Nursing Handoff Report Guideline

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Abstract

Communication between healthcare professionals is a critical period in the exchange of patient information to ensure patient safety and continuity of care. It has been reported that preventable medical errors have resulted in 98,000 patient deaths per year in the United States. The identified problem in the Preoperative Treatment Unit at an urban Los Angeles hospital is the lack of standardization during the handoff transition at break reliefs and at shift change. The purpose of this doctoral project is to apply evidence-based practices of handoff reports for standardization to improve staff satisfaction and perception of handoff quality. This doctoral project aimed to decrease sentinel event rates and to assess the nurses' perception and satisfaction of the handoff process before and after the implementation of the Nursing Handoff Report Guideline (NHRG). The implementation process began with a comprehensive literature review and collaboration with key stakeholders. The nursing staff was asked to complete the pre-survey of their current perception and satisfaction, followed by an educational in-service meeting. After the four-week period, the nursing staff completed the post-survey, with results inputted into SPSS for evaluation using the paired t-test. Results demonstrated there was a statistically significant increase in the nurses' satisfaction and perception of handoff reports utilizing the NHRG. Further observation is needed to evaluate the NHRG's effect on sentinel event rates. This doctoral project promotes the nursing profession by developing nursing communication, endorsing patient safety, and ensuring continuity of care.

Keywords: standardized handoff report, handoff satisfaction, handoff checklist

Nursing Handoff Report Guideline

The field of nursing has become versatile and complex in developing its role in interdisciplinary process improvements. With change, it is essential to have evidence-based practice to guide the implementation process to mitigate potential barriers and ethical implications.

Patient outcomes and safety are always the highest priorities for healthcare organizations. It is essential for nurses to have standardized handoff reports to establish clear and consistent patient information during the transfer of patient care (Boat & Spaeth, 2013). This intervention simplifies the nursing process, which increases nursing satisfaction (Petrovic et al., 2015). By confirming all dynamics of patient information are addressed, optimal safety and care would be promoted. It is essential for nursing leadership to identify problems in nursing practice that impact patient safety; with standardized handoff reports, this approach is leadership driven and aims to improve the practice for the nursing staff.

A current problem for the nursing population, in the Preoperative Treatment Unit (PTU) at the project site is the process of handoff report during shift changes and break reliefs. The handoff, is defined as the transfer of patient information and transfer of care, is a risky and common perioperative event (Pukenas et al., 2014). As the first ever initiative in the PTU, the scope of this subject lies in the lack of organization and consistency in report format; poor communication is a leading cause of sentinel events and human factors impact handoffs (Foronda, VanGraafeiland, Quon, & Davidson, 2016). To minimize errors and improve safety, a standardize checklist, named Nursing Handoff Report Guideline (NHRG) was created (Robins, 2015). To authenticate nursing leadership, an individual must competently comprehend how to improve existing nursing practices with evidence-based research to provide optimal care and safety to patients.

Background

In 1999, the Institute of Medicine (IOM) released a report named, "To Err is Human: Building a Safer Health System," declaring that 44,000 to 98,000 patients die annually from preventable medical errors with the annual cost of these errors ranging from 17 to 19 billion. With the various errors reported, the main causes were flawed systems, processes, and conditions that lead individuals to make mistakes or prevent them (IOM, 1999). This report opened the discussion of quality improvement in healthcare. Later, the IOM released a second report in 2001 named, "Crossing the Quality Chasm: A New Health System for the 21st Century." Factors from this report included the development of technology in healthcare, the aging population and chronic conditions, and how the healthcare system is poorly organized. This disorganization is directly related to handoff reports as, "The delivery of care often is overly complex and uncoordinated, requiring steps and patient handoffs that slow down care and decrease rather than improve safety" (IOM, 2001).

This doctor of nursing practice (DNP) project site is an urban hospital in Los Angeles, California (CA), aiding a diverse population and accepting worldwide patients; as a Level 1 Trauma Center with various specialties. The project site has the infrastructure and support from leadership to support this quality improvement initiative. It has contracted numerous awards including top west coast and national ranking and magnet status for nursing excellence. Since the PTU opened, there was never a formal standardized handoff report, nor an idea to change the process. Staff members have their own unique way of giving report; this may trigger confusion and lead to the probability of patient misinformation between nurses. Communication styles that vary among providers can impact and alter how information is exchanged (Robins, 2015). Nursing leadership at the host site have identified an association between handoff report errors and incidents of sentinel events. With handoff reports in the PTU, there are currently no

requirements, no documentation, no checklists, and no prescribed method for giving report. There are no protocols, policies, or procedures in regard to handoff reporting, and thus, this DNP project was the first initiative for handoff improvement.

Significance

The Joint Commission (TJC) released a Sentinel Event Alert in issue 58 stating that "a common problem regarding hand-offs, or hand-overs, centers on communication: expectation can be out of balance between the sender of the information and the receiver. This misalignment is where the problem often occurs in hand-off communication" (The Joint Commission [TJC], 2017, p. 1). Although this potential of harm to patients can seem minimal, any potential is still a risk of safety to the patient. A National Patient Safety Goal produced by TJC requires healthcare professionals to implement a standardized approach to handoff communications, with the opportunity to ask and respond to questions (Agency for Healthcare Research and Quality [AHRQ], 2017). With the most frequent cause of sentinel events being poor communication during nurse-to-nurse handoff reports, this improvement project became top priority of implementation for the PTU and to be in compliance with TJC (Wollenhaup, Stevenson, Gordon, & Thompson, 2017). Misinformation can lead to medication errors, delayed treatment or diagnosis, increased length of hospital stay, and poor patient outcomes (Leblanc, Donnon, Hutchison, & Duffy, 2013).

At the organizational and national level, communication is imperative within all disciplines and through the continuum of care. At the organizational level, standardizing handoff reports with a checklist establishes improvement in safety and quality (Petrovic et al., 2015). At the national level, healthcare organizations are required to comply to recommendations for TJC accreditation. The complexity of handoff reports is more distinctive than other parts of healthcare (Petrovic et al., 2015). This is related to the transfer of care between several

healthcare providers and the use of various equipment and technology (Chenault et al., 2016). It is reported that 80% of sentinel events were related to communication breakdowns (Bruno & Guimond, 2017). Preoperatively, the patient is cared for by a wide set of healthcare teams that each have their own required documentation; the number of documents for a nurse to review can contribute to gaps in patient care. The literature supports the use of a structured template to capture all essential components of the patient's care with modifications to the needs of the unit (Gagnier et al., 2016).

Problem Statement

This project addressed inconsistency of handoff reports leading to increased risk of sentinel events. Nursing leadership at the project site have identified breakdowns in handoff communication as a cause of recurrent sentinel events in the PTU. This has been reported most commonly when patients are brought to the procedural areas with incomplete patient consent forms. Without the verification of these forms preoperatively, legal and ethical questions arise; has the patient been informed of the risks and benefits of the procedure, and if not, are healthcare professionals committing battery? This may be avoided through appropriate handoff. This is a multidisciplinary problem, and as such the stakeholders for this initiative include the nursing staff, nurse educator, and nursing administration. TJC has various suggestions to drive this guideline, including the use of mnemonics, training and counseling, and the use of an electronic medical record (TJC, 2017). The planned solution to standardize handoff reports was to generate a checklist of patient information for nurses to follow during endorsement. This guarantees essential patient information to be reviewed, while easing the nursing process with its clear and simple aspects.

Purpose Statement

The purpose of this project was to apply best practices for handoff reports and implement a quality improvement initiative to standardize nursing practice with a checklist intending to improve staff satisfaction and improve the perception of handoff quality. This project aimed to reduce sentinel event rates, evaluate the nurses' perception and satisfaction of the current handoff process before and after the implementation of the quality improvement initiative, the NHRG. Evaluating the nurse's perception assesses the clarity of the handoff process. The American Society of PeriAnesthesia Nurses (ASPAN) has established a specific recommendation, called "Safe Transfer of Care: Handoff and Transportation," that is based on TJC's National Patient Safety Goal. ASPAN recommends using a standardized system, or tool, which would discourage failed communication or miscommunication. The guidelines should be tailored to the needs of the population to promote safe transition of care (ASPAN, 2016).

Project Question and Objectives

Establishing an evidence-based project begins with the clinical question using a PICOT (i.e. Patient Population, Intervention, Comparison, Outcome, and Time) format to generate the most pertinent information (Melnyk & Finout-Overhold, 2011). To further analyze the PICOT question, does having a standardized checklist for handoff reports decrease sentinel events in the PTU, improve staff satisfaction and perception of handoff quality between nurses versus having random and inconsistent handoff reports within four weeks of initiation of the checklist. In the timeframe of this DNP project, this project would:

1. Evaluate the initial perception and satisfaction of handoff reports from the staff prior to NHRG implementation.
2. Implement NHRG in collaboration with stakeholders in the PTU.
3. Administer an educational in-service to the nursing staff about the NHRG in the PTU.

