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Best Practice Recommendation on Anesthesia Involvement in Preoperative Interdisciplinary Rounding on Surgical Inpatients

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BEST PRACTICE RECOMMENDATION ON ANESTHESIA INVOLVEMENT IN PREOPERATIVE INTERDISCIPLINARY ROUNDING ON SURGICAL INPATIENTS

by

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A Doctoral Project
Submitted to the Graduate School,
the College of Nursing and Health Professions
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ABSTRACT

Healthcare professionals are always seeking methods to improve patient care and patient outcomes and increase efficiency while reducing errors. By improving communication through the implementation of interdisciplinary communication, improved care quality, fewer variations in care, and enhanced collaboration among the healthcare team may be an outcome (Hoke & Falk, 2012). While anesthesia is involved in patient care throughout the perioperative period, their expertise may impact the patient's outcome and quality of surgical care. With the involvement of anesthesia in interdisciplinary rounding, the patient may be optimized, and the plan of care may be more appropriate and individualized.

The potential for poor outcomes, longer hospital admissions, and postoperative complications may be higher without anesthesia involvement in the plan of care before surgery. The project focused on the advantages and disadvantages of preoperative interdisciplinary rounding on surgical patients and how higher-quality decision-making is established by anesthesia involvement in these interdisciplinary rounds (Sroka et al., 2018). An interdisciplinary rounding tool was chosen from evidence-based practice and assessed by a panel of experts in a survey. The population chosen as the panel of experts were also asked to assess the best practice recommendation on anesthesia involvement in interdisciplinary rounding on surgical inpatients preoperatively.This project's goal was to establish a best practice recommendation on anesthesia involvement in interdisciplinary rounding on surgical inpatients preoperatively with the implementation of a rounding tool. The survey consisted of 7 questions about the advantages and disadvantages of anesthesia involvement in interdisciplinary care and the effectiveness of the rounding tool

implementation. The panel of experts agreed that the implementation of this best practice recommendation would improve patient quality of care throughout the entire perioperative period.

ACKNOWLEDGMENTS

I would like to thank Dr. Nina McLain for her help and constant guidance with this project. I would like to thank Dr. Mary Jane Collins, Dr. Stephanie Parks, and Dr. Michong Rayborn for their help and support throughout this project's process.

DEDICATION

I would like to dedicate this project to my family and dogs, Roxy and Maverick. With your support, love, and encouragement during this journey, it has made it possible to complete this project and this road to success. I owe all of my success to my support system.

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LIST OF ABBREVIATIONS

CRNA	Certified Registered Nurse Anesthetist
CCU	Critical Care Unit
CHF	Congestive Heart Failure
FEV	Forced Expiratory Time
HRC	High-risk Committee
ICU	Intensive Care Unit
IRB	International Board Review
OR	Operating Room
OT	Occupational Therapy
PCP	Primary Care Physician
PFT	Pulmonary Function Testing
PICU	Pediatric Intensive Care Unit
PT	Physical Therapy
SIBR	Structured Interdisciplinary Bedside Rounds
USM	The University of Southern Mississippi

CHAPTER I -INTRODUCTION

Background and Significance

Interdisciplinary rounding can be defined as a model of patient-centered care involving members of different disciplines, who meet to share clinical expertise and develop an appropriate plan of care for each patient. Interdisciplinary rounds provide patients with a safe and efficient plan of care each day. Each plan includes, but is not limited to, care priorities, specific treatments, daily goals, and a discharge plan. Interdisciplinary rounding establishes better communication among each discipline and improved collaboration of the care team ("How-to Guide: Multidisciplinary Rounds," 2015). Surgical care for patients that are considered high quality must be appropriate and individualized, which is done by including input from the entire healthcare team. Anesthesia is involved in the patient's care throughout the entire perioperative period. Anesthesia experts are able to offer expertise and insight specific to each patient's upcoming surgical care and care leading up to surgery. The surgical approach, outcomes, and quality can be improved by input from an anesthesia expert's clinical knowledge for each patient and their comorbidities.

Purpose of Project

The lack of anesthesia involvement in interdisciplinary rounding on the surgical patient preoperatively potentially leads to poor outcomes, longer hospital stays, and postoperative complications. A need for better interdisciplinary communication between nursing and anesthesia has been identified in order to provide the patient with sound medical care (Hoke & Falk, 2012). The goal of this project was to assess the advantages and disadvantages of preoperative interdisciplinary rounding on inpatient surgical

patients and how the involvement of anesthesia leads to a higher quality of decision making and a more thorough preoperative assessment while providing recommendations for operative and postoperative care (Sroka et al., 2018).

Problem Description

Fragmented and substandard quality of care is provided when decisions about patient care are made without key provider input ("How-to Guide: Multidisciplinary Rounds," 2015). New methods of improving efficiency, patient outcomes and services, and reducing errors are consistently being sought out by medical professionals. Implementation of interdisciplinary rounding challenges providers because it is a time-consuming process (Hoke & Falk, 2012). Surgical patients largely contribute to a hospital's revenue and profits. Once the need for surgery is established, an anesthesia provider must assess the patient and identify the surgical risks. Most often, the anesthesia provider or the nurse practitioner are the medical professionals that identify appropriate pre-anesthesia care during the preoperative period. Pertinent patient information is often missed during the preoperative phase, causing provider burden and potentially poorer outcomes during the perioperative period for the patient. As a patient, the preoperative care period should involve care coordination and explanation of the perioperative journey. Providers in each discipline voice the need for coordination of care among interprofessional relationships during the perioperative period. The majority of surgical errors take place before or after the patient arrives in the operating room and identifies the need for improved patient care in the preoperative and postoperative areas. Providers described interprofessional collaboration during the preoperative setting is lacking in

communication and coordination between the primary care physician (PCP), surgeon, and anesthesiologist (Malley & Young, 2016).

