Abstract

Communication has been identified by many governing bodies to be important for the safety and well-being of patients. This study is an analysis of communication between nurses and physicians using evidence from literature. The ways that nurses and physicians communicate, the perceptions of nurses and physicians surrounding communication, the participation of nurses in physician rounding, the barriers to effective communication, and interventions to improve communication are presented and analyzed. Following this analysis, a research project is proposed for a manager of a floor to investigate the communication patterns between nurses and physicians on his or her floor. Tools are also provided for this research project. Using this research and the proposed research project, it is hoped that the outlined evidence-based interventions can be utilized by a nurse manager to improve communication between nurses and physicians, which in turn will lead to decreased costs, greater patient safety, and better patient outcomes.

Keywords: communication, nurse and physician communication, perceptions of nursephysician communication, barriers to communication, assessment of communication, interdisciplinary education, interdisciplinary rounds An analysis of communication between nurses and physicians:

Evidence from the literature

As the price of healthcare continues to climb annually, hospitals are looking for ways to decrease costs and increase efficiency. It is known that it costs hospitals greatly when patients go through a "revolving door" and are readmitted quickly after discharge. In fact, Medicare and Medicaid Services announced hospitals with high readmission rates will now receive financial penalties (Hoban, 2013). There are strategies that not only decrease cost and increase efficiency, but also improve patient outcomes. One of these strategies is simple: improve communication. However, improving communication can be very difficult. With the potential to decrease cost, increase efficiency, and improve patient outcomes, bettering communication is well worth the attention of members of the healthcare team and of hospitals as a whole.

Communication is shown consistently to be essential to the field of healthcare. The Joint Commission reports that nearly 60% of medical errors are a direct result of communication breakdown (Flicek, 2012) and the most frequently identified root cause of sentinel event reports between 1995 and 2008 (Disch, 2012). Improved communication leads to better patient outcomes, safer work environments, decreased adverse events, decreased transfer delays, and shortened lengths of stay (Curtis, Tzannes, & Rudge, 2011; Tschannen et al., 2011). All of these in turn mean saved money and better patient outcomes. Errors can occur between units, between two health care providers, and between providers and the patient. However, the most frequent form of communication breakdown occurs between the nurse and physician according to evidence (Clark & Greenawald, 2013). Efforts to improve communication can begin at this level and hopefully have a trickle-down effect to improving care for and communication with the patient.

Purpose Statement

The purpose of this study is to complete an in-depth review of nursing and other selected literature to identify and analyze the current status of communication between nurses and physicians. Particular attention is focused on literature about medical/surgical floors, as this study was originally designed to be conducted on and presented to a manager of this type of floor. Following this review, the researcher will make recommendations to improve communication patterns on hospital units based on evidence from the literature. Secondly, the researcher will present a research proposal that can be implemented by nurse managers to further investigate communication patterns between nurses and physicians.

Research Questions

The research questions for this study that will be answered through analysis of selected literature are the following:

- 1. How does the physician communicate a plan of care or revisions to the plan of care to the nurse?
- 2. What are the perceptions of nurses and physicians regarding communication patterns and collaboration between nurses and physicians?
- 3. To what extent are nurses involved in physician rounds on hospital units?
- 4. What are the barriers to effective communication between nurses and physicians?
- 5. What are examples of interventions that have been found to improve communication between nurses and physicians?

Review of Literature

The following is the result of a review of literature to find relevant studies related to nurse and physician communication. CINAHL and PubMed were the databases utilized. Key

search terms included: 'nurse and physician communication', 'barriers', 'inter-professional collaboration', 'interdisciplinary rounds', 'technology', and 'medical/surgical floor'. The search was limited to articles published in the last 10 years, from January 2004 to December 2013.

Plan of Care Communication

In assessing communication on a floor, first a researcher must look at the current ways that nurses and physicians communicate. The most important communication that takes place between a nurse and a physician is plan of care. In discussing a plan of care, direction for the management of a patient is addressed, and it is hoped that all parties involved are in agreement in relation to how to care for the patient.

One study aimed to quantify the lack of communication on a medical/surgical floor. This team found that the nurses and physicians did not communicate 40% to 50% of the time on hospitalized general medical patients. When communication did occur, nurses and physicians respectively reported that it was face-to-face 65% to 69% of the time, via telephone 28% to 29% of the time, and text page alone 2% to 7% of the time (O'Leary et al., 2010). The study did not describe a computerized form of communication such as computerized orders without follow up communication through one of the described means; an example of this is when a physician orders a new lab test via the computer without calling the nurse to inform him or her of the new order. The study accurately addresses the major ways that nurses and physicians communicate: in person, over the phone, and via technological resources such as text pages.

