

A GROUNDED THEORY STUDY TO UNDERSTAND NURSE AND RESIDENT
PHYSICIAN COMMUNICATION DYNAMICS

by

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Communication between nurses and physicians frequently occurs in the delivery of care to patients in the acute healthcare setting. In an environment where a person's life and well-being depends upon accurate communication, it becomes an essential component of care delivery and care coordination among health professionals. Investigations of how physician-nurse relationships contribute to the physician's value of nursing and nursing communication do not exist. The purpose of this study is to uncover how resident physicians relate to nurses as members of the healthcare team and how nursing communication is valued.

This study followed constructivist grounded theory to develop a substantive theory that explains how relationships influence nurse and resident physician communication. Interviews were conducted with 15 internal medicine resident physicians at an academic medical center in a southeastern state.

The overarching theme for this study was getting things done, which was comprised of three theoretical categories: shifting communication, accessing nurse's knowledge, and determining the team. The relationship between these theoretical categories create a context for understanding how communication between nurses and resident physicians influences teamwork

and health care delivery. For resident physicians in this study the relationship with nurses is built on a basic foundation of getting work done.

Nurses are not perceived as having discipline specific knowledge that contributes to patient care planning. Rounding patterns illustrate how the nurse is prevented from contributing unique knowledge to the plan of care for patients. The patriarchy that has traditionally influenced the relationship between nurses and resident physician continues to exist today. Further, resident physicians are unaware of the scope of nursing practice and see the nurse as a source for data and executor of prescribed orders. The findings from this study will inform how interprofessional education and practice must focus on relationships that are built on acknowledging the uniqueness of each individual on the patient care team.

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TABLE OF CONTENTS

LIST OF TABLES	viii
LIST OF FIGURES	ix
CHAPTER I: INTRODUCTION.....	1
Background to the Problem	2
Historical Traditions	2
Theoretical Perspectives	2
Research on Nurse-Physician Communication.....	4
Statement of the Problem.....	8
Purpose of the Study	8
Significance.....	9
Research Question	9
Operational Definitions.....	9
Summary.....	10
CHAPTER II: LITERATURE REVIEW	11
Nurse-Physician Relational History: Influences on Communication	11
Theoretical Perspectives on Nurse-Physician Communication	16
Nurse-Physician Communication Research.....	21
Summary.....	27
CHAPTER III: METHODOLOGY	28
Theoretical and Philosophical Perspective	28
Researchers Context.....	30
Protection of Human Subjects	32

Setting and Sample	32
Study Site	32
Sampling Strategy	33
Participants.....	33
Theoretical Sampling.....	34
Data Collection	34
Data Management and Analysis	37
Initial Coding	38
Focused Coding	39
Memoing	40
Theoretical Coding.....	41
Trustworthiness.....	42
CHAPTER IV: FINDINGS	45
Shifting Communication.....	47
Supportive Communication	49
Divisive Communication	52
Directive Communication.....	55
Accessing Nurse's Knowledge.....	57
Nurses Unique Perspective	57
Completing Orders.....	60
Determining the Team	63
Working Separately	63
Developing Trust	67

Getting Things Done.....	68
Summary.....	71
CHAPTER V: DISCUSSION.....	72
Relationship with Historical Perspectives	78
Relationship with Theoretical Perspectives	79
Relationship with Communication Research.....	80
Implications.....	82
Education	82
Practice.....	83
Research.....	84
Policy	85
Limitations	86
Summary.....	86
REFERENCES	88
APPENDIX A: IRB APPROVAL LETTER	96
APPENDIX B: INFORMED CONSENT TO PARTICIPATE.....	97
APPENDIX C: INTERVIEW GUIDE	100
APPENDIX D: THEORETICAL SAMPLING INTERVIEW GUIDE.....	101
APPENDIX E: DEMOGRAPHIC FORM.....	102

LIST OF TABLES

1. Table 1: Participant Demographics.....	36
2. Table 2: Participant 1 Initial Coding Table (extracted sample).....	39
3. Table 3: Focused Code to Overarching Theme Progression (sample)	42
4. Table 4: Focused Code to Overarching Theme Code Progression.....	46

LIST OF FIGURES

1. Figure 1: Dimensions of Relational Coordination Theory	19
2. Figure 2: Patient Care Rounds as Described by Resident Physicians	66
3. Figure 3: A Substantive Theory of Nurse-Resident Physician Relationship Dynamics: Getting Things Done	70

CHAPTER I

INTRODUCTION

According to renowned linguist Noam Chomsky, communication is the social use of language to get people to understand what one means (Osiatyński, 1984). In health care, effective communication enables common understanding of patient information among health care professionals for safe delivery of care (Rothberg et al., 2012). The knowledge and experience of a single discipline can no longer meet the challenges of complex patient conditions (Yeager, 2005) that must be addressed in shorter amounts of time with fewer readmissions and at lower costs. Communication is also critical to success or failure in relationship development, learning, leading, and collaborating (Rothberg et al., 2012).

The Institute for Medicine's report, "To Err is Human," states that 60% of sentinel events reported to the Joint Commission were due to poor communication (Kohn, Corrigan, & Donaldson, 2000). This report proposed an array of interventions to address the problem of poor communication, one of which included the electronic health record (EHR). In the United States healthcare system, the EHR and other digital communication tools have been implemented, yet, communication of patient information remains largely verbal (Tjia et al., 2009). Further, a myriad of other attempts to improve communication have been implemented to improve nurse-physician communication such as interprofessional education, mnemonic devices, and team building exercises. Still, a more recent study by investigators from Johns Hopkins University (Makary & Daniel, 2016) suggest little improvement in this area to date. Communication regarding patients occurs multiple times per day and is essential for effective management of health goals and patient safety. When this communication is ineffective, patient outcomes suffer (Makary & Daniel, 2016).

Background to the Problem

Historical Traditions

The nurse-physician relationship has long been defined in terms of a patriarchy. Most notably exposed in 1967, Leonard Stein described a relationship founded on an educational model for physicians that emphasized medical authority. While the nursing model at the time emphasized the nurse's subservient role to the physician (Stein, 1967). The influence of a patriarchy on the relationship between nurses and physicians has its roots in the gender divide that characterized the two professions, with physicians primarily being male and nurses female. Revisited twenty years later, the nurse-physician relationship was changing as a result of nurses increased independence and scope of practice driven primarily by an emphasis on higher educational levels for nurses (Campbell-Heider & Pollack, 1987; Stein, Watts, & Howell, 1990).

The traditional structure of the relationship between nurses and physicians makes equal input into patient care difficult in an interprofessional environment. The perception of input into patient care by nurses, and discrepancies in how each profession experiences team work, have been attributed to the historical factors that plague the relationship (Thomas, Sexton, & Helmreich, 2003; Reader, Flin, Mearns, & Cuthberston, 2007). While a topic of discussion for decades, patriarchal interactions continue to influence the relationship today. These traditions continue to exist due to system factors that support physicians as the leader of the healthcare team (Wagner, Liston, & Miller, 2007). The presence of this hierarchy in the healthcare arena does little to improve the quality of communication, and decreases the ability of nurses and physicians to have a greater collaborative impact on positive patient outcomes.

Theoretical Perspectives

Nurse-physician communication has been studied through a number of theoretical and practice models. One theoretical model, relational coordination theory (RC theory), posits that in order to explore nurse-physician communication in the patient care environment it is important to examine the relational processes, that is, shared goals, shared knowledge, and mutual respect, as well as the technical processes of communication (Gittell, 2011). Heretofore research has focused predominantly on the technical processes of communication (Havens, Vasey, Gittell, & Lin, 2010; Weinberg, Lusenhop, Gittell, & Kautz, 2007). RC theory uses a framework for investigating the impact relationships, inter- and intra- disciplinary, have on patient care (Havens et al., 2010). Thus, RC theory focuses on relationships between roles rather than interpersonal aspects of the relationships (Gittell, 2009). This is important because it allows for consideration of power and gender differences that may influence communication between nurses and physicians.

The Interprofessional Education for Collaborative Patient-Centered Practice Framework (IECPCP) has been used to understand the link between interprofessional education and collaborative practice (D'Amour & Oandasan, 2005). Further, the framework proposes that the determinants of collaboration include interactional, organizational, and systemic factors (Martin-Rodriguez, Beaulieu, D'Amour, & Ferra-Videla, 2005). In research involving nurses and resident physicians, this model is useful because of its link to the practice environment where the outcomes of their communication are most important.

Despite interest and intent to communicate with another person, successful communication is difficult when persons have differing worldviews; especially if those beliefs are not well understood by the other person (Nordby, 2008). Alternatively, there can be mutual understanding of personal beliefs and knowledge of another's cultural context but conscious

disregard or misunderstanding for those differences (Nordby, 2008). Nordby (2008) argues that in environments involving persons or groups from different cultural contexts successful communication requires that both sets of participants understand and mutually respect personal values and beliefs. A prerequisite for this understanding is the identification of those values specific to each person and the value one has for the other.

Research on Nurse-Physician Communication

Research on nurse-physician communication has primarily focused on the perceptions of communication effectiveness reported by each profession. Reader et al. (2007) found discrepancies in how nurses and physicians perceive communication openness. Physicians considered communication openness generally positive, while nurses considered communication as restricted by the physician (Reader et al., 2007). Similarly, Adler-Milstein et al. (2011) and Thomas et al. (2003) found that nurses considered the relationship with physicians to be less integrated compared to physician colleagues. It is important to note these studies only investigated the perception of communication as rated by the nurse and physician participants. These studies failed to analyze how relationships influences each discipline's value of communication from the other.

Research exploring poor communication have offered suggestions for why different perceptions exist among nurses and physicians. Nurse perceptions of physician communication included difficulty contributing to conversations with physicians, a lack of resolution to disagreements, and a belief that information is not well received by physicians during conversations regarding patient care (Thomas et al., 2003). Each of these proposed rationales for differing perceptions is rooted in the question of whether physicians value nursing knowledge and skill set. In contrast, it has been suggested that differing perceptions could be a result of the

unbalanced relationship between nurses and physicians (Adler-Milstein et al., 2011). This is a result of nurses being unable to attend patient rounds due to shortages of staff or increased patient acuity and the short term cyclic rotation of resident physicians through various patient care units (Adler-Milstein et al., 2011).

Recognizing the criticality of communication in reducing patient error, researchers have studied different interventions to improve communication between nurses and physicians. Most of these attempts can be categorized into four categories: a) localization of physicians, b) forms and checklists, c) teamwork training, and d) interdisciplinary rounds (O’Leary et al., 2012). Localization of physicians refers to the constant movement of physicians’ work across the geography of large medical centers where they must see numerous patients on different units each day. Interventions have attempted to increase relationship-building opportunities, contribute to the development of trust, and improve the feasibility of implementing new interventions aimed at improving communication between nurses and physicians by co-location on the same patient care units (O’Leary et al., 2012). Researchers have found that increasing the opportunity for collaboration on one unit increases familiarity between disciplines, but has minimal influence on the collaboration when developing a patient’s plan of care (O’Leary et al., 2009).

Forms and checklists have received considerable attention in intensive care units and operating rooms; environments where health professionals have close proximity but where communication errors are prevalent (Centofanti et al., 2014; Haynes, Weiser, & Berry, 2009; Makary et al., 2006; Narasimhan et al., 2006; Pronovost et al., 2003; Thomas, Sexton, & Helmreich, 2003). Forms and checklists are a prescriptive attempt to reduce discrepancies in communication by establishing common goals and standards for care. These interventions

attempt to structure the content of communication during interprofessional interactions to develop agreement on the plan of care (O’Leary et al., 2012). While agreement has been noted, over time there is the potential for routine completion to become cursory and lose its initial meaning and intent. These prescriptive attempts are also difficult to update as the plan of care evolves and patient needs vary (O’Leary et al., 2012).

Teamwork training, a third intervention with the potential of improving nurse-physician communication, has been adopted from the aviation sector. These include crew resource management (Haller et al., 2008; Nielsen et al., 2007), and a collaborative effort between the Agency for Healthcare Research and Quality (AHRQ) and the Department of Defense (DoD) to develop Team Strategies and Tools to Enhance Performance and Patient Safety (TeamSTEPPS) (TeamStepps, 2016; Clancy & Tornberg, 2007). These approaches emphasize improved communication behaviors across broad team member interactions. Implementation requires a considerable amount of time and acquisition of new skills whose benefits may be negated if participants are not frequently given the opportunity to interact (O’Leary et al., 2012).

Interdisciplinary rounds (IDRs) are structured meetings composed of multiple disciplines with the purpose of developing an integrated plan of care for an individual patient (Manias & Street, 2001). They often combine daily goals of care that facilitate interdisciplinary communication (O’Leary et al., 2011; O’Leary et al., 2010). The goal of IDR is to improve quality of care through sharing information, addressing patient problems, and planning and evaluating treatment (Manias & Street, 2001). These attempts have shown benefit to the efficiency of communication and improved ratings of effective communication by healthcare providers. However, IDRs tend to only function during dedicated times limiting their ability to evolve with changes in acuity in patient status between rounds (O’Leary et al., 2012).

Riesenberg, Leitzsch and Little (2009) introduced the mnemonic device, *SBAR*, situation, background, assessment, and recommendations, that has been commonly used as a reminder of essential steps in effective communication regarding patient conditions (Riesenberg et al., 2009). Numerous studies have examined mnemonic devices to improve nurse-physician communication, however results have been limited to the nurse's comfort using the tools and accuracy of recall. Only three studies used a research design to evaluate the effectiveness of *SBAR*. One study found that nurses were able to correctly describe the use of *SBAR* and give an example of its use (Haig, Sutton, & Whittington, 2006), while the other compared comfort in using *SBAR* with another mnemonic device and found *SBAR* to be rated lower (Horwitz, Moin, & Green, 2007). Mnemonic devices intend to structure the information of the sender into a format acceptable and understandable by the receiver. This can restrict the sender's communication to items only perceived as relevant to the receiver.

A pilot study investigated the new graduate nurse's experience communicating with physicians that focused on the use of *SBAR* (Forbes & Scott, 2014). Using a qualitative approach, seven new graduate nurses were interviewed regarding their experience communicating with resident physicians in the care of patients. New graduate nurses: a) expressed gaps in educational preparation and practice communicating with physicians, b) had improved communication confidence with experience, c) conformed communication style and content to perceived physician preferences, and d) described communication with physicians as a one-way experience.

Despite numerous studies investigating healthcare provider communication and pressure from regulatory bodies, such as the Joint Commission, to improve communication exchanges, there has been little advancement in the long-term effectiveness of communication. Multiple

studies offer reasons for the persistence of ineffective communication in healthcare that include hierarchical organizational structures, power imbalances, and poor relationships between nurses and physicians (Adler-Milstein, Neal, & Howell, 2011; Reader, Flin, Mearns, & Cuthbertson, 2007; Hansson, Arvemo, Marklund, Gedda, & Mattsson, 2010; Thomas, Sexton, & Helmreich, 2003), but few have offered an effective and sustainable solution.

Statement of the Problem

Differing worldviews and traditional, hierarchical organizational environments frame communication between nurses and physicians (Crawford et al., 2012). Understanding how each discipline relates to and values the other during the exchange of patient information is important to successful patient outcomes. The pilot study with new graduate nurses provided a basic understanding of the contexts that shaped the new graduate nurse's experience communicating with physicians (Forbes & Scott, 2014). These findings highlighted the nurse's perception that physicians valued only the nurse's knowledge and skill set that informed the physician's work. To determine if this is the physician's perspective on the nurse's contribution to the patient care team, this study will examine the perspective of the resident physician on nurse-physician communication dynamics.

Purpose of the Study

The purpose of this study was to uncover how resident physicians relate to nurses as members of the health care team and how nursing communication is valued. A grounded theory approach was used to develop a substantive theory that explains how relational ties influence communication. Grounded theory research offers a way to learn about the world we live in (Charmaz, 2006) through the development of theory where concepts are derived and their relationships are explained (Bryant & Charmaz, 2007).

Significance

Prior research provides an understanding of the frequency, barriers, and perceptions of communication between resident physicians and nurses. Interventions thought to improve communication have been based on these characteristics. What is lacking is an understanding of how relational ties influence how each discipline values communication with the other. Misalignment of what the nurse and resident physician find important regarding communication about patients may adversely affect patient care. Further, this may prevent the exchange of relevant communication about patients. Understanding the resident physician's perception of what is valued in nursing communication provides an opportunity to examine underlying elements that may contribute to continued compromises in patient outcomes attributable to ineffective communication.

Research Question

This study aims to answer the question:

How do resident physicians relate to nurses as members of the health care team and how does this relationship contribute to resident physician's valuing of nursing communication about patients?

Operational Definitions

Nurse –licensed Registered Nurses educated at the Associate degree level or above providing direct patient care on medical-surgical units in acute care hospitals.

Resident Physician – a physician who has finished medical school and is receiving training in internal or family medicine in their 1st, 2nd, or 3rd year.

Medical Surgical Unit – an acute care hospital inpatient care unit for adult patients with a variety of complex medical and surgical conditions.

Communication - any verbal interaction that occurs between the nurse and physicians for the purposes of providing care to patients in the acute healthcare setting.

Value – the regard that one discipline recognizes another’s usefulness or importance in achieving an outcome.

Health care team – a collection of individuals from various disciplines, patients, and families, who collaborate to develop plans of care to assist a patient or population of patients with achieving optimal health.

Summary

Foregrounding the value of nursing communication is a starting point for understanding nurse-physician communication. In spite of its criticality to patient outcomes, communication between nurses and physicians continues to be ineffective and deficient (Robinson et al., 2010). Few studies explicitly address the value of communication between nurses and physicians. Further, the literature is void of research on the value resident physicians place on nursing communication. This lack of understanding may be the reason improvements in communication have not been sustainable. This study is an initial step in understanding the valuing of nurse-physician communication that may advance efforts to improve interprofessional communication for safe, quality patient care.

CHAPTER II

LITERATURE REVIEW

This chapter presents the current research on communication between nurses and physicians. First, I describe the historical and gender perspective on the patriarchal relationship between the nurse and physician. Next, I outline the literature that highlights theoretical perspectives on interprofessional communication. Finally, I conclude with a discussion of the current literature on nurse-physician communication.

Nurse-Physician Relational History: Influences on Communication

Communication between nurses and physicians cannot be discussed adequately without addressing the traditional patriarchal and hierarchical contexts that have long plagued the two disciplines. The most notable, and one of the earliest calls to action, was the seminal article *The Doctor-Nurse Game* by Leonard Stein (1967). In it, Stein depicts the communication that occurs between nurses and physicians in the late 1960's as a game, with rules for how "points" are scored and how the game is won. Stein notes that nurses must frame recommendations in a manner that ensures physicians do not interpret them as disagreement.

Stein (1967) provides an explanation of how the relationship between nurses and physicians developed through the lens of how each discipline is educated. The physician undergoes a rigorous educational journey where a fear of mistakes is hardwired and the heavy responsibility for the lives of patient's rests upon the physician. To compensate for this fear, physicians develop a belief of omnipotence and omniscience which allows the physician to manage the risk and reluctance involved in continuing to treat patients (Stein, 1967). This creates a paradox where the physician wants to use as many resources as possible to effectively treat patients, but is reluctant to accept recommendations from non-physicians due to the conflict

with the belief of omnipotence. Stein (1967) also notes that the physician usually learns how to communicate with nurses after medical school through experience in practice as a physician and role modeling of other physicians.

