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Walden University

College of Nursing

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Kaydian Kerry-Ann Grant

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

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Walden University
2023

Abstract

Perioperative Nurses' Perceptions and Barriers to Implementing the Colorectal Surgery Care Bundle

by

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BSN, University of the West Indies, 2007

MSN, Walden University, 2018

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Nursing Interdisciplinary Health

Walden University

August 2023

Abstract

Despite evidence that surgical care bundle usage prevents surgical site infections (SSIs) in colorectal surgeries, there is a consistent increase in SSIs. Perioperative nurses are in a unique position to provide insight into the process for colorectal surgical care bundle usage, yet little is known about how perioperative nurses view the process. The perioperative patient focused model was used in this qualitative interpretative phenomenological study to examine the perceptions of perioperative nurses regarding the use of colorectal surgery care bundle and its role in preventing SSIs in patients undergoing colon and rectal surgeries. Sixteen perioperative nurses who were members of the Association of Perioperative Registered Nurses were invited via email to participate in the study, however the final interview sample was comprised of seven nurses. After informed consent was obtained, the one-on-one interviews were conducted via Zoom until saturation was achieved. The interviews were recorded and transcribed verbatim then analyzed using Braun and Clarke's six step analytic method. Results revealed three themes. The themes were (a) compliance, (b) education, and (c) accountability. The study is important to clinical practice because nurses are the advocates for patients, especially in the perioperative environment where patients are most vulnerable. The study highlighted perioperative nurses' perceptions, which can be used for positive social change to initiate changes that will be beneficial to patients undergoing colon and rectal surgeries. Future research is needed with other perioperative nurses as the only respondents in this study were operating room nurses, and this may not be a true representation of the perceptions of all perioperative nurses.

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Dedication

I would like to dedicate this dissertation to myself and my children. I was a teenage mom who thought that my life was over when I became pregnant at 16 years old. God has been good to me and has blessed me with determination, perseverance, and the willpower to do well for myself and my children. I would like to say a big thank you to my children for being my greatest cheerleader, for understanding when I had to do schoolwork and could not do the things that they would have preferred. It has been a great experience thus far, even though challenging.

Acknowledgments

I would like to say a big thank you to my chair Dr. Valdez, and my committee member, Dr. Ojeda, for their assistance and guidance during the initial stages of the dissertation process. I would also like to thank Dr. Long and Dr. Fuller for their guidance in the later stages. It was an honor and a privilege to work with and learn from them.

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Chapter 1: Introduction to the Study

Introduction

Surgical site infections (SSIs) are detrimental to the patients, families, healthcare systems, the community, and the federal government. It is estimated that over ten billion dollars are spent on patients affected by surgical site infections yearly (Hajirawala et al., 2020). SSIs are defined as infections that target the surgical incision site and can occur up to 30 days postsurgical procedure (Silvestri et al, 2018). Silvestri et al (2018) posited three types of SSIs, including superficial incisional, deep incisional, and organ space infections. Superficial incisional infections affect the skin and subcutaneous tissues, deep incisional infections involve soft tissues including the fascia and muscle layers, and organ space infections may include any organ exposed or handled during a surgical procedure (Silvestri et al., 2018). SSIs result in over 8,000 annual deaths (Reese et al., 2020), and patients undergoing colon and rectal surgeries are at a higher risk (2-45%) for these infections (Sook et al., 2019). The problem is that despite evidence that colon care bundles help with the reduction and prevention of SSIs in colorectal surgeries, there is a constant increase in the number of patients who are affected by these preventable healthcare-associated infections (Hoang et al., 2019). Despite surgical colon care bundle introduction, SSIs continue to cause grave complications, including death for surgical patients.

The purpose of this study was to ascertain the experiences of perioperative nurses with the use and implementation of a colon care bundle for SSI reduction in patients who have colorectal surgery. The study was imperative because I examined the experiences of

perioperative nurses tasked with implementing the colon care bundle. I conducted a qualitative phenomenological study to explore the experiences of perioperative nurses. I used individualized interviews to gain in-depth information from study participants (see Ravitch and Carl, 2016). I used the perioperative patient-focused model developed by the Association of Perioperative Nurses (as the framework for the study). Findings from the study may result in positive social change by including information about barriers and facilitators of colon care bundle implementation and adherence. The study results included information that may lead to implementing strategies that will improve SSI rates in colon and rectal surgeries, which will lead to improved patients' outcomes and the promotion of better quality of life postsurgical procedures.

In this chapter, there was a summary of the literature related to SSIs in colorectal surgery. Evidence, or the lack thereof, that supports the need for the study. I discussed the significance of the problem to perioperative nursing, patients, families, and the community. I also discussed the problem statement, the purpose and nature of the study, and the conceptual framework that aligned with the research. I defined the key terms and outline the scope and delimitations, limitations, and assumptions. The chapter concluded with the significance of the study and an introduction to Chapter 2.

Background

SSIs are one of the leading complications in surgical patients and are prominent in patients who have colorectal procedures (Gantz et al., 2019). SSIs are the most common cause of preventable healthcare-acquired infections (Ruiz-Tovar, 2018). There is evidence in the literature that SSIs can be prevented in colorectal patients using the

surgical colon care bundle (Bhat et al., 2019). However, there is no standardization of practice for bundle care, and perioperative nurses' experiences are unknown.

Tanner et al. (2016) conducted a prospective cohort study at two large institutions in England to evaluate the effectiveness of bundle care for patients undergoing open colon procedures. Findings from the study showed no significant difference in the post-implementation group; however, only 19% had the care bundle implemented. Tanner et al. concluded that increased staff education and engagement are needed to increase the use of the colon care bundle. Reese et al. (2020) described implementing a surgical colon prevention bundle to prevent SSIs in colorectal surgery in a retrospective cohort study. They found that the bundle approach led to a reduction in SSI rates, and efforts must be made to improve adherence to bundle care. The authors explained that there are interventions at different phases of the operative process that must be carried out to ensure effective results. There were three components to the bundle measures- pre, intra, and postoperative components. Sickder et al. (2017) used the Social Ecological Model as a framework in their mixed-method study, which aimed to ascertain the barriers and facilitators to surgical site infection prevention. Sickler et al. also sought to propose ways of improving nursing practices for SSIs prevention. Nurses (*n*=233) working at a tertiary level hospital were randomly selected for the study's quantitative portion. Focus groups and individual interviews (22 staff nurses and three nurse managers) were carried out for the qualitative part of the study. The researchers found that lack of knowledge, inadequate resources, and limited supplies prevented nurses from adhering to infection prevention strategies. No data were found in the literature about nurses' experiences while

using the surgical care colon bundle for SSI prevention. It is imperative to determine if similar circumstances exist when perioperative nurses use the surgical care colon bundle for SSI prevention.

Koek et. al (2017) conducted a study that assessed the effectiveness of bundle care in reducing SSIs. The researchers formulated a multidisciplinary team that included surgeons, anesthesiologists, microbiologists, and infection control practitioners to develop an SSI bundle care. The researchers concluded that if the components of the bundle care were carried out reliably, they would be beneficial and lead to a significant reduction in SSIs. The researchers did not include nurses in the development of the bundle, which is the scenario in the available data in the current literature. Therefore, this study must ascertain nurses' experiences with using the surgical care colon bundle.

A systemic review and meta-analysis complete by Tanner et al. (2015) concluded that using a surgical care bundle that includes evidence-based interventions results in the reduction of SSI rates in the colorectal patient population. The studies reviewed included a group of evidence-based interventions, including appropriate antibiotic management, hair removal, maintenance of normothermia, and glycemic control, which were mandated by the Centers of Medicare and Medicaid Services for all patients undergoing colorectal surgery (Tanner et al., 2015). Tanner et al. (2015) also concluded that while there is evidence that implementing bundle care is beneficial for patient outcomes, implementation is limited.

Hoang et al. (2017) completed a cohort study which was aimed at evaluating the effects of SSI reduction bundle on surgical site infection rate, compliance with bundle

elements, and the feasibility with which a new process can be implemented at an institution. The institutional database at the Miriam Hospital was used to collect data for NSQIP outcome for the 30-day postoperative period. All patients who underwent colon and rectal surgery from January 1, 2011, to December 2016 were identified using the ACS-NSQIP data along with prospectively collected data from the institutional level, which were integrated with the NSQIP variables. The bundle was implemented and included pre-, intra-, and postoperative components. An interdisciplinary task force was created to monitor, implement, and enforce compliance with bundle elements. Data were collected prospectively to comply with bundle elements and share results with the entire task force monthly. It was concluded that the SSI reduction bundle contributed to the reduction in SSI rates and enabled awareness among perioperative personnel (Hoang et al., 2017). In addition, the study outlined that rigorous implementation of several evidence-based interventions with cooperation and participation from perioperative staff members led to reduced surgical site infections (Hoang et al, 2017). Hence, it is imperative for this study to find out the experience of perioperative nurses while using the surgical care colon bundle for SSI prevention in colorectal surgery to determine if nurses' experiences influence the compliance with implementation.

Problem Statement

SSIs are preventable healthcare-associated infections that increase the cost of care for the patient and the health care system and are the leading cause of surgical complications (Gantz et al., 2019). According to Reese et al. (2020), more than 500,000 surgical patients are diagnosed with surgical site infections every year, resulting in 8,000

annual deaths. Sook et al. (2019) stipulated that colon and rectal surgeries are associated with higher SSI rates with a range between 2% and 45%. Allegranzi (2016) stated that SSIs are the second leading cause of preventable healthcare-associated infections. Patients affected by SSIs are at higher risk for morbidity and mortality, loss of productivity (for both the patient and their families), increased hospital stays, and readmission (Schiavone et al., 2017). Schiavone et al. also stated that the overall annual cost for treatment of SSIs is $3.5 to 10 billion.

