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Impact of a Standardized Situation, Background, Assessment, and Recommendation Tool on Satisfaction and Communication in The Perioperative Area

Salomy Abraham
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Walden University

College of Nursing

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Salomy Abraham

has been found to be complete and satisfactory in all respects,
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Walden University

2021

Abstract

Impact of a Standardized Situation, Background, Assessment, and Recommendation Tool
on Satisfaction and Communication in the Perioperative Area

by

Salomy Abraham

MS, Suny Downstate University, 2015

BS, Stony Brook University, 2013

Project Submitted in Partial Fulfillment
of the Requirements for the Degree of
Doctor of Nursing Practice

Walden University

November 2021

Abstract

Effective communication among health care providers is critical to maintain patient safety during the handoff of care. Communication breakdown during handoff can lead to medical errors and sentinel events. The perioperative area is a vulnerable area that is prone to communication errors due to the involvement of providers from various disciplines and the nature of the quick patient turnovers within the perioperative area. To ensure proper communication during the handoff in the perioperative area, a unit-specific handoff tool is required. The focus of the project was to implement a standardized situation, background, assessment, and recommendation (SBAR) communication tool in the perioperative area to be utilized by preoperative area, operating room (OR), and Post Anesthesia Care Unit (PACU) professionals during the handoff, and to evaluate the impact by assessing perceived communication and satisfaction between the OR and the PACU staff. The framework used to support the project was the Iowa Model of Evidence-Based Practice. The participants were trained on a new standardized SBAR handoff and pre- and post-implementation tests were conducted to evaluate the outcome. Descriptive statistics to analyze the comparison surveys found increased satisfaction and improved communication in the perioperative area. The new standardized SBAR can impact positive social change by shifting the culture to a standardized method of handoff communication by empowering the providers to be effective communicators of patient information.

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Dedication

My DNP proposal is dedicated to my lovely husband and all my family members who have supported me with prayers and encouragement throughout my journey.

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Section 1: Introduction

Introduction

Effective communication among health care providers is crucial in delivering appropriate patient care. Incomplete handoffs can lead to severe patient injury or death through medication administration errors, surgeries to the wrong sites and incomplete follow up of patients leading to gaps in patient care (Bruno & Guimond, 2017). A high-quality handoff is complex, and failed handoffs are ongoing health care problems (Alert, 2017). Well-designed communication tools would promote effective communication, decrease adverse events, and improve patient safety and staff satisfaction (Shahid & Thomas, 2018). The current problem in the perioperative area at the project site is the absence of a standardized communication tool during the handoff from the operating room (OR) to the Post Anesthesia Care Unit (PACU). The communication tool currently being used for handoff in the PACU is missing elements that are necessary for the proper handoff from staff in the OR to PACU. As a result, gaps in effective communication, lack of consistency in documenting on the current handoff tool, and decreased staff satisfaction exist in the PACU, which may pose a risk for a negative impact on patient outcomes due to missing information. Even though studies have been conducted to identify an ideal handoff communication tool, no standardized tool is available that fits all patient care settings. In Section 1, I discuss the problem statement, purpose, nature of the project and its significance.

Problem Statement

Local Nursing Practice Problem

The transition of care is a vulnerable phase of patient care which requires thorough and appropriate communication among the providers in providing continuity of care (Parsons Leigh et al., 2020). A high-quality handoff is complex and failed handoffs are ongoing health care problems (Alert, 2017). The absence of a standardized situation, background, assessment, and recommendation (SBAR) tool used by all who provide handoffs may increase the risk for poor communication and patient safety issues. Communication failures among health care providers lead to medical errors (Burgener, 2017; Carver & Hipkind, 2019). In hospitals and medical practices in the United States, communication failures are responsible for 1,744 deaths, 30% of malpractice claims, and \$1.7 billion malpractice costs over five years (Strategies, 2015).

In the current setting, the absence of a standardized SBAR tool for handoff from the OR staff to the PACU staff has led to incomplete and delayed documentation of information in the electronic medical record (EMR) following patient transfer to the PACU. The current communication tool is neither structured nor organized, and there is no standardized way of documenting the information on the current tool. Each nurse documents in their specific individualized pattern which is inconvenient for the oncoming nurse who often has to take over the care of patients from the primary nurse to cover for a lunch break or to take care of patients at the end of primary nurse's shift. According to David et al. (2017), handoff communication should be designed to support the oncoming nurse to prepare for the upcoming shift to concentrate on the needs and follow the scope

of practice. The handoff is mostly given by OR staff while the PACU registered nurse (RN) is connecting the patient to the monitor and assessing the vital signs and surgical sites, which may increase the possibility of not receiving or missing pertinent information and/or receiving incorrect information due to the possibility of not being able to pay attention to the report. Occasionally, handoffs are performed informally; instead, it should be organized and attentive to safeguard the continuity of care (Alert, 2017).

Local Relevance of the Need to Address the Problem

The absence of a standardized communication tool has led to incomplete handoff from PACU nurses to other patient care areas where patients are transferred to once they are recovered in the PACU. The risk of omission of information on administration of medications in the OR is an issue if that information is not given during the handover to PACU nurses or if the Anesthesia record is not completed prior to patient transfer from PACU. The complete handoff from PACU nurses to the next patient care units is critical to prevent inappropriate medication administration, and thus prevent patient harm.

Personal communication with PACU nurses has indicated that these nurses are dissatisfied with the current pattern of communication and the method of handoff due to the absence of a communication tool with a structured framework. The PACU nurses have expressed that there is a need for a standardized communication tool from the OR to PACU to facilitate a concise and accurate report to enable the delivery of appropriate patient care and documentation of the information in the EMR promptly. Raeisi and Soltani (2019) concluded that one of the causes of safety and quality of service issues in the handover process is the absence of efficient communication. Devin et al. (2019)

demonstrated that there is a need for a standardized handoff practice for postoperative patients who are admitted to the PACU from the OR. A standardized handover process and reliable structured communication increase the efficacy of shift handover and staff satisfaction, as well as staff and patient safety (Abela-Dimech & Vuksic, 2018).

Significance of the Doctoral Project for the Field of Nursing Practice

The American Nurses Association (ANA) code of ethics demands that nurses be accountable to their patients, family members, colleagues, and their profession (Battie, 2016). A standardized SBAR tool will benefit the nursing and medical staff by improving interprofessional communication, teamwork, and autonomy for nurses. RNs are “interprofessional collaborative partners” working towards outcome value for patients, families and their communities (Williams et al., 2016). Effective communication assures proper management of roles and responsibilities of each member of the interdisciplinary health care team in the Perioperative area (Garrett, 2016). The doctoral project has the potential to positively impact nursing practice by bringing awareness to nurses about the need for a standardized communication tool, improving handoff communication among the providers, and thus, assisting in the delivery of safe care at appropriate time.

Purpose

Meaningful Gap-in-Practice

The purpose of the project was to implement a standardized SBAR tool to improve staff satisfaction and perceived communication between PACU and OR RNs, anesthesiologists, and certified registered nurse anesthetists (CRNAs). Greenway et al. (2019) defined the theory-practice gap as a “gap between the theoretical knowledge and

the practical application of nursing, most often expressed as a negative entity, with adverse consequences” (p. 1). A meaningful gap in practice takes place when there exists a disconnection between best practice and actual practice (Leach & Tucker, 2018). Lack of a standardized SBAR tool in the current setting has led to a gap in practice by not complying with the recommendation by the Joint Commission. As per the Joint Commission’s requirement, the handoff communication standard pertains to all hospitals and health care settings including ambulatory care areas, behavioral health, and home care settings (Alert, 2017). The Joint Commission’s Provision of Care Standard PC.02.02.01, Element of Performance (EP) 2, demands that “the organization’s process for hand-off communication provides for the opportunity for discussion between the giver and receiver of patient information” (Alert, 2017, p. 1). The difference in perceptions of the importance of a standardized SBAR tool by professionals involved in the care can also lead to a gap in practice. Randmaa et al. (2017), concluded that health care professionals’ views about postoperative handover vary in perception, and through healthcare interventions, the gap between perception and practices by professionals can be reduced to bring mutual understanding about the handover.

Practice-Focused Question

Due to the of the absence of a standardized SBAR tool in the current setting, pertinent information can be missed during the handoff, the safety of patients can be at risk, and staff satisfaction can be decreased. The practice-focused question for this DNP project was, will the implementation of a standardized SBAR handoff tool in the perioperative area improve staff satisfaction and perceived communication between OR

nurses/anesthesiologists/CRNAs and PACU nurses? By measuring staff satisfaction and perceived communication through surveys, the impact of the intervention can be evaluated. Satisfaction as well as communication survey questions will be utilized before and after implementation of the project. The *Handoff Pre/Post-Intervention Survey* (Tune, 2019) was used to assess communication (see Appendix A). The *Satisfaction Survey* by Funk et al. (2016) were used to assess staff satisfaction (see Appendix B).

Potential to Address that Gap-in-Practice

I conducted this project in the perioperative area by implementing a standardized SBAR tool that is specific to the project site. Potential benefits of a standardized SBAR tool implementation have been evaluated, and studies have concluded that the SBAR tool is beneficial in enhancing communication and patient safety (Shahid & Thomas, 2018). A structured communication tool can improve communication during handovers and satisfaction (Funk et al., 2016). The SBAR tool improves quality and patient safety and encourages proficient communication and sharing of information (Shapiro, 2017). A PACU communication tool has been shown to be effective in the improved transfer of care through the communication of pertinent information to the providers during the transfer of patients (Haltermann et al., 2019). Implementing a standardized SBAR tool in the current setting can minimize the gap in practice through a shared understanding of the importance of the tool, as well through standardizing practice utilizing the standardized SBAR.

Nature of the Doctoral Project

Sources of Evidence

The literature supports the need for a standardized handoff communication tool to improve communication among the providers, improve patient safety and satisfaction, decrease chances of omission of critical patient information, and decrease patient harm. I conducted a literature search using the databases PubMed, Agency for Healthcare Research and Quality, EBSCO, CINAHL and Google Scholar. The search terms used included *handoff communication in PACU*, *SBAR tool in the recovery room*, *handoff communication in the Perioperative area*, *Patient safety*, *SBAR*, *benefits of SBAR*, and *handoff communication and standardized SBAR tool in the PACU*. Boolean operators “AND” and “OR” terms were also used. Journal articles and books were included, and individual case reports were excluded. The search was limited to the English language and articles published in 2015 or later.

Approach

I used a SBAR tool created by Parkwest Medical Center Covenant Health this project (see Appendix C). The PACU RNs, anesthesiologists, and CRNAs had a pre-intervention evaluation to assess staff satisfaction and perceived communication between the OR and PACU staff using the communication survey *Handoff Pre/Post-intervention Survey* by Tune (2019; see Appendix A) and the satisfaction survey by Funk et al. (2016; see Appendix B). Communication was measured with a 5-point Likert scale that measures *strongly disagree*, *disagree*, *neutral*, *agree*, and *strongly agree* (Brownell et al., 2013) and “yes,” “no,” or “not applicable” responses. Staff satisfaction were measured

with a 5-point Likert scale that measures *strongly agree, agree, disagree, strongly disagree, and not applicable* (Kostoff et al., 2016). The questionnaires were completed by OR nurses, PACU nurses, CRNAs, and anesthesiologists in the OR and PACU at their convenience to avoid interruption during busy unit activity. The staff had a 1-week period to complete the questionnaires. The nurse/CRNA/anesthesiologist placed the completed questionnaire in an envelope marked “Pre-Test”. I collected the questionnaires on a daily basis and kept them in my personal lockbox for safety.

Once the pre-test was completed, perioperative nurses, CRNAs, and anesthesiologists were educated regarding the new standardized SBAR tool. Multiple educational sessions were held to cover at least 80% of the nursing staff and CRNAs and anesthesiologists through in-services using an 8- to 10-minute PowerPoint presentation. Handouts consisted of 3–5 pages of the educational information presented in the PowerPoint presentation. The content of the education included the definition of SBAR, the importance and benefits of SBAR, the need for improving communication, improving patient safety and decreasing potential medical errors, the negative impact of not using a standardized SBAR during hand off, and a description of standardized SBAR and instructions on how to complete new standardized SBAR. The education was given in the conference room in groups over a 1- to 2-week period, as well as one-to-one education sessions for those who missed the classroom sessions. After each individual or group education session, time was allotted for questions and answers. Upon completion of education, the new standardized SBAR tool was implemented in the perioperative area for two weeks.

