative multi-disciplinary rounds challenging as it is not easy for a staff nurse to” pull everyone together with everyone’s schedules” (RNL05).

Staff nurses reviewed the EMR to know their patients. Nurses leaders made sure staff nurses conducted BSR to know their patients and “catch things upstream.” Then they made sure staff nurses had a clear plan to keep the patient safe. Once there was a plan, nurse leaders made sure staff nurses implemented nursing interventions to keep the patient safe.

**Making Sure Nursing Interventions are in Place**

Nurse leaders made sure nursing interventions were in place to keep patients safe (n = 10). The theme making sure nursing interventions are in place is defined as setting expectations and holding staff nurses accountable for conducting assessments to guide nursing interventions and implementing the nursing interventions to keep patients safe. Nurse leaders’ subthemes were described as nursing interventions “for nurses to follow”, setting expectations and holding staff nurses accountable for following nursing interventions, alarms, warnings, checklists, and safety checks, and workarounds to keep patients safe.

**Nursing Interventions “for Nurses to Follow”**

Nursing interventions “for nurses to follow” is defined as risk assessments, policies, and protocols developed for staff nurses to follow to guide safe patient care. Nurse leaders referenced the board of nursing and professional organizations to develop nursing interventions
that were evidence-based and followed nursing standards of care. For example, to understand what “nursing practice should look like we’re beginning to look at our professional organizations like NLN or med-surg nursing organizations to really understand what should nursing practice be” (RNL04).

Risk assessments were nursing interventions that identified risk for falls, then based on nursing judgment and the risk screen score directed nursing interventions. Risk assessments were “fall risk assessments and VTE assessments that nurses completed to determine a risk score” (RNL03). Nursing judgment supplemented patient assessments to ensure appropriate interventions were placed based on that individual patient’s needs. Nurse leaders then made sure patients were safe “by looking at the score and going back to understand if we [staff nurses] are meeting all the interventions required” (RNL01). Interventions based on risk assessment scores were “gait belts, walkers, and safe shoes for the patient at the bedside” (RNL04) to keep the patient safe if they had a high fall risk score.

Policies and protocols outlined nursing interventions to keep patients safe. Policies were a way to standardize safe care by developing evidence-based standards of care for staff nurses to follow. Policies referenced were the falls prevention policy, IV medication policy, medication administration policy, and escalation policy. Policies, such as the medication administration policy, provided five rights to “make sure we’re giving the right medication, right dose, and the medication is truly needed and ordered right” (RNL07). Protocols, or order sets, were “clear physicians orders” a staff nurse or physician could implement for patient conditions such as “sepsis, an MI, required chemotherapy, a foley catheter, or central line” (RNL04). Protocols provided direction to staff nurses. For example, if a “patient fires for sepsis” the staff nurse “called a RRT” (RNL08) to get resources at the bedside to make sure the patient received the
standard of care. Protocols provided staff nurses with “standards to do your foley care or someone could get a CAUTI, following the hypothermia protocol or someone can have an SSI [surgical site infection], doing what’s best for patients” (RNL07).

Although nursing interventions guided safe patient care, nurse leaders needed staff nurses to anticipate what might happen to a patient by understanding patient specific needs and interventions to individualize and proactively provide safe care using nursing judgment. “It's not they’re a cardiac cath patient, I’m going to do the same thing for every cardiac cath patient, but what might happen to this patient. That’s what a good day looks like. They’re anticipating things that might happen” (RNL03).

Building relationships with patients can compensate for gaps in critical thinking, especially with novice nurses. “A novice nurse can compensate for gaps in critical thinking with the relationship they build with that patient because they trust you and they believe in you because you are kind and listening to them” (RNL04). She also described how experienced nurses could benefit from building relationships with patients because “you could be an excellent nurse but they [the patient] think you suck because you won’t talk to them and they don’t trust you and you’re not communicating effectively with them” (RNL04).

Policies and protocols assisted staff nurse and nurse leaders to “prove to the doctor it’s the right thing to do.” For example,

I feel like the IV policy is more detailed and it’s definitely a reference that my nursing team utilizes day in and day out as a great reference and then they can escalate when they feel uncomfortable giving an IV medication. For example, recently there was another unit that wanted to transfer a patient who was on a nitro drip for high blood pressures that needed to be titrated. Currently our team is not competent in that nor are we staffed to take care of that acuity to make sure that we are monitoring that patient safely. So they were able to use that policy and stop it right there and try to figure out a different plan to keep that patient safe along with being respectful towards throughput at the organization. (RNL02)
However, not all medications were part of the policy, therefore, because the policy was “grey” the unit was taking patients with titratable medications not appropriate for the floor (RNL03). This identified a discrepancy between nurse leaders on whether policies were either too grey and not prescriptive enough or too black and white not allowing for nursing judgment. For example, nursing judgment was needed to appropriately apply policies based on the situation. “You need to look at the risks and benefits around the patient. If this patient is going to fall and that’s a bigger risk than having a family member [sit with patient] staff nurses need to do what is safest for the patient” (RNL10). However, policies and protocols were so “black and white, they numb people to not think. You [staff nurse] can apply evidence-based care that might not be exactly what a policy says, but they are written so stringent that it doesn’t allow you to think and provide individualized care” (RNL10).

Policies were too complicated, confusing, and unrealistic and ever-changing. Policies were also not easy to find, outdated, and interpreted differently. Policies weren’t always communicated to staff nurses or staff nurses were not educated on policy changes. RNL03 communicated differently and changed her approach when she became aware staff nurses were unaware of policies or policy changes.

I think education was not the best form to make sure that people understood so what we’ve typically done is a policy is pushed out and they need to read the policy. I know the fall risk one how that was rolled out was not helpful. So they took an e-learning that based on your answer it took you to a different way, so each nurse could have gotten a different pathway that they answered so it doesn’t help them when they just have to read a policy. We need critical thinking situations. Give them a patient and what should be in place. And what I did is actually sat down with the nurses and talk through some of those policies and then I’ve been printing a policy every two weeks to go through on the unit that are the high-risk ones that a lot of people don’t know or understand. (RNL03)

Staff nurses not using or following policies “for whatever reason is a risk to patient safety” (RNL05).
So patient is septic, we didn’t use the sepsis order set [protocol], now as the nurse I’ve got to worry about I know they [patient] are going to need this, this, and this because we didn’t use that order set now I have to watch to make sure if this happens that I’m going to have to call back and get this in place. If their lactic is greater than 4 I’m going to have to call back and get a second lactate ordered instead of being able to use the order set and progress the patient through those phases of care. (RNL01)

Protocols weren’t always clear, however “pharmacists partnered with us [staff nurse] to help us catch those [unclear orders] before they reach the patient” (RNL04). Sometimes, protocols weren’t available. For example, a patient who was very angry and very aggressive, “we didn’t have good protocols for that situation, the patient ended up pushing one of the staff members, then a staff member got on the elevator with the patient, thankfully nothing happened, but my heart sunk” (RNL01).

Policies should be developed with staff nurse input and “anybody who is going to participate in that policy should at least review, or put their eyes on it, before giving it to somebody to follow, like a fall policy that inhibits critical thinking, it’s like 15 pages and I don’t get it” (RNL10). When policies were developed without staff nurse input extra work that didn’t benefit the patient was created. For example, a nurse leader described a “22-step process for hanging medications” with a carrier fluid to ensure “every bit of medication” was administered:

We make things more complicated than they need to be. It takes away time from things that might be more important [laughing]. If they have a patient on multiple antibiotics it takes a long time with the carrier fluid, then you got to label all your tubing, put all your green caps on, changing administration sets every couple hours, and every time you disconnect it’s 24 hours the tubing is only good for. If you think about the process versus the benefit of not losing how many cc’s are in there when you're not using the carrier fluid. What’s the risk for just putting the bag on to get it through? Then you're orienting a new nurse and you’re spending day after day trying to get them used to figuring out how to hang antibiotics versus talking about critical thinking and SBAR [situation, background, assessment, recommendation] and creating the plan of care that's effective and specific to this patient to progressing their care and building a relationship with their patient because they’re stuck focusing on how to hang their antibiotic. It takes them 15 minutes to hang an antibiotic and then you have a patient that is on two or three different
things and you are in there like every other hour doing that. Is that time valuable [laughing and shrugging shoulders]. (RNL04)

Committees provided staff nurses an opportunity to provide input into nursing interventions. “One CAUTI team really worked on setting the goals, investigating different products, different interventions, different tools we could use to decrease the risk of infection” (RNL01). However, staff nurses weren’t always heard on committees or their ideas got shot down or they were criticized. For example, “so we have said we want front-line nurses on councils and in project groups yet they are the severe minority and they are not listened to” (RNL08). There were also “not enough staff nurses or the right people at the table making decisions”, and “no training of the staff on the committees how to use evidence-based practice or training in working as a group and group conflict” (RNL08). RNL05 had a staff nurse that was frustrated because of lack of frontline representation on councils, “they are the only one there for a seven hospital system” so the people making the decisions “are doing the best they can because they have to move forward with the work.” For example, “I would have a hard time believing anyone is following the fall policy. There’s things in there not available to nurses. I don’t even know where they would find a helmet or yellow gowns, but that’s in our policy [laughing]” (RNL04). Lack of representation was because nurse leaders didn’t “have the ability to send a nurse and make that a priority” and “you have to have a nurse that cares and wants to come in on their day off” (RNL04). When nursing interventions came out that staff nurses didn’t believe in, it caused “distrust and disengagement” with leadership and was viewed as “a negative” (RNL08).

“Engaged” staff nurses facilitated their involvement in “doing the improvements” and developing policies and protocols (RNL02). Departments working together also facilitated developing nursing interventions that kept patients safe. “We built a relationship with PACU
and the surgical floor that helped dramatically get the patient through phases of care safely” (RNL02).

*Setting Expectations and Holding Staff Nurses Accountable for Following Nursing Interventions*

Once nursing interventions were designed with staff nurse input, nurse leaders set expectations and held staff nurses accountable for having nursing interventions in place. The subtheme setting expectations and holding staff nurses accountable for following nursing interventions is defined as a process nurse leaders employed to make sure staff nurses understood expectations through consistent, clear communication from nurse leaders followed by auditing, rounding, and feedback to ensure learning and compliance. “You know as a leader I am responsible to hold my team accountable” (RNL06). A nurse leader was excited when all the nurse leaders finally agreed to hold staff nurses accountable. “Finally we all agreed between the hospital leadership we are really going to hold people accountable. So you can't turn your head, we’ve got to hold people accountable [slamming fist in hand]” (RNL06).

Nurse leaders believed that staff nurses did not implement nursing interventions because they didn’t know they were supposed to do something and didn’t understand it was an expectation and the rationale behind the expectation. Nurse leaders stated they “didn’t always share stories to help staff nurses understand the why” (RNL01), instead they set expectations and moved right to a punitive response. For example, RNL01 disagreed and was disappointed with the approach to improving compliance with BSR by communicating to staff nurses “you have to do it and if you don’t I’m going to write you up approach versus getting people to see the value and rationale of why they would want to do it.” Nurse leaders had expectations that handover was to be “done by the book” (RNL06) and asked staff nurses to put in an electronic safety event
to help improve the process. The nurse leader would then follow up with the person who didn’t conduct BSR and address it in the moment. A transparent incident reporting system helped with accountability and follow up.

A nurse leader with 30 years experience as a nurse leader took a direct, honest approach to address accountability and educate in the moment. She had a nurse who ran in a room to help, there were 2 other nurses in the room and “he went racing in the room and tripped on a cot and sheet on the floor but didn’t take time to move them so no one else got hurt” (RNL06). After the situation she asked him if he really needed to run into the room and why he didn’t take the time to make the room safe “so the patient or someone else wouldn’t get hurt” (RNL06). RNL10 stated people didn’t follow certain standards or policies they were supposed to follow and “they just choose not to and the organization has not taken a stance on that and it’s hard when people don’t follow the rules and you may be seen as negative when you hold people accountable.” Therefore, consistent messaging by leaders was so important because “if managers get information out and then the telephone line changes the message, somebody is doing something that they shouldn’t be doing because they think they should be” (RNL06).

Nurse leaders had staff nurses and clinical leads conduct audits to make sure nursing interventions were in place and to support “learning and growing.” “There’s audits we do that we follow up to make sure that the safety measures have been put in place and the protocols are being followed and then we talk about it as a team” (RNL08). Audits, “although they are retrospective, help build knowledge.” For example, “Our leads do most of our audits, if there was a miss they follow up with the staff so at least we know follow up is being done so we get ahead of it [the misses] at some point with knowledge” (RNL09). For example, leads “audit lines, tubes, high-risk VTE, high risk falls. They pull up the chart, look at the charting [to
identify evidence-based bundled intervention compliance]. So they ask the questions [audit] and have them [staff nurses] answer and use the audit to huddle with the staff” (RNL03). They make sure “sequentials are in place for high risk VTE” (RNL03). RNL06 described frustration with the ongoing lack of staff nurse compliance with nursing interventions. After tracking and coaching “for so long” staff nurses “veer away from standards and have lost sight of, it’s about the patient, because they are so overwhelmed and overworked” and nurse leaders are “getting to their heads and not their hearts.”

Nurse leaders rounding and on the floor facilitated setting expectations and holding staff nurses accountable. Every morning RNL01 completed leadership rounds:

I check with patients but also check in with my team to see how they’re doing, if there’s any support I can do. I touch base with the clinical lead right away in the morning, complete a stat sheet to understand who they’re worried about, safety, quality issues that need real time follow up. We complete our incident reports with real time follow up as much as we can. If there’s a concern, pulling the right people to help support that whether it’s pharmacy or providers or escalating chronic trends of poor practice. I monitor for on a daily basis. (RNL01)

When RNL06 walked on the unit she could see “somebody doing something you think, not good, they walk in to answer a call light and there’s clearly isolation signs.” Nurse leaders had “an EPIC list of patients so we can see our high risk VTE, CAUTI, CLABSI to help focus where we’re going to round” (RNL03). A nurse leader rounded on her team “to make sure they understand, tell me about one of your patients, just understanding their process, thinking, so we can help ensure they have the resources in place they need” (RNL05). Nurse leaders on the floor changed staff nurse mindsets.

A provider ordered a medication indicating it was for renal protection, however if you truly looked at it, it was for blood pressure. So kind of just talking through that with that nurse, why do you really think we started this medication? Do you think this was appropriate for this patient to stay on the floor? Just sitting down and giving them a different perspective helps them. I touch base with the nurses every morning, which are
your high risk, why are they high risk, what can we do for them. We had a patient yesterday who I called the charge nurse from the ICU to come lay eyes on. (RNL03)

Staff nurses were perceived as not implementing nursing interventions because they were too busy and forget. Not having enough time and being too busy emerged as the most frequent barrier to implementing nursing interventions. Alarms, warnings, checklists, checks, and safety checks facilitated busy staff nurses in initiating nursing interventions and keeping patients safe.

**Alarms, Warnings, Checklists, and Safety Checks to Help Busy Nurses**

The subtheme alarms, warnings, checklists, and safety checks is defined as visual or audible cues or processes that alert the staff nurse when there is an increased patient risk, guide evidence-based decision making, and decrease the risk of errors from occurring.

Alarms and warnings alerted staff nurses to subtle change and patient risks of harm. Alarms included bed alarms, chair alarms, and call lights. Warnings were alerts from the computer of subtle changes in a patient’s condition to “trigger the nurse of patient deterioration through the Rothman” (RNL09). However, better technology was believed to be available. For example, when the existing call light system alarmed “staff nurse didn’t know which room to go to” because “you [staff nurse] don’t know if call light A is needing Kleenex or is ready to jump out of bed because they are having so much pain or need something where they may be at risk for falling” (RNL01). This caused a lot of “manpower” because the staff nurse had to go to the room to “seek to understand what the patient needs” (RNL01).

Everyone was expected to respond to alarms but there were times when alarms went unanswered. Not responding to alarms would require “a change in culture to say there’s an alarm going off everyone answer it” (RNL09). The current culture created was “PT, OT, pharmacists, care managers, anyone sitting right outside a room and alarms going off and they’re
not responding” (RNL09). Nurse leaders witnessed staff nurses not responding to alarms because they were too busy or on the phone with a physician. Although nurse leaders described no reasonable barrier for not answering alarms they identified “socialization takes priority over patient care” (RNL10) and “they [staff nurse] spaced out and didn’t hear it. I don’t know how they space out but they do” (RNL08).

Checklists and safety checks facilitated nursing interventions. For example, “we have bundles [checklists] that identify the standard of care” that staff nurses followed to “meet the standards of care to provide quality care to these patients and it gives specific things to carry out” (RNL04). Checklists helped staff nurses assure they were doing the right thing. Checks and double checks “stop us from doing it or makes us double check if there's some discrepancy” (RNL02). Barcode scanning for medication administration, IV pumps that were programmed for safe medication administration, and physician order entry were some of the technology the organization provided to facilitate safe care. However, when the equipment wasn’t working right staff nurses were “monkeying around [laughing] and you’ve got a med and all of a sudden the barcode is not working, so you’re working around that and we can’t stop practicing so you create those workarounds” (RNL04).

Workarounds to Keep Patients Safe

The subtheme workarounds to keep patients safe is defined as a decision making process staff nurses employed to eliminate or not follow all steps as directed within an established policy or protocol. Staff nurses being busy and not having time also contributed to staff nurses creating workarounds. Checklists and safety checks added to staff nurses not having time and being too busy as did slow computers and staff nurse documentation burden. Staff nurses “socializing” (RNL10) or “searching for equipment because it’s broken or not working” (RNL04) also
contributed to staff nurse not having time and being too busy. Not having time and being busy contributed to staff nurses not completing assessments on time and “workarounds.”

Workarounds as a response to real or perceived time pressure were necessary to “make sure everything we do kept patients safe” by “keeping the patient at the center of everything we do” (RNL04). Workarounds occurred because staff nurses thought it was quicker or easier because they were busy and had no time, staff nurses thought they were doing the right thing, lack of staff nurse knowledge, and lack of accountability. For example, “the medication process has really clearly identified steps, but if I know I can do it quicker by eliminating a step oh yeah absolutely they will do that” (RNL06). The policies created barriers for doing the right thing to keep the patient safe, therefore supporting workarounds.

The nurse had to give this medication, it was a hospice patient who was in a lot of pain and needed morphine. She would scan it, she did her five rights, and it gave her an error and she called me to just override it. I was like why are we overriding something that’s in place because something is not right and she tried to override it and yup it’s not letting me override. I said so something is actually wrong with this. So her being busy, she got an alert, read it, and still felt it was okay and then was just going to override it. When we are rushed people tend to just OK this is the quickest thing. If you're busy and just want to get it done and the patient needs it you do it. I mean it’s not right by any means but I think that some people do and it’s a safety issue, it could have been the wrong med or the wrong route. (RNL05)

Nurse leaders made sure staff nurses were keeping patients safe. They also made sure nursing interventions were in place to keep patients safe. Then they described making sure staff nurses had what they needed to provide safe care.

Making Sure Staff Nurses Have What They Need to Provide Safe Care

The theme making sure staff nurses have what they need to provide safe care is defined as the role of the nurse leader in securing appropriate resources to keep staff nurses at the bedside while cultivating collaborative relationships to ensure safe patient care (n = 10). Nurse leaders’ subthemes were described as balancing financially responsible staffing and patient
needs is challenging, supplies and working equipment aren’t always available to keep staff nurses at the bedside, the whole team doesn’t always work together, and we don’t have great relationships with our physicians. Each of these posed challenges to making sure patients were safe.

**Balancing Financially Responsible Staffing with Patient Needs is Challenging**

Making sure staff nurses had what they needed to provide safe care was financially responsible staffing while being able to meet the needs of the patient, however this was challenging for nurse leaders. This subtheme is defined as the process nurse leaders used to develop staffing models that supported safe patient care within their staffing budgets while managing safe, and efficient patient placement. “Certainly we have targets to meet to be financially responsible to our community so balancing that with the needs of the patients can be challenging” (RNL01). However, inadequate staffing was palpable when you walked on the unit. “The call lights are going off, people are running around. You talk to them, how was your day? I’m busy. What does that mean? Some of those are those trigger words to say I'm going to keep an extra eye” (RNL05). Having a good mix of staff nurses contributed to the safest experience and was “not a right number because sometimes our algorithm is just right, sometimes it’s not enough, but the right amount of people to the patient acuity and mix” (RNL04). However, one nurse leader struggled with staff nurse perception of unsafe staffing because she felt “the ratios really are appropriate” (RNL10).

Not having the right staffing mix and staff resources was the most unsafe safety culture experience and a risk to patient safety because staff nurses weren’t able to implement their interventions or perform basic care. Nurse leaders were challenged with balancing meeting the health needs of the community and safely staffing.
If we don't have staff and there’s patients that need help you are in a bind, what do you do because the organization is here to serve the community but if there is not nurses to take care of them, what do we do? In the past it’s been just take more patients and that makes a nurse feel like it's unsafe. We take 4 or 5 if we need to take a sixth that's okay but if there is no nurses do we have to take seven, eight, where do you stop? (RNL07)

Not having the right staffing mix made staffing challenging. Skill mix barriers were “whether you have more new nurses on who are less comfortable, take longer, are less autonomous, and less confident” (RNL04). “Quite often you walk on and you’ve got all agency on other than one core staff member or you've got all nurses who are six months or less of experience so that can be a big factor too” (RNL09). The right mix was “the experience level of the nurse, the ratios, knowledge, education, orientation, the emotional and mental status of the nurses feeling overwhelmed” (RNL06). Having the right staff on the unit was very complex. “We had over 50% of our staff with less than 2 years experience and you can’t really have a great mix so you’re doing the best you can” (RNL04). When RNL09 walked on the unit she became concerned for patient safety because they had “agency on the floor and all nurses who are 6 months or less of experience.” Low staff nurse turnover and decreased vacancies facilitated having more experienced staff nurses on the unit. Staff nurses helped develop new staff nurses to alleviate the impact inexperience had on workload.

The patient mix and managing patients who needed a higher level of care made staffing, even with the appropriate ratios, challenging.

There was a day this week we had a patient with active chest pain, many drips going and another patient having multiple pauses. Cath lab was backed up and we couldn’t get those patients to the ICU it was full. So we’re trying to manage two critical patients on the unit on one nurse’s team. So the charge nurse and I [nurse manager] helped facilitate both critical patients to keep them stable on the floor until they can get to cath lab. So those other teams of nurses we were not able to support. On that day I really don’t know what happened with all the other patients on the floor. (RNL03)
Having and following appropriate admission and level of care guidelines helped manage the patient mix. Guidelines had failed getting the patient to the right level of care in the past. “We had a hypotension protocol that was supposed to help us if they’re hypotensive for this much time they go to the unit [ICU], but then that’s only for certain cases” (RNL09). Getting patients to the ICU posed a workload challenge. “So helping others see in our eyes what is going on to get them down to the ICU is really my biggest barrier” (RNL03). High acuity patients and the challenge of getting physicians to see “from our eyes” (RNL01) that the patient needs a higher level of care was challenging:

If we have patients that probably need a different level of care, a nurse managing a patient who's on the fence, do they need the ICU, don't they, and really helping the provider see. Sometimes in their mind they just think that patient doesn’t need the ICU, but yet it's not the right environment where they are either. Helping them understand that the nurses capacity to carry out the interventions they are asking them to do. (RNL01)

Nurse leaders believed staff nurses spent time “helping them [physicians and ICU] see the staff nurse capacity from our eyes” (RNL01)and spent more time “trying to make a case to get something for the patient” (RNL02). Sometimes physicians didn’t know the level of care criteria and other times nurse leaders “didn’t push back when physicians were admitting patients who required a higher level of care” (RNL04). Managing high acuity patients and negotiating with physicians to get patients to a higher level of care contributed to “crappier care to the other patients that burns them [staff nurses] out, it breaks down relationships and some nurses are resilient and they just keep escalating and some I’m afraid they don’t escalate next time because what’s the point” (RNL04).

Other factors contributed to staffing challenges such as “how fast are discharges going, how fast are admissions coming” (RNL06). High needs patients described as two-assists, isolation, challenging family dynamics, many drips, and one on one patients that challenged
workload. Patient location, family dynamics, and patient personalities all contributed to staffing challenges. The “right people not performing the right role” (RNL06) also challenged staffing. For example, “the nurse transporting a patient for discharge removes that person from the unit” because they didn’t have a transport team (RNL01). Nurse leaders would have enough staff nurses if they had an IV team, a transport team, or other support so nurses could focus on giving direct care. Technology such as “telesitters” (RNL01) to provide one to one monitoring for patients at risk for harm and call lights that alerted staff nurses to patient needs could alleviate staffing challenges.

The best safety culture experience was when patient assignments dispersed acuity throughout the unit. Creative assignments, reaching out for extra staff nurses, and nurse leaders helping alleviated staffing challenges. Other tools nurse leaders relied on to ensure safe staffing included working with the staffing and patient placement department, an escalation process, forcing a nurse over after 12 hours to fill staffing gaps, agency, traveling nurses, and recognizing nurses by showing appreciation. “Forcing nurses over” was not necessarily the safest thing to do but it alleviated gaps in staffing (RNL01). Forcing over was observed routinely during safety huddle observations.

Inadequate staffing caused staff nurses to have a negative perception of leadership because “they don’t think they can give safe care because they think the organization is going to give bad staffing or keep giving us patients” (RNL07). She also described a negative perception of leadership on the night shift. “Our night shift has a huge problem with respecting leadership or understanding why they do things and they voice it, this is just unsafe staffing, the organization doesn’t care” (RNL07). However, staff nurses didn’t always know the entire
picture because “there might've been sick call-ins that they [staff nurses] don't know about” (RNL07).

**Supplies and Working Equipment Aren’t Always Available to Keep Staff Nurses at the Bedside**

Nurse leaders worked to make sure staff nurses had the supplies and working equipment to provide safe care. The subtheme supplies and working equipment aren’t always available to keep staff nurses at the bedside is defined as the inability for nurse leaders to ensure staff nurses had the appropriate patient care supplies and working equipment readily available to keep them at the patient’s bedside. When staff nurses had supplies and working equipment at the bedside they were “coming to work and feeling like they can keep patients safe and have the resources they need to keep them safe” (RNL08). “We are fortunate we get the equipment and supplies we need” (RNL07). They never had supplies to prevent a “CAUTI, so now we have external foleys” (RNL01). “We haven’t had a ton of equipment issues recently, we’ve been fortunate, it’s if something breaks you might not get it fixed right away and we can’t stop practicing so they [staff nurses] create workarounds” (RNL04).

The right supplies at the bedside were “making sure that you have the right tools in place as simple as gait belts, walkers, and safe shoes for patients” (RNL05). “The floor is stocked, they have what they need. If we didn't have the code cart or have medication stocked in the Pyxes our patient care wouldn’t be safe, that would be a concern” (RNL07). Equipment was broken or not working and nurse leaders struggled trying to get supplies to keep staff nurses at the bedside. “We’re trying to change the culture that nursing is here 24/7” in an attempt to get other departments to make sure staff nurses had what they needed to provide safe care because if they didn’t “it really pulls away from taking care of the patients which that's what we need to be doing” (RNL02). RNL04 described staff nurses needed equipment and supplies right there and
working to “not slow nurses down with their processes so they’re not having to create workarounds” and also to make sure they “have the right things in place to carry out their tasks efficiently without having to take more risk or unnecessary risk.” Nurse leaders knew there was better equipment out there. For example, “there has to be a better way for us to be able to see that patient’s rhythm when we’re doing any sort of medication changes, drip changes, anything like that” (RNL03).