In the same study that described how communication occurred between physicians and nurses, researchers described how well communication was occurring among health professionals. Researchers found that often (meaning around 50% of the time) physicians and nurses did not agree on important aspects of the plan of care including primary diagnosis,

planned tests, planned procedures, medication changes, physician consultations, and anticipated lengths of stay. This contradicts what patients think occurs, as 89% of patients reported that they expected their nurse and physician to discuss plan of care daily in this study. In the 281-286 cases that were in the study, there was complete agreement between the nurse and physician in 52.8% of patients for primary diagnosis, 58.7% for planned tests, 88.7% for planned procedures, 50.7% for medication changes, 53.7% for physician consultations, and only 33.3% for anticipated lengths of stay. Of these statistics, the most concerning are high-risk aspects of care, which the researchers selected as planned procedures and medication changes (O'Leary et al., 2010). This study could be repeated for greater generalizability, but serves as a good indicator that plan of care may not be communicated between nurses and physician team members as often as is assumed or expected by patients. It also adds a quantifiable description of communication to the body of evidence surrounding communication on a medical/surgical floor.

Although subjectively nurses and physicians may think that their communication is satisfactory, numbers from one study are a bit alarming. Though there are many ways that nurses and physicians can communicate including in person, over the phone, and via computer, plan of care and revisions to the plan of care may not be consistently and accurately communicated. This pattern can lead to medical errors.

Perceptions of Nurses and Physicians on Communication and Collaboration

How nurses and physicians perceive their interactions affects how they communicate and collaborate. First, it is important to distinguish between communication and collaboration, as these terms appear frequently in research concerning the relationship between nurses and physicians and are not interchangeable.

Communication and collaboration are two terms that are related, yet distinct. The Quality and Safety Education for Nurses (QSEN) project has identified teamwork and collaboration as one of five competencies needed by nurses to enhance patient safety. This competency is defined as "[being able to] function effectively within nursing and interprofessional teams, fostering open communication, mutual respect, and shared decision making to achieve quality patient care" (Sherwood & Barnsteiner, 2012, p. 344). More simply stated, collaboration involves the processes of communication and problem solving as a team (Disch, 2012; Tschannen et al., 2011). Communication is the first step to collaboration, as it is necessary to properly communicate ideas, concerns, and questions in order to work together to solve a problem. Collaboration is linked to greater continuity of care, increased patient and professional satisfaction, and a decrease in wasted resources. When there is ineffective collaboration, patient safety and quality of care can be compromised leading to increased mortality rates (Tang, Chan, Zhou, & Liaw, 2013). Having defined collaboration and communication, the components of collaboration and attitudes of nurses and physicians can be explored.

In order to have collaboration and good working relationships between physicians and nurses, communication must be clear, precise, and timely. According to the evidence, this type of communication often is not the case, resulting in delayed delivery of care to the patient, more medical errors, and decreased patient safety (Tang et al., 2013). Because communication is the first component of effective collaboration, decreased communication means decreased collaboration. This affects the perceptions of nurses and physicians.

Research shows that decreased collaboration leads to dissatisfaction among nurses and physicians; nurses feel they have a lack of autonomy while physicians feel frustrated by orders

not being carried out in a timely manner or when communication was not clear (Tang et al., 2013). Many studies about attitudes on collaboration have found that physicians and nurses both value collaboration and recognize the aforementioned benefits of interdisciplinary communication (Tang et al., 2013). However, nurses have also been shown to possess a more positive attitude towards collaboration but report less levels of nurse-physician collaboration than do physicians (Clark & Greenawald, 2013; Tang et al., 2013). Additionally, physicians often report having better communication in general with nurses than nurses report having with physicians (Manojlovich, 2013). This difference in perception indicates that nurses are seeking to work more as equals or partners with the physicians, but are not necessarily receiving the same drive from physicians. While this relationship is getting better, there is still work that needs to be done to demonstrate that nurses and physicians both have important and equally necessary roles in caring for patients.

Collaboration and communication are identified as a priority for both nurses and physicians. There is a disparity in how the two professions perceive them to be occurring.

Although this is a challenge, there is much that could be gained if nurses and physicians were able to more effectively communicate and therefore collaborate as equals.

Nursing Involvement in Physician Rounding

Provided the evidence that face-to-face communication may be best for communication about plan of care, one way that health care providers could ensure face-to-face interaction is through daily interdisciplinary rounding. Interdisciplinary rounding refers to when various professionals from multiple disciplines (such as nursing, medicine, nutrition, pharmacy, etc.) gather to discuss the care management strategies of a patient (Beague et al., 2012). Although

some units use this approach, this practice is not consistent in the health care field, and in particular is not consistent in less acute settings such as medical/surgical floors.

In an urban, 957-bed Magnet® hospital located in the southeast United States, recent research illuminated that only 33% of nurses on medical-surgical floors reported participation in interdisciplinary rounds compared to 75% on intensive care units. Provided that research indicates that communication is better on intensive care units, researchers suggest that a relationship between interdisciplinary rounds and improved communication exists and could account for some of the communication differences on these two types of floors (Johnson & King, 2012). This study was the only one found in which statistics were provided for the frequency of interdisciplinary rounding.

Research should continue to investigate the prevalence and success of interdisciplinary rounds. There is a large body of evidence that supports interdisciplinary rounds and its positive impact on interdisciplinary communication; researchers have reported both successes and challenges surrounding the implementation of interdisciplinary rounds (Beague et al., 2012; Burns, 2011; O'Leary et al., 2010; Tang et al., 2013). Nevertheless, these studies do not always specifically indicate the involvement of nursing staff or are published from a nursing perspective. Research was not found that indicated how successful nursing involvement is in interdisciplinary rounds. For example, research was not found that investigated if there was a difference in patient care when a spokesperson nurse rounded with physicians, such as a charge nurse, versus an individual staff nurse caring for that specific patient. This type of research would be beneficial to understanding the importance of nursing involvement during interdisciplinary rounds and how this is potentially beneficial to patient outcomes.

