2018

Scenario-Based Communication Simulation Curriculum and Plan

Sandra Imperial
Walden University

Walden University

College of Health Sciences

This is to certify that the doctoral study by

Sandra Imperial

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

Review Committee
Dr. Barbara Niedz, Committee Chairperson, Nursing Faculty
Dr. Mirella Vasquez Brooks, Committee Member, Nursing Faculty
Dr. Joan Moon, University Reviewer, Nursing Faculty

Chief Academic Officer
Eric Riedel, Ph.D.

Walden University
2018

Abstract

Scenario-Based Communication Simulation Curriculum and Plan

by

Sandra G. Imperial

MS, Texas Tech University Health Sciences Center, 2009

BS, University of Hawaii-Manoa, 1993

Project Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Nursing Practice

Walden University

August 2018

Abstract

The Joint Commission reported that communication failures in United States hospitals contribute to 30% of all malpractice claims, and in 2008, The Joint Commission listed the improvement of effective communication among healthcare providers as a National Patient Safety Goal. The purpose of this practice-focused project was to develop a scenario-based communication simulation for implementation approval by a panel of experts. The approved curriculum was designed to integrate a communication-based simulation scenario into the nurse residency program of a large, urban medical center to improve new graduate nurse communication skills, increase nurse communication competency and self-efficacy, and decrease communication errors. Kolb's experiential learning theory guided the simulation-based educational project. The Delphi technique was used to achieve consensus, which was achieved with 1 Delphi round. The education curriculum was presented to a 5-member expert panel that included chief nursing officers and the staff development directors. The curriculum received panel feedback and approval for implementation in the 2019 nurse residency program. Key comments from the expert panel indicated that the curriculum was approved without major changes. A simulation communication curriculum integrated into the nurse residency program may effect positive social change by decreasing errors and improving patient outcomes.

Scenario-Based Communication Simulation Curriculum and Plan

by

Sandra G. Imperial

MS, Texas Tech University Health Sciences Center, 2009

BS, University of Hawaii-Manoa, 1993

Project Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Nursing Practice

Walden University

August 2018

Dedication

I would like to dedicate this project to my children, Jocelyn, Justis, and Joelle. You are my motivation to always set a good example and be a better me each day. To my parents, Gemma and Coolidge Imperial, for always supporting me in all my endeavors, and continually making me believe that I can accomplish anything I set my mind to do. To Giovani Hyppolite, my love, you've supported my late nights and encouraged me when I think I can't go any further.

Acknowledgments

I thank God for the all the blessings he has bestowed upon me. I am thankful to my family for all the support and encouragement they gave me and continue to give me when I started this adventure of obtaining my DNP.

I would like to thank Amanda Anaya for always being there for me and helping me through the challenging moments. To Dr. Barbara Niedz, thank you for always pushing me when I needed it.

Table of Contents

Section 1: Overview of the Evidence Based Project

Introduction

In 2008, The Joint Commission listed the improvement of effective communication among healthcare providers as a National Patient Safety Goal (Krautscheid, 2008). Communication errors among healthcare providers have been identified as the significant factor in nearly 200,000 deaths a year (Maughan, Lei, & Cydulka, 2011). The sentinel event alert issued by The Joint Commission (2017) reported that communication failures in U.S. hospitals contribute to 30% of all malpractice claims, resulting in 1,744 deaths and 1.7 billion dollars in malpractice costs.

New graduates are expected to provide high-quality, safe patient care which includes the ability to communicate effectively with the other members of the healthcare team, including the hand-off exchange of patients (Krautscheid, 2008). Like all other skills, effective communication can be learned and improved.

The Joint Commission (2017) defined a *hand off* as the transfer and acceptance of patient care through effective communication. Hand-off exchange is an integral part of nursing practice; poor quality and incomplete hand-off communication can contribute to varying degrees of error (Hsu, Chang, & Hsieh, 2015). Quality care, communication, and coordination of care are all activities that can be directly influenced by an effective hand-off tool (Abraham, Kannampallil, & Patel, 2014). There are many factors that can adversely affect the quality of a hand-off communication, such as the lack of a standardized hand-off tool, inaccurate or missing information, language and social

barriers, skill levels, and contextual constraints creating a breakdown in communication (Abraham et al., 2014).

In this doctorate of nursing practice (DNP) project, I developed an educational curriculum focused on hand-off exchange with a scenario-based communication simulation, which is an effective teaching method that assists learners in translating didactic information into patient care and significantly improving their knowledge (see Elfrink, Kirkpatrick, Nininger & Schubert, 2010). The curriculum, which will be offered to new graduates within the first 6 months of their employment at a large, urban medical center, has the potential to prevent serious adverse events. The educational curriculum can contribute to shorter length of stay in the acute care settings, fewer complications of care, and improved patient satisfaction (see Ward, 2012). These are all needed outcomes that contribute significantly to positive social change. The implementation of the curriculum is outside the scope of this DNP project.

Problem Statement

The problem I identified in this DNP project was the lack of experience and knowledge in hand-off communication by the new graduate nurse as patients present with more complicated medical conditions and their hospitalization takes them through several different departments and medical units. During these transitions, the exchange of information during hand-off communication is critical and a risk for adverse events. Novice nurses needed further guidance and training in building their effective communication skills, particularly during the hand-off process. The current nurse residency program in the organization for which this DNP project was developed lacks

active learning experience on hand-off communication that a simulation curriculum will provide.

Communication styles differ from person to person, but in the healthcare setting critical information must be conveyed to maintain a safe and high-quality level of care. Communicating clearly and in a comprehensive way is traditionally a personal approach and style; however, sometimes critical information may not be recognized and omitted leading to errors and possible sentinel events (Scotten, Manos, Malicoat, & Paolo, 2015). A large amount of literature can be found on medical errors and how the breakdown in communication contributed to the problem (Scotten et al, 2015). Ineffective communication skills are especially present in new graduates who may be overwhelmed by many factors as they begin their new work role (Lim & Pajarillo, 2016). New graduates are novice nurses who are expected to competently care for patients with complex medical conditions. As new graduates enter the workplace they are required to quickly transition into their role, but with their limited exposure and practice in hand-off communication, they are at risk for errors or omissions of priority information. Due to the student or new graduates' limited exposure, they have additional barriers to delivering high-quality hand-off information. These barriers can be and are not limited to anxiety, disorganization, lack of focus, and uncertainty of what components of hand off constitute best practices (Lim & Pajarillo, 2016).

Purpose Statement

The purpose of this DNP project was to receive approval of an educational curriculum targeted at improving the gap in practice that new nurses experience when

taking on their first-time role as a registered nurse, specifically a gap in communication processes where potentially important information is omitted during a hand-off exchange. I developed the education curriculum to integrate a communication-based simulation scenario into the nurse residency program to improve new graduate nurses' communication skills and ultimately increase their communication competency and self-efficacy and decrease communication errors. Hsu et al. (2015) completed a randomized controlled trial on the effects of scenario-based simulation training on nurse communication and concluded that simulation was more effective in learner satisfaction than traditional lecture, which supported my development of the simulation curriculum. The practice-focused question that guided this DNP project was: Will a scenario-based communication simulation be approved for implementation by a panel of experts?

Nature of the Doctoral Project

The nature of this doctoral project was to secure approval of a scenario-based simulation, hand-off communication training program from an expert panel. The curriculum was developed and then presented to an expert panel of nurse educators and chief nursing officers for their reactions and ultimate approval. The curriculum was approved and will be incorporated into the nurse residency program and implemented outside the scope of this DNP project.

Within the curriculum, my plan was to administer a presimulation test to new nurses during their orientation to the nurse residency process to score the level of self-efficacy the nurse reported of themselves during hand-off communication. As part of the curriculum, new graduate nurses will participate in a simulation scenario, focusing on

hand off and communication. A debriefing process will follow at the completion of the scenario allowing the participants to self-evaluate their performance and compare their self-evaluation to feedback from observers. The participants then redo the simulation scenario and apply the feedback they received. A postsimulation test will then be administered to evaluate any changes in confidence scores. This hand-off communication curriculum will help participants identify missing or omitted client data that affects continuity of client care, thereby closing the gap in practice within the hand-off communication process.