*The Whole Team Doesn’t Always Work Together to Keep the Patients Safe*

Making sure staff nurses had what they needed to provide safe care was working together as a team. The subtheme the whole team doesn’t always work together to keep the patients safe is defined as when nurse leaders observed any member of the healthcare team or other departments not responding appropriately or working together to make sure the patient was safe. “An alarm goes off and everyone responds” (RNL04). “Everyone is working together to keep the patient safe” (RNL04). “How the team interacts with each other and supports each other really helps with safety culture” (RNL03). A nurse leader moved her office so she could hear what was going on with her team. “I hear every day how are you doing, can I help you? Is there something I can do for you? Did you eat yet? What can I do for you so you can go? That’s everybody to everyone” (RNL04). A nurse manager heard the charge nurses communicate with the staff nurses “we have to work together as a team” (RNL06). The whole team being aware of risks on the floor helped keep patients safe. Staff nurses worked together as a team to support new staff nurses. “A third of my RNs have started within the last year. They are doing things five years ago would take four years to develop. It's pretty cool to see the help of the team surrounding them and helping coach and mentor” (RNL02).
Working together as a team was facilitated when the CEO created the vision and aligned goals. Other facilitators were positive attitudes, being approachable, reliable, and a good communicator. For example, “keeping a positive attitude, because if the patient can’t get up by themselves, if you’re not approachable, I’m not going to come ask you. You need someone who is approachable and respectful so you [staff nurse] can ask freely” for help (RNL07). Leading by example facilitated the team working together. For example, “well I think as a leader I have to lead by example. I can’t be walking by call lights and not responding to alarms because it wouldn’t look like a priority” (RNL04).

Although nurse leaders described their team as working well together, they acknowledged not all departments worked very well together. It was uncomfortable for nurse leaders to work with other departments because they didn’t have relationships with other departments. Developing a relationship with the operating room and PACU facilitated safe patient care. “It has helped dramatically for the nursing leaders to come together because we need to for that patient to go through phases of care safely. We have a shared understanding and a shared goal” (RNL02). Other barriers were a lack of understanding of roles and responsibilities because “people just don’t appreciate or understand what other people are tasked with” (RNL04), teammates not being helpful, they just don’t care, staff nurses are “so busy and rundown” (RNL09), “not speaking up that they need help and being a martyr” (RNL04), and staff nurses are here to socialize. Socializing occurred when staff nurses were on their cell phones, “on Facebook” (RNL09), and having conversations with other staff on the unit when there’s other things they could be focusing on” (RNL09). A nurse leader believed it was a “major issue on the unit” and it’s because “they [staff nurses] are so busy and rundown, I have to breathe, I don’t even want to do any work stuff, I want to chitchat and have downtime” (RNL09).
We Don’t Have Great Relationships With our Physicians

The subtheme we don’t have great relationships with our physicians is defined as the challenges and unprofessional exchanges nurse leaders observed or were made aware of between staff nurses and physicians. Not having great relationships with physicians was the most negative safety culture experience after staffing. “We really don’t have a great partnership with our providers and getting them to partner with us for what they [patients] need” (RNL04). Nurse leaders felt staff nurses couldn’t “pick up the phone and get what they need without being unprofessionally challenged” (RNL01). Having great relationships required the building of relationships and professional, respectful communication between physicians and nurses.

A nurse leader saw conversations go much differently between physicians and staff nurses who had developed a relationship. “I see that same provider with a different nurse have a very different conversation about the same thing. Establishing those relationships is huge” (RNL01). An ideal relationship between a physician and a staff nurse was:

I am envisioning he [physician] comes onto the floor, greets everybody, calls everybody by first name. If he does not have to be about business right from the start because there is not something specifically going on it usually involves a little bit of how’s the day going, how are your kids, that sort of thing. So there is definitely an obvious developed relationship there. When they are rounding, it’s conversation, it's asking for input. The provider will present this is what we’ve got going on, this is the diagnosis, and will say to the nurse what do you see, what are your concerns for this patient today? Asking for that input. It's a very different conversation. And then if I [nurse] need something I’m picking up the phone to call and I know I’m going to be able to make a recommendation and get what I need or they are going to come to the floor and we are going to have a conversation about it with the patient. Looks very different. (RNL01)

Relationships were challenged because “some providers have attitudes and they want it the way they want it and are not seeing the perspective of others. A lot has to do with their attitude and their demeanor when they walk on the unit” (RNL03). If staff nurses and physicians “don’t have afoundational relationship than we can’t respectfully work side-by-side and learn from each other and I don’t see us moving past it” (RNL01).
Professional, respectful communication occurred when physicians were “engaged with the team [nurses], answering questions, providing education to nurses on different treatments and procedures” because it helped form “an integrated care team that helps develop nursing along the way” (RNL10). However, unprofessional physician communication occurred and was very challenging to overcome. “The tone they use, if nurses feel belittled they aren’t going to bring something up if they think someone is going to put them down” (RNL03). “We get pushback, they [staff nurses] don’t want the doctor to yell at them and say why are you calling” (RNL07). Some of them “get angry if you communicate to them in the wrong way. If they’re in a good mood they’re going to do whatever you want them to do and if they’re in a bad mood, you’re not getting anywhere with them” (RNL09). With the ones who were consistent and “even if you don’t like it they explained it and helped you understand that feels better to our staff versus I never know what I’m going to get from this guy or gal” (RNL09).

Unprofessional, disrespectful communication occurred when physicians didn’t respond to staff nurses. “Sometimes we have trouble getting a hold of physicians. Just not getting a response, you either don’t know if they got the page or if they got the information and they don’t need to change anything but there’s no confirmation coming back” (RNL08). For example, physicians had to sign a discharge summary otherwise the patient couldn’t be discharged to a skilled nursing facility. However, “sometimes it won’t happen and you’ll call their office 5, 6, 7 times with no response. It takes up our beds, we can’t help new people, and those patients just sit there longer” (RNL07). Physicians didn’t respond on nights because “they couldn’t hear their pagers when they were in a room and won’t look at their pagers because they are focusing on that patient” (RNL03). The hospitalists on nights also struggled to “manage all their admissions” that created a situation where staff nurses “were entering protocols or taking verbal orders
because they don’t feel like there’s a better option even though they might not necessarily feel comfortable” (RNL04).

Not listening to staff nurse suggestions posed a safety concern because staff nurses “have been with these patients at the bedside and know how they have been for the last day or two and it’s the first time the physician is seeing the patient” but physicians “don’t always listen to the staff nurse perspective” (RNL07). Listening to the staff nurse was provider dependent “a nurse says I need to give Lasix because we fluid overloaded them, they [provider] will say that’s a great idea let’s check a blood pressure first, but there’s others unless they came up with the idea may not suggest that” (RNL07). They also acknowledged that “not that they have to say everything a nurse says goes, but it is good when they listen to feedback not just nope this is what we do” (RNL07). Sometimes staff nurses didn’t know who to call impeding professional physician communication. “If we have a heavy volume of surgical patients, not knowing who’s going to come see the patient, who am I going to be able to get ahold of today to help” (RNL03).

Staff nurses learned through experiences and those challenging relationships and communication with physicians created fear in nurses. The fear was created by past experiences and “certain physicians that made staff nurses feel like they don’t know what they’re doing” (RNL03). This created an unsafe situation that could result in a delay in care because “staff nurses will wait or not call the doctor because they don’t want the doctor to yell at them” (RNL07).

Nurse leaders tried “to create bonds between physicians and staff nurses” by letting physicians know “I’m the manager up here, if you ever need anything let us know, give us feedback” (RNL04). They also cultivated relationships and professional, respectful communication between physicians and staff nurses by role modeling. They role modeled by
building relationships with physicians that come to the floors and having professional conversations with them. A nurse leader heard a phone conversation that didn’t go well between a new staff nurse who was trying to get her patient to a higher level of care and the physician. However, the clinical lead called the physician to the bedside and role modeled a completely different approach to get the patient the care they needed. “The clinical lead called the provider, asked the provider to come to the unit and then led a conversation that was very different than what had occurred between the nurse and provider” (RNL01).

Not following up with physician behaviors was a barrier. “If it’s a one-time thing our nurses don’t care, everyone has a bad day. It’s when it’s consistent, repetitive behavior, it’s just a slap in the face from the physician and the organization” (RNL09). The organization told staff nurses and nurse leaders “we shouldn’t have to deal with this [physician behaviors] and to have it constantly ignored on all levels is just a slap in the face” (RNL09). It could take “6 incident reports saying a provider is still doing this until it gets escalated” (RNL07). The organization was perceived as “not wanting to get rid of doctors because they need the resource and are afraid of losing them” (RNL04). Nurse leaders addressed physician behaviors by “going to the doctor and having difficult conversations or escalating to higher leadership to address the behavior” (RNL02).

Nurse leaders made sure staff nurses were keeping patients safe. They set expectations and held staff nurses accountable for making sure nursing interventions were in place to keep patients safe. They had challenges in making sure staff nurses had what they needed to provide safe care. Next they described expecting staff nurses to stop things or escalate when they felt uncomfortable.
“I Expect Staff Nurses to Stop Things or Escalate When They Feel Uncomfortable”

The theme “I expect staff nurses to stop things or escalate when they feel uncomfortable” is defined as nurse leader expectations that staff nurses stop anyone from doing anything unsafe immediately and reach out to others with more expertise when they are in an unfamiliar situation or when the patient’s condition warrants additional immediate support (n = 10). Stopping things or escalating took staff nurses having no fear, and having courage. A vision of the best safety culture was:

No fear. I [staff nurse] wouldn’t think twice about stopping somebody from doing something if I felt it wasn’t the right thing. I hear people talk about it, so somebody will tell me I saw so-and-so do this and I’ll probably say how did they react when you let them know. Of course the answer I get is ‘I didn’t’. Not having that fear would be a safe culture. They have the power to do it, I don’t think they always believe they have the power. (RNL01)

Nurses leaders’ subthemes described “I expect direct conversations about safety” and get the “right eyes on the patient.”

“I Expect Direct Conversations About Safety”

The subtheme “I expect direct conversations about safety” is defined as speaking up immediately to anyone at any time to keep the patient safe by stopping unsafe practices. “I wouldn't think twice about stopping somebody from doing something if I felt it wasn’t the right thing” (RNL01). Nurse leaders supported staff nurses to change their approach to direct conversations about safety. “When they see poor practices or disrespectful behavior from anybody instead of internalizing it, verbalizing it’s not right, because it’s the right thing to do for the patient” (RNL02). “Ideally it’s to talk right away to that person, say hey you’re making me feel this way and I don’t feel that’s right, right away figure out why that happened so it doesn’t happen again” (RNL05). However, staff nurses needed assistance because “it’s hard when people make them feel that way [bad] and it’s hard to speak up” (RNL05). Escalating when staff
nurses felt uncomfortable was “they could escalate to a house supervisor and when I’m on call if they need to pull me and even if I'm not on call or available to call me to do what is right for the patient at the time” (RNL02).

Staff nurses didn’t always speak up. “I think personally people aren’t willing to have face-to-face conversations or take the time, everything is so rushed, it doesn’t take that long to pick up the phone and have a quick conversation” (RNL10). Staff nurses would describe a situation that wasn’t right, but they wouldn’t stop the behavior. “I’ve had nurses that will sit on nights all weekend long and have certain people that they feel are not helping or being a good teammate and they would rather be miserable than speak up to them or say something” (RNL04).

A nurse leader closed her eyes, shook her head, and remembered her worst safety culture experience that occurred when staff nurses delayed speaking up:

There was a patient who came to us post-op from a complex surgery. The patient was having significant abdominal pain, which they had an abdominal surgery and the patient was very tachycardic. The provider was notified because the orders that we had for postop pain were not sufficient enough. So we call the provider, it took over an hour to get a hold of the provider. After three hours patient’s pain was still not controlled. Patient was still tachycardic and blood pressures were slightly dropping. The provider was notified and came to the bedside they thought it was just pain issues as well and it continues throughout the night. We ended up calling a RRT within about eight hours of receiving the patient from surgery because we did not feel like there is something right with the patient. The patient didn’t do well. So we ended up doing a root cause analysis and the hard thing was that the nurses weren’t able to have at that point a difficult conversation with providers saying this is not right. I’m uncomfortable and did not escalate sooner their gut feeling. (RNL02)

Staff nurses needed assistance having direct conversations. Nurse leaders coached to encourage speaking up. RNL04 brought in a coach through a training program because
“people don’t like to talk to each other.” Nurse leaders provided encouragement to staff nurses to encourage speaking up. “Encouragement and creating a culture of making sure it's okay that they say if something isn't right so they bring it forward so that we can make it better” (RNL05). They also provided encouragement by “thanking them for escalating because it really is the right thing at the moment if they feel like it is to encourage that behavior” (RNL02). Leaders role modeled speaking up to encourage staff nurses to speak up. “It's demonstrating to my nurses how you have that conversation and you really try to put it into that light of learning. If people don't know they don't do, but learning to have those conversations, model them” (RNL01). One nurse leader experienced staff nurses “not having confidence to speak up and feeling there is a reprimand and it delayed the patient from getting a chest tube” (RNL02). Nurse leaders empowered staff nurses to speak up. Empowering staff nurses was “having a voice, feeling like the fear will go away, feeling empowered to do the right thing, knowing we are here to do what’s right for our patient, our profession” (RNL10). Nurses leaders had an open door policy and made time to show speaking up was important. For example, “my team, brought a concern possibly in regards to a doctor [rolls eyes up, smiles, and giggles] which then I would go to the doctor and have difficult conversations and escalate to higher leadership if needed to address the behavior” (RNL02). However at times there were no leaders to support having direction conversations because “we don’t usually have a house supervisor on night shift” (RNL07). Even though there was an escalation process to support having direct conversations “at the time” the staff nurses knew the resource was available but didn’t “always have confidence to use it” to escalate and support direct conversations (RNL05).

Fear prevented having direct conversations. “I think not having that fear would be a safe culture” (RNL03). Fear was because staff nurses “didn’t want to look like they don’t know
what they’re doing and hierarchies with physicians. Nurse leaders believed staff nurses feared “jeopardizing relationships with physicians” and “they don’t want the physician to get mad or yell at them” (RNL10). To alleviate fear in nursing the CEO tried to empower staff nurses and communicated to the organization staff nurses know what’s going on; however, physicians didn’t always support the initiative to empower staff nurses. RNL07 described the condescending manner some physicians responded to the call to empower staff nurses. “Can we all agree in this room that no one needs or wants an EKG [rolling eyes and talking on the behalf of a physician], you’re kind of putting someone in place that if they want it you’re already saying that your agreeing no one wants it” (RNL07).

Supporting a culture that will speak up, nurse leaders had to make sure they supported their team through escalation when they faced challenging behaviors by following through. Following through was “making sure by following through to say okay has it gotten better because really that's not acceptable” (RNL05). Nurse leaders had challenges with following up. “With staff discipline or follow-up you can't go back to the other staff member and say yup just so you know they got written up, so I think that part’s difficult” (RNL09).

*Get the “Right Eyes on the Patient”*

The subtheme get the “right eyes on the patient” is defined as staff nurses using their resources around them to keep patients safe in situations where they lacked experience or were unable to get what they need to keep the patient safe. Nurse leaders expected staff nurses to “escalate if you have not done this before because we’re not going to cover and prepare you for everything, so don’t just figure it out, get the right people involved to help figure it out properly” (RNL04). Staff nurses leaned on experts around them and other disciplines, the clinical lead, charge nurse, or manager, or by calling the ICU or a RRT for their expertise to get the “right
eyes on the patient.” Staff nurses were perceived as using their team and resources around them for their expertise. “We lean on other departments for the specialties if we are struggling with something that is out of the ordinary or things we need support in and making sure that we are carrying things out the right way” (RNL04). “Staff nurses use their resources [experts] around them and that brings me comfort” (RNL06). Leaning on the clinical lead or charge nurse was the safest day because they served as an expert resource for staff nurses on the unit.

Our clinical leads on the units really help with that flow and assures that nurses are understanding the plan of care. They’re kind of the gatekeeper of coaching and mentoring along with stepping in when they feel like something is not right. They help coach and mentor our team members to how to have conversations with providers and then help with knowing that if they are having a hard time and we’ll offer to be there to have that conversation, they will step in. Then, if they’re having a hard time they pull on me as well and then I go up the ladder if need be. (RNL02)

Nurse leaders “expect them [staff nurses] to come to me with any concerns, keep me in the loop” (RNL08). An escalation process helped when staff nurses couldn’t get what they needed from the physician. “Let’s say they [physician] were sleeping and didn’t pick up or said we’ll deal with it in the morning, the nurse would escalate to the lead if they’re not already involved they would take care of the situation” (RNL07). If they still didn’t get an answer the clinical lead would “escalate to the house supervisor and continue to escalate to administration” (RNL02).

Nurse leaders transitioned the supervisor role into a clinical lead role so “now my clinical leads are here 24/7 and if they [staff nurses] feel uncomfortable they can escalate to the lead, a house supervisor, or call me to do what’s right for the patient at the time” (RNL02). The clinical lead or charge nurse needed to be approachable. RNL08 shared the reason a “very new nurse, off orientation for a couple weeks, apologized for asking questions to manage an unstable patient.” “When I told her not to apologize that’s how we learn, she had an experience with
other leads that she should know this, you went to nursing school why don’t you know this” (RNL08). Leaning on the lead or charge nurse was challenging because they were dealing with staffing or taking assignments. Although nurse leaders identified themselves as someone staff nurses leaned on for their expertise, nurse managers weren’t on the unit 24/7. Therefore, they expected the clinical lead or charge nurse to fill the leadership gap however, “there’s no real coaching or mentoring for them [leads and charge nurses]” (RNL09).

Staff nurses also escalated to get what the patient needed by calling the ICU or a RRT to get “those right eyes” on the patient. Staff nurses not being able to get a hold of physicians or get what they need from physicians was the main reason for escalating. The ICU was a resource to “come lay eyes on” a patient “if you looked at the chart the patient looked like they were perfectly fine but eyes on patient they were not okay” (RNL03). “So getting that second set of eyes to help talk with the charge nurse was helpful” (RNL03). Calling a RRT helped to “get the right eyes” (RNL03) on the patient. A strong physician and ICU nurse responding were “the right eyes.” “They bring fresh eyes from multiple perspectives like critically trained RN’s, respiratory therapist, physician, fresh eyes to look at maybe things we didn’t think about to prevent further patient decline” (RNL08). “A patient was declining, the nurse was feeling the patient was declining, tried to tell the provider I don’t feel this patient is stable, the provider said I feel like they are, back and forth, then we called a RRT” (RNL05).

Even though they have the RRT, “responses for RRT’s are poor at best and we’re not seeing those behaviors actually addressed even when they are brought forward. They are brought forward directly to management but often they are deferring to the physician” (RNL09).

The worst experience was a patient who her chest tube fell out. She was having a very difficult time breathing. She was very scared because she couldn’t breathe and a RRT was called. The ICU RN was in the room with the surgeon and the surgeon was [being inappropriate] in front of the patient who was scared to death that she was going to die.
The two nurses felt very uncomfortable in that situation and weren't able to speak up in that moment because they were in disarray with what they were seeing and hearing. They were just focused on the patient and trying to shelter the patient from seeing and hearing it, but it delayed the patient from getting a chest tube. It was one of the first times that the nurses came to me because they felt very uncomfortable. I needed to escalate to the medical team which is very scary because I never did it before and I was their colleague that they worked with side-by-side for years and it was trying to share with them why it was inappropriate. (RNL02)

Other poor behaviors were physicians “come into a RRT very narrow-minded, and they have their mind made up before listening to suggestions from the nurse” (RNL07). Sometimes it depended on who responded. Some were stronger than others, “some share ideas and brainstorm” (RNL07). You can say can I have an EKG and there is pushback. When we do the post-RRT huddle, the ICU nurses will write on it “the doctors didn’t give us what we needed” (RNL07). Staff nurses “look to see who [physician] is working before they call” (RNL01).

Staff nurses had to really push and make a case to get what they needed for their patients. “Really explaining to them [physician] we can’t one-on-one this patient, we have been in the room constantly for the first four hours, really explaining this patient is too high acuity for our floor and if we’re still not getting what we need we go through the escalation process” (RNL03). RNL05 witnessed the push back staff nurses received when trying to escalate to get “extra eyes” on their patient, “they feel that the patient's declining and they’re pulling on the resources and getting made to feel that they shouldn’t be feeling that way even though the patient is declining. They feel like they’re not being heard.” “The ICU nurses come up, why are you calling this, I shouldn’t be here” (RNL05). The physicians or ICU pushed back because “they don’t understand the floor’s perspective. That patient may be doing OK with a blood pressure in the 80’s, but we are also managing three other patients that need our attention as well” (RNL08).

The pushback and bad behaviors were contributed to the responding physician, or ICU nurse, being busy. These negative experiences could cause staff nurses in the future to question
if they should call a RRT. “Those situations that happened or it’s not embraced, you felt you’re following and people make you feel a certain way, and next time they may think I’m not going to [call RRT] because I could be made to feel I shouldn’t” (RNL05).

Nurse leaders made sure there staff nurses were keeping patients safe. They made sure nursing interventions were in place. They struggled making sure staff nurses had what they needed to provide safe care. Nurse leaders expected staff nurses to stop things or escalate when they were uncomfortable. They then described needing the organization to align goals and prioritize safety.

**Organization Prioritizes Patient Safety**

The theme organization prioritizes patient safety is defined as a shared understanding by all departments and members of the healthcare team that patient safety is the overarching priority supported and reinforced by communicating, listening, and responding (n = 10). Nurse leaders’ subthemes described establishing goals and providing transparency and communicate, listen to understand, and respond to staff nurse concerns. This didn’t always result in a shared understanding and response to prioritize patient safety.

**Establishing Goals and Providing Transparency**

The subtheme establishing goals and providing transparency is defined as setting an organization vision of zero preventable harm, developing and aligning patient safety goals across all roles within the organization, and providing routine transparency of the safety goals. The organization prioritized safety through “a call from the top of the organization to focus on safety and quality, aligning leaders to focus on that was a big change” (RNL01). All leaders were told to “get obsessed with safety and quality” and the new CEO shared that “zero harm is possible”
All leaders understood “we want our patients safe, we are trying for zero defects” (RNL07). Communicating zero harm is possible and sharing external benchmarks helped leaders understand how they were performing compared to the rest of the nation.

Prioritizing safety at the organizational level created safety as a focus for everyone. Being able to focus on safety helped nurse leaders prioritize safety. “With previous leadership I don't feel that there was a lot of focus on safety but with new leadership it’s helping to change our mindset of what good looks like so that we are providing that care for that patient” (RNL02).

For example, “keeping people free from infections, three years ago it wouldn’t be unheard of for our 24 bed unit to have 8 to 10 foley’s, 5 to 6 central lines, now we go a week without any of those” (RNL01). Nurse leaders were also able to get equipment and supplies to achieve patient safety, like “external foley’s to make that happen [no infections]” (RNL01).

After setting the vision, the organization established goals to align the organization around safety so “we are all on the same page” (RNL02). Aligning goals and getting all leaders to focus on safety was a big change. Goals around safety “are established by the executive team and cascade to all leaders and departments down to the frontline staff” to align everyone around safety (RNL01). “Having those system goals and bringing those goals down to my nurses so they know what the goals are and they know their role in meeting the goals. They didn't know that before” (RNL01). Although it was a long journey, the alignment helped everyone understand a culture of safety.

It's more of everyone having the same understanding of what a culture of safety is. What does it look like, what does it feel like and then having shared outcome goals of what we can do from a process standpoint to help pull that care team together more so that everyone's on the same page on providing that kind of care for that patient. When everybody is on the same page about safety it looks beautiful. (RNL02)
Reporting safety data provided transparency and alignment. “I honestly think we’ve done a better job in the last year or two years in terms of sharing information, sharing the dashboard, now we’re doing that together and sharing. I think that was helpful” (RNL06). Transparency of sharing data and events related to patient safety was observed during daily unit, facility, and system safety huddles when each huddle started by sharing patient harm numbers and patient harm stories. Transparency of the current state of quality helped nurse leaders prioritize work that needed to be done to achieve safe patient care by providing “transparency of where we are” and “where the focus needs to be” (RNL05). Alignment got everyone on the same page and created a shared ownership to keep patients safe. “It’s a priority for everybody, it’s shared. Everybody feels ownership. Alarm goes off every ancillary on the floor responds to it and makes sure someone is taking care of it. No silo between departments. We’re all in this together” (RNL04).

Even though the organization aligned and prioritized safety, it didn’t always translate the same to all departments. There was a lack of shared understanding of what it meant that safety is a priority for everyone and people don’t want to change which caused nurses leaders to not feel respected as a nurse manager.

I feel like departments vary in that understanding. My team members probably can speak to how I lead and how I speak about it and share what their thoughts are, but I believe from the actions from other departments just even in this hospital people don’t share the same passion like we do which is very frustrating and very sad because it's like banging your head on a wall. (RNL02)

Even though the call from the top of the organization prioritized safety as everyone’s focus, nurse leaders were challenged in receiving support to remove barriers for staff nurses to give safe patient care:
I feel like people don’t want to change. I feel like also as a unit manager I don’t feel that I am respected. For example, last year I was trying to work with our inventory supply to make sure that we had the right supplies at the right time for our nurses so we’re not running around and he kept on going to the directors to get approval for the things that I wanted to try on my unit. So it was very frustrating. (RNL02)

Too many priorities and too many changes related to leadership turnover because “we’re constantly starting over and it’s hard to create a culture because the culture is always changing and it creates fear” (RNL04) made prioritizing safety challenging. Having too many priorities and lack of support to implement and sustain the changes necessary to improve quality and safety was a barrier.

I would say it’s conflicting priorities because there’s so many indicators that we’re trying to focus on and there’s really no support to our unit for any of that so it really relies on me. You can’t focus on all of them every day and then you’re trying to coach on fall prevention and a 17 page policy and by the time you get around to every nurse to personally coach them, they changed it. To actually sit with them, have purposeful valuable conversations where they actually are present to ingest what you’re trying to get them to do with 44 nurses is a struggle. Prioritizing the right work at the right time is really a struggle. It’s hard to feel like you’re doing a good job at anything. (RNL04)

**Communicate, Listen to Understand, and Respond to Staff Nurse Concerns**

The subtheme communicate, listen to understand, and respond to staff nurse concerns is defined as a structure and process nurse leaders followed to communicate patient safety information, actively listen to understand staff nurse challenges, and respond to staff nurses to address the disconnect between leaders and staff nurses. Nurse leaders described communicating through staff meetings, weekly updates or newsletters, and email. Daily rounds and daily huddles emerged as a consistent and effective method of communicating with staff nurses.

Daily rounds were an effective way nurse leaders communicated with staff nurses. Nurse leaders used rounds to connect with their nurses, touch base with their leads, check on high risk patients, understand what staff nurses were worried about, and follow up on their concerns. They also tried to connect on different shifts. For example,
Every morning I do my leadership rounds. I check with some of our patients, check in with my team members to see how they're doing and if there's any support I can do, touch base with my clinical lead right away in the morning, try to understand who they're worried about, safety quality, any issues that we need real-time follow-up. (RNL02)

Huddles emerged as another effective way nurse leaders communicated with staff nurses. Setting the stage at the start of the day through unit huddles made the whole team “aware your patient in 817 is our highest safety risk, we’re all part of the team and we’re all going to work on a safety plan for the patient” (RNL01). Unit huddles gave nurses a different perspective. For example, “if they’re always thinking the same they’re not going to know what to change to make it better” (RNL03).