Barriers to Effective Communication

A multitude of studies have investigated what barriers to communication exist. The prominent barriers to communication that were found in the literature were: historical relationship between nurses and physicians, individual characteristics of nurses and physicians, workplace differences, and changes to forms of communication.

Historical relationship between nurses and physicians. The relationship between nurses and physicians has a long history, from a time when physicians were dominant over subservient nurses to now where there is more collaboration between the two professions. This historical relationship continues to affect the state of nurse and physician relationships today. Currently, more collegial or collaborative relationships between nurses and physicians are becoming the norm. Collaborative relationships are characterized by equal trust, respect, and autonomy over patient care (Schmalenberg & Kramer, 2009). Lack of understanding about the professional role of nurses is one area that research has identified as needing attention to improve collaborative relationships. Fortunately, more evidence is suggesting that the relationship between nurses and physicians is slowly becoming collegial or collaborative (Tang et al., 2013). Strategies can therefore be directed at improving relationships between nurses and physicians so that the two professions continue to move toward collaboration.

Individual characteristics of nurses and physicians. Nurses and physicians have individual characteristics that affect their ability to communicate. Due to differences in gender and education, the two professions face some barriers to effective communication.

There is some sense that collaborative relationships between the professions of nursing and medicine are improving when compared to the nature of past relationships. However, Flicek (2012) explains in her research that traditional gender differences still exist. Men, who are more

present in the medicine field, prefer clear, quick, fact-based communication. Women, who are more present in the nursing field, prefer in-depth discussion style to understand the reasoning behind specific situations. This disparity, though improving as gender gaps decrease, may contribute to failures in communication.

Another author suggests that differences between the professions could be due to the backgrounds of the two professions. Physicians are trained to focus on technical skills of curing diseases, while nurses are taught to develop interpersonal skills to provide holistic care for patients and make decisions interdependently with physicians (Tang et al., 2013). Because the two professions are trained separately and differently, it may be difficult for them to suddenly work collaboratively when they are placed together in the workforce.

Research findings demonstrate that individual characteristics affect communication between nurses and physicians. Strategies to improve the communication patterns should keep in mind the differences in gender and educational background that exist within the two professions.

Workplace differences. In addition to hospital cultures, individual units and types of units have specific cultures. Evidence shows us that more communication issues are present on medical/surgical floors than in intensive care units. These workplace differences therefore represent another potential barrier to communication.

The very nature of intensive care units in comparison to medical/surgical floor leads to communication differences between nurses and physicians in these two settings. With patients that are in more fragile states of health on intensive care units, nurses and physicians are likely to be more attentive and responsive to patients out of necessity. Members of the health care team spend more time in clearly communicating because it is more vital for their patients. Nurses on these floors manage fewer patients due to the higher needs of the patient population and

physicians are more likely to be constantly present in an intensive care setting. This can lead to more face-to-face communication and interaction due to physical presence or perceived availability of this part of the healthcare team (Tang et al., 2013). With decreased acuity on medical/surgical floor comes an increase in workload. Increasing workload can lead to less communication as time can be perceived as a barrier to clear, consistent communication. Nurses and physicians therefore prioritize what to communicate to one another, and these priorities are not always consistent across individuals or professions. Further, on a medical/surgical floor, a mobile workforce is more likely to be present. This term describes the way that various people are working on one patient and are rotating through various units at varying times. This leads to less ability to communicate face-to-face as members of the physician team are simply not physically there to communicate with nurses (Curtis et al.; O'Leary et al., 2010). Better unit nurse-physician relationships were reported by specialized units, particularly critical care units, than on non-specialized medical/surgical units (Schmalenberg & Kramer, 2009). Communication improvement strategies need to be reflective of the type of floor that the intervention is being conducted on, as the type of floor does affect communication.

The type of hospital in which an individual is working also has been shown to affect communication and collaboration between nurses and physicians. In a review of literature that analyzed the responses of over 20,000 nurses on how they perceive, assess, and develop high-quality relationships with physicians, certain differences appeared in relationship to workplace characteristics. Hospitals that had achieved Magnet® recognition reported more collegial and collaborative relationships (81-86%) compared to comparison hospitals (61-80%). Magnet® recognized hospitals also had lower rates of hostile or adversarial relationships between nurses and physicians (13-17%) compared to comparison hospitals (20-29%) (Schmalenberg & Kramer,

2009). This makes sense as the Magnet® recognition program acknowledges those hospitals that are valuing the profession of nursing. With greater value on the profession, nurses feel more empowered in their healthcare setting, which leads to improved collaboration and communication.

The differences in patient acuity, more consistent presence of physicians on intensive care units, and increased collaboration can all be explanations for why the environment of an intensive care unit leads to improved communication in comparison to medical/surgical floors. In addition, the type of hospital has been shown to have an impact on the level of effective relationships and therefore collaboration between nurses and physicians. These identified workplace differences therefore stand as barriers to communication between nurses and physicians. This highlights the importance of making sure a communication improvement strategy is appropriate for the work environment upon which it is being implemented.