The constant increase in the number of people affected by SSIs and the burden it imposes on the healthcare system led to the initiation of the surgical care improvement project (SCIP) in 2002 (Hoang et al., 2019). The SCIP consisted of three or more steps implemented before, during, and after surgery to prevent SSIs in colorectal surgeries (Hoang et al., 2019). The SCIP is also known as the colon SSI bundle. Tanner et al. (2015) stated that care bundles are three or more evidence-based interventions to prevent SSI when implemented consistently for all patients. The problem is, despite evidence that surgical care bundles prevent surgical site infections in colorectal surgeries, there is a continuous increase in surgical site infections, and no literature has been found that documents the experiences of perioperative nurses with the population of colon surgery patients. However, there is evidence that surgical site infections (SSIs) are detrimental to patients' recovery process and increase healthcare costs for the patient and the healthcare system (Allegranzi, 2016).

Bhat et al. (2019) conducted a randomized controlled trial with comparison groups and concluded that care bundles help reduce SSIs in colorectal surgeries. Bhat et

al. found that there were significantly fewer infection rates in the study group than in the control group. However, there is no standardization of surgical care bundles as each institution adopts a part of the bundle care introduced by the Center for Medicare and Medicaid. Wick et al. (2012) conducted a study in which they evaluated the association between implementing a surgery-based comprehensive unit-based safety program (CUSP) and postoperative SSI rates. They implemented several strategies aimed at SSIs reduction but did not ascertain the opinions of nurses who are responsible for implementing these interventions. It is unknown if nurses can exercise autonomy in implementing the surgical care colon bundle since surgeons are the prescribers and decision-makers for the bundle approach. However, if nurses are more involved in the process, there is a possibility that this could lead to a significant reduction in SSIs. Pashnik et al., (2017) posited that nurse-led initiatives positively impact the incidence of Catheter Associated Urinary Tract Infections (CAUTIs). Marrone (2018) completed a nurse-led performance improvement project and found that creating an accountable care team leads to improvement in turnover time in the operating room. The surgical colon care bundle, if initiated by nurses, could produce similar results. However, research is necessary to inform practice. Leaper et al. (2015) concluded that despite compelling evidence that the surgical care bundle reduces surgical site infections, there are issues with compliance and use that need to be addressed.

The problem of SSIs weighs heavily on the recovery of surgical patients, particularly colorectal patients. The nurse must advocate for the patients under perioperative care even in difficult times and must be confident enough to speak up for

patient safety. One cannot take it for granted that nurses support and engage in implementing surgical colon care bundles, especially since SSIs are ranked as the most expensive hospital-acquired infections (Ban et al., 2016). It is imperative to ascertain nurse experiences with the use of surgical care bundles related to colon care. It is also essential to note that perception helps with the understanding of behavior. However, I did not identify any studies about the nurses' perception or knowledge, attitudes, and experiences using surgical care colon bundles used for patients undergoing colorectal surgeries. In this study, I examined perioperative nurses' perceptions of their experiences implementing the colorectal care bundle.

Purpose

The purpose of this qualitative phenomenological study was to ascertain perioperative nurses' experiences with the use of a surgical colon care bundle. Exploring the perceptions and experiences of perioperative resulted in insight on the barriers to the routine use of colon care bundles. I filled the gap in the literature by providing data about nurses' experiences with the implementation and use of surgical care colon bundles.

Research Question

What are perioperative nurses' experiences with the use of colon bundles for the prevention of surgical site infections in patients undergoing colorectal surgery?

Conceptual Framework

The Perioperative Patient-Focused Model (PPFM) is a patient-centered, and outcome-focused model developed by the Association of Operating Room Registered Nurses (AORN) in 2000 (Van Wicklin, 2020). Perioperative nurses practice patient-

centered care. The perioperative nurse is the patient advocate and the patient's voice in the perioperative environment and must ensure patient safety. The implementation and use of the colon care surgical bundle are crucial for patients undergoing colorectal surgeries. I used this model to examine the experiences of registered nurses caring for patients who experience colon and rectal surgeries, which may result in improved education and training. The findings from this study may also be used to promote patient safety and improve patients' quality of life after surgery.

I used the conceptual framework to demonstrate the relationship between perioperative nurses, patients, and their families or caregivers (Luedi & Stamer, 2019). There are four components of the PPFM, including safety, physiological responses, and behavioral responses, which are patient-centered and entail essential elements of care for the surgical patient. The fourth component is the structural element concerned with the environment within which patients receive care and can include personnel that work within the environment (Luedi & Stamer, 2019).

Perioperative nurses use the PPFM to care for patients during the surgical process. I developed the research question for this study to examine nurses’ experience as they carry out caring activities in the perioperative environment. I used the PPFM to examine how nurses experienced implementing the colon bundle. I used phenomenology to understand and make sense of the experiences of perioperative nurses (Patton, 2015).

The conceptual framework was appropriate because my goal was to understand the perioperative nurses' experiences from their point of view.

Nature of the Study

I used a qualitative interpretative phenomenological methodology for this study. My goal was to understand perioperative nurses' experiences with the use of the surgical colon care bundle. The phenomenological approach was appropriate for this study because it can be used to understand a specific phenomenon and the meaning of human experiences (Alase, 2017). I used this approach to understand perioperative nurses' lived experiences as they exist in their work environment every day. I used the interpretative phenomenological methodology to develop an in-depth understanding of the daily experiences of perioperative nurses (Alase, 2017).

According to Matua and Van Dar Wal (2015), the descriptive phenomenological approach is used to generate new knowledge centered on understanding experiences.

I collected demographic data from participants to ascertain their characteristics. Using my own interview guide, I conducted individualized semi structured interviews on Zoom with perioperative nurses with at least 1 year of experience who work within acute care facilities in the United States of America where surgical care colon bundles are in use. Ravitch and Carl (2016) stated that interviews provide excellent individualized and contextualized data beneficial to qualitative research. I recruited participants using social media and the Association of Perioperative Registered Nurses (AORN) email list. I also used snowball sampling to expand recruitment efforts.

Definitions

Listed below are several key terms that I used throughout the study.

Colon care bundle: colon care bundles are three or more evidence-based interventions aimed at preventing SSI in colorectal patients when implemented consistently for all patients (Tanner et al., 2015).

Colorectal surgery: colorectal surgery is a surgical procedure that involves the colon and rectum (Bhat et. al 2021).

Perioperative Registered Nurses: Perioperative nurses are registered nurses who work in the perioperative environment (Preoperative admission, operating room, post anesthetic care unit) caring for patients before, during and after undergoing surgical or invasive procedures (Kaldheim et. al, 2019).

Surgical site infection: SSIs are defined as infections that target the surgical incision, organ, or space after surgery and can occur up to 30 days postsurgical procedure (Silvestri et al., 2018).

Assumptions

Assumptions accepted as true, without proof. I assumed that perioperative nurses would be willing to participate in the study, that participants would provide honest answers to the interview questions, and that the participants would feel comfortable sharing their experiences with me. I assumed that subjects would be honest with their answers, and that their experiences would provide new information for the study. I reassured study participants that their responses would not be tied to anything that can be used to identify them. Additionally, perioperative nurses are patients' advocates, and I

assumed that they would engage in activities that benefit the quality of care that patients receive. These assumptions were necessary because my goal was to understand participant experiences, which cannot be fact checked or validated as accurate.

Scope and Delimitations

This study included perioperative nurses who work in the United States and were recruited from social media and the AORN email list. Participants were required to have at least 1 year of experience as a perioperative nurse, speak English, and work at acute care facilities that use the colon care bundle for SSI prevention in colorectal surgery. I excluded nurses with whom I had a professional and/or personal relationship. I requested permission from participants to have audio-recorded interviews, which I transcribed verbatim. I obtained informed consent prior to interviews and explained the risk and benefits of the study to the participants.

The PPFM is patient-centered and outcome-focused (Van Wicklin, 2020). The perioperative nurses must ensure that the patient is the center of attention, which is vital for effective patient outcomes. This model was useful for understanding the experiences of perioperative nurses while using the colon care bundle because caring for patients in the perioperative environment demands that nurses deliver patient-centered care and focus on positive outcomes. The prevention of SSIs is imperative because it ensures that patients have the best surgical experience.

Lemon and Hayes (2020) stated that transferability is the extent to which a study finding can be applied to different settings. I selected participants in the study from various perioperative environments in the United States to improve objectivity and

transferability of the study. Shufutinsky (2020) stated that continuous self-transparency is essential and results in rigor, trustworthiness, and reduced bias in research. I accomplished self-transparency through self-reflection, journaling, reporting, and memo writing (Shufutinsky, 2020). I adhered to ethical principles including informed consent, setting boundaries for participants, and maintaining clarity and transparency.

Limitations

This was a qualitative study; therefore, there was a risk that I would introduce bias into the research. I maintained awareness regarding positionality throughout the research process (Ravitch & Carl, 2016) to prevent biases. Being an operating room nurse, I have seen the effects of SSIs and their impact on patients. The prevention of SSIs is crucial. To prevent biases during the research process, I engaged in journaling, note-taking, and reflexivity. I used reflexivity to be attentive and conscious about my perspective and that of the participants of the study (Patton, 2015). I did not use my place of employment as the study site because of my influential role at the facility.

Another barrier may be difficulty recruiting participants for the study, especially for interviews where the study participants may have reservations about confidentiality. Study subjects will be recruited from the AORN email list, and it may be difficult to get persons to participate in the study. The email addresses of perioperative nurses may not be available to the public, and there may be challenges in accessing them. I will contact the board of directors for AORN to gain insight into accessing members' email addresses. Social media will be used as an alternative to recruiting study participants and snowball

sampling will be included to gain access to key personnel who may be beneficial to the study (Patton, 2015).

Significance

Despite compelling evidence that the colon care bundle helps prevent surgical site infections, there is a high incidence of SSIs in colorectal patients (Schiavone et al., 2017). This study will address the gap in understanding the perioperative nurses' experiences with the surgical care colon bundle. This will be an original contribution to the literature because no research related to perioperative nurses' experiences with colon care bundles has been identified. Exploring the experiences and barriers faced by perioperative nurses will aid in understanding the challenges associated with implementing the colon care bundle in colorectal surgery cases. The understanding gained from the proposed study can be used to reduce barriers, formulate policies, and result in positive social change by increasing the use of the colon care bundle resulting in fewer SSIs and improved patient outcomes.