Significance

The use of simulation within educational programs has assisted students to transition didactic information into their actions during patient care (Hsu et al., 2015). The safety of the simulation environment allows for errors that will not cause harm to the patient and with proper guidance, allows the student to learn from errors and not repeat them when in practice (Hsu et al., 2015). Using simulation in the clinical setting to assist both new nurses and experienced nurses with tools to improve communication skills can increase their self-confidence and improve patient outcomes, thereby decreasing errors (Foronda, Liu, & Bauman, 2013).

The standardized tool (see Appendix C) that I combined together with a standardized simulation scenario for this project will strengthen and unify nurses' communication skills. Effective communication builds relationships and allows for greater teamwork among nursing, physicians, and ancillary staff, and a strong team creates a healthy work environment and safe environment for patients. Work environment

is a factor contributing to retention and recruitment, and an inclusive team attitude can improve the retention of both new and experienced nurses within the facility (Manojlovich & DeCicco, 2007).

Addressing work environment and teamwork can strengthen and improve the communication skills of the healthcare professional. As medical conditions are increasingly more complicated and patients transition to multiple departments during hospitalization, accurate and complete information is critical in continuation of their care (Scotten et al, 2015).

A healthcare organization can improve their work environment with a culture of teamwork and support and by providing quality care to both patients and staff. Improving the work environment can happen in a variety of ways. Communication simulations can be incorporated into annual clinical competency reviews. Multidisciplinary groups can be created to improve communication between departments. Critical care units, such as emergency department, intensive care units (ICUs), and surgical departments, perform a high volume of hand-off reports daily. These departments also need a team environment to provide critical care to patients (McElroy et al., 2015).

Summary

In this section, I identified the practice problem of ineffective hand-off communication of new graduate nurses. The purpose of this project was to receive the approval of a simulation-based educational curriculum focused on hand-off communication to be implemented outside the DNP project. In the next section, I will

present an overview of key concepts, models, theories, and the background and context of the project.

Section 2: Background and Context

Introduction

The problem I identified in this DNP project was the new graduate nurses' lack of experience and knowledge in hand-off communication as the hospitalization of a patient with more complicated medical conditions takes them through several different departments and medical units. Communication between healthcare providers is a critical skill that affects the delivery of safe, high-quality care (Krautscheid, 2008). The approved hand-off communication education curriculum will provide new graduate nurses the knowledge and experience they lack as novice nurses. In this section, I will present the concepts, models, and theories that supported the project. The section will also include the relevance to nursing that this project can contribute, the local background of the facility that the project was developed for, and a description of the educational curriculum and the role of the DNP student in relation to the project.

Concepts, Models, and Theories

I used several concepts to support this project, including hand-off communication and patient safety, self-efficacy as it applies to nurses (Bandura, 1997), and strategies to bridge the communication gap. The model applied in this project was a collection of simulation techniques for critical decision making. This project was also based on Kolb's (1984) experiential learning theory (Lisko & Odell, 2010).

Hand-Off Communication and Patient Safety

The transition of care between departments or change of shift requires hand-off communication among the healthcare team. This process requires clear communication

and coordination of care to maintain patient safety. McElroy et al. (2015) studied the hand-off process of liver transplant patients between the operating room (OR) to the ICU and recognized the risk of patient harm because of identified failures during the hand-off process. The researchers conducted a failure modes, effects, and criticality analysis to examine the care process involved during the handoff from OR to ICU and understand the criticality of the specific steps of the hand off. Two members of the team observed five OR to ICU transfers to identify the relevant clinical personnel and key steps in the hand off process. The participant clinicians were engaged in recorded sessions and described their role and the process of hand off to include specific tasks that are performed (McElroy et al., 2015). The authors used the descriptions to design the process map, which after consensus was reached on its accuracy, the clinicians employed to identify any weakness in the process that could contribute to a failure (failure mode). Using a 10-point scale, with 1 indicating *minimal risk* and 10 *maximum risk*, the researchers assigned a frequency of occurrence for each failure, the effect on the patient, and the safety measures in place to prevent the failure. They also calculated a Risk Priority Number (RPN) to put the failures in order of criticality, with an RPN range of 1 to 1,000 and 300 being a threshold which if above is identified as "critical."

McElroy et al.'s (2015) direct observational study identified 81 process failures, with 22 categorized as critical. A lack of communication between the OR and ICU presented the process failure with the highest risk for harm to the patient (McElroy et al. 2015). The identified patient care outcomes that were affected by the communication failures were extended time on transport ventilator, delay in administration of blood and

medications, and delay in recognizing postoperative hemorrhage (McElroy et al. 2015). Effective and timely communication of patients' condition and potential complications allowed the receiving department to prepare and have appropriate team members at the bedside during a patient's arrival to ICU unit (McElroy et al. 2015).

In a case study report, Shorthall (2007) described an event during a rotation as a nursing student that could have resulted in an adverse event for a patient due to communication failure. During this clinical rotation, the author observed a patient who appeared confused and agitated, and as the author began to ask if the patient needed help, a nurse entered the area and sternly ordered the patient back to his assigned cubicle. Shorthall noted a hematoma to the back of the patient's head and when reviewing the chart noted that a neurological assessment had not yet been completed. The response the author received when inquiring whether the patient should have a neurological assessment completed was that the nurse had not done the initial assessment, and since the patient was now being admitted to the unit, there was no point in beginning one now and that the patient was just withdrawing from alcohol. They transported the patient to the unit and the nurse gave the report to the receiving nurse there, and Shorthall noticed that there was no mention of the hematoma to the back of the head. The reporting nurse began to walk away and Shorthall decided to point out that the patient had a hematoma to the back of the head and a neurological assessment had not been initiated. Following up on the patient later that day, Shorthall was informed that he was scheduled for a computerized tomography scan of his head, and no alcohol was detected in his lab results. Though the results of the computerized tomography scare are unknown, the potential

omission of the head injury during hand-off report could have resulted in further delay in correct diagnosis of the patient.

Strategies to Bridge Communication Gap

The Joint Commission recognizes that serious adverse events are being identified as being caused by a breakdown in communication, and therefore, added standardized communication as a patient safety goal (Scotten et al., 2015). S-situation, B-background, A-assessment, R-recommendation (SBAR) is a familiar guide within nursing. The SBAR format of communication can improve the effectiveness of information being transferred between healthcare providers (Dunsford, 2009).

Simulation is a teaching strategy that allows learners to integrate information taught into actions and words without the risk of harm to patients. The simulation environment allows the learners to experiment with different communication strategies and techniques. Communication is a skill that can be taught and improved with practice in a simulated scenario within a safe and controlled setting (Ward, 2012).

Foronda et al. (2015) examined the reliability and validity of the addition of *Identification* to SBAR (ISBAR) form of hand off report. The addition of I-identification, to indicate the person initiating the report as the starting point of the clinical conversation, this being important when the conversation is not done face-to-face. Communication is difficult to measure even with the recommended SBAR standardized format (Foronda et al., 2015).

Authors Foronda et al. (2015) developed the Interprofessional Communication Rubric (IICR) to measure communication performance when using the ISBAR method.

The IICR scores ranged from 0 for a *poor performance* to 15 for an *excellent performance*. Their multisite, descriptive design and mixed-method study had a convenience sample of six nurse educators and six physicians to determine content validity. They scored the 15 items of the IICR on a scale of 1 for *not relevant* to 4 *very relevant*. Nursing students from five nursing programs made up the convenience sample of participants (N = 229), and the IICR was used to evaluate their performance during simulation. The 20 nurse educators from the five programs that participated in the evaluation of the students completed the qualitative portion of the study. Students completed an online module with a 10-question quiz that prepared them for the upcoming interprofessional simulation. Then participants completed a manikin simulation scenario in teams of two students that required communication with a physician reporting the patient event using ISBAR format. Each participant was scored individually by separate educators.