The new SBAR tool was first used in the pre-operative area where pre-operative RNs documented pre-operative specific patient information prior to sending the patient to the OR. The completed SBAR was placed in the patient's chart and sent to the OR along with the patient. OR nurses documented OR-specific information on the SBAR tool, such as type of surgery/incisions, type of anesthesia, total intake of fluids/blood and blood products, estimated blood loss (EBL), any precautions, and any pending diagnostic tests. Upon the patient's transfer to the PACU, the handoff was given to PACU nurses by the OR nurses/CRNAs/anesthesiologists. Pre-op nurses were not included in the survey as my goal was to determine whether the new SBAR tool would be helpful during handoff between OR and PACU.

Upon completion of the project, the posttest was given to the PACU and OR RNs, anesthesiologists, and CRNAs to assess for any difference in staff satisfaction and communication between the OR and PACU. Communication was measured with a 5-point Likert scale that measures strongly agree, agree, neutral, strongly disagree, and disagree (Brownell et al., 2013) and "yes," "no," or "not applicable" responses using the communication survey 'Handoff Pre/Post-intervention survey' Tune (2019; see Appendix A). Staff satisfaction were measured with a 5-point Likert scale that measures *strongly agree, agree, disagree, strongly disagree, and not applicable* (Kostoff et al., 2016) using the satisfaction survey by Funk et al. (2016; see Appendix B). The questionnaires were completed by OR nurses, PACU nurses, CRNAs and anesthesiologists in the OR and PACU. The staff had a 1-week period to complete the questionnaires. The nurse/CRNA/anesthesiologist placed the completed questionnaire in an envelope marked

“Post-Test”. I collected the questionnaires on a daily basis and kept them in my personal lockbox for safety. After the completion of pre and posttests, the data were uploaded into a computer and saved under a password-protected Microsoft Excel file. At the end of the project, the original paper surveys were destroyed and the data from the pre- and post-intervention surveys were analyzed to assess the impact of the tool.

Project Purpose Statement to Connect the Gap-in-Practice

Multiple studies have been conducted to assess the impact of the SBAR tool, but few studies have been conducted on implementing a single SBAR tool that can be used by pre-operative, OR, and PACU staff. Tune (2019) studied the impact of a safety communication guideline that followed the patient through the entire perioperative stay. Such a communication tool may have the potential to improve communication among the providers beginning from the pre-operative area where the patient is evaluated first then through the OR and to PACU. Successful completion of this project has provided perioperative staff with a valuable standardized communication tool that they can utilize to provide and to receive better handover within the perioperative area and to other patient care areas in the hospital. Merten et al. (2017) indicated that multiple studies have suggested that the implementation of a structured handover tool was able to improve the transfer of information as well as professional satisfaction. Safe culture in the perioperative area can be maintained through standardized, thorough, succinct, appropriate, transparent communication (Garrett, 2016).

Significance

Perioperative nurses are responsible for patient advocacy, continuity of care, providing safe care and a safe environment for their patients (Battie, 2016) at the vulnerable stage of the immediate post-operative period. Evidence-based practice (EBP) shows that the use of SBAR tool during delivery of report improves the performance of the participants (Inanloo et al., 2017). The delivery of safe care is significantly dependent on effective communication between the providers. The purpose of the project was to educate RNs, CRNAs, and anesthesiologists concerning the importance and benefits of the standardized SBAR tool and the implications of not using one. Education improves knowledge and awareness of the need for effective communication that is required during handoff to promote practicing appropriate handoff. Incorporating SBAR communication as part of the health profession's education is vital because its widespread use in health care closes the gap between education and clinical practice (Kostoff et al., 2016). Perioperative RNs, CRNAs, and anesthesiologists played a major role in this project as they are the main stakeholders for the success of the project. Implementation of a standardized SBAR tool impacts these stakeholders by improving their knowledge of the tool and providing them with a relevant tool to empower them to carry out the handoff effectively. Robinson (2016) indicated that with each handoff communication of patient information from one provider to the other, there is a high risk for communication breakdown. Considering the risk of missing or misinterpreting vital patient information with each communication, creating a single standardized SBAR for the use of

perioperative staff may facilitate effective dissemination and receiving of patient information for the timely response of any issues.

The support of the director and the managers of the perioperative area is critical for the success of the project. Approval from the Hospital Research Committee had to be obtained before implementing the project. The Joint Commission underscores the need for health care organizations to identify handoff communication failures and barriers and recognizes and endorses solutions to increase the level of performance (Alert, 2017). Successful implementation of this doctoral project can lead to improved staff satisfaction and communication among perioperative staff. The Agency for Healthcare Research and Quality (2017) posits that resilient communication among health care team members improves the quality of working relationships and job satisfaction (Merlino, 2017). Integrating best hand-off practices into the organization's culture brings a higher performance of improved communication, satisfaction, and patient safety. If the outcomes of this doctoral project have a significant positive impact, a standardized SBAR tool can be used in other perioperative areas where a single SBAR can be utilized for optimum communication, patient safety, and staff satisfaction.

Summary

Research has indicated that the absence of a standardized communication tool in the Perioperative area can lead to communication failure issues, including missing and misinterpretation of patient information. The purpose of this project was to implement a standardized communication tool for the perioperative area that will be used by staff from the preoperative area, OR, and PACU during the handoff, and to measure staff

satisfaction and perceived communication between OR and PACU. By administering pre- and post-implementation surveys, staff satisfaction and perceived communication were measured. Implementing a standardized SBAR tool ensures continuity of care, teamwork, and improved awareness of the importance of a standardized handoff tool in the perioperative area. The project has the potential to improve communication from one part of the Perioperative area to the other and to increase staff satisfaction. The integration of standardized SBAR tool into perioperative nursing practice can influence the social change of the organization by shifting its culture through standardized practice. In Section 2, I discuss models and theories that apply to the doctoral project and a summary of the relevance of the problem to the local context that justifies the goal of the project.

Section 2: Background and Context

Introduction

Effective communication plays a significant role in maintaining patient safety during the handoff of care between the providers. One of the main reasons of communication breakdown is the absence of a standardized communication tool in the patient care areas. The purpose of this project was to implement a standardized communication tool for the perioperative area that will be used by staff from the preoperative area, OR, and PACU during the handoff. By implementing a standardized handoff tool, it is anticipated that handoffs and communication between the OR and PACU will improve and staff satisfaction will increase. In Section 2, I describe concepts and models used in the doctoral project that are relevant to nursing practice at the context of the project site. Section 2 also includes description of the relevance of the DNP project to nursing practice, including existing scholarship and the research on the topic, current state of nursing practice in the area, the recommendation to improve the practice, and the role of the DNP student in the context of the professional role.

Concepts, Models, and Theories

The concept of this project is to improve communication between the OR and PACU and to improve staff satisfaction through implementing a standardized SBAR in the perioperative area. The Iowa Model of Evidence-Based Practice served as the framework to support this project. The Iowa Model, which focuses on improving the quality of care by using evidence through research, was first published in 1994 and was revised in 2001 per new health care system and user's feedback (Waite & Killian, 2016).

Developed by Titler and colleagues, the Iowa Model of EBP is applicable to clinical practice (Green, 2020) and is a practice model for guiding health care professionals to improve health care outcomes using the evidence (Titler, 2010). The framework can be used by novice to expert users in a variety of settings and was created for clinicians to ask questions and improve quality by utilizing evidence (Iowa Model Collaborative et al., 2017). The Iowa Model provides guidance to identify issues with current practices and ways to improve practice as well as health care outcomes. The seven steps of the Iowa Model include (a) identification of the problem, (b) organizational level of the problem, (c) development of a team, (d) collection of the evidence, (e) pilot the practice change, (f) implement the practice change and continue to evaluation, and (g) disseminate the results (Wahed El Sharkawy, et al., 2019). Waite and Killian (2016) suggested that at each step of the algorithm of the Iowa Model, the background of the organization, and the strength as well as the value of the evidence should be taken into consideration. Various steps of the Iowa Model assist the researcher to identify the practice problems and implement potential solutions to the problems and disseminate the results to evaluate the impact of the project.

The first assumption of the Iowa Model is to question the existing practice through “knowledge and problem-focused triggers” and identify whether patient care can be improved through research (Titler, 2010). Knowledge about the recommended communication tool and the problem of the absence of a structured communication tool in the perioperative area triggered the need for a structured communication tool guided by the Iowa Model. The project was established based on the “trigger” of the need for

communication of consistent patient information with a structured approach meeting regulatory standards (Robinson, 2016).

The second assumption of the model supports that the need for the communication tool is a priority for the organization (White et al., 2016). Based on the satisfaction issues with the present handoff method between the OR and the PACU, implementation of an “effective evidence-based handoff process” was recommended by the perioperative unit-based council (Reber & Adams, (2018).

The third assumption of the model supports the need to develop a team (White et al., 2016). Staff was educated utilizing a team approach on the standardized SBAR and each unit will be functioning as a team to facilitate the handover process. Each of the teams were educationally prepared based on their role in the project. The preoperative team was prepared for their role as documenting basic patient information on the SBAR prior to sending the patient to the OR. The OR staff was educated on all the information that they needed to include in their documentation. Likewise, PACU nurses were trained on the method of using the new standardized SBAR including the type of patient information that will already be documented on the SBAR before that patient is brought in to the PACU.

The next assumption of the Iowa Model supports the collection of appropriate research and associated journalism (White et al., 2016). From the literature review, it was evident that improper communication is a major health care issue and that many studies have been conducted on improving communication and satisfaction through the implementation of a standardized communication tool. As improper communication

among health care providers negatively impacts patient care, identifying ways to improve communication to lower the risk of sentinel events and to improve patient experience is important (Burgener, 2017). The Joint Commission has recommended the standardization of communication tools used in health care based on best practices (Leonardsen et al., 2019).

Another assumption of the Iowa Model supports changing the practice as an experimental study based on the available adequate research evidence (White et al., 2016). Conducting the practice change will be addressed by implementing a standardized SBAR in the perioperative area for 2 weeks. The next assumption of the model supports the relevance of the implementation of the project into the practice (White et al., 2016) which was addressed by communicating with the stakeholders of the Perioperative area to propose the implementation of the standardized SBAR.

The final assumption of the Iowa Model supports publicizing the study results by observing and examining the process and the outcome (White et al., 2016). The outcome of the project was assessed by evaluating the results through the post-implementation test which determined the effectiveness of the project.

Relevance to Nursing Practice

History of the Broader Problem in Nursing Practice

One of the patient safety issues is associated with miscommunication. According to The Joint Commission (2016), communication error was the number one cause of anesthesia-related sentinel events from the year 2004 to 2015. Incomplete handoff communication tools lead to errors in medication administration, wrong-site surgery as

well as lapses in follow-up of care contributing to gaps in patient care (Bruno & Guimond, 2017). The omission of significant patient information is often the result of inconsistent handoff. The busy nature of PACU patient turnovers and the involvement of different specialties of providers in the care of patients provides the opportunity for communication error. Physical patient handover to the PACU, partnership with several providers, and comparable histories of patients place the PACU at high risk for communication failures (Segall et al., 2013, as cited in Park et al., 2017). Due to the absence of a structured format of report in the current setting, the handover to the PACU nurses is given verbally by anesthesiologists, CRNAs, residents, and OR RNs, which can contribute to the risk of incomplete handover.

The Current State of Nursing Practice in the Area, and Recommendations

Each unit of the perioperative area has its unit-specific communication tool designed specifically for its use. During the transfer of the patients from the preoperative area to the OR, only a verbal report is given and no communication tool is transferred with the patient. Research indicates that structured handover and standardized checklist improve the efficacy of the handover. A study on structured handover in a pediatric group has indicated that the improvement in communication reduced rate of communication errors in the OR (Weinger et al., 2015, as cited in Greenberg, 2017). A laminated checklist during the intraoperative handover improved witnessed quality of the handover (Julia et al., 2017, as cited in Greenberg, 2017). Creating and executing standardized instruments and checklists improved the efficacy of the handovers, improved quality of care, and reduced rate of perioperative-related sentinel events (Nagpal et al., 2011, as

cited in Rose, 2016). Standardized handovers can provide efficient, succinct, and thorough communication (Vinu & Kane, 2016). Consistent practice of handoff from the OR to ICU has the potential to improve perceived communication and psychological safety (Prasad et al., 2020). Structured handovers had a positive impact on lowering handover challenges including missing information, wrong information, and documentation errors (Bukoh & Siah, 2020). Utilization of a handover checklist provides a reminder tool for the staff to include all pertinent information to minimize the omission of information (Park et al., 2017). Keller et al. (2020) indicated that when a similar “roadmap” of the handover of communication from the sender to the receiver is used, vulnerability for loss of information is lowered.