Summary

The colon care bundle involves three or more evidence-based measures that, when carried out reliably, will reduce SSIs (Tanner et al, 2015) in colorectal patients. Nurses must carry out these interventions every day in their work-life, but there is no evidence identified in the literature regarding their experiences with the use and implementation of the colon care bundle. Hence the need for this study to ascertain their experiences. It is hoped that the finding will be beneficial to social change and fill the gap that exists in the literature. Chapter one illustrated the problem, the purpose for the study, the conceptual

framework that will guide the research, and the implications for social change. In chapter two, the literature will be reviewed, and there will be a description of the perioperative patient-focused model that will guide this study.

Chapter 2: Literature Review

Introduction

The purpose of this phenomenological qualitative study was to assess perioperative nurses' experiences with the use and implementation of the colon care bundle for SSI prevention in colorectal patients. Despite the introduction of the surgical care bundle and evidence that the bundle approach prevents SSIs, preventable healthcare-associated SSIs still occur (Schiavone et. al, 2017). Silvestri et al. (2018) posited that SSI appear at the incision, organ, or surgical space after surgery and can affect patients up to 30 days post-surgery. According to Tanner et al. (2016), colon care bundles consist of three or more evidence-based interventions that are used together to prevent SSIs in patients undergoing colorectal procedures. Nurses must implement and use the colon care bundle daily. There is a gap in the literature related to nurses' experiences with using and implementing colon care bundles to prevent SSI in patients undergoing colorectal surgery.

In this chapter, I will outline the literature search strategy and the conceptual framework, and pertinent literature. I used the perioperative patient-focused model to guide the study. Studies were reviewed to find the gap in the literature related to nurses' experiences using and implementing the colon care bundle. This chapter will close with a summary of the current literature on colon care bundles and the known and unknown tenets of perioperative nurses' experiences. The gap in the literature will be illustrated about how SSIs continue to affect patients amidst evidence-based interventions to prevent duplicate and the lack of nurses' perceptions.

Literature Search Strategy

To assess the gap in the literature regarding the experiences of perioperative nurses with the use and implementation of the surgical care colon bundle, an extensive review of the literature was completed to include the incidence of SSIs, the progress regarding prevention and healthcare providers insights, most importantly, perioperative nurses' perceptions. The following databases were accessed via the Walden university library: PubMed, CINAHL, EBSCO, Cochrane Library, ScienceDirect, Sage, Medline, PsycInfo, SocIndex, Embase, ProQuest Nursing and Allied Health Source, and Google Scholar. The following key search terms were used while accessing the databases: *qualitative, perception, attitude, opinion, reflection, beliefs, operating room nurses, colon bundle, barriers, colorectal surgery, bundle, order set, perioperative, surgical care bundle, nurses' attitude,* and *nurses' experiences*.

To ensure that the articles presented the best possible evidence on the phenomenon of interest, search dates were narrowed to 2015 to 2021. Thus far, no literature that investigated perioperative nurses' experiences with the use of the colon care bundle has been found. The search terms were altered in each database, and still, no literature has been found to date, which provides grounds for this study. During examination of the literature, it was found that intensive care nurses implement and use bundle approach for patients who are ventilated. One study was found about nurses' perception of SSIs, but nothing specific to SSIs in colorectal surgery. Due to the minimal literature on this topic, studies that address similar SSI prevention bundles were included in the literature review.

Conceptual Framework

I used the Perioperative PPFM to guide this study. The PPFM was developed by the AORN in 2020 and is patient-focused and outcome-oriented (Vanwicklin, 2020). This conceptual framework addresses the tenets of perioperative nursing. The components of the PPFM are safety, physiological response, behavioral responses, and the health system/ environment. According to Van Wickin (2020), physiologic responses are the intended therapeutic response of an invasive or operative procedure. Patient safety is imperative and related to the precautions that perioperative nurses take to ensure that patients are free from harm preoperatively, intraoperatively, and postoperatively. Behavioral responses include psychologic, sociologic, and spiritual responses of patients and their families to surgical or invasive procedures (Van Wickin, 2020). These components of the framework are patient-centered and require the involvement of perioperative nurses who must advocate for their patients during their most vulnerable time in the perioperative environment. Perioperative nurses use the components of the PPFM daily when caring for patients.

With this study the components of the PPFM will be used to assist the perioperative nurses to carry out care that is patient focused and outcome oriented. This study will assess the perioperative nurses' experiences using and implementing the colon care surgical bundle for SSIs in colon surgeries. Implementing and using the colon care bundle is an effective way to ensure that perioperative patients are free from SSIs. Implementing and using the colon care bundle is one way of ensuring patient safety throughout the perioperative process.

Perioperative nurses ensure that patients are knowledgeable about the colon care bundle and the requirements and interventions that patients must complete on their own, both preoperatively and postoperatively. This provides effective care with the aim to prevent SSIs. During their daily work life, nurses must use the framework's components to implement the use of the colon care bundle, which will bring about social change when SSIs in the colorectal patient population are reduced.

There is limited data on the use of the PPFM and its use in research (Van Wickins 2020). The PPFM was used in three studies identified in the literature. McCutcheon (2004) examined several theories to develop a personal framework on which to base nursing practice. One of the theories included was the PPFM. McCutcheon posited that with the patient at the center of the PPFM and the focus of the model on patient outcome, it made the model imperative to her personal practice as a gastroenterology nurse. Flipping (2006) explained how the PPFM is used to care for patients with deformity in a free surgical program. Flipping (2006) stated that for patients to have the best possible results care must be specific, individualized, and centered on the patient. Flipping further explained that all the components of the PPFM are imperative to provide the best results for the patient. Van Wickin (2018) conducted a study to assess the knowledge and attitudes of perioperative nurses about covering a sterile field and used the PPFM as the conceptual framework. Van Wicken (2018) posited that the nature of the model made it relevant to the study. This model will also be applicable in exploring perioperative nurses' experiences with the use of the colon care bundle for SSI prevention in patients undergoing colorectal surgery. The perioperative nurse must provide patient-centered

care and function as a patient advocate. The PPFM is patient-focused and outcome-oriented. Perioperative nurses are expected to carry out care that will produce excellent patient care results. Implementing and using the colon care bundle for SSI prevention in colorectal surgery is a pivotal issue that is supported by the PPFM.

Literature Review Related to Key Variables and Concepts

Data suggest that effective education and participation of healthcare professionals, particularly nurses, will lead to the successful use and implementation of the colon care bundle for SSI prevention. I identified two systematic reviews and meta-analyses in the literature that were included as level one evidence. Most of the data that were available are cohort studies that highlight the importance of bundle care and the detriments and eliminating the use of same. Researchers from multiple research articles concluded that adherence and compliance are lacking with colon care bundles, and education is needed (Tanner et al, 2020). However, there is nothing specific to perioperative nurses, thus justifying the need for this study.

Colon Care Bundles and Surgical Site Infections

Several studies have described the effects of the use of colon care bundle to prevent SSIs in colorectal patients. There is compelling evidence in the literature to support the effectiveness of the bundle approach for the colorectal surgical population. Tanner et al. (2017) conducted a systematic review and meta-analysis that included 8,515 patients (16 studies). My aim was to determine if surgical care bundles reduce the risk of SSIs in patients undergoing colon and rectal surgeries. The authors concluded that there are questions regarding compliance to the implementation of the bundle approach

(Tanner et al, 2017). Similarly, Zywot et al. (2017) conducted a meta-analysis and systemic review to evaluate colorectal surgeries' SSI prevention bundles, bundle components, and implementation and compliance strategies. The study included 17 studies (17,557 patients). The authors concluded that when implemented and complied with, bundle care is pivotal in the reduction of SSIs (Zywot et al., 2017).

Multiple retrospective and prospective studies have described how the amount of staff compliance in the implementation of the bundle approach contributes to patient outcomes. For example, Tanner et al. (2016) did a prospective study to evaluate the SSI care bundle for open colorectal surgery and concluded that there was no difference between the controlled and care bundle group. However, the researchers attributed the results to low compliance with bundle components and stated that only 19% of cases had all bundle components implemented (Tanner et al., 2016). Bhats et al. (2019) also did a prospective cohort study which aimed to ascertain the risk factors of colorectal SSIs and the effects of colon care bundle on SSIs. The researchers concluded that there was a significant reduction in SSI in patients in the colon care bundle group, and collaborative efforts to prevent SSIs must include nurses (Bhats et al., 2019).

Similarly, Elia-Guedea et al. (2017) conducted a prospective cohort study comparing two groups of patients. The aim of the study was to evaluate the impact of a set of preventative measures in the reduction of SSIs in colorectal surgery. There was a drastic reduction in SSI rates after bundle implementation (31.4-13.6%), which depended on good teamwork, communication, and a united stance from all personnel involved. Hoang et al. (2017) also completed a prospective study to evaluate the effects of SSI

reduction bundle on surgical site infection rate, compliance with bundle elements, and feasibility of implementing new processes at a single institution. The researchers concluded that rigorous implementation of several evidence-based interventions with cooperation and participation from perioperative staff members led to reduced surgical site infections (Hoang et al, 2017).

Colon Care Compliance

The studies described above provide insight into the current use and implementation of the colon care bundle. While the researchers focused on the outcomes of using the colon care bundle, it is imperative to note that compliance is an issue with the implementation of the bundle approach. Hoang et al. (2017) posited that rigorous implementation is needed and Elia-Guedea et al. (2017) stated that good teamwork, communication, and a united stance from all personnel involved is crucial. Bhats et al. (2019) posited that collaborative efforts to prevent SSIs must include nurses, and Tanner et al. (2016) concluded that low compliance affected the effectiveness of the bundle approach in the prevention of SSIs. Reece et al. (2020) concluded that the bundle approach led to SSI reduction and work needs to be done to improve adherence to bundle care. Compliance could be significantly improved with colon bundle if the bundle had fewer components (Reece et al., 2020). Similarly, Sickder et al. (2017) concluded that there are many barriers that prevent nurses from adhering to SSI prevention practices, including insufficient knowledge, inadequate resources, improper hand hygiene practices, and insufficient performance monitoring for nurses. Hajirawala et al. (2020) posited that high compliance is vital for the successful reduction of SSIs, but the process of achieving

effective compliance may be challenging. Additionally, Dean et al (2020), concluded that patient compliance can guide future directions in combating SSI prevention. Education and compliance are important for the successful implementation, and use of any protocol, and the use of the surgical care colon bundle is no different. The study will shed light on perioperative nurses' experiences, and it is hoped that this will address the barriers and facilitators to using the colon care bundle. Several studies have alluded that the care bundle, if used properly, lead to significant reduction in SSI rates.