Alternatively, nurses are taught how to communicate with physicians from the beginning of their plan of study (Stein, 1967). Nursing education emphasizes that the physician is a more knowledgeable individual and should be given the highest respect (Stein, 1967). During Stein's research, nursing schools were highly disciplined institutions that engrained in nurses a fear of independent practice (Stein, 1967). Ultimately, the nurse was educated to be a helping hand to the physicians, but when an opportunity to be helpful to the physician is identified by the nurse, recommendations must be made without appearing to do so (Stein, 1967). These educational systems were facilitated by early physician control over nursing education where physicians determined nursing curriculum and constructed nursing education to be supplemental to medical education (Bell, Michalec, & Arenson, 2014). Nurses were demoted to less valued work while physicians retained the more prestigious scientific work (Bell, Michalec, & Arenson, 2014).

Decades later, Campbell-Heider and Pollock (1987) paint a similar picture of the relationship between nurses and physicians. Physicians continued to view the nurse as an extension or helper to the physician. Alternatively, nursing had begun to stress the distinctiveness of their profession by focusing on holistic management of the patient during illness, while medicine continued to focus on diagnosis and treatment of disease (Campbell-Heider & Pollock, 1987). Wagner, Liston, and Miller (2011) allude to this change in nursing stance on the patient care team. They state that both nurses and physicians accepted the hierarchical and patriarchal relationship until nurses began to become better educated. In addition, the evolution of the female role in American society, and increasing patient complexity,

facilitated a new view of the nurse on the patient care team (Wagner, Liston, & Miller, 2011). Stein noted this change as well when he revisited *The Nurse Doctor Game* in 1990, stating that the nurse's handmaiden image has given way to specialty-trained and certified advanced nurse practitioners (Stein, Watts, & Howell, 1990). Further, physicians were beginning to depend on nurse's knowledge in specialty areas like emergency departments and intensive care units (Stein, Watts, & Howell, 1990). Even with these distinctions, nurses often discount the value of nursing knowledge about patients and continue to view the physician as the leader and primary decision-maker on the health care team (Campbell-Heider & Pollock, 1987).

Many authors attribute the passive nurse and dominate physician roles to traditional power hierarchies developed because of the gender divide within each profession (Campbell-Heider & Pollock, 1987; Sweet & Norman, 1995; Rothstein & Hannum, 2007). The nurse-physician role in healthcare can be viewed similarly to the traditional role delineations of husband and wife, "with the nurse looking after the physicians and maintaining the emotional environment, while the doctor decided what the really important work was and how it was done" (Sweet & Norman, 1995, p. 166). The hierarchical structure in communication between nurses and physicians developed because of how each profession was defined by the dominate gender in each profession, men in medicine and women in nursing. Wagner, Liston, and Miller (2011) state that historically the physician was male and better educated which allowed for acceptance into a higher social class. Conversely, the nurse was female, less educated leading to a lower place in the social order, and seen as the one to follow orders (Wagner, Liston, & Miller, 2011). In today's healthcare environment, many nurses and physicians have become unaware that interpersonal exchanges between the two professions may continue to be influenced by historical traditions that have been internalized over multiple generations (Corser, 2000).

While Stein's seminal article started the conversation regarding nurse-physician relationships, the conversation largely continues today. Price, Doucet, and Hall (2013) note that despite nursing's improved professional status, medicine continues to be revered for its knowledge dominance in healthcare, perpetuating a social hierarchy between nurses and physicians. Traditional roles of the physician and nurse have persisted due to the reinforcement of hierarchical structures in the healthcare arena (Wagner, Liston, & Miller, 2007). Over time, these stereotypes exhibited a type of social control of nurses. This social control allowed physicians to advance their status and increase the power differential between the two professions (Campbell-Heider & Pollock, 1987). While nurses have been aware of the power differential present in the relationship, physicians may not be aware of this imbalance. Nurses have reported a lack of collaboration with physicians, while physicians have been satisfied with the status quo (Nathanson et al., 2011). Stein, Watts, and Howell (1990) note that it is common for those in power positions to be unaware of the oppression that occurs among individuals with whom they work. Further, Hansson et al. (2010) and Hojat, Fields, Rattner, Griffiths, Gohen, and Plumb (1999) state that professionals with more power have the lowest interest in collaborating. As a result, despite nurse's understanding of patient conditions, capability to recommend interventions, and understanding of patient needs and concerns the physician often silences the nurse on the patient care team (Malloy et al., 2009). Malloy et al. (2009) found that this silencing lead to a sense of powerlessness among nurses.

The lack of awareness of the power differential between physicians and nurses can be seen in the research that examines the perceptions of collaboration between the two disciplines. Investigations of interprofessional collaboration and communication frequently measure the attitudes and perceptions of the relationship between nurses and physicians (Adler-Milstein,

Neal, & Howell, 2011; Hannsson et al., 2010; Nelson, King, & Brodine, 2008; Reader, Flin, Mearns, & Cuthbertson, 2007; Thomas, Sexton, & Helmreich, 2003; Thomson, 2007). These studies have consistently found discrepancies between nurse and physician perceptions of collaborative environments. Thomas, Sexton, and Helmreich (2003) found discrepant attitudes existed between physicians and nurses about how they experienced teamwork with nurses rating perceptions of teamwork much lower compared to physicians. Reader, Flin, Mearns, and Cuthbertson (2007) examined perceptions of collaboration between nurses and physicians and found nurses reported less communication openness compared to physicians. Conversely, the majority of the physicians had perceptions of interprofessional collaboration that were generally positive (Reader, Flin, Mearns, & Cuthbertson, 2007).

The reasons for these discrepancies are not fully understood. A consistent finding in this research is the perception of hierarchical attitudes that limit nurse's input into the patient plan of care. When asked about teamwork climate, nurses report difficulty speaking up, disagreements not ending in resolution, and nurse input not being well received by physicians on the team (Thomas, Sexton, & Helmreich, 2003). The authors suggest that differences between the two disciplines such as authority, gender, and training are the origins of these different perceptions (Thomas, Sexton, & Helmreich, 2003). Adler-Milstein, Neal, and Howell (2011) suggested that hierarchical factors might surface when nursing's input is not heard or appreciated by the team of physicians. Fundamental differences between physicians and nurses, such as status and authority, may also account for the persistence of hierarchical factors as a barrier to interprofessional collaboration and communication (Thomas, Sexton, & Helmreich, 2003). Reader, Flin, Mearns, and Cuthberston (2007) support the rationale stating that hierarchical

factors and gender could be among the factors that contributes to difference in attitudes of collaboration.

Hansson et al. (2010) found that a collaborative relationship between nurses and physicians was an important element in nurse's job satisfaction. Their study did not find a similar importance among physicians of different ages or experience suggesting that formation of these differences begins early in medical training and continue to influence their practice as they gain experience. Adler-Milstein, Neal, and Howell (2011) also could not reach a definitive answer to the reason why physicians and nurses have differing attitudes about the effectiveness of communication and collaboration. Tjia et al. (2009) discovered a number of barriers to nurse-physician communication including nurse's anticipation of rude behavior by the physician, feelings of disrespect towards the nurse, and the nurse's perception of being a bother to the physician. Additionally, they found that nurses consistently felt hurried by the physician and a lack of openness to the nurse's input. Finally, nurses have reported that physicians seldom recognize the nurse's responsibilities in patient care and have little knowledge of the demands placed upon the nurse in the patient care environment (Rothstein & Hannum, 2007).

The hierarchies that currently exist in healthcare present challenges for developing mutual respect between disciplines (Havens et al., 2010). While the research focusing on the relationships that influence communication between nurses and resident physicians is limited, much of the literature discussing the patriarchal and hierarchical structure in healthcare refers to attending physicians. Attending physician's relationships with nurses may influence resident physician to nurse communication through the mentor relationship between the two levels of physicians.

Theoretical Perspectives on Nurse-Physician Communication

Interprofessional Education for Collaborative Patient Centered Practice

The Interprofessional Education for Collaborative Patient-Centered Practice Framework (IECPCP) links interprofessional education with collaborative practice (D'Amour & Oandasan, 2005), and has guided much of the research efforts in academia. While this research focuses primarily on the relationships between the nurse and physician in the practice setting, it is necessary to understand efforts in the educational setting to improve interprofessional relationships and communication. D'Amour and Oandasan (2005) state that research must delineate educational and professional factors that influence collaborative practice. This delineation allows investigators to examine factors that influence each without disregarding educational and professional interdependence.

Using IECPCP as a guide, Martin-Rodriguez, Beaulieu, D'amour, and Ferra-Videla (2005) propose that determinants of collaboration are interactional, organizational, and systemic factors. It is important to investigate all factors that influence the interprofessional collaborative relationship so that determinants of its success can be identified. Research that isolates education from practice, according to IECPCP, only addresses half of the variables that influence the interprofessional relationship.

This model is useful for investigating communication between nurses and resident physicians since it focuses on linking education with practice. This link highlights the interdependence of learner outcomes with educational initiatives and patient outcomes with collaborative practice (D'Amour & Oandasan, 2005). D'Amour and Oandasan (2005) note that communication is one of the skills associated with interprofessional education outcomes. With communication as an outcome, one can begin to gain an understanding of how learned

communication, with the physician and nurse as a learner, translates into collaborative practice that in turn influences patient outcomes.

The IECPCP framework addresses interactional processes that include sharing common goals and a common vision. Shared goals are developed when the team is focused on the patient, diverse interests are recognized, and the asymmetry of power among team members is acknowledged (D'Amour & Oandasan, 2005). D'Amour and Oandasan (2005) state that trusting relationships depend upon professional's knowledge of others team member's conceptual models, roles, and responsibilities. In addition, this model places importance upon the professional and personal relationships between team members that contribute to mutual trust.

Relational Coordination Theory

A second theoretical perspective, relational coordination theory (RC theory), offers a framework for understanding how relationships between groups of people interact and influence the coordination of team work. Gittell (2002) defines relational coordination as “a mutually reinforcing process of interaction between communication and relationships carried out for the purpose of task integration” (p. 301). RC theory has two dimensions, communication ties and relational ties (see Figure 1). Communication ties include elements of frequency, timeliness, accuracy and problem solving. Relational ties include elements of share goals, shared knowledge and mutual respect (Gittell, 2012).

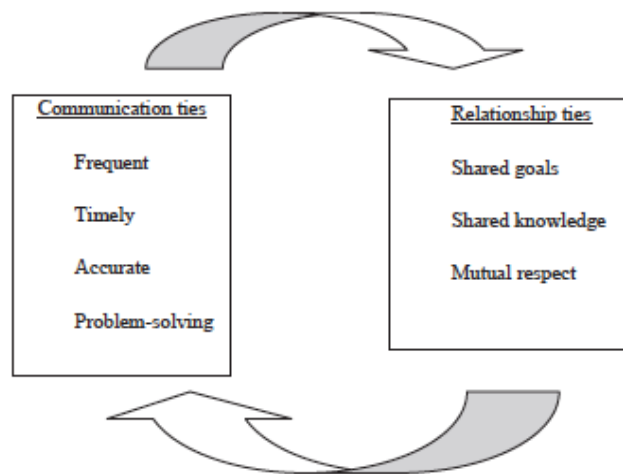


Figure 1. Dimensions of Relational Coordination Theory. Reprinted from “Impact of Relational Coordination on Job Satisfaction and Quality Outcomes: A Study of Nursing Homes,” by J.H. Gittell, D.B. Weinberg, S. Pfefferle, & J.A. Miller, 2008b, *Human Resource Management Journal*, 18(2) p. 155. Copyright 2008 by Blackwell Publishing LTD.

In RC theory, the quality of communication and relationships are interdependent (Gittell, 2002). Communication ties and relationship ties do not precede one another, but act simultaneously to influence an expected outcome. Communication ties ensure quick responses to new and changing information, reductions in errors, and avoidance of blaming and information hiding. Relationship ties are strengthened by sharing knowledge and goals, and by developing mutual respect between the individuals (Gittell, 2002). Relational characteristics ensure participants are motivated by shared goals, socially prepared for interaction, and have a common knowledge base regarding the topic of concern (Gittell, 2002).

RC theory is most applicable to communication that takes place in an environment characterized by high task interdependence, uncertainty, and time constraints (Gittell, Weinberg, Pfefferle, & Bishop, 2008b). Tasks completed in parallel by different disciplines, variability requiring constant updates and modification of actions, and limited time and margin for error or duplication are characteristics of these environments (Gittell, 2002). RC theory differs from

previous relational theories by focusing on the relationships between roles rather than relationships between individuals. When there is a high degree of relational coordination employees are able to connect to each other irrespective of their personal relationships (Gittell, 2011). Thus, based on this criterion, the acute care environment is an area where relational ties can be beneficial in evaluating and improving communication. The acute care environment is highly dependent upon the skills and knowledge of providers representing different disciplines, patient outcomes are highly uncertain, and time constraints often are a barrier to patient care. Further, the acute healthcare environment contains different nurses and physicians that are continuously interacting in the provision of patient care. In a patient care environment, communication and relationships between providers of care are essential to the delivery of safe and effective patient care.

The use of RC theory had positive effects on patient outcomes. Gittell, Seidner, and Wimbush (2010) and Gittell et al. (2000) associated relational coordination with quality outcomes in orthopedic patients. Increased levels of relational coordination decreased length of stay and improved patient perceived quality of care (Gittell, Seidner, & Wimbush, 2010; Gittell et al., 2000). Gittell et al. (2000) was able to determine that all individual dimensions of relational coordination were significantly associated with shorter lengths of stay and improved quality of care. Relational coordination has also been associated with improved quality of life in long-term care facilities (Gittell et al., 2008b) and decreased length of stay and costs in medical units (Gittell, Weinberg, Bennet, & Miller, 2008a). The research on the association between relational coordination and positive patient outcomes has led to job redesign initiatives (Gittell et al., 2008a) and increased job satisfaction (Gittell et al., 2008b). The introduction of the physician hospitalist model is a job redesign that provides physician's opportunities for better

relationships with other members of the health care team thereby improving patient outcomes. While much of the research on job design has focused on individual jobs, RC theory is able to account for the communication and relationship ties between different members of the health care team, all who may have different areas of expertise (Gittell et al., 2008a).

RC theory has been used in a number of studies to frame the collaboration between care providers (Havens, Vasey, Gittell, & Lin, 2010; Weinberg, Lusenhop, Gittell, & Kautz, 2007). Havens et al. (2010) support that improved relational coordination increases nursing reports of quality and decreases adverse events in the patient care environment. The highest predictor of increased quality was respect for the role of the nurse in patient care. Weinberg et al. (2007) used a novel approach in finding support for relational coordination by investigating the relationships between formal and informal caregivers. Similar to the findings of studies investigating the relationships between formal caregivers, this study found that increased relational coordination between formal and informal caregivers resulted in improved pain relief, functional status, and mental health (Weinberg et al., 2007).

From the perspective of RC theory, previous attempts to improve communication have primarily focused on refining communication ties (O’Leary et al., 2012). Since these efforts have not resolved nurse and physician communication issues, perhaps the focus needs to shift to examining the components of relationship ties. The shared knowledge and shared goals aspects of RC theory are measurable and definable. In contrast, the concept of mutual respect is far less quantifiable and has been under explored.

Nurse-Physician Communication Research

Studies that investigate communication between nurses and resident physicians are limited, and even fewer address elements deemed important in relational coordination. The

literature presented in this section reviews those studies where nurse and physician communication was directly investigated or where measured elements of communication were reported.

A number of studies address the frequency in communication between nurses and physicians. Havens et al. (2010) suggests the greater the number of communication exchanges between nurses and physicians the better the understanding of patient progress. More communication exchanges also help build relationships through familiarity as repeated interactions occur (Gittell, 2011). The studies that address frequency in communication between nurses and physicians focuses on the geographic location of physicians and nurses during patient care (Gordon et al., 2011; Weaver et al., 2015). Weaver et al. (2015) supports the work of Gittell (2011), finding that a lack of familiarity and difficulty contacting physicians limits face-to-face communication with nurses and decreases the frequency of communication. When physicians are assigned patients according to disease state, their location may vary greatly during a shift, while nurses tend to remain within a patient care unit.

Gordon et al. (2011) assigned resident physicians patients according to unit location to determine its effect on improving communication frequency and quality of communication with nurses. Communication patterns were assessed using a researcher-developed questionnaire that included an assessment of the frequency of communication (Gordon et al., 2011). As a result, resident physicians that reported frequent communication, also reported decreasing paging. Resident physicians also expressed belief that patient concerns were better met in a unit based system due to the improved frequency of communication with nurses (Gordon et al., 2011).

Timeliness of communication is critical to efficiency for all health care team members (Vermeir et al., 2015). Delays in communication in the patient care environment can result in

error or treatment interruptions (Havens et al., 2010). Information on prior events can influence current decisions on patient care and the lateness or absence of this information can result in patient harm (Vermeir et al., 2015). In addition to the prevention of delays in patient care, timely information has been found to benefit coordinated planning, job satisfaction, and satisfaction with communication between nurses and resident physicians (Adler-Milstein, Neal, & Howell, 2011). Adler-Milstein, Neal, and Howell (2011) found that nurses and resident physicians believed communication timeliness was highly correlated with positive perceptions of collaboration.

Nurses have reported that communication with resident physicians improves with the increased accuracy of information through explanation of patient care issues (McCaffrey et al., 2010). Communication accuracy prevents errors or delays in care (Gittell, 2011). Nurses have also reported that accuracy of information supports resident physician's willingness to rely on nurses as valid contributors to the patient care team (Adler-Milstein, Neal, & Howell, 2011). O'Leary et al. (2010) found that a structured interdisciplinary rounding model that focused information sharing on specific topics related to patient care increased the quality of information shared between nurses and resident physicians. The accuracy of information reinforces trustworthiness (Gittell, 2011) and therefore may influence knowledge seeking by both disciplines in future interactions, a greater valuing of nurse communication by the resident physician, and the development of mutual respect. Yet, Adler-Milstein, Neal, and Howell (2011) found that, in some instances, improved timeliness decreased the accuracy of communication.

Environments with high task interdependence, such as in-patient care units, often require joint problem solving (Gittell, 2011). A common inappropriate response to interdependence is to resort to blaming (Gittell, 2011; Havens et al., 2010). Havens et al., (2010) explains that blaming

often limits future communication exchanges. Nathanson et al. (2011), is one of few studies that measured the degree of similarity of attitudes and collaboration between nurses and resident physicians and found that there was consensus on the decision-making and cooperation by nurses and resident physicians. Further, when asked if decision-making responsibilities were shared between the two disciplines, nurses and resident physicians agreed on the mutual role in solving patient problems (Nathanson et al., 2011).

McCaffrey et al., (2010) implemented an educational session for nurses and resident physicians that provided education on the positive aspects of communication, including shared goals. During this study, nurses and resident physicians were able to work together to develop teaching materials for an orientation to standardized patient care protocols. Both groups reported that working collaboratively led to a sense of working toward a common goal that benefitted patient outcomes (McCaffrey et al., 2010). McCaffrey et al. (2012) used an educational program focused on positive communication skills to improve nurses and resident physician's understanding of each other's role in patient care. After the educational session on communication and collaboration nurses reported an improved ability to communicate in a way that met the resident physician's needs (McCaffrey et al., 2012). Resident physicians also reported they were more accepting of information from the nurse. What was not explored was if this change in perspective was due to the resident physician receiving what they deemed important or if it changed because the resident physician now understood that the nurse's contribution to patient care was critical for good decision-making and patient outcomes.

There are discrepancies in the literature on how the role of the nurse is viewed by the physician. In one study, both nurses and physicians agreed upon the physician's responsibility for diagnosing and prescribing orders and the nurse's responsibility for executing those orders

(Muller-Juge et al., 2013). Baggs and Schmitt (1997) found that resident physicians often saw the nurse's unique knowledge as an extension of the physicians when the physician could not attend the bedside. Alternatively, nurses saw their knowledge as substantive and their role as more of a patient advocate (Baggs & Schmitt, 1997). With these discrepancies in understanding, resident physicians may interpret data about a patient condition as collaboration, while nurses may see this as transfer of factual information (Baggs & Schmitt, 1997). Weinberg et al. (2009) found resident physicians could not articulate the unique knowledge and skill set of nurses, and resident physicians consistently saw the nurse as executor of medical orders. Consensus on roles is not clear and does not address responsibilities and perspectives the nurse has outside of completing physician orders. Nor does it support resident physician understanding of the unique contribution of the nurse to patient care. Instead, the value of nurses is reduced to serving as an extension of the physician.