Strategies Used Previously to Address Gap in Practice

Attempts have been made to modify the perioperative unit specific handoff tool; however, this communication tool only applies to specific units instead of the perioperative area. The preoperative- and OR-specific handoff tools stay in the respective units when the patients leave these units. The PACU nurses continue to rely on the verbal report from anesthesiologists or CRNAs without receiving any form of handoff communication tool. It could be beneficial to have a single handoff communication tool for the perioperative area so that all of the information is communicated to the next area of patient care. The PACU communication tool contains some of the handoff information, but it needs to be more structured to include all vital information. Even though most of the information will be available in the electronic anesthesia record, the record will not be completed until after the handover is completed in the PACU, and

sometimes the anesthesia record will not be completed in a timely fashion due to anesthesiologists being busy or CRNAs being in the case waiting for the anesthesiologists to sign off the record. The delay can interfere with timely documentation by the PACU nurses in the EMR.

Role of Doctoral Project Advances Nursing Practice

Gaps in communication during handoff can lead to incomplete handoff and decreased satisfaction to PACU RNs, Anesthesiologists, and CRNAs. A high-quality handoff is complex, and failed handoffs are ongoing health care problems (Alert, 2017). Standardized communication is a vital aspect of the nursing profession as it enables nurses to clearly receive and provide communication concerning patient's status, and thus provide appropriate care in a timely manner. Adding "specialty specific checklists" for the handoff by anesthesiologists and surgeons demonstrated lesser omission of information, procedural errors, and improved satisfaction to PACU nurses (Petrovic et al., 2015 as cited in Becker & Lane-Fall, 2017). The doctoral project has the potential to fill the communication gap in practice by standardizing the handoff communication tool in the perioperative area. Education and implementation of a standardized SBAR provides the opportunity for the staff to get more insight into the importance of the SBAR and be able to provide and receive a consistent report in a structured format. Standardizing handoff practices and executing reliable communication frameworks improves the effectiveness of the handoff and staff satisfaction, and the safety of both patients and staff (Abela-Dimech & Vuksic, 2018). By implementing a single standardized SBAR which will be utilized first by pre-operative nurses to document

available pertinent patient information may improve communication between pre-op and OR.

Local Background and Context

Local Evidence on the Relevance of the Problem

The absence of a single handoff for the perioperative area can lead to deficient information. For example, patient history, intravenous (IV) insertion dates and time, amounts of fluid given in the preoperative before the patient was sent to OR, blood sugar level or other significant information necessary for proper management of the patient may be missing. Even though the current PACU handoff tool contains some of the handoff information, it does not cover all the pertinent information that is needed for an effective handoff. Due to the nonstructured nature of the handoff tool, there are no proper guidelines on documentation on the tool. The absence of the consistency on the documentation on the PACU handoff tool may not be legible for the oncoming nurse who needs to assume patient care responsibilities unless the nurse obtains the information from the EMR. Handoff is given by anesthesiologists, CRNAs, residents, or OR RNs to PACU nurses, which makes the handoff inconsistent due to the absence of the standardization of handing the report and due to the difference in specialty and background of the reporter. Giving the report to PACU nurses while the RN is connecting the patient to the monitor, assessing the patient's IV sites and IV fluids, surgical sites, and drainages makes it difficult for the nurses to retain all of the information that is provided verbally. Utilizing handoff tools can help overcome the problem of having to remember all the necessary information from the report while trying to focus on patient care. The

nurse anesthetists and anesthesiologists used SBAR to improve memory while handing over critical information (Randmaa et al., 2017). The interruptions during the handover negatively impact the quality of the handover as well as satisfaction. (Methangkool et al., 2019).

Institutional Context

The organization is a Level II trauma center where approximately 2000 trauma cases are handled every year. Multiple types of surgeries including general surgery and specialty surgeries involving bariatric; thoracic; plastic; obstetrics and gynecology (OBGYN); orthopedics; pediatric neurosurgery; ear, nose, and throat (ENT); and endoscopic procedures are conducted in the OR. Patients with interventional radiology procedures are recovered in the PACU before they are sent to the critical care. Given the demanding nature of the PACU with the diverse and complex nature of the patient population being admitted to the PACU, it is critical to have an organized handover with a structured format. Retention of the intraoperative checklist used by OR staff runs the risk for patient safety by loss of patient data (O'Reilly-Shah et al., 2019). The director of the perioperative area oversees all the activities of the area including preoperative, OR, PACU, and postoperative areas. The nurse managers of these units work under the direction of the director. The chief of anesthesiologists is the head of the anesthesia department, and all anesthesiologists are led by this chief. All the activities and the documentation by the perioperative staff are assessed and evaluated by the performance improvement and performance management professionals.

Definition of Terms

Handoff: A transfer and acknowledgment of accountability of patient care that is accomplished through successful interaction (Alert, 2017). Handoff is the real-time practice of handing over patient information between caregivers and between patient care teams to provide safe and continuity of care (Alert, 2017). Handoff is the process of transferring and accepting thorough information to support the interaction of patient care obligations (Jewell, 2016).

Situation background assessment recommendation (SBAR): A simple, organized, well-designed format that the U.S. military created and utilized to improve communication among members of the team through emergencies (Kostoff et al., 2016). The SBAR communication includes briefly mentioning the problem, succinctly stating important information that is related to the situation, evaluation, and looking for different options, and suggesting the appropriate action.

Sentinel event: A patient safety incident, the consequence of which can lead to death, lasting damage, or short-term damage (Joint Commission, 2004).

Communication: The “exchange of information, thoughts and feelings” between individuals verbally or through other methods (Kourkouta & Papathanasiou, 2014).

State and Federal Contexts Applicable to the Problem

Health care settings depend on effective communication to maintain patient safety and to prevent avoidable injuries. Communication failure has been shown to cause approximately 70% of sentinel events (The Joint Commission, 2015, as cited in Mukhopadhyay et al., 2018). Independent organizations oversee hospital functions and

guide them to provide high-quality patient care. The inefficient handoff communications that lead to harmful results are included in the Joint Commission's sentinel event database (Alert, 2017). The Joint Commission, 'an independent, not-for-profit, largest and nation's oldest' health care organization established in 1951, pursues health care improvement for the public by working with the 'stakeholders' by assessing health care establishments and encouraging them to top in administering 'safe and effective care of the highest quality and value' (Joint Commission, n.d. p.1). The Joint Commission implemented a national patient safety goal in 2012 to address handoff communication (Alert, 2017). The National Patient Safety Goal 2, requirement 2E, recommends the application of the consistent method of "hand-off" communication with the prospect of asking and responding to questions (The Joint Commission, 2008, p. 102). The Association of periOperative Registered Nurses (AORN) and the US Department of Defense Patient Safety Program (DoD PSP) distributed a "policy guide and toolkit" to standardize the handoff communication (AORN, n.d. as cited in Canale, 2018). The handoff communication training for all teaching programs in the United States was made mandatory by the Accreditation Council for Graduate Medical Education (ACGME) (Kluger & Bullock, 2002, as cited in Greenberg, 2017).

Role of the DNP Student

Professional Context and Relationship to the Doctoral Project

Professorially, I am a clinical nurse specialist (CNS) in Adult-Gerontology. However, due to circumstances, I haven't been able to work as a CNS and therefore currently, I am working as an RN in the PACU. I had the opportunity to work in critical

care and clinical research before I became an RN in the PACU. The project has personal significance to me as I experience the importance of the communication between the providers while handling the care of the vulnerable PACU patient population. The Perioperative patients are at a vulnerable stage (Cousley, 2015, as cited in Lillibridge, et al., 2017), inefficient handoffs are serious problems for the wellbeing of the patient (The Joint Commission, 2018). As a coworker of the PACU RNs, I can understand their need for better communication tools to comprehend a better picture of the patients. The Nurse anesthetists and PACU RNs suggested the significance of having patient information written before them (Randmaa et al., 2017). The checklist can be used as an instruction to transfer the information systematically and to assist the provider not to miss any fundamental information (Siddiqui et al., 2012 & Salzwedel et al., 2013, as cited in Methangkool et al., 2019). When I look at the communication tool that is being used currently from the PACU perspective, it is easily noticeable that the Perioperative area needs an organized method of communication with a structured communication tool.

Role in the Doctoral Project

My role in the Doctoral project consisted the roles of the project developer/leader, educator, and data collector. My role as a project developer was to design the project and to create an educational plan to bring knowledge to the team based on EBP.

Communication and satisfaction can be improved through SBAR (Dalky et al., 2020). As a project leader, I worked with the involved stakeholders including the Director, managers, RNs, anesthesiologists, and CRNAs of the Perioperative area. I educated RNs, anesthesiologists, and CRNAs about the project in the form of a PowerPoint presentation

and collected data after the completion of the project. The PowerPoint presentation included 3–5 pages of education related to the standardized SBAR, including possible benefits of the standardized SBAR, potential patient harm for not using the SBAR, evidence from research, description of and instructions on how to use new standardized SBAR. I was responsible for keeping all the project related documents in the password-protected lockers. As a data collector, I collected the data and will disseminate the final result of the project to the nursing leadership of the Perioperative area. Continuation of care similar to preceding providers with the same accurate and implicit understanding of patients is possible with well-performed handoffs (Greenberg, 2017). Coming from a critical care and research nurse background, it is easy for me to recognize the importance of an effective communication between the teams involved in the care. By working with the Director of Education during my clinical rotation, I was able to improve my teaching skills and leadership skills that enabled me to lead the project successfully. I have attended multiple leadership meetings that included meetings with compliance officers during the practicum period. Part of the discussion in the meetings included sentinel events that almost compromised patient safety that was associated with incomplete communication that occurred in the hospital. The practicum experience has given me a better insight into the importance of effective communication that is required to prevent sentinel events. Successful transfer of patient information requires effective communication with valuable communication skills and is critical to ensure patient safety (Methangkool et al., 2019).

Motivation for the Doctoral Project

My motivation for the doctoral project was to implement a standardized Perioperative communication tool to improve communication between the providers in the Perioperative area to improve patient safety. Research has indicated the importance of a structured communication tool regarding patient care to maintain safety. The approval of standardized practices, instruments, and methods are needed for patient safety and shifting of patient care (Bagian & Paull, 2018), even when multiple providers with multiple specialties are involved in the care. Continuity of care is ensured through handovers irrespective of the participants (Garrett, 2016). The goal was to bring awareness of the significance of a standardized tool through education and training. A handover program that was conducted in a Pediatric unit was noted to save time and cost of the handover as well as improved nurse satisfaction (Sarvestani et al., 2017). I am motivated to make changes in the work environment that can improve both the efficiency of the workflow and can save nurses' time so that the nurses can focus on patient care during the immediate postoperative period.

Potential Bias

I do not have any potential bias related to this project. One of my goals was to promote a better work environment; therefore, I believe implementing a structured SBAR can accomplish the goal. Even though I was working in one part of the Perioperative area where the project was implemented, I don't believe there was the possibility for any bias. The project was implemented based on the evidence-based findings available from the literature. Additionally, my project was reviewed and monitored by my project chair.

Careful attention was paid throughout the project so that no place for any bias would exist.

Summary

Effective communication is critical in maintaining the safety and wellbeing of the patient. Communication error happens when critical information is either missed or misinterpreted during the handoff. Studies have concluded that using standardized communication tools during the handoff between the providers improves communication. National, as well as international agencies, have clarified the importance of standardized communication tools and suggested using standardized communication tool during handoff. As the current project site lacks a standardized SBAR tool and the need of the standardized SBAR tool was identified based on the nature of the site, including multispecialty surgeries and participation of multiple providers, the goal of the DNP project was to implement a standardized SBAR in the Perioperative area and to evaluate the outcomes of staff satisfaction and perceived communication by conducting pre and post-implementation tests. The Iowa Model of EBP that focuses on evidence-based quality of care was used as a guide in this project. The various steps of the framework guided the project from recognizing the practice problem to identifying the potential solution. Based on the problem and solution-based approach, standardized SBAR was implemented in the Perioperative area and the outcome was evaluated at the end of the project. During this Doctoral project, I functioned as a project developer or leader, educator, and data collector. As the leader of the project, I led the project and, functioned as a resource person to the staff during the entire process of the project. As an educator, I

educated the Perioperative staff about the standardized SBAR, nature, and process of the project. As a data collector, I collected the data to evaluate the outcome of the project. In Section 3, I discussed the local problem, the gap in practice that lead to the DNP project, practice-focused question, sources of evidence, analysis and synthesis, and the summary.