Facility huddles allowed nurse leaders an opportunity to “reach out to other departments to see and understand if they are seeing the same things or if we need somebody to help correct a problem” (RNL01). This was observed when nurse leaders were working with clinical engineering during huddles to create a safe plan around broken bed alarms. Nurse leaders described weekly huddles in which “executive leaders touch base with our zero defects and whatever project we’re working on” (RNL07). The executive leaders would always say “do you guys have what you need, what's going well, what's not going well” (RNL07).

Daily unit huddles helped nurse leaders communicate and connect with their staff nurses, facilitated understanding of the highest safety risks, facilitated making sure there was a plan to keep patients safe, provided a venue to educate and follow up with staff nurses on safety related issues, facilitated teamwork, and helped connect staff nurses to the whys and the purpose of safety interventions and nursing contributions.

For example, I think it gives the nurses a different perspective. If they're always thinking the same they're not going to know what to change to make it better. So for example, printing the policies, if they haven't reviewed, like our foley policy changed in the past three months and a lot of the nurses did not know I need to remove that foley, put a new one in to get a UA [urinary analysis], or the red seal is non-intact what do I need to
know. So it's really helping them think and pull the policy before they do if you haven't
done it in a in a month or two you really should pull it up and review. Also to understand
the hard work that they have done so pulling up...it’s been this many days since we had
an incident on the floor. What you're doing is working. Keep up the hard work.
Recognizing them so they don't feel like it's just mundane every day and every day that
what they're doing is purposeful and contributing to what we need to do. (RNL03)

This was observed when nurse leaders shared at their unit safety huddle tips for staff to stay safe
from aggressive patients that they learned from the facility huddle when an employee from
another unit was hurt by a patient. Leaders focused communication on the safety scorecard and
safety learnings. This was witnessed during huddle observations.

Huddles, including post fall huddles, were used to learn and communicate learnings to
the rest of the nursing team. For example, nurse leaders shared “you [staff nurses] have to call
tele before you transfer a patient otherwise they won’t know and they can call the wrong nurse.
Someone could have died because we’re not following the oxygen protocol” (RNL07). There
were a lack of huddles on night shift because there were “fill in leads or charge nurses on night
shift and there is a lack of expectations and limited follow up with night shift” (RNL09). Nurse
leaders identified inconsistent messaging among nurse leaders as a barrier to communication
because staff nurses were receiving conflicting information. Nurse leaders interpreted
information differently causing a disconnect with messaging and confusion for staff nurses.
Nurse leaders didn’t always “share with each other to spread what’s working well so other areas
can benefit” (RNL06). Nurse leaders weren’t always on the same page causing confusion for
staff nurses when leaders communicated. Nurse leaders weren’t always available to talk with
staff, “you've got to be at a meeting, your staff is busy, how do you have time to go back to them
and discuss those safety issues” (RNL09).

Nurse leaders then listened to understand the staff nurse challenges in providing safe
care. Then they responded by advocating for their staff nurses by “speaking up for my team to
represent what’s really happening at the frontline, to be that connection” (RNL07) to bridge the disconnect between leaders and staff nurses. Listening to understand happened by having an open door policy, being open-minded, and honest. “It’s really speaking to high reliable organization and really changing my leadership style to seek clarity, asking questions, listening differently, opening my eyes differently” (RNL02). Nurse leaders acknowledged a disconnect between “what we’d like to do as a system” and “where we are at the bedside” (RNL06). Nurse leaders described needing to stay connected to the staff nurse so they can support their perspective to bridge the disconnection gap between leaders and staff nurses. This was observed when nurse leaders were listening and following up with their staff nurse concerns at unit safety huddles. Escalating concerns about the safety of floor mats was one example.

Nurse leaders made sure staff nurses were keeping the patient safe. They made sure nursing interventions were in place. They had challenges making sure staff nurses had what they needed to provide safe care. Nurse leaders expected staff nurses to stop things or escalate when they were uncomfortable. The organization aligned goals and prioritized safety. They then described making sure staff nurses were learning and growing.

**Making Sure Staff Nurses are Learning and Growing**

The theme making sure staff nurses are learning and growing is defined as a structure and process to support learning from internal threats to patient safety and through formal programs to develop skills of the staff nurse (n = 10). Nurse leaders’ subthemes described a nonpunitive response and follow through and support staff nurse knowledge and education. These subthemes resulted in supporting learning and growing.

**Nonpunitive Response and Follow Through**

The subtheme nonpunitive response and follow through is defined as learning and
growing through encouraging reporting and follow through in a manner that supports staff nurse decisions without assigning blame to facilitate learning and mitigating patient harm. Nurse leaders encourage “nurses reporting everything, even good catches” (RNL03). Good catches were circumstances that could have the potential to harm a patient, but had not reached the patient or caused harm. However, nurse leaders wanted to be more proactive by “celebrating good catches, but we don’t utilize it [incident reports] like that as much as we should” (RNL01).

Staff nurses reported safety concerns through an online, anonymous incident reporting system. The online incident reporting system made follow up “very clear what I need to do, to change. I can see reports on what is happening on the unit, it helps you think differently on different areas” (RNL03). Once the incident was reported, nurse leaders provided non-judgmental feedback as close to real time as possible to help staff nurses learn. A non-judgmental approach by the organization that supported nurses also helped encourage staff nurse reporting. “If something happens, we don’t point fingers and discipline you, we put in an incident report, gather data and then we build off of that, because it only makes everybody stronger instead of just pointing fingers” (RNL07). For example, “at every staff meeting not to embarrass people, but to educate others we review every issue [incident report]” (RNL06). “I try to be available and open-minded. I’ve been here long enough to know anything is possible [laughing], so just trying to seek to understand how we got there and how we could prevent getting there again” (RNL04). A trusting, non-judgmental response by leaders began by building trusting relationships with staff nurses. “For me, it’s building a different relationship with my team by building trust through being approachable and not judging” (RNL02). “Being able to respectfully coach and learn why people maybe aren’t doing something one way or the other promotes that patient safety factor” (RNL01).
In spite of their attempts to create a non-judgmental, non-punitive response, nurse leaders felt staff nurses still perceived reporting safety events as punitive. “I don’t know why but it’s so frustrating” because staff nurses “perceive mistakes will be punitive or put in their file” (RNL05). This was frustrating because “we’ve always been honest to say if something happens we’re gonna talk through it. It’s not to say you did something wrong, but it’s to understand what happened and what we could do differently, it’s just making sure” (RNL05). A nurse leader shared the staff nurse perspective:

I want my organization to stand by me and I know that but a lot of people don’t necessarily trust leadership, not the manager, the higher ups. I feel like if something were to happen, a patient fall, those things happen, but I know my organization would still support me, they’re not going to say you’re canned, but some people don’t feel that way. (RNL07)

A nurse leader described how following up with staff nurses made her feel.

My hair stood up every time we have to call them in [staff nurse] even though I say we have your back, we still need to understand what happened so that we don’t keep repeating that, there’s still an element of I didn’t do something right and that guilt spills over to make it feel like I’m making them feel bad. (RNL06)

A nurse leader had pride in providing real-time feedback and how she along with her clinical leads accomplished providing feedback as close to real time as possible. “We don’t bother them at home but we put a reminder on my calendar for the next time they’re here, days or nights, to touch base with them to understand what happened and what they would do differently next time” (RNL04). For example when reviewing a surgical site infection, “we share the learnings with everyone, then follow up personally with everyone involved and we share celebrations too of what good really looked like so everyone can learn from it and grow from it” (RNL04). Nurse leaders compiled incident reports and brought them forward to the appropriate person or department to resolve the issue from a systems perspective. For example, pharmacy and information technology assisted in resolving incidents with heparin drips. Nurse
leaders shared the results of safety reporting to facilitate reporting. “We've had heparin drip incident reports and I was able to bring that to our medication safety officer and say we need to do something differently” and this resulted in a system change to make medication administration safer because “there is going to be something in place that will have a stop so the nurses are not hanging it incorrectly” (RNL03).

Nurse leaders acknowledged the staff nurse perception that leaders don’t always follow up. Nurse leaders used huddles to talk through learnings with staff nurses so they know they’re following up. “I don’t know if they just didn't know if the follow-up was completed, but really doing the huddles and talking through it they’re starting to understand more” (RNL03). They also followed up and provided feedback immediately “if there’s any huge safety concern we’d obviously give feedback with the staff right then” (RNL05). Debriefing facilitated talking about what went well and what should be done differently. For example, “if there is a fall, we do the post-fall huddles, so like immediate feedback” (RNL07). Learning also occurred from a root cause analysis and by focusing on system issues and not blaming.

It’s truly investigated from the unit manager, the frontline team, quality, infection prevention coming together to really dig deep into that particular case. Discover if we can come up with the root cause and proactively initiate changes for the system to mitigate that risk for the next patient. (RNL01)

Root cause analysis did not always reflect what was going on at the frontlines. “I’ve been at a few of them that pretty loudly I can say that this is not how our nurses do it, this is not the way it's done” (RNL09). This created the perception that “it’s a lot of blame versus finding system opportunities to fix the potential for error” (RNL09).

**Support Staff Nurse Knowledge and Education**

The subtheme support staff nurse knowledge and education is defined as the support nurse leaders provided to staff nurses for continued development of their skill set. Nurse leaders
supported staff nurse knowledge and education through an online education system, outside conventions to support nursing education, supporting certification, and supporting orientation.

“We have the LMS [learning management system]” (RNL04) online learning system. “We have a great donor who financially supports nurses to go to conventions and get education and we do compensate, but that’s not something people [staff nurses] are utilizing” (RNL04). Nurse leaders believed staff nurses didn’t go to conferences or get certified because it wasn’t required. A nurse leader shared “there’s a lot of education provided around code STEMI and code stroke” (RNL10). However, she thought it was “sad” regulatory agencies had to require “multidisciplinary drills to ensure patient safety.”

A nurse leader shared the biggest concern with staff nurses being able to provide safe care was the orientation process:

We were tasked with creating your own orientation for your floor. I did the best I could and I’m constantly asking for feedback, but I never received training on how to create an orientation plan for an RN. There’s a lack of resources, I have no educational support. So you’re trying to manage that along with other things. We are doing the best we can with what we have. What we lack in orientation we make up for with a lot of love and caring for our new people. (RNL04)

RNL03 shared similar concerns, “I try to develop something myself, I might not know best practice, I don’t have an education background” and staff nurses “feel the education gap too.”

Orientation was critical to making sure staff nurses had the “foundation to know how they needed to perform their job and deliver patient care, how to correctly administer medications and how to follow policies here” (RNL05). Finding the best preceptor was challenging because of the preceptor workload as they often had “a full, busy assignment in addition to training a new nurse” (RNL05).

Nurse leaders struggled with the lack of leader training or development for themselves. “It’s tricky because there is no leader training and you are trying to develop yourself so you can
do a good job and develop your team and maintain the day-to-day work with no support” (RNL04). For example, “we’ve been given the responsibility to manage a budget, we’ve never been trained. You’re leading your team and you don’t want them to see you’re struggling, struggling to get positions approved but you’re working short. It’s a vicious cycle” (RNL09).

**Summary Nurse Leader Results**

In summary, nurse leaders’ experiences with safety culture on a medical-surgical unit were described in six themes. Nurse leaders made sure staff nurses were keeping the patient safe. They made sure nursing interventions were in place. Nurse leaders made sure staff nurses had what they needed to provide safe care. They expected staff nurses to stop things or escalate when they were uncomfortable. They needed the organization to prioritize patient safety. Finally, they made sure staff nurses were learning and growing.

**Results: Similarities and Differences Between Staff Nurses and Nurse Leaders**

The following results answered the research question describing the similarities and differences of medical-surgical staff nurses’ and nurse leaders’ experiences with safety culture. The themes between staff nurses and nurse leaders were similar in language; therefore, shared language categories were developed. The shared language categories were (1) relationships with patients; (2) nursing interventions; (3) relationships with colleagues; (4) resources; (5) organization prioritizes; and (6) learning. The subthemes portraying meanings supported by rich descriptions of staff nurses’ and nurse leaders’ experiences were coded using convergence coding in respect to shared, unique, or discord to understand the convergent, unique, or divergent perspectives between staff nurses and nurse leaders. These themes and subthemes resulted in staff nurses and nurse leaders making sure the patient was safe as displayed in the final model (Figure 8). Staff nurses made sure patients were safe by being able to provide safe care. Nurse
leaders made sure patients were safe by making sure everyone was doing what was best to keep the patient safe.

<table>
<thead>
<tr>
<th>Staff Nurse Themes</th>
<th>Shared Language Categories</th>
<th>Nurse Leader Themes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time to “know my patient to keep them safe”</td>
<td>Relationships with Patients</td>
<td>Making sure staff nurses are keeping patients safe</td>
</tr>
<tr>
<td>“Using my gut” and nursing interventions</td>
<td>Nursing Interventions</td>
<td>Making sure staff nurses have nursing interventions in place</td>
</tr>
<tr>
<td>“Extra eyes on the patient”</td>
<td>Relationships with Colleagues</td>
<td>“I expect staff nurses to stop things or escalate when they feel uncomfortable”</td>
</tr>
<tr>
<td>Not always having what is needed to provide safe care</td>
<td>Resources</td>
<td>Making sure staff nurses have what they need to provide safe care</td>
</tr>
<tr>
<td>Organization prioritizes patient safety</td>
<td>Organization Prioritizes</td>
<td>Organization prioritizes patient safety</td>
</tr>
<tr>
<td>Learning: “Have our Backs”</td>
<td>Learning</td>
<td>Making sure staff nurses are learning and growing</td>
</tr>
</tbody>
</table>

Figure 8. Final Model
Convergence Assessment

There were 18 staff nurse subthemes and 17 nurse leader subthemes. Of those, 12 (34.3%) were shared, three (8.6%) were unique, and 20 (57.1%) were discord (Figure 9). The convergence within themes between participant groups is likely attributed to the participants sharing a registered nurse background and a shared immersion in the same culture. Conversely, the unique and discord findings more than likely are related to differences in the participants’ role within the organization.

<table>
<thead>
<tr>
<th>Shared Language Category</th>
<th>Shared Language Subthemes</th>
<th>Unique Language Subthemes</th>
<th>Discord Language Subthemes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Relationships with Patients</strong></td>
<td>None</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Nursing Interventions</strong></td>
<td>Alarms, warnings, checklists, and safety checks (SN/NL)</td>
<td>Frequent rounds (SN/NL)</td>
<td>Time to &quot;know my patient&quot; by reviewing the EMR (SN)</td>
</tr>
<tr>
<td></td>
<td>Workarounds (SN/NL)</td>
<td></td>
<td>&quot;Get eyes on my patient&quot; through bedside shift report (SN)</td>
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<td></td>
<td></td>
<td></td>
<td>Knowing the patient by reviewing the EMR (NL)</td>
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<td></td>
<td></td>
<td></td>
<td>bedside report to know the patient and &quot;catch things upstream&quot; (NL)</td>
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<td></td>
<td></td>
<td></td>
<td>Making sure there is a clear plan (NL)</td>
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<tr>
<td><strong>Relationships with Colleagues</strong></td>
<td>Leaning on others for their expertise (SN)</td>
<td>Escalating to keep the patient safe (SN)</td>
<td>I expect direct conversations about safety” (NL)</td>
</tr>
<tr>
<td></td>
<td>Get the &quot;right eyes on the patient&quot; (NL)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Resources</strong></td>
<td>Supplies and working equipment are not always available (SN)</td>
<td></td>
<td>Inadequate staffing contributes to unsafe care (SN)</td>
</tr>
<tr>
<td></td>
<td>Supplies and working equipment aren’t always available to keep staff nurses at the bedside (NL)</td>
<td></td>
<td>Balancing financially responsible staffing with patient needs is challenging (NL)</td>
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<tr>
<td></td>
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<td></td>
<td>We don’t always work together as a team (SN)</td>
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<td></td>
<td></td>
<td></td>
<td>The whole team doesn’t always work together (NL)</td>
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<td></td>
<td></td>
<td></td>
<td>More respect from physicians would be appreciated (SN)</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>We don’t have great relationships with our physicians (NL)</td>
</tr>
<tr>
<td><strong>Organization Priorizes</strong></td>
<td>&quot;Sharing the numbers and keeping us updated&quot; (SN)</td>
<td>&quot;Giving nurses a voice in making improvements&quot; (SN)</td>
<td>Communicate, listen to understand, and respond to staff nurse concerns</td>
</tr>
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<td></td>
<td>Establishing goals and providing transparency (NL)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Learning</strong></td>
<td>None</td>
<td>Support staff nurse knowledge and education (NL)</td>
<td>Time to teach and learn from experience (SN)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Learning from mistakes (SN)</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Nonpunitive response and follow through (NL)</td>
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<td></td>
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<td></td>
<td>We don’t always learn from audits (SN)</td>
</tr>
</tbody>
</table>

Figure 9. Convergence Assessment

Completeness Comparison

The convergence assessment identified shared, unique, and discord subthemes between participant groups. These findings will be described within the shared language categories to
answer the final research question of the similarities and differences between staff nurse and nurse leader experiences with safety culture. A definition of the shared language categories will be provided.

**Relationships with Patients**

Although the staff nurse theme time to “know my patient to keep the patient safe” (n = 16) and the nurse leader theme making sure staff nurses are keeping patients safe (n = 10) were similar in language between participant groups, there were differences in meaning. Relationships with patients, the shared language category, is defined as the process staff nurses used to build relationships with their patients by getting to know the patient to understand their health and safety risks to keep them safe. Developing relationships with patients facilitated knowing the patient. Nurse leaders described the importance of building relationships with patients by listening and building relationships. Staff nurses described how they developed relationships with their patients when they had time to “talk to their patients.” They both identified that getting to know the patient was the critical first step in providing safe care. There were no shared subthemes. There were two unique staff nurse subthemes, bedside risk assessments supported by “going with my gut” and frequent rounds. There were no unique nurse leader subthemes. There was discord within five subthemes including the staff nurse subtheme time to “know my patient” by reviewing the EMR, the nurse leader subtheme knowing the patient by reviewing the EMR, the staff nurse theme “get eyes on my patient’ through BSR, the nurse leader theme BSR to know the patient and “catch things upstream”, and the nurse leader theme making sure there is a clear plan.

**Relationships with patients: Unique.** The unique staff nurse subtheme, bedside risk assessments supported by “going with my gut”, supported the staff nurse to “get eyes on the
patient” to facilitate knowing their patient to keep them safe. Staff nurses provided rich description of how their nursing gut was developed, felt, and used to provide safe care. This was not described by nurse leaders. The unique staff nurse subtheme, rounding, described how staff nurses developed relationships with their patients through frequent rounding to get eyes on their patients throughout their shift. This gave staff nurses time to talk to their patients, make sure they were still safe, and reinforce education when they had the time to conduct rounds. This was not described by nurse leaders.

**Relationships with patients: Discord.** There was discord between the staff nurse subtheme time to “know my patient” by reviewing the EMR and the nurse leader subtheme knowing the patient by reviewing the EMR. The EMR provided a source of knowing the patient. They both identified the EMR to know the patient was inefficient and unreliable and documentation burden contributed to taking time away from the patient. The discord between staff nurses and nurse leaders was the rich description provided by staff nurses on how the EMR was an important part of their process to know the patient and prepare for interactions with the patient and family; whereas, nurse leaders described the EMR as simply a source of information and did not describe the integration of reviewing the EMR as part of the nursing process critical to knowing the patient. Staff nurses described depending on the EMR particularly when the patient had cognitive barriers that prevented staff nurses from getting to know them. Staff nurses didn’t have much time to review the EMR because of their workload and having to rush to get to BSR. Being too busy and having too many interruptions prevented staff nurses from knowing their patients. Staff nurses described an intense, negative, emotional impact that not having time with their patients created for them as staff nurses. Nurse leaders did not describe these experiences.
There was discord between the staff nurse subtheme “get eyes on my patient” through BSR and the nurse leader subtheme BSR to know the patient and “catch things upstream.” Staff nurses described in rich detail how BSR was incorporated into their nursing process to conduct their first assessment, however they didn’t have sufficient time to conduct BSR; whereas, nurse leaders focused on BSR to prevent errors. Both identified BSR was an effective method to listen and talk to patients to get to know them and involve them in their plan of care. BSR also facilitated getting eyes on the patient and the environment to make sure the patient and environment were safe.

Staff nurses provided a richer description of why BSR was so important. Staff nurses identified the patient as the best source of information. They described BSR as their first important “eyes on patient” assessment and used their “gut” to identify patient risks that would help them prioritize patient care. They described needing to conduct BSR early in the morning before they got too busy so they could get a baseline assessment. Instead, nurse leaders’ description focused on BSR as a mechanism for the on-coming staff nurse to catch things the off-going staff nurse missed to prevent errors. Even though they both concluded BSR was not conducted consistently and described similarities in barriers to conducting BSR, staff nurses described the time pressure of having “a half hour” to get the off-going nurse out on time making BSR challenging with a full patient load. Instead, nurse leaders focused on holding staff nurses accountable and sharing stories to help explain the rationale to perform BSR to ensure it happened consistently. Conversely, staff nurses described a lack of expectations and accountability to ensure BSR was conducted, especially when patients were being transferred from other units.
There was also discord with the nurse leader subtheme having a clear plan in place to keep patients safe and staff nurses’ experiences described within several other subthemes. Nurse leaders described knowing the patient and keeping them safe as making sure there was a clear plan in place. This was described as their most safe day. A clear plan included collaboration and input from the patient, physician, nurse, and other disciplines. Nurse leaders described physicians as rounding with staff nurses to educate and develop them as nurses. Nurse leaders also described clear follow up, following orders, and following policies as making sure there was a plan in place. Staff nurses put much less emphasis on this view of collaboration. Instead, they described needing physicians to listen, be more willing to hear the staff nurse perspective, acknowledge staff nurse recommendations even if they don’t both agree, and take them seriously. Conversely, they did not describe a collaborative plan as following orders or policies or having the physician develop or educate them. The purpose of collaborative rounds from the staff nurse perspective was a quick understanding of what each discipline needed, including the staff nurse, and direction for follow up. Both identified a lack of physician relationships and unwillingness to collaborate with staff nurses was a barrier to having a collaborative plan in place and keeping the patient safe.

**Nursing Interventions**

Although the staff nurse theme “using my gut” and nursing interventions (n = 16) and the nurse leader theme making sure staff nurses have nursing interventions in place (n = 10) were similar in language between participant groups, there were differences in meaning. Nursing interventions, the shared language category, is defined as risk assessments, policies, and protocols nurses followed to keep patients safe. There were four shared subthemes including staff nurse and nurse leader workarounds and staff nurse and nurse leader alarms, warnings,
checklists and safety checks described by both groups. There were no unique subthemes. There was discord in three subthemes including the staff nurse subtheme appropriate nursing interventions, the nurse leader subtheme nursing interventions “for nurses to follow”, and the nurse leader subtheme nurse leaders setting expectations and holding staff nurses accountable for following nursing interventions.

**Nursing interventions: Shared.** Workarounds to keep patients safe and alarms, warnings, checklists, and safety checks were shared subthemes of nursing interventions. Staff nurses and nurse leaders acknowledged staff nurses implemented workarounds in the best interest of keeping patients safe. Time pressure, resources not available, unrealistic nursing interventions, nursing interventions that didn’t make sense, and not understanding the rationale of the nursing interventions contributed to workarounds. Both rationalized workarounds as they were in the best interest of keeping the patient safe. Nurse leaders didn’t feel there was ever a good reason for workarounds, but understood they facilitated the staff nurse to get what they thought the patient needed. There was agreement staff nurses wouldn’t do something they felt was unsafe for the patient.

Both agreed alarms and warnings were useful if they were answered and not broken. Staff nurses were concerned alarms and warnings decreased the development of critical thinking. They also agreed checklists and safety checks helped busy staff nurses remember; however, both agreed the resources weren’t always available to do checks and they added extra work burden to the already busy staff nurse. There was a shared perception that staff nurses focused on completing the checklist instead of focusing on the patient and the rationale of the intervention.

**Nursing interventions: Discord.** There was discord between the staff nurse subtheme appropriate nursing interventions and nurse leader subtheme nursing interventions “for nurses to
follow.” Appropriate nursing interventions were described by staff nurses; whereas, nursing interventions for staff nurses to follow was described by nurse leaders. The discord was in the staff nurse description of nursing interventions supplemented by nursing judgment; conversely, nurse leaders described nursing interventions as standards of care that nurses should follow without taking into consideration nursing judgment. Furthermore, staff nurses described concerns that merely following nursing interventions was not only unsafe at times, but it undermined the development of critical thinking and nursing judgment.

Staff nurses and nurse leaders described nursing interventions as risk assessments, policies, and protocols that guided evidence-based nursing interventions. Staff nurses emphasized the importance of nursing interventions to support autonomous nursing practice when applied using clinical judgment. On the contrary, nurse leaders emphasized using nursing interventions to make sure staff nurses had the correct interventions in place to make sure patients were safe.

Staff nurses believed risk assessments had the potential to provide a false sense of security as they were not predictive by nature, conflicted with critical thinking, and decreased the development of critical thinking by creating a reliance on a risk screen score. Nurse leaders did not describe this, instead they described risk assessments as ensuring staff nurses were meeting the intervention requirements to keep patients safe. On the contrary, staff nurses described following all of the interventions required by a risk screen score, or only following the risk score interventions, posed a risk to patient safety.

They both identified nursing interventions supported by clinical judgment facilitated individualized patient care. However, staff nurses described nursing interventions as too black and white; whereas, nurse leaders couldn’t agree on the right amount of direction nursing
interventions should provide staff nurses. Furthermore, even though nurse leaders described the importance of clinical judgment to facilitate individualized care, they described in rich detail audit processes to make sure nursing interventions were implemented as stated without consideration for clinical judgment. This created conflict for staff nurses between following what they believed was best for patient care and their requirement to follow organizational policies and protocols.

Staff nurses also described the process they used to apply clinical judgment to keep patients safe. They described an eyeball test that facilitated in just a few minutes of getting eyes on their patients a gut feeling that determined if their patient was at risk based on their nursing experience and judgment. While both identified nursing judgment developed over time with experience, nurse leaders didn’t emphasize through rich description the importance of nursing experience and judgment to keep patients safe or how “nursing gut” felt. Instead, nurse leaders focused on making sure staff nurses were compliant with nursing interventions.

Staff nurses felt they couldn’t know everything; therefore, they relied on knowing where to find their resources. They both identified nursing interventions were not easily accessible at the point of care and were confusing. Staff nurses described using their nursing experience to try to remember if they couldn’t find the resources in a timely manner; instead, nurse leaders described that staff nurses will always use their resources around them if there is something they don’t know. Although both groups described resources to implement nursing interventions weren’t always available, staff nurses provided rich description on how “rationing resources” that were not available was “not fair” and was a risk to patient safety. Nurse leaders did not describe how that experience made staff nurses feel or the risk that posed to patient safety.
Nursing interventions were described by both participant groups as not having enough staff nurse input. Councils and committees were recognized by both groups of participants as ineffective in obtaining staff nurse input because of lack of staff nurse participation, not listening to their perspective, not focusing on the important things, and lack of training to effectively work together within a council or committee. However, nurse leaders also described staff nurses as not caring enough to be involved, not wanting to come in on their day off, and the nurse leader didn’t have enough staff to send someone during a work shift. On the contrary, staff nurses acknowledged they could have input if they were part of a council or committee, but they were tired and didn’t want to come in on their day off. Staff nurses and nurse leaders described how not having nurse input contributed to added work for the staff nurse without benefit to the patient.