To date, no literature has been found that addresses the experiences of perioperative nurses with the use and implementation of the colon care bundle for SSI prevention in colorectal patients. Hence the imperativeness of the study. The experiences of perioperative nurses must be assessed to find out if nurses' experiences influence compliance, address communication and teamwork, and how this affects the implementation of preventative measures for patients undergoing colon surgeries and clarify perioperative nurse's participation and involvement.

Summary

Key search terms used for the literature review included *qualitative, perception, attitude, opinion, reflection, beliefs, operating room nurses, colon bundle, barriers,* and *colorectal surgery*. SSIs will be reduced if bundle components are adhered to. However, some researchers posited that bundle components are too much and that could be a reason for noncompliance. Perioperative nurses’ experiences are not known as there is no literature regarding this to date. In Chapter 3 the topic of interest was reintroduced and

the study design along with rationale was outlined. The study instrument, recruitment procedure, data collection and analysis was also discussed.

Chapter 3: Research Method

The purpose of this qualitative study was to fill the gap in the literature that existed pertaining to the experiences of perioperative nurses with the use of and implementation of the surgical care colon bundle. In this chapter I discussed my role as the researcher, the recruitment process, data collection and analysis, instrumentation, and participation. I also discussed the research design and rationale, along with issues of trustworthiness and ethical procedures.

Research Design and Rationale

The research question for this study was: What were perioperative nurses' experiences with the use of colon bundles to prevent surgical site infections in patients undergoing colorectal surgery? This aligned well with the interpretative phenomenological approach (IPA). I used the IPA to explore the lived experiences of study participants in detail and was committed to examining how the participants made sense of their experiences (Alase, 2017). My aim in this research was to understand the experiences of perioperative nurses with the use of and implementation of the surgical colon care bundle. To explore my phenomenon of interest, I chose the IPA using semistructured interviews. The researcher conducted semistructured interviews using an interview guide to conduct interviews with the flexibility of asking follow-up questions based on participants' responses and research topics (Ravitch and Carl, 2016).

Patton (2015) stated that phenomenological analysis sought to explain the meaning, structure, and essence of lived experiences of a problem of interest for a person or group of people. The rationale for choosing a qualitative IPA was to bring to the

forefront a proper understanding of the experiences of perioperative nurses with the use and implementation of the colon care bundle. I used the IPA to explore and interpret (Patton, 2015) the experiences of study participants when using the colon care bundle. Explicating the experiences of perioperative nurses was essential since they were the advocates for patients undergoing colorectal procedures and had to ensure patient safety. The interpretation of data allowed me to make recommendations for improving the use of colon care bundles, which might be resulted in improved patient outcomes and reduced SSIs.

Role of the Researcher

I am a perioperative nurse and was the primary researcher and data collector for this study. My personal biases, values, and experiences may have affected the study results. I was also close to the phenomenon of interest and had knowledge of what effective patient care was, and I was also a patient advocate. Due to the nature of my role at my place of employment, I was privy to data relevant to SSIs in colorectal patients. I also observed that many of my colleagues did not seem to appreciate the effectiveness of the surgical care colon bundle, hence the reason for this study. I made every effort to set aside my personal biases as I took on the role of the researcher to address the gap that existed in the literature. I did not lead interviewees or share my experiences or that of other participants during interviews. I used a journal to write down my reflections, thoughts, and ideas this is supported by Burkholder et al., 2016.

I had a significant interest in this study due to my experience as an operating room nurse. In my previous role as a charge nurse, there were ethical issues that could

arise. I excluded persons that worked in the facility where I was employed and those with whom I had personal relationships. I ensured that I was not affiliated with study subjects. Information regarding the study was not shared with family, friends, or colleagues. Furthermore, I did not share my personal experiences with study participants because I did not want to introduce any personal biases.

I explored the experiences of perioperative nurses with the use of and implementation of the surgical colon care bundle using the qualitative phenomenological approach. I thought about the qualitative case study when deciding on which qualitative design would best fit the study. Patton (2015) posited that a qualitative case study enabled the exploration of a complex phenomenon by identifying how different factors interacted with each other. Baskarada (2014) stated that problems might arise with the justification of findings and the determination of rigor when the qualitative case study design was employed. While rigor and justification of findings were imperative for all qualitative research designs, I decided against using the case study approach. The experiences of perioperative nurses in their daily work life were better explored using the phenomenological interpretative approach with semistructured interviews for data collection. Using open-ended questions, produced in-depth data that was analyzed.

Methodology

I conducted the proposed qualitative study according to the methods described below. I was meticulous in the methodology I used to ensure clarity of the study findings.

Participants

To recruit participants, the Association of Perioperative Nurses was elicited to send an email invite to perioperative nurses from the United States to participate in the study. Additionally, social media and snowball sampling were used to recruit study participants. The inclusion criteria for the study included nurses who worked at acute care facilities within the United States of America and used the surgical care colon bundle for patients undergoing colorectal surgery. Perioperative nurses were required to have at least 1 year of experience as a perioperative nurse with a current registered nurse license. Nurses who did not have 1 year of experience as a perioperative nurse with a current license and did not work in acute care facilities within the United States where the colon care bundle was used were excluded from the study.

Purposive sampling was used for the study. I used purposive sampling to seek out informative participants (Ravitch and Carl, 2016) which provided rich information to the research. I used Purposive sampling to gather the data for my study, interviewing 10 to 15 participants who worked in facilities that used the colon care bundle. Demographic information about study participants was collected to understand their attributes and ensure they met the inclusion criteria, after which semistructured interviews were conducted until data saturation was reached. There were seven study participants. Patton (2015) stipulated that data saturation occurs when no new data are being obtained, and further data collection is not warranted.

I used snowball sampling, the AORN email list, and social media to recruit study participants. A poster was created that outlined study details and a link to the Qualtrics

survey. The Qualtrics link contained an invitation letter that included my contact information, consent form, screening questionnaire, and demographic survey. The research flyer was emailed by the AORN to prospective participants and posted on social media sites to recruit perioperative nurses who were not members of the organization. Interested perioperative nurses who consented to participate in the study and met inclusion criteria based on the screening questionnaire were invited to participate in the study. I contacted them via phone or email and arranged for an interview via Zoom at a time that was convenient for the participant.

I hoped to attain data saturation by interviewing 10 to 15 participants. It was believed that 10 to 15 participants would be a large enough sample size to ascertain data to describe the phenomenon of interest and answer the research question. According to Boddy (2016), the selection of a sample size for qualitative research is contextual. Nascimento et. al (2018) asserted that data saturation occurs when no new elements are found, and new information is not forthcoming.

Instrument

The instrument for the study included semistructured interviews conducted via Zoom. I created an interview guide to use during the one-on-one interviews. I created the questions for the interview based on the research on the phenomenon of interest and they were evaluated by my dissertation committee to ascertain content validity. I collected data to aim to answer the research question: What were perioperative nurses' experiences with the use of colon bundles to prevent surgical site infections in patients undergoing colorectal surgery? To obtain meaningful data, I had to talk with perioperative nurses

who had actual experiences using the colon care bundle. I used One-on-one interviews to ascertain the experiences of perioperative nurses with the use of an interview guide. Using an interview guide (See Appendix A) I was able to stay on track with the questions and ensure that the study participants stayed focused on the phenomena being studied (Creswell, 2018). Using the interview guide I had the flexibility to ask follow-up questions when the need arose. Zoom was used to carry out the interviews. All interviews were audio recorded and transcribed verbatim.

Interview questions were open-ended and reviewed by my committee members for content validity. With the use of open-ended questions participants expressed their authentic experiences in their own words. Using semistructured interviews, I had the flexibility to add follow-up questions when needed. To date, no literature addressed the phenomenon of interest. Still, it was hoped that using an interview guide, I would be able to extrapolate findings that would contribute to the gap that existed in the literature.

Procedures

Perioperative nurses who were members of the AORN were contacted via email. The flyer was emailed to prospective participants along with an invitation letter (Appendix B) and posted on social media sites to recruit perioperative nurses who were not members of the organization. I used the recruitment flyer (Appendix C) to outline study details and included a link to a Qualtrics survey for collecting screening and demographic data. After clicking on the link for Qualtrics, the first page shown was the informed consent. Participants were asked to agree to participate in the study after reading the informed consent. If the participant agreed, they moved on to the screening

questionnaire and demographic page. Limited demographic information (Appendix D) was collected to provide context for who the participants were in this study. A screening questionnaire was included to ensure that the potential participants met the study inclusion criteria. Interested perioperative nurses who completed the online survey and consent form and met study criteria were contacted, and a time was arranged for an interview via Zoom.

Data were collected for 6 months. I informed participants that interviews would last 30 to 45 minutes with slight variation based on the possibilities of follow-up to open-ended questions. I informed Participants that the interviews would be audio-recorded and that they could stop the interview at any time and for any reason. I sent the transcript to the participants and allowed them the opportunity to make corrections and confirm what they stated in the interviews. I also informed them that their identity would not be revealed, and their answers would be kept confidential.

Participants were given my contact information to ask questions if the need arose post-interview. I expressed my gratitude to all research participants and informed them of the positive contribution they made to the nursing profession. I informed them that the results of the study would be published in ProQuest and I would send them a summary of study findings if they requested. If there was a need for a follow-up interview, participants were contacted via the email address they provided at the time of enrollment in the study.