The analysis of content validity and reliability of the IICR were considered acceptable (Foronda et al., 2015). The item content validity index was equal or greater than 0.83, where a score of 0.80 is viewed as acceptable (Foronda et al., 2015). The researchers used Spearman used to measure interrater reliability among the nurse educators and found that strong reliability with an overall rating at 0.79. These results demonstrated that IICR is reliable and valid tool to measure communication performance during simulation.

Hawthorne et al. (2016) studied the use of SBAR during hand off after 6 years of implementation between surgical team members in an academic, tertiary care center. To

establish interrater reliability, two of the researchers observed four cases together at the start of the study. The two researchers applied Cohen's kappa to identify agreement between themselves on the presence of the separate components of SBAR in each operating room hand off. They observed a total of 23 operative procedures and recorded the case duration, presence or absence of SBAR components, and duration of hand-off communication. Hand-off communications were observed between registered nurses (RN); certified surgical technicians (CST); certified surgical assistants (CSA); and either certified registered nurse anesthetists, anesthesia residents, or anesthesiologists (ANES; Hawthorne et al., 2016).

Hawthorne et al. (2016) observed hand-off communication in 20 of the 23 total cases. Within those 20 cases, a total of 123 hand-off reports were observed; however, only 119 could be assessed for using SBAR. There was high agreement in the interrelater reliability ($k = 0.89$) between the two coders ($n = 36$ hand offs; Hawthorne et al., 2016). From the assessable 119 hand offs, the researchers found each communication interaction addressed 67% of the four components of SBAR. Though different roles had varying frequency of communication as well as the duration of hand off communication, RNs had the highest number of hand offs with 40, ANES followed closely with 36, CST 31, and CSA 12; yet, the ANES took longer to complete hand offs with an average of 85.7 sec while RNs' duration was 60.5 sec, CSTs' was 45.7 sec, and CSAs' only 37.5 sec (Hawthorne et al., 2016). Different roles used the standardized form of hand-off communication with differing emphasis on each component while focusing on their role

(Hawthorne et al., 2016). Hawthorne et al. (2016) study supports the use of standardized hand-off communication.

Simulation Techniques for Critical Decision-Making

Watters et al. (2015) performed a comparative study of interprofessional (IP) and uniprofessional (UP) simulation education interventions. IP collaboration has continually been a subject in the healthcare agenda with organizations, such as World Health Organization and the Nursing and Midwifery Council, supporting the benefits and value that IP brings to healthcare (Watters et al., 2015). Using a simulation-based education intervention, Watters et al. sought to learn how IP education impacted the participants learning while using self-efficacy as a measure of performance in practice. The setting for the educational training they studied was the Simulation and Interactive Learning Centre at St. Thomas' House, a high-fidelity simulation facility. All participants in their study were in their early postgraduate year which consisted of nurses, midwifes, and doctors in their Foundation Year 1 and 2 (FY1/2). Their hypothesis stated that self-efficacy would increase overall after and that IP training groups would show increased shifts in self-efficacy measured with a pre- and posttraining test. The researchers tested 187 participants pre- and posttraining in either 21 IP courses or 53 UP courses.

The results of the pre- and posttraining tests of nurses and midwifes that trained UP (n = 64) were compared to those that trained with FY1/2 doctors (IP; n = 66; Watters et al., 2015). The IP group scores improved by 20%, while the UP group scores improved 12%, and a t test showed a significant difference (t = 3.4, df = 128, p = 0.001,). The second comparison of results from FY1/2 that trained UP (n = 94) compared to those that

trained IP (n = 62) yielded a 2% increase in self-efficacy mean score within the IP group and was not significant (t = 1.4, df = 154). Their results supported that IP simulated training increased self-efficacy for all participant doctors and nurses, though significantly for nurses.

Fero et al. (2010) aimed to examine the relationship between critical thinking skills and simulation-based performances. A sample of 36 nursing students in their final term from a diploma, associates, or baccalaureate was included to participate in their study. All participants completed the 75-item Critical Thinking Disposition Inventory (CCTDI) and the 34-item California Critical Thinking Skills Test (CCTST) and were then randomized into two groups. Group A participated in videotaped vignettes (VTV) after receiving orientation where they viewed a practice VTV scenario, completed the assessment individually, stating the patient problem, necessary data to report, nursing interventions to implement, anticipated orders, their rationale for interventions, and the acuity level of the patient. After review of the performance, they completed the test scenario completing the same process as during the practice.

Group B received orientation to high-fidelity human simulation (HFHS) and instructions on HFHS lab performance (Fero et al., 2010). They then viewed a videotaped scenario of a HFHS simulation, then reviewed the performance and expected actions, and individually completed the test scenario in the simulation room. The third phase of the study consisted of groups switching and group A completing the HFHS and Group B the VTV simulation scenarios.

The scores of the CCTDI ranged from 267 to 384 of the 36 participants 25% indicated a strong critical thinking disposition, while 55.6% were average and 19.4% indicated weak (Fero et al., 2010). The CCTST test scores ranged from 13 to 30. From the total group of 36 participants, 30.6% scored high critical thinking skills, 41.7% scored average, and 27.8% weak (Fero et al., 2010). Performance in the VTV and CCTDI or CTST showed no significant relationship. The HFHS and CCTDI scores were significant, students with strong critical thinking disposition performed at a higher rate during the HFHS scenario demonstrating the ability to identify the clinical problem with essential information to report to provider while prioritizing care and initiating nursing interventions.

Experiential Learning Theory

The theory that was applied is Kolb (1984) experiential learning theory. This theory was appropriate for a simulation-based educational project, as it states learning is a process and knowledge is gained from the transformation of the experience into existing cognitive frameworks. The key concepts identified and defined by the theory for the learner are that experiences are gained through apprehension or comprehension. Participation in the experience is apprehension, while comprehension occurs outside the experience through abstract conceptualization.

New graduate nurses must be prepared to collaboratively practice with the healthcare time and effective communication skills are imperative to provide safe quality care. A communication-based simulation scenario incorporated into the new nurse educational program during orientation or nurse residency program is the project I have

proposed. Simulation provides the opportunity of transforming the experience to new ways of thinking and change in behavior.

Self-Efficacy as Applied to Nurses

Cardoza and Hood (2012) stated self-efficacy as a student's belief that he or she can perform a specific task. In nursing. performing the task includes the ability to recognize the patient's condition and respond and initiate interventions for the condition. The comparative study conducted by Cardoza and Hood sought to examine the reported self-efficacy of senior nursing students before and after simulation training.

The General Self-Efficacy (GSE) scale was completed by 52 participants prior to any knowledge of the case scenario. GSE is a 10-item psychometric scale and total scores range from 10 lower confidence to 40 higher confidence. Simulations were completed in groups of five to six participants with an orientation prior to and debriefing after the simulation session, followed by completion of GSE. Seven weeks later following course lectures and clinical rotations the 52 participants completed the simulation sessions including the GSE before and after the simulations. ANOVA repeatedly used to assess the difference in the data collected. Mean scores from test 1 were 31.35 and there was a drop in mean scores for Test 2 to 28.6. Test 3 mean score increased nearly equal to Test 1 at 30.38. The mean score of Test 4 was significantly increased at 32.31. The decrease in score between Test 1 and 2 indicates students are overly confident in their knowledge and ability before simulation training. Scores increased between Test 2 and 3 and subsequently Test 4 following lecture and clinical experience. The study supports the

implementation of simulation within nursing curriculum, and a means to measure learning outcomes.

The self-efficacy pretest will be administered before beginning any activities (Appendix B). Simulation instructions will then be given to all participants, explaining the objectives of the simulation, which are to recognize changes and effectively care for the patient, then give hand off report to next shift while using the hand-off tool. Participants will be randomly paired to complete the simulation scenario within 20 minutes. Each nurse will have the experience of giving report to the oncoming nurse using the Hand-Off tool (Appendix D). Each pair will debrief, allowing participants to reflect on their performance and identify areas of improvement and receive feedback from the evaluator. Each pair of participants will repeat the scenario after feedback to implement improvements. At completion, all participants in the simulation activity will complete the self-efficacy posttest.