Nurse leaders set expectations and held staff nurses accountable to implement nursing interventions; however, staff nurses did not agree. Nurse leaders set expectations by sharing stories to make sure staff nurses understood the rationale. They also had open, direct conversations to support accountability. Then, nurse leaders rounded to make sure interventions were in place. Staff nurses did not acknowledge any of these descriptions of setting expectations and holding people accountable. Instead, staff nurses described nurse leaders as struggling to hold staff nurses accountable. Staff nurses did not see that things changed, the same people weren’t accountable, and the same poor behaviors were never addressed.

They both identified staff nurses didn’t always implement nursing interventions because the interventions didn’t always make sense, staff nurses were busy or didn’t have time, and staff nurses didn’t understand the rationale. Nurse leaders admitted that due to inconsistent and poor communication by leaders, staff nurses didn’t always know or weren’t educated on nursing
interventions. While staff nurses acknowledged they weren’t always aware or educated, they believed they were too exhausted from working long shifts and multiple shifts in a row, busy with too much to do, and had frequent interruptions causing them to forget to implement nursing interventions. Nurse leaders described nursing interventions weren’t implemented because staff nurses didn’t care or were too busy socializing. They also described staff nurses chose not to follow policies, protocols, or expectations and the organization didn’t address personal choices and accountability. Nurse leaders took accountability for lack of staff nurse compliance with nursing interventions because they failed getting to the hearts of staff nurses causing them to forget it was all about the patient. Conversely, staff nurses felt they were doing everything they could to keep the patient safe and get them what they needed. The problem was there was too much to do for the patient and they didn’t have the time.

Time was the most frequently cited barrier to implementing safety interventions between both groups of participants. Nurse leaders felt staff nurses were busy, overwhelmed, and needed more time but didn’t describe, as staff nurses did, that staff nurses needed more time with their patients. Nurse leaders thought time barriers were perceived versus actual barriers. Staff nurses provided rich descriptions of being busy and not having time including there was too much to do, phones constantly ringing, patients constantly talking, and endless interruptions. They both described having to push to get the patient to a higher level of care and getting others to see things from the staff nurse perspective as a significant contributor to staff nurses not having time. Staff nurses, however, emphasized through richer description the physical, mental, and emotional toll busy took on them and not feeling like a nurse at all because of the lack of time they spent with their patients. Nurse leaders did not describe that experience.
Nurse leaders relied on staff nurses to conduct audits on nursing interventions to increase knowledge and accountability. However, experienced staff nurses felt audits were a waste of their time because they were too busy to do them. Staff nurses with less experience appreciated the double check. All staff nurses felt nurse leaders didn’t do anything with the audits, therefore accountability was not reinforced.

**Relationships With Colleagues**

Although the staff nurse theme getting “extra eyes on the patient” (n = 16) and the nurse leader theme “I expect staff nurses to stop things or escalate if they feel uncomfortable” (n = 10) were similar in language, there were differences in meaning. Relationships with colleagues, the shared language concept, is defined as relationships staff nurses and nurse leaders had with other colleagues to lean on each other or escalate to keep the patient safe. There were three shared subthemes including the staff nurse subtheme leaning on others for their expertise, the nurse leader subtheme getting the “right eyes on the patient”, and the staff nurse subtheme escalating to keep the patient safe. There were no unique subthemes described be either group of participants. There was one nurse leader subtheme, “I expect direct conversations about safety” in discord with staff nurses’ meaning described within several subthemes.

**Relationships with colleagues: Shared.** Staff nurses got “extra eyes on the patient” was described by two subthemes, leaning on others for their expertise and escalating to keep the patient safe. There was shared meaning with those two staff nurse subthemes and the nurse leader subtheme getting the “right eyes on patients” when staff nurses were not getting what they needed for the patient. These shared subthemes described other eyes as other staff nurses, disciplines, nurse leadership, and calling the ICU or a RRT. They both believed staff nurses used their resources around them for their expertise and escalated to nursing leadership or
by calling a RRT to keep the patient safe. They both described an inadequate or lack of physician response as the contributing reason staff nurses didn’t get what they needed for the patient. Staff nurses were acknowledged by both participant groups as exhausting all their resources before escalating to a physician. They both also described similar barriers to leaning on each other. Staff nurses described the negative impact having new staff nurses, nurses not familiar with the unit, or co-workers that didn’t work together as a team had on getting extra eyes on the patient. Staff nurses and nurse leaders agreed the charge nurse or clinical lead was a valuable expert resource on the unit if they were not busy dealing with staffing issues or taking an assignment. Charge nurses and clinical leads conducted proactive rounds to keep patients safe when they had time. Both agreed charge nurses and clinical leads not being approachable was a barrier.

Both participant groups agreed staff nurses would always escalate to keep their patients safe. They both described fear based on previous experiences as the contributing factor for delaying escalation. Although staff nurses didn’t hesitate to escalate because they were patient advocates, they described not always feeling supported during escalation due to the leader not being available or not removing the barriers. Nurse leaders acknowledged they were not always available; therefore, they implemented the 24/7 clinical lead staffing model to supplement leadership on the night shift and weekends. Nurse leaders didn’t believe the organization provided mentoring or education to the charge nurses or clinical leads to support them in succeeding in their role as a leader extension. Both agreed charge nurses and clinical leads not being approachable was a barrier. They also both acknowledged they had little ability to address poor physician behaviors that were experienced by staff nurses during escalation.
They both agreed staff nurses were afraid to escalate. The fear derived from previous experiences and being yelled at by the physician, hierarchies between physicians and staff nurses, getting too much pushback, and the staff nurse not wanting to look like they don’t know. In addition, staff nurses and nurses leaders described the negative experiences staff nurses had when escalating created a safety risk causing staff nurses to hesitate escalating in the future.

**Relationships with colleagues: Discord.** There was discord between the nurse leader subtheme “I expect direct conversations about safety” and meaning described by staff nurses within several subthemes. Overall, they both acknowledge staff nurses weren’t comfortable having direct conversations. They both identified a lack of confidence, hierarchies with physicians, fear of jeopardizing relationships, not wanting physicians angry or yelling at staff nurses, lack of leader follow up, lack of accountability, and repeat poor behaviors as reasons staff nurses didn’t have direct conversations about safety.

Nurse leaders described their role in creating a culture that speaks up; however, staff nurses described a fear of jeopardizing relationships with colleagues and expected nurse leaders to hold others accountable. Nurse leaders focused on creating a culture that spoke up to challenge unsafe practices and behaviors. Nurse leaders felt staff nurses who had courage and confidence were perceived as speaking up more. They described their role in developing staff nurses to have difficult, direct conversations in real time. They coached, encouraged, empowered, and role-modeled speaking up. They did not describe how they empowered staff nurses other than when the CEO communicated his support of empowering staff nurses. They acknowledged staff nurses were afraid to speak up and were unaware of their power to speak up.

Conversely, staff nurses felt empowered when they felt a lack of fear. They also needed their nurse leaders to intervene in difficult, direct conversations so they wouldn’t jeopardize the
relationships they depended on to keep their patients safe. Staff nurses then described negative behaviors and unwillingness to help out by the same staff nurses over time because nurse leaders were not following up and holding staff nurses accountable. Nurse leaders did not describe this situation, instead focused on developing staff nurses to speak up and address challenging behaviors in real time creating a discord between groups.

Nurse leaders also showed gratitude, had an open door policy, made escalation a priority, and followed up when there was an escalation to show it was important and to support staff nurses in stopping unsafe actions and behaviors. On the contrary, staff nurses described times when nurse leaders were unavailable or couldn’t remove barriers. Nurse leaders did acknowledge they needed more time to and the ability to remove some of the barriers staff nurses brought forward.

**Resources**

Although the staff nurse theme not always having what is needed to provide safe care (n = 16) and the nurse leader theme making sure staff nurses have what they need to provide safe (n = 10) were similar in language, there were differences in meaning. Resources, the shared language category, are defined as the human resources, patient supplies, working equipment, and relationships staff nurses needed to provide safe care to keep patients safe. Staff nurses and nurse leaders both acknowledged staff nurses didn’t always have resources and relationships they needed to provide safe care. There were two shared subthemes including the staff nurse subtheme supplies and working equipment are not always available and the nurse leader subtheme supplies and working aren’t always available to keep staff nurses at the bedside. There were no unique subthemes. There were six subthemes in discord including the staff nurse subtheme inadequate staffing contributes to unsafe care, the nurse leader subtheme balancing
financially responsible staffing with patient needs is challenging, the staff nurse subtheme we don’t always work together as a team, the nurse leader subtheme the whole team doesn’t always work together, the staff nurse subtheme “more respect from physicians would be appreciated”, and the nurse leader subtheme we don’t have great relationships with our physicians.

**Resources: Shared.** Staff nurses and nurse leaders both agreed staff nurses did not always have supplies and working equipment readily available to keep staff nurses at the bedside. They both agreed they got the supplies and equipment they needed; however, nurse leaders felt there was better equipment available out there. They also both agreed challenges with not having supplies available and broken equipment contributed to workarounds and took staff nurses away from the bedside.

**Resources: Discord.** There was discord between safe staffing models that supported workload and what contributed to inadequate staffing between participant groups. Inadequate staffing was the most described negative safety culture experience between groups. In order to spend more time with their patients, staff nurses described needing staffing models that supported their workload with the correct support staff that allowed them to practice as registered nurses. On the contrary, nurse leaders described appropriate staffing models that supported workload except when staff nurses were managing high acuity patients, staff nurses disagreed.

They both described similar barriers to staffing such as the skill mix and experience of staff nurses, algorithms that don’t reflect the acuity and high needs patients, patient acuity, documentation burden, geography of patient placement, admission work burden, inefficient workflows, and push back when trying to get others to see things from their perspective. However, staff nurses felt nurse leaders could relieve some of the burden by holding others accountable for doing their jobs.
Nurse leaders described nursing turnover, vacancies, call ins, flexing staff nurses to other units, staff nurses on orientation, and the emotional and mental status of the staff nurses as barriers to staffing not described by staff nurses. Nurses leaders felt force over, creative assignments, staff nurse recognition, and support from the staffing office facilitated staffing. These were not described by staff nurses, instead the staffing office was described as a barrier for staff nurses that prohibited proactive planning. Nurse leaders didn’t describe proactive planning. Staff nurses described inadequate support staff as a barrier not fully described by nurse leaders. Nurse leaders believed technology could facilitate support staff challenges, this was not described by staff nurses. Nurse leaders struggled balancing staffing with being financially responsible and supporting the needs of the community, this perspective was not described by staff nurses.

They both identified algorithms were not helpful because they only addressed the census. They also both identified that the disagreement between nurses, physicians, and the ICU on appropriate level of care and admission guidelines was a barrier. Staff nurses struggled with the inability for charge nurses to right size teams by distributing high acuity and high needs patients across staff nurse teams; conversely, nurse leaders acknowledged the distribution of high acuity patients contributed to a safe day and believed this happened. Nurse leaders described not having the right people in the right roles such as a transport team or IV team to support nurse staffing that was not described by staff nurses.

There was discord in working together as a team. Specifically nurse leaders believed staff nurses worked well with the team on their unit, seemingly unaware of the amount of challenges faced with the staff on their unit. Instead, nurse leader described not working together as a team with other departments, this was not the focus for staff nurses. They both
described needing to work together as a team on the unit and with other departments. Staff nurses described how important working together as a team was to help them get through challenging days; however, nurse leaders didn’t describe the importance of those relationships. This contributed to their most safe day and alleviated being too busy and workflow challenges.

They both described the team on the unit as the staff nurses and support staff on the unit. They both described situations in which they didn’t work together as a team on the unit; however, nurse leaders felt overall staff nurses worked together as a team on the unit. Conversely, staff nurses described the challenges they faced when the same staff nurses or team on the unit didn’t work together as a team making them feel they were alone and the challenges this posed with providing safe care. They described nurse leaders as not holding staff nurses accountable for their behaviors. Nurse leaders were silent on this described experience and impact.

Staff nurses and nurse leaders described personal characteristics and behaviors that supported positive working relationships between staff nurses such as positive behavior, willingness to help out, and huddles to communicate about safety. Staff nurses that were new, or those who recalled when they were new, described challenges with working together as a team that resolved as they built relationships with their co-workers over time, although nurse leaders acknowledged relationships build over time they did not describe staff nurse experiences with feeling intimidated by other staff nurses on the unit and how this made them feel. They both described other departments not working together as a team; however, nurse leaders placed a greater emphasis on the impact of other departments not helping out by ignoring call lights and their own struggles working together with other departments. This made nurse leaders feel disrespected and unable to remove barriers for staff nurses, not described by staff nurses.
Both agreed poor relationships with physicians were the main contributor, after staffing challenges, to unsafe care. Nurse leaders felt it was the hardest barrier to overcome because they had little power or influence to address repeated, poor physician behaviors. Staff nurses felt the organization needed to set behavior expectations and hold people accountable. The discord was that staff nurses needed physicians to respect them and be accountable for doing their job to provide safe care; whereas, nurse leaders described role-modeling how to interact with physicians without describing in rich detail the lack of overall respect physicians showed staff nurses and how this made them feel.

Staff nurses provided rich descriptions of what was contributing to poor physician relationships including, physicians aren’t there for the patients like they’re there for the patients. Not being there for the patient was described by staff nurses as physicians relying on staff nurses to double check their work and remind them to fix wrong orders or put in new orders. They also had to call physicians repeatedly to get them to do their work or follow through. This not only added extra time for the already busy staff nurse, but it created an environment conducive to staff nurses making errors in providing care. Conversely, nurse leaders didn’t describe those experiences as contributing to poor relationships between staff nurses and physicians, instead focused on having to coach staff nurses to have different conversations with physicians than what they were hearing. They both identified a lack of or inappropriate physician response was a contributor to the poor relationships.

Staff nurses and nurse leaders experienced intimidating physician behavior and physicians looking down on nurses. Newer nurses, in particular, felt physicians looked down on them because they were new. Staff nurses believed their role as patient advocates and building a backbone or thick skin were facilitators for coping with poor relationships with physicians. This
was not described by nurse leaders. They both identified that relationships and trust between staff nurses and physicians developed over time. They both also identified a lack of follow up with poor physician behaviors and negative experiences with physicians contributed to unsafe care.

Staff nurses were not being respected as the eyes and ears of the patient. They wanted to be trusted and respected for their role as a staff nurse. Staff nurses didn’t feel physicians respected or actively listened to their perspectives. Instead, nurse leaders focused on their role in cultivating relationships and trying to create bonds between staff nurses and physicians by role modeling collaborative relationships with physicians, modeling professional conversations, asking for feedback from physicians, and leading by example to show we are here to work together. They did not describe advocating for the role of the staff nurse. Staff nurses needed nurse leaders to follow up and remove barriers in real time so they could spend more time with their patients, however nurse leaders described challenges in removing barriers for staff nurses.

**Organization Prioritizes**

The staff nurse theme organization prioritizes patient safety (n = 16) and the nurse leader theme the organization prioritizes patient safety (n = 10) were similar in language, however there were differences in meaning. The organization prioritizes, the shared language category, is described as the process the organization used to establish safety goals, align safety goals, and communicate safety goals and safety interventions across the organization. There was shared meaning in three subthemes “giving nurses a voice in making improvements”, “sharing the numbers and keeping us updated”, and establishing goals and providing transparency. There were no unique staff nurse or nurse leader subthemes. There was discord in communicate, listen to understand, and respond to staff nurse concerns.
**Organization prioritizes: Shared.** There was shared meaning of the staff nurse subtheme “giving nurses a voice in making improvements” and nurse leader experiences described within other subthemes. A disconnect between what organizational leaders believed was happening on the frontline and what was actually happening on the frontline was a shared experience. This caused organizational leaders to create safety interventions that added extra work for the staff nurse without benefitting the patient. Both groups of participants agreed giving staff nurses a voice in making improvements closed the disconnect between staff nurses and leaders, but staff nurses didn’t always have a voice in decisions. Councils and committees were a venue to give nurses a voice, but they were ineffective, lacked staff nurse participation, and staff nurse voices weren’t always heard or listened to.

There was also shared meaning of the staff nurse subtheme “sharing the numbers and keeping us updated” and the nurse leader subtheme establishing goals and providing transparency. There was agreement that communicating patient safety goals and providing transparency of the patient safety data set the tone across the organization. They both agreed declaring zero harm was possible had changed their mindsets and behaviors. Leaders changed what they thought was important and started focusing on making sure safe care was provided. Staff nurses started providing care differently. For example, they became aware foley catheters and central lines were a source of risk so they became proactive to remove them from patients. Transparency of sharing safety goals helped them understand where they were and where they needed to go. Nurse leaders appreciated external benchmarks. Staff nurses had no idea they weren’t providing safe care until safety data was shared.

Nurse leaders kept staff nurses updated by communicating and sharing what the organization was doing to improve patient safety was also shared. This created a sense among
staff nurses that they were listening and responding. Communication occurred through multiple modalities, however safety huddles emerged as a consistent, favorable method. Huddles were an effective mechanism to check on staff nurses and patients, educate, mentor, make sure everyone had what they needed, and follow up. Communication was a shared barrier as nurse leaders provided ineffective and inconsistent messaging and there was a gap in communicating and follow up on night shift. Nurse leaders also described that leaders interpret information differently and staff nurses and nurse leaders were too busy to communicate with each other. Staff nurses agreed nurse leaders communicated different interpretations of information.

Nurse leaders believed aligning everyone to prioritize and focus on safety through shared goals helped get everyone on the same page, although this wasn’t described by staff nurses. Nurse leaders described the importance of aligned goals from the executive team to the staff nurse role to prioritize safety and help staff nurses understand their role in patient safety. Nurse leaders had too many priorities and felt like they weren’t doing anything good at all. Staff nurses were silent on this description, although acknowledged nurse leaders were busy. Nurse leaders were frustrated with the lack of shared understanding of what it meant for everyone to focus on safety causing nurse leaders to feel a lack of respect and inability to remove barriers for staff nurses. Although staff nurses acknowledged nurse leaders tried and could not remove barriers, they were silent on this making nurse leaders feel disrespected. Nurse leaders also described the challenges with creating a culture when the culture was always changing because of leadership turnover.

**Organization prioritizes: Discord.** There was discord in the nurse leader subtheme communicate, listen to understand, and respond to staff nurse concerns and staff nurse experiences described within other subthemes. Nurse leaders described, with rich description,
the methods they used to facilitate listening to their staff nurses to understand their perspective. Nurse leaders stayed connected to their staff nurses by building trusting relationships with staff nurses and rounding. Staff nurses were silent on nurse leader rounding to stay connected, however they described good relationships with their nurse leaders. Although nurse leaders described listening, staff nurses didn’t feel listened to, heard, or that they had a voice.

Nurse leaders acknowledged a disconnect between staff nurses and organizational leaders. They believed they served as a voice to advocate for staff nurses. There was discord in nurse leader as a staff nurse advocate. In fact, staff nurses wondered who was looking out for them. This suggested they did not feel like they had any advocates.

Learning

The staff nurse theme learning: “Have our backs” (n = 16) and the nurse leader theme making sure staff nurses are learning and growing (n = 10) were similar in language, however there were differences in meaning. Learning, the shared language category, is defined as the mechanisms in which staff nurses learned or were supported to learn to improve the safety of care delivery. There were no shared subthemes. There were no unique staff nurse subthemes. There was one unique nurse leader subtheme support staff nurse knowledge and education. There were four subthemes in discord including the staff nurse subtheme time to teach and learn from experience, the staff nurse subtheme learning from mistakes, the nurse leader subtheme nonpunitive response and follow through, and the staff nurse subtheme we don’t always learn from audits.

Learning: Unique. Nurse leaders had a unique perspective on learning through conferences and certifications, orientation, and professional development. Nurse leaders supported conferences and certification, but acknowledged staff nurses didn’t participate. Nurse
leaders described the importance of nurse orientation and their concerns that education was a barrier for staff nurses to provide safe care. Nurse leaders shared their own discontent with lack of leadership development opportunities. Staff nurses were silent on professional development.

Learning: Discord. Although staff nurses and nurse leaders described staff nurses as learning by experience, nurse leaders described a different approach to learning by experience by sharing stories to facilitate learning by experience. Conversely, staff nurses needed to learn from each other. Staff nurses learned through experiences, especially if they were positive experiences. They also needed time to learn and teach by sharing experiences with each other through debriefs, reflections, and sharing their own experiences to build their knowledge. A lack of time was a barrier for staff nurses to teach and learn from each other, this was not described by nurse leaders. Nurse leaders were silent on staff nurses needing time to teach and learn from each other to build nursing experience and judgment; instead focused on sharing stories of experiences of other staff nurses.

Within learning, there was identification between staff nurses and nurses leaders that staff nurses learn from mistakes. Staff nurses described fear of reporting safety concerns. They also described a lack of leader follow through and punitive response to mistakes. Conversely, nurse leaders prided themselves in timely, nonjudgmental follow through when mistakes or safety concerns were reported. Staff nurses also described receiving no follow up on safety culture survey results; whereas, nurse leaders did not describe safety culture surveys.

Staff nurses and nurse leaders acknowledged learning began with staff nurses reporting safety concerns. They reported safety concerns through an anonymous online incident reporting system. Both identified providing anonymous feedback in real time facilitated reporting as well as a focus on fixing processes and not blaming individuals. While nurse leaders encouraged
reporting by following through in a non-judgmental, as real-time as possible manner, they acknowledged their frustration with staff nurses not reporting safety concerns. Nurse leaders felt they provided feedback and followed up, however they acknowledged the staff nurse perception that follow up was inadequate. They described pride in their processes for following up on staff nurse concerns and safety events. Nurse leaders were aware of the discord in perception of follow up, but they believed the perception was influenced by ensuring the integrity of the confidential, no blame process of following up. Conversely, staff nurses described not reporting safety concerns because they experienced a lack of follow up and feared they would be punished. They also reported fear of jeopardizing relationships with colleagues and physicians as contributing to their fear of reporting, not described by nurse leaders.

Learning by debriefing on safety incidents, such as a post-fall huddle, facilitated learning from the mistakes by sharing those experiences with individuals and the entire team through safety huddles. Root cause analysis after a mistake was reported was seen as an effective method to fix systems issues while not blaming individuals, however it was also experienced by both groups as punitive.

There was discord in the nonpunitive approach. Nurse leaders felt they were available, open-minded, built trusting relationships with their staff nurses, and respectfully coached to facilitate a nonpunitive response. While staff nurses were silent on these descriptions, they appreciated listening and not writing things down. Staff nurses wanted to learn from mistakes in a non-judgmental, positive learning environment. They needed their nurse leaders to have their back and support them. They described not wanting to be judged because they were humans and humans make mistakes, however they feared punishment for making mistakes. Staff nurses described a punitive response based on what they’ve heard from others on the unit and the horror
stories they heard in nursing school when staff nurses were fired or reprimanded for making a mistake. Nurse leaders were frustrated that staff nurses perceived a punitive response to mistakes. Nurse leaders focused on systems and not blaming individuals as a learning approach; however, staff nurses and nurse leaders described inconsistencies in leaders focusing on fixing the process and not blaming the person. Nurse leaders felt they needed to not blame, but staff nurses needed to be held accountable for their decisions. Staff nurses didn’t describe professionally accountability.

Finally, as previously described, staff nurses and nurse leaders were in discord with learning from audits. Nurse leaders felt they not only used audits to hold staff nurses accountable, but they shared learnings based on audit findings with individuals and the team, however staff nurses disagreed.

**Summary of Similarities and Differences Between Staff Nurse and Nurse Leader Results**

The results answered the final research question describing the similarities and differences of medical-surgical staff nurses’ and nurse leaders’ experiences with safety culture. There was convergence among the language of themes between participant groups; therefore, shared language categories were developed. These shared language categories identified the importance of relationships with patients, nursing interventions, relationships with colleagues, resources, organization prioritizes, and learning as the means by which staff nurses and nurse leaders kept patients safe. Subthemes provided rich description of participant meaning attributed to the themes. Subthemes varied in convergence and divergence, with few unique findings. The convergence in subthemes reflected the shared language used by registered nurses immersed in the same culture. The differences in subthemes reflected the unique role of each of the participant groups. The themes and subthemes supported making sure patients were safe. Staff
nurses made sure patients were safe by being able to provide safe care. On the contrary, nurse leaders made sure patients were safe by making sure everyone was doing what was best to keep the patient safe. They both agreed everyone was doing their best to keep patients safe.
CHAPTER V

DISCUSSION

The results of staff nurse and nurse leader experiences with safety culture were described in the previous chapter. Similarities and differences between staff nurse and nurse leader experiences with safety culture within a medical-surgical hospital unit context were described. Staff nurses and nurse leaders used similar language to describe experiences with safety culture with differences in meaning, unique to their individual roles, to describe six themes within each participant group. The similarity in language of themes allowed for the description of shared language categories. These shared language categories were described as relationships with patients, nursing interventions, relationships with colleagues, resources, organization prioritizes, and learning. The meanings of the themes described within the subthemes varied in respect to convergent, unique, and divergent experiences between groups. The themes and subthemes resulted in making sure patients were safe for both groups of participants. Making sure is defined as “to find out or do something so that one has no doubt about whether something is true, correct, will happen, etc.” (Merrian-Webster, n.d.). In this study, staff nurses were “making sure” by providing care, nurse leaders were “making sure” by ensuring “everyone was doing their best to provide safe care.” Safe, in this study, was consistent with the standard definition of safe defined as “the condition of being safe from undergoing or causing hurt, injury or loss” (Merrian-Webster, n.d.). Staff nurses and nurse leaders both believed everyone was trying to provide safe care.
Making sure patients were safe was either facilitated or inhibited through relationships between everyone and between everyone and the organization. Relationships are defined as “the way in which two or more people are connected” and “the way in which two or more people or groups regard and behave toward each other” (Merriam-Webster, n.d.). Although all relationships had some constraints in which staff nurses and nurse leaders were able to resolve or work through issues, relationships between staff nurses and physicians were particularly constrained without a process for a resolution. For example, although nurse leaders did not feel respected by other departments limiting their ability to remove barriers for staff nurses to provide safe care, they described a means to work with other departments to improve those relationships. Conversely, poor relationships were addressed by nurse leaders who focused on role modeling how to have professional conversations with physicians for staff nurses that did not result in improved relationships.

Time to build trust between staff nurses and physicians did result in improved relationships for several experienced staff nurses; however, unprofessional interactions between staff nurses and physicians was consistently experienced and witnessed. Staff nurses and nurse leaders did not feel the staff nurse role was respected or trusted as the eyes and ears of the patient by physicians. Respect is defined as “a feeling of deep admiration for someone or something elicited by their abilities, qualities, or achievements” (Merriam-Webster, n.d.). Staff nurses and nurses leaders described unique abilities, qualities, and a skill set staff nurses contribute that warrants respect because of their impact on making sure patients were safe. Relationships were essential to making sure patients were safe. Staff nurses and nurse leaders agreed that poor relationships between staff nurses and physicians was a barrier to making sure patients were safe.
In this chapter, findings from this study will be compared to the safety culture framework to ascertain theoretical triangulation to promote a more complete picture of safety culture in medical-surgical units as experienced by staff nurses and nurse leaders (RSSB, n.d.). Findings will be compared to previous research and previous SOPS findings to illustrate the complementarity this design contributed to the safety culture literature. This research provided a rich description of the human behaviors and responses of staff nurses and nurse leaders provided by those experiencing the phenomenon, safety culture. Findings that were shared, unique, and in discord will be compared to previous findings. This will be followed by a discussion of strengths and limitations of this study. Finally, recommendations for future application in nursing research, practice, education, and policy will be described.

**Key Findings Compared to Previous Research Findings**

The findings of this study will be compared to knowledge that is known. Shared language categories will be compared within the situational, behavioral, and psychological aspects of a safety culture to provide methodologic triangulation and complementarity. Findings will also be compared to the 2018 AHRQ SOPS trending database to provide a richer description of the discrepancy of results between staff nurses and nurse leaders (Famolaro, et al., 2018).