Rounding with an interdisciplinary approach for surgical patients has only gained popularity recently, although it has been practiced far before it was discovered to be useful in this population. The concept of *rounds* can be traced back to Hippocrates using the methodology for instructing trainees to observe and study patients, instead of only observing and studying the disease. The concept of interdisciplinary rounding has proved to be beneficial in numerous inpatient settings. Specifically, in trauma, orthopedic, cardiac surgery, and critical care units, interdisciplinary rounding has shown measurable outcomes including shorter hospital stays, decreased morbidity and mortality, decreased pulmonary complications (Counihan et al., 2014).

Review of Evidence

The lack of anesthesia involvement in interdisciplinary rounding on the surgical inpatient is important to assess and address because, as stated earlier, the lack of anesthesia involvement in interdisciplinary rounding on surgical inpatients can lead to poor outcomes, longer hospital stays, and postoperative complications. According to Cooper et al. (2015), one important contribution that anesthesia providers can provide during interdisciplinary rounding on surgical inpatients would be determining if the surgery itself and if the care leading up to the surgery is appropriate. With the population aging and increasing healthcare costs, it is important that anesthesia providers and surgeons play a key role in ensuring that the pre-surgical care is provided in a valuable manner by critical decision-making. Another important key player in high-quality surgical decision-making is the patient. Evidence shows that patients who are involved in

their treatment plan are more likely to have an active role in behaviors that will result in a surgical outcome that is positive and are more likely to choose not to have a surgery that is inappropriate (Cooper et al., 2015). To perform a high-quality surgical procedure, the risks and benefits must be weighed. The benefits must outweigh the risk sufficiently in order to consider the procedure worth doing (Cooper et al., 2015). A thorough evaluation of the risks and benefits of surgical inpatient procedures can be performed by the interdisciplinary team. The anesthesia provider could potentially be able to identify specific factors about a patient that others on the team may not, which is why they are an important component of the interdisciplinary team.

Interdisciplinary Care

In the Intensive Care Unit (ICU) and Critical Care Unit (CCU), an interdisciplinary team can be made up of medical professionals from numerous specialties. Physicians, registered nurses, case management, pharmacists, chaplains, advanced practice providers, physical therapy (PT) and occupational therapy (OT), family members, and others from different areas of expertise may be involved in interdisciplinary care. Each member of the team contributes to improved patient care and outcomes by bringing an array of information, training, and technical skills to the team (Friede & Sharma, 2018).

Direct Communication

According to the Joint Commission, communication failures are often the leading cause of sentinel events (Fogg et al., 2017). Clear, direct, and transparent communication between team members is a primary goal of interdisciplinary rounding in the Intensive Care Unit (ICU). Interdisciplinary rounding begins at a scheduled time in the ICU for

team members to meet and discuss, review and develop a care plan for the patients. Direct communication reduces delays and/or missed communication among healthcare providers. Preventable harm to patients is greatly eliminated by proper communication among healthcare providers (Friede & Sharma, 2018). Many tools have been created to aid in direct communication during interdisciplinary rounding. Situation-Background-Assessment-Recommendation (SBAR) protocols have established a shared understanding of the patient's plan of care and improved situational awareness. Hospitals can be described as a place where there is an extensive amount of information and a dynamic work environment. Improvement in communication is important for success because studies continue to find that communication in hospitals is problematic (Townsend-Gervis et al., 2014). Good communication prevents avoidable mistakes in patient care. The opinion of one medical doctor states:

> Communication is essential in any field. In medicine, it is particularly important because you delegate work on behalf of the patient. You have to be clear on your assessments and management plan, and this has to be laid out very carefully to the patient, your colleagues, to nursing staff, and aides who are participating in care. (Lancaster et al., 2015)

Active communication is the most successful implementation for high-risk patients preoperatively. Communication, for this population, is especially important between the anesthesia provider and the surgeon (Sroka et al., 2018).

Daily Plan of Care

A daily plan of care for ICU patients is usually established through interdisciplinary rounding that is held in the morning. According to Friede and Sharma

(2018), there is no structured interdisciplinary tool that is most optimal, but it is considered best practice for the collaboration of all of the patient care members involved in interdisciplinary rounds to meet at a set time regularly. Greater participation of team members and rounding effectiveness are directly correlated with a concrete start time. Some important aspects of daily interdisciplinary rounds include a systematic approach to patient information, formation of a plan of care, ordered team player input, and a daily plan of care summary (Friede & Sharma, 2018).

The Interdisciplinary Team

The interdisciplinary team members vary from each facility. Lopez et al. (2019) noted that the members of a pediatric intensive care unit (PICU) interdisciplinary rounds included lead nurses, lead respiratory care practitioners, attending physicians, and fellows. Sroka et al. (2018) noted that a high-risk committee (HRC) was formed to assess surgical appropriateness and optimize perioperative care. The HRC was anesthesiologist-led and considered a multidisciplinary approach for reviewing high-risk patients at a cancer center. The HRC team considered a surgeon, medical director, chair of surgical oncology, anesthesiology, risk management, critical care physician, palliative care, ethics officer, and consultants (cardiologist, pulmonologist, medical oncologist, and other specialties). Counihan et al. (2016) described the multidisciplinary group as essential members of the patient care team. The patient care team included a chairman of surgery, charge nurse, hospital quality improvement representative, electronic health records and clinical documentation/coding specialist, surgical resident, perioperative nursing leadership, pharmacist, and surgical case manager. According to Townsend-Gervis et al. (2014), the staff that attending interdisciplinary rounds included a charge nurse, staff

nurse, dietitians, pharmacists, social workers, and case managers. Identifying the members of common interdisciplinary teams clearly shows that anesthesia providers are often left out of interdisciplinary rounding. Evidence shows that the implementation of interdisciplinary rounding decreases surgical patient's length of stay and complications while improving patient safety. This tool is effective in improving surgical care (Counihan et al., 2016). Anesthesia providers play an important role in the surgical inpatient's care throughout the entire perioperative period. With anesthesia involvement in preoperative interdisciplinary rounding for the surgical inpatient, an even more refined preoperative assessment could be performed while providing recommendations for the daily plan of care and aiding the other team members in the treatment plan leading up to the surgical procedure.