Changes to forms of communication. The way that people communicate both personally and professionally has changed in the twenty-first century. In hospitals, nurses and physicians now have many modes of communication including talking in person, over the phone, via computerized orders, and through text pages. However, some researchers argue that this is not necessarily leading to better communication.

Reliance on electronic modes of communication in this century has led to greater communication errors. In a review of literature, it was found that many studies support that the dependence on electronic messaging systems has caused more problems in communications between nurses and physicians (Tang et al., 2013). According to the research of Burns (2011), when nurses personally hear the physician's plan of care, the potential for misunderstanding decreases, which in turn decreases the risk of error. However, with the changes in technology,

orders are more likely to be communicated by written patient care records rather than in person. These records are not always clear or read in a timely manner. Flicek (2012) found that technology advances can contribute to increased errors, specifically when they are solely relied on rather than using face-to-face communication. One reason for this that the researcher postured was that communication modalities such as text pages, inbox messaging, and electronic ordering systems are not always correctly prioritized by the receiving party; sometimes, they are not even received. Also, she found that nurses and physicians still desire follow-up communication on urgent orders with verbal contact rather than solely relying on the technological systems (Flicek, 2012). Participants in another study felt that electronic communication had taken place of face-to-face dialogue which contributed to ineffective communication (Robinson, Gorman, Slimmer, & Yudkowsky, 2010). Although these changes are supposed to help communication between nurses and physicians, they sometimes can cause more problems.

Being aware of the downfalls of advances in technology is significant to address when assessing communication on a unit. It is essential that nurses and physicians understand when to utilize the various forms of communication, such as an urgent scenario versus a non-urgent scenario, and are clear when describing how to prioritize aspects of patient care if it is important to the party sending the message. It may also be important that the receiver acknowledges that they have received the information if the communication is not taking place over the phone or in person. When assessing communication, these types of improvement strategies can be addressed so that both nurses and physicians understand how the two professions desire communication to be handled.

Interventions to Improve Communication

Many effective strategies have been attempted to improve communication. The most common strategies discussed included interdisciplinary education, interdisciplinary rounding, rounding worksheets, and teamwork trainings.

Many researchers discussed the need for interdisciplinary education during Nursing and Medical School. This is a time in which inter-professional communication should be addressed and possibly practiced such as through simulation (Curtis et al., 2011; Flicek, 2012; Robinson et al., 2010; Tang et al., 2013; Tschannen et al., 2011). However, on a unit, the most common intervention aimed at improving collaboration is implementing interdisciplinary rounds (Tschannen et al., 2011). Researchers recommend having rounds on specific days and times to ensure that multiple disciplines can all be available to lead to nurses having a better understanding of a patient's plan of care (Johnson & King, 2012). Multiple researchers have found that collaborative rounds led to improved patient outcomes, more efficient patient care, improved communication between nurses and physicians, improved perception of patient care, and allowed for greater collaboration on plan of care between nurses and physicians (Beague et al., 2012; Burns, 2011; O'Leary et al., 2010). Interdisciplinary rounds were also found to improve confidence among nurses in communicating with physicians leading to improved relationships and collaboration (Tang et al., 2013). Daily goal worksheets to assist in the direction of interdisciplinary rounds were also reported to be helpful for communication (O'Leary et al., 2010; Narasimhan, Eisen, Mahoney, Acerra, & Rosen, 2006), and objective measures confirmed this in one study (Rehder et al., 2012). Workshops on teamwork and other unit-specific communication building activities could also be used by units attempting to improve communication between nurses and physicians (Schmalenberg & Kramer, 2009). These workshops could also include conflict resolution discussions and unit-specific interventions aimed at problems assessed by staff relating to nurse and physician communication.

There are many evidence-based interventions that a unit could implement to improve communication between nurses and physicians. These strategies include interdisciplinary rounding, rounding worksheets, and communication workshops. There is also a body of evidence that points towards the first step in improving communication and collaboration is to start at the academic level, before nurses and physicians are officially working together. Through greater interdisciplinary education, nurse-physician communication could greatly improve, leading to better collaboration and improved outcomes for patients.

Results and Discussion

Through analysis of recent research, the current state of communication between nurses and physicians has been described and analyzed. This description included ways that nurses and physicians communicate plan of care, how the two professions perceive the current state of their communication, the participation of nurses in interdisciplinary rounds, and barriers to communication. Evidence-based strategies to improve communication were also suggested.

The last few decades have seen many changes in how people communicate both personally and professionally. Now, nurses and physicians use text pages and computerized orders. However, these modes of communication come with their own faults and can become barriers to effective communication. Clear descriptions of how to utilize communication modalities via unit-specific workshops could be helpful to improve this communication.

How nurses and physicians perceive one another is a second important aspect of communication. More collegial relationships and increased collaboration are present between the two professions, however progress needs to continue as this type of interaction is inconsistent

across hospitals and units. It has been suggested that these inconsistencies in collaboration occur due to historical relationships between the professions, workplace differences, and individual differences between nurses and physicians. While the state of collaboration is improving, there are many identified communication barriers that need to be overcome. Interdisciplinary education may be helpful in helping both physicians and nurses understand their important roles in caring for patients.