Section 3: Collection and Analysis of Evidence

Introduction

Communication error in healthcare has major implications for patient safety, including medical errors that lead to poor prognosis, patient morbidity, and mortality. The perioperative setting is prone to medical errors due to multiple providers being involved in the care, high volume of patients, quick turnovers, and vulnerability for complications during the immediate postoperative period. According to Halterman et al. (2019), the impact of medical errors has led to \$17 billion in annual costs and approximately 200,000 to 400,000 patient deaths. The World Health Organization (WHO), World Alliance for Patient Safety, and Institute for Safety and Quality in Health Care Research and Quality have noted the importance of effective communication and have recommended the importance of precise and proficient communication during the handover (Kesten, 2011 as cited in Yu & Kang, 2017). The purpose of this project was to implement a single standardized SBAR based on EBP with the potential to improve communication in the Perioperative area as well as to improve staff satisfaction. Comprehensive and efficient handover is important in the perioperative area due to the risk for patient instability (Halterman et al., 2019). The presence of a single SBAR ensures the effective transfer of patient information and facilitates smooth handoff as the presence of a physical handoff tool provides all the necessary information that is necessary for a complete handoff. Section 3 includes discussion of the practice-focused question, sources of evidence, analysis and synthesis, and the summary.

Practice-Focused Question

Approximately 80% of medical errors occur due to incomplete communication between caregivers during handoff (Joint Commission, 2012, as cited in Peer et al., 2020). Maintaining effective communication in health care is important for patient safety and utilization of the standardized tool for communication ensures all critical patient information is communicated, and thus, maintains the well-being of the patient. The current project site lacks a standardized communication tool which can lead to miscommunication or misinterpretation of patient information during the handoff from the OR to the PACU. Leonardsen et al. (2019) suggested that the execution of a structured communication tool during handoffs may increase the quality and safety of patients during handovers between the OR and the PACU. Hence, the practice-focused question for this DNP project was, will implementation of a standardized SBAR handoff tool in the Perioperative area improve staff satisfaction and perceived communication between OR nurses/Anesthesiologists/CRNAs and PACU nurses? Dalky (2020) concluded that the handoff of patient information using the SBAR method leads to organized handoff and decreased errors during an interaction between nurses and health care providers.

Purpose

Near misses and adverse incidents can occur due to improper communication, therefore, effective communication is critical during intrahospital transfers for patient safety and satisfaction for nurses (Sarver et al., 2020). Absence of a standardized communication tool during handoff at the project site can present opportunities for

mistakes and safety issues. Kaliraman and Sharma (2020) indicated that patient handoffs that do not use systematic methods are insufficient, incorrect, imperfect, misapprehended and inappropriate, and may lead to medical errors and increased mortality and morbidity of patients. The purpose of this project was to implement a standardized SBAR to improve communication and staff satisfaction between the OR and the PACU nurses and physicians. Education about the SBAR and the implementation of a standardized SBAR in the perioperative area will provide the opportunity for the perioperative staff to understand the significance of the standardized communication tool and implement EBP for improved patient outcomes and staff satisfaction. Educating the Perioperative staff on the importance of using a standardized handoff communication tool will bridge the disparity between the practice gap and the knowledge gap.

Operational Definitions

Handoff: The transfer of the patient information from one care provider to another care provider (Benton et al., 2020). The term ‘handoff’ in this project will be used to represent the communication between one provider to the other provider during the transfer of the patient from the Preoperative area to the OR and the PACU.

Situation background assessment recommendation (SBAR): An outline that organizes and supports the methodical transfer of patient information that is well defined and comprehensible to all of the health care providers that are part of patient care (Kostiuk, 2015; Yu & Kang, 2017, as cited in Stevens et al., 2020). SBAR will be the document that will be used as a communication tool whenever the handoff is carried out between the providers in the perioperative area.

Communication: The disclosure or replacement of information (Oxford dictionaries (n.d.) as cited in Chahal, 2017). The term *communication* will be used to indicate the interaction between the providers during the handoff within the Perioperative area.

Sources of Evidence

For the doctoral project, sources of evidence were gathered from peer-reviewed journals, Walden Library resources, and government agency websites to provide adequate and reliable data that supports the importance of using a structured communication tool in the perioperative area to improve communication and satisfaction. The databases used for the literature search included PubMed, Agency for Healthcare Research and Quality, ProQuest Nursing & Allied Health, and Ovid Nursing Journals, EBSCO and CINAHL, and Google Scholar. The search terms included *SBAR*, *communication tool*, *handoff communication in PACU*, *SBAR tool in the recovery room*, *handoff communication in the perioperative area*, *patient safety AND handoff communication standardized SBAR tool in the PACU*, *handoff communication*, and *single SBAR in the perioperative area*. The Boolean operators used were “AND” and “OR.” Journal articles and books were included, and individual case reports were excluded. The search was limited to the English language and articles published in the years 2015–2020.

Considering the inefficient and unreliable techniques of communication during a handoff leading to an unsuccessful handoff, Bruno and Guimond (2017) evaluated the enhancement in the practice of handing off patient information from CRNAs to PACU RNs with the use of an evidence-based PACU handoff checklist over a 4-month period in

an acute care hospital. The aim of the study was to create a successful handoff tool that promoted the effective transfer of patient information during the perioperative phase. The convenience sample included 14 CRNAs and 7 RNs who worked in a local health system. The Handoff Accuracy Scoring Tool (HAST) was used to compare the pre- and post-intervention verbal handoff scores to determine the precision and entirety of the handoff checklist. The unpaired sample *t* test showed that the difference in pre- and post-intervention scores were statistically significant with $p = .0001$, which is a 95% confidence interval. It was concluded that with the use of a unit specific handoff checklist, the number of errors due to the omission of patient information can be reduced during the handoff (Bruno & Guimond, 2017). The study supports the objective of the DNP project by providing evidence that unit specific structured handoff communication tool can improve communication among Perioperative providers thus lower omission errors.

Halterman et al. (2019), at a Level 1 trauma center, aimed to evaluate the decreased rate of oversight of patient health information post-SBAR implementation during the handoff between Anesthesia and PACU nurses. By utilizing Lean/Six Sigma tools, the current handoff tool was revised based on the need of the site and the handoffs were used on adult patients who were undergoing anesthesia and then admitted to PACU. Data were obtained on five patient-related items, procedure, allergies, input and output, antiemetic administration, and lines and catheters pre-and post-implementation of the project. The pre-intervention data revealed that each of the five items was missed from 17% to 23% of the times and post-intervention data showed a significant drop from 13%

to 82% in the omission of the information. It was concluded that through the revised SBAR, the receiver was able to acquire more information without many omissions during the handoff of care. Halterman et al.'s study aligns with the doctoral project by supporting that the structured PACU handoff based on the need can improve communication by transferring pertinent patient information.

Canale (2018) implemented a standardized handoff to evaluate the improvement in the quality and continuousness of handing off patient information, discernment of patient safety, and the satisfaction of the staff in a Perioperative area. Team Strategies to Enhance Performance and Patient Safety (TeamSTEPPS) was implemented for 2 weeks. Anonymous pre- and post-intervention surveys were conducted and a descriptive analysis was executed for the comparison between pre and post-implementation survey data. The data were analyzed using a paired *t* test which revealed the value of $p < .0001$ to $.0003$ signifying substantial progress in the steadiness in the information transfer, views on patient safety, and satisfaction of the staff. Canale et al.'s study supports the DNP project by providing relevant data that reveals the positive impact of standardized handoff tools in improving staff satisfaction, patient safety, and continuity of care.

Leonardsen et al. (2019), in a cross-sectional quantitative study, evaluated staff experience with pre- and post-implementation of the patient handover, Identification-Situation-Assessment, and Recommendations (ISBAR) tool. The study included nurse anesthetists, surgical nurses, PACU RN, and critical care nurses through consecutive sampling method over a 6-month period. It was found that there was significant improvement regarding the perception about the handover, experience with structured

handover and the completeness of the documentation. It was concluded that the implementation of a structured communication tool improved the quality and safety of the handovers, and the staff's experience with handovers, including teamwork. The study supports the DNP project by reinforcing that handoffs using structured handoff tools between OR and PACU can improve staff's experience which in turn may improve satisfaction with handovers ensuring improved communication with complete handovers.

Funk et al. (2016) evaluated team members satisfaction pre and post structured handover implementation in a pediatric PACU using a convenience sample of 52 pre-implementation and 51 postimplementation handover communications. The results indicated there was improvement in the percentage of elements communicated during handovers and satisfaction among providers. The authors concluded that an organized handover tool is linked to increased communication of handover items and better provider satisfaction. The study supports the DNP project by emphasizing that structured handovers from OR to PACU can improve satisfaction and improved communication.

Burns (2018) assessed the impact of implementing a consistent handoff procedure from anesthesia providers to the PACU with the purpose of evaluating the effect on information transfer and communication during handoff and satisfaction in PACU nurses through the new process. The 3-phase study included anesthesiologists, anesthesia residents, and CRNAs, and 100 handoff scores that were observed randomly during the 4 weeks of each pre-intervention and intervention period. The post-implementation handoff score increased by 38.2% and the PACU nurses' satisfaction increased by 36%. Burns et al. concluded that the execution of a uniform handover checklist can lead to precise and

significantly improved information transfer and enhanced satisfaction in PACU nurses. The study supports the purpose of the DNP project by exhibiting positive results both in communication and satisfaction with the structured handoff from OR to PACU.

Petrovic et al. (2015) evaluated the impact of a new perioperative handoff tool in the adult PACUs in a study conducted over a 2-week period using pre and post-implementation surveys. Out of 103 handoffs that were observed, there were significant decreases in the mean handoff defects per handoff, as well as the missed items from both the surgery and anesthesia reports. Verbal handoff given by surgeons improved from 21.2% to 83.3%. It was concluded that the new handoff tool was associated with the improved transfer of information during the handoffs, decreased handoff defects, and improved PACU nurses' satisfaction with the handoff. Petrovic et al.'s study supports the DNP project with the evidence that implementing a new handoff protocol can significantly improve the transfer of information, decrease omission of information, and improve satisfaction to PACU nurses.

Relationship of Evidence to the Purpose of the Project

The purpose of the DNP project is to evaluate the impact of a structured SBAR in the perioperative area by assessing perceived communication between and satisfaction in the perioperative staff in the OR and the PACU. The above studies indicate the positive impact of standardized communication tools implemented in the perioperative area on improved communication, increased satisfaction, decreased omission of information, and improved information transfer. The significance of education and training prior to implementing the project to obtain a positive result aligns with the plan of the DNP

project. Perioperative physicians were trained using educational meetings to provide an understanding of the new protocol (Burns et al., 2018). SBAR is considered the most appropriate tool for the project as it includes all aspects of patient information, beginning from the history of the patient to the treatment plan, which gives minimal opportunity for missing out on any pertinent information, which is the need at the project site.

Evidence Generated for the Project

Participants

The participants included full-time, part-time, and per diem RNs, CRNAs, and anesthesiologists of the perioperative area. The highest educational level of RNs ranges from an Associate Degree in Nursing to Master's degree in Nursing. The schedule of the participants ranges from 8 hours to 12.5-hour varied shifts. The participants' inclusion in the project is significant as they play an active role in the communication between different parts of the perioperative area during the handoff of care. The pre-operative RNs performed their role in completing the patient information on the SBAR that is specific to the pre-operative area before sending the patient to OR. OR RNs participated in the practice improvement initiative by documenting OR related information on the SBAR before sending the patient to PACU. RNs from OR and PACU, CRNAs, and anesthesiologists of the perioperative area contributed to the project by actively participating in the handoff from OR to PACU and PACU RNs, CRNAs and anesthesiologists further contributed to the project by completing the pre- and post-implementation surveys. The participants' input is relevant to the project question as the project's outcome is directly related to their practice and their experience.

Procedures

After obtaining IRB approval and project site research committee and Perioperative leadership approval, I conducted a pre-implementation survey on the OR and PACU RNs, CRNAs, and anesthesiologists of the perioperative area using the communication survey ‘Handoff Pre/Post-intervention survey’ by Tune (2019; see Appendix A) and the satisfaction survey by Funk et al. (2016; see Appendix B). Perceived communication was measured with a 5-point Likert scale using *strongly disagree, disagree, neutral, agree, and strongly agree* (Brownell et al., 2013) and “yes,” “no,” or “not applicable” responses and the staff satisfaction was measured with a 5-point Likert scale that measures *strongly agree, agree, disagree, strongly disagree, and not applicable* responses. I included Pre-operative RNs, OR RNs, and PACU RNs and CRNAs and anesthesiologists in the project. The preintervention survey through paper and pen format was completed by RNs of OR and PACU, CRNAs, and anesthesiologists in the OR and PACU in one-week and the completed questionnaires was placed in a marked envelope named ‘pretest’ by the participants. I gathered the questionnaires on a daily basis and stored them in my lockbox for safety purposes.