Data Analysis

I used an interpretive phenomenological approach to understand perioperative nurses' experience with the use of colon bundle. Qualitative data were collected during the study period after Institutional Review Board (IRB) approval. Data were manually coded and analyzed using Braun and Clarke's six-step method (Braun & Clark, 2006). Zoom transcribed the audio recordings from the interviews, and I compared them with field notes that I collected during the interviews and made edits as needed. I used field notes to get a complete understanding of the phenomenon being studied and clarification of audio recording and transcription (Patton, 2015).

In Step 1 of Braun and Clark's six-step method, I read and reread the transcripts to gain a better understanding of the data and identified possible patterns (Braun & Clark, 2006). I also took notes and documented ideas for coding. Step 2 commenced with me starting the manual coding process using the notes and ideas documented from step one. I worked acidulously to extrapolate interesting points within the data that were repetitive, highlighting and writing down potential patterns (Braun & Clarke, 2006). Data was combined after successfully matching interesting abstracts with codes (Braun & Clarke, 2006). In the third step, codes were sorted into potential themes (Braun & Clarke, 2006). Coded data extracts were combined with identified themes. The relationship between codes, themes, subthemes, and different levels of themes was considered. I compiled candidate themes and data extracts that were coded (Braun & Clarke, 2006). Moving on to step 4, I ensured that all themes were refined. I made sure that data within the themes matched meaningfully. I also ensured that there was clarity between themes. I read all

data extracts for each theme and ensured that they formed coherent patterns (Braun & Clarke, 2006). In step 5, I finalized and refined themes for presentation of analysis. I explained the essence of the data that the themes captured (Braun & Clarke, 2006) and gave them names. In the final step, I finalized my themes and completed the final analysis of the data and wrote up the final report (Braun & Clarke, 2006).

Issues of Trustworthiness

Qualitative researchers had to ensure that the result of their studies was trustworthy. Ravitch and Carl (2016) stated that trustworthiness was concerned with the researcher's steps to maintain rigor in their research. The study had to be reliable and other researchers had to trust study findings. In qualitative research, trustworthiness could be attained through dependability, credibility, transferability, and confirmability (Patton, 2015).

Dependability

Dependability was a critical strategy to ensure trustworthiness. Dependability referred to the stability of the data that would be collected (Ravitch & Carl, 2015). Reflective journaling was useful for spontaneous thoughts, emotions, concerns, and meaning making (Ravitch & Carl, 2016). If the study was to be carried out by another researcher, the same or similar results should have been forthcoming. I ensured that the steps in the study could be verified and examined by other researchers, which was known as an audit trail (Patton, 2015).

Credibility

According to Ravitch and Carl (2016), researchers had to consider the complexities of the study and handled patterns that were hard to explain. While checklists were not recommended to ensure validity, triangulation, participant validation, and peer debriefing were essential aspects of qualitative research. I made sure to check for uniformity among participants during the data collection process. This was explained by Patton (2015) as triangulation of data sources. I also used different perspectives to validate the study by merging the data sources (Patton, 2015). I allowed participants of the study to review their transcribed interviews for accuracy, thus utilizing participant validation (Ravitch and Carl, 2016). Peer debriefing was accomplished through the guidance of my dissertation chair, who had no interest in the study and remained unbiased throughout the study period (Patton, 2015).

Transferability

Transferability was concerned with the ability of the study to be applicable or transferable to other settings (Ravitch and Carl, 2015). In other words, how generalizable was the study? Could other researchers or the audience who would read the study apply study findings to other settings or experiences? To ensure transferability, I provided a detailed description of the data I collected and the context in which the data was collected (Patton, 2015).

Confirmability

While transferability spoke to the applicability of the study, confirmability was concerned with the ability of the study finding to be corroborated by other individuals

(Patton, 2015). Korstjens and Moser (2018) stated that researchers had to remain neutral. I used my reflective journal to engage in note-taking, detailing my decision-making research process and data management process in an attempt to demonstrate that my study conclusion could be confirmed (Korstjens and Moser, 2018). Epoche was necessary to eliminate biases. It was an ongoing process that I engaged in throughout the analysis process to ensure that my personal beliefs, viewpoints, and assumptions did not impose meaning on the phenomenon that was studied (Patton, 2015). Bracketing was also essential and was used in my research to ensure rigor. I ensured that I acknowledged my beliefs and biases as it related to the phenomenon being studied and set them aside so that they did not interfere with the study results (Patton, 2015).

Ethical Procedures

Ethical considerations were pivotal in all research endeavors. To ensure that ethical procedures were followed, I sought approval from the IRB at Walden University. I ensured that my certificate from the National Institute of Health was up to date and completed any additional training needed. I ensured that all participants received the consent form and had a chance to ask questions. Participants acknowledged their desire to participate in the study by selecting the "I agree to participate" button in Qualtrics after reading the informed consent document. This was the first page of the survey. Assistance was provided when necessary, and every attempt was made to ensure that prospective participants understood the risks and benefits of participating in the study.

Participants were concerned about their confidentiality. Ravitch and Carl (2016) stated that the confidentiality and privacy of the study participants must be maintained. I

addressed this by reassuring study subjects that there would be no identifying information in the reporting of findings even though minimal demographic data was collected. I further explained that each participant would be assigned a unique number, which would be kept apart from the relevant data to gain insight on the chosen topic. Data was stored on my dedicated laptop for school and was password protected. Audio recordings were stored on Zoom cloud and were password protected and only accessible to me. I downloaded and printed transcripts after which they were stored in a locked cabinet and were discarded according to the IRB timeline (five years). Given my current role, I ensured that staff members at my current facility were not recruited to participate in the study. Anyone I had worked with in the past, family members, and close friends were excluded from participating in the study, and study details were not shared. Finally, I was mindful of my positionality and ensured that I remained unbiased throughout the study.

Some participants might have had strong emotional reactions to interview questions resulting in anxiety and fear. To address these issues, persons were directed to resources that would be helpful, such as online resources like the Therapy Aid Coalition that provided free counseling for essential workers, or the participant's Emergency Assistance Program (EAP) if available. The IRB was solicited for their approval before approaching people to participate in the study. This was done to ensure that each participant was treated fairly. Participants were reassured throughout the interview process, and they were informed that they could withdraw from the study at any time without penalty.

Summary

The aim of this qualitative phenomenological study was to explore perioperative nurses' experiences with the use of colon care bundle. In this chapter, the research methodology was discussed in-depth, outlining the procedure for recruitment, research design and rationale, participation and data collection, and the role of the researcher. The data analysis plan was also discussed, along with ethical procedures and issues of trustworthiness. Chapter four described the data collection and recruitment process and the results of data analysis. Details regarding trustworthiness were also discussed, and evidence of the same was outlined.

Chapter 4: Results

Introduction

The purpose of this qualitative phenomenological study was to gain an understanding of the experiences of perioperative nurses with use and implementation of the colon care bundle. To ascertain perioperative nurses' perception with use of the bundle approach it is imperative to understand their experiences when using the bundle. A qualitative methodology which included open ended questions and answers regarding participants' experiences when using the colon bundle for SSI prevention in colorectal surgery was used. In this chapter I will describe the setting, outline participants' demographic information, and discuss data collection and analysis procedures. The results that sought to answer the research question will also be presented. The research question was: What are perioperative nurses' experiences with the use of colon bundles for the prevention of surgical site infections in patients undergoing colorectal surgery?

Setting

Study recruitment took place between July 2022 and January 2023. I elicited the help of the AORN to send emails to its members with my study flyer and invitation letter. The flyer was also posted on LinkedIn, Facebook, Instagram and Reddit. The link to Qualtrics was in the flyer and invitation letter which took prospective participants to the consent form, screening questions and demographic survey. Once the online survey was completed, participants were contacted via email if they met the study's inclusion criteria, and a time was arranged for a Zoom meeting. One person did not meet the inclusion

criteria hence was not contacted. Zoom recorded the interviews and provided verbatim transcripts.

Demographics

I conducted seven interviews with participants from six different states across the United States. All participants were women. The inclusion criteria stipulated that participants must have an active RN license and must work in the perioperative department at an acute care facility that uses the colon care bundle for patients undergoing colorectal surgeries. Four of the seven study participants indicated that they were 51 years or older. Five of the seven study participants had greater than 10 years of experience working in the perioperative department. Table 1 outlines participants' demographic information. Four of the seven participants had master's degrees in nursing as their highest level of education, the others had bachelor's degrees. Of the seven participants three were Black/African American and four were White.

Table 1

Participants Demographic Information

Demographic Information	Number of participants (*n=7*)
Gender	
Male	0
Female	7
Age Range	
18-21	0
21-30	0
31-40	2
41-50	1
51+	4
States	
Georgia	1
Maryland	2
South Carolina	1
Texas	1
Virginia	1
West Virginia	1
Race/Ethnicity	4
White	3
Black/African American	
Highest level of Education	
Master's	4
Bachelor's	3
Time Working as Perioperative RN	
Less than 1 year	0
1-3 years	1
4-9 years	1
Greater than 10 years	5

Data Collection

Participants

Sixteen people responded to the request for participation during recruitment and completed the Qualtrics survey which included the consent form, screening, and demographic surveys. One person did not meet the inclusion criteria for the study. Two people did not leave contact information. I contacted 13 individuals to set up interviews via Zoom, however, only seven interviews were completed. Despite multiple attempts to connect with the remainder of persons that showed interest by completing consent forms I was unsuccessful, and the final sample included seven participants.

Location, Frequency and Duration of Data Collection

Permission was granted by the IRB at Walden University for my study before recruitment commenced. Study approval was granted on June 29, 2022, and the approval number is 06-29-22-0665670. I recruited nurses living in the United States by eliciting the association of perioperative nurses to send an email invite to its members and post my flyer on social media. I also asked study participants if they could share my study with other perioperative nurses to seek out participants. The email from the AORN included an invitation letter that contained a link to the Qualtrics survey. The flyer that was posted on social media sites also contained a link to the Qualtrics survey. The Qualtrics survey contained the consent form along with screening and demographic questions (Appendices D).