4. Provide data on staff perception and satisfaction to nursing leadership after implementation of NHRG.
5. Reduce sentinel event rates by 50% in the PTU that are related to handoff reports through NHRG compliance.

Search Terms

Utilizing evidence-based research further supported this project and aid the steps necessary to implement the plan. The Cumulative Index of Nursing and Allied Health Literature (CINAHL), EBSCOhost, PubMed, and uptodate.com were used with searches based off the PICOT question; keywords and phrases included "handoff report", "standardized handoff", "handoff report satisfaction", "sentinel events with handoff reports," and "checklist handoff report". Each of these searches yielded between 92 and 208 results depending on the search engine. The search was narrowed down to full text literature published between 2013 and 2018, and then expanded out to 2008. Additional filters included selecting English as the language and literature being peer-reviewed, which further decreased the results to 78. The various types of literature returned included process improvement projects, systematic reviewed, strategy implementations, and discussions of various handoff specific tools. At the project site, a general search of "handoff reports" with no filters or criteria in the established policies was done, which returned zero results.

Review of Literature

Patient handoff is defined as "the transfer of information and professional responsibility and accountability between individual teams" (Segall, et al., 2012, p. 102). Handoff reports occur frequently during a patient's hospital stay and are one of the most common times error occurs; TJC estimates 80% of medical errors are linked with communication breakdowns during the transfer of care (Seifert, 2012). From the review of literature, there is not one sole solution to

the problem of handoff reports, but there are many recommendations and suggestions of tailoring reports to the specific care setting (Kalman, 2010). With the association between sentinel events, staff satisfaction, and poor-quality handoffs, it is pertinent to identify evidence-based methods for improvement (Petrovic et al., 2015; Segall et al., 2012).

Evidence-Based Practice

Using a standard, evidence-based approach reduces communication errors and provides reliability in patient care (Petrovic et al., 2015). A recent review of handoff literature outlined evidence-based recommendations, which included the use of structured checklists as a guide to communication and ensure full coverage of information, and the provision of team and handoff training (Pukenas et al., 2014). Meisel and Smith (2015) reviewed the literature and found a large-scale, multicentered prospective study where a handoff intervention, designed by a multidisciplinary group using evidence-based guidelines, was done in 23 different children's hospitals with a significant decrease in handoff-related failures, such as misunderstanding of information, forgetting information, and failure to be told information.

Communication in Perioperative Phase

Perioperative care occurs in a busy and complex environment where various providers interact with patients in a short amount of time (Boat & Spaeth, 2013). An estimate 18-25% of medical errors occurs in the preoperative phase (LeBlanc, Donnon, Hutchinson, & Duffy, 2013). Research studies have shown that standardized handover protocols have been employed to improve teamwork and reduce medical errors in the perioperative arena (Boat & Spaeth, 2013).

Handoff Reports

The types of handoff reports vary between written, verbal, in-person, via telephone, at the bedside, care plan-based, and through chart review (Staggers & Blaz, 2012). There is a disagreement between authors however, on which method reduced safety risks and produced best

patient outcomes. Using a quasi-experimental study testing three handoff styles, Riesenberg, Leitzsch and Cunningham (2010) showed that a combination of verbal and written handoff methods created the best recollection between nursing staff at 96%. Welsh, Flanagan, and Ebright (2010) suggested that the literature does not illustrate a preferred method as best practice. Staggers and Blaz (2012) utilized an integrative review of 30 articles to synthesize research outcomes to guide computerization process and determined the main focus be more patient-centered and contextually based but emphasized how TJC calls for structured handoffs.

Handoff Protocols

Boat and Spaeth (2013), Bruno and Guimond (2017), and Robins (2015) found a statistically significant reduction of errors after using a checklist in their post-anesthesia care units. Boat and Spaeth (2013) applied a quality improvement methodology to create standardized checklists with results of 31% to 80% reliability; reliability was defined as the discussion of all essential items, and if one was omitted, it would be deemed a failure. Bruno and Guimond (2017) used a preintervention and postintervention tool to analyze results from a unpaired sample test with statistically significant results with the checklist. "Deficient handoffs contribute to gaps in patient care, including medication errors, wrong-site surgery, and omissions in follow-up care, each of which can lead to serious patient injury or death" (Bruno & Guimond, 2017, p. 125). Robins (2015) used randomization to form two groups to observe handoff reports with and without a checklist; the checklist group were able to recall six key elements from the observed report. "Lack of standardization increases the risk of information loss by depending on the communication abilities of the providers exchanging information" (Robins, 2015, p. 265). Petrovic et al. (2015) used a prospective, unblinded cross-sectional study and developed the Perioperative Hand Off Protocol, which is a checklist for operating room nurses and anesthesia staff to follow when transferring patients to the receiving unit and observed a reduction in

information sharing defects. Gagnier, Derosier, Maratt, Hake, and Bagian (2016) and LeBlanc, Donnon, Hutchison, and Duffy (2014) both found a significant decrease in adverse events after their handoff tool checklist was created for orthopedic surgery. Foronda, VanGraafeiland, Quon, and Davidson's (2016) integrative review included research articles focused on handover checklists, concluding that standardized communication through mnemonics and handoff tools is associated with improved outcomes. Chenault et al. (2016) used a prospective study with direct observation and found sustainability of an improved handover process using a checklist from cardiac surgery to the intensive care unit.

Various Report Tools

Using structured or standardized templates ensures consistency in information communicated between the sender and receiver (Arora, Auerbach, & Melin, 2017). Wollenhaup, Stevenson, Thompson, Gordon, and Nunn (2017) analyzed handoff reports pre and post implementation of their situation, background, action, and recommendation (SBAR) incorporated into a checklist on a postpartum unit, which found a high percentage of compliance after implementation. Schindler and Lapiz-Bluhm (2014) also used a SBAR format as their tool during handoff report observation. Pukenas et al. (2014) designed a preintervention and postintervention pilot study that measured resident handoff performances with a 16.5% improvement in reducing communication failures; intraoperative handoff checklist, which decreased omission errors by half the percentage in a year. The most common omission errors included volume status, anesthetic maintenance, airway details, and vascular access (Pukenas et al., 2014). In the preoperative phase, Pukenas et al. (2014) included age, gender, procedure, indication, medical problems, and allergies on the checklist. Communication errors, such as misunderstanding and forgetting, may cause complications, including lack of preparation and anticipation for adverse events, and lack of awareness of key information. Boat and Spaeth

(2013) anesthesia handoff checklist included general demographics, medical history, invasive lines, anesthetic, labs, and disposition. Bruno and Guimond (2017) preoperative handoff accuracy scoring tool used patient name, allergies, diabetic, history of nausea and vomiting, medical history, and pertinent medications. Arora, Auerbach, and Melin (2017) suggested the essential elements to include assessment of illness, patient summary, action items, situation awareness, and other patient specific data, such as allergies, age, and weight. After reviewing numerous literature, there are many suggestions and recommendations that should be unit specific, rather than one tool to solve the handoff report problems (Kalman, 2010).

Sentinel Events

In the literature, there is sufficient evidence of adverse events that are related to inadequate handoffs and poor communication (Weingart et al., 2013). Weingart et al. (2013) initiated a quality improvement team to develop a standardized and scripted transport handoff process; analysis from a Likert-style survey and data collated using Microsoft Excel for preintervention and postintervention was completed, which resulted in improved provider perception and overall satisfaction. TJC (2017) reports of adverse events from inadequate handoff communication include delays in treatment, medication errors, falls, and wrong-site surgery. A 2016 study reports that communication failures in United States hospitals and medical practices were accountable for 30 percent of malpractice claims with 1,744 deaths and $1.7 billion dollars in malpractice costs in the past five years (TJC, 2017). Relating to the PTU, incomplete consent forms were not found in the literature as sentinel events; consent forms were included, however, in the checklist generated for Gagnier et al. (2016) and Leblanc, Donnon, Hutchison, and Duffy (2013).

Risk of Errors

Without an official guideline to communicate pertinent patient information between healthcare professionals, the risk of misunderstanding and unfinished tasks increases (Petrovic et al., 2015). Wollenhaup et al. (2017) audited handoff process compliance in a postpartum unit, where various adverse events were products of poor communication. Bruno and Guimond (2017) used a scoring system, called the Handoff Accuracy Scoring Tool, to assess the handover of patient care and found poor quality in 20% of cases, satisfactory quality in 38% of cases, and good quality in 42% of cases; this tool was used to determine if handoff reports included the discussion of patient name, allergies, medical problems such as diabetes and nausea/vomiting, medical history, and pertinent medications. Schindler and Lapiz-Bluhm (2013) reported that 61% of healthcare related sentinel events in 2011-2013 are attributed to communication errors among healthcare team members. Patton et al. (2017) reviewed literature to guide their quality improvement project and researched a greater number of medication errors before implementation of a handoff tool, where post-implementation resulted in zero medication errors. Petrovic et al. (2015) used an observational approach to assess frequent missed items from report before applying a perioperative handoff protocol related to various complaints of incomplete reports.