Upon completion of the pre-test, I provided education to Perioperative RNs, CRNAs, and anesthesiologists on the structured SBAR tool that included 3–5 pages of handouts presented in the form of an 8- to 10-minute PowerPoint presentation. The education included a number of sessions to cover the majority of the nursing staff and anesthesiologists. The content of the education included the meaning, importance, and benefits of SBAR, the importance of the SBAR in improving communication, patient

safety and decreasing possible errors, harmful effects of not using standardized SBAR during handoff, and instructions on how to complete the new standardized SBAR. I educated the participants during staff meetings in groups as well as one-to-one education sessions to include those who did not attend the presentation and at the end of each education session, the participants were given time for questions and answers to address any questions or concerns. I posted laminated standardized SBAR posters in multiple areas of the Perioperative area to assist the staff to become familiar with the new SBAR. Petrovic et al., (2015), provided education to the participants before implementing study intervention.

Once the perioperative staff education was completed, I implemented the new structured SBAR in the perioperative area for two weeks. The pre-operative RNs documented pre-operative specific patient information on the SBAR and sent the document to OR along with the patient's chart. During the patient's OR stay, the OR RNs documented OR specific information on the SBAR that includes the type of surgery/incisions, type of anesthesia, total intake of fluids/blood and blood products, EBL, any precautions, and any pending diagnostic tests. When the patient was transferred to PACU, the PACU RN received handoff by the OR nurses and CRNAs or anesthesiologists using the same structured SBAR that was completed in the OR and clarify any questions with the transferring provider. The PACU RN documented required patient information in the EMR that included previous fluid intake, EBL, and urine output that is required to calculate 24-hour total intake and output.

The handoff tool was intended to collect postoperative information and enter into the EMR (Lambert, 2018). Once the patient was adequately recovered in the PACU, the RN handed over care to patient's following destination using the standardized SBAR.

I administered a post-test through paper and pen format to the OR and PACU RNs, anesthesiologists, and CRNAs after the completion of the project to evaluate the impact of perceived communication and satisfaction. I measured perceived communication using the 'Handoff Pre/Post-intervention survey' by Tune (2019; see Appendix A) with a 5-point Likert scale using *strongly disagree*, *disagree*, *neutral*, *agree*, and *strongly agree* and "yes," "no," or "not applicable" responses and I measured satisfaction by using the satisfaction survey by Funk et al. (2016; see Appendix B) with a 5-point Likert scale that measures *strongly agree*, *agree*, *disagree*, *strongly disagree*, and *not applicable* responses. The post-intervention survey was completed two weeks after the implementation of the standardized SBAR. The OR and PACU RNs, CRNAs, and anesthesiologists placed the completed questionnaire in an envelope marked "Post-Test". I collected the questionnaires on daily basis and kept them in my lockbox for safety. Funk et al., (2016), conducted an electronic survey pre- and post-implementation of the structured handoff implementation to assess satisfaction scores. After the completion of pre and post-tests, the data were uploaded into a computer and saved under a password protected Excel file. At the end of the project, the original paper surveys were destroyed and the data from the pre and post-intervention surveys was analyzed to assess the impact of the tool.

Protections

I obtained Walden University IRB approval and site leadership approval before I implemented the project. I have a good rapport with the participants as I work in the perioperative area. I held individual and group meetings as needed in the process of involving and preparing the participants. The identity of the participants was protected as pre- and post-surveys were anonymously returned to their respective envelopes. The envelopes were kept safely in the password protected locker. After the data was collected and uploaded to an Excel spreadsheet, the paper surveys were destroyed. No ethical issues were encountered that presented problems for the completion of the project. There was no harm to patients as the project was not included direct patient care. As this project was implemented in the entire pre-operative area, OR, and PACU, the staff was expected to participate and no consent was required for the practice improvement initiative.

Analysis and Synthesis

The pre and post-intervention surveys were placed separately in sealed, labeled envelopes such as "Pre-Test". and "Post-Test" respectively and stored in a personal password-protected locker. The data were collected upon completion of the project and were entered into an Excel spreadsheet. I analyzed and synthesized the data when all the pre and post-intervention data were recorded in the Excel sheet. I used descriptive statistics to evaluate perceived communication and satisfaction and I compared the data from pre-test to post-test results. The response to communication and satisfaction surveys were analyzed separately as the project's goal was to evaluate the impact of the structured

SBAR on communication and satisfaction. The percentage of mean scores was analyzed to measure the outcome of the project.

Summary

Communication error is a patient safety issue, and inadequate communication during handoff needs to be addressed to improve patient safety. Understanding the causes of communication errors and solving the problem using appropriate educational measures and tools is important. The perioperative area is one of the vulnerable areas of patient care where patient safety can easily be compromised without effective communication. The SBAR tool is considered to be one of the most reliable tools for effective communication. The goal of the DNP project was to implement a structured SBAR in the perioperative area and to measure the impact by analyzing communication and satisfaction using pre and post-implementation surveys. Pre-intervention survey will be given to RNs of the OR and PACU, CRNAs, and anesthesiologists to assess both perceived communication and satisfaction on existing handoff tool in the Perioperative area. Upon completion of the survey, educational sessions were conducted to educate and inform the participants of the project plan. The standardized SBAR was implemented in the perioperative area after the education was completed and the post implementation survey was administered two weeks after the implementation of the SBAR. The RNs of the OR and PACU, CRNAs, and anesthesiologists participated in the practice improvement initiative. Pre and post implementation surveys were collected daily and labelled separately and were stored in password protected lockers. Descriptive statistics was used to analyze the data after the data was entered into an Excel spreadsheet. In

Section 4, I describe the findings, implications, and recommendations of the project after the completion of the project.

Section 4: Findings and Recommendations

Introduction

Absence of standardized handoff communication tools have shown to trigger patient safety issues due to breakdown in communication. Analysis from clinical and legal records on 23,658 malpractice cases from 2009 to 2013 indicate that 7,000 cases were related to communication failure between the providers or between the providers and the patients (Bailey, 2016). Handoff practices between the units of the perioperative area using a standardized communication tool has shown to improve communication among the providers. Communication breakdown can be avoided by utilizing standardized handoff practices (Becker & Lane-Fall, 2017). The SBAR is a very frequently used tool (Riesenberg et al., 2009, as cited in Smith et al., 2018). The SBAR tool has been endorsed by Agency for Healthcare Research and Quality (n.d.) and Institute for Healthcare Improvement (n.d.). Successful information transfer practices enable effective communication among the providers, reduce dismissal of information (Becker & Lane-Fall, 2017). The purpose of the DNP project was to implement a standardized SBAR tool in the perioperative area and to evaluate its impact on communication and satisfaction among perioperative staff. The practice-focused question was, will the implementation of a standardized SBAR handoff tool in the Perioperative area improve staff satisfaction and perceived communication between OR nurses/anesthesiologists/CRNAs and PACU nurses? Section 4 provides the sources and collection of evidence, analytical strategies, findings, implications, and the recommendations.

Sources and Collection of Evidence and the Analytical Strategies

To evaluate the impact of the standardized SBAR, I administered two surveys titled *Handoff Pre/Post-Intervention Survey* by Tune (2019; see Appendix A) and the *Satisfaction Survey* by Funk et al. (2016; see Appendix B) before and after implementation of the standardized SBAR in the perioperative area. The anonymous surveys, in the paper and pen format, were distributed to RNs from the OR and PACU, and CRNAs and anesthesiologists of the perioperative area. The completed surveys were placed in envelopes marked “Pre-Test” and “Post-Test,” respectively, before and after implementation of the SBAR. I collected the surveys daily and stored them in my personal lockbox for safety. The data were entered into a Microsoft Excel spreadsheet on a password-protected computer that was kept in a locked private office. Descriptive statistics were used to compare pre and post intervention survey data. The purpose of the project was to implement a standardized SBAR tool in the Perioperative area and to evaluate its impact on communication and satisfaction between perioperative staff.

Findings and Implications

Implementation of the Standardized SBAR tool in the Perioperative area

Once the pre-intervention surveys and perioperative staff education was completed, the standardized SBAR tool was implemented in the perioperative area for 2 weeks from May 17 to May 30, 2021, after completing pre-intervention satisfaction and communication survey. The pre-operative RNs documented pre-operative specific patient information on the SBAR and the document was sent to OR along with the patient’s chart. During the patient’s OR stay, the OR RNs documented OR specific information on

the SBAR that included the type of surgery/incisions, type of anesthesia, total intake of fluids/blood and blood products, EBL, any precautions, and any pending diagnostic tests. When the patient was transferred to the PACU, the PACU RN received handoff by the OR nurses and CRNAs or anesthesiologists using the same structured SBAR that was completed in the OR and clarified any questions with the transferring provider. The PACU RN documented required patient information in the EMR that included previous fluid intake, EBL, and urine output that was required to calculate 24-hour total intake and output and other pertinent information. When the patient was adequately recovered in the PACU, the RN handed over care to patient's following destination using the standardized SBAR. The impact of the standardized SBAR was evaluated comparing the pre and post intervention surveys.

Evaluation of the Impact of the SBAR Tool on Communication

To evaluate the impact of the SBAR on the communication, pre and post intervention communication surveys, 'Handoff Pre/Post-intervention survey' by Tune, (2019) (Appendix A) were administered through paper and pen format that were completed by RNs, CRNAs and Anesthesiologists working in the Perioperative areas of the OR and the PACU. The completed questionnaires were collected on a daily basis and were stored in my lockbox for safety purposes. Thirty-seven participants completed each pre- and postintervention communication surveys. There were 17 postoperative RNs, 14 OR RNs, three CRNAs and three anesthesiologists who participated in the preintervention survey. Among pre-intervention communication survey respondents, 66.6% of CRNAs and anesthesiologists had 10 years or greater experience (see Table 1).

The majority of the postoperative RNs had 10 years or more experience and majority of OR RNs had 1–3 years and 10 years or more experience. The majority of the CRNAs, postoperative RNs and the OR RNs answered that they have used a standardized guideline or form for patient handoffs, while 66.6% of the anesthesiologists did not. Also, the majority of CRNAs, Post op RNs and OR RNs believed that the guideline or form improved communication between providers. Approximately two thirds of CRNAs, anesthesiologists and postoperative RNs strongly agreed that they give a complete handoff report when transferring patients to the next area of care. All CRNAs and anesthesiologists and approximately half of the Post op RNs and OR RNs strongly agreed that the use of a standardized handoff form can decrease the amount of communication errors between the preoperative nurse, circulating RN, and the CRNA. All CRNAs and anesthesiologists and approximately two thirds of the Post op RNs strongly agreed, and almost half of the OR RNs both agreed and strongly agreed respectively that the use of a standardized handoff form can decrease the amount of amount of communication errors between the OR nurse and the PACU nurse. The majority of CRNAs and all anesthesiologists strongly agreed that the use of a standardized handoff form can decrease the amount of communication errors between the anesthesia provider and the PACU nurse. They also agreed that the use of a standardized handoff form can decrease interruptions during handoff report. Approximately half of Post op RNs and OR RNs agreed that implementing the use of a standardized handoff form can improve the efficiency and clarity of communication in the ASC. The anesthesiologists strongly agreed that the use of a standardized handoff form can decrease omission of pertinent

patient information during handoff report. Although one third of Post op RNs did not agree that they are usually satisfied with patient handoff report between caregivers, the majority of CRNAs and anesthesiologists did. Only a few Post op RNs and OR RNs did not agree that the current handoff done at the ASC met their needs to continue caring for the patient. Approximately half of Post op RNs and OR RNs agreed that the current handoff process at this ASC occurs efficiently and without interruptions. Only a few Post op RNs and OR RNs disagreed that they are willing to use a standardized handoff form while majority of the participants agreed to use the standardized handoff form to improve communication, efficiency, and patient safety at the ASC.