I interviewed seven perioperative nurses who work at acute care facilities across the United States who had current RN licenses. Interviews took place between July 2022

and January 2023. Interview time varied from 11 to 24 minutes. Open ended questions were used to stimulate authentic responses and I asked follow-up questions when necessary. I also asked for further explanation and elaboration when needed. The interview guide (Appendices A) was used to carry out each interview.

All interviews were done using Zoom, which audio recorded and provided verbatim transcripts for four of the interviews. The first three interviews were transcribed by me due to technicalities with the Zoom platform. Verbal and written consent was obtained prior to recording and transcription of data. After each interview the Zoom app would send a message informing me that the verbatim transcript is available. I listened to each recording and made corrections to the transcript where necessary. Field and journal notes were also made post each interview. After the transcripts were corrected, I sent them back to the participants to ascertain if they captured what the participants stated correctly. I received response from one person stating that the transcript was correct. Despite sending reminders the other participants did not respond. The recording and transcripts are kept in a file on my password, protected dedicated laptop. Printed transcripts and my journal notes are kept in a locked cabinet in my home office and will be discarded via shredding after 5 years. Audio recordings and transcripts saved on the cloud will remain there protected for five years after which they will be deleted.

Variations in Data Collection

Participants were recruited and data collected between July 2022 and January 2023. Recruitment started towards the end of the COVID-19 pandemic when the social distancing requirements had just been lifted and people still were not sure how safe face-

to-face interactions would be. Due to this fact and the need to collect data across multiple States I decided to carry out data collection and recruitment remotely. I started out by posting my flyer on social media sites but after three to four weeks I did not receive a single interested participant. I decided to elicit the help of the AORN to send email invite to its members on my behalf after receiving permission from the IRB to make additions to my recruitment method. I submitted my proposal along with evidence of IRB approval to the AORN and waited another four weeks for approval from the leadership of the association. Thereafter emails were sent out to members and interviews were conducted via Zoom.

There were two instances of technical difficulties where participants stated that they could not hear me. In both cases the participants opted to leave the meeting and then rejoin. In one case the interview had to be restarted but all were completed without further issues.

Data Analysis

Coding Process

After completing my first three interviews I started the data analysis process using in vivo coding and Braun and Clarke's six step method (Braun & Clark, 2006). Additional interviews were added as they were completed. Three themes emerged from the data: education, compliance and accountability. I started the analysis using the Braun and Clarke's six step method by first beginning with step 1. I read and reread the transcripts until I felt I was familiar with the data. In step 2 I printed the transcripts and highlighted the participants' words and wrote the codes in pencil on the side of the paper.

I started step 3 by creating an Excel spreadsheet that contained a column for themes, patterns, codes, and participants comments. I achieved this by identifying words and phrases that were linked to the research question. Thereafter I searched for more words and phrases from the same participants and others that were related to a specific pattern. This was repeated for each interview transcript. In step 4, I combined the data after matching successful abstracted data with codes and form potential themes. I then reviewed the data, codes, patterns and themes to make sure that they match meaningfully. This was achieved by reading and rereading the data extract and ensuring that they align with the patterns. In step 5, themes were named and defined. After this I started step 6, which entailed writing up the report. The written transcripts were sent along with my Excel spread sheet for my chair to review.

Codes, Patterns, Themes

Data saturation was achieved with three interviews, however I continued to interview participants until I completed seven interviews. Three themes were extrapolated from the data: compliance, education, and accountability. Each participant shared their experiences using the colon care bundle for patients undergoing colorectal surgeries. Open ended interview questions were used to allow participants to explain their experiences using the colon care bundle.

Several study participants expressed that one of the biggest challenges they had using the colon care bundle was getting surgeons to cooperate. Commonalities among participants included factors that contribute to non-compliance. For example, one participant stated, “it’s real hard to get the surgeons to use the bundle.” Another

participant stated “they (surgeon) don’t want to take the time to do it.” Other participants stated, “thinking that we have more control over what the surgeon do than we really do.” “They pick and choose what they want to use. They won’t use all of the elements.” “Surgeons don’t want to use the bundle.” Others stated, “people grumble about having to do extra set up.” And “time and extra instrument that need to be counted.” These statements extrapolated the patterns accessibility, time consuming and challenges with surgeons which translated to the theme factors that contribute to non-compliance.

The next most common theme that emerged had to do with education of staff and providers. Participants shared “reinforce to staff/educate on the importance.” Another person stated, “education is important.” Others expressed “explain why it should be done” “it requires on going education” and “understanding the program and why it’s done.” People also stated, “lots of reminders and re-education.” “Educating and reeducating of the importance of the bundle.” Another individual stated, “no challenge once everyone is educated on why we are doing it.” These experiences materialized as the theme education is needed for all staff and providers.

The third most common theme that surfaced had to do with accountability with participants sharing experiences that included nurses being fearful of reporting bundle elements that were not completed. Several participants stated that people should be held accountable and there should be actual repercussions when bundle approach is not followed. One participant stated, “hold accountable for role in carrying out colorectal bundle.” Another one exclaimed “get in trouble whether they follow bundle approach or

not. These experiences from the perioperative nurses led to the emergence of the theme accountability.

Discrepant Cases

While the three themes emerging from my study are described above and are included in the thematic analysis, several participants described responses to the questions regarding the colon bundle use at their location in favorable terms regarding compliance stating: participant four stated “the surgeon knows what is to be done and does that.” Still another participant described the patient response as needing to begin “before the day of surgery.” The topic of SSI as a risk related to not using the colon bundle was raised by one participant who stated: “there is no certainty of how and when a patient develops an SSI, and one should investigate aspects outside of healthcare providers.” The overarching theme with the greatest level of input from participants was the theme of education. Study respondents felt that once educated on the whys of the colon bundle approach most people are more apt to engage and use bundle elements.

Table 2

Main Themes, Patterns and Codes

Themes	Pattern	Code
Compliance	Accessibility	Having accessibility to the closure tray
		Supplies and equipment need to be available
	Time consuming	Time and extra instrument that need to be counted It takes a little bit more time
		People grumble about having to do extra set up They (surgeon) don't want to take the time to do it
	Challenges with surgeon	Thinking that we have more control over what the surgeon do than we really do.
		They (Surgeons) don't want to take the time to do that even after its explained why we find it important
		It's real hard to get the surgeons to use the bundle itself to begin with.
		They'll pick and choose what they want to use. They won't use all of the elements
		Surgeon think it's not necessary
		Hound surgeon. Constantly check to make sure.
		Doctors are in charge. That's their decision
		Surgeon grumble
		Kick back from surgeons
		Surgeons don't always use the bundle
		All we can do is suggest they can always refuse
		We can't make them listen
Education	Education needed	Reinforce to the staff/educate on importance
		Education is important
		The importance of the colorectal bundle should be passed on
		Education/ yearly skills
		Explain why it should be done
		we get educated on stuff for the O.R. and, you know, policies and everything
		it requires ongoing education
		understanding of the program and why it is done
		educating and reeducating of the importance of each one of the bundles
		Lots of reminders and re-education
		No challenges once everyone is educated on why we are doing it
		Stay current on bundle requirement
		Share information with staff
Accountability	Holding people accountable	Hold accountable for role in carrying out colorectal bundle
		Hold people accountable
		Have actual repercussion
		Get in trouble whether they follow bundle approach or not
		Hold everyone accountable

Evidence of Trustworthiness

Credibility

Credibility in a research study is important because it means that the study results are believable (Patton, 2015). Credibility was achieved by triangulation of sources. This was achieved by analyzing the uniformity of the different participants' data sources using the same interview style. Data saturation was achieved with a total of seven study participants. I also engaged in peer debriefing through my chair to ensure the validity of the study (See Patton). My chair has no interest in the study and remained unbiased throughout, thus enhancing the validity of my study. Participant validation was attempted, however, only one person responded to confirm the content of the transcript.

Transferability

Transferability of the study is concerned with generalizability (Patton, 2015). It speaks to the whether other researchers or the audience who will read the study can apply study findings to other settings or experiences. To ensure transferability I provided a detailed description of the data that was collected. I reported the number of participants, location settings, frequency and duration of data collection. I also reported the demographics of study respondents. This allows for clarity in the mind of the audience who will read my study. Study participants were from multiple geographic areas in the United States which enhances the transferability of my study.

Dependability

According to Ravitch & Carl, (2015) reflective journaling is helpful for spontaneous thoughts, emotions, concerns and meaning making. I used reflective

journaling to express thoughts about the interviews after each interview. Journaling was also helpful for writing down thoughts and emotions during the data analysis process. My data collection and analysis, and results were examined by my chair for accuracy of findings. By examining the reflective journals and sharing the transcript of my interviews with my chair I further promoted the dependability of my study.

Confirmability

Confirmability is concerned with the ability of the study finding to be corroborated by other individuals (Patton, 2015). I used my journal to make notes detailing my decision-making process and data management. This was an attempt to demonstrate confirmability. Epoche was imperative to eliminate biases (See Author date). It was an ongoing process that I engaged in throughout the analysis process to ensure that my personal beliefs, viewpoints and assumptions did not impose meaning on the phenomenon that was studied (See Patton, 2015). I acknowledge my beliefs and biases related to the study and set that aside so that they did not interfere with the rigor of the study.

Results

The research question was: What are perioperative nurses' experiences with the use of colon bundles for the prevention of surgical site infections in patients undergoing colorectal surgery? The themes that answered the research question were garnered through detailed review and in vivo coding of written transcripts. The transcripts codes and themes were reviewed by my dissertation chair. The themes that were extrapolated from the data were: Compliance, Education and Accountability.

Theme 1: Compliance

All study participants shared that if nurses and providers are educated about the whys of the use of the colon care bundle then they will be more likely to use the bundle approach. The contributors to non-compliance were expressed as time consuming, accessibility and challenges with surgeons. For example, participant 1 shared her experience using the colon bundle "they (surgeons) don't want to take the time to do that." Participant 1 also shared that there may be thoughts of nurses having more control over the surgeons than they really do. Participant 2 stated, "Some of the barriers that we've seen is it's real hard to get the surgeons to use the bundle itself to begin with."