Preoperative Inpatient Rounding

Many patients who are undergoing surgery during their hospital stay are not without comorbidities and they may pose a challenge for the surgical team. The surgical team must identify the best treatment plan for each patient and ensure they are optimized before they have surgery. A few chronic conditions that must be taken into consideration who formulating a preoperative plan, for an anesthesia provider, include asthma, heart failure, and diabetes mellitus. These chronic conditions present the anesthesia provider with challenges, especially if these conditions are not well controlled going into surgery.

Asthma Preoperative Care

Asthma is a chronic inflammatory disorder that may present with an airway obstruction, inflammation, and hyper-responsiveness. Some symptoms that present with this disorder include coughing, wheezing, shortness of breath, and chest tightness.

Several factors may trigger an asthma attack including recent respiratory infections, animal dander, dust mites, mold, pollen, cigarette smoke, temperature changes, exercise, and anxiety. Even when asymptomatic, a child with asthma is at an increased risk for perioperative morbidity from a bronchospasm or anaphylaxis (Bosenberg, 2013).

A preoperative evaluation is paramount. It is important to include questions in the preoperative evaluation about the severity of the disease, how well the symptoms are controlled, what medications are taken for asthma, previous anesthesia history, presence of allergies, coughing, sputum production, and level of activity. Allergies are important to assess due to the increased risk of anaphylaxis in the operating room (OR) from allergens including muscle relaxants, antibiotics, or latex. Symptoms should be optimally controlled before elective surgery (Bosenberg, 2013). Patients who are inadequately optimized may develop post-operative pulmonary complications which may further result in right heart failure or prolonged mechanical ventilation (Azhar, 2015).

An anesthesia provider is an important asset in interdisciplinary rounds for these patients preoperatively because they are able to identify potentially detrimental factors about the patient that might result in a poor surgical outcome and provide expert treatment suggestions to decrease the risk of these poor outcomes. Azhar (2015) states that all patients should be assessed for symptoms of pulmonary infections and aggressive antibiotic therapy should be initiated by the healthcare provider. Pulmonary function tests may be needed to assess for small airway obstruction related to asthma. Small airway obstructions are identified specifically through spirometry and peak expiratory flow rate (Azhar, 2015). According to Azhar (2015), if a patient has a pre-operative forced expiratory time (FEV) at the end of the first second of forced expiratory is less than 80%,

oral steroids are needed. The anesthetist may identify the need for hydration in order to mobilize sputum preoperatively, in addition to chest physiotherapy and postural drainage. Beta 2 agonists and other nebulizers or corticosteroids may be needed to treat and optimize an asthma patient preoperatively. For example, an asthmatic patient who has suddenly had a worsening in symptoms is required to be treated with a long-acting beta 2 agonist and corticosteroids. A short course of oral corticosteroids for 3 to 5 days preoperatively may be considered for surgery, with a short-acting beta 2 agonist administered just prior to surgery (Azhar, 2015). Anesthesia providers bring a critical set of skills and experiences to the interdisciplinary team and are able to provide the patient with preoperative care that will maximally optimize the patient to ensure better surgical outcomes and fewer postoperative pulmonary complications.

Heart Failure Preoperative Care

Surgical in patients suffering from heart failure may present with signs of peripheral edema, jugular vein distention, rales, third heart sounds, and a chest x-ray may show signs of pulmonary edema. Any patient with these symptoms or a history of heart failure is at an increased risk for perioperative complications (Fleisher et al., 2014). According to Fleisher et al. (2014), the number of preoperative assessments of patients with heart failure is continuing to increase due to the aging of the population and the newer cardiovascular therapies that are emerging resulting in patients living longer with heart failure. A large impact on postoperative death of surgical in patients with heart failure includes the stability of the disease. Patients with heart failure have an increased likelihood of longer hospital stays, readmission to the hospital, and long-term mortality rates (Fleisher et al., 2014). Patients undergoing cardiac surgery who have heart failure

with end-organ dysfunction should be optimized. The preoperative period is a window of opportunity for optimization, but few cardiologists recognize the preoperative period in this way (Pichette et al., 2017). Preoperatively, the anesthesia provider should assess for anemia, renal function, fluid and electrolytes, liver function, nutritional status, and medications. Literature suggests that perioperative optimization often is care given by anesthesia and reveals that interventions in the intra- and post-operative periods may be too late if the patient is already in a decompensated state (Pichette et al., 2017). With the involvement of anesthesia in interdisciplinary rounding on these patients, the right assessments may be conducted, and optimization may be obtained so the patient is not in a decompensated state upon arrival to the OR.

Diabetes Mellitus Preoperative Care

Diabetes Mellitus can cause multiple complications including gastroparesis, coronary disease, cardiac autonomic neuropathy, chronic kidney disease, and other diseases. The anesthesia provider should evaluate the diabetic patient's glycemic control and blood glucose trends while being an inpatient. Fasting, stress, infection, and glucocorticoids can all cause fluctuations in blood glucose. Gastroparesis is an important complication of diabetes mellitus to assess because it increases the risk of pulmonary aspiration on induction. With the proper assessment of gastroparesis preoperatively, the anesthesia provider can prepare for a rapid sequence induction to prevent pulmonary aspiration (Cheisson et al., 2018). It is important for the anesthesia provider to be involved with a diabetic patients' preoperative care so that the proper monitoring of blood glucose is done preoperatively, and the proper anesthesia plan can be formulated to prevent perioperative complications.