Because communication is best face-to-face according to the evidence, and because collaboration involves problem solving as a team, interdisciplinary rounds are an opportunity for both nurses and physicians to improve communication and collaboration. Nevertheless, this is not the standard of practice across the healthcare field or within individual hospitals. Researchers have suggested that the decreased utilization of interdisciplinary rounds on medical/surgical floors contributes to the documented decreased communication and collaboration between nurses and physicians on floor patients. This again represents how workplace differences can form a barrier to communication.

Through analysis of communication between nurses and physicians, the current state of communication has been described, barriers to communication identified, and strategies for interventions suggested. This research serves as a basis upon which a study could be created to analyze communication on a unit and identify possible interventions to improve communication. Through this type of study with this research as its base, it is hoped that communication between nurses and physicians improves, leading to decreased costs for hospitals, increased efficiency, and, most importantly, improved patient outcomes. The following pages of the project present the original proposed research that could serve as a beginning point to establish an evidence based solution to the problem of nurse patient communication.

Proposed Research

Background

Originally, a study was designed to investigate the communication between nurses and physicians on a medical/surgical floor at the UNC Hospitals in Chapel Hill, North Carolina. The project in general was proposed to a nurse manager at the hospital. This manager was excited about the research and wrote a letter of approval for use by the researcher; this letter can be seen in Appendix E. When the research was proposed to the Nursing Research Council (NRC) and UNC Institutional Review Board (IRB), the research was approved with contingencies. The NRC contingencies were numerous and difficult to understand in relation to the research, and so the research team waited to receive information from the IRB before responding to the NRC. The IRB did not return information until a month after submission, which left the team unable to navigate/revise the various contingencies of the research; re-submit to the various governing bodies; then collect, analyze, and report the data within the timeframe needed for submission of the research project. For these reasons, the proposed research was not completed, and it was determined that the researcher would instead answer research questions from the available literature. Nevertheless, the following is the proposed research plan that could be used by nurse managers to further investigate communication patterns between nurses and physicians. From an ethical perspective, the researcher did not resubmit to IRB because it seemed unfair to resubmit knowing that the project would not be implemented. Approval was pending due to a need to make some technical changes in the application and revisions to the consent form to acknowledge a possible conflict of interest as the primary researcher is also an employee of the hospital. In addition, it was determined that passive consent as outlined in the original proposal

sent to IRB was not appropriate, so the process of consent would need to be changed before implementation.

Methodology

Information about the unit and staff will be collected through an interview with the nurse manager. Data will include: the service provided by the floor, number of beds on the floor, number of nurses, number of physicians, typical composition of physician team, and years of experience of nursing staff. In addition, the researcher will ask the nurse manager to identify concerns related to nurse-physician communication on the floor, strategies that have been implemented to improve communication, and any other information that he or she believes is pertinent to understanding the floor or communication in general. This interview is structured in format (see Appendix A) and will be recorded for accuracy.

The researcher will attend physician rounding on the unit and observe the role of nursing staff. Using a convenience sampling technique, up to 50 rounds will be observed or until data saturation is achieved. From the observations of nurse-physician rounds, the researcher expects that a majority of the nursing staff will be involved or had the opportunity to be involved in the rounds. A standard form will be used (see Appendix B) to collect data about the rounds. Data collected from this tool include where rounding takes place, who is involved in the rounding, who leads the rounding, if the nurse is present, if the nurse provides information about the patient during the round, and any other observations. The researcher would not be involved in the rounding, and simply will be an observer of communication patterns.

From the participants in these rounds, the researcher will conduct up to 30 interviews with 15 nurses and 15 physicians, or until the data is saturated. With the help of the nurse manager, the researcher will be able to identify nurses and physicians that are working and

rounding during the two week time period of data collection. A convenience sample of the rounds participants will be selected based on the willingness and availability of staff. These interviews will be audio recorded for accuracy.

A tool to assist the researcher in directing questions and for recording information has been developed. The tool for interviews of nurses can be found on Appendix C, and the tool for interviews of physicians can be found on Appendix D. These interviews will be recorded in order to ensure accuracy. In the interviews, nurses will be asked if they were aware of the plan of care for the patient, if they participated in physician-nurse rounds with explanation for their participation or lack of participation, how they communicate about plan of care for specific patients, how they alert physicians of both urgent and non-urgent updates about the patient, and how they feel about nurse-physician communication in general. For physician interviews, the researcher will ask if they communicated the plan of care with the patient's current nurse on that day, how they communicate plans of care to nurses, how they prefer nurses to ask questions about the plan of care, how they prefer nurses alert them of both urgent and non-urgent changes with the patient, and how they think physician-nurse communication is going in general.

All data collected will be aggregated and reviewed by the researcher. The researcher will identify patterns of communication and evaluate the communication on the floor. The results will be presented to the manager with suggestions for improvement based on evidence previously discussed in this paper.

Ethical Considerations

Informed consent. An email (see Appendix F) will be distributed by the nurse manager to the nurses and physicians of the floor. It is hoped that most subjects will receive this email and be recruited in advance. However, some recruitment may take place in person. If this is the case,

a copy of this document will be distributed in person to participants in physician-nurse rounding.