**Situational Aspects**

Situational aspects are what an organization has to promote a safety culture such as policies, regulations, and organizational structures (Cooper, 2000). Situational aspects, changeable organizational factors, support a normative approach to culture that result in the organization being cultured (Edwards et al., 2013). Several key situational aspects were described in this study including the organization prioritizes, resources, nursing interventions, and learning.
Organization Prioritizes

A review of safety culture literature in the United States identified the critical role leaders and the organization contributed to safety culture. They contributed by designing, fostering, and nurturing a safety culture through acknowledgement that hospitals were high risk environments, by aligning the organization’s vision and mission to support patient safety, developing competencies, and aligning resources (Sammer et al., 2010). However, evidence supporting those relationships is scarce (Sammer et al., 2010). The SOPS composite management support for patient safety found an 86% favorable response of leaders compared to a 65% favorable response from nurses (Famolaro et al., 2018). This composite is comprised of assessing if management provides a safety climate that promotes patient safety, the actions of management show patient safety is a top priority, and management seems interested in patient safety only after an adverse event happens.

Staff nurses and nurse leaders described inadequate staffing, lack of working equipment and supplies at the bedside, poor behaviors that went unaddressed, work processes that didn’t make sense, and the inability to influence these factors. The convergence in description between participants in this study suggests nurse leaders, a subset of leaders in the SOPS, do not represent the perspectives of the leader unit of analysis or staff nurses do not represent the nurse unit of analysis. There was discord in meaning of staff nurses and nurse leaders that provided insight into the discrepancy between leaders and nurses in particular, listening and responding.

In this study, the organization set the tone by declaring zero harm was possible. They then prioritized patient safety by aligning goals and providing transparency of safety outcomes to get everyone on the same page. Expectations were then set and leaders held others accountable;
however, there was discord in this meaning. Staff nurses and nurse leaders agreed there was a disconnect between organizational leaders and staff nurses.

**Zero harm is possible.** When the organization declared zero harm was possible, staff nurses and nurse leaders changed their mindsets and re-prioritized their focus and work. Participants in this study acknowledged no one wanted to cause harm; however, there were significant barriers in systems, processes, and people that made zero harm more of an ideology than a reality in the current state. This could explain why declaring zero harm without understanding the psychological and behavioral aspects wasn’t sufficient to positively impact a safety culture.

Targeting zero isn’t a well-defined construct in healthcare and lacks theoretical grounding. There is no empirical evidence that declaring zero harm is possible and actually improves a safety culture or patient safety outcomes, although it would be hard to disagree with the approach. Critics of the pursuit of zero harm in healthcare have cautioned this approach due to limitations with measurement and potential safety consequences, suggesting organizations pursue a more pragmatic approach (Meddings et al., 2020). A meta-analyses of 70 international studies identified a 6% pooled prevalence of preventable harm in hospitals, but there was a lack of consensus on what constituted a preventable harm and minimal quality improvement work focused on averting preventable harm (Panagioti et al., 2019). This study also suggested zero harm in healthcare was impossible because some harms were not preventable, for example known risks of treatment (Panagioti et al., 2019).

In this study, staff nurses described being human and humans make mistakes. Mistakes can and have led to harm. Therefore, declaring zero harm is possible may be influencing the perception that staff nurses, as previously described and corroborated in this study, are fearful
mistakes will be held against them or they will be blamed. The consequences of the demand of expecting perfection from human beings that are fallible has not been explored. Theoretical support of zero harm could strengthen this lacking body of research.

**Aligning goals and providing transparency.** The organization in this study, prioritized patient safety by aligning goals and providing transparency of safety outcomes. This was previously supported in the review of literature. In this study, nurse leaders experienced conflicting priorities, too many priorities, and a lack of shared understanding of priorities across departments. Staff nurses acknowledged their nurse leaders were busy, but were silent on nurse leaders having too many priorities. Nurse leaders being busy with too many priorities prevented them from spending time developing staff nurses and making sure patients were safe. Lack of leadership prioritization of patient safety and failure of leadership to prioritize and support patient safety has been previously associated with poor patient safety outcomes (Atkins & Cole, 2005; PSAG, 2017).

Having too many priorities is described in the literature. A theoretical model identified role overload among nurse leaders as the most important predictor of stress (p < .01). The second and third most important predictors were organizational constraints (p < .01) and role conflict (p < .01) (Kath et al., 2013). There has been an acknowledgement in the literature that nurse leaders were busy. Authors recommended nurse leaders shift from busy work to focused, strategic work through an energy preservation framework to promote vitality that drives engagement, productivity, and innovation (Shirey & Hites, 2015). However, empirical support of nurse leader tactics to promote prioritization and accomplishment of duties is lacking. This study identified how too many priorities made nurse leaders they were doing the best they could with what they had and not feeling like they were doing anything good at all. They also felt
ill-prepared to competently manage all their priorities. A survey of nurse managers (n = 37) found decreased levels of nurse manager perceived competency with managing the business and managing the people, taking six years to even reach a level of proficiency (Baxter & Warshawsky, 2014).

The role of the nurse leader is to provide the vital link between the organization’s strategy and the point of care (American Organization of Nurse Executives [AONE], 2015). Nurse leaders must gain expertise in the science of managing the business; the art of leading the people; and the leader within (AONE, 2015). Nurse leaders provide 24 hour accountability and responsibility for creating safe, healthy environments that support the work of the health care team and contribute to patient engagement (AONE, 2015). They are also influential in creating a professional environment and fostering a culture where interdisciplinary team members are able to contribute to optimal patient outcomes and grow professionally (AONE, 2015). Nurse leaders in this study not only lacked confidence in their skill level, they didn’t feel confident they could develop others as they weren’t supported to develop themselves. However, this is a key competency in the AONE nurse leader competency model (AONE, 2015).

Nurse leaders, in this study, also acknowledged leader turnover as a threat to the development of a safety culture. This impacted the ability to develop a culture when the culture was always changing. Job demands have been associated with leader turnover. In a mixed-methods study, 21 nurse leaders attributed chronic fatigue to 24 hour accountability and intense role expectations and described their intent to leave the role because of the job demands (Steege et al., 2017). A qualitative study of 125 staff nurses and managers in Canada identified 19% of the 60 staff nurses interviewed showed minimal interest in pursuing a role in nursing leadership because the perceived rewards were not greater than the perceived concerns (Wong et al., 2013). They observed the effects of nurse manager stress attributed to long hours, heavy workload, poor
work-life balance, and dissonance nurse managers experienced trying to meet the needs of nurses and the organization. Another qualitative study of Canadian nurse managers (n = 95) identified work overload/not having work-life balance, insufficient ability to ensure quality care, insufficient human/fiscal resources, and insufficient empowerment as factors influencing intent to leave (n = 28); whereas having work-life balance, support from an immediate supervisor, and the ability to ensure quality of care were factors influencing intent to stay in the nurse manager role (n = 67) (Hewko et al., 2015).

If nurse leaders hold such an influential and important role, attention needs to be paid to the fact that nurse leaders experience role overload, organizational constraints, and role conflict without any empirical support to help them navigate this situation successfully to create a healthy, professional work environment while fostering a safety culture. Support to ensure nurse leaders can successfully manage all their key competencies or a redesign of the role may be warranted.

**Set expectations and hold staff nurses accountable.** After declaring no harm was possible and prioritizing safety, nurse leaders set expectations and held staff nurses accountable. However, there was discord between staff nurses and nurse leaders when describing nurse leaders as effective in setting clear expectations or holding staff nurses accountable. Management support for patient safety, through leadership expectations and actions promoting patient safety, was supported by the SOPS framework (Famolaro et al., 2018). Although this was a higher scoring composite, there was still a discrepancy of favorable results between nurses (77%) and leaders (90%) (Famolaro et al., 2018). The discord in experiences with accountability found in this study informed the discrepancy in results.
A recent study identified a positive association between organization support, as part of an initiative to improve patient safety outcomes, and safety culture in 70 community hospitals achieving a 62.5% decrease in patient harm (p < .001) and 29% increase in safety climate scores (p = .00) (Frush et al., 2018). This was accomplished by leadership showing absolute and unwavering commitment to patient safety, setting patient safety expectations, holding others accountable, sharing transparent data, creating systems that support patient safety as part of daily management practices, and executive rounding (Frush et al., 2018). Other interventions included using well-established improvement science and focusing on components of culture including teamwork behaviors, mutual respect, accountability, and provider well-being (Frush et al., 2018).

There was no empirical evidence on how leaders hold each other and themselves accountable to foster a safety culture. Nurse leaders in this study, acknowledged they weren’t always accountable for clear communication, setting expectations, and holding staff nurses accountable.

In this study, staff nurses and nurse leaders felt staff nurses struggled having peer to peer accountability conversations. In fact, nurse leaders recognized a lack of professional accountability, whereas staff nurses were silent on the matter. Although professional accountability is a core aspect of professional nursing practice, a review of the literature (n = 26) identified no consistent language or definition of professional accountability in nursing (Krautscheid, 2014). Empirical evidence linking professional accountability to safety culture or management practices to influence safety culture was not found. This is also not a component of the SOPS survey.

 Hierarchical accountability is the traditional sense of the organization holding people accountable from a top-down approach (Tye & Dent, 2020). Building a culture of ownership, instead of a culture of accountability, promotes intrinsic motivation of doing something because
you expect it of yourself which is more impactful than doing something because it is expected by others (Tye & Dent, 2020). This supports the notion that situational factors alone won’t have a significant impact on safety culture as psychological aspects, such as intrinsic motivation, contribute to culture. Cultural accountability is a peer-to-peer process of employees holding each other accountable for standards and behaviors (Tye & Dent, 2020). The lack of progress in accountability may warrant exploring alternative accountability models.

**Disconnect between organizational leaders and staff nurses.** In this study, staff nurses and nurse leaders described a gap between what organizational leaders thought was going on at the bedside and what was actually going on at the bedside. Safety experts have proclaimed a safety culture is facilitated when organizational leadership is deeply involved with and attentive to issues frontline workers face and an understanding of the established norms and hidden cultures that guide behaviors (AHRQ, 2019).

Nurse leaders attempted to serve as staff nurse advocates to address this gap; however, described not having the ability or influence to advocate successfully on the behalf of staff nurses. In addition, this study identified how this made nurse leaders feel disrespected and frustrated. This role conflict was previously described. Staff nurses did not describe the nurse leader as a nurse advocate, in fact wondered who was advocating on behalf of their interests. An advocate “pleads, defends, or supports a cause or interest of another” (Merrian-Webster, n.d.). Advocacy requires a nurse leader to be able to problem-solve, communicate, influence, and collaborate (Tomajan, 2012). Nurses readily embrace advocating for the patient; however, advocating on behalf of the profession, oneself, or the work environment although clearly outlined in nursing standards of practice and code of ethics, is not consistently addressed (Tomajan, 2012). Nurse leaders advocate for appropriate resources to promote a positive work
environment (Tomajan, 2012). In this study, nurse leaders didn’t feel they had influence to remove barriers for their staff nurses or to promote a positive work environment. For example, they couldn’t get supplies at the bedside without going through executive leadership. They also struggled with securing the appropriate staffing models.

Advocacy also involves bringing groups together to address issues or concerns to promote a healthy work environment (Tomajan, 2012). In this study, physician behaviors were escalated repeatedly without being addressed. The nurse leaders didn’t feel they could impact the work environment related to addressing physician behaviors.

Other activities that promote the profession of nursing include teaching, mentoring, peer review, involvement in professional associations, community service, and knowledge development and dissemination (ANA, 2015). Nurse leaders described teaching, mentoring, and knowledge development and dissemination as activities they promoted. Relying on professional associations to develop nursing standards was also described in this study. However, nursing peer review and community service was not described. This study showed nurse leaders shared similar language describing safety culture as staff nurses, with variation in subthemes or meaning. This suggests nurse leaders perception of safety culture may not be represented within the majority of the AHRQ SOPS leader safety culture survey results. This study also informed the need for a powerful nurse advocate to influence safety culture and promote the unique and valuable role of nursing within a safety culture.

Staff nurses can also serve as powerful nurse advocates through memberships on committees, councils, and improvement teams (Tomajan, 2012). In this study, staff nurses acknowledged they could have a voice by joining councils and committees, but they were tired from working long shifts multiple days in a row, often times not getting a break in a challenging
work environment. Even though they were paid to participate in committees, councils, and improvement teams, they didn’t want to stay extra to attend a meeting. Staff nurses and nurse leaders also agreed although staff nurses could have a voice, their voices often weren’t heard. A significant relationship between shared governance and empowerment of staff nurses (p < .0001) indicate a well-designed shared governance model could impact staff nurse empowerment and promote the voice of the staff nurse (Barden et al., 2011).

The SOPS assesses the perception that the manager/supervisor seriously considers staff suggestions for improving patient safety (Famolaro et al., 2018). This is a higher scoring composite with leaders (92%) and nurses (78%). In this study, staff nurses felt their nurse leaders listened, but felt a disconnect with organizational leadership. Supporting staff nurses to want to participate to share their valuable voices can be accomplished through administrative support and modification of the staffing model and working environment to facilitate participation.

Executive rounds were a method that connected executive leaders to frontline staff. Several staff nurses and nurse leaders that participated in executive rounds described executive rounds as a positive experience. Executive rounds connected executive leaders to staff nurses to support alignment, prioritize, and show leader support of patient safety. There were mixed empirical results associating executive rounds with improved safety culture (Singer & Tucker, 2014). Implementation differences, intensity of exposure, executive leaders’ understanding and engagement when conducting rounds, willingness of frontline workers to speak up, and follow up barriers impacted the effectiveness of executive rounds (Singer & Tucker, 2014).
Resources

Staff nurses described inadequate staffing as contributing to being too busy and not having enough time to provide safe care as the primary barrier. Nurse leaders provided a similar description with slightly differing perceptions of barriers and facilitators. The research results pose the question, if the role of the nurse leader is to make sure staff nurses have what they need to provide safe care, and they acknowledged barriers, then who is advocating for these critical resources on behalf of the staff nurse?

Inadequate staffing. Staffing emerged as the most frequently cited and emotionally charged negative safety culture experience in this study. Although staff nurses and nurse leaders acknowledged staffing as a barrier, they differed in their opinion of barriers and facilitators with staffing. Staffing is a factor in the SOPS, however it was previously reported as having the lowest reliability (Sorra & Nieva, 2004). This composite is also a lower scoring item among leaders (64%) and nurses (53%) (Famolaro et al., 2018).

A systematic review which included the results of a meta-analysis (n = 27), a narrative review (n = 28), and 15 new studies identified strong evidence of relationships between increased nurse staffing per patient ratios and decreased mortality outcomes with no reported serious patient harms associated with an increase in nurse staffing ratios (Shekelle, 2013). However, there was no study that identified increased staffing ratios as an intervention to improve patient outcomes (Shekelle, 2013). Mandated nurse to patient ratios in California have resulted in fewer patients per nurse on average, significantly decreased patient mortality, increased nurse job satisfaction, decreased burnout, and increased the ability for nurses to care for patients compared to two states that didn’t have mandated ratios (Aiken et al., 2010).
Evidence shows nurse staffing per patient ratios are effective in reducing harm and improving the workplace environment, yet staff nurses and nurse leaders in this study and in the SOPS identified staffing challenges. This study showed the barriers were much more than just ratios. Sitters or care companions were described by staff nurses as a critical facilitator to managing “high needs” and impulsive patients to prevent falls despite a systematic review (n = 20) that identified limited evidence for the use of sitters to reduce falls (Greeley et al., 2020).

Nurse leaders described force over or making staff nurses stay four extra hours after their 12 hour shifts as a facilitator for staffing. Staff nurse exhaustion was associated with long hours, multiple shifts in a row, and the physically and emotionally demanding nature of their work. This created a barrier to working together as a team because they were exhausted leading to acting crabby and being too tired to help others. Nurse leaders did not describe the impact force over or challenging work practices had on safety culture. Leadership failure to recognize and address burnout was identified as a factor impacting poor safety outcomes (PSAG, 2017). Long working hours were associated with poor patient safety grades and poor teamwork scores (Wu et al., 2013). As described in this study, a multiple state study in the United States identified direct care nurses working in a non-ICU setting (n = 16,074) reported working 12 hour shifts or more (64%), 12 hour shifts were the median, with 46% disagreeing they had time to take a 30 minute break within that shift (Witkoski et al., 2013). Compared to direct care nurses working < 10 hours in any hospital setting (n = 22,275), direct care nurses had a higher odds of reporting a poor hospital safety grade when they worked 12-13 hours (OR = 1.21, 95CI[1.11,1.31], p < .0001) and when they worked > 13 hours (OR = 2.25, 95CI[1.89,2.68], p < .0001). There was also a higher odds of poor quality of nursing care reported by direct care nurses who worked
12-13 hours \( (\text{OR} = 1.27, 95\% \text{CI}[1.13,1.41], p < .0001) \) and when > 13 hours was worked \( (\text{OR} = 2.43, 95\% \text{CI}[2.04,2.89], p < .0001) \).

Almost 20 years after the IOM report to support safe patient care, recommendations to improve the safety of care by supporting prohibition of mandatory overtime to reduce extended work hours is not routinely followed (IOM, 2003). A scoping review reported key historical drivers for 12 hour shifts were financial savings, a positive impact on recruitment and retention, and improved continuity of care (Harris et al., 2015). The review \( (n = 95) \) identified inconclusive evidence of the effects of 12 hour shifts on risks to patients, patient experience, risks to staff, staff experience, and impact on the organization. Further studies to identify the risks and benefits of 12 hour shifts is required as staff nurses described the physical, emotional, and mental exhaustion created by 12 hour shifts.

**Nursing Interventions**

As described in this study, safer systems of care were described in the literature as, but not limited to, evidence-based practice bundles, checklists to reduce practice variation, and supportive technology solutions (Leape, 2015). Staff nurses described nursing interventions as too black and white causing them to be under or over-utilized. They also described a reliance on alarms and warnings as negatively impacting critical thinking skills. Nurse leaders had mixed reactions to nursing interventions describing them as either too grey and not prescriptive enough, or too black and white not allowing for nursing judgment or critical thinking for individualized patient care. Safer systems of care have resulted in improvements in patient safety outcomes (AHRQ, 2014; Longmate et al., 2011; MHA Keystone Center, 2019). However, safer systems have been plagued by lack of spread and adoption (Leape, 2015).
In this study, staff nurses and nurse leaders identified many barriers to spread and adoption of nursing interventions including: they didn’t understand the whys, they were confusing, they conflicted with nursing judgment, they weren’t easily accessible, and they were outdated. They described situations in which risk assessments recommended interventions that weren’t safe for the patient or the staff nurse. They also described challenges because of differences in how individuals go about things, lack of nursing experience to apply appropriately, they were too busy and forgot, the resources weren’t available, and the patient or family didn’t agree with the interventions. These barriers were consistent with empirical evidence that identified organizational barriers that were out of the nurses control such as insufficient time, lack of information sources of evidence-based practice (EBP), insufficient tools related to research, individual barriers including lack of knowledge and skills, perception of lack of influence to change practice, and unsupportive colleagues (Black et al., 2015). An integrative review (n = 20) found individual barriers to EBP may be influenced by programs or interventions designed to address barriers in incorporating EBP into practice by increasing knowledge and improving nurses’ attitudes, beliefs, or values related to EBP (Middlebrooks et al., 2016). However, not all the studies identified an impact with EBP programs and increased knowledge or improvement in individual barriers (Middlebrooks et al, 2016). The need to provide individualized patient care as a barrier to implementing EBP was not identified in the integrative review. Safety interventions are not assessed in the SOPS.

Checklists, alarms, warnings, and double checks were described, in this study, as facilitators to support busy staff nurses to ensure safe care was provided. Each of these have been supported in the literature to positively influence safe behaviors (Bates & Singh, 2018). Lack of support and response to alarms was also described in this study because staff nurses
were so busy and everyone was on alarms. Alarm fatigue caused by desensitization related to excessive alarms and the burden of responding to false positive and nonactionable alarms is supported in the literature (Turmell et al., 2017).

**Learning**

Learning was described by staff nurses and nurse leaders as reporting safety concerns, timely follow up and real time feedback, and focus on fixing the process and not blaming the person. Staff nurses identified needing time to learn from each other to build experience and judgment. Nurse leaders described their role in supporting nursing knowledge and education. Learning was identified as a factor of safety culture that occurred when organizations valued and learned from mistakes and sought new opportunities to improve (Sammer et al., 2010).

Learning was also empirically supported through the SOPS through feedback and communication about errors, organizational learning-continuous improvement, communication openness, and nonpunitive response to errors (Sorra & Nieva, 2004). Organization learning-continuous improvement received 85% favorable results among leaders and 72% among nurses (Famolaro et al., 2018). The item, mistakes have led to positive change, had the largest discrepancy between leaders (82%) and nurses (62%). This was corroborated in this study when staff nurses wondered what happened to the events they reported; however, nurse leaders felt they did a good job following up and sharing learnings. Feedback and communication about errors also showed discrepancies between leaders (81%) and nurses (65%), also corroborated in this study (Famolaro et al., 2018). Nurse leaders in this study shared follow up at safety huddles; however, safety huddles only happened once a day and never happened on night shift, possibly explaining the staff nurse perception that safety events had no follow through. Nurse leaders also described the confidential nature of follow up contributing to the perception of lack of
follow through.

A systematic review (n = 18) was conducted to identify the nurse leaders’ role in influencing the development of staff nurse knowledge and competence. The study identified organizational culture that supports learning, sharing of information, learning together, reciprocal feedback, leadership characteristics including transformational leadership, Magnet hospital status, and leader traits and competencies positively influenced the development of staff nurse knowledge and competence (Lunden et al., 2017). The study also identified factors inhibiting knowledge management including an organizational culture that lacked motivation to learn, lacked support for learning, lacked knowledge, organizational traits, lack of time, and lack of human resources. Organizational traits were small capacity of an organization, non-Magnet status, and individualistic and task-oriented organizational culture. In this study, nurse leaders identified that staff nurses didn’t participate in medical-surgical nurse certification programs. Medical-surgical nurse certification is a mechanism for staff nurses to build and demonstrate commitment, confidence, and credibility with their nursing practice (Academy of Medical-Surgical Nurses [AMSN], n.d.). A review of the literature (n = 8) identified inconsistent empirical evidence that nursing certification had an impact on patient outcomes (Biel et al., 2014). The reasons staff nurses weren’t motivated to participate in nursing certification programs was neither identified nor explored in this study. Staff nurses did not describe certification programs as learning. No staff nurses were certified in this study.

Situational aspects in healthcare are challenging because the context of a medical-surgical unit is neither highly controlled nor tightly supervised (Edwards et al., 2013). Situational aspects both facilitated and inhibited a safety culture. The results of this study informed how and why situational aspects influenced behavioral aspects.
Behavioral Aspects

Behavioral aspects are described as what people do, or the work (Cooper, 2000). This is described as the pragmatic approach to culture or the way the work is done (Edwards et al., 2013). Staff nurses work in a dynamic environment in which behavior is self-regulated based on situational and psychological aspects (Cooper, 2000). Behavioral aspects emerged in this study including relationships with patients, nursing interventions, relationships with colleagues, and learning.

**Relationships with Patients and Nursing Interventions**

Staff nurses described a process of knowing patients, getting eyes and extra eyes on patients, and having a plan in place as how they provided safe care. Nurse leaders shared a similar process. Making sure was the process staff nurses and nurse leaders used to ensure that patients were safe and staff nurses had what they needed to provide safe care. Making sure is described within relationships with patients and nursing interventions. Time to know the patient supported relationships with patients and nursing interventions. Other nursing interventions were workarounds, BSR to know the patient while getting eyes on the patient, and handoff communication.

**Making sure.** Every nurse and most nurse leaders (n = 8) described making sure as a process to ensure patients received safe care. A substantive, making sure theory was developed by Schmidt (2010) describing the social process registered nurses used to watch over their patients. The process included knowing what’s going on, being close, watching and not taking anything for granted, taking action, and protecting patients from harm and negative events. This study corroborated those results.
A concept analysis described surveillance as a nursing process that used behavioral and cognitive processes of monitoring, evaluating, and acting upon emerging indicators (Dresser, 2012). Antecedents of surveillance included staffing, skill mix, human and material resource adequacy, collegial relationships with physicians, nurse expertise, education, experience, and knowledge. The outcomes were described as, when performed adequately, lower rates of mortality and failure to rescue with cost savings by avoiding adverse events (Dresser, 2012).

Each of the antecedents were described as barriers or facilitators to safety culture in this study. For example, working together as a team was described as a facilitator to help staff nurses get through busy days and keep patients safe. Poor relationships with physicians were described as a barrier. Nurse leaders were concerned about lack of staff nurse and nurse leader education. In this study, additional challenges included monitoring, evaluating, and acting upon emerging indicators. Acting upon emerging indicators was challenged by needing to work with others who pushed back staff nurses such as the ICU staff and physicians and not having time.

Situational aspects that facilitated making sure were alarms, warnings, checklists, and safety checks. However, alarms, warnings, checklists, and safety checks were not always reliable. Staff nurses also didn’t always have enough time to respond. They also had the ability to bypass these which were described as precursors to unsafe acts.

**Time to know the patient.** Staff nurses described needing time at the bedside, with the patient, to make an assessment and apply their nursing judgment to identify the patient’s risk and apply the appropriate interventions. Staff nurses described making decisions based on their experiences with other patient situations. This process was empirically supported in the literature. An integrative literature review (n = 18) identified factors and processes medical-surgical nurses used to make patient care decisions (Nibbelink & Brewer, 2018). Key findings
were: nurses’ clinical judgment was influenced by previous experiences rather than the actual clinical situation; time spent as a nurse led to confidence and increased trust in decision-making; and intuition was based on recognition of patterns or similar experiences.

Inexperienced nurses used protocols to support decision-making to increase confidence in decision-making. Experienced nurses relied on protocols for unusual situations because of a perception protocols interfered with patient specific care and confidence in their ability to make patient specific decisions rather than simply follow a protocol, this was corroborated in this study (Nibbelink & Brewer, 2018). Inexperienced staff nurses, in this study, appreciated detailed nursing interventions to facilitate decision making; whereas, experienced staff nurses found them too detailed and impractical to access during time-constrained situations.

Autonomy to make decisions was influenced by experience as was the urgency of the situation (Nibbelink & Brewer, 2018). This was corroborated as staff nurses didn’t hesitate to call a rapid response for a sudden decline in patient status. During less urgent situations staff nurses would also seek out expertise by leaning on others with more experience.

Other findings were collaboration with experienced colleagues was preferred over their own experience or protocols; protocols were difficult to reference during time-constrained situations; organization and unit culture influenced decision-making based on concerns related to how they will be perceived by others, all corroborated in this study (Nibbelink & Brewer, 2018). In this study, nursing experience predicted how a patient would progress. Staff nurses relied on other staff nurses to share their experiences and knowledge to facilitate safe decision-making. Previous negative experiences and fear of looking incompetent to their co-workers and physicians caused hesitancy for staff nurses to reach out for decision-making help. However, as patient advocates they escalated or called a RRT if the patient’s condition was deteriorating.
Understanding the patient status, which developed over a period of time, facilitated decision-making (Nibbelink & Brewer, 2018). This occurred through time the nurse spent physically with the patient to support more holistic decisions based on a deeper understanding of individual patient responses. Staff nurses in this study provided rich description on why they needed time with their patients and the negative impact of not having time with their patient had on patient safety. This also contributed to distress caused by their inability to provide safe care. Nurse leaders did not share that perspective. Time to spend with the patient was identified as highly valued to know the patient and pick up on cues; however, the lack of time to know the patient to support decision making was a barrier to safety culture. The EMR supported knowing the patient but had limitations.