At times, the physician desires more input from the nurse in patient care decisions (Muller-Juge et al., 2013). Such as, information about patient changes that occurred overnight or subtle changes in condition not represented in the EHR. Recognizing the nurse possess important information about patients, physicians believe staff nurses and charge nurses should be present and participate in unit rounds (Weller, Barrow, & Gasquoine, 2011). Alternatively, nurses report unmet expectations in the resident physician's role in explaining decisions to nurses, listening to nurses, and consideration of the nurse's opinions on patient care (Muller-Juge et al., 2013). This supports other findings that nurses occasionally do not share patient information (Gardezi et al., 2009), due to fear of poor reception by the physicians and possible rejection of the nurses input.

Respect for each member of the health care team increases participant's value of the contribution of others and consideration of the impact of their actions (Havens et al., 2011). Gittel (2011) explains that respect for the work of others builds a strong bond that facilitates effective coordination of interdependent work. Alternatively, disrespect has been demonstrated between health care professionals when a lack of role definition exists (Gittel, 2011). Effective communication on the healthcare team requires the acknowledgement of respect for each member on the team (McCaffrey et al., 2012).

Lingard et al. (2004) discusses the importance of mutual respect in terms of how non-tangible and tangible items are owned by members of the interprofessional team, or the *process of trade*. Lingard, Espin, Evans, and Hawryluck (2004) discovered that the trade process is controlled by the power of those who can authorize the transfer. Nurses report that respect is the most common commodity transferred between those on the interprofessional team (Lingard et al., 2004). Nurses expect that the knowledge, resources, and information they share with the team will translate into a return of respect from the other team members. If this transfer does not occur, barriers to further collaboration are put in place, such as withholding information from team members relevant to patient care (Lingard et al., 2004). This method of retaliation further inhibits the collaborative process and exemplifies the importance of trust and respect in an interprofessional relationship.

Weller, Barrow, and Gasquoine (2011) have interviewed nurses and resident physicians to explore their experiences of working together. Resident physicians acknowledged the need to respect and value the opinions of nursing, as well as the knowledge of senior nurses. Nurses want resident physicians to value their contribution to patient care, but respect is not always present in the relationship (Weller, Barrow, & Gasquoine, 2011). While identified as vitally

important to the effective coordination and communication between nurses and resident physicians, the current research is limited in its ability to explain how the resident physician respects and values communication with nurses.

Summary

In summary, patriarchal and organizational hierarchical structures have influenced how nurses and physicians have communication for decades. This limits nursing's role in patient care and allows it to be defined by the physician. The IECPCP framework informs how the educational and practice environments interact to influence collaboration. Offering a different view, RC theory informs how relational and communication ties rely on each other for successful communication. Even though the relational aspects of communication are considered important, little research has investigated how relationships between nurses and resident physicians influence communication. There is little understanding of what value resident physicians place on nursing communication's contribution to the patient care team.

CHAPTER III

METHODOLOGY

The purpose of this study was to uncover how resident physicians relate to nurses as members of the health care team and how nursing communication is valued. Grounded theory methods were used to develop a substantive theory that explains how resident physicians perceive the importance of nurse-physician communication in relation to patient care. This chapter provides an overview of the grounded theory methods and research design. Methods for data collection, management and analysis follow the constructivist grounded theory approach (Charmaz, 2006).

Theoretical and Philosophical Perspective

Grounded theory was developed by sociologists Barney Glaser and Anselm Strauss. According to Glaser (1978), “The goal of grounded theory is to generate a theory that accounts for a pattern of behavior which is relevant and problematic for those involved” (p. 93). For Strauss, social life was seen as interactive and emergent (Fisher & Strauss, 1979). Grounded theory research requires the researcher to maintain persistent interaction with data and constant involvement with the emerging analysis (Bryant & Charmaz, 2007). The epistemological beginnings of grounded theory are rooted in symbolic interactionism. Symbolic interactionism posits that people construct reality through social processes (Charmaz, 2006). Symbolic interactionism assumes that reality, society, and the individual rely upon communication and language for construction (Charmaz, 2006). This construction of reality leads people to think about their actions (Charmaz, 2006).

In constructivist grounded theory, conceptual and theoretical discovery is constructed through the researchers past and present interactions with people and perspectives (Charmaz,

2006). Like traditional grounded theory, constructivist grounded theory emphasizes the duality of action and meaning and adopts an inductive, emergent, and open-ended approach. Where constructivist grounded theory differs from its traditional form is in its flexibility rather than a methodological approach to theory development (Charmaz, 2006). Charmaz (2014) argues, while symbolic interactionism focuses on the language of research participants in the construction of reality, the researcher must also be cognizant of their own language and how it shapes what is asked, seen, and told during the research process (Charmaz, 2014). If the social reality is constructed then the researcher's position, privileges, perspective, and interactions must be taken into account in the research (Charmaz, 2014). The researcher in constructivist grounded theory does not have to remove how their perspective may influence the analysis; instead, the researcher's perspectives on the phenomena are acknowledged and analyzed along with participant data. The usefulness of this theory is that the researcher may use different approaches that view the participant's world by entering their settings and situations to the extent possible (Charmaz, 2006). Different approaches may include observations, conversations, formal interview, public records, diaries, journals and organizational reports.

Communication between nurses and physicians is a mechanism that shapes each discipline's perception of their relationship. While both disciplines participate in the communication experience simultaneously, interpretations of the experience can vary. These variations may be formed due to the different values and expectations of the interaction. Investigators have demonstrated that physicians consistently rate the quality of communication between nurses and physicians higher than nurses (Makary et al., 2006; Thomas, Sexton, & Helmreich, 2006; Vazirani et al., 2005). Understanding how each discipline values the other may explain the discrepancy in how nurses and physicians perceive communication

effectiveness. A grounded theory approach was chosen for this study because little is known about how resident physician's value communication with nurses about patients. This study assumes that the value and meaning attributed, by the resident physician, to the nurse's communication about patient care is not an explicit action, but is hidden beneath the history and tradition of medical and nursing education. Grounded theory provides a conceptualization of how resident physicians relate to nurses and how this relationship contributes to communication regarding patient care.

Researchers Context

In grounded theory, the researcher's context is used as a tool for the researcher to assist with developing ideas about processes defined in the data (Charmaz, 2014). Sensitizing concepts guide the starting point for a researcher's inquiry. These concepts are used to organize and understand the data, listen to participants, think analytically about the data (Charmaz, 2014), and prepare the researcher for identifying theoretically relevant phenomena (Kelle, 2007). As a nurse, I have experienced both collaborative and unprofessional communication when communicating with resident physicians in delivering patient care. When I worked in an intensive care unit, the resident physicians communicated frequently with nurses during patient care rounds. I felt as though my input about patient care was heard, and saw how my contribution translated into mutual development of care plans. In this setting, resident physicians consulted nurses for recommendations regarding patient care needs. When resident physicians valued my contribution to the health care team, I had greater job satisfaction, an improved ability to deliver high-quality patient care, and felt patients received better care.

In contrast, when I experienced unprofessional communication in the intensive care unit from resident physicians, I perceived that my role as a nurse was not valued. For example, I

consulted a resident physician by telephone due to a patient's persistent decreased blood pressure. Upon answering an evening call, the resident physician considered the finding not worthy of emergency notification. Without coming to the patient's bedside, the resident physician expressed disrespect of my role and competence. I eventually had to take my concerns to a higher level. Because of this unprofessional communication, patient care suffered and I questioned my ability to recognize patient care needs. These contrasting experiences heightened my interest in studying relational processes between nurses and resident physicians influence communication.

In my recent role as a project manager for the system project management office in an academic medical center, my communication with resident physicians is in the form of feedback on projects related to quality and safety issues. In many instances, I work with resident physicians to get their perspective on current processes. Due to the nature of the projects, resident physicians are often willing to provide their recommendations for improvement and understanding of current issues. In my present role as administrator of nursing support services, I am responsible for developing nursing policy that guides completion of nursing tasks and ensures the organization uses evidence to guide practice. In this role, I have very little direct interaction with resident physicians, but am often part of discussions of how to improve nurse-physician communication on the patient care units.

RC theory was also a sensitizing concept for me in conducting this research. Understanding of the relational ties in RC theory set the foundation for further exploration of the valuing in the communication relationship between nurses and resident physicians. The concepts of shared knowledge, shared goals, and mutual respect led to the development of the research

question by providing a point of reference for focusing the researcher's investigation on the relationship dimension of communication, as opposed to the technical aspects.

Protection of Human Subjects

Institutional Review Board (IRB) approval was obtained from the University and Medical Center Institutional Review Board at East Carolina University (see Appendix A). Informed consent was obtained from participants (see Appendix B). Prior to study initiation, resident physicians were given the opportunity to review the informed consent document, ask any questions, and refuse to participate if they chose. I retained signed informed consent documents of resident physicians who voluntarily consented to participate. Each resident physician received a copy of the informed consent document. The interview transcripts were de-identified and each resident physician was given a code number and remained anonymous. The link between the resident physician and identification code is known by me and is kept in a locked filing cabinet inside my locked office. The consent forms were stored in a separate locked box from the interview transcripts.

Setting and Sample

Study Site

Participants were selected from an internal medicine residency program at a 909-bed academic medical center located in eastern North Carolina. This program has over 400 resident physicians. Residency programs are offered in emergency medicine, family medicine, internal medicine, medicine-pediatrics, obstetrics and gynecology, pediatrics, physical medicine and rehabilitation, surgery, and psychiatry. This study site was chosen because of its collaboration with the academic medical center where this author completed a study of new graduate nurse's perceptions of communication with physicians (Forbes & Scott, 2014).

Sampling Strategy

Resident physicians were recruited through an email campaign and snowball sampling techniques. The study was presented to the Associate Dean of Graduate Medical Education for access to the residents. The Associate Dean of Graduate Medical Education sent out an email introducing the study and requesting participants contact the researcher. After the first interviews, resident physicians were asked to have colleagues that might be interested in participating in the study contact me. I responded to interested participants to screen for inclusion/exclusion criteria and to coordinate a time and location for interviews. Inclusion criteria were either first, second, or third year resident physician in internal medicine, who had communication with nurses at least once per working shift in relation to patient care. Resident physicians were excluded if they were currently in an intimate (married or dating) or family (mother, father, brother, sister) relationship with a nurse or completing their research year as part of residency. A relationship with a nurse may have made it difficult for the resident physician to reference only patient care communication. One resident physician that responded was excluded for this reason. The initial sample allowed me to develop the overall directions of the study (Morse, 2007). As resident physicians were recruited I analyzed resident physician demographics to determine what other characteristics among participants should be targeted to achieve sufficient variation.

Participants

A total of 15 resident physicians met the inclusion criteria for this study (see Table 1). Seven were third year resident physicians, four were second year and four were first year resident physicians. Nine were women and six were men. Most (n=11) of the participants were from ethnic and racial minority groups. Cultural backgrounds included seven participants with

an Asian heritage, four were White European, three were African American, and one was Middle Eastern. The ages ranged from 26 to 42 years, with a mean age of 29. Morse (2007) suggests that participants must have experienced the phenomena under investigation and must be able to reflect on that experience. Variation in the sample was to explicate categories (Charmaz, 2006). The purpose of sampling in grounded theory is for the conceptual and theoretical development of the phenomenon (Charmaz, 2006).

Theoretical Sampling

As I began to identify categories and themes, I recognized the need for expanded variation in sampling. After interviewing 11 resident physicians I realized the initial codes evidenced a pattern of shifting communication related to progression through residency in valuing nursing communication. At this point, no participants were 2nd year resident physicians. An additional email campaign was sent to 2nd year resident physicians only. Eligible resident physicians were screened on initial contact for experiences that related to initial codes. The addition of four 2nd year resident physicians assisted with the construction of full and strong categories (Charmaz, 2006).

Theoretical sampling also allowed for confirmation of the codes and conceptual trajectory and increased the rich descriptions of the phenomena of study (Morse, 2007). During theoretical sampling, participants were asked more detailed questions that supplemented the links between concepts (Charmaz, 2006; Morse, 2007). The initial interview guide (see Appendix C) was modified to focus questions on concepts that were identified during data analysis (see Appendix D). Recruitment continued until interview data no longer provided new theoretical concepts or new properties of established concepts (Charmaz, 2006).

Data Collection

Data were generated through open-ended, semi-structured, face-to-face individual interviews with resident physicians. They took place in a private room within the study site and lasted between 30-40 minutes. After consent was obtained, resident physicians completed a brief demographic form (see Appendix E). Resident physicians one through six were interviewed using a semi-structured interview guide (see Appendix C). Participants seven through eleven were interviewed using the conceptually expanded interview guide (see Appendix D).

Interviews were audio recorded and emailed to a commercial transcription service. The transcriptionist service stores and transmits all files using 128-bit SSL encryption, the highest level of security available. Files were only visible to the transcriptionist who signed a confidentiality agreement. At my request, the transcriptionist service deleted the audio-recording files upon completion of the transcription. Completed transcriptions were downloaded from the company's secure website. I listened to the audio recordings two times for accuracy and to match the audio recordings with the transcript. I kept detailed field notes on my interaction with resident physicians. These notes were organized chronologically, coded, and analyzed in conjunction with the transcribed interviews. The 15 transcripts yielded a total of 147 single spaced typed pages.

Table 1

Participant Demographics

	Pseudonym	Age	Gender	Racial/Ethnic Heritage	Year of Residency	Location of Medical School
1	Dr. S.	34	Female	Black, Afro-Caribbean, or African American	3	Northeast
2	Dr. L.	34	Female	Non-Hispanic White or Euro-American	3	Northeast
3	Dr. M.	26	Male	South Asian or Indian American	1	South
4	Dr. H.	30	Female	South Asian or Indian American	3	Northeast
5	Dr. T.	35	Male	Non-Hispanic White or Euro-American	1	International
6	Dr. O.	42	Male	East Asian or Asian American	3	International
7	Dr. E.	27	Male	Black, Afro-Caribbean, or African American	1	South
8	Dr. B.	29	Female	East Asian or Asian American	3	South
9	Dr. K.	34	Female	Non-Hispanic White or Euro-American	3	South
10	Dr. C.	27	Female	East Asian or Asian American & Non-Hispanic White or Euro-American	1	International
11	Dr. U.	34	Male	Middle Eastern or Arab American	3	International
12	Dr. J.	30	Female	South Asian or Indian American	2	International
13	Dr. A.	29	Female	South Asian or Indian American	2	Northeast
14	Dr. I.	28	Female	Black, Afro-Caribbean, or African American	2	South
15	Dr. R.	29	Male	Non-Hispanic White or Euro-American	2	South

Data Management and Analysis

Data analysis began after completion of the first interview. Analysis of data was performed iteratively with data collection in order to make adjustments to the interview guide, sampling strategy, and to understand the participant's worldview. The analysis included different coding phases and memoing that allowed data interpretation to move from concrete statements (initial coding) to analytic interpretations (Charmaz, 2006). Memoing and coding provided the link between data collection and theory development (Charmaz, 2006).

Throughout the coding of data, I used constant comparative analysis. When using constant comparative analysis, the researcher compares statements within and across interviews to determine where similarities and differences exist (Charmaz, 2006). Constant comparison ensures that data continue to support new codes and that the properties and dimensions of those codes are defined (Holton, 2007). Constant comparison between codes increases the researcher's awareness of commonalities and differences and strengthens theory development. The comprehensive nature of constant comparison is achieved by a) comparing different people, b) comparing data at different points in time, c) comparing event with event, d) comparing data with the category, and e) comparing a category with other categories (Charmaz, 2003).

Grounded theory researchers must probe deeply in the data so that the narratives of the participants are rooted in the final product (Mills, Bonner, & Francis, 2006). I became immersed in the data through the detailed coding process. Coding is the initial step in the transition from concrete statements to the development of analytic interpretations (Charmaz, 2006). The coding process began with the first interview and took place in several phases.

Initial Coding

Initial coding was completed quickly and spontaneously through line-by-line coding. According to Charmaz (2006), this rapid, natural coding allows the researcher to remain open-minded and develop a new perspective of the data. An open mind allows other analytic possibilities to be identified and promotes coding that best fits the data (Charmaz, 2006). Line-by-line coding helped me identify implicit concerns and explicit statements in the data (Charmaz, 2006).

Verbatim statements (in vivo codes) that exemplified strong links to the research question were extracted from the transcripts. Words or phrases within each segment that strengthened the participant's response were bolded and underlined. The in vivo code "resident abuse" led me to search through transcripts for other instances of resident physicians portraying conflict during communication with nurses such as "chart wars." Initial codes were organized in a matrix that allowed the analytical parts of each transcript to be viewed against the context of the original transcript (see Table 2). In this example, the in vivo code, "the other side" led me to analyze the data looking for specific instances of resident physicians mentioning the nurse as a separate entity including the use of "they", "their", and "them" rather than "we", "us", and "our". Initial coding was completed two times for each transcript to check initial codes against the original text and to stay close to the data. Initial codes were loaded into NVivo v.10 qualitative management software (QSR International Pty Ltd. Version 10, 2012). NVivo was used to assist with data management and organization of a large amount of verbatim text for the remainder of the coding process.

Table 2: *Participant 1 Initial Coding Table (extracted sample)*

No.	Speaker	Verbatim Interview Text	Initial Coding
1.	Interviewer:	What is your background? What makes it different?	
2.	Participant 1:	I was a registered nurse before going to medical school for about four and a half years, and I traveled so I know what's important. I know talking to people, remembering their first name, talking to them as the professional that they are, not talking down to them including, you know, I guess, I just know because I've been on the other side. So, I know the things that were lacking when I was in their shoes, and I try to make sure I don't do that.	I was a registered nurse before going to medical school for about four and a half years I know talking to people, remembering their first name, talking to them as the professional that they are, not talking down to them including, you know, I guess, I just know because I've been on <u>the other side</u> I know the things that were lacking when I was in <u>their</u> shoes, and I try to make sure I don't do that.

Focused Coding

The next phase of coding was focused, which is more directed, selective, and conceptual (Glaser, 1978). During focused coding, data was analyzed across transcripts and given a code name. Initial codes were identified from the participant's words and data from the literature. The focused codes came about through the recognition of patterns and links among initial codes. The first round of focused coding led to the emergence of 98 sub-concepts with varying specificity and sensitivity to the data. I remained open to analytic possibilities and continued to look across transcripts for similarities. Due to the more conceptual nature of focused codes, after repeated readings of the data, I was able to synthesize larger segments of the data. Links between the focused codes continued to develop. Through multiple analyses and moving

between coding phases, focused codes that were similar in meaning were combined or reconciled into one code resulting in 8 final codes. This process took place over five months in continuous consultation with faculty on the dissertation committee. For example, resident physicians discussed the role of “gaining confidence” and the process of “accomplishing the task” in reference to how the nurse was found useful during patient care. These codes were combined to form one of the first focused codes of “accomplishing tasks”. After further analysis and movement between coding phases this became “completing orders”. Focused codes helped determine which codes made the most analytical sense and resulted in the categorization of the data (Charmaz, 2006). As with constructivist grounded theory, the ongoing comparisons between focused and initial codes resulted in multiple changes in coding labels and addition of in vivo codes.