Participant 2 highlighted that surgeons don't use all bundle components. They stated, "They like to use the order set, but they'll pick and choose what they want to use. Participant 3 expressed that some surgeons don't think that the bundle approach is important. They stated, "Every now and then you'll have a surgeon where, you know, they'll say it's not necessary." Participant 4 recalled that having accessibility to the closure tray and not having it as big and bulky so it's not excessive. Participant five shared that surgeons don't always use the bundle approach. They stated, "Well, we kind of open up the closing tray and say here it is. You must use it. Of course, they can still refuse, and we do have that." Participant 5 also stated that "all we can really do is suggest, they can always refuse." Participant 6 stated that they need to ensure that they provide the things.

Theme 2: Education

All seven participants expressed the need for more education. The theme education is needed for all staff and providers was described as education is important, explain why it should be done, it requires ongoing education, lots and reminders and re-education. Participant 1 expressed; “they don’t want to take the time to do it even after it is explained why we find it important. Participant 1 also shared that when persons are educated, they are more likely to understand and go along with it. Participant 2 stated “educating and reeducating of the importance of each bundle.” They also shared that ongoing education is required because of changing staff.

Participant 4 stated, “encouraging people to do it and do it properly.” Participants 5 stated “as far as nurses we have went to education and there are yearly skills they have to meet and go over everything and the importance of why we do it. So, education is how we have tried to nail it in, how we tried to drive it home.” Participant 6 stated, “Education is important first and foremost. Each nurse who participates in the care of patients with colorectal surgery should know the reason behind the colorectal approach.” She also stated, “so when we have new nurses coming into our circle of nurses the importance of the bundle should be passed on to these nurses.”

Theme 3: Accountability

Some participants expressed that there were no repercussions when the bundle was not followed by nurses and physicians. Participant three stated, “ultimately it comes down to whether they get in trouble, whether they follow them or not. You know because if they are getting in trouble for lack of a better term because they are not following it

then it puts a greater pressure on them to follow it." Participant four stated that there were no repercussions for surgeons if they did not use the bundle approach at one facility that she worked. Participant five stated, "if they (surgeons) don't do 100% of the bundle in there, some of their monies are taken away.' Participant six stated that each and every nurse that will come in contact with the patient should be held accountable for the role that they need to play in carrying out the colorectal bundle." She also stated, "Holding surgeons accountable should be taking their block time. Participant one expressed "if we are not holding everyone accountable then they are not going to be able to figure out why we're having surgical site infections. Participant five stated "all we can do is suggest they can still refuse, and we do have that."

Summary

This qualitative phenomenological interpretative study aimed to elicit perioperative nurses' perceptions regarding their experiences with the use and implementation of the colon care bundle used for patients undergoing colon and rectal procedures. The research question was: What are perioperative nurses' experiences with using colon bundles to prevent surgical site infections in patients undergoing colorectal surgery? This chapter discussed the study settings, participants' demographics, and data collection, including the location, frequency, and duration of data collection, along with variations to data collection. This chapter also embarked on data analysis strategies that included formulating codes, patterns, and themes and explaining inconsistencies in the data collected. Steps taken to ensure the study's trustworthiness, such as credibility, transferability, dependability, and confirmability, were explained. The study results entail

the three themes extrapolated from the data: compliance, education, and accountability. The most overarching of the three is education. Chapter Five addressed the interpretation of the findings, study recommendations, limitations, and implications for practice and research. Most importantly, the study's impact on social change was also outlined.

Chapter 5: Discussion, Conclusion and Recommendation

Introduction

The purpose of this qualitative study was to determine the lived experiences of perioperative nurses with use and implementation of the colon care bundle. To address the gap in the literature I conducted a qualitative, interpretative, phenomenological study using semistructured, individual interviews. Phenomenology was the methodology of choice because it aligned well with the study. I used phenomenology to gain a deeper understanding of the lived experiences of perioperative nurses.

In chapter 4 I discussed the settings, demographics, data collection, location, frequency and duration of data collection. I also discussed variations in data and discrepant cases. In this chapter the interpretation of findings, study limitations, recommendations, implication for practice and concluding findings were discussed.

Interpretation of Findings

This interpretative phenomenological study was conducted using the AORN's patient- focused model. I used the conceptual framework to gain in depth and rich data of the lived experiences of seven perioperative nurses who work in acute care facilities where the colon care bundle is being used when surgical procedures are carried out for patients undergoing colon and rectal procedures. The participants shared their experiences openly when expressing their experiences with the use of the bundle approach when caring for people undergoing colorectal procedures. To date there are no studies that address perioperative nurses' experiences with use and implementation of the colon care bundle. My findings fill the gap in the literature as it relates to perioperative

nurses' experiences with use and implementation of the colon care bundle for patients undergoing colon and rectal surgeries.

Theme 1: Compliance

My findings for perioperative nurses align with what was previously known about the colon care bundle. The current literature stipulates that adherence and compliance are lacking with colon care bundle for patients undergoing colorectal surgeries (Tanner et al, 2015). Tanner also highlighted the need for education among the end users of the colon care bundle.

Tanner et. al (2017) concluded that there were questions surrounding compliance to implementation of the colon care bundle. This was highlighted in my study through multiple statements made by participants. Participants (one) stating "surgeons don't want to take the time to do it, (five) "surgeons don't always use the bundle", (five) "we can't make them[surgeons] listen" and (four) "people grumble about the extra set up". The perioperative nurses in this study expressed that they constantly had to remind surgeons to carry out bundle components. Study participant (three) stated that even with reminders some surgeon still did not complete all the steps in the bundle. This was highlighted in previous studies that outlined that not all the steps in the bundle are followed; for example, Tanner et al. (2016) attributed the results of their study to low compliance with bundle components.

Theme 2: Education

Sickder et al. (2017) concluded that insufficient knowledge is a concern for infection prevention strategies. Likewise, Tanner et al. (2016) stated that increased staff

education and engagement are needed to increase the use of the colon care bundle. Reece et. al (2020) also alluded that efforts must be made to improve adherence to bundle care. This was confirmed with my study findings. Perioperative nurses in this study shared that the colon care bundle needs lots of reminders and reeducation that include making sure the end users of the bundle approach understand the program and why it is done. They expressed that people need to stay current on bundle requirements and that it is important that the colorectal bundle is passed on to all staff members who will care for patients undergoing colon and rectal surgeries. Some participants also shared that there needs to be a way that information about patients is shared with the staff after surgery. This is supported by Sickler et al. (2019) with their conclusion that there was insufficient performance monitoring for nurses.

Perioperative nurses in my study were not knowledgeable about the components of the care bundle at the facilities where they worked. All participants were knowledgeable about changing gowns, gloves, and drapes but they could not share the other components. One participant stated that there are eight steps in the care bundle but could not outline all of them. This was the same for most of the participants in the study. This finding is confirmed by Tanner et al. (2017) in their study that concluded that increased staff education is needed.

Theme 3: Accountability

Making sure that people are accountable for their actions in patient care is imperative for best practice and patient outcomes. The center for Medicare and Medicaid does not provide payment for the treatment of SSIs. This can be looked at as holding

healthcare facilities accountable for ensuring patients do not acquire SSIs. No other data was found in the literature regarding accountability of staff members who do not adhere to and comply with bundle components. Perioperative nurses in this study shared that people need to be held accountable for the role they play in carrying out the bundle approach. They stated that there need to be repercussions for persons who chooses not to use the bundle components. One participant stated that surgeons who work for facilities where the colon care bundle is used should lose their funding. Another participant stated that depending on what facility she works for, it is different and not all facilities enforce the bundle approach. Study participants expressed the need for people to be held accountable for the implementation of the bundle approach. The existing literature showed that there is no standardization of practice for bundle care as each facility can choose what to include in the SSI prevention bundle for colon and rectal surgeries.

Perioperative Patient Focused Model

The perioperative patient focused model was imperative to this study because of its components that required the involvement of perioperative nurses who are advocates for the patients that they care for. Participant three stated that “one of the big things for perioperative nurses is being an advocate for the patient,” which is the foundation for the PPFM. The perioperative nurses in this study expressed that they constantly had to remind surgeon to carry out bundle components and that even with reminders some surgeon still did not complete all the steps in the bundle. This was highlighted in previous studies that outlined that not all the steps in the bundle are followed for example Tanner

et al. (2016) attributed the results of their study to low compliance with bundle components.

Tanner et al. (2015) stated that there is evidence that implementing the bundle care is beneficial to patient outcomes, but implementation is limited. My study findings were similar to Tanner's as perioperative nurses shared that adherence and compliance with the colon care bundle are multifactorial for example there were issues with surgeons, problems with accessibility of supplies and equipment and issues with people who felt that the bundle components were too much. The participants confirmed these concerns reporting that surgeons pick and choose what they wanted to use from the bundle components, surgeons do not always use the bundle and it's hard to get the surgeons to use the bundle. Participants also shared that supplies and equipment needed to be readily available and there were those that thought that it takes extra time to set up and people complained about having to do the extra set up and count the extra instruments. Reece et. al (2020) echoed the perioperative nurses experiences with the extra set up and time it takes to implement the bundle components in their study that concluded that compliance with bundle component could significantly improve if the bundle had fewer components.

Limitations of the study

There were a few limitations in my study. One limitation was that only operating room nurses responded to the study. There were no preoperative and postanesthetic care nurses that responded to the study so their experiences may not be entirely representative of the experiences of all perioperative nurses. Initially the aim was to gain 10 to 15 study participants; however, only seven people responded to and participated in the study.

Which may not be an accurate representation of perioperative nurses. Therefore, further research is needed on the topic. Additionally bias exists in all research, more so in a qualitative methodology which is at high risk for researcher bias (Patton, 2015). As a perioperative nurse, my personal experiences and feelings may have potentially invoked bias during data collection and analysis. To ensure that bias did not influence the study findings I relied on my chair as an independent person who has no bias.