**Workarounds to get what the patient needs now.** Nursing interventions were identified as a situational factor. However, the barriers described previously with nursing interventions influenced staff nurse decisions to create workarounds to get what the patient needs now. Workarounds were often justified as staff nurses believed they were making the safest decision to get what the patient needed immediately at that time, which is consistent with other research (Debono et al., 2013). Although there is a perception workarounds are routine practice in nursing, there is no empirical evidence to support this claim; however, workarounds make national headlines when human errors result in harm to patients. This was identified in this study as perpetuating fear within staff nurses. Time pressure, lack of safety benefits of interventions, and barriers in technology contribute to workarounds (Bates & Singh, 2018). These barriers were described in this study as precursors to workarounds.

A systematic review of workarounds in acute care identified staffing workload, productivity pressures, poor leadership, and lack of nurse involvement in decision-making as
contributors to workarounds (Debono et al., 2013). All these factors, except poor leadership, were described in this study as conditions leading to workarounds. Participants in the study also identified work processes that didn’t make sense, not understanding the why, and that the workaround wouldn’t cause patient harm as justification for workarounds, also supported empirically (Debono et al., 2013).

Workarounds were described as a necessity because of a lack of response by physicians, not having equipment, supplies or resources readily available at the point of care, and time pressures to address patient needs immediately. In the study by Debono et al. (2013) a lack of availability of doctors, equipment and supply barriers, and the need to get what the patient needed in a timely manner were also precursors to workarounds. Similarly, Debono et al. (2013) identified fatigue, cognitive load, not being familiar with policies, not understanding the why, increased patient risk if the policy was implemented, and not listening to nurses’ voice as precursors to workarounds. Each of these were described in this study. Staff nurses described there’s just so much to do and forgetting to do things because they are so tired as well as barriers with policies, not understanding the why, practices that created more risk than benefit, and lack of nurse input in safety interventions as precursors to workarounds.

Staff nurses described interruptions as a barrier to safe care in this study and were associated with contributing to workarounds in the literature (Potter et al., 2005). Tucker and Spear (2007) described interruptions, not having physician orders, medication problems, supply barriers, and broken or missing equipment as barriers in the system that contributed to workarounds. Again, these were all described in this study. Staff nurses responded with guilt and embarrassment when they conducted workarounds, acknowledging they were at times taking a risk.
**Bedside shift report.** Staff nurses and nurse leaders described BSR as an evidence-based practice that was not performed consistently. Staff nurses and nurse leaders identified many barriers to conducting BSR, however, they believed many were just excuses and there really was no good excuse. A systematic review identified patients and families described BSR positively and reported feeling more informed and engaged in care (McCloskey et al., 2019). Staff nurses, in this study, also described the value BSR brought by enhancing knowledge about the patient and allowing nurses to spend more time with their patients. Barriers were described as a desire to uphold confidentiality and privacy and varying desire and ability; however, challenges can be overcome with adaptive practices.

**Handoff communication.** Communication across transitions of care was described as a barrier in this study due to staff nurses being busy and unreliable and inaccurate information in the EMR. Time pressure to keep patient flow moving was a barrier to handoff between departments. There was a lack of expectation and accountability to perform BSR during patient transfers from other units. Handoff communication remains a low scoring composite in the SOPS without much improvement over time (Famolaro et al., 2018). Previous research described teamwork, perceptions of staffing, and management support for safety were significantly associated with successful handoffs (Richter et al., 2016). These facilitators to support handoffs between units were not described in this study. Handoffs were the lowest scoring composite for leaders (51%) and nurses (48%) in the SOPS (Famolaro et al., 2018).

**Relationships with Colleagues**

Several key behaviors emerged within the relationships with colleagues. Staff nurses escalated to get what the patient needed. They also worked together as a team to keep patients safe.
**Escalating to get what the patient needs.** Staff nurses leaned on each other for additional expertise. Each staff nurse and nurse leader described, in spite of negative experiences with escalating, not hesitating to escalate to get what the patient needs now. They also described lack of physician response or inappropriate physician response as the main reason for escalating.

Assertive communication in a clinical situation requires immediate action and appropriate persistence until there is a clear resolution to prevent harm (Premeaux & Bedeian, 2003). Staff nurses in this study didn’t hesitate to escalate or get what the patient needed. Trusting, collaborative relationships that were built over time were described as facilitators to speaking up for safety by staff nurses and nurse leaders. Trusting relationships facilitated respectful communication and speaking up. Staff nurses felt empowered when reacting to a patient who had an immediate change in status requiring immediate intervention due to their role and obligation as a patient advocate. However, they often negotiated between each other before they reached out to others in less urgent conditions.

A systematic review identified perceived patient risk, hospital administrative support, policies, team work, safety of speaking up, and relationships among colleagues as factors influencing speaking up (Morrow, 2016). Staff nurses in this study felt empowered to speak up when they felt their nurse managers had their back; this was also supported in the literature (Morrow, 2016). Also, this study identified a barrier to speaking up was lack of follow up and poor repeated behaviors of staff nurses and physicians. Poor behaviors didn’t get addressed so staff nurses didn’t bother saying anything anymore.

There was an overarching theme of fear that prevented speaking up in non-urgent conditions and a hesitancy to speak up that could negatively impact safe patient care. The fear
was described as a fear based on previous negative experiences of being scolded or questioned from predominantly physicians but also was described at times when reaching out to the ICU or each other. A metasynthesis of speaking up behaviors identified hierarchies and power dynamics and communication that was unsafe and ineffective negatively affected safety voice (Morrow et al., 2016). Embedded expectations, nurse behaviors, and nurse managers having a powerful positive or negative voice had an effect on safety voice (Morrow et al., 2016). Power gradients were obvious in this study and were stated as “I’m just a nurse” (RN06) when discussing interactions with physicians. The ability for staff to question the actions and decisions of those with more authority was a low scoring item for nurses (48%) compared to leaders (73%) in the SOPS, this study corroborated those findings (Famolaro et al., 2018).

Nurse leaders described their role in creating a culture that challenges unsafe practices and behaviors; however, nurse leaders didn’t describe a process for improving systems and processes to prevent the need to challenge unsafe practices. Communication openness was another composite that showed discrepancies between leaders (80%) and nurses (64%), suggesting leaders were unaware of the challenges nurses face in speaking up and communicating (Famolaro et al., 2018).

**Working together as a team.** Working together as a team in a collegial, collaborative, cooperative environment facilitates open, safe, respectful communication and is a necessary component of safety culture (Sammer et al., 2010). The evidence supports that teamwork training can improve relationships between all disciplines, suggesting this is a skill that can be taught (Blegen et al. 2010; Pettker et al., 2011; Provonost et al., 2005; Sexton et al., 2011). As described in this study, teamwork was also a factor supported by the SOPS; however, nurses perceived working together as a team as more favorable within their units (83%) than across
units (59%) with leaders sharing similar perceptions (Famolaro et al., 2018). This study did not identify any teamwork training that occurred.

In this study, although staff nurses identified a few individuals as not willing to help and being crabby as barriers to working together as a team, for the most part they relied on each other for knowledge and to get through their busy days. Working together as a team on the unit was facilitated by having relationships with their co-workers. These relationships built over time. Negative relationships between nurses are established in the literature as influencing quality and safety of patient care (Purpora et al., 2015). Lateral violence was inversely related to peer relations (p < .01), inversely related to the quality of patient care (p < .01), and was positively correlated with adverse events (p < .01). However, the relationship between staff nurses and each other, other than lateral violence, and safety culture has not been studied.

**Learning**

Several key behaviors emerged within the learning shared language category. Reporting safety concerns was necessary for learning. Leader behaviors supported “having our backs.”

**Reporting safety concerns.** Reporting safety concerns was described by staff nurses and nurse leaders as necessary for learning. Several barriers were described including fear from staff nurses and lack of leader follow up. Nurse leaders were extremely frustrated with the perception of fear staff nurses described because they felt they reiterated to staff nurses that reporting was nonpunitive and used for learning. Staff nurses described the fear as fear of jeopardizing relationships and fear of getting in trouble. Fear of jeopardizing relationships was created by a lack of organizational infrastructure and process to hold people accountable for poor behaviors. Only one staff nurse described an experience with reporting that felt punitive, however the other staff nurses described positive experiences and positive changes in the system to make care safer.
Other than staffing, nonpunitive response to error is traditionally a low scoring composite that is supported by the SOPS (Famolaro, 2018). Previous findings identified a willingness to report safety incidents was influenced by the transparency of the incident reporting system, the effectiveness of reporting, and management support (Pfeiffer et al., 2013). Nurse leaders corroborated those findings in this study as a transparent incident reporting system was described as a facilitator.

Another study, also corroborated by this research, identified retaliation fear as the primary reason employees wouldn’t report an error; however, increased psychological safety increased error reporting (Derickson et al., 2015). Nurse leaders in this study built trusting relationships with their staff nurses as a mechanism to reduce fear; however, there was still a staff nurse perception of fear of getting in trouble that was not substantiated by any personal experiences of getting in trouble. Fear of retaliation from physicians and co-workers that could jeopardize relationships was described by staff nurses. Keeping feedback anonymous facilitated staff nurse reporting. The SOPS identified a disparity in perceptions of a nonpunitive response to errors between nurses (47% favorable) and leaders (68% favorable) which encompassed believing mistakes are held against people, when an event is reported it feels like the person is written up, not the problem, and nurses worried mistakes were kept in their files (Famolaro, et al., 2018). These experiences were all described and informed the discrepancy and unfavorable perceptions.

**Leader behaviors.** The role of a nurse leader was previously described as was the role of the nurse leader in creating a safe, healthy environment. Leader behaviors that facilitated a safety culture were described by staff nurses in this study as non-judgmental, “having our backs”, giving staff nurses the benefit of the doubt, actually listening, and asking if staff nurses
have questions. Nurse leaders described their role in listening to understand, advocating for my
team, open door, open honest conversations with nurses, showing gratitude, following up,
coaching, and encouraging as behaviors they used to support staff nurses. Leader behaviors that
were supported in the literature positively impacting safety culture were trusting relationships,
rounds, education, and providing support in a relationship-oriented leadership style (Weaver et
al., 2017). All of these behaviors were described in this research; however, staff nurses were
silent on their nurse leaders rounding. Overall, staff nurses described positive relationships with
nurse leaders.

Situational aspects described in this study were not always embraced or supported as
evidenced by behavioral aspects. This study described barriers associated with situational aspects
that influenced behavioral aspects and were identified as precursors to unsafe acts. This helped
explain why culture was a barrier to embracing safety interventions. Behavioral aspects are also
influenced by psychological aspects.

**Psychological Aspects**

Psychological aspects influence behavioral aspects. Psychological aspects are how
people feel, this is typically measured in safety climate or safety culture surveys (Cooper, 2000).
Surveys measure the perception of how people feel, however they can’t describe the cultural
norms, attitudes, and values (Edwards et al., 2013). The perception of fear was already described
above as a barrier to safety culture. Several psychological aspects were evident within the
relationships with colleagues and nursing interventions shared themes.

**Relationships with Colleagues**

Several key psychological aspects including conflict related to scope of practice, poor
relationships with physicians, power gradients and hierarchies, and empowerment emerged
within relationships with colleagues. Staff nurses were challenged when they couldn’t get a response to get what the patient needed because it was outside of their scope of practice. Staff nurses described exhausting all of their resources before having to interact with physicians due to poor relationships between staff nurses and physicians. Power gradients and hierarchies with physicians were described by staff nurses and nurse leaders as a barrier to safety culture. Feeling empowered was described from the perception of staff nurses when they were in a position to advocate for their patient and from a nurse leader perspective when they focused on trying to empower staff nurses.

**Scope of practice.** What is a medical-surgical nurse? Nursing is the protection, promotion, and optimization of health and abilities; prevention of illness and injury; facilitation of healing; alleviation of suffering through the diagnosis and treatment of human response; and advocacy in the care of individuals, families, groups, communities, and populations (ANA, 2015). Medical-surgical nursing is a unique specialty with a unique body of knowledge (AMSN, n.d.). In this study, staff nurses and nurse leaders agreed staff nurses should have the ability to use clinical judgment to diagnose and respond to patient responses within the scope of nursing practice. However, staff nurses were challenged in getting responses to the patients’ needs when the response was outside of their scope of care and when nursing interventions weren’t sufficient. For example, when a patient required a physician order to manage pain that wasn’t responding to nursing interventions or when a patient was in respiratory distress and needed to be intubated. These were outside the staff nurse scope of care. Staff nurses didn’t feel respected for their role in providing safe care.

Nurse autonomy is an essential element of professional status, however autonomy in nursing is complex with various definitions (Varjus et al., 2011). A review of the literature (n =
36) identified nurses were expected to practice autonomously; however, they felt they had little support and were hindered by limited autonomy when trying to safeguard the patient’s interests when there was conflict between the patient’s interests and others such as physicians or colleagues (Varjus et al., 2011).

Empowerment enhanced autonomy of nurses in clinical hospital practice. A qualitative study described and interpreted staff nurse experiences (n = 11) with autonomy in nursing practice (Skar, 2009). Staff nurses experiences of autonomy were to have a holistic view, to know the patient, to know that you know, and to dare (Skar, 2009). In this study, staff nurses described each of these experiences. They also acknowledged that they know through experience and if they don’t know they reach out to other staff nurses who have had experiences and share their knowledge to facilitate to know. To dare occurred when there were no formal standards or routines to follow. Rowe (2010) described the first three themes as not autonomy but the acquisition and development of knowledge and skills needed to practice confidently and competently in a familiar situation. However, to dare is a starting point for autonomy in nursing practice as there are no rules to follow.

In this study, there was debate among leaders as to how prescriptive standards should be when guiding nursing practice. This was described in nursing interventions. However, it was in this grey space where staff nurses in this study felt significant distress in not being able to respond to the patients’ needs. Physicians trained to diagnose and treat diseases and nurses trained to respond to suffering and facilitate healing will naturally be at odds with one another, particularly when the response to medical treatment creates suffering and inhibits healing for the patient. The lack of respect of the staff nurse role by physicians was described in this study and created significant resentment and distress for staff nurses.
Poor relationships with physicians. Lack of or inadequate physician response was also described in this study. A review of the literature (n = 10) identified an alarming existence of disruptive physician behavior as perceived by nurses (Saxton et al., 2009). Although disruptive physician behavior had differing definitions, verbal abuse, condescending language, failure to respond, and intimidating behaviors were described. These behaviors were described in this study. Disruptive behavior was associated with increased staff nurses’ intent to leave the organization, a reported increase in patient errors by staff nurses, and staff nurse inability to concentrate or engage in critical thinking (Saxton et al., 2009).

Power gradients. The ability to understand and respect each disciplines’ individual, unique role in providing safe care to the patient is necessary infrastructure to support a safety culture. In this study, power gradients and conflict between staff nurses and physicians were barriers in creating a collaborative relationship between the staff nurse and physicians. Staff nurses and nurse leaders described power gradients with physicians and “I’m just a nurse” as barriers to a respectful, professional, collaborative relationship with physicians. Staff nurses didn’t feel like they were respected or trusted as eyes or ears for the patient. They described needing to feel trusted, listened to, and respected.

Nurse leaders described fear of physicians yelling at staff nurses or jeopardizing relationships with physicians as reasons staff nurses hesitated speaking up and escalating. This negatively impacted staff nurses’ willingness to speak up and communicate with physicians. Despite filing multiple reports of rude and disrespectful physician behavior, staff nurses did not see a change in the physician behavior. Consequently, staff nurses were balancing advocating for patient needs and also trying to not upset the physician so they didn’t lose their support. Nurse leaders felt similarly and because of their lack of power and influence to address poor
physician behaviors, they consequently leaned toward managing poor physician behaviors by encouraging and modeling conversations with physicians for staff nurses. Organizational tolerance of rude behaviors negatively impacted staff nurses’ willingness to speak up and communicate with physicians.

Power gradient assessments exist in the SOPS described as feeling free to question decisions or actions of those with more authority (Famolaro, 2018). This has been a low scoring composite over time. A systematic review identified nurses as wanting to work collaboratively with physicians to coordinate care, equity in decision-making and developing the patient’s plan of care, a two-way knowledge exchange with their input and concerns considered, the ability to share their concerns and suggestions, and valuing open and clear communication with active listening from physicians (House & Havens, 2017). Siedlecki and Hixson (2015) reported that physicians rated relationships with nurses significantly better than nurses and 55% of nurses said physician’s behavior negatively impacted nursing decisions. An integrated literature review identified physicians viewed physician-nurse collaboration as less important than nurses but rated the quality of collaboration higher than nurses (Tang et al., 2013). Communication, respect and trust, unequal power, understanding professional roles, and task prioritizing were identified as factors affecting nurse-physician collaboration, while interdisciplinary rounds and interprofessional education emerged as improvement strategies (Tang et al., 2013).

Nurse-physician collaborative rounds were described as a facilitator for safety culture and safe patient care in this study; however, nurse leaders described them as a need to know only basis and infrequently conducted together with the nurse. Nurse leaders described an environment in which physicians round and teach staff nurses as an ideal environment to support patient safety, however this practice was not described consistently at this study site and was
physician dependent. Nurse leaders also found value in staff nurses and physicians learning from each other. Staff nurses’ perspectives of nurse-physician collaborative rounds was the physician shared what they needed, the staff nurse shared what they needed, and a plan was developed with clear follow up. The perspective of the physician was not assessed in this study.

Nursing as a profession brings a defined, empirically supported, nursing science, and an ability to understand and translate a holistic view of the patient through relationships developed with patients by being with them 24/7 to make sure the patient is safe. Participants in this study acknowledged leaning on others for their expertise to keep patients safe through collaborative relationships with the patient at the center. According to Nursing’s Social Policy Statement (2010) collaboration requires working relationships that consist of true partnerships, power valued by all, with recognition and acceptance of separate and combined spheres of activity and responsibility, mutual safeguarding of the legitimate interests of each party, and commonality of goals (ANA, 2010). Although all participants in this study believed everyone was doing their best to keep patients safe, poor relationships and lack of collaboration, particularly with physicians, undermined safety culture. Staff nurses and nurse leaders also didn’t feel empowered.

**Empowerment.** In this study, nurse leaders didn’t believe staff nurses realized they had power. Nurse leaders described their role in coaching, encouraging, and role modeling behavior to support staff nurses in feeling empowered. Staff nurses described being new or inexperienced and lacking confidence as barriers to speaking up and asking questions or feeling empowered; however, as they gained experience they gained confidence and empowerment. Empowerment enhances the ability to make decisions and contributes to safer care and a safety culture (Laschinger, 1996). Kanter’s theory of empowerment described having the power or
ability to access and mobilize resources and having opportunities within the work environment empowered individuals to achieve organization goals and effectiveness (Laschinger, 1996). A systematic review of nurse work environments in the United States identified how promoting nurse empowerment, engagement, and interpersonal relationships at work helped achieve a healthy work environment and improved quality of patient care (Wei et al., 2018).

Empowerment was described in terms of the environmental structures supporting empowerment. Empowerment for nurses is more complex and consists of not only the structural empowerment within the workplace, but a psychological belief in one’s ability to be empowered to shape their work role and context, and acknowledgement that there is power in the relationships and caring that nurses provide (Manojlovich, 2007). Although this recommendation is slightly outdated, the results of this study suggest there is still a need to have a more thorough understanding of all three components to help nurses become empowered and use their power for better patient care.

Patricia Benner (1982) developed a novice to expert framework for nursing in acute-care settings based on the Dreyfus skill acquisition model. This frameworks described the movement of a staff nurse from novice to expert by moving from reliance on abstract principles to the use of experience as paradigms and the ability to understand a situation. This moves the situation from a compilation of equally required bits of information to a more complex whole in which only certain parts are relevant. Lack of experience was not only described as a barrier to empowerment, but also described as a barrier for applying nursing judgment to situations in this study. Benner (1982) described the novice staff nurse as having no experience with situations in which they were expected to perform tasks and an inability to use discretionary judgment. Although novice staff nurses rely on rules to perform tasks, they can’t discern if the tasks are
relevant in the current situation. This concern was raised by experienced nurses in this study in relation to the application of evidence-based practice (EBP) standards. EBP caused unsafe situations for novice staff nurses as they tended to under or over-utilize interventions because of their inability to discern appropriateness. This is a consideration that warrants further study as it was described as a contributor to a lack of safety culture and unsafe care. The novice to expert framework may also explain why novice staff nurses tend to have more favorable safety culture survey responses than more experienced staff nurses as they may not fully understand the whole of the situation (Famolaro et al., 2018).

Medical-surgical nursing is the largest nursing specialty in the United States (AMSN, n.d.). Medical-surgical nurses provide care to adults with a variety of medical issues and adults who are preparing for or recovering from surgery, requiring a broad knowledge base (AMSN, n.d.). Medical-surgical nurses have advanced organizational, prioritization, assessment and communication skills and are leaders in coordinating care among the interprofessional health care team (AMSN, n.d.). Other than the charge nurse and clinical leads, neither staff nurses nor nurse leaders recognized staff nurses as leaders in this study.

A qualitative study identified a shared perception between staff nurses and nurse leaders that staff nurses were influential employees; however, staff nurses identified charge nurses as formal leaders (73%) more often than nurse leaders (48%) (p = .04) (Weaver et al., 2018). The clinical lead or charge nurse role was the most valued expert resource available on the unit in this study, not only for having expert knowledge but for being able to facilitate conversations with physicians as they described having built positive, trusting relationships with physicians over time. When they were busy taking an assignment or dealing with staffing challenges they were not available as resources to staff nurses.
Staff nurses must be empowered to practice within their scope of practice. Nurse leaders described uncomfortable situations in which staff nurses had to put in an order because a physician was too busy, thereby practicing outside their scope of practice. Staff nurses in this study identified awareness of their scope of practice and were uncomfortable when they couldn’t respond to patient suffering when the response depended on physicians who weren’t responding. Ensuring staff nurses are empowered, competent, supported, and accountable to work within their scope of practice is necessary for safe patient care as is expecting all disciplines to work within their scope and respond appropriately to patient needs. Evaluating staff nurses on their ability to competently work within their scope of practice will enhance empowerment by improving confidence in nursing practice and supporting the development of competencies. A unified agreement of the educational preparation of registered nurses may increase the power of nursing nationally.

Nursing Interventions

Being too busy and not having enough time emerged as key psychological aspects within nursing interventions. The experience of being busy and not having enough time emerged as a barrier to safety culture. This influenced behavioral aspects and were precursors to unsafe care.

Too busy and not enough time. The most frequently described barrier for staff nurses and nurse leaders was being too busy and not enough time. Lack of time also emerged as a barrier to building relationships and working together as a team. Time is defined as “the indefinite continued progress of existence and events in the past, present, and future regarded as whole” (Merriam-Webster, n.d.). Although staffing not adequate for the workload was the primary contributor to not having enough time and being too busy, there were a multitude of factors contributing to this perception. This was described as the amount of care patients need is
not feasible, fighting for the patient, and just always rushing because there’s too much to do. The additional work from safety checks, documentation, interventions, searching for things staff nurses needed to provide safe care, inaccurate and ineffective EMRs, and getting ahold of physicians contributed to busyness. Individual patient factors including being confused, going through detoxification, incontinence, and the amount of education patients and families needed also consumed significant time. Staff nurses described challenges with everything for the patient going through the nurse and having to remind the physician to do their job as contributing to not having enough time.

Being too busy and not having enough time were the most significant contributors to shortcuts, workarounds, not answering alarms, not implementing safety interventions, and basic care being missed. Working together as a team was the way staff nurses got through the day; conversely, too busy and not enough time was a barrier to working together as a team. Similarly, a quantitative measure of workflow and computer use among 27 medical-surgical nurses identified assessment, charting, and communicating as the most frequent activities comprising 18.1%, 9.9%, and 11.8% of nurse time, respectively (Cornell et al., 2010). The other activities were random, meaning that the activity lasted less than 10 seconds as nurses were constantly switching activities and locations in a random pattern impacting the ability to critically think and engage in planning care.

A phenomenological hermeneutical exploration of staff nurse busyness identified busyness as an experience of disparity between perceived necessary tasks and time available to accomplish tasks that was acceptable; however, became uncomfortable if important tasks didn’t get done creating negative emotions and personal struggles in trying to cope (Govasli & Solvoll, 2020).
Staff nurses in this study were also visibly bothered by guilt for not being able to spend time with their patients and provide the care they believed their patients deserved. One staff nurse described this is not nursing. Despite the acknowledgement that staff nurses and nurse leader contribute significantly to safety culture, staff nurse and nurse leader busyness and not having time had little empirical support in the literature. Staff nurses and nurse leaders both described that everyone was doing the best they could to provide safe care. Staff nurses had emotional responses when they described their inability to spend time with their patient and provide the level of care they thought the patient required and deserved.

**Summary of Discussion**

This research set out to address the gap in the literature about the poor perception of safety culture among staff nurses and the discrepancy in safety culture perception between staff nurses and nurse leaders. The purpose was to understand, explore, and describe safety culture as experienced by staff nurses and nurse leaders in medical-surgical units. Results showed similarities in language of themes describing safety culture between participant groups enabling the creation of shared language categories. This is to be expected as both groups of participants were registered nurses, sharing a common language, and immersed within the same culture. The shared language categories were well supported in the literature. There was variation in shared, unique, and discord in meaning, or subthemes, describing experiences of participants within the themes. Again, this is to be expected as their experiences are from their unique roles within the organization. This study provided an insight into the discrepant perceptions of safety culture between staff nurses and nurse leaders. Nurse leaders sharing convergent experiences suggests they don’t represent the perceptions of leaders within the SOPS. Relationships emerged as a critical component of safety culture that lacks empirical support in the literature. Time also
emerged as a significant barrier, lacking empirical support in the literature. The process of making sure was corroborated, as was the lack of support and empowerment for staff nurses to make sure to keep patients safe. Although the shared language categories were empirically supported in the literature, the rich description of situational, behavioral, and psychological aspects informed the importance of the interaction between these aspects and the impact on safety culture. This study offered complementarity and a description that provided clarity of previous findings and identified the how, why, and impact of the experiences on safety culture.

**Strengths**

The study of safety culture has been limited by inconsistent definitions and management strategies to address isolated theoretical elements in hopes of improving an organization’s safety culture. Safety culture has been predominantly presented in a manner that increases its application within organizations through a normative approach of assessing the presence or strength of a safety culture and then building or strengthening upon those results (Edwards et al., 2013). A limitation of this approach is assuming culture can only be manipulated from the top down leaving deeper levels of culture unexplored by focusing on organizational systems and structures with little emphasis on social dynamics and sub-cultures (Edwards et al., 2013).

Inherent in the safety culture definition most adopted in healthcare are anthropological roots, culture is possessed by all ensuring conduct is repeated, describing safety culture as a product of individual and group values, attitudes, and assumptions (Edwards et al., 2013). However the anthropological approach is often not explored in healthcare. Through this approach a richer understanding of the positive and negative effects of culture and underlying assumptions can be explored providing insight into the culture rather than evaluating the presence or strength of the culture (Edwards et al., 2013). Current safety climate research
focuses on employee attitudes and perceptions related to organizational structures, processes, and procedures used by an organization in support of safety, whereas an anthropological approach is not limited to the role of the organization around the individual making it more applicable to a broader range of organizations (Edwards et al., 2013). Finally, a pragmatic cultural approach, shared practices, behaviors or the way things are done, can provide insight into safety behaviors and safety outcomes (Edwards et al., 2013).