Postoperative Outcomes

According to Counihan et al. (2014), several measurable postoperative outcomes in cardiac surgery, as well as in critical care units and trauma have been improved by the implementation of interdisciplinary rounding. For example, a patient's length of stay has been shortened, morbidity and mortality have improved, and fever ventilator-associated infections and acute respiratory distress syndrome have been reported (Counihan et al., 2014). According to Azhar (2015), it is important for asthmatic patients to have a detailed preoperative assessment and treatment that can potentially decrease the chance of postoperative pulmonary complications. Prolonged mechanical ventilation is an example of a post-operative pulmonary complication. Post-operative pulmonary complications may lead to a prolonged stay in the hospital and increased monetary considerations (Azhar, 2015).

Advantages and Disadvantages

Hoke and Falk (2012) state that interdisciplinary rounding does not come without challenges. Providers need convincing that interdisciplinary rounding is worth their time. Once the providers' perspective changes and they realize that interdisciplinary rounds are beneficial, it will become obvious that the patient's care is positively influenced by interdisciplinary rounds (Hoke & Falk, 2012). Many hospitals have reported numerous positive impacts and outcomes from implementing interdisciplinary rounding. These advantages included a reduction in errors, days on ventilators and with central lines, as well as an improved communication among caregivers and an increase in collaboration and satisfaction among the interdisciplinary team members ("How-to Guide: Multidisciplinary Rounds," 2015).

Tool Development

The tool chosen for this project was the structured interdisciplinary bedside rounds (SIBR) (Lopez et al., 2019). An illustration of SIBR in a Pediatric ICU can be found in Figure 1. With this tool, the rounds are structured, and a specific guide is followed by multiple participants. Although this tool does not specifically involve anesthesia, the addition of an anesthesia provider could potentially offer expertise on patient care before surgical procedures. According to Lopez et al. (2019), lapses in communication are common in the ICU causing potential errors, patient care delays, and decreased staff and patient satisfaction. The implementation of this tool in a Pediatric ICU improved unit workflow, increased patient satisfaction, and positively impacted resident learning. One important factor of this tool is the input of the Respiratory Care Practitioner, who reports on a ventilator or nebulizer needs (Lopez et al., 2019). The Respiratory Care Practitioner is an important team member for the anesthesia provider to collaborate with during interdisciplinary rounds in order to optimize the patient's respiratory status prior to surgery. SIBR ensures accurate and timely communication by allowing collaboration among team members and promotes situational awareness that ensures the delivery of care is high quality (Lopez et al., 2019). Counihan et al. (2014) state that all front-line stakeholders in the delivery of patient care are involved in interdisciplinary rounding. Anesthesia is a key member of the healthcare team for a surgical patient and could potentially improve surgical outcomes if involved in these patient's interdisciplinary rounds.

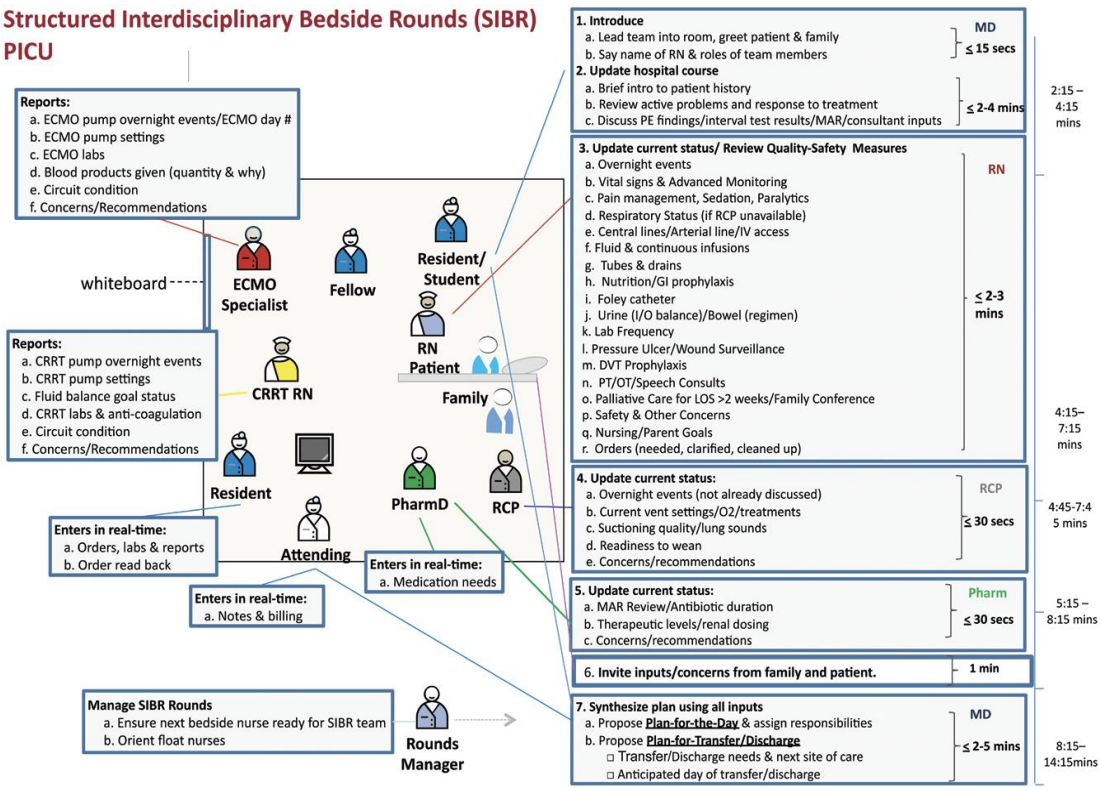

Figure 1. Structured Interdisciplinary Bedside Rounding Tool

(Lopez et al., 2019).