Improve Communication

To reduce the risk of communication error, inputting a standardized handoff report creates a foundation for all nurses to follow, which provides consistency and safety (Petrovic et al., 2015). Wollenhaup et al. (2017) found an increase in nursing compliance to all aspects of a modified bedside handoff model and found an increase in patient and staff satisfaction of the process. Bruno and Guimond (2017) implemented a formal checklist, which was statistically analyzed to reduce the number of omission errors during patient handoff. Schindler and Lapiz-

Bluhm (2013) interviewed nurses and identified the use of a SBAR format as a standardized communication that would promote safe patient transfer and a potential to reduce errors by interviewing nurses from two units to inquiry the most needed information. Patton et al. (2017) implemented a system wide handoff tool that decreased medication errors and improved nursing satisfaction analyzed quantitatively from survey results. Petrovic et al. (2015) found an increase in staff satisfaction, improved information sharing, and a reduction in handoff defects after the implementation of a perioperative handoff protocol. The research suggests pertinent patient information placed in handoff tools that would minimize confusion between the sender and receiver.

Satisfaction

Improving the handoff report communication process has patient safety as top priority, while also giving the potential to increase patient and nurse satisfaction. Weingart et al. (2013) used the Model of Improvement and created a standardized and scripted transport handoff process that improved provider satisfaction by measuring staff surveys with a Likert format. Similarly, Nagpal et al. (2013) used a prospective pre-post intervention study and developed a new handover protocol in the postoperative setting that improved teamwork and nurse satisfaction using a Likert format, and reduced information omissions and task errors; nurses were more satisfied in communication, coordination, cooperation, and situational awareness. Taylor (2015) implemented a standardized bedside handoff and walking rounds on an inpatient surgical oncology unit, which resulted in improved satisfaction for nurses and patients through analysis of surveys, improving communication and prioritization; patient satisfaction can be improved through nurse-patient relationships, involvement of care, and reduction of discharge times. Streeter and Harrington (2017) used a qualitative analysis of nurses' perspectives and measured improved satisfaction of the handoff process from online surveys after using a handoff

protocol with a standardized checklist. Foronda et al. (2016) performed an integrative literature review of 40 research studies, concluding with improved patient outcomes related to an increase in provider satisfaction of the overall handoff process.

Best Practices

To improve the handoff process, Riesenberg, Leitzsch, and Cunningham (2010) identified eight key barriers, including communication barriers, lack of standardization, equipment issues, environmental issues, misuse or lack of time, difficulties related to caseloads or high acuity, lack of education or training, and human factors. It is reported that nurses were more comfortable with the handoff process during shift change when additional training and education is provided (Horwirtz, Moin, & Green, 2007). Teamwork and the use of specialized teams were steadily identified as best practice for safe transport and handoff, while decreasing adverse events (Foronda, VanGraafeiland, Quon, & Davidson, 2016). TJC established a model to develop best practice standardized handoff tools, which included "building a process map, standardizing content in the form of a checklist, implementing and disseminating the tool, and monitoring to ensure tool effectiveness" (Meisel and Smith, 2015, p. 80). Streeter and Harrington (2017) utilized a qualitative analysis of nurses' perspectives of best handoff reports, which included accurate patient information, encouragement of questions and answers, encouragement of checking information for accuracy and clarity, a trusting and respectful relationship between nurses, and the occurrence at bedside.

Significance of the Literature Review

Strategies to improve handoffs at the system level should include standardization of practice (Arora, Auerbach, & Melin, 2017). From the comprehensive review of the peer reviewed literature regarding standardized handoff report, the recommended practice change would be to develop a checklist for the nursing staff in the PTU to follow during the exchange of

patient information. With this implementation, TJC standards would be adhered to for the patient safety goal of reducing communication errors, while also increasing staff satisfaction. Adhering to TJC standards by implementing a checklist in the PTU is pertinent to IOM's vision for patients to receive "safe, effective, patient-centered, timely, efficient, and equitable care" (IOM, 2001, p.3). The evidence from the literature supports a tool that is unit specific to assist in omitting pertinent information and the ease to recall of information. "While handoff education and evaluation is now required by numerous accrediting agencies and bodies in the United States, it is unclear what the best methods and tools to measure handoff performance are" (Arora, Auerbach, & Melin, 2017). The main issue that is and should be investigated in the future is the most superior or important protocol for handoffs (Petrovic et al., 2015). Limitations with a checklist included providers to have a "tunnel vision" when solely following the information on a checklist and leaving out pertinent information (Petrovic et al., 2015).

Theoretical Framework

Altering a routine practice can be an overwhelming task that involves a realization that a change is needed and acceptance that it can produce improvement (Radtke, 2013). "Change for the sake of change is often not sustainable and leaves participants with frustration, especially in these times of almost constant change" (Radtke, 2013, p. 20). With the implementation of a standardized checklist for handoff reports, nurses are required to change their current process to be more structured, which can be anticipated to slow the nurses' workflow and increase frustrations. Within current literature, it was noted that various theories were utilized as a basis for change and behaviors. Thus, it is necessary to utilize a theory to guide the system level change at the project site.

Lewin's Change Theory and Historical Development

Kurt Lewin was born in Poland in 1890 and became a professor of psychology at the University of Berlin (Lock, 2017). Kurt Lewin is commonly considered one of the founding fathers of change management; academics claim that various change theories are reducible to this idea (Cummings, Bridgman, & Brown, 2016). Lewin established the Theory of Planned Change in 1951 for social psychology (Sullivan, 2012). "Lewin stated very astutely that change for the sake of change is stressful and unnecessary" (Radtke, 2013, p. 20). Lewin's change theory uses correlations of balancing forces; driving forces enable change with its push to the desired direction while restraining forces impede change with its push in the other direction (Sullivan, 2012). This theory aims to increase the driving forces and to decrease the restraining forces; the three-step process is termed as unfreezing, moving, and refreezing (Sullivan, 2012). Blocks of ice are used as a metaphor; you must "unfreeze" to melt the ice, "change" the mold to the desired shape, and "refreeze" into the new and desired shape (Lock, 2017). Appendix A shows the diagram of Lewin's Theory of Planned Change.

Applicability of Theory to Current Practice

Lewin's unfreezing, moving, and refreezing process provided the foundation for future action research, development techniques, and organizational change (Cummings, Bridgman, & Brown, 2016). To overcome the resistance in organizational change, employee involvement is the most effective in preparing the planning and implementation stages; increased employee participation will lead to high-quality change and overcome resistance in the implementation stage (Hussain et al., 2016). "By doing this a variety of information and ideas may be generated, which may contribute the innovations effective and suitable in the situation, raise likelihood, create member commitment in implementing change, and employee motivating and leading change effort in work" (Hussain et al., 2016, p. 3). When out of the status quo, leaders should

support employee's involvement in accelerating the change in the organization (Hussain et al., 2016). Leaders should communicate, educate, participate, task support, provide emotional support and incentives, and involve employees about change (Hussain et al., 2016).

Major Tenets of the Theory

Human change at the individual or group level is a psychological dynamic process that involves "painful unlearning without loss of ego identity and difficult relearning as one cognitively attempted to restructure one's thoughts, perceptions, feelings, and attitudes (Schein, 1999, p. 59). The major tenets of Lewin's change theory are the relationships of balancing forces, also referred to as the force field analysis (Schein, 1999). Lewin's model is an early fundamental change model explaining the striving forces to sustain the status quo and pushing for change (Hussain et al., 2016).

Driving forces. Driving forces are forces that are pushed to the desired direction to facilitate change (Schein, 1999). For change to ensue, the striving forces for change must be altered under complex psychological conditions; an addition of a driving force towards change often creates an immediate counterforce to maintain the equilibrium (Schein, 1999). This leads to the observation of the equilibrium being easily moved when removing restraining forces since there are usually driving forces in the system (Schein, 1999).

Restraining forces. Restraining forces are forces that decrease or hinder the driving forces, hindering change with the push to the opposite direction (Schein, 1999). Restraining forces are more difficult since it relates more often to personal psychological defenses or group norms rooted in the community or organizational culture (Schein, 1999).

Equilibrium. Equilibrium is reached when the driving forces equal the restraining forces (Schein, 1999). To change the "quasi-stationary equilibrium" stage, an individual may "increase the striving forces for change, or decrease the forces maintaining the status quo, or the

combination of both forces for proactive and reactive organizational change through knowledge sharing of willingness with the help of stimulating change leadership style" (Hussain et al., 2016).