A strength of this study was it provided a unique approach to understanding safety culture through exploring a normative culture, described as situational aspects, pragmatic culture, described as behavioral aspects, and anthropologic culture, described as psychological aspects to provide a richer description of safety culture. Exploring normative, pragmatic, and anthropologic conceptualizations of culture together provided a richer description of the interaction between the different conceptualizations of a safety culture. This provided a better understanding of the culture within a safety culture and described precursors of unsafe acts that can ultimately be linked to safety outcomes (Edwards et al., 2013).

Another strength of this study was the description of safety culture experiences were provided by those who were currently living those experiences. A final strength of this study was it presented a unique description of safety culture from the lens of medical-surgical staff nurses and nurse leaders, sharing similarities and differences which have not been explored in the literature.

**Limitations**

There were several limitations to this study. The role of researcher occurred simultaneously while employed as a system leader. Although the researcher holds no formal position of authority over the participants and works in a different building, one staff nurse and
five nurse managers were aware of the researcher’s role within the organization. This could have prevented the participants from honestly describing their experiences, however this affiliation could have also served to establish rapport and trust with the participants. The dual roles may have biased interpretations of the data; however, the dual roles may have also provided insight into the context of the environment. The transcription of all interviews and analysis and coding helped maintain a focus on the data. Remaining close to the data through maintaining a personal research journal to reflect on researcher perspectives, weekly meetings with the dissertation chair, and validation of results through follow up interviews with staff nurse participants and nurse leader participants assured the researcher captured the voice of the participants.

Midway through the interviews a pandemic was experienced. While the pandemic did not have an impact on the immediate environment until during the final validation, there was awareness that a pandemic was occurring which could have created an unusual environmental context. The investigator of this study has had an extensive background with patient safety that may have contributed to bias in the interpretation of results. Finally, this study described staff nurse and nurse leader experiences with safety culture on a medical-surgical unit. Since unique cultures are present at the unit level, these results are not intended to be generalizable to other medical-surgical units.

Implications for Research

This study described a process staff nurses and nurse leaders followed for making sure patients were safe. Making sure was shared common language when describing patient safety and safety culture. Nevertheless, relationships either facilitated or inhibited making sure patients were safe. This study revealed a shared description of poor relationships between staff nurses and physicians. Relationships between staff nurses and patients, each other, other disciplines,
and leaders were described more favorably. Described experiences with relationships either
gave staff nurses’ courage or created hesitancy to making sure patients were safe. A
phenomenological study could offer interpretation of these relationships and the influence on
making sure patients are safe and safety culture.

Safety culture was described from the lens of medical-surgical staff nurses and nurse leaders;
however, to fully understand the culture at the unit level the perspective of physicians and other
members of the care team is needed. Understanding the physician’s perspective is necessary to
further understand the discord between staff nurses and physicians so that solutions may be
found in regards to power gradients, hierarchies, collaboration, communication, and respect for
each disciplines unique role in providing safe care.

Empowerment beyond what the organization can provide with a focus on psychological
and relational aspects of empowerment must be explored. Culture was previously reported as the
biggest barrier to embracing safety interventions. Until there is a deeper understanding of these
relationships and the impact these relationships have on safety behaviors there may be little more
than another 20 years of initiatives aimed at improving the safety of care to patients with
minimal impact.

A qualitative study to understand the experiences and interpretation of the contribution of
nursing as a unique body of knowledge is warranted. The scope of nursing practice is at times
inherently in conflict with medical care. This disparity was described as a barrier to providing
safe care in this study. Further defining nurse autonomy and how unique roles can complement
each other on medical-surgical units to promote a safety culture is warranted.

The notions of time and busyness emerged as barriers. These concepts are underexplored in
the literature and could offer explanations and solutions to the challenge nurse leaders and staff
nurses experienced. The impact of being busy on cognitive load should also be explored as this was described as leading to burnout, forgetting, and potentially having a negative impact on patient safety. Understanding how being busy and not having time impacts safety behaviors should be further explored.

The organization setting the tone and declaring zero harm changed behaviors and mindsets; however, there was little theoretical support for the construct of zero harm that warrants further exploration. While this study offered insight into the reasons causing the perception of fear, fear should continue to be explored since it continues to be a barrier to speaking up, in particular understanding the relationship between negative experiences and/or perceived negative experiences and the long term impact on fear.

The challenges of balancing EBP with nursing judgment and individualized patient care emerged in previous literature and in this study. The significant barriers that remain when applying EBP merit further exploration. There was little empirical evidence exploring relationships between professional accountability and safety culture or safer patient care outcomes; therefore, empirical support is justified to understand not only staff nurse professional accountability, but leader accountability.

Understanding the impact of the reliance on alarms and warnings on critical thinking skills deserves further research. Barriers to behavior aspects, or safety practices, are well described in the literature and supported by this study; therefore, developing a model that could potentially predict safety behaviors based on the factors described as facilitators or barriers could assist leaders in proactively mitigating unsafe behaviors by addressing factors proactively. Handoffs and transitions continue to plague safety culture. A qualitative study could support observation of the process to inform new processes that will be embraced.
Finally, nurse leadership is a specialty within nursing that has been deemed as critical by many professional organizations. A more robust body of evidence to facilitate evidence-based nursing leadership is necessary to be able to not only develop a safety culture, but to ensure staff nurses are respected and supported in their role to make sure patients are safe. This may also contribute to decreased nurse leader turnover and a more robust succession plan to ensure ongoing nurse leader support.

**Implications for Practice**

Staff nurses and nurse leaders described processes for making sure patients were safe and processes supporting decision making, both supported within the literature. Leaders can support this process by ensuring they are setting the tone, aligning goals, and providing transparency; however, there needs to be a mindfulness that the message is translated consistently across an organization and that each department understands their role and contribution.

Nurse leaders should have manageable priorities and support for those priorities to prevent turnover and burnout. Nurse leaders need to be aware of organizational and psychological aspects that influence unsafe behavioral aspects so they can be addressed or removed to facilitate safety behaviors. Executive rounds served as a mechanism to connect the executive leadership team to staff nurses. Organizations should require and provide time in leader schedules to support executive rounds. Leader rounds and huddles to connect with staff nurses and bridge the gap between what leaders think is happening and what is happening should be incorporated into a leaders day. However, building in time for follow up is important. Nurse leaders must be supported and empowered to remove barriers for staff nurses to provide safe care by revisiting their authorities outlined in their job descriptions.
Making sure and the decision-making process described within this study and corroborated in the literature should serve as the foundation for safe nursing practice. In order for this to happen, hospitals must support the autonomy of nursing practice within their organizations and address the antecedents to making sure. Nurse leaders must advocate and drive change in the environment to support nursing practice. This includes creating a shared mental model on the responsibilities and unique perspectives of each discipline, in particular staff nurses and physicians. Nurse practitioners were briefly mentioned in this study as a resource that helped keep patients safe when physicians were unable to respond. Promoting and supporting a model that incorporates advanced practice nurses on medical-surgical units can facilitate a safety culture and safer patient care. Then, building a culture of ownership and/or accountability needs to be cultivated to promote staff nurse involvement in influencing nursing practice.

Attention to asking staff nurses to follow EBP without getting their input and understanding their desire to provide individualized patient care instead of a one size fits all protocol needs to be addressed. Staff nurses, based on their experience and judgment, are placed in situations where they are over or under-utilizing interventions that they don’t perceive as improving safe patient care and contributing to workarounds because they don’t see the value or understand the why behind the EBP. Standards should then be efficient, accessible, and reliable to support safe care.

Checklists and double checks that help the busy nurse remember important tasks should be incorporated into the workflow as standard work that can’t be bypassed by busy staff nurses. Other tools that can prevent unsafe behaviors should be explored and designed with staff nurse
input. Technology was identified as a barrier, therefore technology barriers must be addressed to facilitate efficient, safe patient care.

Nurse leaders’ identification of what is taking staff nurses away from the bedside is essential to restructuring the work environment for nurses to practice within their scope. This includes alleviation of barriers to allow staff nurses to get the valuable time they need with their patients. Staff nurses and nurse leaders should work together to simplify, standardize, organize, and prioritize nursing standards and workflow to support staff nurses in efficiently providing safe care. A model of accountability should be implemented for leaders to ensure they are performing their role to facilitate a safety culture. However, nurse leaders must embrace a nonpunitive response.

Incorporating collaborative rounds and BSR including the patient should be a requirement supporting the patient’s right to make autonomous decisions and be involved in their care. Nurse leaders need to be aware that individual patient factors influence staff nurses’ ability to make sure patients are safe as they can increase surveillance requirements. Therefore, individual patient factors should be incorporated into staffing algorithms.

There was an intense focus on patient safety and safety culture in this study. However, staff nurses described a need for more support. Nurse leaders focused on nursing practice related to patient safety and safety culture; however, organizations need to also address support for caring for the nurses who are caring for the patients. There were significant barriers identified by staff nurses inhibiting them from providing nursing care in a safe manner. Nurse leaders described challenges with removing staff nurse barriers. Someone in the organization must be responsible for supporting the staff nurse role in providing safe care. The challenges described are well established in the literature. Re-designing staff nurse and nurse leader roles to ensure
they are supported to perform the work within their scope can potentially reduce turnover in staff
nurse and nurse leader roles and positively impact safety culture and safer patient care. A
fundamental paradigm shift from developing staff nurses to challenge unsafe practices to
leveraging the power of the unique role of nursing to build safer practices with other professional
colleagues may be what is necessary to truly foster a safety culture to deliver safer patient care.
Nurse leaders must be empowered and accountable to ensure staff nurses are respected,
empowered, held accountable, evaluated, and recognized for their unique contribution to safety
culture and safer systems of care.

**Implications for Education**

In this study, staff nurses learned from experience and mistakes. Learning from
experience started in nursing school. Nursing schools should continue to develop robust
interprofessional simulation activities to expose nursing students to practice situations to
decrease the challenges nurses experience when transitioning to practice. In addition to patient
situations, interprofessional relationships are as important, therefore practicing difficult
conversations is necessary. Interprofessional team training should be an ongoing part of team
development to facilitate the building of relationships and collaborative care. Teaching staff
nurses and leaders how to have accountability conversations with each other in a manner that
doesn’t jeopardize relationships should be part of ongoing education, starting in nursing school.

Learning from mistakes without scaring student nurses in academia and staff nurses in
practice was recommended by staff nurses in this study. Advocating for nursing practice is
comprised of skills that can be taught. Staff nurses and nurse leaders must be taught the skills
needed to successfully advocate for the nursing profession. Staff nurses described learning by
experience. Time needs to be built into a staff nurse’s day to allow for sharing of experiences, debriefing, and reflecting.

Developing nurse confidence can catalyze empowerment in staff nurses. Nurse leaders should ensure there are development programs to increase staff nurse skills in communicating with physicians, communicating with each other, and exposure to various experiences in a safe simulated environment. Incentivizing or building in time for staff nurses to participate in formal learning programs should be considered to address nurse fatigue and unwillingness to participate in work-related activities outside of work hours. Basic and ongoing professional development of nurse leaders should be foundational in every organization to assist nurse leaders in achieving their goals while supporting their growth and development as nurse leaders. Explaining the rationale when implementing interventions and using real experiences will enhance the teaching method while facilitating acceptance.

**Implications for Policy**

Staffing and poor relationships with physicians emerged as the most significant barriers to safety culture and safe patient care. Staffing has been a longstanding barrier leading to unsafe behaviors and poor work environments. In spite of evidence of mandated ratios on patient and nurse outcomes, policy to support safe nurse ratios has been resisted in many states. Safe work practice policies must be instituted to address fatigue and enhance wellness and a healthy work environment. Burnout contributes to poor safety outcomes, therefore burnout assessments and interventions should be instituted as organization policy.

Clear escalation and non-retaliation policies must be instituted at each organization. This includes appropriate follow up that focuses on improving systems and not blaming individuals balanced with professional accountability. These policies should also support recognition of all
care providers who speak up and stop unsafe and poor behaviors. Poor behaviors undermined relationships and posed a threat to patient safety. A zero tolerance for poor behaviors should be supported through policy with a clear follow up and an accountability plan. Staff nurses, physicians, and other members of the care team should be involved in the development of policies necessary to influence a safer environment. An alarm management program to decrease alarm fatigue is warranted.

National policy has done little to impact safer patient care, other than provide transparency of selected outcome measures and financial penalties or incentives. Preventable harm to patients is typically not the result of negligence or incompetence, but a breakdown in processes and systems of care (Sorrell, 2017). Since the nuclear industry was one of the first industries to adopt safety culture as a mechanism for safety, there is much to learn from their accomplishments and failures. The more recent nuclear disaster in Fukushima identified some important lessons learned that can be applied within healthcare and institutional policy. History of accidents in the nuclear industry have been attributed to decisions and actions that were influenced by flawed shared assumptions, values, and beliefs (Institute of Nuclear Power Operations (INPO), 2015). INPO (2015), identified although there was a focus on strengthening the safety culture, the big picture of cultivating a questioning attitude, challenging assumptions, practicing safety-first decision making, and promoting organizational learning contributed to the accident.

Healthcare should take into consideration a focus on strengthening safety culture alone was not sufficient to prevent accidents in nuclear. Organizational policy must require and support a questioning attitude and ensure safety-first decision making. INPO requires the reporting of lessons learned from actual or potential accidents that are shared securely within the
nuclear industry to promote safer operations. Healthcare should consider mandatory reporting and learning in a manner that protects those individuals involved.

Conclusion

Safety culture has been previously targeted as the reason safety interventions were not embraced, thus perpetuating harm to patients in hospitals (Leape, 2015). The safety culture framework and instruments to measure the presence or strength of a safety culture have been empirically supported, as previously described in Chapter 2, yet surveying and interventions to improve safety culture have not yielded significant gains in either safety culture or patient safety. Furthermore, the most recent nuclear accident confirmed assessing and strengthening a safety culture alone isn’t sufficient to penetrate psychological and behavioral aspects within a culture that impact a safety culture.

This study described the experiences contributing to the very complex construct, safety culture, by those embedded within the safety culture and providing the majority of care to hospitalized patients, medical-surgical staff nurses and their nurse leaders. This study provided a richer description explaining the ongoing poor perception of safety culture among staff nurses, and discrepancies in perception of safety culture between staff nurses and nurse leaders. The results of this study provided clarity to underlying values, cultural norms, and behaviors within a safety culture as experienced by medical-surgical staff nurses and nurse leaders.

This study also highlighted the significance of relationships as fundamental, connecting not only the product of the combined aspects comprising a safety culture and their reciprocal relationships with each other, but also influencing the ultimate outcome of a safety culture which was described in this study as making sure patients were safe. Understanding the safety culture experiences of medical-surgical staff nurses and nurse leaders had not been previously
investigated in the United States. A continued study of safety culture from an anthropological, pragmatic, and normative cultural perspective begins to form evidence that can further inform safety behaviors in nursing that and the impact on safer patient care.
APPENDIX A

SOPS QUESTIONNAIRE
Hospital Survey on Patient Safety

Instructions

This survey asks for your opinions about patient safety issues, medical error, and event reporting in your hospital and will take about 10 to 15 minutes to complete.

If you do not wish to answer a question, or if a question does not apply to you, you may leave your answer blank.

- An "event" is defined as any type of error, mistake, incident, accident, or deviation, regardless of whether or not it results in patient harm.
- “Patient safety” is defined as the avoidance and prevention of patient injuries or adverse events resulting from the processes of health care delivery.

SECTION A: Your Work Area/Unit

In this survey, think of your “unit” as the work area, department, or clinical area of the hospital where you spend most of your work time or provide most of your clinical services.

What is your primary work area or unit in this hospital? Select ONE answer.

☐ a. Many different hospital units/No specific unit
☐ b. Medicine (non-surgical)☐ h. Psychiatry/mental health ☐ n. Other, please specify:
☐ c. Surgery ☐ i. Rehabilitation
☐ d. Obstetrics ☐ j. Pharmacy
☐ e. Pediatrics ☐ k. Laboratory
☐ f. Emergency department ☐ l. Radiology
☐ g. Intensive care unit (any type) ☐ m. Anesthesiology

Please indicate your agreement or disagreement with the following statements about your work area/unit.

Think about your hospital work area/unit...

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. People support one another in this unit..........................</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2. We have enough staff to handle the workload..........................</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3. When a lot of work needs to be done quickly, we work together as a team to get the work done ..................................................</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4. In this unit, people treat each other with respect..........................</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5. Staff in this unit work longer hours than is best for patient care............</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
### SECTION A: Your Work Area/Unit (continued)

Think about your hospital work area/unit...

6. We are actively doing things to improve patient safety
   
<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ 1</td>
<td>□ 2</td>
<td>□ 3</td>
<td>□ 4</td>
<td>□ 5</td>
</tr>
</tbody>
</table>

7. We use more agency/temporary staff than is best for patient care
   
<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ 1</td>
<td>□ 2</td>
<td>□ 3</td>
<td>□ 4</td>
<td>□ 5</td>
</tr>
</tbody>
</table>

8. Staff feel like their mistakes are held against them
   
<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ 1</td>
<td>□ 2</td>
<td>□ 3</td>
<td>□ 4</td>
<td>□ 5</td>
</tr>
</tbody>
</table>

9. Mistakes have led to positive changes here
   
<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ 1</td>
<td>□ 2</td>
<td>□ 3</td>
<td>□ 4</td>
<td>□ 5</td>
</tr>
</tbody>
</table>

10. It is just by chance that more serious mistakes don’t happen around here
    
    | Strongly Disagree | Disagree | Neither | Agree | Strongly Agree |
    |-------------------|----------|---------|-------|---------------|
    | □ 1               | □ 2      | □ 3     | □ 4   | □ 5           |

11. When one area in this unit gets really busy, others help out
    
    | Strongly Disagree | Disagree | Neither | Agree | Strongly Agree |
    |-------------------|----------|---------|-------|---------------|
    | □ 1               | □ 2      | □ 3     | □ 4   | □ 5           |

12. When an event is reported, it feels like the person is being written up, not the problem
    
    | Strongly Disagree | Disagree | Neither | Agree | Strongly Agree |
    |-------------------|----------|---------|-------|---------------|
    | □ 1               | □ 2      | □ 3     | □ 4   | □ 5           |

13. After we make changes to improve patient safety, we evaluate their effectiveness
    
    | Strongly Disagree | Disagree | Neither | Agree | Strongly Agree |
    |-------------------|----------|---------|-------|---------------|
    | □ 1               | □ 2      | □ 3     | □ 4   | □ 5           |

14. We work in "crisis mode" trying to do too much, too quickly
    
    | Strongly Disagree | Disagree | Neither | Agree | Strongly Agree |
    |-------------------|----------|---------|-------|---------------|
    | □ 1               | □ 2      | □ 3     | □ 4   | □ 5           |

15. Patient safety is never sacrificed to get more work done
    
    | Strongly Disagree | Disagree | Neither | Agree | Strongly Agree |
    |-------------------|----------|---------|-------|---------------|
    | □ 1               | □ 2      | □ 3     | □ 4   | □ 5           |

16. Staff worry that mistakes they make are kept in their personnel file
    
    | Strongly Disagree | Disagree | Neither | Agree | Strongly Agree |
    |-------------------|----------|---------|-------|---------------|
    | □ 1               | □ 2      | □ 3     | □ 4   | □ 5           |

17. We have patient safety problems in this unit
    
    | Strongly Disagree | Disagree | Neither | Agree | Strongly Agree |
    |-------------------|----------|---------|-------|---------------|
    | □ 1               | □ 2      | □ 3     | □ 4   | □ 5           |

18. Our procedures and systems are good at preventing errors from happening
    
    | Strongly Disagree | Disagree | Neither | Agree | Strongly Agree |
    |-------------------|----------|---------|-------|---------------|
    | □ 1               | □ 2      | □ 3     | □ 4   | □ 5           |

### SECTION B: Your Supervisor/Manager

Please indicate your agreement or disagreement with the following statements about your immediate supervisor/manager or person to whom you directly report.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ 1</td>
<td>□ 2</td>
<td>□ 3</td>
<td>□ 4</td>
<td>□ 5</td>
</tr>
</tbody>
</table>

1. My supervisor/manager says a good word when he/she sees a job done according to established patient safety procedures

2. My supervisor/manager seriously considers staff suggestions for improving patient safety

3. Whenever pressure builds up, my supervisor/manager wants us to work faster, even if it means taking shortcuts

4. My supervisor/manager overlooks patient safety problems that happen over and over
SECTION F: Your Hospital

Please indicate your agreement or disagreement with the following statements about your hospital.

<table>
<thead>
<tr>
<th>Think about your hospital...</th>
<th>Strongly Disagree</th>
<th>Disagree ▼</th>
<th>Neither ▼</th>
<th>Agree ▼</th>
<th>Strongly Agree ▼</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Hospital management provides a work climate that promotes patient safety.</td>
<td>□ 1</td>
<td>□ 2</td>
<td>□ 3</td>
<td>□ 4</td>
<td>□ 5</td>
</tr>
<tr>
<td>2. Hospital units do not coordinate well with each other.</td>
<td>□ 1</td>
<td>□ 2</td>
<td>□ 3</td>
<td>□ 4</td>
<td>□ 5</td>
</tr>
<tr>
<td>3. Things “fall between the cracks” when transferring patients from one unit to another.</td>
<td>□ 1</td>
<td>□ 2</td>
<td>□ 3</td>
<td>□ 4</td>
<td>□ 5</td>
</tr>
<tr>
<td>4. There is good cooperation among hospital units that need to work together.</td>
<td>□ 1</td>
<td>□ 2</td>
<td>□ 3</td>
<td>□ 4</td>
<td>□ 5</td>
</tr>
</tbody>
</table>

SECTION C: Communications

How often do the following things happen in your work area/unit?

<table>
<thead>
<tr>
<th>Think about your hospital work area/unit...</th>
<th>Never ▼</th>
<th>Rarely ▼</th>
<th>Sometimes ▼</th>
<th>Most of the time ▼</th>
<th>Always ▼</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. We are given feedback about changes put into place based on event reports.</td>
<td>□ 1</td>
<td>□ 2</td>
<td>□ 3</td>
<td>□ 4</td>
<td>□ 5</td>
</tr>
<tr>
<td>2. Staff will freely speak up if they see something that may negatively affect patient care.</td>
<td>□ 1</td>
<td>□ 2</td>
<td>□ 3</td>
<td>□ 4</td>
<td>□ 5</td>
</tr>
<tr>
<td>3. We are informed about errors that happen in this unit.</td>
<td>□ 1</td>
<td>□ 2</td>
<td>□ 3</td>
<td>□ 4</td>
<td>□ 5</td>
</tr>
<tr>
<td>4. Staff feel free to question the decisions or actions of those with more authority.</td>
<td>□ 1</td>
<td>□ 2</td>
<td>□ 3</td>
<td>□ 4</td>
<td>□ 5</td>
</tr>
<tr>
<td>5. In this unit, we discuss ways to prevent errors from happening again.</td>
<td>□ 1</td>
<td>□ 2</td>
<td>□ 3</td>
<td>□ 4</td>
<td>□ 5</td>
</tr>
<tr>
<td>6. Staff are afraid to ask questions when something does not seem right.</td>
<td>□ 1</td>
<td>□ 2</td>
<td>□ 3</td>
<td>□ 4</td>
<td>□ 5</td>
</tr>
</tbody>
</table>

SECTION D: Frequency of Events Reported

In your hospital work area/unit, when the following mistakes happen, how often are they reported?

<table>
<thead>
<tr>
<th>1. When a mistake is made, but is caught and corrected before affecting the patient, how often is this reported?</th>
<th>Never ▼</th>
<th>Rarely ▼</th>
<th>Sometimes ▼</th>
<th>Most of the time ▼</th>
<th>Always ▼</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. When a mistake is made, but has no potential to harm the patient, how often is this reported?</td>
<td>□ 1</td>
<td>□ 2</td>
<td>□ 3</td>
<td>□ 4</td>
<td>□ 5</td>
</tr>
<tr>
<td>3. When a mistake is made that could harm the patient, but does not, how often is this reported?</td>
<td>□ 1</td>
<td>□ 2</td>
<td>□ 3</td>
<td>□ 4</td>
<td>□ 5</td>
</tr>
</tbody>
</table>

SECTION E: Patient Safety Grade

Please give your work area/unit in this hospital an overall grade on patient safety.

A: Excellent  B: Very Good  C: Acceptable  D: Poor  E: Failing
SECTION F: Your Hospital (continued)

Think about your hospital...

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. Important patient care information is often lost during shift changes</td>
<td>☐ 1</td>
<td>☐ 2</td>
<td>☐ 3</td>
<td>☐ 4</td>
<td>☐ 5</td>
</tr>
<tr>
<td>6. It is often unpleasant to work with staff from other hospital units</td>
<td>☐ 1</td>
<td>☐ 2</td>
<td>☐ 3</td>
<td>☐ 4</td>
<td>☐ 5</td>
</tr>
<tr>
<td>7. Problems often occur in the exchange of information across hospital units</td>
<td>☐ 1</td>
<td>☐ 2</td>
<td>☐ 3</td>
<td>☐ 4</td>
<td>☐ 5</td>
</tr>
<tr>
<td>8. The actions of hospital management show that patient safety is a top priority</td>
<td>☐ 1</td>
<td>☐ 2</td>
<td>☐ 3</td>
<td>☐ 4</td>
<td>☐ 5</td>
</tr>
<tr>
<td>9. Hospital management seems interested in patient safety only after an adverse event happens</td>
<td>☐ 1</td>
<td>☐ 2</td>
<td>☐ 3</td>
<td>☐ 4</td>
<td>☐ 5</td>
</tr>
<tr>
<td>10. Hospital units work well together to provide the best care for patients...</td>
<td>☐ 1</td>
<td>☐ 2</td>
<td>☐ 3</td>
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<tr>
<td>11. Shift changes are problematic for patients in this hospital</td>
<td>☐ 1</td>
<td>☐ 2</td>
<td>☐ 3</td>
<td>☐ 4</td>
<td>☐ 5</td>
</tr>
</tbody>
</table>

SECTION G: Number of Events Reported

In the past 12 months, how many event reports have you filled out and submitted?

- ☐ a. No event reports
- ☐ b. 1 to 2 event reports
- ☐ c. 3 to 5 event reports
- ☐ d. 6 to 10 event reports
- ☐ e. 11 to 20 event reports
- ☐ f. 21 event reports or more

SECTION H: Background Information

This information will help in the analysis of the survey results.

1. How long have you worked in this hospital?
   - ☐ a. Less than 1 year
   - ☐ b. 1 to 5 years
   - ☐ c. 6 to 10 years
   - ☐ d. 11 to 15 years
   - ☐ e. 16 to 20 years
   - ☐ f. 21 years or more

2. How long have you worked in your current hospital work area/unit?
   - ☐ a. Less than 1 year
   - ☐ b. 1 to 5 years
   - ☐ c. 6 to 10 years
   - ☐ d. 11 to 15 years
   - ☐ e. 16 to 20 years
   - ☐ f. 21 years or more

3. Typically, how many hours per week do you work in this hospital?
   - ☐ a. Less than 20 hours per week
   - ☐ b. 20 to 39 hours per week
   - ☐ c. 40 to 59 hours per week
   - ☐ d. 60 to 79 hours per week
   - ☐ e. 80 to 99 hours per week
   - ☐ f. 100 hours per week or more
SECTION H: Background Information (continued)

4. What is your staff position in this hospital? Select ONE answer that best describes your staff position.

☐ a. Registered Nurse
☐ b. Physician Assistant/Nurse Practitioner
☐ c. LVN/LPN
☐ d. Patient Care Asst/Hospital Aide/Care Partner
☐ e. Attending/Staff Physician
☐ f. Resident Physician/Physician in Training
☐ g. Pharmacist
☐ h. Dietician
☐ i. Unit Assistant/Clerk/Secretary
☐ j. Respiratory Therapist
☐ k. Physical, Occupational, or Speech Therapist
☐ l. Technician (e.g., EKG, Lab, Radiology)
☐ m. Administration/Management
☐ n. Other, please specify:

5. In your staff position, do you typically have direct interaction or contact with patients?

☐ a. YES, I typically have direct interaction or contact with patients.
☐ b. NO, I typically do NOT have direct interaction or contact with patients.