The self-efficacy test in Appendix B consists of ten questions. The test is a 4-point forced choice scale. As there are 10 questions the most positive score will be 40, the most negative score will be 10. Schwarzer and Jerusalem (1995) developed the original German version of GSE in 1979, which has subsequently been revised and adapted to 26 languages. Using samples from 23 nations reliability was computed by Cronbach's alpha which ranged from 0.76 to 0.90. Validity is documented in numerous correlation studies and positive coefficients were related to favorable emotions, optimism and work satisfaction (Schwarzer & Jerusalem, 1995). Explicit permission to use the GSE is not needed, general permission is granted (Appendix C).

Relevance to Nursing Practice

Hand off is an integral part of nursing practice. Poor quality and incomplete hand-off communication can contribute to varying degrees of error. The literature review by Abraham et al. (2014) stated that there are many factors that can adversely affect the quality of a hand-off communication from a lack of standardized hand-off tool, distractions, to nursing skill level.

Sustainability and consistency of the hand-off tool to provide a smooth transition across providers and settings is a continuous issue. Therefore, close further examination is needed to evaluate if patient safety is enhanced with successful use of a hand-off tool. Abraham et al. (2014) reviewed 36 articles of hand-off tool evaluation. The types of tools being used were paper-based, electronic, standalone tools and electronic medical record integrated. Students and new graduates require more exposure and practice with the process and the tool. Simulation activities are incorporated into the educational programs, and nurse residency programs provide additional education and practice during the new graduate's transitional phase into the workplace. The use of a standardized hand-off tool will increase the quality of information communicated during transfer of care and improve safety while contributing to an enriched clinical education experience (Lim & Pajarillo, 2016). The recommendation for this project was that a communication simulation activity would be incorporated into new graduate nurse residency program and new nurse orientation and annual competency activities for all nursing staff.

Local Background and Context

The 180-bed acute care facility hires an average 20-30 new graduates a year. They will work within different units of the facility. The facility discontinued the nurse residency program due to financial reasons. However, the facility is one of four in the city that are part of a corporation. To continue offering the nurse residency program for all the facilities within the corporation the program has been centralized and the budget to support it has been centralized and is used as a marketing tool. Individual facilities are not financially burdened, and all facilities can benefit from the program. New graduates are hired from the separate facilities yet attend residency classes together in a central location.

The nurse residency program is currently enrolling an estimated 40 new graduates twice a year. Administration is evaluating the current enrollment dates and evaluating the possibility of adding two additional enrollment dates. The approval of the project by the facilities' expert panel, the educational curriculum of hand-off communication with scenario-based communication simulation was incorporated into the nurse residency curriculum, which is outside of scope of the DNP project.

Communication breakdown has been indicated in adverse events and due to this; The Joint Commission added the standardization of communication as a new patient safety goal in 2010 (The Joint Commission, 2017). Because patients transition through several departments during hospitalization there are risks of missed information that contribute to medication errors or missed test results and readmissions. The transition from inpatient to outpatient is potentially hazardous if there is no communication

between the hospital and the primary care or home health agency assuming care. Discharge summary is the traditional format of transfer of information, yet summaries are not readily available immediately upon discharge and some critical information tends to be missing such as a complete medication list or recommendation for follow-up appointments. Readmissions are greatly affecting reimbursements from Medicare and Medicaid. Therefore, readmissions are an important issue within hospitals, as they are at risk of losing reimbursements when a client is readmitted within 30 days of discharge.

The following terms are important to the DNP project and are defined accordingly.

Adverse Events: Is an untoward or negative medical occurrence in a patient's condition due to medical management rather than the patient's underlying condition (IOM, 2000).

Hand-off communication: The sharing of essential information when the responsibility of care of the patient is transferred during change of shift or transfer of units (The Joint Commission, 2017).

Self-efficacy: Is a person's belief in their ability to complete a future task or solve a potential problem (Bandura, 1977).

Sentinel events: Is an occurrence resulting in serious physical or psychological injury or death not related to the natural course of a patient's underlying condition (IOM, 2000).

Simulation: Is the enactment or imitation of clinical experiences in a safe environment as part of a student's education (Institute of Medicine (IOM), 2000).

Educational Curriculum

The new graduates of the nurse residency program will meet the three objectives upon completion of the educational curriculum. The objectives are: (a) practice the nursing process and improve critical thinking and decision-making skills in a simulated clinical setting; (b) recognize critical changes in patient condition, initiate appropriate nursing interventions; (c) communicate critical information to members of healthcare team (Appendix G). The curriculum begins with an introduction and tour of the simulation environment and expectations for participation. The self-efficacy test will be administered as a pretest, prior to the instruction (Appendix B).

The curriculum will proceed with a presentation and discussion of the communication simulation objectives. The new graduates should: (a) recognize changes in the patient condition; (b) implement the appropriate interventions; (c) give hand-off report which includes all critical information. A video presentation of handoff report depicting several incorrect or incomplete transfers of information will be included in the training. As a group, the new graduates will discuss identified errors and areas that need improvement within the hand-off communication. Following completion of the discussion a second video of an improved hand off report will be viewed.

The new graduates will be separated into groups of four to complete the simulation scenario. The groups will first review the SBAR tool to be used for hand-off report (Appendix D). Then two new graduates will perform the simulation scenario, with one as the nurse caring for the patient and giving hand-off report and the second being the receiver of report. The remaining two new graduates will observe the simulation while

noting both positive points and areas needing improvement. Then the second pair will perform the simulation with the first pair observing and also noting positive points and areas needing improvement. An instructor will be present for all simulation monitoring performance for completion of communication competency checklists (Appendix A).

Groups will be guided through a debriefing of their simulation performance. Each pair will be provided with feedback and the instructor will complete competency checklists for all participants. Then groups will repeat the simulation alternating roles of nurse caring for patient and giving report and being receiver of hand-off report. After all groups complete the simulation scenario, the self-efficacy test will be administered a second time for post test results.

Role of the DNP Student

My experience as a nursing instructor introduced me to the use of simulation in education. As a nursing instructor for an academic institution, I sought feedback from clinical preceptors and a frequent comment regarding new graduate performance cited lack in communication skills and self-confidence when giving and receiving hand-off report. In the academic setting, I observed how students benefitted from the use of simulation to connect didactic information with direct patient care. As a result, I wanted to introduce simulation to the acute care setting for training and education of both new graduates and experienced nurses. I functioned as the DNP project leader of this project.

Summary

In this section I described the concept of simulation as the method of educating new graduates. The theory of experiential learning and its appropriateness for a

simulation curriculum to improve communication skills. The development of this educational curriculum was presented to an expert panel for approval of implementation outside the DNP. In section three I describe the collection and analysis of evidence from the project.

Section 3: Collection and Analysis of Evidence

Introduction

New graduate nurses lack knowledge and experience in hand-off communication. To address this issue, I developed an educational curriculum on hand-off communication with a scenario-based communication simulation project and presented it to an expert panel for approval and eventual incorporation into the nurse residency program of a large, urban medical center. In this section, I will discuss the practice-focused question, sources of evidence, participants, and procedures of the project.

Practice-Focused Question

New graduates need further guidance and education to differentiate what information is critical to communicate during the hand-off process. Their limited exposure and practice with hand-off communication leaves them vulnerable to errors. The practice-focused question that guided this DNP project was: Will a scenario-based communication simulation education curriculum be approved for implementation by a panel of experts? The curriculum can ultimately increase nurse communication competency and self-efficacy and decrease communication errors.

Sources of Evidence

The expert panel that included chief nursing officers and the staff development directors was presented the educational curriculum. I used a content analysis of the panel responses to the Delphi questions (see Appendix E) to extract themes related to future use and implementation. The panel came to a consensus and approved the implementation of

the simulation education curriculum on hand-off communication into future nurse residency programs at the large, urban medical center.