Application of the Theory to DNP Project

The first step of Lewin's change theory is unfreezing. This is the planning stage where current habits and routines are defined, barriers are identified, and feedback is specified (Sullivan, 2012). It is significant for the DNP project lead to identify the restraining forces to appropriately neutralize them and continue the process of moving nursing staff towards the new process. The proposed change idea was collaborated with the project mentor, the nurse educator, the clinical nurse specialist, and nursing administration for approval, modification, and finalization for policy specifications. The new implementation plan was announced to the nursing staff with the hopes of potential feedback to improve the process. It is necessary to communicate continuously with the nursing staff to reduce anxiety and address any dissatisfaction; initial discussions can help identify those nurses that may be more change resistant and those who are more appropriate to be appointed as a champion. Strategies for nursing staff acceptance can include presentation of the topic, benefits of patient outcomes, and increasing a sense of urgency (Shirey, 2013).

The second step of Lewin's change theory is moving. This is the implementation stage where what is planned from the first stage begins, compliance is verified, and resistance is overcome (Sullivan, 2012). Education classes began with the nursing staff regarding proper compliance, and risks and benefits with standardization. The standardized report checklist was mounted on the specified locations, which allowed nurses to begin using it during communication of patient endorsement. Project champions must create a plan of clear and established goals to ensure engagement. As the new nursing process rolled out, the nurse

educator and a nurse administrator were on the unit to assist nurses, engage the nurses, and oversee compliance. Nursing leaders should represent a culture of open communication for nurses to feel involved, comfortable, and provide feedback. The DNP project lead observed the nursing staff for feelings of apprehension and initiated coaching or education meetings as needed. Using positive reinforcement towards staff compliance, in addition, increased the driving forces.

This leads into Lewin's last step of refreezing and sustainability of the change (Sullivan, 2012). A movement towards this stage signals a successful intervention however, it is important to review the new process and evaluate the feedback from staff to improve the checklist. Evaluation of the outcomes from the PICOT question determined further success; measurement would include a reduction in sentinel events and improvement in staff satisfaction and perception of handoff reports. Sustaining the change was reflected as a hospital policy, reflected as the new norm for handoffs, and compliance is constantly overseen by nursing leadership. Cost and time efficiency is necessary to be determined at this step.

Project Design

This DNP project utilized a quality improvement design with a non-experimental pre and post-test methodology. The factors that affect the variable quality of handoff communication are the nurses' training and expectations, inadequate or incomplete documentation, language barriers, the complexity of patient information, distractions during report, and the receiving nurse's receptiveness (TJC, 2017). This quality improvement project had the ability to reflect national health care goals; with the report "Crossing the Quality Chasm" from the IOM, health care improvements need to be effective, safe, efficient, timely, and equitable (IOM, 2001). The purpose of this project was to improve the quality of handoff communication for the population of interest, who are nurses in the PTU. Applying Lewin's 3-step change theory of unfreezing,

freezing, and moving predicts or explains relationships, identifies known relationships among variables, and provides a framework to examine outcomes (Moran, Burson, & Conrad, 2016).

The evaluation of outcomes for this project included collaboration between stakeholders, evaluating sentinel event data, and pre and post-intervention surveys. The questions on the pre and post-intervention surveys (Appendix E) were adapted from the Hospital Survey on Patient Safety Culture's section of "Hand Off and Transitions" and a Likert scale (AHRQ, 2018). Evaluating the initial perception and satisfaction of handoff reports from the staff prior to NHRG implementation were done by distributing the pre-surveys at the initial in-service staff meeting and collected prior to the educational presentation with an incentive given to the nursing staff for survey completion; this incentive was breakfast for the PTU staff. The baseline data was discussed with the key stakeholders as additional feedback to design the NHRG. These results, the NHRG, and the advantages and benefits of standardized handoff reports from the literature review were administered as an educational presentation to the PTU nursing staff at a scheduled mandatory weekly meeting. Post-surveys were given and collected three weeks after implementation at a second scheduled mandatory weekly meeting. Data from the post-survey on staff perception and satisfaction were analyzed and presented to the nursing leadership; collaboration with the key stakeholders presented the opportunity to adjust and modify the NHRG for optimization. To evaluate the reduction of sentinel event rates by 50% related to handoff reports through NHRG compliance, the DNP student collaborated with the Nurse Manager to obtain sentinel event rate information from the PTU's Administrative Analyst. Sentinel event rates were attained pre-implementation for a baseline percentage and post-implementation to evaluate effectiveness. The four-week timeframe of this DNP project, however, gives a limitation to achieve the sentinel event rate goal reduction by 50%; it will be

planned with key stakeholders to evaluate these rates quarterly to determine effectiveness and sustainability.

Population of Interest

The population of interest for this DNP project is the nursing staff of the PTU. There are 35 full-time PTU registered nursing staff, one nurse educator, one clinical nurse specialist, and one nurse manager. Inclusion criteria for this sample included registered nurses working within the PTU who are involved in patient handoffs. Excluded are the ancillary staff, such as the clinical care partners and the administrative assistants, since they are not part of the nurse to nurse handoff process.

Setting

This DNP project was set in the PTU, a unit consisting of 26 beds where both inpatients and outpatients begin their hospital process and receive their preoperative work up; in an average day, approximately 120-140 patients are seen. This unit is located on the second floor within an urban Level 1 trauma hospital in Los Angeles, CA with various specialties. This healthcare organization has received several honors including top national and west coast ranking and magnet status for nursing excellence. An affiliation agreement between Touro University Nevada (TUN) and the project site was needed for permission to operate in this setting. This was obtained through communications between the Director of Nursing Graduate Programs at TUN and an administrative assistant in the Department of Professional Development from the project site. The project mentor is the Chief Nurse Executive at the project site; proposal of the project topic was confirmed by the project mentor and agreed upon by the PTU's nurse administrators.

Stakeholders

The key stakeholders within the organization who had a significant impact on the proposal of standardizing handoff reports were the nursing staff, nurse educator, clinical nurse

specialist, and the nurse administrators. Full collaboration from the unit was needed for optimization and compliance with patient safety as a top priority. Bruno and Guimond (2017) assembled a multidisciplinary team to develop a new handoff protocol, consisting of staff nurses and nurse anesthetists. White-Trevino and Dearmon (2018) chartered a team with staff nurses, the nurse educator, and nurse manager in standardizing handoff reports. Younan and Fralic (2013) task force of stakeholders included staff nurses, the nurse manager, physicians, and the clinical educator for their quality improvement project to improve the handoff process.

The nursing staff was an imperative part since they are the frontline individuals of the new change. Being part of the nursing staff provided trust and confidence with the majority of the individuals for the checklist. This allowed open communication and input needed from the staff to optimize the checklist. The nurse educator and clinical nurse specialist are significant for their expertise in identifying and providing educational needs for the nursing staff. The nurse educator and clinical nurse specialist became the main resource for feedback, ideas, and questions; their role also became necessary in facilitating the implementation process by assisting the DNP student in presenting the information to the administration and the staff. Nurse administrators were needed to approve and oversee the necessary processes related to finances and goal alignment with the organization; their authority over the staff assisted in compliance with the checklist. Building and maintaining a plan for rapport focused on keeping open and receptive communication with stakeholders, including sharing experiences and ideas, building common ground, and showing empathy.

Recruitment Methods

Identification and collaboration between key stakeholders were needed to assess the healthcare organization's culture and channels of communications (Hall & Roussel, 2016). In the PTU, the nursing staff must attend mandatory weekly in-service meetings; the topic of one

scheduled meeting focused on the staff regarding handoff reports, which allowed concerns and questions to be answered. Confidentiality was maintained by distinguished codes instead of the nurses' names and by encouraging private informal meetings for staff members who feel uncomfortable verbalizing opinions in front of others. A unit incentive, breakfast for the entire PTU staff, for participation increased the engagement of the staff with this project. When the NHRG becomes a policy, the nursing staff of the PTU will be required to utilize and incorporate the process into their workflow.

To assess the outcome of reduction of sentinel events, the DNP student collaborated with the Nurse Manager to receive the data pre and post-implementation from the Administrative Analyst of the PTU. There was no recruitment techniques used for this aside from collaboration with nursing leadership. Participation from the PTU nursing staff was not mandated, nor a condition of employment; however, when the NHRG becomes a policy, the PTU nursing staff are required to utilize the handoff report. To protect confidentiality, sentinel event data were unnamed with no patient or staff information.

Tools/Instrumentation

The DNP student and the key stakeholders developed the NHRG (Appendix F) with guidance from the Targeted Solutions Tool created by the TJC (Appendix C). In 2009, the TJC and ten collaborating hospitals formed this project to examine handoff communication problems and identify failures and improve barriers; this led to an identification of validated solutions, which improved performance (TJC, 2012). By utilizing the Targeted Solutions Tool, pilot and participating hospital organizations attained an average of over 50% decrease in defective handoffs (TJC, 2012).