Memoing

Memoing occurred throughout the coding process, beginning with the first thoughts on initial codes. Memos encouraged me to take codes and data apart, compare, and define the links between them so that I remained open to developing new ideas and insights throughout analysis (Charmaz, 2006). According to Lempert (2007), memoing allows the researcher to engage in and record intellectual thoughts about the data. Intellectual thoughts and reflections are the fundamental links between the data and the emergent theory (Lempert, 2007). For example, while reflecting on the transcripts I wrote: *Building a relationship contains initial codes related to the resident physician’s tactics to develop a relationship with the nurse. For the most part the resident physician discusses how being with the nurse on the floor improves the relationship. They also discuss the importance of how they treat the nurses, and developing a “family” like relationship. It is apparent that this relationship is developed for the purpose of improving the*

ease of getting information from the nurse. This category supports the resident physician's ability to "Access nurse's knowledge bank". (TF Memo, 9/15/16).

As I continued with coding, categories changed but memos reminded me of previous thoughts and rationales for links between the data. This facilitated the transition to theoretical coding. For example, when thinking about how the resident physician relates to the nurse I reflected on the focused code "Nursing Proximity" and "Accomplishing the Task" and wrote: *When resident physicians discussed nursing proximity, they are referring to the benefit the nurse is to them due to their proximity to the bedside, the data that provides the nurse, and the link this give the resident physician to the patient. Similarly, the resident physician recognizes that the nurse is skilled in completing tasks and carrying out orders. The resident physician recognizes the nurse benefits their ability to complete their job (TF Memo, 9/27/16).*

In this example I drew a link between the nurse's perspective on the patient, as viewed by the resident physician, and their view of the nurse's job. This reflection led to the development of accessing nurse's knowledge as a theoretical category in the final model. Further, relevant literature and participant voices were included in memos as they were pertinent to the ideas derived from the data (Lempert, 2007). When a focused code of "Rite of Passage" was considered, I looked to the literature to inform the applicability of this code to the data and included the original model of rites of passage in the memo to compare the data against the code. This knowledge facilitated my entry into a theoretical conversation about newly identified codes. Analysis and review of memos supported the development of the phenomena that explains the relationship between theoretical categories. Linkages between codes were recorded in memos and sorted.

Theoretical Coding

Theoretical coding specifies the potential relationships between the categories that are developed during focused coding (Charmaz, 2006). Important relationships between codes were determined and given meaning. This step moved the data from an analytic understanding to a theoretical understanding (Charmaz, 2006). According to Holton (2007), theoretical coding identifies the relationships between sub-concepts that were identified through focused coding.

Theoretical sorting allowed the identified patterns to form an outline of the conceptual framework that explains the phenomena (Holton, 2007). Sorting of focused codes resulted in three final theoretical categories and one overarching theme. Table 3 shows a sample of the progression from focused codes to overarching theme. The table includes the number of resident physicians that contributed to each focused code along with the total number of references made to each.

Table 3

Focused Code to Overarching Theme Progression (sample)

Focused Code	No. Participants	No. References	Theoretical Category	Overarching Theme
Supportive Communication	13	26	Shifting Communication	Getting Things Done
Divisive Communication	13	39		
Directive Communication	12	29		

Trustworthiness

Trustworthiness of the data provides evidence for rigor in qualitative studies. Guba (1981) describes credibility, transferability, dependability, and confirmability as criteria for

improving rigor in qualitative studies. To address credibility, I followed principles of grounded theory using initial, focused, and theoretical coding. During theoretical sampling, I purposively selected 2nd year residents to interview to fill a gap in data and ensure maximum variation of resident physicians. Interviews were conducted in private rooms that were reserved for two hours to allow adequate time for respondents to answer questions. Participants were ensured that all interview data would remain confidential. All records were de-identified and all interviews were transcribed verbatim. I reviewed transcriptions for accuracy prior to analyzing. During analysis, I conducted five debriefing sessions with my dissertation chair and methodologist committee member to scrutinize progress of the analysis.

With regard to transferability I have provided detail about my context in the environment and the organization from which resident physicians were sampled. This is to provide the reader with information from which to interpret the findings from this study to their own setting. Further, thick descriptions are provided by exemplars from participants and allow another researcher with an interest in the same phenomena to draw conclusions about whether findings can be transferred (Lincoln & Guba, 1985).

Dependability addresses the consistency of the findings over time. Throughout this study, I kept chronological description of field notes, documents, memos, transcriptions, coding schemes, and thematic interpretations (Munhall, 2012). Detailed notes were kept from consultative meetings with faculty mentors regarding analytic moves through the dataset. Additionally, I have provided a description of methods to allow for the study to be replicated.

The confirmability of a qualitative study ensures that the description of the ideas and experiences of the participants are in fact theirs and not my preferences (Shenton, 2004). I have provided a detailed description of my context in the research environment that includes the

experience and perception of communication with physicians. I have also provided tables to show the progression of resident physician's language through coding phases. Detailed memos were kept throughout analysis to capture my thoughts and reflections throughout analysis. I kept an audit trail to document the progression of the study. Analyst triangulation was accomplished through multiple reviews of analysis and findings by my dissertation chair and a committee member with expertise in qualitative methods. This was done to confirm categories and ensure interpretations stayed close to the data.

CHAPTER IV

FINDINGS

The purpose of this study was to uncover how resident physicians relate to nurses as members of the health care team and nursing communication is valued. Findings are based on contextual factors, as well as, the interviews with resident physicians regarding how they relate to nurses during day to day patient care. The overarching theme in this study was getting things done, which was comprised of three theoretical categories: shifting communication, accessing nursing knowledge, and determining the team. The progression from focused codes to overarching theme is presented in Table 4. I present each of the theoretical categories and the overarching theme supported by the voices of the resident physicians and corresponding field notes. I also include a general description of rounding from the perspectives of the resident physicians.

All across the United States, the transition from medical student to resident physician occurs annually on July 1. Resident physicians receive both an institutional and program orientation that lasts one to two weeks prior to beginning patient care responsibilities. The institutional orientation focuses on aspects of the organization such as electronic health record, and presentations human resources, infection control, and quality. The program orientation is focused on the medical aspects of being a resident physician. No part of orientation addresses communication or the relationship with nurses on the patient care units. The July 1 transition not only impacts the resident physician, but other members of the health care team with whom they come to work experience a transition, as well. Further, the health care facility itself experiences a transition. In the health care facility, this transition begins with two different conversations, one from administration and another from nursing. In a formal setting, hospital administrators

typically announce the imminent arrival of new resident physicians and the importance of supporting their transition and enculturation into the hospital. Staff nurses get prepared for resident physicians by developing a heightened awareness. The heightened awareness arises from a concern that the nurses need to ensure safe patient care.

Table 4

Focused Code to Overarching Theme Progression

Focused Code	No. Sources	No. Participants	Theoretical Categories	Overarching Theme
Supportive Communication	13	26	Shifting Communication	Getting Things Done
Divisive Communication	13	39		
Directive Communication	12	29		
Nurses Unique Perspective	15	102	Accessing Nurse's Knowledge	
Completing Orders	12	23		
Working Separately	11	40	Determining the Team	
Developing Trust	10	13		

Once placed in the hospital, resident physicians begin to navigate the system, apply their knowledge, and learn from fellows and attending physicians. They begin the process of independently interacting with the nurse and attempting to provide patient care with other disciplines. In many instances this interaction with the nurse occurs during patient care rounds.

Rounding is an opportunity for multiple members of the patient care team to collaborate on patient progress, needs, and revisions in plans of care (O'Mahony, Mazur, Charney, Wang, & Fine, 2007). Resident physicians round early in the morning to gather patient specific data from nurses that will be used in later rounds with other residents, fellows, and attending physicians to develop treatment plans for patients.

Resident physicians in this study used a standard language to describe their status based on year of residency. The term intern refers to a 1st year resident physician, while second and third-year resident physicians are called senior residents. This terminology was consistent throughout all resident physician's transcripts. The pronoun *they* is also used consistently to refer to nurses. When appropriate to the analysis I have clarified which profession is being addressed or referred to by resident physicians.

Shifting Communication

The theoretical category of shifting communication is composed of three focused codes: supportive communication, divisive communication, and directive communication. As I analyzed the communication experiences of resident physicians with nurses, resident physicians expressed very different perspectives. The notion of "shift" was first identified in the second transcript. In discussing level of knowledge of the nurse and the intern, Dr. L. (3rd year) stated, "There's a shift that happens as you progress through residency where you start to perhaps know more about medicine."

Dr. A. (2nd year) labeled the communication shift that occurs as one progresses through the stages of residency as a rite of passage:

I feel like they're a lot nicer to me this year.... If there's a new doctor that's coming taking care of them they give them a hard time. Kind of a rite of passage... Looking back in retrospect I became a better physician out of it. (Dr. A., 2nd year)

While the only resident physician to use the phrase “rite of passage,” eight participants mentioned changes in communication with nurses through the stages of residency. For a resident physician, going through a rite of passage and becoming an attending physician involves new tasks, changes in perspectives, personal and professional development (Westerman et al., 2010). A rite of passage for a resident physician is complex and multifaceted. Part of this rite of passage involves learning the role of the nurse and how to communicate with them.

Competence, for the resident physician, was perceived to reinforce their image of being knowledgeable and influenced the shift in communication. Resident physicians did not discuss how competence was developed over the course of the residency, rather they focused on being able to display competence and how it facilitated action and agreement when communicating with the nurse. The importance of the image of competence was an early lesson during residency training:

From the physician perspective, within the culture of physicians, there’s always this concern of not looking competent and being worried that you look stupid and that sort of thing. That’s kind of imprinted into your mind from day one of training. (Dr. T., 1st year)

While important to many of the resident physicians, there were different views as to why the display of competence was important. Emphasizing the need to not appear as lacking knowledge Dr. L. (3rd year) reflected, “I think when residents start we’re very insecure. I was insecure. You don’t want to be like “I don’t know.” Dr. K. (3rd year), viewed insecurity as a safety mechanism, “I think we still all question our competence I hope because otherwise, that’s dangerous to not question sometimes.” Competence for this resident physician is not a measure of status. Rather, acknowledging a lack of competence allows her to be aware of her strengths and weaknesses and act as a safety mechanism in decision-making.

Confidence also played a role in the communication shift. The nurse reacted differently to the resident physician's display of confidence. According to Dr. O. (3rd year), when it was evident the resident physicians was not confident, nurses were either anxious, “Some inexperienced nurse, they will feel anxious if you don’t feel confident...” or asked more challenging questions, “...sometimes your voice shows your confidence and then in that case they will challenge you.” In discussing his own confidence and the nurse’s response, Dr. E (1st year) discussed that when he was not able to create a sense of security or confidence in decision-making the nurse would “call the upper-level”. The response of the nurse is a signal to the resident physician that a lack of confidence is on display and the nurse moves on to another level of physician hierarchy to get what the patient needs.

As the shift in communication occurs, resident physicians experience supportive and divisive communication with nurses and the tone becomes increasingly directive. These communication experiences positively and negatively influenced the perception of how the nurse and resident physician related during care delivery. The following sections explain the focused codes that supported the category of shifting communication.

Supportive Communication

Resident physicians saw supportive communication as a benefit to their ability to practice medicine. Seven females and six male resident physicians made reference to types of communication that they perceived to be supportive. Resident physicians described the need for supportive communication from the nurse as the medical student transitions to intern. At this stage, the intern is willing to listen to nurses as sources of information that would improve the intern’s ability to be successful. “Listen” was an initial code that Dr. E (1st year) mentioned when discussing how nurses offered him suggestions, “I try to be humble enough to try to listen

to everybody on the team...” I looked across transcripts for evidence of other physicians listening or taking in suggestions from nurses to support their decision-making. Adding to the code of listening, Dr. T. (3rd year) reflected, “You know an expert nurse, first of all, as an intern you listen to every person. You try to collect data until you create your own way of managing the patients. Initially, you listen to the nurses.” Listening, for resident physicians seems to be an early strategy toward becoming a better physician, but there are undertones that this has to be a conscious effort and may be lost over the course of residency.

The importance of listening is recognized quickly by resident physicians. Early in residency, they recognize gaps in knowledge and admit that nurses know more. Dr. M. (1st year), when discussing his entry into the practice environment stated, “They [nurses] knew more than I did about how the system works and how to start from point A and go to point C.” I initially coded this as “learning the system”. After analyzing this transcript I memoed: *Dr. M. (1st year) sees the nurse as someone that can help him navigate the health care system. Knowing the nurse knows more, he takes a more attentive approach when interacting with nurses. Early, he recognized the nurse could support his transition to residency* (TF Memo, 10/1/16). When looking across transcripts for evidence of supportive communication, 13 resident physicians discussed different instances of how nurses supported their transition to residency from medical student.

During supportive communication, nurses help interns navigate the system, as well as, facilitate an understanding of clinical care. Dr. M. (1st year) later stated that nurses were his “primary point for helping me manage the patient.” Reflecting, Dr. L. (3rd year) differentiated the title of “doctor” with the amount of knowledge she had, “Yeah, we’re called doctor on day one, but we’ve been a doctor for literally 10 minutes, so the nurses know more.” While

supportive, Dr. L.'s link to the time she had been a resident led to the assumption that at some point the knowledge of the physician, at a minimum, matches the nurses.

From the resident physician's perspective, nurses recognize the limits of the intern and assist the resident physician with acclimating to the new environment. Dr. C. (1st year) states, "I think at the beginning it's probably a little more cautious because they know you're still learning so they help you along the way." Reflecting on the nurse's anxiety with the arrival of the new resident physicians, I realized that there is motivation for the nurse to be supportive. Dr. J. (2nd year), emphasized the nurse's acknowledgment that the resident physician was learning. She stated, "They are very understandable. Some of them [nurses] are very nice like, 'Hey, you're new to this place, you're new to this program, and you're learning stuff.'" As a result of the acknowledgment of the resident physicians learning needs, Dr. J. (2nd year) discussed how she responded relationally to the nurse. "I would be so comfortable working with those people who were helpful to me those first few months when you're learning so many things." The support the nurse provides also improves the development of the relationship between the two disciplines.

As resident physicians continued to discuss communication that was supportive of their ability to practice, they began to discuss a specific method nurses would use to support their decision-making. Dr. C. (1st year), referred to this practice as prompting. She stated, "They [nurses] say, 'Usually people would do this.' It's nice to have some prompting sometimes because obviously if they've been there, they have more experience and they've seen at least other interns go through that too." Dr. L. (3rd year) also discussed the benefit of nurses prompting decision-making. She stated, "It helps me figure out why you're deciding what

you're doing.” It was appreciated that the nurse did not emphasize the resident physician's lack of knowledge, rather, the nurse provided a subtle direction for action.

Even more subtle on the nurse's part, and appreciated by the resident physician, was when the prompt was framed as a question. Dr. T. (1st year), also emphasizing his appreciation for nurses prompts as questions stated, “there's always a concern of not looking competent and being worried you look stupid.” Framing the prompt as a question allows the resident physician to receive an external signal that their decision may need reconsidering and, as Dr. C. (1st year) stated, “an opportunity to save myself.” This resident physician recognizes that the nurse is saving the doctor from looking bad, and allowing this to happen. Not recognizing that the nurse is making an indirect attempt to question the resident physician.

During reflection on this part of supportive communication I wrote the following memo:

The resident physician views a prompt, framed as a question, from the nurses as supportive.

They appreciate this from the nurse, but it is not clear where this tactic is developed. Nurses

anticipation or encroachment into the resident physician's territory may push the nurse to offer a

suggestion, and even more passively frame it as a question, to avoid a negative reaction on from

the physician (TF Memo, 10/15/16).

Divisive Communication

Divisive communication tactics were also identified by resident physicians. Nine female and four male resident physicians made reference to communication that was divisive.

Communication that was viewed as divisive was part of the daily workflow. Sorting of initial codes led to the development of “communicating to be heard” as a focused code. This included references to nurses and resident physicians using tactics to ensure their voice was heard. When

compared to an initial code of “knowing when to call the physician” it became clear that divisive communication was part of the shifting communication that occurs during residency.

Divisive communication manifests as disagreements and hostility perceived during some communication exchanges with nurses. Dr. S. (3rd year), suggested that nurses have an inaccurate perception of resident physician’s workload due to their training status. She stated, “I think a lot of the times it’s just, Oh well they’re a resident. They’re not doing anything else. Just call them. I feel like there is an element of resident abuse.” “Resident abuse” denotes a potential for hostility between nurses and physicians.

Communicating through paging and the electronic health record appeared to further potentiate a hostile environment between the nurse and resident physicians. Dr. R. (2nd year) witnessed nurses and resident physicians “bickering” through notes in the electronic health record.

I’ve seen a few cases in which it’s just very apparent this is bickering without any benefit to the patients. I remember an overnight call with another senior resident. The senior resident was covering one patient. He got into a chart war with the nurse. (Dr. R., 2nd year)

The notion of “chart wars” was of no benefit to patient care yet it was identified by other resident physicians. Two resident physicians, Dr. R. (2nd year) and Dr. H. (3rd year), discussed that notes in the electronic health record can approach “aggressive” in nature. Dr. H. was sensitive to the nurse charting statements that created an appearance that she was not taking action on certain patient needs. She stated, “The notes in the charts kill us every time... They write ‘MD notified - no new orders.’ I haven’t even looked at the chart. Give me a second.” As a result of the “chart wars”, resident physicians become more selective in their communication with nurses. Dr. H. (3rd year) continued,

It makes us feel bad. It closes us off because we're not going to want to tell you more things, because every time we want to do something, you'll just write 'No new orders' as soon as anything happens. That's not really fair. (Dr. H., 3rd year)

Divisive communication included delays in responding to hospital pages by nurses. Dr. C. (1st year) stated, "We might be a little delayed in getting orders in because it's like sometimes we are cross covering up to 60 people [patients], so the pager can be going off a lot." Nurses become frustrated with the resident physician's delay in response. Dr. K (3rd year) stated, "When I'm carrying four pagers at the same time for me to prioritize which to call back. Then often, understandably, nurses get upset if they have to page me twice."

Dr. A. (2nd year) revealed frustration when discussing an exchange of communication with the nurse after patient rounds,

Usually I just kind of tell them this is what we discussed and this is what we said when we rounded. This is what we discussed, this is why we decided to do it this way. What's your issue with it? (Dr. A., 2nd year)

In this excerpt, Dr. A. is referring to the physician group as "we". The emphasis on "what's your issue with it" was not intended to probe the nurse for more information, rather it was used to shut down the conversation. This interaction is both contentious and places the nurse external to the health care team without a voice. For resident physicians, the questioning of orders is not viewed as the nurse seeking to understand, rather an attempt to question the resident physician's competence. Dr. O. (3rd year), had the perspective that nurses could sense the resident physician's level of competence in decision-making through "your voice" and make a decision to "challenge" orders.

Divisive communication negatively influences the relationship between the nurse and resident physician. Further, the negative communication exchanges shift the focus of communicating away from patients toward conflict between the resident physician and the nurse.

When discussing these negative communication tactics, poor patient outcomes were never mentioned.

Directive Communication

Directive communication refers to how the resident physician's communication with nurses' changes into an order or command. Six female and six male resident physicians made reference to communication that was directive. During the second interview with Dr. L. (3rd year) I recognized a shift in communication for the resident physicians that moves them towards being more directive when communicating with nurses. She stated, "It goes from a nurse giving you orders, to you guys working together taking care of a patient, to the doctor feeling they're the complete boss." This was initially coded as *the boss*, but after more interviews and sorting this was transformed into *calling the shots* after Dr. T. (1st year) stated, "The physician calls the shots. We write the orders." Dr. U. (3rd year) also articulates the shift in being directive, "You start to pass on and start to be the one giving the plan, maybe by your 2nd or 3rd gen med rotation." As other transcripts were analyzed, other initial codes such as addressing nursing concerns and informing the nurse of the plan were combined to form directive communication.