Published Research and Outcomes

Upon completion of the literature review, I found evidence to support the use of simulation to improve nurses' communication skills and increase their self-efficacy and incorporated this evidence into the educational curriculum and project. For the ongoing literature review conducted throughout the project development, I accessed resources through the Walden University Library using the EBSCOhost, PubMed, and Ovid Nursing Journals databases. The key words I used to search were *simulation, nursing education and simulation, communication, hand off communication,* and *hand off communication tools*.

I began the literature review by searching for the use of simulation in nursing education and the use of simulation to improve communication skills. The literature referenced self-efficacy as the factor that contributed to improving communication skills (CITE). I then directed the search towards self-efficacy and methods of measurement and focused on the specific skill of hand-off communication and recommended tools.

Evidence Generated for the Doctoral Project

The educational curriculum I developed for this project supports the incorporation of hand-off communication with communication-based simulation scenarios into the nurse residency program at a large, urban medical center. Simulation scenarios are an effective mechanism of experiential learning providing an experience to translate into

knowledge (CITE). Improving new graduate communication skills improves their self-efficacy and contributes to improved patient outcomes (Watters et al., 2015).

Participants. The expert panel in this study consisted of five members. The members represented the four different acute care facilities in the corporation. Of the total five expert panel team, two members were the directors of nurse education and one was the nurse residency coordinator. The remaining two members were the chief nursing officers, each with responsibility as chief nursing officer for two of the four facilities.

Procedures. I presented this project to the expert panel representing nursing, nursing education, and the nurse residency program at the project site. The panel responded to the Delphi questions in regards to the project (see Appendix E). The panel convened for three iterations until consensus was obtained.

Protections. At the time of the project, the project site did not currently have an Institutional Review Board (IRB). Therefore, I sought IRB approval from Walden University, but also acquired a letter of support from the facility. The Walden IRB approved the project (Approval No. 07-18-18-0319734). All members of the expert panel agreed to participate in the DNP project by reviewing the curriculum and participating in the Delphi technique rounds, capturing their reaction to the curriculum.

Analysis and Synthesis

I presented the educational curriculum as a Powerpoint presentation to the expert panel for their review and approval. The qualitative data including their discussions, questions, and responses of the panel to the presentation were analyzed to extract themes. I constructed the collected information extracted from their responses, consensus was

met, not requiring a second round of questions. If necessary, an additional round of questions would have been created from responses in Round 1. Any changes they suggested were incorporated into the curriculum. I summarized these responses for the DNP project and were included in Section 4 after full permissions were received from the Walden IRB.

Summary

I developed the simulation education curriculum project on hand-off communication to improve the new graduate nurses' communication skills. Upon receiving IRB approval from Walden University, I presented the curriculum to an expert panel for approval to implement in future nurse residency programs. Section 4 will include the presentation of the curriculum to the expert panel and their responses to the project.

Section 4: Findings and Recommendations

Introduction

New graduate nurses lack the knowledge and experience needed to provide an effective hand-off communication as patients present with more complicated medical conditions. The practice-focused question that guided this project was: Will a scenario-based communication simulation be approved for implementation by a panel of experts? The purpose of this project was to receive approval of an educational curriculum targeted at improving the communication skills of new gradate nurses.

I presented the education curriculum to a five-member panel of experts. Their feedback and responses to the Delphi questions (see Appendix E) were analyzed for consensus of approval of the curriculum. Consensus was met with one round of questions.

Findings and Implications

The expert panel expressed unanimous interest in improving new graduate communication skills. The use of a simulation educational curriculum was openly welcomed, and a majority agreed to the use of simulation. There was also agreement that an active simulation is a more effective teaching method than traditional lecture. The expert panel expressed that communication is not only vital during the hand-off report but also in the patient-nurse relationship. Improving the communication skills of nurses can contribute to patient understanding, patient participation in care, improved outcomes, and improved effectiveness and efficiency of the healthcare team.

The implications of this project are that a communication curriculum is applicable in any and every unit of the healthcare system. The staff education department will review the annual competencies of all patient care departments and integrate a communication component to the checklist. Improving communication enhances patient and family satisfaction which can be reflected in satisfaction scores that affect reimbursements (Centers for Medicare and Medicaid, 2018)

Recommendations

The expert panel recommended that the simulation communication curriculum be incorporated into the nurse residency program with no changes. Members of the expert panel explained that in their collective views, the curriculum will not only improve new graduate communication skills but will also improve nurses' confidence in reporting untoward signs and symptoms in a timely manner, therefore improving intervention times and patient outcomes. Communication can build relationships with peers, physicians, and all branches of the healthcare team. No additional recommendations or products were presented for improvement of the project.

Strengths and Limitations

The strength of the project is how applicable the curriculum is for any healthcare department. Scenarios can be changed to fit many situations, such as responding to challenging a patient and/or family or providing complicated instructions. Communication is an issue that can be addressed and contribute to improved outcomes within any workplace (Manojlovich & DeCicco, 2007). Time and financial support are

the primary limitations of the implementation of this project. Access to a simulation lab can be another limitation of this project, if a facility does not have the space for one.

Section 5: Dissemination Plan

I presented the education curriculum to an expert panel consisting of the directors of nurse education, the nurse residency coordinator, and chief nursing officers of a large, urban medical center, and they approved it for implementation. The approved education curriculum will be integrated into the centralized nurse residency program, which serves the four facilities of the medical center, when the 2019 budget is approved. The nurse residency coordinator will integrate the communication curriculum into the residency program schedule, and new graduates enrolled in the 2019 program will be informed of the additional communication curriculum. Though the educational curriculum will be implemented outside the scope of this DNP project, my role of project leader will continue. My current educational facility has agreed to provide the simulation lab for the implementation of the simulation educational curriculum with the assistance of nursing faculty to evaluate the nurse residents. For additional dissemination of the project, I have submitted it to The Texas Hospital Association for poster presentation and journal publication to *Nursing Education Perspectives*.

Analysis of Self

As a nurse educator, I am aware of the challenges new graduates face when transitioning into their new role in the acute care setting. I support nurse residency programs as they provide the continued education a new graduate needs; however, there are different programs available to be adopted. I believe that an education curriculum using simulation is not only a benefit to the leaners but also the facility. This project has prompted me to discuss this issue with my colleagues. We are collectively reviewing the

course lesson plans to incorporate communication simulation into the curriculum. The commitment of my institution to the facility to provide the simulation lab and faculty to implement the education curriculum creates a partnership with my direct interaction.

Summary

In this DNP project, I identified that new graduate nurses lack the knowledge and experience of performing an effective hand-off communication. I developed an education curriculum using simulation to improve hand-off communication that was approved for implementation in the nurse residency program at the project site. Integration of the education curriculum into the nurse residency program when the 2019 budget is approved.