The pre-surveys were given at the initial in-service meeting and post-surveys were given three weeks after implementation. These surveys measured staffs' perception and satisfaction of

handoff reports before and after NHRG implementation. The questions on the pre and post-surveys were acquired from the Hospital Survey on Patient Safety Culture's section of "Handoff and Transitions" (Appendix D). This survey was made publicly available for download and use within the United States (AHRQ, 2018). Overseen by the U.S. Department of Health and Human Services, the Hospital Survey on Patient Safety Culture presents data from 630 U.S. hospitals and showing trending results of changes over time for 306 U.S. hospitals; handoffs and transitions was a top area of improvement for most hospitals (AHRQ, 2018). Blegan et al. (2009) analyzed the psychometric properties of the Hospital Survey on Patient Safety Culture and concluded that the tool showed moderate-to-strong validity and reliability, with a interitem consistency reliability above 0.7 for five subscales. The PowerPoint presentation was reviewed by the stakeholders at the project site and by the project team for quality assurance.

Data Collection Procedures

The pre and post-intervention surveys were handed to PTU nurses during mandatory training sessions. Each of the 35 registered nurses of the PTU were given a code to ensure participation of the same nurses and to keep anonymity. In-service weekly meetings are required attendance by the staff, which ensures participation. At the initial in-service, the pre-survey were distributed and collected before the educational presentation. Completion of the pre-survey in-person ensured collection from all PTU nursing staff. A second in-service was provided three weeks after implementation for questions and answers, and distribution and collection of the post-surveys. The results from the post-surveys were analyzed with the key stakeholders with considerations of any gaps or improvements of the NHRG and handoff process. Along with the surveys, feedback from the staff during in-service meetings were highly considered in the development of the NHRG.

Collection of data for sentinel events required collaboration with the Nurse Manager. The DNP student does not have individual access with the Administrative Analyst to receive reports. This was discussed with the Nurse Manager at formal meetings to evaluate sentinel event data pre and post-implementation. Similar to the nursing surveys, the sentinel event data were unnamed to protect confidentiality; the percentage rates pre and post-implementation are most significant.

Intervention/Project Timeline

This DNP project involved implementing NHRG in the PTU and had a four-week implementation timeline. During DNP Project I, the topic of standardizing handoff reports was articulated and reasoned with the project mentor and nurse educator for initial approval. After deliberation, evidence-based articles were found to support the idea, which led to the creation of the NHRG. This was conveyed in a meeting with the nurse educator as well as discussion and collaboration of the checklist for optimization. The nursing administration met to review the project's reasoning and process, which resulted in an approval. During DNP Project II, the NHRG was brought to the project mentor for assistance in submission and approval of the site's institutional review board (IRB). This project met exemption as a quality initiative, as well as falling under the category of TUN quality improvement project. The nursing staff had a meeting about the change process, the timeline for preparation, and pre-surveys were given and collected. With staff feedback and further collaboration with the educator and administration, the checklist was be optimized. Then, the NHRG was made, cut and laminated, and was placed at the nursing stations, in each patient bay, and at each computer.

The NHRG began implementation on November 8, 2018. At week one: before the project was implemented, the nursing staff again received an in-service. At week two, the NHRG was implemented, which was overseen by this DNP student in conjunction with

administration and the unit educator. At week three, continuous observation was performed by the DNP student, who acted as a "Super User," with further evaluation and enforcement by key stakeholders. At week four, a meeting was held with the nursing staff, nurse educator, and nurse administration to address concerns, comments, and feedback for improvement; post-surveys were given and collected. Data collection continued at week six and seven, with analysis of survey results to occur at week eight and nine. With the limitations of sentinel events, nursing administration will plan to monitor these results quarterly to review sustainability and effectiveness after the conclusion of the DNP project. During DNP Project III, dissemination of results were presented to key stakeholders after the data analysis is complete around week six. Dissemination of final project results to DNP faculty and student will occur during week 14.

The following table describes the timeline of implementation for this project:

Week	Activity
Week 1: November 7 – 13, 2018	In-service educational presentation to reinforce understanding of NHRG to PTU staff; pre-intervention survey administration
Week 2: November 14 – 20, 2018	Implementation of NHRG
Week 3: November 21 – 27, 2018	Continuous observation and evaluation by DNP student and key stakeholders
Week 4: November 28 – December 4, 2018	Post-implementation meeting with PTU staff and key stakeholders for feedback; post-surveys were distributed and collected; further monitoring needed for sentinel event rates

Ethics/Human Subjects Protection

Before starting this quality improvement project, the required documentations, including IRB determination forms, were submitted for review in accordance with this host site and TUN policies. This project fell under the category of TUN Quality improvement project, which does not require IRB review. Exempt status was sought, with no ethical objections, for this quality improvement project since no specific patient and staff identifiers were collected with the maintenance of anonymity. Ethical considerations for this quality improvement project included the PTU nursing staff and the patients. The PTU nursing information were kept confidential since the pre and post-implementation surveys had assigned specific codes. Protected health information and patient identifying information was not be directly involved with the NHRG. The PTU nursing staff were not be subjected to any form of deception or coercion in an effort to attain their participation with this project. Participation from the PTU nursing staff was voluntary with no risks and no direct benefit from participation; refusal of participation involved no loss of benefits or penalty, and individuals may discontinue participation at any time. Compensation was not provided to the PTU nursing staff; however, a unit incentive, which was breakfast for the staff was provided after collection of the pre and post-surveys.

Plan for Analysis/Evaluation

Evaluation involved comparing final results to baseline results. For sentinel events, rates were taken pre-implementation as a baseline and post-implementation for assessment. For handoff report perception and quality, participants were given a specific assigned code to compare pre and post-implementation survey results. The survey utilized a Likert scale of 1 to 5, where 1=strongly disagree, 2=disagree, 3=neutral, 4=agree, and 5=strongly agree, which the participants were asked to complete. When completed, the project findings, implications, and conclusions were observed to answer the project question.

For analysis, IBM SPSS Statistics version 25 was utilized. After collaboration and validation from a statistician at TUN, it was imperative to get the same number of surveys pre and post-implementation; the goal was to receive 35 surveys pre and post-implementation. For the pre and post-implementation surveys, a paired sample t test was applied to compare results. For sentinel events, data were dichotomous (yes/no), and thus, a chi-squared test and Fisher's exact test was applied to evaluate results.

Significance/Implications for Nursing

Clear and efficient communication is imperative to maintain safe patient care. The NHRG bridges the gap between evidence-based best practices and the current practice of randomizations of handoff reports in the PTU. Handoff communications continually becomes an area of opportunity to ensure continuity of care and keep patients safe (TJC, 2017). In the perioperative phase, the susceptibility of handoffs relates to the different healthcare professionals involved with the patient (Nagpal et al., 2010). The NHRG brings about an evidence-based sustainable practice change. It assists the PTU nursing staff in understanding which required components are needed for the pre-operative patient; this aligns to the NHRG goals of increasing staff perception and satisfaction with standardization. The literature supports the need to examine tools to improve handoff reports by communicating patient information between healthcare providers with the purpose of ensuring continuity of care (Berger et al., 2012, Sears et al., 2014, & TJC, 2017). This host organization's mission aligns with the IOM's (2001) report, "Crossing the Quality Chasm: A New Health System for the 21st Century." The IOM suggests an improvement of organization in healthcare; the NHRG acts as a safety double check to highlight any errors, which assists in organizational goals to provide more patient-centered care. With a patient focus, the NHRG aimed to reduce sentinel events. Minimizing errors and complications should transpire when nurses have the opportunity to verify understanding of the

transfer of information (Halm, 2013). Utilizing a standardized tool for the handoff process permits healthcare professionals to provide a consistent and structured approach for the exchange of information (Cornell et al., 2013).

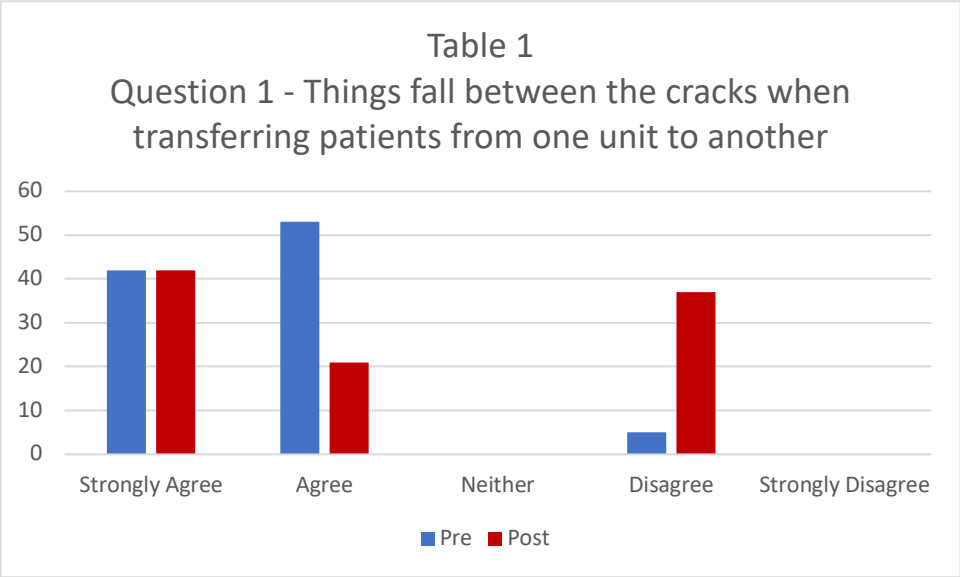
Analysis of Results

The purpose of this DNP project was to evaluate sentinel events, and the nurses' satisfaction and perception of the current handoff transition before and after an educational presentation and the implementation of the NHRG. The educational meeting was provided utilizing a PowerPoint presentation, open forum discussion, and handouts of the NHRG checklist. The nurses incorporated the NHRG into the handoff communication process for a four-week period; the post-survey was completed evaluating the nurses' satisfaction and perception of the NHRG handoff process at the end of week four.