Doctor of Nursing Practice Essentials

As referenced in Appendix A, this Doctor of Nursing Practice (DNP) project fulfilled several DNP Essentials created by the American Association of Colleges of Nursing (AACN). These foundational competencies provide a core for all advanced practice nursing roles and prepare the DNP graduate for a variety of those roles. These DNP Essentials must be present in DNP programs and set forth the elements that are required for the curriculums ("The Essentials of Doctoral Education for Advanced Nursing Practice," 2006).

Theoretical and Conceptual Framework

Kurt Lewin's Change Management Model is the theoretical framework that was applied to this project. According to *Lewin's Change Management Model* (n.d.), change occurs in three steps, unfreezing, changing, and refreezing. To begin a successful change, one must understand why a change is needed. Unfreezing is used to explain the process of motivating and learning about what needs to be changed. Once the need for the change is accepted, the change stage may begin. This stage is when uncertainty is resolved and new methods of doing things are assessed. Lastly, refreezing must take place which is explained by changes taking shape and change being anchored into the culture ("Lewin's Change Management Model," n.d.). When applied to this project, the change would be to involve anesthesia in interdisciplinary rounds on the surgical inpatient. First, one must be made aware of how this will impact patient surgical outcomes and quality of care. Next, one must implement anesthesia involvement in these rounds. Last, one must support and ensure anesthesia involvement in these rounds is sustained and evaluate how they affect the patient's surgical outcomes and quality of care.

Summary

For this project, Chapter I has outlined the background, significance, purpose, theoretical framework, and review of evidence. A best practice recommendation for anesthesia involvement in interdisciplinary rounding for the surgical inpatient has been explained in this chapter. This best practice recommendation is based on the review of evidence on interdisciplinary rounding in numerous patient care settings. In order to have completed this project, specific methods used are discussed in the next chapter.

CHAPTER II -METHODS

Context

The current best practice investigation regarding anesthesia involvement in preoperative interdisciplinary rounding on inpatient surgical patients has been conducted at a clinical affiliate hospital in Mississippi. Prior to this step, The University of Southern Mississippi Institutional Review Board (IRB) approval (Protocol # 20-427) and approval from the chief CRNA at the Mississippi hospital was obtained. The hospital is a 208-bed non-profit healthcare organization. The purpose of this chapter was to discuss the method chosen to assess the advantages and disadvantages of preoperative interdisciplinary rounding on surgical inpatients and how the involvement of anesthesia leads to a higher quality of decision making and a more thorough preoperative assessment while providing recommendations for operative and postoperative care (Sroka et al., 2018). The hospital does not have a standardized interdisciplinary rounding tool with anesthesia involved for patients before surgery. The need has been identified, and a best practice recommendation and interdisciplinary rounding tool have been identified through a thorough evaluation of current evidence-based practice. A survey was conducted to collect data to evaluate perceptions on the advantages and disadvantages of anesthesia involvement in interdisciplinary rounding preoperatively on surgical inpatients.

Target Population

For this project, the target population was anesthesia providers. A panel of experts was established to evaluate the best practice recommendation and provide feedback through a survey. The panel of experts included Student Registered Nurse Anesthetists and Certified Registered Nurse Anesthetists. Each of these experts provided insight into

the topic of interest with valuable knowledge from their roles in health care. The survey assessed the panel of experts' opinions on the best practice recommendation's advantages and disadvantages.

Data Collection and Analysis

The SIBR interdisciplinary rounding tool was presented to the panel of experts with a one-page survey regarding the tool. The survey was developed using the USM Qualtrics® Survey system to allow for anonymous responses from the panel of experts. The survey clearly stated at the top that participation is voluntary, anonymous and there are no repercussions for non-participation. A standard online consent was required before the participant could begin the survey in the system. The data was collected, reviewed, and analyzed. Descriptive statistics were reported and qualitative findings such as specific comments were conveyed. Data were reported as percentages and group findings. Where necessary, p-values were reported using the students' T-test. Based on the data collected from the survey, a best practice recommendation was developed based on feedback from the panel of experts. The best practice policy has been finalized and approved by the DNP project committee. The recommendation has been submitted to the Chief CRNA to be implemented into practice. The results of the survey were stored in report form on a password-protected computer and once the project was completed, the file was deleted, and the trash can was emptied. The survey that was used is located below in Figure 2.

Figure 2. Qualtrics Survey for Project

Presentation and Dissemination

This project was disseminated during DNP Scholarship Day presented by the School of Leadership and Advanced Nursing Practice at The University of Southern Mississippi on February 26, 2021. The results were shared with the doctoral committee,

nursing faculty and students at the DNP Scholarship Day. The DNP Scholarship Day presentation was available to the faculty, students, and public via ZOOM.

Summary

In summary, after IRB and clinical site approval, a survey about the advantages and disadvantages of implementing an interdisciplinary rounding tool for inpatient surgical patients preoperatively with anesthesia involvement was provided to the panel of experts that are previously listed. Chapter II delineates the methods that were used for this project's completion. The target population was identified, and the data collection was discussed. In Chapter III, the feedback and data collection process was discussed.

CHAPTER III -RESULTS

Findings

This best practice recommendation DNP project implemented a seven-question survey on current literature that was presented to a panel of experts. Multiple CRNAs and SRNAs were invited to participate in the survey. The survey was completed by 24 participants including four CRNAs and twenty SRNAs. The participants voluntarily reviewed the interdisciplinary rounding tool provided and were asked to complete the survey questions shown in Figure 2. The USM Qualtrics® Survey system was used to present the survey. Twenty-four participant responses agreed that the implementation of this best practice recommendation and anesthesia involvement in interdisciplinary rounding would improve the relay of information and quality of care. These 24 participants agreed that patients may be optimized before surgery with anesthesia involvement in preoperative interdisciplinary rounding. Participant responses can be viewed at the end of this chapter in Figure 3. Question 5 of the survey was a text box inquiring what specific of patient populations would benefit most from anesthesia involvement in preoperative interdisciplinary rounding and the results can be found in Table 1 below.