Table 1*Communication Survey Pre-Intervention*

Survey item	CRNAs %	Anesthesiologists %	Post op RNs %	OR RNs %
2. How long have you been in this role?				
Less than 1 year	33.3			
At least a year but less than 3 years			11.76	35.71
At least 3 years but less than 6 years			11.76	7.14
At least 6 years but less than 10 years		33.3	29.41	21.43
10 years or more	66.6	66.6	47.05	35.71
3. Have you ever used a standardized guideline or form for patient handoffs anywhere you've worked?				
Yes	66.6	33.3	76.47	92.86
No	33.3	66.6	23.53	7.14
4. If you answered yes to number 3, do you believe the guideline or form improved communication between providers?				
Yes	66.6	33.3	62.5	85.71
No			12.5	7.14
N/A	33.3	66.6	25	7.14
Un-answered			1	
5. I believe I give a complete handoff report when transferring patients to the next area of care.				
Strongly Disagree			12.5	7.14
Disagree			6.25	7.14
Neutral				14.30
Agree	33.3	33.3	18.75	42.86
Strongly Agree	66.6	66.6	62.5	28.57
Un-answered			1	
6. The use of a standardized handoff form can decrease the amount of communication errors between the pre-op nurse, the circulating RN, and the CRNA				
Strongly Disagree			12.5	7.14
Disagree				
Neutral			18.75	7.14
Agree			12.5	35.71
Strongly Agree	100	100	56.25	50
Un-answered			1	
7. The use of a standardized handoff form can decrease the amount of amount of communication errors between the OR nurse and the PACU nurse.				
Strongly Disagree			6.25	7.14
Disagree			6.25	
Neutral				7.14
Agree			25	42.86
Strongly Agree	100	100	62.5	42.86
Un-answered			1	
8. The use of a standardized handoff form can decrease the amount of communication errors between the anesthesia provider and the PACU nurse.				
Strongly Disagree			13.30	7.14
Disagree				7.14
Neutral	33.3		6.6	14.3
Agree			26.6	35.71
Strongly Agree	66.6	100	53.33	35.71
Un-answered			2	

Survey item	CRNAs %	Anesthesiologists %	Post op RNs %	OR RNs %
9. The use of a standardized handoff form can decrease interruptions during handoff report.				
Strongly Disagree			6.25	
Disagree		33.3	6.25	7.7
Neutral	33.3		12.5	21.43
Agree	66.6		43.75	46.15
Strongly Agree		66.6	31.25	23.07
Un-answered			1	
10. Implementing the use of a standardized handoff form can improve the efficiency and clarity of communication in our ASC				
Strongly Disagree			6.25	7.14
Disagree				
Neutral			12.5	7.14
Agree	33.3	33.3	43.75	50
Strongly Agree	66.6	66.6	37.5	35.71
Un-answered				
11. Use of a standardized handoff form can decrease omission of pertinent patient information during handoff report.				
Strongly Disagree			6.66	7.14
Disagree				
Neutral			6.66	
Agree	33.3		20	64.26
Strongly Agree	66.6	100	66.66	28.57
Un-answered			2	
12. I am usually satisfied with patient handoff report between caregivers.				
Strongly Disagree			6.25	7.14
Disagree			37.5	14.3
Neutral		33.3	25	21.43
Agree	66.6	66.6	25	50
Strongly Agree	33.3		6.25	7.14
Un-answered			1	
13. The current handoff done at this ASC meets my needs to continue caring for the patient.				
Strongly Disagree				7.14
Disagree			12.50	7.14
Neutral		33.3	50	7.14
Agree	66.6	66.6	31.25	71.43
Strongly Agree	33.3		6.25	7.14
Un-answered			1	
14. The current handoff process at this ASC occurs efficiently and without interruptions.				
Strongly Disagree				
Disagree		33.3	37.5	14.3
Neutral		33.3	12.5	28.57
Agree	33.3	33.3	43.75	50
Strongly Agree	66.60		6.25	7.14
Un-answered			1	
15. I am willing to use a standardized handoff form to improve communication, efficiency and patient safety at this ASC.				
Strongly Disagree			12.50	7.14
Disagree				
Neutral				
Agree		33.3	37.5	71.43
Strongly Agree	100	66.6	50	21.42
Un-answered			1	

The communication survey post-implementation of the SBAR standardized form was completed by 16 postoperative RNs, 14 OR RNs, 3 CRNAs and 4 anesthesiologists (see Table 2). At least half of the CRNAs, Anesthesiologists and Post op RNs had 10 years or greater experience. The majority of CRNAs, Post op RNs and OR RNs used the standardized guideline or form for patient handoffs, while 50% of the anesthesiologists did not. Most OR RNs believed that the guideline or form improved communication between providers. All CRNAs strongly agreed that they give a complete handoff report when transferring patients to the next area of care, while only a few Post op RNs and OR RNs did not. All CRNAs and most of Post op and OR RNs strongly agreed that the use of a standardized handoff form can decrease the amount of communication errors between the pre-op nurse and the circulating RN. Only 50% of Anesthesiologists strongly agreed that the use of a standardized handoff form can decrease the amount of amount of communication errors between the OR nurse and the PACU nurse. Most Post op RNs strongly agreed that the use of a standardized handoff form can decrease the amount of communication errors between the anesthesia provider and the PACU nurse, while only one-fourth of anesthesiologists did not. Approximately half of anesthesiologists, Post op RNs and OR RNs agreed that the use of a standardized handoff form can decrease interruptions during handoff report. All CRNAs strongly agreed that implementing the use of a standardized handoff form can improve the efficiency and clarity of communication in the ASC. All CRNAs and the majority of Post op OR RNs strongly agreed that the use of a standardized handoff form can decrease omission of pertinent patient information during handoff report. Most of the anesthesiologists agreed that they

are usually satisfied with patient handoff report between caregivers and only a few of Post op RNs and OR RNs were not. The majority of CRNAs and Post op RNs agreed that the current handoff done at this ASC met their needs to continue caring for the patient. Most anesthesiologists agreed that the current handoff process at this ASC occurs efficiently and without interruptions. All CRNAs and the majority of Post op OR RNs strongly agreed that they are willing to use a standardized handoff form to improve communication, efficiency, and patient safety at the ASC, while only one fourth of anesthesiologists strongly disagreed.

Table 2*Communication Survey Post-Intervention*

Survey item	CRNAs %	Anesthesiologists %	Post op RNs %	OR RNs %
2. How long have you been in this role?				
Less than 1 year		25		
At least a year but less than 3 years			18.75	28.57
At least 3 years but less than 6 years	33.3	25	12.5	28.57
At least 6 years but less than 10 years			25	7.14
10 years or more	66.6	50	43.75	35.71
3. Have you ever used a standardized guideline or form for patient handoffs anywhere you've worked?				
Yes	66.6	50	75	85.71
No	33.3	50	25	14.3
4. If you answered yes to number 3, do you believe the guideline or form improved communication between providers?				
Yes	66.6	50	68.75	85.71
No			6.25	
N/A	33.3	50	25	14.3
Un-answered				
5. I believe I give a complete handoff report when transferring patients to the next area of care.				
Strongly Disagree				14.3
Disagree		25		
Neutral		25	31.25	35.71
Agree	100	50	56.25	50
Strongly Agree				
Un-answered		25	12.50	
6. The use of a standardized handoff form can decrease the amount of communication errors between the pre-op nurse, the circulating RN, and the CRNA				
Strongly Disagree				7.14
Disagree		25	12.50	21.43
Neutral	100	50	75	71.43
Agree				
Strongly Agree		25		
Un-answered				
7. The use of a standardized handoff form can decrease the amount of amount of communication errors between the OR nurse and the PACU nurse.				
Strongly Disagree		25	18.75	28.57
Disagree	100	50	81.25	71.43
Neutral				
Agree				
Strongly Agree		25		
Un-answered				
8. The use of a standardized handoff form can decrease the amount of communication errors between the anesthesia provider and the PACU nurse.				
Strongly Disagree	33.3	25	25	28.57
Disagree	66.6	50	75	64.28
Neutral				
Agree		25		
Strongly Agree				
Un-answered	33.3		6.25	14.28

Survey item	CRNAs %	Anesthesiologists %	Post op RNs %	OR RNs %
9. The use of a standardized handoff form can decrease interruptions during handoff report.	33.3	50	43.75	42.85
Strongly Disagree	33.3	25	50	42.85
Disagree				
Neutral		25		
Agree				
Strongly Agree				
Un-answered		25	31.25	35.71
10. Implementing the use of a standardized handoff form can improve the efficiency and clarity of communication in our ASC	100	50	68.75	64.28
Strongly Disagree				
Disagree		25		
Neutral				
Agree				07.14
Strongly Agree		50	12.50	28.57
Un-answered	100	25	87.5	74.28
11. Use of a standardized handoff form can decrease omission of pertinent patient information during handoff report.				
Strongly Disagree				7.14
Disagree			12.5	7.14
Neutral			31.25	42.85
Agree	66.6	75	37.5	28.57
Strongly Agree	33.3	25	18.75	14.28
Un-answered				
12. I am usually satisfied with patient handoff report between caregivers.				
Strongly Disagree				7.14
Disagree		25	12.5	21.43
Neutral	66.6	25	56.25	35.71
Agree	33.3	50	31.25	35.71
Strongly Agree				
Un-answered				
13. The current handoff done at this ASC meets my needs to continue caring for the patient.			6.25	21.43
Strongly Disagree		25	43.75	14.28
Disagree	66.6	75	31.25	28.57
Neutral	33.3		18.75	35.71
Agree				
Strongly Agree		25		
Un-answered				
14. The current handoff process at this ASC occurs efficiently and without interruptions.				
Strongly Disagree		50	18.75	28.57
Disagree	100	25	81.25	71.43
Neutral				
Agree		25		
Strongly Agree			18.75	28.57
Un-answered	33.3	25	12.5	28.57
15. I am willing to use a standardized handoff form to improve communication, efficiency and patient safety at this ASC.			25	7.14
Strongly Disagree	66.6	50	43.75	35.71
Disagree				
Neutral	66.6	50	75	85.71
Agree	33.3	50	25	14.3
Strongly Agree				
Un-answered	66.6	50	68.75	85.71

Evaluation of the Impact of the SBAR Tool on Satisfaction Between Perioperative Staff

To evaluate the impact of the standardized SBAR on satisfaction, the 'Satisfaction Survey' by Funk et al. (2016; see Appendix B) was administered to the OR and PACU RNs, CRNAs, and Anesthesiologists in the Perioperative area pre- and post-implementation using a paper and pen format. 17 postoperative RNs, 14 OR RNs, 3 CRNAs and 3 Anesthesiologists completed the pre-intervention survey (Table 3). The majority of Post op and OR RNs agreed that they are satisfied with the current handover. Most OR RNs agreed that they are satisfied with the surgery and anesthesia teams, while one-third of Anesthesiologists and Post op RNs disagreed that they have the opportunity to ask questions during the handoff. Most OR RNs agreed that the information about the patient problem is provided and approximately one-third of Anesthesiologists disagreed. All CRNAs agreed that the handoff is current, timely and efficient. The majority of Anesthesiologists disagreed that guidance on the patient's next postoperative course of treatment is provided. The majority of CRNAs, Anesthesiologists, Post op RNs and OR RNs agreed that overall, the handoff is comprehensive and clear, while one-third of Anesthesiologists disagreed.

Table 3*Satisfaction Survey Pre-Intervention*

Survey item	CRNAs %	Anesthesiologists %	Post op RNs %	OR RNs %
Satisfied with current handover				
Strongly agree	33.3	33.3	0	28.57
Agree	66.60	66.6	76.47	57.14
Disagree	0	0	23.53	14.3
Strongly disagree	0	0	0	0
Satisfied with surgery teams				
Strongly agree	33.3	0	0	21.43
Agree	66.6	66.6	62.5	78.57
Disagree	0	33.3	37.5	0
Strongly disagree	0	0	0	0
Satisfied with anesthesia teams				
Strongly agree	66.6	33.3	23.53	28.57
Agree	33.3	66.6	58.8	71.43
Disagree	0	0	17.64	0
Strongly disagree	0	0	0	0
Opportunity to ask questions				
Strongly agree	33.3	66.6	35.29	28.57
Agree	66.6	0	52.94	57.14
Disagree	0	33.3	5.88	7.14
Strongly disagree	0	0	5.88	7.14
Information about problem provided				
Strongly agree	33.30	33.30	06.25	21.43
Agree	66.6	33.3	50	71.43
Disagree	0	33.3	43.75	7.14
Strongly disagree	0	0	0	0
Currently, timely and efficient				
Strongly agree	0	33.3	0	21.43
Agree	100	0	68.75	57.14
Disagree	0	66.6	31.25	21.43
Strongly disagree	0	0	0	0
Guidance of postoperative course is provided				
Strongly agree	33.3	0	0	21.43
Agree	66.6	33.3	64.7	50
Disagree	0	66.6	29.41	28.57
Strongly disagree	0	0	5.88	0
Overall, handout is comprehensive and clear				
Strongly agree	33.3	0	0	21.43
Agree	66.6	66.6	58.82	64.28
Disagree	0	33.3	41.18	14.3
Strongly disagree	0	0	0	0

There were 16 postoperative RNs, 14 OR RNs, 3 CRNAs and 4 Anesthesiologists who completed the post-intervention satisfaction survey (see Table 4). All CRNAs strongly agreed that they are satisfied with the current handover and only few OR RNs strongly disagreed. Approximately one third of OR RNs strongly agreed that they are satisfied with surgery teams. Approximately half of Post op and OR RNs strongly agreed that they are satisfied with the anesthesia teams. The majority of the CRNAs and Anesthesiologists strongly agreed that they had opportunity to ask questions and only few OR RNs strongly disagreed. Approximately half of Post op and OR RNs agreed that the information about the patient problem was provided. Few OR RNs strongly disagreed that the current handover is current, timely and efficient. All CRNAs strongly agreed that the guidance of postoperative course is provided. All CRNAs and most Anesthesiologists strongly agreed that overall handout is comprehensive and clear, while few OR RNs strongly disagreed.