Thirty-five nurses voluntary completed the pre and post-implementation survey. These nurses remained anonymous by using an assigned code for both surveys. The level of education of the 35 nurses consisted of 84% having a Bachelor of Science in Nursing and 16% having an Associate Degree in Nursing. Of the 35 nurses, 10% have 5-10 years of nursing experience, 16% have 16-20 years of nursing experiences, 21% have 11-15 years of experience, and 53% have greater than 20 years of nursing experience.

The pre and post-implementation survey consisted of four questions with a Likert scale to examine the thirty-five nurses' perception and satisfaction of the NHRG. Table 1 displays the pre and post-implementation results of the surveys for question one. It is significant to note the major change in the "Disagree" category from 5% to 37% in nurses' feeling that "Things fall between the cracks when transferring patients from one unit to another" after the implementation of the NHRG. This is also similarly represented in Table 2; here, there is a reduction from 47% to 26% in nurses' agreeing that "Important patient care information is often lost during shift

changes or handoff reports." Additionally, there is an increase of nurses' disagreeing with question two post-implementation.



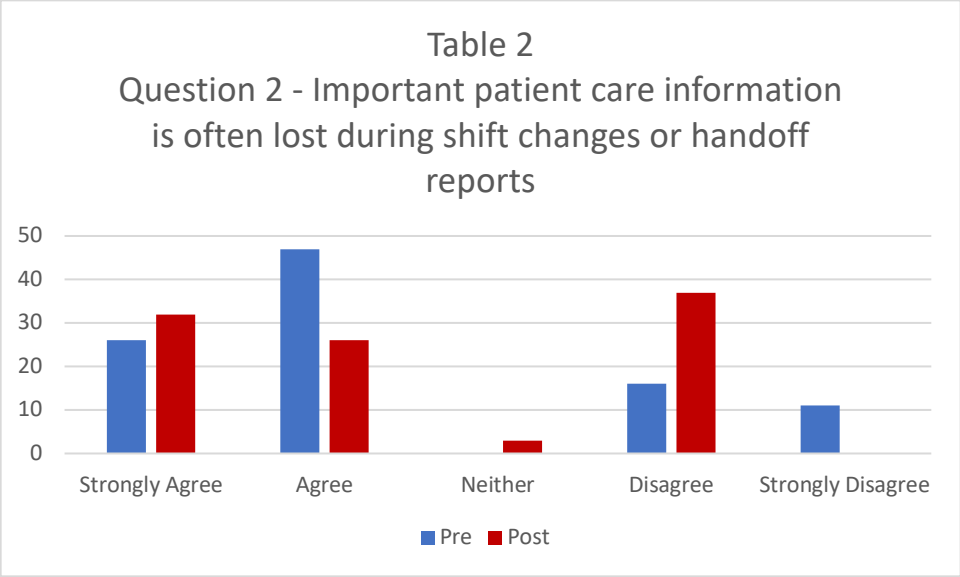
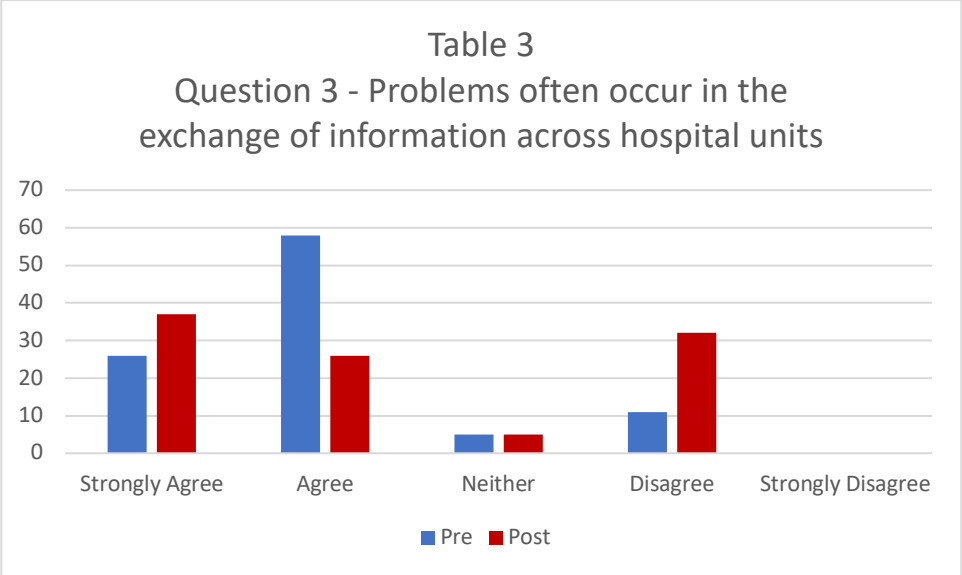
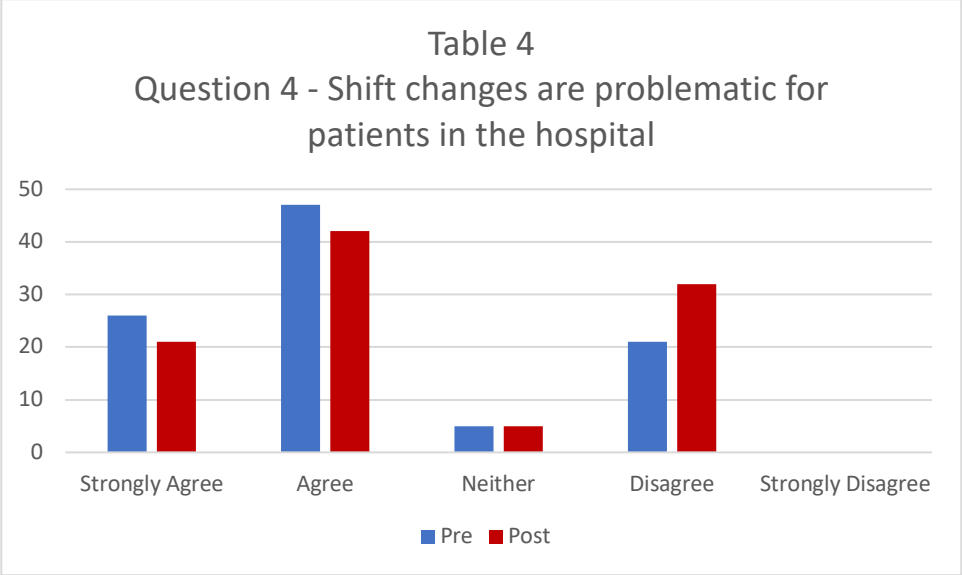


Table 3 presents the survey results for question three. Like question two, question three had comparable results of the "Agree" category decreasing from 58% to 26% and the "Disagree" category increasing from 11% to 32% of nurses' perception that "Problems often occur in the exchange of information across hospital units." Lastly, question four is shown in Table 4; although 32% disagree with "Shift changes are problematic for patients in the hospital," there is

still a major percentage of nurses agreeing after the implementation of the NHRG. This information were collaborated and presented to key stakeholders for future improvement and optimization of the NHRG.





A paired sample t-test was performed utilizing IBM SPSS Statistics version 25; the output from SPSS can be found in Appendix H. Each question was paired for analysis; for example, pre-implementation question one was compared with post-implementation question one. The findings are statistically significant if the p value is less than .05. Question one's p

value is at .001, question two's p value is at .014, question three's value is at .003, and question four's value is at .044. Based on these findings, it is demonstrated there is a statistically significant increase in the nurses' satisfaction and perception of handoff reports using the NHRG.

During the DNP project timeframe, there were no reported sentinel events related to the handoff transition, consent issues, or pre-operative documentation problems. The sentinel event rate related to the aforementioned issues in the past year was at 38%, which acts as the baseline data for comparison for improvement. A chi-square test was performed utilizing IBM SPSS Statistics version 25 to evaluate sentinel events; the output from SPSS can be found at the end of Appendix H. Based on the results, the Pearson Chi-Square asymptomatic significance is at .350; to be significant, the findings needs to be .05 or smaller, demonstrating that there is no significance of the NHRG before and after implementation related to sentinel events. The DNP project timeframe, however, is a limitation for the reduction of sentinel events; it cannot be assumed that the NHRG alone reduced sentinel event rates to zero. Nonetheless, the key stakeholders will plan to follow-up on sentinel event information quarterly after the completion of the DNP project. As planned, a chi-squared test and Fisher's exact test will be applied to evaluate sentinel event results. Receiving this information and presenting it to the nursing staff promotes sustainment as the nursing administration can set future goals to reach with provided incentives.