Table 1

Question 5 Participant Responses

Q5: What type of surgical patients do you think would benefit from anesthesia involvement in preoperative interdisciplinary rounding and making plans for treatment? For example, Cardiac, Colon, ASA 3, ASA 4, Asthmatic, etc.
Cardiac (aortic stenosis), ASA 3 or greater, Respiratory diseases
Cardiac and ASA 3
asthmatic
All
I'm not sure how to make the exact determination but I definitely believe complex patients including ASA 3 and above, prolonged hospitalizations, multiple comorbidities would benefit from this tool with anesthesia involvement
All
Cardiac
Any patient plus ones receiving regional/blocks preop
ASA 3 and higher
Critical Patients
ASA 3, ASA 4
Patients with conditions, disease, comorbidities, and high-risk surgeries.
ASA 3 or higher with multiple comorbidities that could increase the chances of mortality in the operative theatre
ASA 3, ASA 4
ASA 3, ASA 4
ASA 4
ASA 3 & higher
Cardiac
Cardiac, Asthma
Asthmatics
ASA 4

Summary

In summary, this best practice recommendation was analyzed by the panel of experts which confirmed that this study is evidence-based. All participants agreed that patient care can be improved with the implementation of anesthesia involvement in preoperative interdisciplinary rounding and the interdisciplinary rounding tool. One

hundred percent of the participants agreed that patients may be better optimized prior to surgery with the adoption of the rounding tool and implementation of this best practice recommendation. Several populations of patients undergoing anesthesia were identified that may potentially benefit from anesthesia involvement in their interdisciplinary care prior to the surgical procedure. One hundred percent of the participants agreed that with the implementation of anesthesia involvement in preoperative interdisciplinary rounding, patients may experience quality care throughout the entire perioperative period. No participants provided any suggestions or feedback for the best practice recommendation or the rounding tool presented.