Additional consent (see Appendix G) will be provided to physicians and nurses who are individually interviewed, including to the nurse manager.

Coding Sheet/Recording. During the interviews, a coding sheet (see Appendix H) will be used to keep track of how many interviews have been conducted, and with whom the interviews have been conducted, to ensure that subjects are not interviewed multiple times. Last names of respondents will be recorded and coded. The code will be placed on top of interview sheets and linked to the audio recordings. This coding system will be kept confidential, and only the researchers will have access to this. At the end of data collection, this coding information will be destroyed.

Aggregate Form of Research. All data gathered will be analyzed in raw form by the research team. After the data has been aggregated, all raw data including audio, interviews, and code sheet, will be destroyed. The aggregate form of the research results will be presented to the nurse manager along with the researcher's evidence-based suggestions for communication improvement.

Potential Harm to Subjects. Because the sample size will be small and over a specific amount of time, it is possible for someone with access to the schedule would be able to find out the identities of staff that were interviewed over the two week period. However, the researchers believe that the data collected should not have any risks involved to nurses and physicians in terms of placing the participants at risk of criminal or civil liability or be damaging to the participants' financial standing, employability, or reputation.

Though it is anticipated that there will be no possible harm to these participants, through required confidentiality procedures, the researchers will ensure that they are protected from any

possible harm and are aware of any potential harm. As stated previously, the data from observations, interviews and surveys will be reported to the nurse manager in aggregate form only. The audio recordings will be used for verification purposes on the interview data, and will be destroyed after this point. Therefore they will never be presented or available to the nurse manager. The researchers will be the only ones who will have access to the raw data. The coding system will be kept confidential, and only the researchers will have access to this. At the end of data collection, this coding information will be destroyed. With these protections in place, it is hoped that all ethical considerations have been accounted for, and participants are placed at no harm.

Practice Implications

Through analysis of communication using this research study along with its research tools, it is hoped that a comprehensive understanding of communication on a floor can be assessed. After this assessment has been completed, options for evidence-based interventions can be utilized by a nurse manager to improve communication on a floor. With improved communication between nurses and physicians, hopefully a nurse manager will see saved money and increased efficiency, and, most importantly, improved patient outcomes.

References

- Beague, A., Overcash, J., Lewis, R., Blanchard, S., Askew, T. M., Borden, C. P., . . . Ross, P. (2012). Retrospective Study of Multidisciplinary Rounding on a Thoracic Surgical Oncology Unit. *16*(6), E198-E202. doi:10.1188/12.CJON.E198-E202
- Burns, K. (2011). Nurse-Physician Rounds: A Collaborative Approach To Improving

 Communication, Efficiencies, and Perception of Care. *MEDSURG Nursing*, 20(4), 194199.
- Curtis, K., Tzannes, A., & Rudge, T. (2011). How to talk to doctors a guide for effective communication. *International Nursing Review*, 58(1), 13-20. doi:10.1111/j.1466-7657.2010.00847.x
- Disch, J. (2012). Teamwork and Collaboration. In G. Sherwood, & J. Barnsteiner (Eds.), *Quality* and safety in nursing: a competency approach to improving outcomes (1st ed.). Ames, Iowa: John Wiley & Sons, Inc.
- Flicek, C. L. (2012). Communication: A Dynamic Between Nurses and Physicians. *MEDSURG*Nursing, 21(6), 385-386. Retrieved from

 http://www.amsn.org/sites/default/files/documents/practice-resources/healthy-workenvironment/resources/MSNJ-Flicek-21-06.pdf
- Hoban, R. (2013). Focus on Patient Transition from Hospital to Home Pays Off. Retrieved from North Carolina Health News: http://www.northcarolinahealthnews.org/2013/08/22/focus-on-patient-transition-from-hospital-to-home-pays-off/

- Johnson, S., & King, D. (2012). Nurses' Perceptions of Nurse-Physician Relationships: Medical-Surgical vs. Intensive Care. *MEDSURG Nursing*, 21(6), 343-347.
- Manojlovich, M. (2013). Reframing Communication With Physicians as Sensemaking: Moving the Conversation Along. *Journal of Nursing Care Quality*, 28(4), 295-303. doi:10.1097/NCQ.0b013e31828b1c6d
- 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. Retrieved from http://ajcc.aacnjournals.org/content/15/2/217.long
- O'Leary, K. J., Thompson, J. A., Landler, M. P., Kulkarni, N., Haviley, C., Hahn, K., . . . Williams, M. V. (2010). Patterns of nurse--physician communication and agreement on the plan of care. *Quality & Safety in Health Care*, *19*(3), 195-199. doi:10.1136/qshc.2008.030221
- Rehder, K. J., Uhl, T. L., Meliones, J. N., Turner, D. A., Smith, P. B., & Mistry, K. P. (2012).