Discussion

Clear and efficient communication is a significant component in patient safety and outcomes. Implementation of the NHRG and its checklist was a substantial milestone in improving the handoff transition. The purpose of this project was to apply best practices of handoff report standardization to improve staff satisfaction and the perception of handoff quality

while aiming to decrease sentinel event rates. The NHRG checklist captured the essential pertinent information for patients in the pre-operative phase. Time, patience, and frequent reminders were needed for the staff to utilize the NHRG during the implementation phase. The demographic data for years of nursing experience indicated that 53% of the nursing staff had over 20 years of nursing experience, while 10% have 5-10 years of nursing experience. Although there was slight expected staff resistance, the improved handoff transition with the NHRG gave nurses a standard process within the whole unit.

After the implementation of the NHRG, there were considerable increases in the option "Disagree" with questions regarding handoff transition problems. Post-implementation survey results showed a gradual improvement with handoff satisfaction and perception; however, survey results have many subjective variables, including extreme response bias or acquiescence. A paired sample t-test was then applied for each question pre and post-implementation; all four questions resulted in a statistically significant increase in the nurses' satisfaction and perception of handoff reports using the NHRG. Additionally, nurses were perceived to have an improved workflow after observations from key stakeholders. This perception may or may not be apparent if key stakeholders were not present or visible on the unit.

The objectives of this project were met throughout the projected timeframe. Evaluating initial and post-implementation satisfaction and perception were completed in weeks one and four, an educational in-service meeting was performed in week one, and presenting results to nursing leadership was accomplished after week four. The objective to reduce sentinel event rates by 50% was met, despite no statistical significance per the results from the chi-square test. Future observation and appropriate statistical tests are required to validate the NHRG in regard to sentinel events.

Significance/Implication for Nursing

The perioperative handoff is a vulnerable phase for patients as it involves staff from different healthcare disciplines with their own priorities and documentations of the perioperative patient (Nagpal et al., 2013). Using a standard approach and a checklist for handoff communication has been suggested as a means to ensure pertinent information is transferred. Though nurses are highly trained professionals, human error is still a factor especially in a fast-paced complex environment with various sensory stimulation. Analysis of data for sentinel events did not show a significant difference. However, the literature supports the need to utilize a tool to enhance the handoff transition process. According to TJC (2017), a standardized communication checklist or tool is necessary to ensure pertinent patient information is shared during handoff. This is also supported by Cornell et al. (2013), regarding the importance of a tool that focuses on patient needs and prioritization during the handoff transition. Having a tool contributes to a more consistent handoff by engaging nurses in an enhanced active conversation with time to clarify exchanged information (Berger et al., 2012). The NHRG can serve as a guideline, a checklist, and promote reduced communication errors (Halm, 2013). This DNP project relates to the profession of nursing by enhancing nursing communication, promoting patient safety, and ensuring continuity of care.

Limitations

Various limitations have been identified throughout this quality improvement project. The first limitation is the subject variables related to survey responses, such as acquiescence and response bias. Although surveys remained anonymous, it is unknown if responses are adequately reliable and accurate of the nurses' perception and satisfaction of handoff reports. A second limitation is nursing compliance, which can be affected by a number of variables. The presence of stakeholders and a super-user gives staff more of an inclination to comply with the

utilization of the NHRG. Additionally, pressure received from other healthcare disciplines, when pre-operative patients are needed as soon as possible, may limit the nurses' ability to utilize the NHRG to reduce the amount of time in order to complete the pre-operative assessment. The four-week time frame of this project is also a limitation; a longer time frame for implementation may have created more handoff opportunities, which gives the potential for increased compliance and increased educational opportunities. Another limitation of this project is the lack of assessments of completed NHRG checklists. Reviewing completed checklists with stakeholders would give a better understanding on how to optimize the NHRG in the future. The most significant limitation that has been aforementioned are sentinel event rates. Due to the project's timeline, further assessment is needed to evaluate the NHRG's effect on sentinel event rates. Evaluating this rate quarterly will ensure the goal of the project objective and further sustainability.

Dissemination/Project Sustainability

There are several plans to disseminate the results of this project. On the organizational level, the project mentor will assist the DNP student to meet the hospital organization's leaders to share project results and collaborate on the standardization of handoff reports hospital-wide. Throughout the project, there have been monthly meetings with neighboring units on the project status, including each step taken towards objective goals. With handoff reports, it was consistently emphasized that evidence-based research recommended tailoring standardization to the units' specific needs (Kalman, 2010). Finalization of the NHRG will be available on the unit's policy and procedure section as a reference. Upon completion, this DNP project will be submitted on doctorsofnursingpractice.org. Further, the goal for dissemination of this project is to submit a poster presentation for approval to ASPAN's 38th annual conference this May in Nashville, Tennessee.

Dissemination and feedback from hospital leaders and stakeholders promote project sustainability. Planning to evaluate sentinel event rates quarterly maintains NHRG compliance and determines future effectiveness. With the intent to improve nursing satisfaction and perception of handoff reports, the NHRG became a nurse-driven effort worth sustaining. Further, the DNP student will become the handoff report champion to provide educational resources when needed and oversee compliance. The NHRG will be recommended to be integrated in the new hire orientation curriculum and training.

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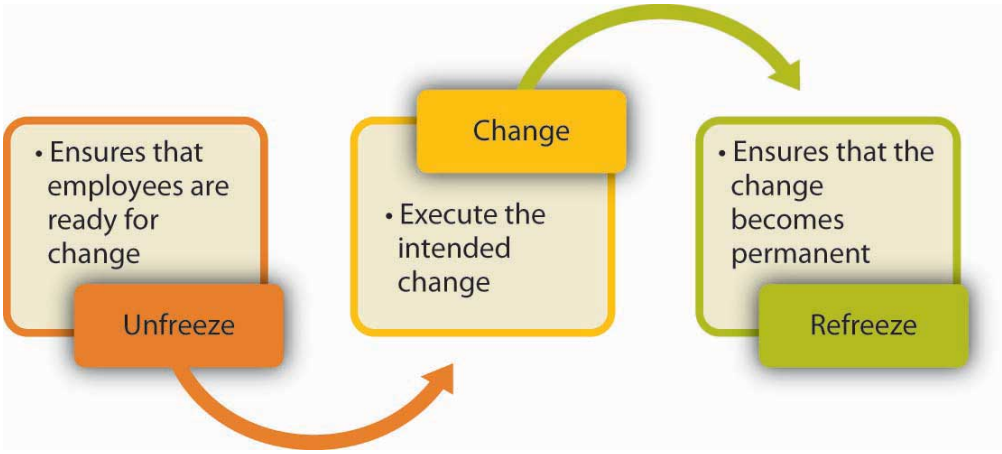
Appendix A

Lewin's Change Theory



Appendix B

DNP Scholarly Project Permission

UCLA Ronald Reagan Medical Center

Operative Services
PACU, PTU, TRU ANII Office
757 Westwood Plaza
Los Angeles, CA 90095

To whom it may concern:

This letter hereby grants permission to Alex Joseph Francisco, MSN, RN, PHN, CNOR to apply the DNP scholarship project of standardizing handoff reports to the Pre-Operative Treatment Unit as it is pending approval towards the process of exemption status from the Institutional Review Board. Please do not hesitate to contact me for any questions or concerns.

Thank you
Cherrylin

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Appendix C

Targeted Solutions Tool

Joint Commission Center for Transforming Healthcare

Hand-off Communication Tool-SENDER

Date of hand-off (month/day/year):	Time of hand-off (hh:mm):
Your role:	☐ Primary nurse
Your unit:	Pre-Operative Unit
Did the hand-off meet your needs to hand-off care of the patient?	○ Yes ○ No
*If "No," please check all that apply:	
☐	A. The method of communication was ineffective Check the method(s) that were ineffective for this hand-off: ☐ Chart ☐ Electronic record ☐ Face to face ☐ Fax ☐ Handwritten ☐ Telephone ☐ Text message ☐ Other (please specify):
☐	B. The timing of the hand-off communication and physical arrival of the patient were not in sync
☐	C. The amount of time provided was inadequate
☐	D. Interruption(s) occurred
☐	E. Standardized procedures were not followed
☐	F. Staffing was inadequate
☐	G. Although I informed the receiver of "pending information", I was unable to provide up-to-date information to the receiver because it was not available at the time of the hand-off
☐	H. I was unable to contact the receiver who will be taking care of the patient
☐	I. I was not able to follow up with receiver with additional information
☐	J. I was asked by the receiver to repeat/resend information that I had already shared
☐	K. The receiver was unable to focus on the hand-off communication
☐	L. The receiver was unaware of the patient's arrival
☐	M. The receiver is aware of the patient's arrival but has little or no knowledge of the patient
☐	N. There was a lack of teamwork and respect
☐	O. Other
Comments (or other factors)	