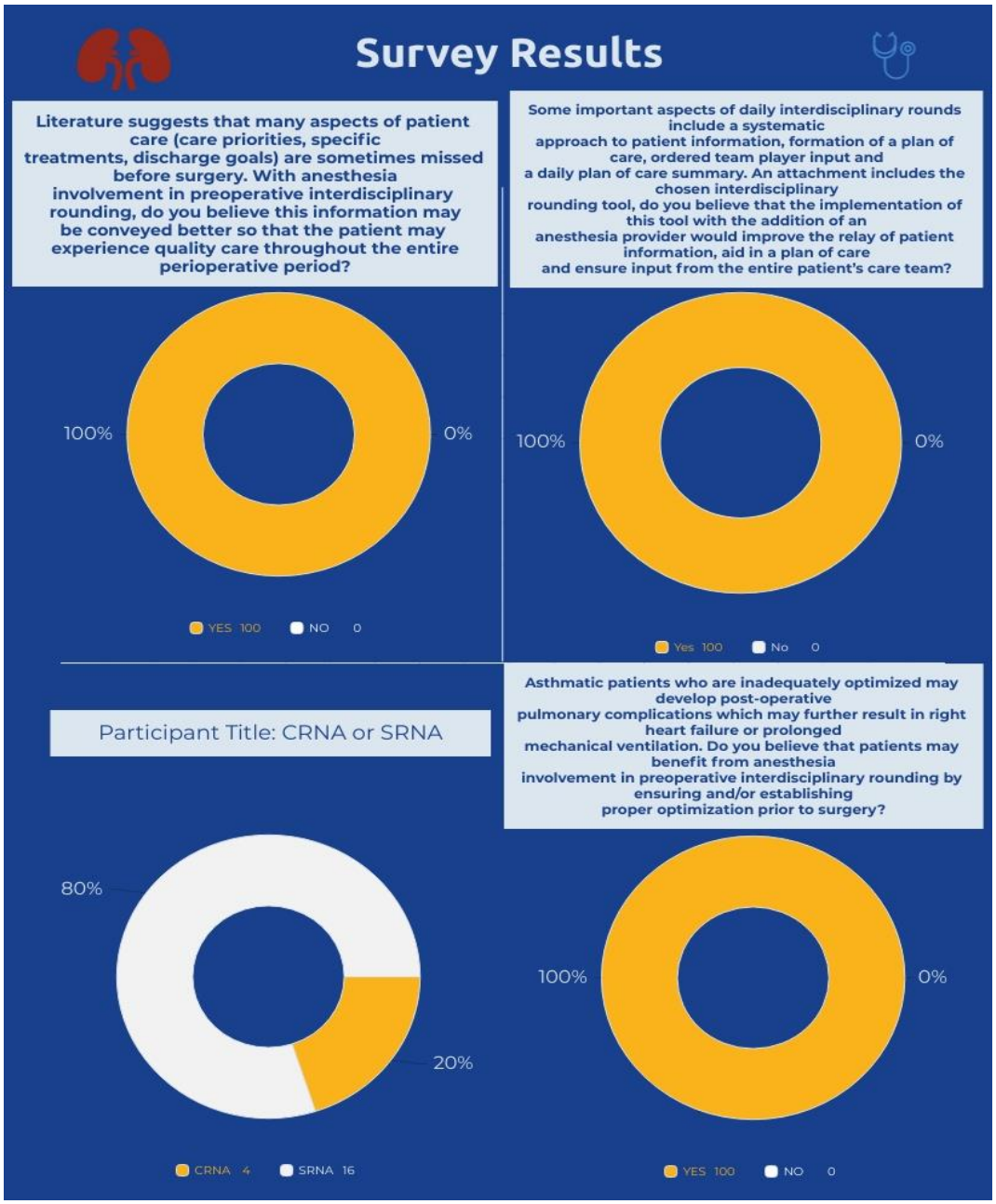

Figure 3. Survey Results

CHAPTER IV –DISCUSSION

Summary

A best practice recommendation guideline including a basic rounding tool, in which anesthesia providers participate in, has been presented to a Mississippi hospital so that inpatients may receive a higher quality of care prior to surgery is the purpose of this DNP project. A thorough review of the current evidence on interdisciplinary rounding in numerous patient care settings has been completed in order to formulate and present this best practice recommendation. The advantages and disadvantages of preoperative interdisciplinary rounding on surgical inpatients have been examined throughout this project. Without key provider input, decisions about patient care may be fragmented and substandard quality ("How-to Guide: Multidisciplinary Rounds," 2015). Poor outcomes, longer hospital stays, and postoperative complications may be avoidable with the implementation of anesthesia involvement in interdisciplinary rounding on the surgical inpatient preoperatively. Appendix A presents the DNP Essentials that were achieved throughout this project. DNP Essential I and this project assessed and recommended the best practice of nursing actions or processes in which positive changes in health status are achieved. Positive changes in health status may be achieved with the implementation of this best practice recommendation and interdisciplinary rounding tool. This project utilized critical appraisal of existing literature and implemented evidence-based practice which was included in DNP Essential III. Lastly, DNP Essential VI was utilized for this project by interprofessional collaboration for improving patient and population health outcomes. Surgical outcomes may be improved by better communication among an interdisciplinary team in which anesthesia is involved preoperatively.

Limitations

One limitation to this study was the size of the panel of experts. With the small sample size, the input was limited, and suggestions were slim. Areas of improvement and the elimination of potential selection bias may be eliminated by presenting this survey to more than Mississippi CRNAs and SRNAs. One suggestion to increase the sample size would be to send to all clinical preceptors or the Mississippi Association of Nurse Anesthetists population for input. The survey's number of questions were limited in consideration of the participant's time. Another suggestion to increase the sample size would be to provide an entry for a chance to win a prize as an incentive for participation. Literature is lacking regarding anesthesia involvement in the identified interdisciplinary rounding setting so evidence from other patient care settings had to be utilized for this project.

Conclusion

In conclusion, the highest quality of care for patients and positive health outcomes are the top goals as healthcare providers. Medicine and health care are constantly evolving, and healthcare providers must stay up to date on best practice recommendations for patients. With the implementation of this interdisciplinary rounding tool and best practice recommendation, patient care may be improved by better collaboration among healthcare providers and better communication about the latest healthcare practices. Anesthesia involvement in preoperative interdisciplinary rounding is necessary in order to provide a high quality of care for surgical inpatients throughout the entire surgical experience. Patient optimization is important. Asthmatic patients may be optimized with this best practice recommendation in order to prevent postoperative pulmonary

complications such as prolonged mechanical ventilation. Patients may be optimized fully and missing details about the patient's care may be brought to light with anesthesia involvement in their interdisciplinary care. In the future, patients may benefit from different types of interdisciplinary tools or teams preoperatively depending on their specific surgical needs. The future of anesthesia involvement in preoperative interdisciplinary rounding for surgical inpatients may lead to better outcomes and a higher quality of care provided with multiple interdisciplinary tools. In addition to better outcomes and a higher quality of care, the implementation of this tool and best practice recommendation may lead to an increase in literature and evidence-based content for future research and development of other tools or methods for better healthcare practices.

APPENDIX A – DNP Essentials

Doctor of Nursing Essentials	**Clinical Implications**
Essential I: Scientific Underpinnings for Practice	This project assessed and recommends the best practice of nursing actions or processes in which positive changes in health status are achieved
Essential II: Organizational and Systems Leadership for Quality Improvement and Systems Thinking	This project involves leaders creating a tool for anesthesia involvement in interdisciplinary rounds for the surgical inpatient
Essential III: Clinical Scholarship and Analytical Methods for Evidence-Based Practice	This project utilizes critical appraisal of existing literature and implements evidence-based practice
Essential V: Health Care Policy for Advocacy in Health Care	This project recommends the implementation of a rounding tool for improving outcomes for surgical inpatients
Essential VI: Interprofessional Collaboration for Improving Patient and Population Health Outcomes	This project implements communication among an interdisciplinary team to improve surgical patient outcomes
Essential VIII: Advanced Nursing Practice	This project design implements and evaluates therapeutic interventions based on evidence-based practice and nursing science

APPENDIX B – IRB Approval Letter

Office *of*
Research Integrity

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NOTICE OF INSTITUTIONAL REVIEW BOARD ACTION

The project below has been reviewed by The University of Southern Mississippi Institutional Review Board in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services regulations (45 CFR Part 46), and University Policy to ensure:

- The risks to subjects are minimized and reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered involving risks to subjects must be reported immediately. Problems should be reported to ORI via the Incident template on Cayuse IRB.
- The period of approval is twelve months. An application for renewal must be submitted for projects exceeding twelve months.
- Face-to-Face data collection may not commence without prior approval from the Vice President for Research's Office.

PROTOCOL NUMBER: IRB-20-427
PROJECT TITLE: Best Practice Recommendation on Anesthesia Involvement in Preoperative Interdisciplinary Rounding on Surgical Inpatients
SCHOOL/PROGRAM: School of LANP, Leadership & Advanced Nursing
RESEARCHER(S): Elizabeth Davis, Nina Mclain

IRB COMMITTEE ACTION: Approved
CATEGORY: Expedited
7. Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

PERIOD OF APPROVAL: October 28, 2020

Donald Sacco Jr.