6. How long have you worked in your current specialty or profession?

☐ a. Less than 1 year
☐ b. 1 to 5 years
☐ c. 6 to 10 years
☐ d. 11 to 15 years
☐ e. 16 to 20 years
☐ f. 21 years or more

SECTION I: Your Comments

Please feel free to write any comments about patient safety, error, or event reporting in your hospital.

THANK YOU FOR COMPLETING THIS SURVEY.
APPENDIX B

AHRQ SOPS COMPOSITE RELIABILITIES
<table>
<thead>
<tr>
<th>Composite</th>
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<tr>
<td>Overall Perceptions of Safety</td>
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<td>Frequency of Event Reporting</td>
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<td>Supervisor/manager expectations and actions promoting patient safety</td>
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<tr>
<td>Staffing</td>
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<tr>
<td>Hospital management support for patient safety</td>
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<tr>
<td>Teamwork across hospital units</td>
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<td>Hospital handoffs and transitions</td>
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</table>
Date: 7/30/2019

RE: IRB Letter of Support

Dear Institutional Review Board Chair and Members:

I am writing this letter of support for one of our colleagues, Lisa Harton. It is our intention to support the research described below.

**Research Overview**

1. Project Summary: The researcher will interview nurse leaders and staff nurses working on the medical-surgical units at [redacted] to understand their experiences with patient safety and safety culture. The researcher will attend unit and facility safety huddles to learn how patient safety issues are communicated and resolved.

2. Objectives: The purpose of the study is to understand explore and describe patient safety and safety culture experience of nurses caring for medical surgical patients and nurse leaders working within [redacted]. The research study aims to 1) explore and describe staff nurses’ safety culture experiences on medical surgical units; 2) explore and describe nurse leaders’ safety culture experiences on medical surgical care units; 3) compare and contrast staff nurses’ and nurse leaders’ safety culture experience.
3. Background & Rationale: Staff nurses have continuously had the poorest perception of working within a safety culture across the nation and within the organization. Leaders across the country have continuously had a higher perception of working within a safety culture. Hospitals continue to experience avoidable patient harm. This research is essential to addressing the gaps in knowledge regarding how a safety culture is understood, created and maintained in the medical surgical nursing care context. Through a better understanding of the context of the leader and staff nurses' experiences, it is expected that perceptions will be better understood, behaviors described, and motivators, facilitators, barriers and challenges identified. This knowledge is crucial for the design of nursing interventions, policies and procedures for staff nurses to improve patient safety and promote a safety culture.

Sincerely,

[Blacked out]

Director of Nursing.
APPENDIX D

STUDY SITE IRB

[Redacted text: exempts several classes of research from HS-IRB review and bases recognition of these exemptions on the following two assumptions:]

1. The risk to participants in the proposed activity is so minimal that required HS-IRB review represents unwarranted intrusion into the process.

2. Investigators (faculty, students, or staff) understand, accept, and will implement the principles of informed consent.

[Redacted text: investigators who conduct exempt research are required to provide individual participants with reasonable and necessary information so they may form their own decision to participate.]

Exemption Category: Research involving the use of educational tests, survey procedures, or observation of public behavior unless the information obtained is recorded in such a fashion that individuals can be identified and/or disclosure of responses outside the research could place the subjects at risk of criminal/civil liability and/or damage subjects' financial standing, employability or reputation.

Protocol Outline

Protocol Title: The Situational Context of Safety Culture from the Perspective of Nurse Leaders and Staff Nurses in a Hospital
Protocol Version:
Protocol Date: 10/7/2019
Principal Investigator: Lisa Harton
Research Team: Lisa Skemp, co-investigator, Lisa Burkhart-dissertation committee, Kathy Bobay-dissertation committee

I. Abstract
Safety culture is the largest barrier in realizing safer patient care. Nurses’ comprise the largest component of the health care workforce in hospitals and consistently have the lowest perceptions of a safety culture. On the contrary, leaders who play a key role in creating and sustaining a safety culture consistently have the most favorable perception of safety culture. The development of a safety culture will not be fully achieved without a richer understanding of safety culture within the unit or organizational context as experienced by those leading and providing the majority of direct patient care in hospitals. The purpose of this inductive qualitative descriptive study is to describe the context of safety culture in hospitals through the lens of nurse leaders and staff nurses to gain a deeper understanding of safety culture to describe the factors influencing safety culture and safe patient care. Understanding safety culture from this perspective will assist in better explaining variances in the poor perception of safety culture among staff nurses and the discrepancy in safety
culture perception between leaders and staff nurses.

II. Background and Significance/Preliminary Studies
The Institute of Medicine (IOM, 2000), now the Health and Medicine Division of the National Academies of Sciences, Engineering, and Medicine, seminal report on preventable patient harm identified 44,000 – 98,000 people die each year from avoidable medical errors. The IOM (2000) recommended patient safety become a national priority. The IOM (2000) also recommended the development of a safety culture to ensure that the workforce and processes are focused on improving the reliability and safety of care for patients at the delivery level. A safety culture is the extent to which organizational beliefs, values and norms are shared by individuals throughout the organization and influence actions and behaviors that support and promote patient safety (Famolaro et al., 2018). While there have been efforts to develop a safety culture, those efforts have not significantly impacted safety culture at a national, organization or unit level. Despite decades of national attention, including trillions of dollars in investment, heartbreaking stories caused by preventable harm continue to be told (Pronovost, Ravitz, Stoll, & Kennedy, 2015). The healthcare system in the United States too often harms when it it intended to help (Pronovost, Ravitz, Stoll, & Kennedy, 2015). In addition to the devastating human consequences of preventable harm, these events burden the already limited resources of the healthcare system (Pronovost, Ravitz, Stoll, & Kennedy, 2015). Organizational culture remains the most substantial barrier to embracing safety interventions intended to reduce preventable harm (Leape, 2015).

Leaders, including administration, managers, and supervisors, who have the authority to prioritize and lead a safety culture, had the highest average favorable perceptions (77%) among all dimensions as displayed in Table 1 (Famolaro et al., 2018). Staff nurses, comprised of registered nurses, licensed vocational nurses, and licensed practical nurses, had the lowest average favorable perception of safety culture (63%). This discrepancy in safety culture results between leaders and staff nurses has been consistent over time.

Trends in safety culture are not particularly favorable and have not improved over time. Staff nurses providing the majority of direct care to patients, continue to have the lowest perception of safety culture. Staff nurses are critically important in ensuring patient safety as they are a constant presence at the patient’s bedside and interact with all members of the health care team (https://psnet.ahrq.gov/primers/primer/22, n.d.). Discrepancies between leaders and staff nurses continue to emerge. There are unknown factors contributing to the low perception of safety culture among staff nurses and the discrepancy between staff nurse and leader perceptions.

This research is essential to addressing the gaps in knowledge regarding how a safety culture is understood, created and maintained in the medical surgical nursing care context. Building on what is known about the aspects of a safety culture and the perceptions of safety culture, it is critical to now explore and describe the context and safety culture experiences of staff nurses. Through a better understanding of the context and the leader and staff nurses’ experiences, it is expected that perceptions will be better understood, behaviors described, and motivators, facilitators, barriers
and challenges identified. This knowledge is crucial for the design of nursing interventions, policies and procedures for staff nurses to improve patient safety and promote quality health care.

III. Study Aims
The purpose of the study is to understand explore and describe the situational safety culture experience of nurses caring for medical surgical patients through the lens of staff nurses and nurse leaders. The research study aims to 1) explore and describe staff nurses’ safety culture experiences (motivators, facilitators, barriers, challenges) on medical surgical units; 2) explore and describe nurse leaders’ safety culture experiences (motivators, facilitators, barriers, challenges) on medical surgical care units; 3) compare and contrast staff nurses’ and nurse leaders’ safety culture experience.

IV. Administrative Organization
The study will be conducted with nurse leaders and staff nurses working on or supporting from a leadership perspective one of four medical-surgical units within ThedaCare, Appleton.

V. Study Design
a. Qualitative Descriptive
b. Nurse leaders including nurse managers and nurse supervisors. Staff nurses include Registered nurses, providing direct patient care.
c. Purposive sampling
d. Data saturation to describe patient safety and safety culture within the context of the medical-surgical units and within hospital nursing leadership.

VI. Study Procedures
a. A purposive sample of staff nurses and nurse leaders including nurse managers and nurse supervisors or leads working within a medical-surgical unit within

i. Inclusion Criteria: Nurse leaders working within the hospital on the designated units or supporting the designated units. Staff nurses working >50% of their time on one of four medical-surgical unit. Participants must work on their designated units for at least 6 months.
Exclusion Criteria: Students, nurse educators, or nurses in a support role that do not provide direct patient care or serve in a formal designated leadership role. Casual nurses without a dedicated FTE or agency nurses will also be excluded.

ii. Recruitment procedures
1. Recruitment will occur through flyers provided during active recruitment at unit safety huddles, facility safety huddles and at staff meetings.
2. Consent will be obtained prior to interviews.
3. The co-investigator conducting the interviews will obtain consent.
4. Flyers will be created and shared with unit leaders, shared with the unit shared governance members, and shared with the nursing leadership team at leadership meetings or huddles.

iii. Screening procedures
1. What procedures are required for screening? The unit manager’s will provide a list of registered nurses who meet criteria. The list will be used to validate the role of the participants and ensure they meet inclusion criteria prior to scheduling the interview.

2. What happens with screen failures (including any data gathered during screening)? If the participant does not meet the inclusion criteria, the researcher will inform them of the reasons why they did not meet criteria and thank them for their interest.

b. Randomization procedures (if applicable) N/A

c. Study Intervention: N/A

d. Study Assessments and Activities

   i. The researcher will validate the participant meets inclusion criteria by validating against the lists provided by nursing leadership.

   ii. Prior to the interview, the researcher will call the participant or meet face to face to:

       1. Discuss the focus of the research and intent of the interview;
       2. Discuss the time commitment involved and preference of location for the interview;
       3. Disclose that the interview will be audio taped and transcribed;
       4. Discuss informed consent and process for ensuring anonymity and confidentiality of each participant;
       5. Schedule the interview

   iii. Participant will be identified by a pseudonym to protect anonymity. Interviews will be held in a private location of the participants choosing to protect confidentiality.

   iv. Interviews will be audio taped and will continue as long as the participant has information to provide, all questions have been addressed, or until the participant chooses to stop providing information. Audio tapes will be kept in a secured file on a secured drive and destroyed after publication of results.

   v. Participants will receive a copy of their interview transcript for review, corrections, and additions within 30 days of the interview.

   vi. The researcher will continuously modify data to accommodate new data and new insights using a coding scheme.

   vii. Qualitative content analysis will be applied to analyze and summarize information to describe the phenomenon.

   viii. Once data saturation is reached, the researcher will stop marketing and scheduling interviews.

   ix. Transcripts and themes will be reviewed by the dissertation chair to validate results.

   x. The final results will be shared with participants to confirm validity of the results within 30 days of completion. Final study results will be shared with the study site Research Liaison.

   xi. Dissemination of research will ensure study site anonymity and be reviewed by the study site Research Liaison. Results will be published in the form of a dissertation through Loyola University, Chicago using the
student’s academic credentials to not refer to a professional title to increase anonymity of the study site. Any other external dissemination through publications will be reviewed by the study site Research Liaison to ensure anonymity of the research study site prior to publication.

xii. The researcher will schedule observations of unit and facility huddles with nursing leadership to support the situational context.

1. The researcher will serve as an observer of the huddles and will not actively participate.

2. The researcher will take notes on how safety information is shared and resolved. The researcher will not take notes on any details of any specific patient safety event. The researcher will attend facility huddles and unit shift safety huddles until no new information is obtained.

VII. Safety Monitoring Plan

a. Solicitation of information related to patient safety may elicit a psychological or emotional response from the participant. These responses may be positive or negative. Actual or potential threats to patient safety may also be elicited.

b. What procedures will be used to monitor subject safety? The researcher will monitor for negative emotional responses to questions. The researcher will ask the participant if they need a break. The researcher will encourage the participant to report their emotional status to their leader. Immediate threats to participant safety will be escalated to the Facility Research Liaison and Dissertation chair. The researcher will inform the participant based on the researcher’s license the researcher is obligated to ensure the participant has a safety plan to prevent harm to self.

c. Solicitation of information that may uncover actual or potential threats to patient safety. The researcher will encourage the participant to follow the organization’s policy for reporting patient safety events. Immediate threats to patient safety will be escalated to the Facility Research Liaison and Dissertation chair. The researcher will inform the participant based on the researcher’s license the researcher is obligated to ensure the reporting of actual patient harm practices to prevent harm to patients.

VIII. Analysis Plan

Describe statistical analysis methods as appropriate. For example, will intention-to-treat methodology be used in the analysis? Will there be any sample stratification? Qualitative content analysis will be applied to analyze and summarize information to describe the phenomenon (Sandelowski, 2000). The researcher will continuously modify data to accommodate new data and new insights using a coding scheme.

IX. Literature Cited

Westat, Rockville, MD, under Contract No. HHSA 290201300003C). Rockville, MD: Agency for Healthcare Research and Quality; AHRQ Publication No. 16-0021-EF


HUMAN SUBJECTS—INSTITUTIONAL REVIEW BOARD ACTION

Request Approved  X

More Information Required 

HS—IRB Review Required 

Provide the following information:

12/31/2019

Date:  

Reviewer's Signature
APPENDIX E

ACADEMIC INSTITUTION IRB
NOTICE OF IRB EXEMPTION OF A RESEARCH PROJECT

Investigator  Skemp, Lisa
LU Number  212782
Title  The Context of Safety Culture from the Perspective of Nurse Leaders and Staff Nurses in a Hospital
Date of Review  02/05/2020
Reason  45CFR46.102(I) Category Not Research

Comments  This project consists of activities that do not meet the definition of human subject research according to the 45 CFR 46.102(l). Research means a systematic investigation, including research development, testing and evaluation, designed to develop or contribute to generalizable knowledge. Activities which meet this definition constitute research for purposes of this policy, whether or not they are conducted or supported under a program which is considered research for other purposes.
1. This is a quality improvement project being conducted at [Redacted] and will be implemented as a partial fulfillment of requirements for a PhD Degree at Loyola University Chicago Marcella Niehoff School of Nursing.
2. Should you wish to make modifications that involve changing the type, nature, source (etc.) of the data/materials specified in the current proposal, you MUST request such changes in advance from the Loyola IRB, as this may change the categorization of the proposed research.
3. LUMC is not engaged in this project.

This project has been determined to be EXEMPT from IRB review. There are no reporting requirements associated with this project. The Full Board will review this determination on 02/19/2020. If the Board disagrees with this action, you will be notified by 02/26/2020.
REGISTERED NURSE RESEARCH PARTICIPANTS NEEDED

PURPOSE: Registered nurses play a key role in providing safe patient care. The purpose of this study is to understand, explore and describe the patient safety culture experience of nurses caring for medical surgical patients and nurse leaders supporting those medical surgical nurses. This will provide a deeper understanding of safety culture and the factors influencing safety culture and safe patient care.

You will participate in one to three confidential interviews in a location of your choice. Interviews can take up to 60 minutes.

ELIGIBILITY: Registered nurses with at least 6 months of experience working 50% of their time on a medical-surgical unit in a direct care or nursing leadership role

BENEFITS: We do not know if you will benefit from taking part in the research but the knowledge obtained may help others.

COMPENSATION: There will be no compensation for participating in this study

CONTACT: Lisa Harton RN, MBA, MPA
Loyola University, Chicago
Call (708) 307-3576 or email lharton1@luc.edu
APPENDIX G

INFORMED CONSENT
INFORMED CONSENT

Date:                                                   Participant’s Name:

PROJECT TITLE: The Situational Context of Safety Culture from the Perspective of Nurse Leaders and Staff Nurses in a Hospital.

You are being asked to participate in this study because you are a registered staff nurse, working within, or nurse leader, supporting, a medical/surgical unit within[redacted] You have been asked to participate because of your experience in providing or supporting safe patient care within a unit or facility culture.

The purpose of this study is to understand, explore and describe the patient safety culture experience of nurses caring for medical surgical patients in a hospital through the lens of staff nurses and nurse leaders. The results of this study can provide an understanding of perceived individual and organizational factors that support or inhibit a safety culture or provision of safe patient care.

RESEARCH PROCEDURES: I would like to talk with you in one to three one on one interviews for 60-90 minutes at your convenience. The interview will take place in a private area of your choosing to ensure confidentiality in a location that is convenient for you. I will ask you to share your experiences with patient safety and working within a safety culture in your unit or within the hospital.

The interview will be tape-recorded and transcribed to facilitate data analysis. The research, transcriptionist and dissertation chair will be the only individuals hearing the audiotapes. The tapes will be kept until the results are published before they are destroyed. All materials will be kept in a locked and secure file cabinet in the researcher’s office or in a secured electronic file that is password protected.

RISKS AND BENEFITS: When a researcher and participants are working closely to understand personal experiences there can be psychological risks because of disclosing emotions and re-living events that are being shared. The researcher will ask you if you need a break. The researcher will also refer you to[redacted] employee assistance program for voluntary follow up. If actual threats to patient safety arise the researcher will ask you to escalate the threat to patient safety by referring you to follow [redacted] incident reporting policy. You will not benefit from participating in this study.

CONFIDENTIALITY: The data in this study will be confidential. The interviews will be analyzed and only I as the researcher will know your identity as your interview will be identified by a fictitious name. The results of this research study may be published in a journal for the purpose of advancing medical knowledge. You will not be identified by name or by any other identifying information in any publication or report about this research.

If you participate in this study, I would like to be able to quote you directly without using your name. If you agree to this, please sign the statement at the bottom of the form.

PARTICIPATION: Participation in this study is voluntary, and you may withdraw at any time and for any reason. If you decide not to participate or you withdraw from the study, there is no penalty or loss of benefits to which you are otherwise entitled. There are no costs to you. There will be no compensation for participating in this study. We do not know if you will benefit from taking part in the research but the knowledge obtained may help others.

CONTACT INFORMATION: The study is being conducted by Lisa Harton RN, MBA, MPH, a doctoral student at Loyola University, Chicago and supported by faculty advisor Dr. Lisa Skemp, Professor, Loyola University, Chicago. Lisa Harton can be reached at (708)307-3576 or lharton1@luc.edu and Dr. Lisa Skemp at (319) 331-2728 or lskemp@luc.edu if you have any questions or comments regarding your rights as a participant in this research study.
CONSENT

I have fully explained to ____________________________ the nature and purpose of the above-described procedure and the risks that are involved in its performance. I have answered and will answer all questions to the best of my ability. I may be reached at 708-307-3576.

________________________________________________Date:____/_____/____
Signature

You have been fully informed of the above-described research program with its possible benefits and risks. Your signature below indicates that you are willing to participate in this research study and agree to the use and disclosure of information about you as described above.

________________________________________________Date:____/_____/____
Signature: Participant

Your signature below indicates that you give permission to be quoted directly in publications without using your name.

________________________________________________Date:____/_____/____
Signature: Participant
APPENDIX H

DATA COLLECTION PROTOCOL
DATA COLLECTION PROTOCOL

**Project Title:** The Situational Context of Safety Culture from the Perspective of Leaders and Staff Nurses in a Hospital  
Research Team: Lisa Harton, PhD Candidate, RN; Lisa Skemp, PhD, RN

**INTRODUCTION:** Thank you for coming today and agreeing to participate in my research project. Here is the consent letter that we discussed and you had an opportunity to review when I first contacted you. Please take a moment to read it now. If you are comfortable proceeding with our interview, please sign the consent letter and we can begin.

**DESCRIPTION OF THE RESEARCH CONTEXT AND PURPOSE:** Since the Institute of Medicine reporting on patient harm in 2000, hospitals have implemented many tactics to improve patient safety and create a safety culture. Registered nurses play a key role in providing safe patient care in a direct care and leadership roles. The purpose of this qualitative study is to understand, explore and describe the patient safety culture experience of nurses caring for medical surgical patients in a hospital through the lens of staff nurses and nurse leaders.

**INTERVIEW PROCESS:** I am going to begin by asking you a few questions about your background and professional experiences. From there we will talk about your experiences of providing safe patient care and working within a safety culture. Before we begin, I want to assure you that anything you say will remain confidential and will not be shared with anyone else within the organization or outside of the organization. Do you have any questions for me before we begin the interview?

Leader/Staff Nurse Characteristics (Code: )

DATA COLLECTION PROTOCOL  
Staff Nurse and Leader Characteristics

**Project Title:** The Context of Safety Culture from the Perspective of Leaders and Staff Nurses in a Hospital  
Research Team: Lisa Harton, PhD Candidate, RN; Lisa Skemp, PhD, RN

Leader/Staff Nurse Characteristics (Psuedonym: )

1. **Role:**
   - [ ] Staff Nurse
   - [ ] Staff nurse that acts as charge nurse
   - [ ] RN Clinical Team Leader
   - [ ] Nurse Leader (Clinical supervisor, house supervisor, manager, director)

2. **Gender**
   - [ ] Female
   - [ ] Male

3. **What is your birth date?** ____/____/____
   - Mo Da Yr
4. Highest Education Level completed:
   - Diploma
   - Associate’s
   - Bachelor’s
   - Graduate; state highest degree
   - PhD

5. Number of years as a registered nurse: ________________________________

6. Number of years working as a registered nurse at the Facility: ________________

7. Length of time working on your current unit: ____________ months ___________ years

8. Number of hours worked per week: ______________________

9. Shift most often worked: □ Days □ Nights

10. Nurse leaders: Number of years working as a nurse leader: __________________

11. Nurse leaders: Number of years working as a nurse leader on your current unit: _________

12. Nurse leaders: Number of hours worked per week: ____________________________

13. Nurse leader: Role □ Clinical Nurse Supervisor □ House Supervisor
   - □ Nurse Manager □ Nurse Director

14. List specialty certifications: ________________________________________________
INTERVIEW PROTOCOL

Project Title: The Context of Safety Culture from the Perspective of Leaders and Staff Nurses in a Hospital
Research Team: Lisa Harton, PhD Candidate, RN; Lisa Skemp, PhD, RN

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<thead>
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<td></td>
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<tr>
<td>Setting:</td>
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I am interested in learning about patient safety, your experiences with patient safety and what safety culture means to you.

1) Please describe what patient safety means to you? Prompts:
   a) Are there policies or protocols that guide patient safety practice?
   b) What organizational factors guide patient safety practice?
   c) What technology guides patient safety practice?

2) Please describe your experiences with patient safety as it relates to your practice?
   Prompts:
   a) Best experience
      i) Facilitators
      ii) Barriers
      iii) Challenges
   b) Worst experience
      i) Facilitators
      ii) Barriers
      iii) Challenges
   c) Typical experience
      i) Facilitators
      ii) Barriers
      iii) Challenges

3) How would you define safety culture? Prompts:
   a) Close your eyes and describe your mental picture of safety culture.
   b) When did you first hear this term?
   c) How has it impacted your practice?
   d) What do you/others think about this term?

4) What are your experiences working in a safety culture?
   a) Best experience
      i) Facilitators
      ii) Barriers
      iii) Challenges
   b) Worst experience
      i) Facilitators
ii) Barriers
iii) Challenges

c) Typical experience
   i) Facilitators
   ii) Barriers

5) Please describe your experiences with how a safety culture or the organizational culture impacts safe patient care delivery?

Debriefing Questions:
1) Is there anything else you would like to share with me that will help me better understand your experience?

2) How was your experience with this interview?

3) Do you have any additional questions or comments about the interview or your responses to the questions posed?

Thank you for your participation in this interview. Please feel free to contact me if you have any further questions.
APPENDIX J

ACTIVITIES LOG
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<th>Interview ParticipantCode</th>
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<th>Unit</th>
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<th>Consent form signed</th>
<th>Interview/ Observation complete (date)</th>
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APPENDIX K

OBSERVATION PROTOCOL
Safety Huddle Observation Protocol

Project Title: The Context of Safety Culture from the Perspective of Leaders and Staff Nurses in a Hospital
Research Team: Lisa Harton, PhD Candidate, RN; Lisa Skemp, PhD, RN
Objective: A description of escalation, discussion and resolution of patient safety events within the medical-surgical units and within the Facility daily safety huddle.

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APPENDIX L

PARTICIPANT CHARACTERISTICS
### Staff Nurse Participant Demographics

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### Nurse Leader Participant Demographics

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APPENDIX M
SUMMARY OF IMPLICATIONS
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<th>Nursing Interventions</th>
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| Implications for Research | - Alarms and Critical Thinking  
- Evidence-based nursing leadership | - Nurse Autonomy  
- EBP & Individualized Patient Care  
- Professional Accountability  
- Alarms and Critical Thinking | - Structural, psychological and relational aspects of empowerment | - Time/Busy  
- Physicians Perspective  
- Relationships & Safety Culture  
- Predict safety behaviors  
- Handoffs & Transitions | - Zero Harm | - Fear and negative experiences |
| Implications for Practice | - Collaborative rounds  
- Staff nurse input  
- Nurse advocate  
- Accountability model  
- Standards | - Empowered staff nurses & nurse leaders | - Staffing Algorithms  
- Advanced practice models  
- Culture of ownership  
- Technology  
- Staff nurse and nurse leader role  
- Checklists and double checks | - Nurse leader priorities  
- Executive rounds  
- Huddles  
- Set tone, align goals, transparency  
- Clear communication | - Nonpunitive response |
| Implications for Education | - Professional accountability  
- Advocate skills  
- Rationale | - Interprofessional simulation  
- Team training  
- Communication | | | - Debrief/reflect time  
- Professional development  
- Incentivize education |
| Implications for Policy | - Staff nurse input  
- Escalation  
- Non-retaliation | - Safe Staffing  
- Zero tolerance for poor behaviors  
- Safety behaviors | | | - Burnout assessment  
- Recognition  
- System focus  
- National learning |
REFERENCE LIST


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Leape, L. (1997, October 12). Testimony, United States Congress, House Committee on Veterans’ Affairs [Television broadcast] [Radio broadcast].


Vogus, T., & Sutcliffe, K. (2007, October). The impact of safety organizing, trusted leadership, and care pathways on reported medication errors in hospital nursing units. *Medical Care, 45*(10), 997-1002.


VITA

During the past 15 years of her career, Dr. Harton has worked in various health system leadership roles. This experience has included a broad range of operational and strategic oversight activities to ensure efficient and effective delivery of safe, quality healthcare services. Currently her role is the oversight of patient safety, clinical quality, and regulatory oversight across the healthcare continuum. Dr. Harton is a board certified nurse executive. Dr. Harton is a Fellow of the American College of Healthcare Executives.

During her career, Dr. Harton has presented quality improvement achievements nationally and internationally. These improvements have included increased nurse engagement, improved patient experience, decreased mortality, decreased hospital-acquired infections, and improved safety culture. Dr. Harton has earned a Black Belt in Lean Six Sigma and a Certificate in Health Care Project Management from Harvard University.

Dr. Harton’s research interest is with delivering safe, quality healthcare. This work will be the foundation for future research, where the implementation of healthcare strategies can be implemented and tested.