References

Abraham, J., Kannampallil, T., & Patel, V. L. (2014). A systematic review of the literature on the evaluation of handoff tools: Implications for research and practice. *Journal of American Medical Information Association, 21*, 154-162. http://dx.doi.org/10.1136/amiajnl-2012-001351

Bandura. A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84*, 191-215

Cardoza, M., & Hood, P. (2012) Comparative study of baccalaureate nursing student self-efficacy before and after simulation. *Computer, Informatics, Nursing, 30*(3), 142-147. http://dx.doi.org/10.1097/NCN.0b01333182388936

Centers for Medicare and Medicaid. (2018). HCAHPS: Patients' perspectives of care survey. https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/HospitalQualityInits/HospitalHCAHPS.html

Dunsford, J. (2009). Structured communication: Improving patient safety with SBAR. *Nursing for Women's Health, 13*(5). http://dx.doi.org/10.1111/j.1751-486X.2009.0156.x

Elfrink, V., Kirkpatrick, B., Nininger, J., & Schubert, C. (2010). Using learning outcomes to inform teaching practices in human patient simulation. *Nursing Education Perspectives, 31*(2), 97-100. https://journals.lww.com/neponline/Abstract/2010/03000/Using_Learning_Outcomes_to_Inform_Teaching.8.aspx

Fay-Hiller, T. M., Regan, R. V., & Gordon, M. G. (2012). Communication and patient

safety in simulation for mental health nursing education. *Issues in Mental Health Nursing, 33,* 718-726. http://dx.doi.org/10.3109/01612840.2012.709585

Fero, L. J., O'Donnell, J. M., Zullo, T. G., DeVito Dabbs, A., Kitutu, J., Samosky, J. T., & Hoffman, L. A. (2010). Critical thinking skills in nursing students: Comparison of simulation-based performance with metrics. *Journal of Advanced Nursing*, *66*(10), 2182-2193. http://dx.doi.org/10.1111/j.1365-2648.2010.05385.x

Forunda, C., Alhusen, J., Bandhathoki, C., Lamb, M., Tinsley, K., MacWilliams, B.,… Bauman, E. (2015). A mixed-methods, international, multisite study to develop and validate a measure of nurse-to-physician communication in simulation. *Nursing Education Perspectives, 36*(6), 383-388. http://dx.doi.org/10.5480/15-1644

Foronda, C., Liu, S., & Bauman, E. B. (2013). Evaluation of simulation in undergraduate nurse education: An integrative review. *Clinical Simulation in Nursing, 9*(10), e409-e416. http://dx.doi.org/10.1016/j.ecns.2012.11.003

Hawthorne, H., Cohen, T., Cammon, W., Bingener, J., Hallbeck, S., Santrach, P.,… Blocker, R. (2016) Assessing SBAR during intraoperative handoff. *Perioperative Care and Operating Room Management, 6,* 7-10. http://dx.doi.org/10.1016/j.pcorm.2016.12.004

Hsu, L., Chang, W., & Hsieh, S. (2015, January/February). The effects of scenario-based simulation course training on nurses' communication competence and self-efficacy: A randomized controlled trial. *Journal of Professional Nursing*, *31*(1), 37-49. http://dx.doi.org/10.1016/j.profnurs.2014.05.007

Institute of Medicine. (2000). *To err is human: Building a safer health system.* Washington, DC: National Academy Press.

Krautscheid, L. C. (2008). Improving communication among healthcare providers: Preparing student nurses for practice. *International Journal of Nursing Education Scholarship, 5*(1), 1-13. https://doi.org/10.2202/1548-923X.1647

Lim, F., & Pajarillo, E. J. (2016, Feb). Standardized handoff report form in clinical nursing education: An educational tool for patient safety and quality of care. *Nurse Education Today, 37,* 3-7. http://dx.doi.org/10.1016/j.nedt.2015.10.026

Lisko, S. A., & O'Dell, V. (2010, March/April). Integration of theory and practice: Experiential learning theory and nursing education. *Nursing Education Perspectives*, *31*(2), 106-108. https://journals.lww.com/neponline/Abstract/2010/03000/Integration_of_Theory_and_Practice__Experiential.10.aspx

Manojlovich, M., & DeCicco, B. (2007). Healthy work environments, nurse-physician communication, and patients' outcomes. *American Journal of Critical Care,16* (6), 536-543. http://ajcc.aacnjournals.org/content/16/6/536.full.pdf+html?sid=836fcdad-b103-42b1-a00c-911c2379f0b3

Maughan, B. C., Lei, L., & Cydulka, R. K. (2011). ED handoffs: Observed practices and communication errors. *American Journal of Emergency Medicine, 29*(5), 502-511. http://dx.doi.org/10.1016/j.ajem.2009.12.004

McElroy, L. M., Collins, K. M., Koller, F. L., Khorzad, R., Abescassis, M. M., Holl, J.

L., & Ladner, D. P. (2015, September). Operating room to intensive care unit handoffs and the risks of patient harm. *Surgery, 158*(3), 588-594. https://dx.doi.org/10.1016/j.surg.2015.03.031

Poore, J. A., Cullen, D. L., & Schaar, G. L. (2014). Simulation-based interprofessional education guided by Kolb's experiential learning theory. *Clinical Simulation in Nursing, 10,* e241-e247. https://dx.doi.org/10.1016/j.ecns.2014.01.004

Schwarzer, R., & Jerusalem, M. (1995). Generalized self-efficacy scale. In J. Weinman, S. Wright, & M. Johnston (Eds.), *Measures in health psychology: A user's portfolio. Causal and control beliefs* (pp. 35- 37). Windsor, England: NFER-NELSON.

Scotten, M., Manos, E. L., Malicoat, A., & Paolo, A. M. (2015). Minding the gap: Interprofessional communication during inpatient and post discharge chasm care. *Patient Education and Counseling, 98,* 895-900. http://dx.doi.org/10.1016/j.pec.2015.03.009

Shorthall, R. (2007, June). Preventing adverse events. *Emergency Nurse, 15*(3), 26-28. http://dx.doi.org/10.7748/en2007.06.15.3.26.c4245

The Joint Commission. (2017, September 12). Sentinel Event Alert 58. Retrieved from The Joint Commission website: https://www.jointcommission.org

Ward, L. (2012). Using simulation to teach communication. *The Journal for Respiratory Care Practitioners,* 26-29. http://www.rtmagazine.com/2012/07/using-simulation-to-teach-communication

Watters, C., Reedy, G., Ross, A., Morgan, N. J., Handslip, R., & Jaye, P. (2015). Does

interprofessional simulation increase self-efficacy: A comparative study. *BMJ Open*. http://dx.doi.org/10.1136/bmjopen-2014-005472

Wheeler, K. K. (2014, January). Effective handoff communication. *OR Nurse, 8*(1), 22-27. http://dx.doi.org/10.1097101.ORN.0000438472.00326.1a

Appendix A: Communication Competency Checklist

Participant Name_____
Evaluator Name_____ Date_____

Task	Completed	Not Completed	Comments
Introduction/Safety			
Introduce self to patient; contract care			
Identify patient with two identifiers			
Hand hygiene			
Universal precautions			
Assessment			
Obtain Vital signs			
Assess SpO_2			
Assess IV site			
Assess complaint of leg soreness			
Auscultate lungs			
Interventions			
Elevate HOB to Semi-fowlers or higher			
Apply ECG leads and assess SpO_2			
Administer oxygen			
Recognize symptoms of pulmonary embolism			
Call for second RN or charge nurse			
Communication			
Therapeutic communication with patient			
SBAR report to second RN or charge nurse			

Appendix B: General Self-Efficacy Scale

1. I can always manage to solve difficult problems if I try hard enough.

1 = Not at all true 2 = Hardly true 3 = Moderately true 4 = Exactly true

2. If someone opposes me, I can find the means and ways to get what I want.

1 = Not at all true 2 = Hardly true 3 = Moderately true 4 = Exactly true

3. It is easy for me to stick to my aims and accomplish my goals.

1 = Not at all true 2 = Hardly true 3 = Moderately true 4 = Exactly true

4. I am confident that I could deal efficiently with unexpected events.

1 = Not at all true 2 = Hardly true 3 = Moderately true 4 = Exactly true

5. Thanks to my resourcefulness, I know how to handle unforeseen situations.

1 = Not at all true 2 = Hardly true 3 = Moderately true 4 = Exactly true

6. I can solve most problems if I invest the necessary effort.

1 = Not at all true 2 = Hardly true 3 = Moderately true 4 = Exactly true

7. I can remain calm when facing difficulties because I can rely on my coping abilities.

1 = Not at all true 2 = Hardly true 3 = Moderately true 4 = Exactly true

8. When I am confronted with a problem, I can usually find several solutions.

1 = Not at all true 2 = Hardly true 3 = Moderately true 4 = Exactly true

9. If I am in trouble, I can usually think of a solution.

1 = Not at all true 2 = Hardly true 3 = Moderately true 4 = Exactly true

10. I can usually handle whatever comes my way.

1 = Not at all true 2 = Hardly true 3 = Moderately true 4 = Exactly true

Schwarzer, R., & Jerusalem, M. (1995). Generalized Self-Efficacy scale. In J. Weinman, S. Wright, & M. Johnston, Measures in health psychology: A user's portfolio. Causal and control beliefs (pp. 35- 37). Windsor, England: NFER-NELSON

Appendix C: General Self-Efficacy Scale Permission

Everything you wanted to know about the **General Self-Efficacy Scale** but were afraid to ask

by Ralf Schwarzer, January 5, 2009

The purpose of this FAQ is to assist the users of the scales published at the author's web pages http://www.ralfschwarzer.de/

DOWNLOAD of PDFs: http://userpage.fu-berlin.de/~health/self/selfeff_public.htm

Before attending to the questions below you might want to study our web pages. You might not have any questions after reading the web pages.