Donald Sacco, Ph.D.
Institutional Review Board Chairperson

APPENDIX C – Literature Matrix

Author/Year/ Title	Level / Grade	Design	Sample/Data Collection	Findings	Recommendations
Malley & Young (2016) A Qualitative Study of Patient and Provider Experiences During Preoperative Care Transitions.	VI	Qualitative Study	975-bed academic center; patients and providers recruited through emailed flyers > 18 years of age, spoke English and were in the preoperative phase of surgical care. 30 providers (10 PCP's, 10 anesthesia providers, and 10 surgical providers). 10 patients were recruited.	The following needs were identified: clarity for the preoperative care; care coordination; interprofessional care boundaries, and more time and resources.	Structures and processes of preoperative care that are currently in use today are less than optimal and the needs of the providers nor patients are met. Transitions through the perioperative environment could be improved by the implementation of interdisciplinary models of care that attend to the patients' needs preoperatively. The quality of surgical outcomes could be improved if providers bridge gaps in care and expectations between the patient and provider.
Sroka et al. (2018) A Novel Anesthesiologist-led Multidisciplinary Model for Evaluating High-Risk Surgical Patients at a Comprehensive Cancer Center.	V	Systemic reviews of descriptive and qualitative studies	167 high-risk surgical patients with cancer-related diagnoses who were evaluated and discussed at a High-Risk Committee meeting to determine surgical appropriateness and optimize perioperative care	1 out of 107 high-risk patients died within the first 30 days of having surgery. A smaller percentage of patients whose surgery was canceled died. These patients had one or a combination of, hypertension, smoking, dyspnea, heart failure, chronic	Active communication is an important implementation for high-risk surgery patients before surgery. Surgical appropriateness should be assessed, and the patient's perioperative care should be optimized.

				obstructive pulmonary disease, diabetes, renal failure, and/or sleep apnea. For all patients, the mortality rate was less than 2% within the first 30 days.	
Hoke & Falk (2012) Interdisciplinary Rounds in the Postanesthesia Care Unit: A New Perioperative Paradigm	VII	Opinions of authors and/or reports of expert committees	138 patients in the PACU	Interdisciplinary rounds have challenges (time). The staff became aware that the plan of care for the perioperative patient is greatly impacted by rounds. Within 6 months of rounding, staff satisfaction increased, interdisciplinary rounds were implemented daily instead of twice weekly, patient education increased and patient safety has improved through changes in systems and processes. A transition process from PACU to the inpatient unit has been refined and improved.	Interdisciplinary rounding in the perioperative arena is needed to improve communication between nursing and anesthesia. Many studies on interdisciplinary rounds have been conducted, but most are outside the perioperative arena.
Townsend-Gervis et al. (2014) Interdisciplinary Rounds and Structured Communication	IV	Single non-experimental study	111 nurses on 3 medical-surgical units from the first quarter of 2010 through the fourth quarter of 2012.	HCAHPS scores were not statistically significant but were in the predicted direction. Foley catheter	Situation-Background-Assessment-Recommendation, Interdisciplinary rounds, and re-admission risk

Reduce Re-Admissions and Improve Some Patient Outcomes				removal showed consistent improvement. There was a significant drop in readmission rates.	assessments can improve patient outcomes but may not affect patient satisfaction. It is recommended that these interventions be utilized because they are consistent with Joint Commission recommendations on communication and safety improvement.
Friede & Sharma (2018). Multidisciplinary Rounds in the ICU.	VII	Opinions of authors and/or reports of expert committees	ICU inpatients involved in multidisciplinary rounding	Multidisciplinary rounding is consistent with decreased length of stay. Improved communication among providers directly correlated with a reduced number of adverse events and appropriate treatment was less delayed. Mortality rates, ventilator days, skin breakdown, and pressure ulcers, deep vein thrombosis, falls, infection and readmissions all showed improvement with multidisciplinary rounding.	Multidisciplinary rounding lacks a single structure that is most optimal. Preventable harm to patients is most frequently caused by a failure in communication between health care providers.
Lopez et al. (2019)	IV	Single non-experimental study	25-bed PICU at a tertiary care University	There was a decrease in rounding	Implementation of SIBR improved unit

Impacting satisfaction, learning, and efficiency through structured interdisciplinary rounding in a pediatric intensive care unit: A quality improvement project			Children's Hospital and 6 fellows participated; all patients were hospitalized during the 18 months of study	duration. Physician order read-back increased 41%. There was a significant increase in family, nurse, and respiratory care practitioner participation. There was an increase in family experience and resident physician education was increased.	workflow, family and staff satisfaction. Research is necessary to develop tools for interdisciplinary care and studies could look at how medical outcomes, safety, resource utilization, and cost are affected by the implementation of SIBR.

APPENDIX D –Invitation to Participate in Study

APPENDIX E- Invitation to Participate in the Study

Best Practice Recommendation on Anesthesia Involvement in Preoperative Interdisciplinary Rounding on Surgical Inpatients

Elizabeth Paige Davis, SRNA

The survey presents no more than minimal risk of harm to subjects and involves no procedures for patients or participants. Data being collected is confidential and anonymous, and 100% voluntary with no repercussions for non-participation. This project has been approved by the USM Institutional Review Board. Protocol number: 20-427. The IRB approval number is IRB-20-427.

Dear SRNA or CRNA,

I am asking for volunteers to help in the completion of my DNP project. The volunteers will be asked to review an interdisciplinary rounding tool. The volunteers will then be asked to fill out an anonymous and confidential survey related to the interdisciplinary rounding tool as well as the perceived advantages and disadvantages on anesthesia involvement in interdisciplinary rounding for the surgical inpatient preoperatively. Participation in this survey is voluntary and should take no more than 10 minutes to complete. There are no repercussions for non-participation. Your feedback will help strengthen my study. If you have any questions, please contact me. Please review the attached documents and complete the survey. Thank you so much for your help!

The survey can be found at: https://usmuw.co1.qualtrics.com/jfe/form/SV_25Cq6qm7bvTWHOJ

Elizabeth Paige Davis

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