Five resident physicians made references to nurses that suggested a possessive nature. Transcripts were searched for words such as "my nurses" and "your nurses". I recognized that this possessive language would support the resident physician's ability to be comfortable with directing communication to the nurse. Instances of possessive language included statements such as "we [physicians] have **our** nursing there" (Dr. C., 1st year) and "I go see my patients so I know what to ask **my** nursing staff" (Dr. J., 2nd year). Dr. M. (1st year) stated, "It's all about being able to interact, how to be able to communicate using **your** nurses..." Developing a sense of ownership or possession of nurses eases the ability to be comfortable with communicating in a

directive manner. This perspective facilitates, while not explicitly, a paternalistic relationship with nursing. Further, it reinforces an “us versus them” mind set and subservient relationship between resident physicians and nurses.

Resident physicians viewed their role when communicating with nurses as the one to answer all questions related to patient care. The nurse was to relay concerns to the resident physician rather than coming to a mutually determined solution. Dr. R. (2nd year) discussed how directive communication helped ensure the work was accomplished,

I seek out the nurses and update them and I'm like, "This patient's going to do this and this and this."...That makes it work, if I seek them out and I say, "Make sure that the patient doesn't eat. Make sure that we've got everything set up for them to go to this place. (Dr. R., 2nd year)

Directive communication limits opportunities for sharing of goals and knowledge by the nurse. When nursing concerns are brought to the attention of the resident physician, the expectation is to solve the problem.

Dr. O. (3rd year) exemplified the perspective of physician as problem solver, “What’s the concern from the nurse, then what’s your [the physicians] plan to address those concerns.” When the nurse brings the patient concern to the attention of the resident physician, they are acting as the “eyes and ears” of the resident physician. The directive stance is driven by the resident physician’s view of their responsibility in patient care. Dr. C. (1st year) emphasized this responsibility is placed on interns by senior residents stating, “You’re like the first line person as the intern. They [senior residents] say, ‘You have to make the calls now.’”

For the resident physicians in this study, communicating with nurses was a process that shifts over the three-year course of the residency program. Communication is described as either supportive, divisive, or directive. Communication moves back and forth across each type throughout residency. At times, all three may occur within the same time frame. Each

communication category describes not only the way information is exchanged, but also the relationship between nurses and resident physicians.

Accessing Nurse's Knowledge

Accessing nurse's knowledge was the theoretical category derived from the focused codes nurse's unique perspective and completing orders. In accessing nurse's knowledge, the resident physician determines that understanding what the nurse knows supports the ability to practice medicine. As the resident physician develops their individual perspective of how interprofessional communication should be carried out, having good sources of data flow are critical to the effective delivery of medical care. As I coded the data it was clear that resident physicians value the perspective nurses have of the patient and their ability to carry out orders. My early memos of accessing nurse's knowledge discussed the intentions of the relationship and communication with the nurse: *Accessing nurse's knowledge involves gaining patient specific data that is either difficult to retrieve or irretrievable in the EHR. Resident physicians recognize the position of the nurse and their increased presence with the patient. This gives the nurse access to information the resident physician does not have. The resident physicians query this information* (TF Memo, 10/4/16). This section explains the resident physician's effort to access the nurse for objective data about patients.

Nurses Unique Perspective

All 15 resident physicians referenced the unique perspective the nurse has of the patient. Dr. B. (3rd year) highlighted this point stating, "The nurse is the person that stays with the patient every single minute. They push a button, it is nurse who responds to that." This perspective appears similar to a beck and call mind set where the nurse is always there when the patient uses the call bell or needs assistance.

Resident physicians indicated no prior training in communication with nurses during medical school or during their residency. Instead, resident physicians developed their communication throughout residency in providing patient care, observations on the unit or at the bedside with the nurse, and through trial and error. Dr. M. (1st year) stated, “I think it’s just more the day-to-day basis of working with nurses that facilitates understanding.” Dr. S. (3rd year), a nurse prior to attending medical school, was clear in the resident physician’s lack of knowledge of the nurse’s role stating, “There’s just blatant ignorance between the two groups of what one does, the amount of training one has even to the point of the amount of compensation.” Having a perspective of both professions, Dr. S. uses strong language to emphasize the economic difference between the two profession and how that may contribute to the confusion in how nurses and physician complement patient care.

The unique role of the nurse was based on the resident physician’s perception of the nurses more frequent presence at the bedside. Resident physicians recognized their inability to have the same presence with the patient, and interpreted the presence of the nurse as a benefit to the resident physician’s ability to provide treatment. Dr. M. (1st year) differentiates nursing perspective, “I think nursing is seeing patients on a day-to-day basis. That they’re there with them 24/7 whereas the physician, we see them intermittently through the day.” This is a misunderstanding of nursing’s presence. Nurses have patient ratios that prevent them from having a constant presence at the bedside. Further, short staffing and high utilization of traveling nurses may bring little consistency to nursing’s bedside presence.

Only two resident physicians mention valuing nurse’s communication. Dr. E. (1st year) associates nurses presence at the bedside with their value, “I think that nurses are valued members of the team who see the patient way more than the physicians do, and have some great

insight to share.” One resident physician offered a perspective of the nurse's presence that highlights nursing's value to patient care decision-making. "They [nurses] spend dozens more time periods with the patients. Often, I think, there is value when we discuss discharge and nurses bring up barriers that we [physicians] probably wouldn't have anticipated" (Dr. K., 3rd year). Searching for the word "value", these were the only two instances using value to describe nurse's significance on the patient care team.

Once I understood that resident physicians acknowledged a unique perspective of the nurse with regard to patient care, it was important to know what insight resident physicians believed the nurse possessed. As I analyzed the transcripts I found initial codes like “giving objective information” (Dr. T., 1st year), “gathering information” (Dr. L., 3rd year), and “first line information” (Dr. H., 3rd year & Dr. U., 3rd year). In all of these references, resident physicians emphasized the information the nurse provides that benefits the resident physician’s ability to gain a complete picture of the patient. These benefits are firsthand information of patient needs or changes that the resident physician may not have easy access to. Discussing this first line information further, Dr. M. (1st year) stated, “I often times get my first line of information from the nurses if there's anything going on with the patient.” The nurse’s ability to recognize trends in the patient’s condition was recognized in the excerpt:

They've dealt with the patient all day long, so they know that if there's an abrupt change, then they help us know that, because otherwise, we have no idea, because we're in a totally different place most of the time. (Dr. I., 2nd year)

While the perspective of the nurse gives the resident physician access to a source that gathers data, and is expected to relay that information, there were references to more specific types of information that benefited resident physician practice.

For the resident physician, firsthand information and access to patient data were not available except through the nurse. Further, this information allows the resident physician to decide if a physician goes to see the patient. Dr. U. (3rd year) states, “They see the patients the most and you depend on them to guide you whether the patient actually needs to be seen or not.” Irrespective of this decision, resident physicians recognized the nurse’s perspective can change the course of treatment:

Because I think often nurses, as I said, they have different expertise and they observe things differently and they've talked more with family members. They might have information that can change what our management ends up being. (Dr. K., 3rd year)

More specifically, the information that could change treatment, and thereby more valuable, is the nurse’s ability to recognize subtle trends in the patient’s condition.

They [nurses] spend most of the time with the patients, so they see how ... Very minor changes that for us, that doesn't seem to be a major event, they know that this is not the patient's baseline. I had nurses telling me, ‘I have been with that patient for 2 days now and this is not their mental status,’ although the patient is alert, oriented times 3, they are very accurate, but they just know that this patient is different. (Dr. U., 3rd year)

Access to this information supplements the many data sources resident physician’s use to develop the patient treatment plan. Resident physicians in this study know the nurse has a view of the patients that is close and intimate.

Completing Orders

Completing orders was identified when resident physicians were referring to nurse’s task orientation. I first began thinking about this during the analysis of Dr. M.’s (1st year) transcript, when he stated, “I think nurses here do a lot for us that at other institutions the physician often times have to do.” Memoing on this comment I wrote, “*Dr. M.’s comment on the nurses “doing for” the resident physicians is task oriented.*” Six interviews later, Dr. K. (3rd year) clarified this task orientation:

In a sense, explaining that and then to have the nurse say, ‘Oh, I get this, and I’m going to call the blood bank right now so that they can send it. Hey, in the meantime, I’m going to get your Vascath materials ready. Hey, I already brought you gloves,’ Kind of the anticipation of what’s going to be needed. A lot of nurses are really good having that foresight of, ‘Hey, the last time they asked me to get this ready, they also needed this.’ (Dr. K., 3rd year)

Although there was an appreciation of the nurse’s knowledge and past experience, there was little understanding of the nurse’s scope of practice. This task orientation supports a subservient role of the nurse to the physician, thereby accentuating the physician’s position as decision-maker and the nurse as executor of orders. An emphasis on completing orders minimizes the nurse’s full scope of practice and dismisses the nurse’s holistic view of the patient.

Dr. S. (3rd year) relates differently with nurses, having been a nurse. She referred to nursing as “the other side” on a number of occasions. She acknowledged the importance, and potential neglect, of treating nurses as professionals stating, “I know talking to people, remembering their first name, talking to them as the professional they are, not talking down to them, I just know because I’ve been on the other side.” Supporting the lack of training on role differentiation among resident physicians she states, “from my own little unique perspective, unless you’ve been there [nursing], you don’t really get a lot of things.” She described the different roles as “book smart” and “street smart:”

Being a physician is a lot more cerebral than being a nurse in the sense that the knowledge base and content is just exponentially deeper.... Being a nurse is a lot more practical. You have a lot more practical knowledge of the way things work and the way everyday things happen... So just the kind of, to me, nurses are a lot of, I’d say like street smart, the hospital street smart. Very common sense based. With a lot of knowledge, too, but being a physician, to me, in a lot of times, it’s being book smart. (Dr. S., 3rd year)

While viewed positively by resident physicians, being “street smart” may be perceived as degrading by the nurse. This implies that there is a lack of scientific knowledge among the nursing profession and further emphasizes a task oriented view of nurses.

Learning the capabilities of nurses was important for resident physicians. An understanding of the nurse's capabilities in patient care gave the resident physician comfort in knowing that patient care was being carried out. This also provides insight into how the nurse prioritized work. This understanding gave the resident physician an appreciation for the nurse's workload when prescribed treatments may not be delivered as timely as needed according to the physician. Dr. T. (1st year) stated, "With repeated interactions, you get a sense of how the nurse operates and how they prioritize things and you can get a sense of how it works and how they think and that sort of thing."

With this perspective of nursing, the correctness and efficiency of completing orders becomes an avenue the resident physician uses to measure the nurse's capabilities. During the interview, responses focused on some characteristics of what resident physicians believed were preferred traits of a nurse. Dr. U. (3rd year) states, "You just know it... Your orders are being done ahead of stuff. You see your stuff, patient care in itself is being done appropriately, you realize that nurse is competent." The timeliness of nurse's actions supports the efficiency of completing orders. Dr. H. (3rd year) discussed a nurse that was able to anticipate orders as an example of the efficiency of nursing and facilitate the resident physician's treatment plan:

One of the nurses I knew since intern year. She knows exactly what I'm going to say before I say it, or she knows what to do before ... she knows what we're going to order because she's experienced this hundreds of times. (Dr. H., 3rd year)

A long-standing relationship helps resident physicians measure nursing efficiency and expertise based on anticipating and/or completing tasks in a timely manner. Still, the value of the nurse is centered on how the resident physician is benefited. Further, the resident physician's misunderstanding of interprofessional relationships is based on the nurse supporting the work of the resident physician; rather than a member of the healthcare team.

Determining the Team

Determining the team was the theoretical category derived from the focused codes working separately and developing trust. Structuring the relationship with the nurse so that information is accessible is important to the resident physician. During analysis, I searched for references to “team” in the transcripts. In total, resident physicians made 41 references to team in primarily two contexts: the physician team or interdisciplinary team; 20 of those 41 referred to team as being composed of only physicians. Phrases included “physician team”, “consult team”, or “surgery team”. Alternatively, there were 21 references to team that were more inclusive, “we are all part of one team”, “it’s not just a team of doctors”, and “nurses are valued members of the team”. This section explains how the resident physician determines who is on the team through rounding and proximity to the nurse.

Working Separately

Working separately was most evident in the resident physician’s description of rounding. Although there was not a specific question about rounding, nine resident physicians explained the rounding process that occurs throughout the day on the units as the main mechanism for working with the nurse. From these conversations, a pattern emerged as to the process for rounding (see Figure 2). Rounding was discussed in terms of what disciplines are included and the purpose of each interaction. When the process for rounding and conferencing was extrapolated from the multiple references, nurses’ limited input became apparent.

Interestingly, all rounds for the internal medicine service are located in a “rounding room”, in other words, rounding is not done in the patient’s room. A less formal pre-rounding was identified as a first pass through with the nurse. Dr. L. (3rd year) stated, “Typically I get more information for the patient when I just approach them [nurses] one-on-one, sort of when

I'm pre-rounding.” While this resident physician refers to this round as the less formal “pre-rounding”, five other resident physicians mention the process of going to see the nurse prior to official rounding. Dr. U. (3rd year), recognizes the importance of the seeing the nurse first, but goes to the patient first if the nurse is unavailable, “I personally prefer to see the nurse first before I see the patient. However, if the nurse is not available then I, for time management, I go see the patient.” Many of the resident physicians describe going to see the nurses at the beginning of the shift and asking for any concerns that need to be addressed. During pre-rounds the nurse was not included in the conversation with the patient in this academic medical center.

Once the resident physician has gathered relevant information from nurses and/or patients, first rounds take place where interns present to senior residents. This discussion is in preparation for meeting with the attending physician to review the patient's condition and plans of care. Dr. J. (2nd year) mentioned these rounds from the perspective of a senior resident, “My interns would have gone and seen their patients and we sit down and round. We discuss big things and what changes need to be made before we meet with the attending.”

Second rounds are where patient care plans begin to be made, and included are medical students, resident physicians, a pharmacist, and the attending physician. The information collected during pre-rounds and first rounds is shared while sitting in a conference room on the unit:

We have sit down rounds, attending [physicians], the senior residents on the team, all our interns. We have some medical students. We have a pharmacist usually all the time with us; that's just very helpful, and a medical student, like I said. These are the people who will definitely be there. (Dr. J. 2nd year).

The nurse does not have a presence. Dr. U. (3rd year), confirmed the membership of the group and absence of the nurse stating, “We have residents, pharmacists, attending [physicians], but usually we don't have nurses during rounds.”

Third rounds are where the plan of care is given to the nurse as Dr. O. (3rd year) explains, “We discuss the plan with the nurse and give her the actual plan that we’re going to do for the day.” Further emphasizing the lack of nursing participation in patient care planning, Dr. J. (2nd year), discussed a script that is followed to instruct the nurse on the plan of care:

A complete script. It's put up in our rounding room. In that, it says the big goals for the patients today; the nursing goals. We have a heading and the nursing goals. Each patient will have what our nursing needs to be concerned about. We address that at that time.
(Dr. J., 2nd year)

The nurse is queried about any concerns they may have that can add to the resident physician-led care plan. This is the prompt for the nurse to get answers to any concerns they may have with the plan.

Resident physicians discussed their process for gathering concerns from nursing pertaining to the patient. This query typically happened at two points during interactions with nurses: during the morning pre-rounds and when nurses attended interdisciplinary rounds. Knowing that the nurse has patient information that is relevant to their ability to develop a treatment plan, resident physicians would query the nurse prior to seeing the patient. As Dr. H. (3rd year) explained, “I walk on the wards and ask the nurses, ‘Hey, any issues at all?’ They’ll just tell me what’s going on. It’s nice that way.” Dr. E. (1st year) adds, “I’ll go see the patients, during which time I’ll try to stop the nurse who’s taking care of the patient that day and ask if they have any concerns.”

During the transition from medical school to residency, the resident physician is unsure of how to navigate the health care system and nurses work, in particular. They are certain that they must work together in some way, but the structure of that relationship is unknown. The physical presence of the nurse was the first step in building the concept of a team with nurses. In addition, this presence will serve as a building block for the resident physician’s ability to

establish trust with the nurse. Resident physicians come in to an institution with established procedures and protocols. Rounding in this academic medical center does not support the inclusion of nurses' perspective. Further, the resident physician gains a perspective from increased interactions with nurses to build a framework for how the nurse's role is different from that of the physician.

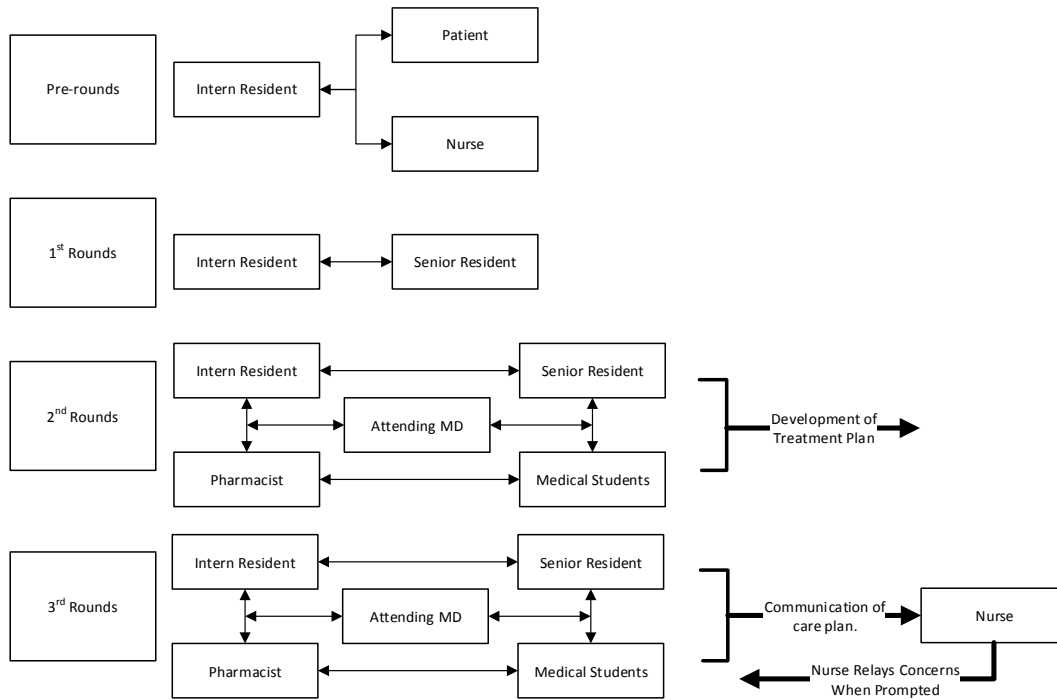


Figure 2. Patient Care Rounds as Described by Resident Physicians

Through these various levels of rounding, the resident physicians separate the nurse from decision-making about patient care. Although separate in decision-making, the resident physician's location in reference to the nurse is important so that information can be accessed efficiently. Resident physicians found their own proximity to the nurse as to the delivery of patient care. After the second interview, I began to sense the importance the resident physician gave to being close to the nurse. During that interview, Dr. L. (3rd year) stated, "I think being physically on the floor is helpful, it's just you're easier to find." I initially coded this as "on the

floor” and it helped me analyze other transcripts for evidence of the resident physician’s value of proximity to the nurse. The resident physician’s physical presence on the units improved the ability to facilitate a relationship with nurses. This was likened to building a relationship with family or friends:

They become more like family so you can be able to feel comfortable being able to go up and ask them questions about how to take care of this patient, what can I do, what’s usually done in this situation, how did we address this issue in the past. (Dr. M., 1st year)

In Dr. M.’s comment, depicting a “family” relationship is facilitated by the resident physician location with the nurse. The importance of this relationship inspires senior residents to pass along this knowledge to intern residents. Dr. U. (3rd year) stated, “They are our friends. We’re on the same team, that’s something I always tell my interns. All of us on one team, all of us care for the patient.” Not all interactions with nurses were viewed as a process to achieve a patient care goal. Some relationships were social and perceived to improve over time:

It’s social. For the most part, I’m pretty friendly. It’s more social than all business. I feel like on units I’m more social with the staff. Everybody’s there all the time, the relationship is actually improved. I think you become coworkers as opposed to some sort of parallel workers. (Dr. L., 3rd year)

Developing Trust

Most of the resident physicians (n=10) identified the notion of trust that began with a lack of trust and moved to developing trust, across the three years of residency. One of my earliest memos was on valuing trust between the resident physician and the nurse. In it I wrote: *The resident physician places a high value on trust with the nurse. This likely has a lot to do with the reliance on nursing’s perspective on patients and the need for nurses to feel open to contacting the resident physician when patient needs warrant* (TF Memo, 9/24/16). From this memo, I compared transcripts for the stage of residency when developing trust was referenced.