Table 4*Satisfaction Survey Post-Intervention*

Survey item	CRNAs %	Anesthesiologists %	Post op RNs %	OR RNs %
Satisfied with current handover				
Strongly agree	100	50	43.75	42.85
Agree		50	43.75	35.71
Disagree	0	0	12.5	14.3
Strongly disagree	0	0	0	7.14
Satisfied with surgery teams				
Strongly agree	100	50	50	38.46
Agree	0	50	50	46.15
Disagree	0	0	0	7.69
Strongly disagree	0	0	0	7.69
Satisfied with anesthesia teams				
Strongly agree	100	50	62.5	46.15
Agree		50	37.5	38.46
Disagree		0	0	7.69
Strongly disagree		0	0	7.69
Opportunity to ask questions				
Strongly agree	66.6	75	50	42.85
Agree	33.3	25	50	42.85
Disagree	0	0	0	7.14
Strongly disagree	0	0	0	7.14
Information about problem provided				
Strongly agree	100	50	37.5	35.71
Agree	0	50	62.5	57.14
Disagree	0	0	0	0
Strongly disagree	0	0	0	7.14
Currently, timely and efficient				
Strongly agree	100	50	50	28.57
Agree	0	50	50	50
Disagree	0	0	0	14.30
Strongly disagree	0	0	0	7.14
Guidance of postoperative course is provided				
Strongly agree	100	50	50	35.71
Agree	0	50	37.5	35.71
Disagree	0	0	12.5	14.3
Strongly disagree	0	0	0	7.14
Overall, handout is comprehensive and clear				
Strongly agree	100	75	43.75	35.71
Agree	0	25	43.75	35.71
Disagree	0	0	12.5	21.43
Strongly disagree				7.14

Unanticipated Limitations or Outcomes

The project was conducted for 2 weeks due to the COVID situation. Short term implementation can negatively impact the reliability of the outcome data and may also make the participants less familiar with the new tool. Change needs long term obligation by multiple people with the commitment to evaluate the landscape and initiate focusing on the problems that result from the evaluation (Harmon et al., 2018). Another unanticipated challenge that caused delay in project initiation was delay in approval from the IRB. In spite of willingness to actively participate in the project by the staff, due to the additional work that was required by the Perioperative staff in completing the SBAR, the number of SBARs completed were lower than expected; out of 100 expected, 64 SBARs were completed in 2 weeks period. The lower percentage of SBAR handoffs that were completed may be a reflection that there was not enough opportunity for the participants to become familiar with the tool to be competent in using the tool efficiently. Self-efficiency with using the tool can be achieved by getting familiar with the tool during less stressful situations (Coolen, et al., 2020).

Implications on Individuals, Communities, Institutions, and Systems

The positive findings from the project suggest that the single standardized SBAR is effective in improving communication and satisfaction among Perioperative staff. Each provider of the Perioperative area would benefit through a standardized communication tool by being able to remember and transfer complete and critical patient information to the next provider. The project promoted positive implications for the staff by preparing them with the ability to be thoroughly informed of the patient information by providing

the tool that they need to organize the information and to handover the care in an effective way that will promote transferring the information in detail during the communication between the providers. The perception of the importance and the critical need to use the SBAR was improved through the project and this insight can promote the use of this tool if implemented permanently at the site. Standardized handoff tools and uninterrupted communication can improve patient outcomes by decreasing the rate of adverse effects, communication errors, timely intervention and recovery of patients. The Joint Commission National Safety Goal 2 (02.03.01), recommends institutions follow effective communication protocols among care providers (The Joint Commission, 2021). Effective communication can be achieved through using standardized communication tool during the handoff. The Joint Commission National Safety Goal 3 (03.04.01), recommends maintaining and communicating precise information on patient medication (The Joint Commission, 2021). The standardized single SBAR tool provides information on important patient medication, including beta blocker and antibiotics that aligns with Joint Commission's patient safety goals for better patient outcome. The project promoted positive implication on the system by identifying the gap in practice and opens the opportunity for practice using the SBAR through quality improvement project that is consistent with Joint Commission's recommendation for standardized practice. The project promoted positive implication on the institution by promoting safe and quality patient care through the change process that is cost effective with minimal opportunity for medical errors and liability issues.

Potential Implications to Positive Social Change

Handoff using a standardized SBAR opens up the opportunity for effective communication and a safe work environment by improving quality of care. AACN's Healthy Work Environment (HWE) standard #1, skilled communication, recommends role modeling communication skills according to corresponding responsibilities and abilities (Harmon et al., 2018). Shifting the method of information communication from a non-standardized to standardized handoff methods impacts social change by bringing the change in the culture in transferring the patient responsibility. The SBAR may support nurses to make quick decisions, provide social capital and legitimacy to less-tenured nurses and emphasize leaning towards standardization in the nursing profession (Vardaman et al., 2012, as Cited in Shahid and Thomas, 2018). This project impacts social change by enabling providers to be competent in effective communication and focus on pertinent patient information with the use of standardized SBAR during handoff of care. The project assists the providers to be in supportive of Joint Commission's recommendation for standardized communication tool and to be able to function towards minimizing errors and support patient safety and improve quality of care. Working with the stakeholders to bring changes in the policies and procedures foster social change for better and safe interprofessional communication.

Recommendations

Standardized communication tool is a recommended tool for the handover of patient care from one care provider to the other. When clear and efficient interactive communication is needed, SBAR can be a suitable handoff tool that that is appropriate to

health care settings (muller et al., 2018). Absence of a standardized communication tool can lead to unsuccessful communication between the patient care units resulting in decreased satisfaction and communication. The gap in practice that this project addressed was the inadequate communication and poor satisfaction among Perioperative staff due to lack of a standardized communication tool in the Perioperative area. To further validate the benefits of SBAR related to patient safety and to foster the awareness of communication errors (muller et al., 2018), the recommendation is to conduct the project for 3 months to support the findings of improved communication and satisfaction among Perioperative staff. Future quality improvement initiatives can also focus on SBAR compliance rate to ensure the use of SBAR to the fullest extent.

Strengths and Limitations of the Project

Strengths

The strength of the DNP project included the successful implementation of the single standardized SBAR communication tool in the Perioperative area. The tool from the project was able to assist in transferring complete patient information from one area to other area of the Perioperative unit. SBAR use is important in efficient communication as its goal is to improve quality of service, decrease patient safety incidents, misinformation and confusion among nurses (Freitag, Carroll, 2011 as cited in Purwanza, et al., 2020). The feedback from the participants indicated the positive impact of the tool. The use of SBAR in the Anesthesia practice has signified that it can improve communication among the professionals, increase safety atmosphere and lower the incidence of mistakes. (Meester et al., 2013; Randmaa et al., 2014; Ramasubbu et al.,

2017, as cited in Dusse et al., 2021). Funk et al. (2016) suggested that utilization of SBAR provides organized handoff communication between the team members of the patient care team, improve verbal handover at the bedside, increase provider satisfaction and can lead to increased patient safety in the PACU without delaying length of handoff.

Another strength of the project was the participation of CRNAs and anesthesiologists along with OR and PACU RNs. The inclusion of different level of care providers in the project was beneficial in receiving perception about the tool from different viewpoints and evaluate the benefit of the tool. The residents and the nurses were included in the SBAR study as they are directly involved in sharing patient information during regular care and shifts changes in the pediatric ward (Coolen, et al., 2020). A third strength of the project was the support from all levels of leadership and the staff. The leadership of the hospital and the Perioperative area was supportive from the beginning of the project implementation plan. The willingness of the participants to support the project by taking extra time to document the standardized SBAR was one of the reasons for the success of the project. Total of 64 new standardized SBARs were completed in 2 weeks of implementation period which I believe was adequate in determining its benefit upon satisfaction and communication from OR to PACU. This project opens up the opportunity for similar research for longer duration to obtain broader view of the participants in similar settings. Dalky et al., (2020) advocate for studies in the future for additional verification of the practicality and efficiency of the tool comparing with other handoff tools with various health care settings.

Limitations

By understanding the limitations of the project, the validity of the project can be evaluated and recommendations can be made for future projects. The project was conducted for only 2 weeks as it was an additional work for the RNs. The RNs had to spend more of their time in documenting on the SBAR along with their required documentation on existing tool. The COVID situation also contributed to the limited time frame of the SBAR implementation. Frequent encouragement to participants was needed for them to complete the SBAR tool. Even though most of the information on the SBAR tool was appropriate for the project site Perioperative area, few suggestions and concerns were expressed from the participants. One of the concerns was that the font on the tool was too small for good visibility. One of the suggestions included addition of blood type and screen status on the tool to guide OR nurses. These suggestions and concerns are valid as these are critical patient information that need to be available prior to surgery. I will take these suggestions and concerns to the Perioperative leadership when disseminating the data of the project. The use of the SBAR tool can be enhanced by recognizing the professional's needs to utilize the tool efficiently and by understanding the perception of the responsibilities by various providers in the team (Coolen, et al., 2020). The handoff structure should be selected that is personalized to the patient condition, description of the PACU and individualized organizational environment (Wang, He, Feng, 2021).

Section 5: Dissemination Plan

The plans to disseminate this work to the institution that was experiencing the problem in practice includes sharing the findings of the project to the stakeholders who included the leadership of the perioperative area, the director of nursing education and the members of the Research Committee. The data findings will also be shared with the project participants during staff meetings after obtaining permission from the Research Committee. Similarly, I will be looking for the opportunity to disseminate the standardized handoff across the health system based on the site-specific requirements. The plan is also to present the project and the result in the form of poster presentation during the site research poster presentation week.

For the successful dissemination of this quality improvement project, the appropriate audience would include the stake holders and the end uses of the organization. The accomplishment of the practice implementation is dependent on support from the senior clinician (Bennetts et al., 2012, as cited in Curtis et al., 2017), and those who are affected by and those who are essential to play role on the intervention (Curtis et al., 2017). To obtain the approval for the permanent implementation of the modified tool at the site, I will be meeting with the leadership and will be presenting the project data in the leadership meeting. To gain support from the perioperative RNs, the end users of the tool, I will obtain any suggestions for a modified tool during staff meetings. Translation of research should include the end users and assessment of the research implementation (Curtis et al., 2017). Sufficient data from research studies is not available on single perioperative SBAR to evaluate its effectiveness on communication

and satisfaction. Hence, disseminating the project data to other perioperative areas of the health system would provide the opportunity to further evaluate the effectiveness of a single modified perioperative SBAR, which I am planning to accomplish through PowerPoint presentations during system research meetings.

Analysis of Self

Coming from a non-U.S. background and being able to study nursing from a bachelor degree to the Doctor of Nursing Practice from 2011-2021 in the United States is one of the greatest achievements that I can be proud of. I have been working as an RN for the last 22 years in various specialties from neonatal ICU through adult critical care to recovery room. In addition to working as a bedside RN, I have worked as a research RN for 3 years. The experience that I have acquired over the years has enabled me to provide quality of care specific to patient population that I have been serving. The nursing practice, research, and training are influenced by new simulation for provision of health care; the graduates should be aware of increasing methods, understand EBP being focused on quality and value, and embrace obligation to those that they provide care (Young et al., 2017). Working with leaders and administrators during clinical rotation has equipped me with knowledge and insights on leadership roles and responsibilities and also the leadership challenges especially during COVID pandemic. The clinical and theoretical knowledge that I gained over the years has enabled me to function as a competent and efficient leader and a practitioner. Experts have high level skills to put together practical and experience for pioneering resolutions to practical problems (Benner & Tanner, 1987; Benner et al., 2009, as cited in Thomas & Kellgren, 2017).