Joint Commission Center for Transforming Healthcare

Hand-off Communication Tool-RECEIVER

Date of hand-off (month/day/year):	Time of hand-off (hh:mm):
Your role:	☐ Primary nurse
Your unit:	Pre-Operative Unit
Did the hand-off meet your needs to continue caring for the patient?	○ Yes ○ No
*If "No," please check all that apply:	

☐	A. The method of communication was ineffective Check the method(s) that were ineffective for this hand-off: ☐ Chart ☐ Electronic record ☐ Face to face ☐ Fax ☐ Handwritten ☐ Telephone ☐ Text message ☐ Other (please specify):
☐	B. The timing of the hand-off communication and physical arrival of the patient were not in sync
☐	C. The amount of time provided was inadequate
☐	D. Interruption(s) occurred
☐	E. Standardized procedures were not followed
☐	F. Staffing was inadequate
☐	G. The sender provided inaccurate or incomplete information Check all that apply: ☐ Age ☐ H&P ☐ Issues to monitor ☐ Equipment needed ☐ DOB ☐ Reason for admission ☐ Proposed next steps ☐ Pending tests ☐ Gender ☐ Allergies
☐	H. The sender had little knowledge of the patient
☐	I. Although I was informed of "pending information", the sender was unable to provide up-to-date information, because it was not available at the time of the hand-off
☐	J. I asked the sender to repeat/resend information
☐	K. I was unaware of the patient's arrival
☐	L. I was not able to follow up with the sender
☐	M. There was a lack of teamwork and respect
☐	N. Other

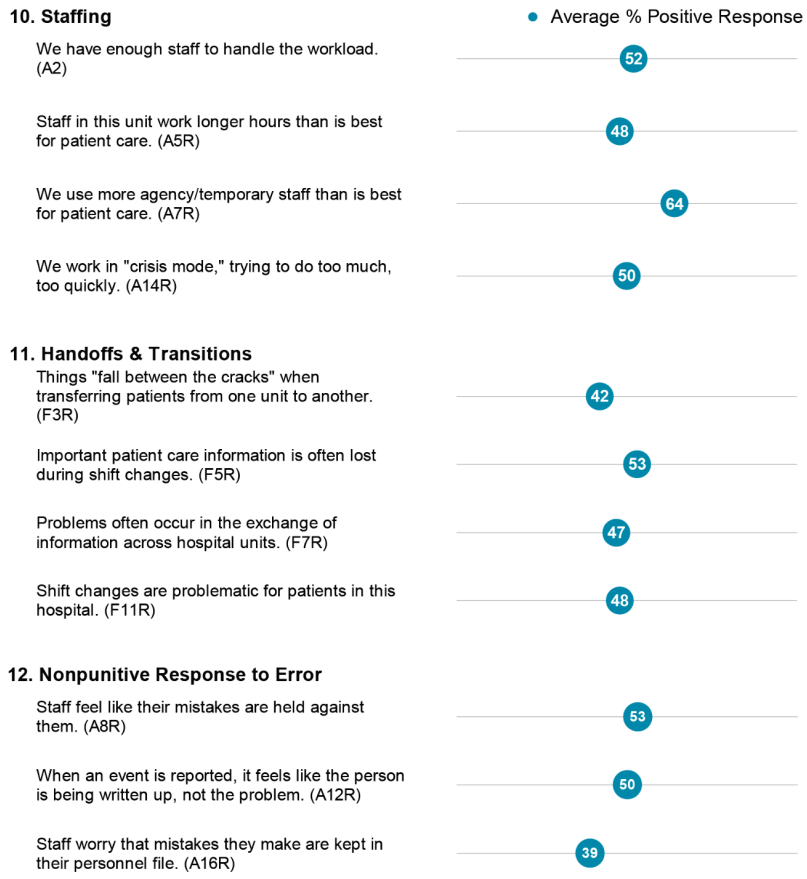
Comments (or other factors)

Appendix D

Tool- Hospital Survey on Patient Safety Culture

Questions derived from section "Handoffs and Transitions" for pre and post-surveys

Chart 5-2. Item-Level Average Percent Positive Response – 2018 Database Hospitals (Page 4 of 4)



Note: The item's survey location is shown to the right in parentheses. An "R" indicates a negatively worded item, where the percent positive response is based on those who responded "Strongly disagree" or "Disagree," or "Never" or "Rarely" (depending on the response category used for the item).

Appendix E

Pre and Post-Survey for PTU nursing staff

Assigned code:

Please choose the appropriate response for the following demographic questions.

How long have you been a nurse?

- <5 years
- 5-10 years
- 11-15 years
- 16-20 years
- >20 years

Please indicate your educational level:

- Associates
- BSN
- MSN
- DNP or PhD
- Other

Please indicate your response to the following questions regarding the current handoff report:

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
1. Things fall between the cracks when transferring patients from one unit to another					
2. Important patient care information is often lost during shift changes or handoff report					
3. Problems often occur in the exchange of information across hospital units					
4. Shift changes are problematic for patients in the hospital					

Feedback, comments, questions, concerns:

_____

_____

_____

_____

Appendix F

Nursing Handoff Report Guideline

Purpose: To apply best practices for handoff reports, standardize nursing practice, and reduce errors related to misinformation/information omission during handoff reports.

Objectives: (1) Utilize evidence-based framework to administer a standardized patient hand-off report. (2) Provide accurate succinct hand-off reports during times of care transitions, including change of shift, transfer of care, and/or break reliefs. (3) Provide a written template for handoff reports.

Indications: Change of shift, transfer of care, and/or break reliefs for continuity of care

Contraindications: None

Steps:

(1) Off-going nurse prepares for patient hand-off for shift change, transfer of care, and/or break reliefs
    a. Off-going nurse gets new NHRG template to guide and document pertinent pre-operative patient information
    b. Off-going nurse gathers pre-operative information (H&P and H&P attestation) from electronic medical record and interdisciplinary team
    c. Off-going nurse evaluates missing consents (surgical and anesthesia) and pre-operative orders
(2) Off-going nurse to engage patient at bedside
    a. Off-going nurse introduces oncoming nurse, patient, and family member while verifying armband
    b. Off-going nurse asks patient preference to have family member present during report

(3) Discussion of clinical care issues between off-going and oncoming nurses

a. Report on any missing consents (surgical and anesthesia), pre-operative orders, and pertinent patient values (for example, abnormal lab values, vital signs, or diagnostic studies)

b. Off-going nurse to document issues needed to be address at the bottom of checklist template (this can include what consents are missing, if a H&P and H&P attestation are needed, and if pre-medications and other nursing interventions are needed; for example, IV insertion, laboratory draws, and identifying pedal pulses)

(4) Facilitate two-way communication

a. Allow for questions/concerns between off-going and oncoming nurses

b. Answer patient and/or family member questions and address unresolved issues

Appendix G

Nursing Handoff Template

UCLA Health

Age:	Sex:
Allergies:	
Pertinent Medical Hx:	
Procedure:	
○ Surgery Consent ○ Anesthesia Consent ○ H&P ○ H&P Attestation	
Things to do (IV, Labs, Fluids, Meds): ○ ○ ○	

Appendix H

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PreQ1	1.11	35	1.243	.285
	PostQ1	2.37	35	1.499	.344
Pair 2	PreQ2	1.37	35	1.342	.308
	PostQ2	2.32	35	1.376	.316
Pair 3	PreQ3	1.21	35	1.084	.249
	PostQ3	2.37	35	1.422	.326
Pair 4	PreQ4	1.42	35	1.216	.279
	PostQ4	2.11	35	1.286	.295

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	PreQ1 & PostQ1	35	.515	.024
Pair 2	PreQ2 & PostQ2	35	.385	.104
Pair 3	PreQ3 & PostQ3	35	.343	.150
Pair 4	PreQ4 & PostQ4	35	.396	.093

Paired Samples Test

		Paired Differences					t	df
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper		
Pair 1	PreQ1 - PostQ1	-1.263	1.368	.314	-1.922	-.604	-4.025	18
Pair 2	PreQ2 - PostQ2	-.947	1.508	.346	-1.674	-.220	-2.738	18
Pair 3	PreQ3 - PostQ3	-1.158	1.463	.336	-1.863	-.453	-3.450	18
Pair 4	PreQ4 - PostQ4	-.684	1.376	.316	-1.348	-.021	-2.167	18

Appendix H (continued)

Paired Samples Test

		Sig. (2-tailed)
Pair 1	PreQ1 - PostQ1	.001
Pair 2	PreQ2 - PostQ2	.014
Pair 3	PreQ3 - PostQ3	.003
Pair 4	PreQ4 - PostQ4	.044

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	10.000[a]	9	.350
Likelihood Ratio	13.460	9	.143
Linear-by-Linear Association	6.545	1	.011
N of Valid Cases	10		