 Targeted interventions improve shared agreement of daily goals in the pediatric intensive care unit. *Pediatric Critical Care Medicine*, 6-10. doi:doi: 10.1097/PCC.0b013e3182192a6c
- Robinson, F. P., Gorman, G., Slimmer, L. W., & Yudkowsky, R. (2010). Perceptions of effective and ineffective nurse-physician communication in hospitals. *Nursing Forum*, *45*(3), 206-216. doi:10.1111/j.1744-6198.2010.00182.x
- Schmalenberg, C., & Kramer, M. (2009). Nurse-physician relationships in hospitals: 20 000 nurses tell their story. *Critical Care Nurse*, 29(1), 74-83. doi:10.4037/ccn2009436

- Sherwood, G., & Barnsteiner, J. (Eds.). (2012). *Quality and safety in nursing: a competency approach to improving outcomes* (1st ed.). Ames, Iowa: John Wiley & Sons, Inc.
- Tang, C., Chan, S., Zhou, W., & Liaw, S. (2013). Collaboration between hospital physicians and nurses: An integrated literature review. *International Nursing Review*, 60(3), 291-302. doi:10.1111/inr.12034
- Tschannen, D., Keenan, G., Aebersold, M., Kocan, M., Lundy, F., & Averhart, V. (2011).

 Implications of Nurse-Physician Relations: Report of a Successful Intervention. *Nursing Economic*\$, 29(3), 127-135. Retrieved from http://www.medscape.com/viewarticle/746223_1

Appendices

Appendix A: Interview for Nurse Manager

Interview Questions for the Nurse Manager

) What type of service does	s this floor provide?
How many beds are on yo	pur floor?
How many nurses do you	have on staff?
What is their range of yea	ars of experience?
How many physicians doe attendings, interns, reside	es your staff interact with regularly? What is the typical number of ents, etc.?
What are your concerns f	or nurse-physician communication on this floor?
What strategies have bee	n implemented by you to improve communication?
What other information of	do you think I need to know about your unit?

Appendix B: Observation Sheet

Observation of Rounding

Date:	Time:				
Room number:					
Location:	Inside room:				
	Outside room: 🗆	Outside room: 🗆	Outside room: 🗆	Outside room:	Outside room: 🗆
Description of team:	# medical staff:				
	# nursing staff:				
	Other:	Other:	Other:	Other:	Other:
Did a physician or other member of	Yes: □				
the medical team lead the	No: □				
discussion?					=
Was the patient's primary nurse	Yes:	Yes:	Yes:	Yes:	Yes:
present during the physician's rounding?	No: □				
Did the nurse provide any	Yes: □				
information about the patient during	No: □				
the physician's rounding?					
Other observations?					

Appendix C: Interview for Nurses

Number Code:			
	Interview Qu	iestions for Nurse	
Patient Specific Questions: Room number:			
Are you aware of the plan of care for this patient?	Yes: No: Other information:	Yes: No: Other information:	Yes: No: Other information:
Did you participate in rounding when the physicians came in to discuss the patient?	Yes: No: Other information:	Yes: No: Other information:	Yes: No: Other information:
3. In reference to #2, why or why not?	Timing of rounds: Busy during rounds: In another room: Not aware happening: In more urgent situation: Did not feel necessary: Other:	Timing of rounds: Busy during rounds: In another room: Not aware happening: In more urgent situation: Did not feel necessary: Other:	Timing of rounds: Busy during rounds: In another room: Not aware happening: In more urgent situation: Did not feel necessary: Other:
How did you learn about the plan of care for this patient?	Nurse report: Physician report: Order communicated via computer: Electronic charting: Other: Other:	Nurse report: Physician report: Order communicated via computer: Electronic charting: Other: Other:	Nurse report: Physician report: Order communicated via computer: Electronic charting: Other: Other:
Telephone call: □ Paging: □ Face-to-face communicatio Rounding: □	☐ Specify:		
6. In general, how do you alert the Electronic communication: Telephone call: Paging: Face-to-face communication Rounding: Other: Other:	☐ Specify:	o a patient's plan of care? —	
7. How do you think communicatio Needs to be improved: Could be improved: Adequate: Good: Excellent: Reasoning:	n is going between physicians and	nurses about plan of care with patie	nts in general?

Appendix D: Interview for Physicians

Number Code:			
	Interview Que	stions for Physician	
Patient Specific Questions:		•	
Room number:			
 Did you communicate the 	Yes: □	Yes: □	Yes: □
plan of care with the patient's	No: □	No: □	No: □
current nurse today?	Other information:	_ Other information:	Other information:
		_	_
		-	_ -
How did you communicate	Computer orders:	Computer orders:	Computer orders:
the plan of care with the	Electronic communication:	Electronic communication:	Electronic communication:
nursing staff?	Specify:	Specify:	Specify:
marsing starri	Telephone call:	Telephone call: □	Telephone call:
	Face-to-face : □	Face-to-face :	Face-to-face : □
	During rounds: □	During rounds: □	During rounds: □
	Other:	Other: □	Other:
		_	
4. How do you prefer the nurses ale Computer orders: Electronic communication: Telephone call: Face-to-face: During rounds:	ert you of any general or non-urger	nt changes with the patient?	
5. How do you prefer that nurses all Computer orders: ☐ Electronic communication: Telephone call: ☐ Face-to-face: ☐ During rounds: ☐ Other: ☐	□ Specify:	the patient?	
Needs to be improved: ☐ Could be improved: ☐ Adequate: ☐ Good: ☐ Excellent: ☐	n is going between physicians and	nurses about plan of care with patier	nts in general?