Developing trust, between nurse and resident physician, was discussed along the continuum of the residency program.

It was apparent that resident physicians were able to sense the lack of trust from nurses when they were interns. Dr. A. (2nd year) stated “I think especially, maybe I had it more as an intern than I did as a second year just because I’m new. They don’t trust you yet.” The lack of trust exists when a resident physician first enters the hospital environment. There is an indication that resident physicians anticipate this lack of trust and further emphasize that it develops over time. Dr. I. (2nd year) stated, “When I first got there, they didn’t trust you. That’s just how it goes, but then I’d say once they found out who I was I never felt like I had a really big issue with anybody.” Further, indicating this lack of trust in the resident physician, Dr. R. (2nd year) stated, “First few months here, it was very clear they knew I was the intern and they didn’t trust me.” Resident physicians also discussed how trust developed through patient care experiences:

I think its become a lot easier. Mainly because I know a lot of the nurses personally because I’ve worked with them before. We both know how much we can trust each other and we refer back to the experiences we’ve had working with each other. (Dr. K., 3rd year)

There is also a link to the nurse’s perspective of the patient and the development of trust. The nurses as a member of the health care team came from learning the value of the nurse’s proximity to the patient. Dr. U. (3rd year) referencing his recognition of nursing’s increased time at the bedside stated he, “...learned to trust them and respect their evaluation.” Resident physicians appreciated nursing’s assessment and monitoring skills. Resident physicians trusted they would be informed timely if the patient concerns warranted a phone call and the nurse would provide accurate data for the resident physician to make a clinical decision.

Getting Things Done

Shifting communication, accessing nurse's knowledge, and determining the team came together to form the overarching theme of getting things done (see Figure 3). Resident physicians and nurses, two health care disciplines that have the most contact with patients and with each other, make attempts every day to collaborate in order to provide safe, quality patient care. Understanding their role in the delivery of healthcare, the hierarchy, and the divisions between roles are important parts of successfully delivering patient care. In addition to the definition of their own roles, resident physicians and nurses must learn to communicate with each other in a manner that effectively combines the expertise from each discipline to create a well-developed plan for returning a patient to optimal health.

During the analysis of this study, the theoretical categories of shifting communication, accessing nurse's knowledge, and determining the team inform how the resident physician interacts with the nurse for the purpose of getting things done. This purpose is not focused on collaborative work with the nurse, rather it is how the resident physician uses the nurse to get the work done. The theme of getting things done stays close to the words resident physicians used in this study. It first appeared in an interview with Dr. S. (3rd year) when she described the nurse's "street smarts" as "you [the nurses] know how to get things done." This was an initial code that led to the continued analysis and searching for other instances of resident physicians emphasized getting work done. The theme of getting things done, and its connection with relating to the nurse, came from interview seven with Dr. E. (1st year). During his interview, he stated, "I just found that the more casual relationship [with nurses] has made it a lot easier to get things done." Using the text search in NVivo with the search criteria of, "get" OR "getting" AND "things" AND "done", found 11 resident physicians made direct mention of their relationship with nurses and the notion of getting things done.

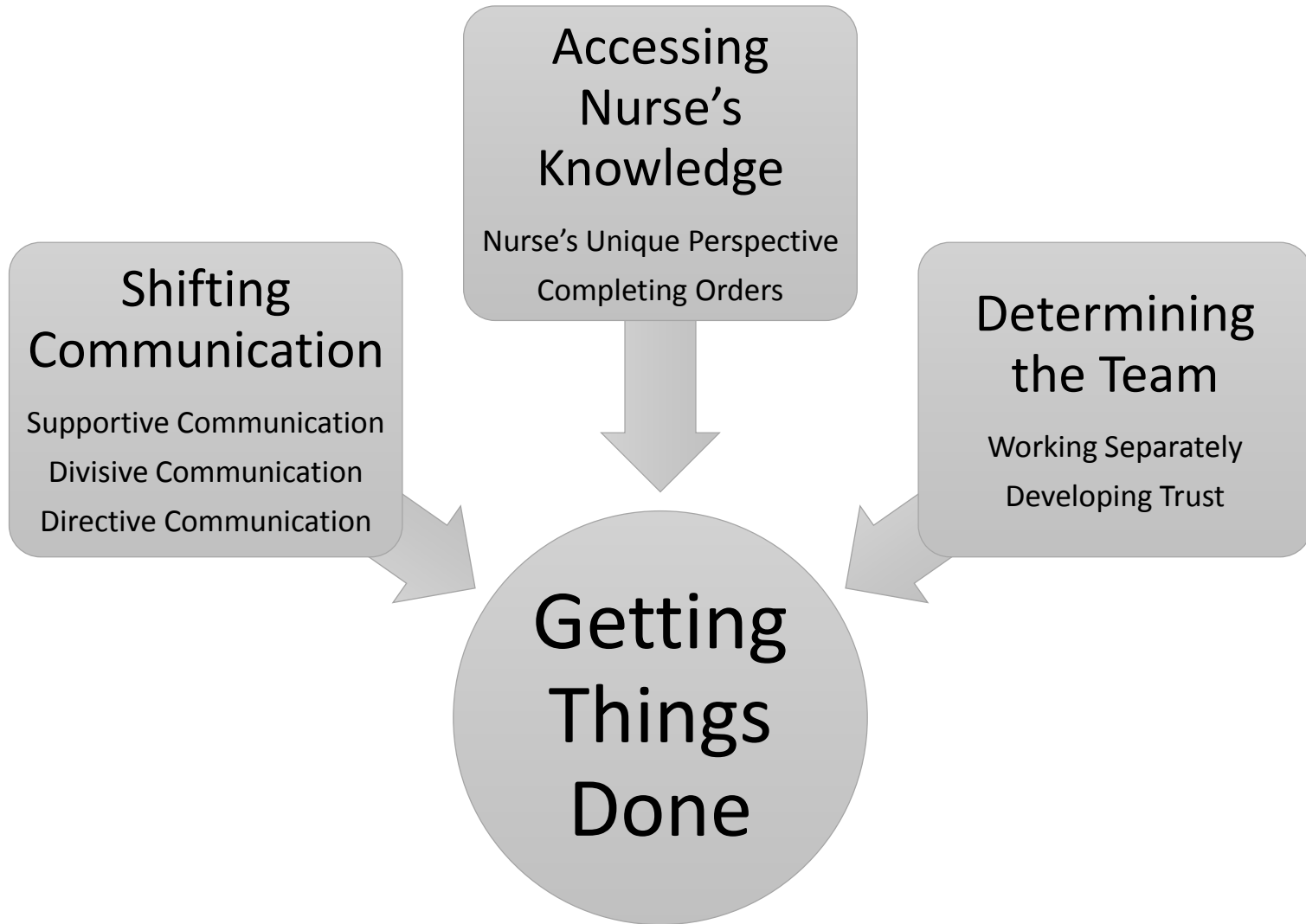


Figure 3. A Substantive Theory of Nurse-Resident Physician Relationship Dynamic: Getting Things Done

Summary

A constructivist grounded theory approach was used to develop a substantive theory that explains how resident physicians relate to and communicate with nurses. Grounded theory research offers a way to learn about the world we live in (Charmaz, 2006) through the development of theory where concepts are derived and their relationships between concepts are explained (Bryant & Charmaz, 2007). The overarching theme, getting things done, was supported by three theoretical categories of shifting communication, accessing nurse's knowledge, and determining the team. In the next chapter, I explain how this framework is applicable to better understanding the context of how nurses and physicians relate and how this influences communication.

CHAPTER V

DISCUSSION

This study led to a substantive theory that describes how resident physicians relate to and communicate with nurses. The overarching theme of getting things done was supported by the three theoretical categories of shifting communication, assessing nurse's knowledge, and determining the team. For resident physicians, communication shifted from supportive to divisive to directive. Further, there was little recognition of nurse's unique, discipline specific knowledge, except in the form of gaining information to make physician-led patient care decisions. Resident physicians determined the team and the nurse was on the sidelines. This focus on getting things done minimizes the nurse's full scope of practice, and supports a hierarchy where resident physician's work takes precedence.

Resident physicians perceived the nurse as an important source of information to alert them to subtle changes in patient condition, provide patient data not captured in the electronic health record, and complete medical orders. The minimal value of the nurse was constructed over time through experiences providing patient care. Nursing communication was valued as an information source, rather than distinct knowledge that contributes to a holistic plan of care. The traditional hierarchy between the nurse and physician facilitated the relationship seen in this study. Focusing on getting things done marginalized the nurse and relegated the nursing profession as an extension of the physician team.

According to resident physicians, nurses enable this hierarchical form of communication through offering prompts and ques that facilitate decision-making. Nurses also assist resident physicians in navigating a complex healthcare system, including the electronic healthcare record and retrieving critical supplies. Prompts from nurses allowed the nurse to influence patient care

without encroaching upon the resident physician's decision-making territory. Resident physicians allowed the nurse authority on administrative tasks, but ensured that patient care decision-making remained in the control of the physician team.

In addition, healthcare system factors influenced how resident physicians relate to nurses. This academic medical center has increased bed capacity by 5.5% since 2009 without increasing the number of resident physicians. Resident physicians in this study did not discuss the influence of a high patient caseload on the ability to communicate with nurses. Rather, a high patient caseload contributed to the need for developing a relationship that focused on getting things done. Resident physicians alluded to the pace of care and impact on communication when discussing paging and divisive communication. The pace of care, emphasis on cost reduction, and pressure to be more efficient in healthcare may stretch both disciplines resource capacity to the extent that there is little opportunity to participate in interprofessional communication.

Resident physicians received no formal education on nurse's discipline specific scope of practice. In fact, registered nurses on the unit may range from associate degree nurses (two years of education) to baccalaureate degree nurses (four years of education) to master's degree nurses, such as clinical nurse specialists (six years of education). The clinical decision making and reasoning varies among these nursing degrees. Further, resident physicians made no indication that nurses asserted any other role than that defined by the physician team. Findings suggest that resident physicians may not take time to understand the various nursing roles that contribute to the healthcare team. Without mentorship on the value of nurses from more senior and attending physicians, resident physicians construct a relationship with nurses driven by the need to ensure the decisions they make, and the orders they prescribe, are completed.

Most resident physicians discussed experiencing a lack of confidence and competence in the 1st year of residency. As an intern, resident physicians were cautious not to appear to nursing that they were not confident in decision-making. This concern may have been accentuated due to expectations from the medical culture that the physician is the leader of patient care. The humility of admitting a lack of competence or confidence in decision-making was not an option for most resident physicians. Instead, resident physicians relied on cues from nurses to “save themselves” from appearing unqualified to be the leader of patient care.

Divisive communication that occurred through technology is a new finding, and one not mentioned in the literature. While technology advancements intended to improve healthcare delivery, this study found instances of passive-aggressive nurse-physician communication through “chart wars” and “resident abuse.” The EHR has the potential to improve communication, but more improvements are needed on how disciplines communicate through technology.

Further, divisive communication from female resident physicians was noticeable. This finding challenges the traditional view of how gender roles divided the two professions and impacted communication. This study adds that gender is less of a contributor to patriarchal structures, rather the power of the profession was pervasive. Wagner, Liston, and Miller (2011) discussed the influence the traditional male dominated medical field and female dominated nursing field had on reinforcing the patriarchy. While the present study included nine females and six males, the patriarchal undertones persisted in the nurse-physician relationship. Since 1970, the percentage of female physicians in the workforce has grown from 7.6% to 35% (Bureau of Health Workforce, 2017). This changing demographic seems to have had little impact on the relationships and value of nursing communication.

Resident physicians recognized how accessing nurse's knowledge facilitated the resident physician's ability to accomplish patient treatment goals. Nurses were not viewed as having unique, discipline-specific, knowledge that was beneficial to an interprofessional care plan. Rather, the resident physician valued objective information and the efficiency of the nurse's completion of tasks related to medical orders. Zwarenstein et al. (2013) found that physician's decision-making intentionally excluded useful information on patient care that may come from other professions if it was not deemed relevant to the medical aspects of care.

While acknowledging the nursing perspective of the patient, the value to the resident physicians is based on the nurse being a source of information that facilitates getting things done. The resident physician sees the nurse as a vehicle to get information about patients and quickly alert them if something is wrong. This false model of interprofessional collaboration creates an imbalance of power in the patient care arena. With the nurse as an informant, the resident physician becomes the purpose for information flow, not the patient. The resident physician reinforces their leadership position and decides how to use objective information from the nurse to create a plan of care.

The unique perspective of the patient that the nurse possesses becomes marginalized against the information needed by the resident physician. Prior to this study, I completed a qualitative study investigating nurse's experiences communicating with physicians (Forbes & Scott, 2014). One of the findings was that nurses perceived physicians to be uninterested in their recommendations for patient care when using the pneumonic device *SBAR* (Situation, Background, Assessment, and Recommendation). Similarly, Zwarenstein et al. (2013) found that information communicated from nurses to physicians during patient care rounds was prompted by a physician on the team and this information was limited to facts. The present

study may support why nurses may experience this lack of interest in their recommendations to the patient's plan of care. When the foundation of the relationship is focused on the needs of one discipline, the unique knowledge of other professions may be viewed as unnecessary, and thereby, not valued. Combined with rounding patterns that do not provide an opportunity for nursing's perspective to be shared, nurses have a limited voice in patient care decision-making.

Modern healthcare teams, including nurses and physicians, appear to be highly experienced, polite and caring with patients, but the physician continues to be positioned above the deliberations of the team (Zwarenstein et al., 2013). Studying barriers to interprofessional collaboration, Kvarnstrom (2008) found that the knowledge contribution of an individual's profession was not always equally valued or put to use. Further, Hall (2005), in discussing barriers to interprofessional collaboration states that physicians will not easily listen to a nurse's story about a patient but expects strong data to solve a patient's problem. This imbalance of value is counter to the main tenant of interprofessional communication where equality is necessary (Zwarenstein et al., 2013).

In health care, inclusion on the patient care team for the sake of physical presence does little for the development of a holistic plan of care for patients. When all perspectives are not included a plan of care is developed that is focused on a narrow patient condition. Hall (2005) mentions that one discipline may relinquish their role so that they may be included on the team. While resident physicians placed a high value on information from the nurse that supported the development of a medical treatment plan, there was no indication that nurses asserted a different role in patient care when communicating with resident physicians.

Resident physicians believed that being on the unit with the nurse improves the relationship and is an opportunity for resident physicians to observe and learn about the unique

role of nursing. However, the importance of close proximity to the nurse is for the sake of getting things done. While on the unit, resident physicians could access nursing knowledge and remove distractions, such as paging, from the communication process. While some resident physicians supported socializing with nurses, the purpose was not to gain insight into what nurses know about the patient. Resident physicians built a relationship with nurses as they moved through their residency program. This is linked with the resident's sense of being lost on the units early in their first year of residency. As they have this sense of "loss" or lack of confidence, they encounter the nurse. At this point, they do not yet know the purpose of the nurse and lack a social relationship. There is a sense of vulnerability and they see the nurse as either someone who is going to help or impede their transition.

The exclusive physician-focused structure of patient rounds silences the nurses' contribution to patient care. Resident physicians perceived this as an effective process for decision-making related to patient care. There is no intentional action to remove the nurse. Rather, the structure is based on supporting the central focus of getting things done, supported by the traditional hospital hierarchy. There is little need to include the nurse in the entirety of rounds when the value of their inclusion has a defined and specific purpose, that is, to provide data, receive direction, and carry out orders.

Dr. J. (2nd year) described how the physicians determine the goals for nursing, "We have a heading and the nursing goals. Each patient will have what our nursing needs to be concerned about." In this instance, the resident physician was describing a chart that has a placeholder for nursing goals. Rather than the nurse being involved in the process, the physician team defines the goals for the nurse. These findings are similar to Zwarenstein et al. (2013), which found communication during patient care rounds was mainly directed from physicians to nurses

(Zwarenstein et al., 2013). The lack of nursing input into decision making perpetuates the cycle of minimizing the nurse's scope of practice and decision-making lens that could contribute to a holistic care plan.

Relationship with the Historical Perspectives

This study supports what, Stein (1967), called the cardinal rule of the physician-nurse game, that open disagreement should not occur. In Stein's (1967) description, he stated that the nurse, "must communicate her recommendations without appearing to be making a recommendation statement (p. 699)." The rules of the game have not changed. While not explicit, these hierarchical patterns of communication were present in this study, specifically through nurses framing questions as prompts. As recently as 2015, Lancaster, Hayner, Kovacich, and Williams (2015) also found that subservient roles continued to exist between nurses and physicians. What may have changed, though, is the perception that the nurse should not make suggestions, to one where the resident physician appreciates its occurrence, even if worded as a question.

Further, the present study supports findings by Campbell-Heider and Pollock (1987) in that physicians still consider the nurse as an extension or helper. What cannot be confirmed from this study is that nurses assert their value in patient care, and push back on the patriarchal relationship, due to higher levels of education (Campbell-Heider & Pollock, 1987; Wagner, Liston, & Miller, 2011). This study adds to the position made by Howell (1990) that those in power positions may be unaware that they are silencing others. Resident physicians perceived that the relationship with nurses was positive. This relationship was considered necessary for the delivery of patient care. A false sense of collaboration had been created based on an underdeveloped understanding of nursing's role in patient care. Further, rounding patterns were

viewed as an appropriate structure for making decisions related to patient care. The lack of knowledge among resident physicians of the potential role nursing could play in patient care, beyond completing tasks, facilitates the resident physician's mis-understanding of how they marginalize the nurse.

Relationship with Theoretical Perspectives

In the ideal practice environment, the Interprofessional Education for Collaborative Patient Centered Practice (IECPCP) framework is where all health care professionals are equally represented with the patient as the central focus. In this study, for the resident physician the central focus was getting things done. The resident physician was grateful when the nurse supported the focus of getting things done. While the IECPCP framework attempts to link education with practice, this study informs the importance of ensuring the practice environment is structured so that it can support and carry on the efforts of interprofessional education. This study did not find evidence of interprofessional practice.

This study contributes to the fact that IPE cannot only focus on the academic environment. With a discipline-specific view as central, the team cannot be expected to gain a holistic view of patient (Kantor, 2008). Training medical students, residents, and nurses on the concepts of inter-professionalism and inserting them into a practice environment that does not reinforce and support those concepts will result in poor communication. Compounding this lack of support, the structure of rounds and an emphasis on the efficiency of work, will continue to maintain a physician focus on patient care.

Likewise, Baker et al. (2011) found that physicians were not part of many interprofessional experiences. The common perception of the physician as decision-maker legitimized their absence from interprofessional collaboration. In the present study, resident

physicians viewed themselves as the leaders and decision makers in patient care. Thus, the relationship with the nurse was structured to support the physician as leader. While Baker et al. (2011) claims that interprofessional education and practice may confirm the scientific and clinical contributions of other professions to patient care, the perception that the physician is the only member of the team with the knowledge to make decisions will impede advancements in collaborative care.