I am a pursuer of my goals no matter what it takes. For example, academic writing was difficult to accomplish when I was in undergraduate and graduate studies. However, during DNP program I learned the skill of using Standard Academic English. Having come from an educational background that is entirely different from the American education system, it took me extra time and effort to complete my assignments in a timely fashion. Even though constant writing and reviewing and rewriting was challenging, I was able to keep up with the challenge through the constructive criticism and support from my mentor. When I look back, I can definitely acknowledge that my academic life has been a great experience of overcoming challenges and gaining knowledge and confidence. The one regret that I have in my life is that I did not pursue any leadership roles even when the occasions came. I tried to focus on my studies more than finding the opportunity to get into the administrative or leadership roles because I did not want to spend my time learning something else while I had to invest so much of time in my studies. I am confident that I will be able to find an appropriate leadership jobs that is relevant to my academic and clinical knowledge and expertise. Health care leaders should understand and utilize the talents, knowledge, and proficiencies of DNP graduates (Kesten et al., 2021).

Analysis as Practitioner

The experience from participating in the DNP program has prepared me to be a practitioner where I can bring changes to practice through the EBP approach. The EBP approach aligns with DNP Essential III, which proposes that DNP graduates create evidence to lead practice improvements and care effects through their practice (American

Association of Colleges of Nursing [AACN], 2006). The competencies and skills that are learned while in the program has added to my clinical nurse specialist competencies to become a better practitioner. The DNP essentials are fundamental to all types of advanced practice roles based on the role that the DNP students are practicing (AACN, 2006). Following the steps of the Iowa Model of Evidence-Based Practice from identifying the practice issues and finding right solutions brings positive clinical outcomes. The DNP program prepares graduates to improve and review new practice methodologies on the basis of nursing theories (AACN, 2006).

Analysis as a Scholar

Through the DNP program, the graduates are prepared to evaluate current literature along with any other evidence to establish and implement best evidence for practice (AACN, 2006). The concepts learned from the DNP program has added the knowledge and experience to my existing education as clinical nurse specialist. As a DNP scholar, I am empowered through the education and the clinical experience to bring positive changes in the clinical as well as academic areas. The DNP program emphasizes the translation of scholarship to improve patient outcomes (Smith et al., 2021). The combined experience is much needed to succeed as a scholar in the current health system meeting the complex demands. Knowledge and inquiry are the symbols of doctoral education (AACN, 2006).

Analysis as Project Manager

To initiate and complete the project as a project manager was possible only through the support of the participants and the leadership of the site. Constant

communication with participants of the perioperative area was needed to motivate and to succeed as a project manager. Theoretical and clinical knowledge and experience was important to convince the participants and the stake holders that change was needed to improve satisfaction and communication. As a project manager, I was able to gain insights on diverse perspectives from different levels of providers during the project. The feedback from the participants provided the opportunity to view their perceptions and evaluate the need for further clarification on the modification of the tool to bring positive change in practice. Based on the perceptions of the recipients, the study aimed at assessing the new handover procedure (Fabila et al., 2016).

Even though the role as a project manager was exciting at the initial stage, this experience offered me with opportunities to go through various levels of experience from challenging to rewarding. Ultimately, my goal as a project manager was to find a gap in the practice, look for appropriate intervention, implement a practice change and evaluate the outcome, which I was able to accomplish through the project. This scholarly journey has prepared me to take on bigger challenges in the future and be able to find appropriate solutions through application of scholarship focusing on EBP and impact the health care at a higher level. My next goal is to find opportunities where I can utilize my knowledge and skills and bring positive impact in the health care whether it be teaching, research or administration.

Summary

Efficient and uninterrupted communication among health care providers is a fundamental requirement to prevent provider induced errors and to ensure safe patient

care. The need of effective communication is more critical when multiple providers are involved in the care of a same patient. Even though many communication tools are available, there is no one tool that is available that fits all patient care settings. Hence the purpose of this quality improvement project was to evaluate the impact of a single SBAR in the perioperative area and to evaluate the impact on perceived communication and satisfaction among perioperative staff. The DNP project was implemented on the basis of the Iowa model of EBP, which requires various stages of application in the practice from identifying the problem to evaluating the effect and disseminating the results. Findings from descriptive analysis through comparison of survey results suggest that there was a positive impact from the single perioperative SBAR. Based on the result of this project, it is suggested that use of single SBAR in the perioperative area will improve perceived communication and satisfaction between OR nurses/anesthesiologists/CRNAs and PACU nurses.

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Appendix A: Communication Survey

Handoff Pre/Post-intervention survey

1. Identify your role at the Ambulatory Surgery Center (ASC). Please circle response
 - a. Pre-op RN
 - b. OR RN
 - c. Post-op RN
 - d. CRNA
 - e. Anesthesiologist
2. How long have you been in this role?
 - a. Less than 1 year
 - b. At least a year but less than 3 years
 - c. At least 3 years but less than 6 years
 - d. At least 6 years but less than 10 years
 - e. 10 years or more
3. Have you ever used a standardized guideline or form for patient handoffs anywhere you've worked?
 - a. Yes
 - b. No
4. If you answered yes to number 3, do you believe the guideline or form improved communication between providers?
 - a. Yes

b. No

c. Not Applicable

For the next section of questions please circle the response which corresponds with your level of agreement.

5. I believe I give a complete handoff report when transferring patients to the next area of care.
a. Strongly Disagree b. Disagree c. Neutral d. Agree e. Strongly Agree
6. The use of a standardized handoff form can decrease the amount of communication errors between the pre-op nurse, the circulating RN, and the CRNA
a. Strongly Disagree b. Disagree c. Neutral d. Agree e. Strongly Agree
7. The use of a standardized handoff form can decrease the amount of communication errors between the OR nurse and the PACU nurse.
a. Strongly Disagree b. Disagree c. Neutral d. Agree e. Strongly Agree
8. The use of a standardized handoff form can decrease the amount of communication errors between the anesthesia provider and the PACU nurse.
a. Strongly Disagree b. Disagree c. Neutral d. Agree e. Strongly Agree
9. The use of a standardized handoff form can decrease interruptions during handoff report.
a. Strongly Disagree b. Disagree c. Neutral d. Agree e. Strongly Agree
10. Implementing the use of a standardized handoff form can improve the efficiency and clarity of communication in our ASC.

a. Strongly Disagree b. Disagree c. Neutral d. Agree e. Strongly Agree

11. Use of a standardized handoff form can decrease omission of pertinent patient information during handoff report.

a. Strongly Disagree b. Disagree c. Neutral d. Agree e. Strongly Agree

12. I am usually satisfied with patient handoff report between caregivers.

a. Strongly Disagree b. Disagree c. Neutral d. Agree e. Strongly Agree

13. The current handoff done at this ASC meets my needs to continue caring for the patient.

a. Strongly Disagree b. Disagree c. Neutral d. Agree e. Strongly Agree

14. The current handoff process at this ASC occurs efficiently and without interruptions.

a. Strongly Disagree b. Disagree c. Neutral d. Agree e. Strongly Agree

15. I am willing to use a standardized handoff form to improve communication, efficiency and patient safety at this ASC.

a. Strongly Disagree b. Disagree c. Neutral d. Agree e. Strongly Agree

Obtained from Tune, B. (2019). Perioperative Patient Safety Handoff Guideline

Karen Wolaridge Touro Nevada University DNP Project III DNP 767

Appendix B: Provider Satisfaction Survey

Provider Satisfaction Survey-pre-implementation of SBAR

	strongly agree	agree	disagree	strongly disagree	not applicable
Satisfied with current handover					
Satisfied with surgery teams					
Satisfied with anesthesia teams					
Opportunity to ask questions					
Information about problems is provided					
Currently timely and efficient					
Guidance of postoperative course is provided					
Overall, handout is comprehensive and clear					

Obtained from Funk, E., Taicher, B., Thompson, J., Iannello, K., Morgan, B., & Hawks,

S. (2016). Structured Handover in the Pediatric Postanesthesia Care Unit. *Journal of PeriAnesthesia Nursing*, 31(1), 63–72. <https://doi->

[org.ezp.waldenulibrary.org/10.1016/j.jopan.2014.07.015](https://doi-org.ezp.waldenulibrary.org/10.1016/j.jopan.2014.07.015)

Appendix C: Standardized SBAR

Parkwest MEDICAL CENTER
 Treated Well, Well Treated

S	Patient ID Label Here		Surgeon: Procedure:		Procedure:	
			NPO Status: Ht/Wt: Site Marked:		Anesthesia Type: General – Epidural – Spinal – Local – MAC Other:	
B	History: (circle)	Neuro – Seizures – DM – Cardiac Dz – Dysrhythmia – HTN – Resp Dz – Asthma – Renal Dz – Liver Dz – Malignant Hyperthermia				
	Other:					
	Allergies:					
	Isolation (circle)	MRSA – VRE – TB – Other:				
A	Cultural/Interpreter:	/ Personal Belongings:		Given to:		
	Family Contact Info:	Location: Waiting Room – Unavailable	Contact #:			
A	T/HR/BP/RR/SaO2:	ASU →	PSA →	OR → PACU/ASU/CCU		
	Skin:					
	Neuro:					
	Pulmonary:					
	Cardio/Rhythm/PV:					
	Gastrointestinal:					
	GU/Cath/Drains:			Circle: Foley – CBI – JPx – Hvac – Other:		
	Dressings:					
	Musculoskeletal:					
	Pain:					
	Epidural Block:					
	IV Site & IVE LTC:	Site: LTC:	Site: LTC:	Site: LTC:		
	Lines (CVL, A-Line):					
	Intake/Output & EBL:	I= O=	I= O=	I= O=	EBL:	
	Medx/Reversal Given:					
Infusions:						
Blood Given/Needed Abn Labs & Last BS:	Given: Needs: BS=	Given: Needs: BS=	Given: Needs: BS=			
R	BetaBlocker Protocol:	Yes No N/A	Yes No N/A	Yes No N/A	Yes No N/A	
	DVT Protocol:	Yes No N/A	Yes No N/A	Yes No N/A	Yes No N/A	
	Other:					
	Special Equipment: Acute Orders:					
Unexpected Events:						
Post Op Destination:	ASU CCU Floor	ASU CCU Floor	ASU#	CCU#	Floor Room#	
Medx (Antibx) needed:						

Courtesy of Parkwest Medical Center. Used with permission.

Obtained from: SampleTools.pdf (n.d). Obtained from:

<https://pdf4pro.com/view/handout-toolkit-07-washington-patient-safety-1a7229.html>

on 12/20/20

Appendix D: Permission Letter to Reuse Satisfaction Survey

From: Emily Funk <XXX@XXX>

Subject: Re: Looking for permission to reuse satisfaction survey

Date: December 16, 2020 at 1:48:25 PM EST

To: salomy salom < XXX@XXX >

Hello Salomy,

Thank you for your interest in this project and topic.

I developed the survey with my project team in October 2013. Please note that it has NOT been tested for validity or reliability.

I am glad to give you permission to use the survey with the request to please cite our article when using the survey - Funk, E., Taicher, B., Thompson, J., Iannello, K., Morgan, B., & Hawks, S. (2016). Structured handover in the pediatric postanesthesia care unit. *Journal of PeriAnesthesia Nursing, 31*(1), 63-72.

Best wishes,

Emily Funk

Emily M. Funk DNP, CRNA

Assistant Clinical Professor

Duke University School of Nursing

Nurse Anesthesia Program

DUMC 3322, 307 Trent Drive, Durham, North Carolina 27710

From: salomy salom <XXX@XXX >

Date: Sunday, December 13, 2020 at 9:06 PM

To: Emily Funk <XXX@XXX >

Cc: salomy <XXX@XXX >

Subject: Looking for permission to reuse satisfaction survey

Good evening Dr. Funk, how are you?

My name is Salomy Abraham, a DNP student from Walden University. I was looking for a satisfaction survey for my project and I found the survey in your paper from 2016 which I have cited below. The survey that is used in the paper is very appropriate for my project and I am hoping to be able to use it for my project. I am writing this email to you to request your permission as I need to obtain permission to reuse the survey. I see that you are the first author along with other authors and I am not sure who has the right to give me the permission. If it is not a problem, please let me know who else I should contact for permission. It will be a great help if you are willing to help me out with my need. My contact number is 516-543-9464 and my email is salomypa@yahoo.com

I will write an official letter for permission once I know who I should contact for permission.

Thank you for your time

Sincerely

Salomy

The Citation for the paper is as below;

Funk, E., Taicher, B., Thompson, J., Iannello, K., Morgan, B., & Hawks, S. (2016). Structured Handover in the Pediatric Postanesthesia Care Unit. *Journal of PeriAnesthesia Nursing*, 31(1), 63–72. <https://doi-org.ezp.waldenulibrary.org/10.1016/j.jopan.2014.07.015>