Do I need permission to use the general perceived self-efficacy (GSE) scale?

You do not need our explicit permission to utilize the scale in your research studies. We hereby grant you permission to use and reproduce the General Self-Efficacy Scale for your study, given that appropriate recognition of the source of the scale is made in the write-up of your study.

The international source is:
Schwarzer, R., & Jerusalem, M. **(1995)**. Generalized Self-Efficacy scale. In J. Weinman, S. Wright, & M. Johnston, *Measures in health psychology: A user's portfolio. Causal and control beliefs* (pp. 35-37). Windsor, England: NFER-NELSON.

The source for the German version is:
Schwarzer, R., & Jerusalem, M. (Eds.). (1999). *Skalen zur Erfassung von Lehrer- und Schülermerkmalen: Dokumentation der psychometrischen Verfahren im Rahmen der Wissenschaftlichen Begleitung des Modellversuchs Selbstwirksame Schulen*. Berlin: Freie Universität Berlin.

Appendix D: Hand-Off Tool

Pt ID label

Name of person giving report: _____

Report Time: _____

Core measure: _____

HAND-OFF COMMUNICATION TOOL

Vital signs: HR:_____ BP:_____ Resp:_____ Temp: _____ 02 Sats:_____

HAND-OFF COMMUNICATION TOOL

Diagnosis: _____ Admission Date:_____

Code Status: _____ Allergies: _____ Isolation Precautions: _____

Attending Physician: _____ Consults_____

Hx:_____

Surgical Procedure:_____ Date: _____ MD: _____

Estimated Blood Loss: _____ Complications: _____

Temperature 15 min arrival: _____ Antibiotics_____ Foley DC order: _____

Neurological Status:_____ Fall Risk: Y / N GCS:_____ NIH:_____

CARDIAC:_____ Pacer/AICD:_____

RESPIRATORY: _____ liters Nasal cannula /simple mask / venti mask / non-rebreather BIPAP Settings: _____

Vent settings: AC/SIMV/ CPAP, Rate: _____, TV:_____, PEEP:_____, FIO2:_____ ET Tube Size:_____ Location:_____

Respiratory Treatments: _____

IV Site: _____ IV Gauge:_____ IV Therapy: _____

Insertion date: _____

Central Line/PICC Line/ Dialysis Catheter: Insertion Site: _____ Date Inserted: _____

Date dressing changed: _____

Diet: _____ NG/ PEG/ Keofed Tube Feeding Location: _____ Last BM _____

Diabetic: Y / N Last Blood Sugar: _____ Time: _____ Sliding Scale: Y / N Low: _____ Med: _____ High: _____

Foley Catheter: Y/ N Date Inserted:_____ Order to D/C within 48 hours: Y/ N Date Discontinued:_____

Skin wound/Dressings: _____

DischargePlanning: _____

NOTES:

_____

_____

_____

_____

Appendix E: Delphi Process

1. What are your thoughts on how this project can contribute to improving patient outcomes?

2. Do you think this curriculum could be used at your facility for future educational training? If so how, when, where with whom?

3. Do you think that improving new graduate communication skills will contribute to improved patient outcomes?

4. What other benefits can be produced when improving communication skills?

5. Do you think other professionals can benefit from this type of education?

6. Do you anticipate any barriers to full implementation of this curriculum? If yes, please describe with possible solutions.

Appendix F: Literature Review Matrix

Reference	Theoretical / Conceptual Framework	Research Question(s)/ Hypotheses	Research Methodology	Analysis & Results	Conclusions	Grading the Evidence
Abraham, J., Kannampallil, T., & Patel, V. L. (2014). A systematic review of the literature on the evaluation of handoff tools: implications for research and practice. *Journal of American Medical Information Association, 21*(), 154-162. http://dx.doi.org/10.1136/amiajnl-2012-001351	Evaluation of Hand off Tools	Systematic review of hand off evaluation studies.	PubMed, Cochrane and CINAHL for articles published between Feb 1, 1983 and June 15, 2012 which evaluate hand off tools and categorized as hand off tool characteristics, standardization initiatives, methodological framework, and theoretical perspectives of the evaluation.	Thirty-six articles were found to meet inclusion criteria. The evaluations were based on aspects of standardiza-tion that included continuity of care and patient safety.	The evaluations of hand off tools were too varied in their nature, methodolo-gical and theoretical foundations to definitively guide standardizatio n of hand off tools.	Level III
Cardoza, M., Hood, P. (2012) Comparative Study of Baccalaureate Nursing Student Self-Efficacy Before and After Simulation. Computer, Informatics, Nursing,30(3),142-147. http://dx.doi.org/10.1097/NCN.0b01333182388936	Social cognitive theory	Do students have realistic beliefs of their nursing knowledge and ability to apply that knowledge to changing patient conditions. Does and nursing student's self-efficacy change as a result of engaging in a high-fidelity simulation learning experience	Investigation of reported self-efficacy between two groups of nursing students before and after participating in high-fidelity simulation training.	Deomogra-phic data revealed similar characteris-tics between the participants. Repeated ANOVA of GSA scores revealed significant differences in scores before and after two 8 hour simulation intervention.	The study identified human simulation as and effective teaching and learning modality in conjunction with traditional lecture and testing.	Level III
Fero, L. J., O'Donnell, J. M., Zullo, T. G., DeVito Dabbs, A., Kitutu, J., Samosky, J. T., & Hoffman, L. A. (2010). Critical thinking	Adaptation of Argyris and Schon (1974 & 1980) theories of Action Espoused and Theory-in-Use.	Examine the relationship between metrics of critical thinking skills and performance in simulated	A quasi-experimental, crossover design.	SPSS software was used to calculate statistical data, the Fleiss crossover binary	Though students had difficulty meeting expectations in simulated clinical scenarios the HFHS overall	Level II

skills in nursing students: comparison of simulation-based performance with metrics. *Journal of Advanced Nursing*, *66*(10), 2182-2193. http://dx.doi.org/10.1111/j.1365-2648.2010.05385.x		clinical scenarios.		response chi-square was used to compare VTV and HFHS scores.	performance were the best scores on the standardized measure of critical thinking.	
Forunda, C., Alhusen, J., Bandhathoki, C., Lamb, M., Tinsley, K., MacWilliams, B., Daniels, J., Baptiste, D., Reese, K., Bauman, E. (2015). A mixed-methods, International, multisite study to develop an validate a measure of Nurse-to-Physician communication in simulation. *Nursing Education Perspectives,36(6),383-388.* http://dx.doi.org/10.5480/15-1644	Jeffries (2005) Simulation Model	Examine the reliability and validity of ISBAR Interprofess-ional Communica-tions Rubric (IICR).	A mixed-method approach using five sites.	The calculated content validity index for the 14 items was equal or greater than 0.83. Spearman's Rho was used to measure interrater reliability, correlation coefficient was r_s=.079	Results indicate that the IICR is a valid and reliable tool to measure communica-tion in simulation.	Level I
Foronda, C., Liu, S., & Bauman, E. B. (2013). Evaluation of Simulation in Undergraduate Nurse Education: An Integrative Review. *Clinical Simulation in Nursing*, *9*(10), e409-e416. http://dx.doi.org/10.1016/j.ecns.2012.11.003	Simulation based learning	Evaluate and synthesize the research findings of evaluations of simulation in undergraduate nurse education.	CINAHL and PubMed databases for articles published within five years of March and April 2012 that contained the combined keywords "evaluation", "simulation", and "nursing" that were peer	A total of 101 articles provided evidence in the following five themes: confidence/ Self-efficacy, satisfaction anxiety/ stress, skills/know-ledge and interdisciplin-ary experiences	Review suggests simulation as an effective andragogy for teaching skills and knowledge.	Level III