RC theory was the framework that informed my interest in completing this study. I posited that the relational ties between nurses and resident physicians were not clearly understood. In this study, there was no indication that shared knowledge, shared goals, and mutual respect were present in the relationship between nurses and resident physicians. Further, the central focus of RC theory in the health care context is the delivery of holistic patient care. This study adds to the position that efforts to improve communication should focus on relational ties as much as communication ties. The foundational shift that must occur first is a move away from getting things done, and towards a shared goal for the patient based on nurse and resident physicians being equally valued on the healthcare team.

Relationship with Communication Research

Most current research on communication between nurses and resident physicians focuses on the technical aspects, such as the frequency, efficiency, and accuracy of communication. While important, this study supports the gap in understanding the relationship between nurses and resident physicians. This study supports Baggs and Schmitt's (1997) study which reported that resident physicians saw the nurse as an extension of their own knowledge when they could not be present at the bedside. Further, they see the nurse as executor of resident physician's orders (Weinberg et al., 2009). Resident physicians in the current study expected the nurse to be

vigilant in observing the patient so that they could pass on objective information to guide medical decision-making.

Previous research has found differences in how nurses and physicians perceive communication effectiveness (Adler-Milstein et al., 2011; Reader et al., 2007; Thomas et al., 2003). These studies did not offer evidence for why these discrepancies existed. The present study suggests that those discrepancies may be due to opposing views of each discipline's purpose in providing patient care. When the purpose of communication is focused on the needs and expectations of one discipline, different perspectives of what constitutes success will be present. In this study, resident physicians view successful communication based on the nurse's role in assisting with getting things done. If nurses' expectations of value in patient care are different from resident physicians, discrepancies in how successful communication is measured will continue to exist.

This study adds to the few studies that associate the health care system factors that impede collaborative communication between disciplines (Dean, & Oetzel, 2013; Gonzalo et al., 2014; Zwarenstein et al., 2013). Gonzalo et al. (2014) found that the number of patients being covered by the team and resident scheduling have negative consequences on time spent in interprofessional collaboration. Dean and Oetzel (2013) found that, during observations and interviews with physicians, they would prioritize efficiency of communication over understanding or relationships with other disciplines. The increased pressure by healthcare organizations to decrease costs with fewer resources forces nurses and physicians to provide care at a faster pace (Zwarenstein et al., 2013). Baker et al. (2011) found that nurses would defer decision making to physicians due to busy working conditions. As efficiency takes priority, interprofessional communication gets redefined with a focus on getting things done.

Implications

Education

Educational efforts to improve communication between the two disciplines must focus on the preservation of each discipline's professional identity and not ignore the potential for patriarchal traditions to disrupt the relationship. According to the World Health Organization (2010), interprofessional education occurs when students from two or more professions learn about, with, and from each other. This study should inform interprofessional educational efforts that emphasize the development of knowledge about each discipline's unique contribution to holistic patient care. Further, education must enhance nurses and physician's relational capacity to facilitate collaboration. The presence of trust and a feeling of safety when nurses and physicians communicate will ensure that the input from each is valued and included in patient care decision-making. Education that only increases comfort or attitudes does not create a mode of communication that contributes to safe patient care.

This study also informs nursing leaders on the increased need for ensuring new graduate nurses are able to articulate their value in the delivery of patient care beyond the completion of tasks. While interprofessional communication relies on multiple disciplines, one discipline cannot bear the responsibility for shaping and applying its concepts. Nurses must be responsible for knowing and articulating their value to patient care. This ability begins in the pre-licensure educational setting. Nursing's social and physical science foundations ensured the profession was well-rounded but, according to Cook and Peden (2017), gave it a weak foundation for distinguishing nursing as unique and necessary. The varied nature of the nursing profession makes articulating this value difficult (Cook & Peden, 2017) but, at the same time, an opportunity to educate nurses on their vital role in patient care.

Interprofessional education that focuses on simulation-based reenactments falls short of replicating how the nurse and resident physician's relationships manifest in the clinical arena. Simulation is beneficial in its ability to reinforce defined roles and responsibilities of different disciplines present at the patient's bedside, such as in advanced cardiovascular life support. Interprofessional education is doing what it was designed to do, increase the frequency, timeliness, and ability to problem solve through communication, but it is not changing the relationships that are foundational for on-going effective patient care. Simulation based training has not met the routine communication needs between the resident physician and the nurse on the unit.

Practice

Interprofessional education has focused primarily on the academic arena (Abu-Rish et al., 2012). Cox et al. (2016) have reported that education and health delivery systems lack purposeful alignment related to interprofessionalism. Further, interprofessional interventions in practice are limited and those that have been conducted are highly varied in their approach, setting, and outcome measurement, limiting the understanding of interprofessional education and its effectiveness (Reeves et al., 2013). While this study did not find evidence of significant education on interprofessional collaboration, it does inform practice leaders that interprofessional communication will not occur without training. Without healthcare systems making intentional efforts to align with IPE efforts to improve interprofessional practice, collaborative patient care will continue to be compromised (Cox et al., 2016).

Practice leaders from both disciplines must ensure the environment is structured so that communication reflects mutual respect, shared goals, and shared knowledge. This can be accomplished by ensuring that patient rounds are not structured in a manner that positions nurses

on the margins of decision-making. Rather, patient care rounds should be designed so that all members of the patient care team are present throughout the decision-making process, empowered to contribute equally, and focused on the holistic needs of the patient. The patient responsibilities of resident physicians and nurses must acknowledge the benefits of collaborative communication and be reduced or have appropriate support to allow for relationship building and developing a shared plan of care. Finally, the practice environment must continue the educational efforts that occur in academia. Interprofessional educational concepts must continue to be taught throughout the health sciences curriculum with integration into the practice arena.

Research

While this study has identified an opportunity for improvement in the relationships, this study left questions for why nurses do not advocate their position on the interprofessional team. More research is needed on the factors that contribute to nurses abdicating their professional role in patient care delivery and the potential health care system factors that do not give nursing a voice to promote their unique knowledge in patient care delivery. Research in this area warrants an investigation on the pre-licensure education related to communication with physicians and how the value of the nurse is positioned in the curriculum. Further, research should be done on educational models that not only teach medical and nursing students how to communicate but focus how each disciplines expertise is combined for a holistic purpose.

Research is needed in the clinical area on innovative rounding structures that include nursing, as well as, other disciplines. Investigations on how the decision-making that occurs in these interprofessional structures impact the perceptions of those involved and patient outcomes. Additionally, eleven resident physicians were from ethnic or racial minority groups and five

were trained in international medical schools. More research is needed on how these factors influence resident physician's perceptions of collaboration and how they value the nurse.

This study suggested that there may be healthcare system factors that influence the relationship between nurses and physicians. More research is needed on how system and patient complexity influence the ability for nurses and physician to participate in interprofessional collaboration. Finally, this study should be replicated at a health care organization that has a robust interprofessional education program in academics and practice. This will inform how the practice environment structures the relationship and communication between nurses and physicians.

Policy

Health care policy is in the midst of great change. Among all the different viewpoints of what is best, creating value for patients continues to be a central goal. Value, in the context of healthcare, should be based on achievement of health for the patient, and determine the rewards for all stakeholders in its creation (Porter, 2010). Based on these assumptions, Porter and Teisberg (2006) described value in healthcare as improved health outcomes and reductions in cost. Porter (2010) goes on to state that focusing on value defined in this manner, "unites the interests of all actors in the system." One of Porter and Lee's (2013) strategies that will shift health care delivery to a value based system is the development of integrated practice units. This study informs the difficulties that may exist with organizing into integrated practice units. In an integrated practice unit, care is organized around a defined patient population or medical condition (Porter & Lee, 2013). This includes the care provided by physicians and nurses. While they become familiar with the patient's condition, they know and trust one another's expertise, meet frequently to discuss patient care, and work as a team toward one shared goal,

creating positive outcomes for the patient (Porter & Lee, 2013). A focus on getting things done does not support a patient centered focus on care.

Getting things done is aligned with a traditional model of healthcare that is centered on medical directives, approvals, and practices. This study further informs how that traditional structure takes the focus off creating a collaborative treatment plan for patients and focuses the work on getting things done relative to one discipline during patient care. This care is not patient-centric, nor is it interprofessional. Health care policy changes should emphasize and incentivize the development of integrated practice units and should reward systems to optimize value by providing patient care that is cost-effective and concerned with the full continuum of patient needs. As long as health care policy continues to incentivize physician-led models and incident-based interventions, traditional hierarchies will be inherent in the structure and limit the ability to truly move to a value-based health care system.

Limitations

Several limitations were identified in this study. The findings in this study emerged from 15 resident physicians that practice in internal medicine at one medical center. Therefore the transferability of these findings would be to like populations; resident physicians in a rural southeastern medical center. In my attempts to strengthen transferability, I have presented my context in this study and the environment in which these resident physicians practice. Recruitment of resident physicians took longer than expected due to the busy resident physician work schedules. In light of these limitations, a substantive theory, and greater understanding, of how nurses and resident physicians relate as members of the health care team and how nursing communication is valued was generated.

Summary

Healthcare delivery is an increasingly complex task that requires multiple disciplines and patients to collaborate to develop safe and effective plans for restoring health. In health care, interprofessional communication has been an audacious goal for some time without major advancements in the relationships between disciplines. This study has brought out the relational context that resident physicians and nurses experience in the patient care environment. This environment is highly complex and pressured to be more efficient, potentially at the risk of degrading the relationships between those providing care to patients. Further, this study highlighted that one basis for the relationship between nurses and resident physicians is founded on getting things done. While those “things” reach the patient, there was no explicit recognition that the patient is the center of care.

For healthcare to make great shifts in providing high quality patient care we must move away from a discipline-specific approach to patient care. The often-overlooked contexts that shape relationships between health care disciplines must be disrupted and redesigned in the context of today’s complex patients need. For nurses and resident physicians, the two most prominent professions in the health care system, there is ample opportunity to influence how those relationships are formed so that they are focused on the holistic needs of the patient. Acknowledging the deficiencies in current communication, and committing to improvement, will ensure that healthcare delivery can be structured on a foundation of collaborative safe patient care.

REFERENCES

- Abu-Rish, E., Kim, S., Choe, L., Varpio, L., Malik, E., White, A. A., ... & Thigpen, A. (2012). Current trends in interprofessional education of health sciences students: A literature review. *Journal of Interprofessional Care, 26*(6), 444-451.
- Adler-Milstein, J., Neal, K., & Howell, M.D. (2011). Residents and nurses' perceptions of team function in the medical intensive care unit. *Journal of Critical Care, 26, 104.e7-104e.15*.
- Baggs, J.G., & Schmitt, M.H. (1997). Nurses' and resident physicians' perceptions of the process of collaboration in an micu. *Research in Nursing and Health, 20*(1), 71-80.
- Baker, L., Egan-Lee, E., Martimianakis, M., & Reeves, S. (2011). Relationships of power: implications for interprofessional education. *Journal of Interprofessional Care, 25*(3), 98-104.
- Bell, A. V., Michalec, B., & Arenson, C. (2014). The stalled progress of interprofessional collaboration: the role of gender. *Journal of Interprofessional Care, 28*(2), 98-102.
- Bryant, A. & Charmaz, K. (2007). Grounded theory research: Methods and practices. In A. Bryant & K. Charmaz (Eds.), *The Sage Handbook of Grounded Theory*. Thousand Oaks, CA: Sage.
- Bureau of Health Workforce. (n.d.). Retrieved April 02, 2017, from <https://www.hrsa.gov/about/organization/bureaus/bhw/>
- Campbell-Heider, N., & Pollock, D. (1987). Barriers to physician-nurse collegiality: An anthropological perspective. *Social Science & Medicine, 25*(5), 421-425.
- Centofanti, J.E., Duan, E.H., Hoad, N.C., Swinton, M.E., Perri, D., Waugh, L., & Cook, D. (2014). Use of a daily goals checklist for morning ICU rounds: A mixed-methods study. *Critical Care Medicine, 42*(8), 1797-1803.
- Charmaz, K. (2003). Grounded theory. In J. A. Smith (Ed.), *Qualitative psychology: A practical guide to research methods*. London: Sage.
- Charmaz, K. (2006). *Constructing Grounded Theory: A practical guide through qualitative analysis*. London: Sage.
- Charmaz, K. (2014). *Constructing Grounded Theory* (2nd ed.). London: Sage.
- Clancy, C. M., & Tornberg, D. N. (2007). TeamSTEPPS: assuring optimal teamwork in clinical settings. *American Journal of Medical Quality, 22*(3), 214-217.
- Cook, L. & Peden, A. (2017). Finding a focus for nursing the caring concept. *Advances in Nursing Science, 40*(1), 12-23.

- Corser, W. D. (2000). The contemporary nurse-physician relationship: insights from scholars outside the two professions. *Nursing Outlook*, 48(6), 263-268.
- Cox, M., Cuff, P., Reeves, S., & Zierler, B. (2016). Measuring the impact of interprofessional education on collaborative practice and patient outcomes. *Journal of Interprofessional Care*, 30(1), 1-3.
- Crawford, C.L., Omery, A., & Seago, J.A. (2012). The challenges of nurse-physician communication. *Journal of Nursing Administration*, 42(12), 548-550.
- D'amour, D., & Oandasan, I. (2005). Interprofessionality as the field of interprofessional practice and interprofessional education: An emerging concept. *Journal of Interprofessional Care*, 19(Supplement 1), 8-20.
- Dean, M. & Oetzel, J. (2013). Physicians' perspectives of managing tensions around dimensions of effective communication in the emergency department. *Health Communication*, 29(3).
- Fisher, B.M. & Strauss, A.L. (1979). George Herbert Mead and the Chicago tradition of sociology (Part 1). *Symbolic Interaction*, 2(1), 9-25.
- Forbes, T. & Scott, E. (2014). Communicating with physicians: A phenomenological study of the new graduate nurse's experience. Manuscript in preparation.
- Gittell, J.H. (2002). Relationships between service providers and their impact on customers. *Journal of Service Research*, 4(4), 299-311.
- Gittell, J. H. (2009). *High performance healthcare: Using the power of relationships to achieve quality, efficiency and resilience*. McGraw Hill Professional.
- Gittell, J. H. (2011). *Relational coordination: Guidelines for theory, measurement and analysis*. Waltham, MA: Brandeis University.
- Gittell, J.H. (2012). New directions for relational coordination theory. in K.S. Cameron & G. Spreitzer (Eds.), *Oxford handbook for positive organizational scholarship*. London: Oxford University Press.
- Gittell, J.H., Seidner, R., & Wimbush, J. (2010). A relational model of how high-performance work systems work. *Organization Science*, 21(2), 490-506.
- Gittell, J. H., Weinberg, D. B., Bennett, A. L., & Miller, J. A. (2008a). Is the doctor in? A relational approach to job design and the coordination of work. *Human Resource Management*, 47(4), 729-755.
- Gittell, J.H., Weinberg, D.B., Pfefferle, S., & Miller, J.A. (2008b). Impact of relational coordination on job satisfaction and quality outcomes: A study of nursing homes. *Human Resource Management Journal*, 18(2), 154-170.

- Glaser, B. (1978). *Theoretical sensitivity*. Mill Valley, CA: Sociology Press.
- Gonzalo, J., Wolpaw, D., Lehman, E., & Chuang, C. (2014). Patient centered interprofessional collaborative care: Factors associated with bedside interprofessional rounds. *Journal of General Internal Medicine*, 29(7), 1040-1047.
- Gordon, M.B., Melvin, P., Graham, D., Fifer, E., Chiang, V.W., Sectish, T.C., & Landrigan, C.P. (2011). Unit based care teams and the frequency and quality of physician nurse communications. *Archives of Pediatric and Adolescent Medicine*, 165(5), 424-428.
- Guba, E.G. (1981). Criteria for assessing the trustworthiness of naturalistic inquiries. *Educational Communication and Technology Journal*, 29, 75-91.
- Haig, K.M, Sutton, S., & Whittington, J. (2006). SBAR: a shared mental model for improving communication between clinicians. *Joint Commission Journal on Quality and Patient Safety*, 32, 167-175.
- Hall, P. (2009). Interprofessional teamwork: Professional cultures as barriers. *Journal of Interprofessional Care*, 19(sup1), 188-196.
- Haller, G., Garnerin, P., Morales, M. A., Pfister, R., Berner, M., Irion, O., Clergue, F. & Kern, C. (2008). Effect of crew resource management training in a multidisciplinary obstetrical setting. *International Journal for Quality in Health Care*, 20(4), 254-263.
- Hansson, A., Arvemo, T., Marklund, B., Gedda, B., & Mattsson, B. (2010). Working together—primary care doctors' and nurses' attitudes to collaboration. *Scandinavian Journal of Public Health*, 38(1), 78-85.
- Havens, D.S., Vasey, J., Gittell, J.H., & Lin, W. (2010). Relational coordination among nurses and other providers: Impact on the quality of patient care. *Journal of Nursing Management*, 18, 926-937.
- Haynes, A.B., Weiser, T.G., Berry, W.R., Lipsitz, S.R., Breizat, A.S., Dellinger, E.P.... Gawande, A.A. (2009). A surgical safety checklist to reduce morbidity and mortality in a global population. *The New England Journal of Medicine*, 360(5), 491-499.
- Hojat, M., Fields, S.K., Veloski, J.J., Griffiths, M., Cohen, M.J., & Plumb, J.D. (1999). Psychometric properties of an attitude scale measuring physician-nurse collaboration. *Evaluations and the Health Professions*, 22(2), 208-220.
- Holton, J.A. (2007). The coding process and its challenges. In A. Bryant & K. Charmaz (Eds.), *The Sage Handbook of Grounded Theory*. Thousand Oaks, CA: Sage.
- Horwitz, L.I., Moin, T., & Green, M.L. (2007). Development and implementation of an oral sign-out skills curriculum. *Journal of General Internal Medicine*, 22, 1470-1474.

- HRSA Health Workforce Data. (2017, February 01). Retrieved April 2, 2017, from <https://bhwh.hrsa.gov/health-workforce-analysis/data>.
- Interprofessional Education Collaborative Expert Panel. (2011). *Core competencies for interprofessional collaborative practice: Report of an expert panel*. Washington, DC: Interprofessional Education Collaborative.
- Kohn, L. T., Corrigan, J. M., & Donaldson, M. S. (Eds.). (2000). *To Err Is Human: Building a Safer Health System* (Vol. 627). National Academies Press.
- Kvarnström, S. (2008). Difficulties in collaboration: A critical incident study of interprofessional healthcare teamwork. *Journal of Interprofessional Care*, 22(2), 191-203.
- Lempert, L.B. (2007). Asking questions of the data: Memo writing in the grounded theory tradition. In A. Bryant & K. Charmaz (Eds.), *The Sage handbook of Grounded Theory*. Thousand Oaks, CA: Sage.
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Beverly Hills, CA: Sage Publications.
- Lingard, L., Espin, S., Evans, C., & Hawryluck, L. (2004). The rules of the game: Interprofessional collaboration on the intensive care unit team. *Critical Care*, 8(6), R403-R408.
- Martin-Rodriguez, L., Beaulieu, M., D'Amour, D., & Ferrada-Videla, M. (2005). The determinants of successful collaboration: A review of theoretical and empirical studies. *Journal of Interprofessional Care*, Supplement 1, 132-147.
- Makary, M. A., & Daniel, M. (2016). Medical error the third leading cause of death in the US. *The British Medical Journal*, 353, i2139.
- Makary, M. A., Sexton, J. B., Freischlag, J. A., Holzmueller, C. G., Millman, E. A., Rowen, L., & Pronovost, P. J. (2006). Operating room teamwork among physicians and nurses: teamwork in the eye of the beholder. *Journal of the American College of Surgeons*, 202(5), 746-752.
- Malloy, D.C., Hadjistavropoulos, T., McCarthy, E.F., Evans, R.J., Zakus, D.H., Park, I., Lee, Y., & Williams, J. (2009). Culture and organizational climate: nurses' insights into their relationship with physicians. *Nursing Ethics*, 16(6), 719-733.
- Manais, E. & Street, A. (2001). Nurse-doctor interactions during critical care ward rounds. *The Journal of Clinical Nursing*, 10, 442-450.
- McCaffrey, R.G., Hayes, R., Stuart, W., Cassell, A., Farrell, C., Miller-Reyes, C., & Donaldson, A. (2010). A program to improve communication and collaboration between nurses and medical residents. *Journal of Continuing Education in Nursing*, 41(4), 172-178.