Appendix E: Letter from Nurse Manager



IOI MANNING DRIVE CHAPEL HILL, NC 27514 www.unchealthcare.org

January 20, 2014

To whom it may concern:

We are pleased to allow Laura Wert, BSN student from the University of North Carolina's School of Nursing, to conduct an honors project research study on 5 West at the University of North Carolina Medical Center. The project entitled, "Analysis of Nurse and Physician Communication on a Medical/Surgical Floor" will examine the communication practices of our nursing and medical teams in regards to our patient's plan of care.

The project, which will take place in March 2014, will give our staff insight into our communication practices and suggestions for improvements. Our unit's goal is to consistently provide the highest level of service and quality. Laura's research will help continue that tradition.

Sincerely,

Tracy J. Carroll, BSN, RN, CMSRN

Nurse Manager/Patient Services Manager III
5 West/Surgery Service/UNC Medical Center

Tracza, Comoll

101 Manning Drive Chapel Hill, NC 27514

(919) 966-0806 office/ (919) 347-1509 pager/ tcarroll@unch.unc.edu

Appendix F: Emailed Informed Consent Form for Interviews

Emailed Informed Consent for Observations

Hello,

My name is Laura Wert. I am an undergraduate at the UNC School of Nursing. I am completing a research project this semester concerning nurse and physician communication. Having discussed this with the manger of 5 West, we think that this unit would be a great place for my research. My faculty advisor on this project is Dr. Shielda Rodgers.

There are two components of my research. I will observe physician rounding, and gather information about communication patterns between physicians and nurses surrounding patient plan of care. I will also complete short interviews that include more specific information about communication patterns between physicians and nurses. This will be occurring between March 1, 2014 and March 16, 2014. I plan to do these interviews at your convenience when you are able and willing to complete them. They will be recorded for accuracy. I will make a code of your name to a randomized number to ensure that there is not redundancy in the interviews. This information as well as the recordings will be protected and only available to myself and my faculty advisor.

Your participation is completely voluntary. We do not anticipate any risks involved to nurses and physicians in terms of financial standing, employment, reputation, criminal or civil liability. If you would like to opt out of this research, please inform Tracy Carroll at Tracy.Carroll@unch.unc.edu prior to March 1st. If you have any additional questions, I can be reached at wert@email.unc.edu, and my faculty advisor can be reached at srodgers@email.unc.edu. Thank you in advance for your participation and honesty.

Sincerely,

Laura Wert

Laura Wert

Appendix G: Informed Consent Form for Interviews

Informed Consent Form for Interviews

Analysis of Nurse and Physician Communication on a Medical/Surgical Floor

Laura Wert Shielda Rodgers
Primary Investigator Faculty Advisor
UNC School of Nursing
wert@email.unc.edu srodgers@email.unc.edu

Please read the following carefully. Sign your name below only if you voluntarily agree to participate. Your signature is required for participation. If you desire a copy of this consent form, you may request one and the research team will provide it.

Research Summary:

The following interview is part of an analysis of physician-nurse communication for 5 West. Evidence consistently shows that effective communication is related to improved patient outcomes. The goal of this research is to describe the nature of physician –nurse communication on this medical-surgical unit. This will be done through observation of physician-nurse rounding and through interviews of nurses and physicians from these rounds. After data is collected, the research team will analyze the data and present the findings in aggregate form along with recommendations to the nurse manager.

Nature of participation:

This portion of the research is the interview. The researcher will ask you questions about information regarding how patient care is communicated on this floor and about communication between nurses/physicians in general. It is anticipated that this will take five to ten minutes. The interview will be audio recorded to ensure accuracy. In addition, all interviews will take place in a private conference room on the unit.

Risks:

The research team does not anticipate any risks involved to nurses and physician, including in terms of financial standing, employment, reputation, criminal or civil liability.

Voluntary Nature and Opportunity to Withdraw:

The research team emphasizes that participation in this study is completely voluntary. Your choice to participate or not participate will not affect you in terms of financial standing, employment, reputation, criminal or civil liability. You may also withdraw at any point if you so desire.

Confidentiality:

The information discussed in the interview will be kept confidential. We ensure this by keeping a coded form that contains your last name with a number. This number will appear on the interview sheet and in the audio recording, but your name will not be used. This coding form will only be accessible to the primary investigator and faculty advisor. It is kept for organization purposes only, and will be destroyed after all data is collected. The data will be aggregated and presented to the nurse manager, so she will not be able to see individual responses or be able to link data to participants.

I have read the statement	s above and understan	nd them. I voluntarily agree to participa	ate in an interview
as part of the above resea	rch and to have my sta	atements written down and the audio	of this interview
recorded.			
Signature of Participant	Date	Signature of Researcher Obtaining Consent	Date

Appendix H: Code Sheet for Interviews

Code Sheet for Interviews Analysis of Nurse and Physician Communication on a Medical/Surgical Floor

Interview Code	Last Name of Nurse
01	
02	
03	
04	
05	
06	
07	
08	
09	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	
26	
27	
28	
29	
30	
	I

Note: Keep in secure location. Destroy after data is collected.