			reviewed research articles.			
Hawthorne, H., Cohen, T., Cammon, W., Bingener, J., Hallbeck, S., Santrach, P., Elliott, S., Lindeen, K., Kang, J., Blocker, R. (2016) Assessing SBAR during intraoperative handoff. *Perioperative Care and Operating Room Management,6,7-10. http://dx.doi.org/10.1016/j.pcorm.2016.12.004*	Standardized handoff communication tool known as SBAR	Examine the use of SBAR during hand off communication after six years of implementation.	Observation of 23 surgical cases in their entirety and the use of SBAR during hand off between surgical team members.		Though standardized communication is necessary, SBAR may not fit every healthcare setting.	Level III
Hsu, L., Chang, W., & Hsieh, S. (2015, January/February). The Effects of Scenario-Based Simulation Course Training on Nurses' Communication Competence and Self-Efficacy: A Randomized Controlled Trial. *Journal of Professional Nursing*, *31*(1), 37-49. http://dx.doi.org/10.1016/j.profnurs.2014.05.007	Experiential Learning	Scenario-based simulation course will demonstrate more significant mean differences in communication competency, self-efficacy, and performance than the traditional training course.	A randomized controlled trial	Mann-Whitney U test, Pearson chi square tests and Fisher's exact tests were used to compare baseline characteristics of control and experimental groups. ANCOVA was used to examine effects on communication competence between subjects. Mann-Whitney U test and independent *t* test were used to determine learning satisfaction	The study established that simulation-based communication training is more effective in learner satisfaction and communication skill improvement, and simulation-based training could enhance nurses' communication skills in clinical practice.	Level I

				and communica-tion performance between subjects. Paired *t* test was used to determine effects on communica-tion competency, efficacy and learning satisfaction with-in subjects.		
McElroy, L. M., Collins, K. M., Koller, F. L., Khorzad, R., Abescassis, M. M., Holl, J. L., & Ladner, D. P. (2015, September). Operating room to intensive care unit handoffs and the risks of patient harm. *Surgery*, *158*(3), 588-594. https://doi.org/10.1016/j.surg.2015.03.031		To assess systems and processes involved in the OR and ICU handoff report to understand the criticality of specific steps of handoff.	A failure modes, effects and criticality analysis (FMECA) of the OR to ICU handoff of liver transplant recipients. A risk priority number (RPN) was calculated for each failure.	Identified failures were verified with the ethnographic observation notes. Observations revealed multiple simultaneous workflows during handoff. Thirty-seven major steps identified, 22 had a failure with an RPN >300 considered critical.	The handoff between OR and ICU have many steps with a substantial number of steps with weakness that can lead to failures that can result in potentially significant outcomes for patients.	Level III
Poore, J. A., Cullen, D. L., & Schaar, G. L. (2014). Simulation-Based Interprofessional Education Guided by Kolb's Experiential Learning Theory. *Clinical Simulation in Nursing*, *10*, e241-e247. https://doi.org/10.1016/j.ecns.2014.01.004	Kolb's Experiential Learning Theory	Present the integration of Kolb's Experiential Learning Theory (ELT) with simulation-based IPE to improve communication and collaboration among health profession students.	Medline, Cumulative Index to Nursing and Allied Health Literature, Education Information Center, Ovid, and ProQuest Central for published articles 2007 to 2014 that focused on the historical development and use of Kolb's ELT,	Kolb's ELT is testable and widely used learning theory that has been operational-ized at the individual, group, organization al, societal and global level.	Kolb's ELT offers a process for delivering IPE and a mechanism to maximize the learning of individual students.	Level III

			application of IPE, theoretical underpinnings of IPE, and outcomes of IPE as related to healthcare.			
Scotten, M., Manos, E. L., Malicoat, A., & Paolo, A. M. (2015). Minding the gap: Interprofessional communication during inpatient and post discharge chasm care. *Patient Education and Counseling*, *98*, 895-900. http://dx.doi.org/10.1016/j.pec.2015.03.009	Plan-Do-Study-Act (PDSA) methodology and TeamSTEPPS training, utilizing train-the-trainer methodology	Support for Interprofessional collaboration with the introduction of tools for use in standardized clear communication.	PDSA to evaluate ongoing process improvement. TeamSTEPPS training and tools to establish common and safe culture of communication	Paired *t* tests used to compare baseline and post-training results. Improved attitudes about team structure, leadership, situation monitoring, team communication, and shared decision-making.	A successful culture change within a health care system across healthcare professionals that was introduced as a common communication system.	Level III
Watters, C., Reedy, G., Ross, A., Morgan, N. J., Handslip, R., & Jaye, P. (2015). Does interprofessional simulation increase self-efficacy: a comparative study. *BMJ Open*. http://dx.doi.org/10.1136/bmjopen-2014-005472	Interprofessional simulation education	An overall increase of Self-efficacy will result from the training. Interprofessional training courses would show increased shifts in self-efficacy and final post-training outcomes.	A quasi-experimental (non-randomized) design.	Paired *t* test showed an increase in confidence after training ($t=15.6$, $n=186$, $p<0.001$)	Simulation significantly improved ratings of self-efficacy.	Level II

Appendix G: Educational Curriculum Plan

Title of Project: Improving Hand-Off Communication with Scenario-Based Communication Simulation

Problem: New graduates lack self-confidence which can affect their communication skills and contribute to fragmentation of information ultimately resulting in poor patient outcomes.

Purpose: Integrate communication-based simulation scenario into nurse orientation to increase nurse communication skill resulting in increased confidence and self-efficacy scores.

Practice-Focused Question: Will a scenario-based communication simulation increase nurse communication competency, self-efficacy and decrease communication errors?

Objectives At the conclusion of this educational experience the learner will be able to -	Content Outline	Evidence	Method of Presenting	Method of Evaluation	Evidence Grade
1. Practice the nursing process and improve critical thinking and decision-making skills in a simulated clinical setting 2. Recognize critical changes in patient condition. 3. Initiate appropriate nursing interventions 4. Communicate critical information to members of healthcare team	A. Introduction 1. Introduction to simulation 2. Pre-test 3. Objectives of communication simulation a) Recognize changes in patient b) Implement appropriate interventions c) Hand off report including critical info 4. View video: bad example of hand off report 5. Discuss points to be improved 6. View video: good example of hand off report 7. Divide students into groups for simulation exercise 8. Review SBAR tool	A 1. Hsu, Chang and Hsieh (2015) 2. Cardoza and Hood (2012) 3. Fero et al. (2010) 4.Fero et al. (2010) 5.Fero et al (2010) 6. Fero et al (2010) 7.Hsu, Chang and Hsieh (2015) 8. Forunda et al (2015) 9.Cardozaand Hood (2012)	Oral presentation and tour of simulation center Written response Oral presentation and power point Video Oral discussion Video	Self-efficacy pretest	A. 1. Level I 2. Level III 3. Level II 4. Level II 5. Level II 6. Level II 7. Level I

	9. Perform in Simulation scenario 10. Debrief each group at completion of scenario a) Have student identify areas to improve: was SBAR used b) Instructor adds any missing points 11. Group repeats simulation scenario applying feedback given in debrief 12. Posttest-after all groups have completed exercise	10.Cardoza and Hood (2012) 11.Cardoza and Hood (2012) 12. Cardoza and Hood (2012)	Handout Group participation Oral discussion Group participation Written response	Competency checklist Qualitative debrief Self-efficacy posttest	8.Level I 9. Level I 10. Level III 11. Level III 13. Level III