- McCaffrey, R., Hayes, R.M., Cassell, A., Miller-Reyes, S., Donaldson, A., & Ferrell, C. (2012). The effect of an educational programme on attitudes of nurses and medical residents towards the benefits of positive communication and collaboration. *Journal of Advanced Nursing*, 68(2), 292-301.
- McCaffrey, R., Hayes, R., Stuart, W., Cassell, A, Farrell, C., Miller-Reyes, C., & Donaldson, A. (2010). A program to improve communication and collaboration between nurses and medical residents. *The Journal of Continuing Education in Nursing*, 41(4), 172-178.
- Mills, J., Bonner, A., & Francis, K. (2006). The development of constructivist grounded theory. *International Journal of Qualitative Methods*, 5(1), 25-35
- Morse, J.M. (2007). Sampling in grounded theory. In A. Bryant & K. Charmaz (Eds.), *The Sage Handbook of Grounded Theory*. Thousand Oaks, CA: Sage.
- Muller-Juge, V., Cullati, S., Blondon, K. S., Hudelson, P., Maître, F., Vu, N. V., ... & Nendaz, M. R. (2013). Interprofessional collaboration on an internal medicine ward: Role perceptions and expectations among nurses and residents. *PloS one*, 8(2), e57570.
- Munhall, P. (Ed.). (2012). *Nursing research*. Sudbury, MA: Jones & Bartlett Learning.
- Narasimhan, M., Eisen, L.A., Mahoney, C.D., Acerra, F.L., & Rosen, M.J. (2006). Improving nurse-physician communication and satisfaction in the intensive care unit with a daily goals worksheet. *American Journal of Critical Care*, 15(2), 217-222.
- Nathanson, B.H., Henneman, E.A., Blonaisz, E.R., Doubleday, N.D., Lusardi, P., & Jodka, P.G. (2011). How much teamwork exists between nurses and junior doctors in the intensive care unit? *Journal of Advanced Nursing*, 67(8), 1817-1823.
- Nelson, G.A., King, M.L., & Brodine, S. (2008). Nurse-physician collaboration on medical-surgical units. *Medsurg Nursing*, 17(1), 35-40.
- Nielsen, P. E., Goldman, M. B., Mann, S., Shapiro, D. E., Marcus, R. G., Pratt, S. D., ... & Gluck, P. A. (2007). Effects of teamwork training on adverse outcomes and process of care in labor and delivery: a randomized controlled trial. *Obstetrics & Gynecology*, 109(1), 48-55.
- Nordby, H. (2008). Values, cultural identity and communication: A Perspective from philosophy of language. *Journal of Intercultural Communication*, 17(6), 6-18.
- O'Leary, K. J., Sehgal, N. L., Terrell, G., & Williams, M. V. (2012). Interdisciplinary teamwork in hospitals: A review and practical recommendations for improvement. *Journal of Hospital Medicine*, 7(1), 48-54.

- O'Leary, K.J., Wayne, D.B., Haviley, C., Slade, M.E., Lee, J., & Williams, M.V. (2010). Improving teamwork: Impact of structured interdisciplinary rounds on a medical teaching unit. *Journal of General Internal Medicine*, 25(8), 826-832.
- O'Leary, K. J., Wayne, D. B., Landler, M. P., Kulkarni, N., Haviley, C., Hahn, K. J., Jeon, J., Englert, K.M., & Williams, M. V. (2009). Impact of localizing physicians to hospital units on nurse—physician communication and agreement on the plan of care. *Journal of General Internal Medicine*, 24(11), 1223-1227.
- O'Mahony, S., Mazur, E., Charney, P., Wang, Y., & Fine, J. (2007). Use of multidisciplinary rounds to simultaneously improve quality outcomes, enhance resident education, and shorten length of stay. *Journal of General Internal Medicine*, 22(8), 1073-1079.
- Osiatyński, W. (1984). *Contrasts: Soviet and American thinkers discuss the future*. MacMillan Publishing Company.
- Porter, M. (2010). What is value in health care. *The New England Journal of Medicine*, 363(26), 2477-2481.
- Porter, M., & Lee, T. (2013). The strategy that will fix health care. *Harvard Business Review*, 91(10), 50-69.
- Porter, M., & Teisberg, E.O. (2006). *Redefining Health Care: Creating Value-Based Competition on Results*. Boston: Harvard Business School Press.
- Price, S., Doucet, S., & Hall, L. M. (2014). The historical social positioning of nursing and medicine: Implications for career choice, early socialization and interprofessional collaboration. *Journal of Interprofessional Care*, 28(2), 103-109.
- Pronovost, P., Berenholtz, S., Dorman, T., Lipsett, P.A., Simmonds, T., & Haraden, C. (2003). Improving communication in the ICU using daily goals. *Journal of Critical Care*, 18(2), 71-75.
- Reader, T. W., Flin, R., Mearns, K., & Cuthbertson, B. H. (2007). Interdisciplinary communication in the intensive care unit. *British Journal of Anaesthesia*, 98(3), 347-352.
- Reeves, S., Perrier, L., Goldman, J., Freeth, D., & Zwarenstein, M. (2013). Interprofessional education: effects on professional practice and healthcare outcomes (update). *Cochrane Database of Systematic Reviews*, 3(3).
- Riesenberg, L. A., Leitzsch, J., & Little, B. W. (2009). Systematic review of handoff mnemonics literature. *American Journal of Medical Quality*, 24(3), 196-204.
- Robinson, F., Gorman, G., Slimmer, L., & Yudkowsky, R. (2010). Perceptions of effective and ineffective nurse-physician communication in hospitals. *Nursing Forum*, 45(3), 206-216.

- Rothberg, M. B., Steele, J. R., Wheeler, J., Arora, A., Priya, A. & Lindenauer, P. K. (2012). The relationship between time spent communicating and communication outcomes on a hospital medicine service. *Journal of General Internal Medicine*, 27, 185-189.
- Rothstein, W. G., & Hannum, S. (2007). Profession and gender in relationships between advanced practice nurses and physicians. *Journal of Professional Nursing*, 23(4), 235-240.
- Shenton, A. (2004). Strategies for ensuring trustworthiness in qualitative research projects. *Education for Information*, 22, 63-75.
- Stein, L. I. (1967). The doctor-nurse game. *Archives of General Psychiatry*, 16(6), 699.
- Stein, L. I., Watts, D. T., & Howell, T. (1990). The doctor-nurse game revisited. *The New England Journal of Medicine*, 322(8), 546-549.
- Sweet, S. J., & Norman, I. J. (1995). The nurse-doctor relationship: A selective literature review. *Journal of Advanced Nursing*, 22(1), 165-170.
- TeamSteps. (2016, May 20). Retrieved April 02, 2017, from <https://www.ahrq.gov/teamsteps/index.html>.
- Thomas, E. J., Sexton, J. B., & Helmreich, R. L. (2003). Discrepant attitudes about teamwork among critical care nurses and physicians. *Critical Care Medicine*, 31(3), 956-959.
- Thompson, J.P. (1967). *Organizations in action: Social science bases of administrative theory*. New York: McGraw-Hill.
- Thomson, S. (2007). Nurse-physician collaboration: A comparison of the attitudes of nurses and physicians in the medical-surgical patient care setting. *MedSurg Nursing: Official Journal of the Academy of Medical-Surgical Nurses*, 16(2), 87-91.
- Tjia, J., Mazor, K.M., Field, T., Meterko, V., Spenard, A., & Gurwitz, J.H. (2009). Nurse-physician communication in the long-term care setting: Perceived barriers and impact on patient safety. *Journal of Patient Safety*, 5(3), 145-152.
- Vazirani, S., Hays, R.D., Shapiro, M.F., & Cowan, M. (2005). Effect of a multidisciplinary intervention on communication and collaboration among physicians and nurses. *American Journal of Critical Care*, 14(1), 71-77.
- Vermeir, P., Vandijck, D., Degroote, S. O. P. H. I. E., Peleman, R., Verhaeghe, R., Mortier, E., ... & Vogelaers, D. (2015). Communication in healthcare: a narrative review of the literature and practical recommendations. *International journal of clinical practice*, 69(11), 1257-1267.
- Wagner, J., Liston, B., & Miller, J. (2011). Developing interprofessional communication skills. *Teaching and Learning in Nursing*, 6, 97-101.

- Weaver, C., Callaghan, M., Cooper, A.L., Brandman, J., & O'Leary, K.J. (2015). Assessing interprofessional teamwork in inpatient medical oncology units. *Journal of Oncology Practice, 11*(1), 19-22.
- Weinberg, D. B., Lusenhop, R. W., Gittell, J. H., & Kautz, C. M. (2007). Coordination between formal providers and informal caregivers. *Health Care Management Review, 32*(2), 140-149.
- Weinberg, D. B., Miner, D. C., & Rivlin, L. (2009). It depends: medical residents' perspectives on working with nurses. *The American Journal of Nursing, 109*(7), 34-43.
- Weller, J.M., Barrow, M., & Gasquoine, S. (2011). Interprofessional collaboration among junior doctors and nurses in the hospital setting. *Medical Education, 45*, 478-487.
- Westerman, M., Teunissen, P., van der Vlueten, C., Scherpbier, A., Sieger, C., van der Lee, N., & Scheele, F. (2010). Understanding the transition from resident to attending physician: A transdisciplinary qualitative study. *Academic Medicine, 85*(12), 1914-1919.
- World Health Organization (WHO). (2010). Framework for action on interprofessional education & collaborative practice. Geneva: World Health Organization. Retrieved from http://whqlibdoc.who.int/hq/2010/WHO_HRH_HP_N_10.3_eng.pdf.
- Yeager, S. (2005). Interdisciplinary collaboration: The heart and soul of health care. *Critical Care Nursing Clinics of North America, 17*(2), 143-148.
- Zwarenstein, M., Rice, K., Gotlib-Conn, L., Kenaszchuk, C. & Reeves, S. (2013). Disengaged: a qualitative study of communication and collaboration between physicians and other professions on general internal medicine wards. *BMC Health Services Research 13*(1), 494.

APPENDICIES

APPENDIX A: IRB APPROVAL LETTER



EAST CAROLINA UNIVERSITY
University & Medical Center Institutional Review Board Office
4N-70 Brody Medical Sciences Building · Mail Stop 682
600 Moye Boulevard · Greenville, NC 27834
Office **252-744-2914** · Fax **252-744-2284** · www.ecu.edu/irb

Notification of Initial Approval: Expedited

From: Social/Behavioral IRB

To: [Thompson Forbes](#)

CC: [Elaine Scott](#)

Date: 3/1/2016

Re: [UMCIRB 15-001883](#)
Relationship Ties and Valuing Nurse's Communication about Patient Care

I am pleased to inform you that your Expedited Application was approved. Approval of the study and any consent form(s) is for the period of 3/1/2016 to 2/28/2017. The research study is eligible for review under expedited category # 6, 7. The Chairperson (or designee) deemed this study no more than minimal risk.

Changes to this approved research may not be initiated without UMCIRB review except when necessary to eliminate an apparent immediate hazard to the participant. All unanticipated problems involving risks to participants and others must be promptly reported to the UMCIRB. The investigator must submit a continuing review/closure application to the UMCIRB prior to the date of study expiration. The Investigator must adhere to all reporting requirements for this study.

Approved consent documents with the IRB approval date stamped on the document should be used to consent participants (consent documents with the IRB approval date stamp are found under the Documents tab in the study workspace).

The approval includes the following items:

Name	Description
Consent to Participate	Consent Forms
Email Campaign.docx	Recruitment Documents/Scripts
Interview Guide	Interview/Focus Group Scripts/Questions
Thompson Forbes Dissertation Proposal.docx	Study Protocol or Grant Application

The Chairperson (or designee) does not have a potential for conflict of interest on this study.

APPENDIX B: INFORMED CONSENT TO PARTICIPATE

East Carolina University



Informed Consent to Participate in Research

Information to consider before taking part in research that has no more than minimal risk.

Title of Research Study: Relationship Ties and Valuing of Nurses Communication about Patient Care

Principal Investigator: Thompson H Forbes III

Institution/Department or Division: College of Nursing

Address: 2313 Wheaton Village Dr. Greenville, NC 27858

Telephone #: 252-714-5693

Study Sponsor/Funding Source: None

Researchers at East Carolina University (ECU) study problems in society, health problems, environmental problems, behavior problems and the human condition. Our goal is to try to find ways to improve the lives of you and others. To do this, we need the help of volunteers who are willing to take part in research.

Why is this research being done?

The purpose of this study is to uncover how resident physicians relate to nurses as members of the health care team and how this relationship contributes to the physician's valuing of nursing communication about patients. The decision to take part in this research is yours to make. By doing this research we hope to learn about the communication between resident physicians and nurses that may result in interventions that improve communication with nurses.

Why am I being invited to take part in this research?

You are being invited to take part in this research because you are a third or fourth year resident physician specializing in family or internal medicine. If you volunteer to take part in this research, you will be one of no more than 15 people to do so.

Are there reasons I should not take part in this research?

You should not participate in this research if you are in an intimate (married or dating) or family (mother, father, brother, sister) relationship with a nurse. This study intends to focus on the communication about patient care that occurs between resident physicians and nurses. We realize that these personal relationships may make it difficult to reference only patient care communication during the interviews.

You should also not participate in this research if you do not communicate with nurses at least once per working shift in relation to patient care.

What other choices do I have if I do not take part in this research?

You can choose not to participate.

Where is the research going to take place and how long will it last?

The research procedures will be conducted at Vidant Medical Center or the Brody School of Medicine in a private room reserved for the interviews on a single occasion. The principle researcher will meet you at the agreed upon location. The total amount of time you will be asked to volunteer for this study is no more than 2 hours.

What will I be asked to do?

You are being asked to answer interview questions posed by the principle researcher. The interviews will ask questions related to how you communicate with nurses during patient care.

What possible harms or discomforts might I experience if I take part in the research?

It has been determined that the risks associated with this research are no more than what you would experience in everyday life.

What are the possible benefits I may experience from taking part in this research?

We do not know if you will get any benefits by taking part in this study. This research might help us learn more about the barriers to nurse physician communication so that we might improve the relationship during patient care. There may be no personal benefit from your participation but the information gained by doing this research may help others in the future.

Will I be paid for taking part in this research?

We will not be able to pay you for the time you volunteer while being in this study.

What will it cost me to take part in this research?

You will incur not cost by participating in this research.

Who will know that I took part in this research and learn personal information about me?

To do this research, ECU and the people and organizations listed below may know that you took part in this research and may see information about you that is normally kept private. With your permission, these people may use your private information to do this research:

- The University & Medical Center Institutional Review Board (UMCIRB) and its staff, who have responsibility for overseeing your welfare during this research, and other ECU staff who oversee this research.
- Any agency of the federal, state, or local government that regulates human research. This includes the Department of Health and Human Services (DHHS), the North Carolina Department of Health, and the Office for Human Research Protections.

How will you keep the information you collect about me secure? How long will you keep it?

Demographic and interview transcripts will be destroyed three years after the completion of the study. Voice recordings will be erased the same date as the transcripts. If used for future research, only pseudonyms will be used in place of your identity. All identifying information will be stripped from research documents.

What if I decide I do not want to continue in this research?

If you decide you no longer want to be in this research after it has already started, you may stop at any time. You will not be penalized or criticized for stopping. You will not lose any benefits that you should normally receive.

Who should I contact if I have questions?

The people conducting this study will be available to answer any questions concerning this research, now or in the future. You may contact the Principal Investigator at 252-714-5693 (Sunday-Saturday, between 8am and 5pm).

If you have questions about your rights as someone taking part in research, you may call the Office for Human Research Integrity (OHRI) at phone number 252-744-2914 (days, 8:00 am-5:00 pm). If you would like to report a complaint or concern about this research study, you may call the Director of the OHRI, at 252-744-1971.

I have decided I want to take part in this research. What should I do now?

The person obtaining informed consent will ask you to read the following and if you agree, you should sign this form:

- I have read (or had read to me) all of the above information.
- I have had an opportunity to ask questions about things in this research I did not understand and have received satisfactory answers.
- I know that I can stop taking part in this study at any time.
- By signing this informed consent form, I am not giving up any of my rights.
- I have been given a copy of this consent document, and it is mine to keep.

Participant's Name (PRINT)	Signature	Date
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Person Obtaining Informed Consent: I have conducted the initial informed consent process. I have orally reviewed the contents of the consent document with the person who has signed above, and answered all of the person's questions about the research.

Person Obtaining Consent (PRINT)	Signature	Date
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APPENDIX C: INTERVIEW GUIDE

I am interested in the relationships between resident physicians and nurses that contribute to interprofessional collaboration. Specifically, I am interested in learning about the communication that occurs between resident physicians and nurses.

- Approximately what percentage of your communication on the unit is with the nursing staff?
- Have you ever taken an educational workshop or specific course in communication?
- As a resident physician, how have you been mentored in communication skills?
- I would really like you to share with me your experience communicating with nurses on the units where you primarily practice.
- Can you describe a situation when you worked with a nurse on a patient outcome that you would consider included collaborative communication?
- Can you describe a situation when you worked with a nurse on a patient outcome and there was disagreement?
- Is there anything that you want to share with me about communicating and nursing that I have not already asked

APPENDIX D: THEORETICAL SAMPLING INTERVIEW GUIDE

Relationship Ties and Valuing of Nurses Communication about Patient Care Interview

Guide (Revised 5/16/16)

I am interested in the relationships between resident physicians and nurses that contributes to Interprofessional collaboration. Specifically, I am interested in learning about the communication that occurs between resident physicians and nurses.

1. To get started, describe a typical day working with the staff as a (1st, 2nd, or 3rd) year resident on your home unit.

(Depending on mention of nursing in question 1, will ask 2a or 2b.)

- 2a. I noticed you did not mention nurses, can you tell me about your interaction with nursing.

- 2b. Tell me more about your interactions with nurses.

3. During your residency, how have you been mentored to work with nurses?

4. Have you ever had any education in how to interact with other professions?

5. Describe how your interaction with nursing has changed over time as a resident.

6. Tell me about a time when you worked with a nurse and you thought care of the patient improved because of the collaboration.

7. Tell me about a time when you worked with a nurse and you thought collaboration did not go so well.

8. Is there anything you want to share with me about working with nurses that I have not already asked?

APPENDIX E: DEMOGRAPHIC FORM

- 1) Age:_____
- 2) Gender : Male or Female
- 3) Which of the following best represents your racial or ethnic heritage? Check all that apply.
- Non-Hispanic White or Euro-American
 - Black, Afro-Caribbean, or African American
 - Latino or Hispanic American
 - East Asian or Asian American
 - South Asian or Indian American
 - Middle Eastern or Arab American
 - Native American or Alaskan Native
 - Other_____
- 4) What year of residency are you currently completing?
- First
 - Second
 - Third
- 5) From what medical school did you receive your medical training?
-
- 6) Have you had residency training in other specialties?
- Yes
Please Provide other Specialty_____
 - No
- 7) What is your medical degree?
- Doctor of Medicine (MD)
 - Doctor of Osteopathic Medicine (DO)