Recommendations

The purpose for this study was to fill the gap in the literature as it relates to perioperative nurses' experiences with use and implementation of the colon care bundle for patients undergoing colon and rectal surgeries. The existing literature contained many findings about the effectiveness of the colon care bundle, but none addressed the experiences of perioperative nurses. My study fills the gap in the literature by highlighting perioperative nurses' experiences with use and implementation of the care bundle for patients undergoing colon and rectal surgeries.

The most common sentiment among participants in my study was the need for education. Participants stated that implementing the colon care bundle required multiple reminders, education, and reeducation. Participant four shared that the importance of the colon care bundle must be passed on to others who will care for patients undergoing colon and rectal surgeries. The need for compliance with bundle components was expressed by perioperative nurses in this study. Some participants shared that people grumble about the extra set up and that some surgeons did not want to complete the steps in the bundle approach. Lack of knowledge regarding the importance of the bundle

approach may be one reason some healthcare professionals did not want to engage in the colon bundle care. To address these issues, a robust education program must be developed and implemented for all perioperative team members. The program should include an initial education initiative to involve all current perioperative team members. The program must also include orientation education and annual competency for perioperative team members. This educational program should extend to surgeons, students, and surgical residents.

Further research to include perioperative nurses from preoperative and post operative areas is needed to determine to what extent nurses are aware of the colon care bundles in other perioperative areas. Research is also needed to evaluate the effect of colon care bundle education on compliance and adherence in the perioperative setting.

Implications

The results of my study fill the gap in the literature regarding perioperative nurses' experiences with use and implementation of the colon care bundle for patients undergoing colon and rectal surgeries. Perioperative patients are at risk for multiple complications, one of which is SSIs. Patients undergoing colon and rectal surgeries are at greater risk for developing these infections. The perioperative nurses in this study need more education about the surgical care bundle to effectively speak to the bundle requirements and advocate for its implementation. Positive social change can occur at the organizational level if key personnel in leadership positions in healthcare utilize my study findings to implement changes that will support perioperative nurses when carrying out their duties to implement and use the surgical care bundle to prevent SSIs in patients

undergoing colon and rectal surgeries. Now that perioperative nurses' experiences are understood, steps can be taken to address initiatives that are nurse led to assist with potentially reducing the incidence of SSIs in this patient population.

At the societal level positive social change can occur with the results from my study because we have new information about the unique experiences of perioperative nurses when caring for surgical patients with colon and rectal diseases. When SSIs are reduced, it will lead to faster recovery to baseline for patients and their families. Hospital systems will not have to absorb the cost that it takes to care for patients with SSIs, and ultimately this will result in less morbidity and mortality for the patients that perioperative nurses care for.

Conclusions

In this study I examined perioperative nurses and their lived experiences caring for patients undergoing colon and rectal surgeries. Results have shown that even though there has been great work with the colon care bundle for SSI reduction in the colorectal population perioperative nurses still need support and education to assist them in carrying out their functions effectively. More collaboration is needed with surgeons to ensure that all team members adhere to and comply with bundle components.

Education of all team members is imperative for the successful implementation of the surgical colon care bundle for SSI prevention in colorectal surgery population. After education is completed, stipulations need to be imposed to ensure that surgical care team members are held accountable for the role they play in carrying out the bundle approach. Health care organizations along with key personnel in leadership positions can show their

support to perioperative nurses with regard to the care bundle for SSI prevention in colon and rectal patient population. This in turn may enhance the work that is done in the perioperative environment and assist with SSI reduction in colorectal surgery patients. A reduction in SSIs will lead to less monies spent by healthcare facilities to care for patients and better outcomes for the patients served by perioperative nurses.

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Appendix A: Interview Guide

Interview Questions
Introduction and review of the informed consent.
Describe your experiences working with colon bundles.
What are some challenges that you face when using the colon bundle?
What steps do you think can be taken to increase adherence to using the colon bundle?
What do you think your role is as a perioperative nurse in initiating and using the surgical care bundle in colon cases?
What concerns do you think other nurses have about using the colon bundle?
Is there anything else you want to share?

Appendix B Invitation Letter

Dear Perioperative Nurses,

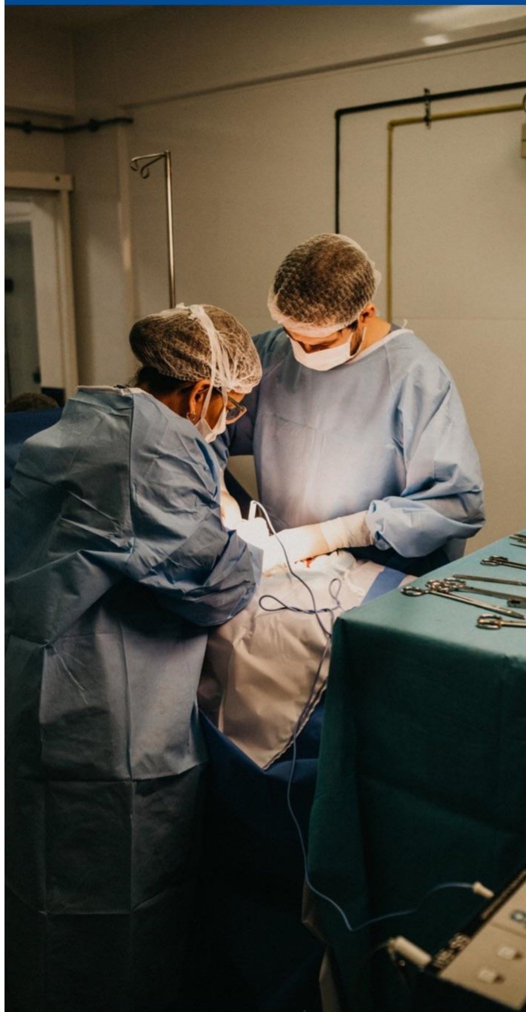
I invite you to take part in a research study to be conducted as partial fulfilment of my PhD in nursing degree at Walden University. The purpose of the study is to ascertain perioperative nurses' experiences with use and implementation of the surgical colon care bundle. To be eligible to participate in the study you must be an operating room nurse who works at a facility that use the colon bundle for patients who are undergoing colorectal surgeries. I will ask you to engage in an interview via Zoom or telephone call. The interview will last 30 to 45 minutes and will be audio recorded and transcribed. Your information will be kept confidential, and no identifying characters will be used when the data will be analyzed.

Your participation in this study is completely voluntary and you may choose to withdraw from participating at any time. You will be contacted to schedule an interview based on your answers to the questions in Qualtrics. You will be asked to sign a consent form indicating your willingness to participate in the study. You may contact me with questions or concerns by phone or email address provided.

Sincerely,

Appendix C: Recruitment Flyer

PARTICIPANTS NEEDED!!!



Participate in a study exploring experiences using the colon care bundle for the prevention of surgical site infections in colorectal surgery

Peri-operative Nurses' Perceptions and Barriers to Implementing the Colorectal Surgery Care Bundle

- This study could help care providers like doctors and nurses better understand and help their patients. For this qualitative study you are invited to describe your experiences using the colon care bundle for the prevention of surgical site infections in patients undergoing colorectal surgeries.
- This research is part of the doctoral study for Kaydian Grant, a student at Walden University.

Participating in the Study:

- An initial survey can be accessed via the link:
- The link will take you to the informed consent letter and further details about the study.
- You are not obligated to participate, and you can withdraw at any time. No identifiable information will be collected. Only aggregate data from the study will be shared.
- After completion of the survey, you will be contacted for an interview.

Study Eligibility:

- Minimum one year experience as a peri-operative nurse.
- ·Work at a facility that uses the colon care bundle
- Willing to share your experiences

Appendix D: Demographic Survey/ Screening Questions

Screening Questions:

*Are you a perioperative nurse?

- o Yes
- o No

*How many years of experience do you have as a perioperative nurse?

- o Less than 1 year
- o 1-3
- o 4-9
- o Greater than 10 years

*Do you have a current Registered Nursing License?

- o Yes
- o No

*Do you have a current, past, or professional relationship with the researcher?

- o Yes
- o No

*Do you work as an operating room, pre-op or PACU nurse?

- o Operating Room
- o Pre-Op

- PACU

*Does your facility use the colon care bundle for SSI prevention in colorectal surgery patients?

- Yes
- No

Demographic Questions:

1. What is your sex?
    - Male
    - Female
    - Non-binary; gender non-conforming
    - Other (comment area)
    - Prefer not to answer

2. What is your age?

    - 18-21
    - 21-30
    - 31-40
    - 41-50
    - 51+
    - Prefer not to answer

4. What is your race/ethnicity?

    - Asian
    - African American/ Black
    - Caucasian
    - Hispanic or Latino
    - Multiracial
    - Other (comment area)
    - Prefer not to say

5. What State do you live in? (Comment field)

6. What is your highest level of education completed in nursing?

- o Associate Degree
- o Bachelors
- o Diploma
- o Masters
- o PhD

Please provide your name, email, and telephone number. This information will be used to contact you to arrange an interview and will be kept confidential.

Name: ______________________________

Phone number: ______________________

Email: ______________________________

Appendix E: Introduction to the interview Script

Thank you for taking the time out of your schedule to talk with me today and thank you for agreeing to participate in my study. The purpose of this study is to find out about peri-operative nurses' experiences with the use and implementation of the colon care bundle for the prevention of surgical site infections in patients undergoing colorectal surgeries. I am a doctoral student at Walden university and this study is for partial fulfillment for my PhD in nursing degree.

This is a voluntary study. You can choose to stop at any time that you like. If you prefer not to continue. There will be no payment for participation. It is totally voluntary. As stated, before the interview will be recorded so that I will be able to go back over it to understand and analyze the information. The interview recording will be available to you on your request. A summary of the findings will be sent to you via email. The audio interview will also be transcribed, and a copy of the written transcript will be sent to you for verification of accuracy.

I have a list of questions that I planned on asking you, however there may be other questions based on the answers that you give. I may also ask you for clarification and also for further explanation if needed. Again, thanks for your help with my study. I will start the recording now.