Interprofessional Collaboration and Communication: A Module on Effective Communication Between Preceptor and Student

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Author Note

This paper is based on data from the DNP Project completed as partial fulfilment of the Doctor of Nursing Practice degree with the guidance and supervision of the following:

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Dedication

It is with great pride that I dedicate this Doctorate of Nursing Practice project to my loving family. Their constant support and encouragement are what made this project what it is. During this difficult year due to Covid-19, I am reminded of the power of family and how to lean on the people you love in the darkest of times. Additionally, my mentors, Dr. Stephanie Woodruff and Dr. Bernard Gilligan, have inspired me have a passion for this project and encouraged me when I needed it the most. Their dedication to their profession and to academia are a true inspiration for me.

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Abstract

The relationship between a preceptor and student is a very important one. Without proper training, preceptors may not have the skills to properly educate students in a clinical setting. Students report that it is difficult to learn when the preceptor is not properly equipped to teach or when there is a breakdown in communication. Certified registered nurse anesthetists (CRNAs) precept student registered nurse anesthetists (SRNAs) in the operating room and many times do not receive formal training of the best method to do so. Part of the teaching process is communicating effectively. Utilizing different forms of communication correctly can enhance the learning process and decrease the overall stress for both the student and the CRNA. Online simulation-based education has been shown as an effective means of educating healthcare professionals. The use of an online simulation-based module can increase knowledge for participants as related to interprofessional collaboration and communication. This quality improvement project effectively demonstrates how an online education tool can be used to improve knowledge on interprofessional collaboration and communication related to effective communication between a preceptor and student while also demonstrating the use of an enhanced recovery after surgery (ERAS) spine protocol and a post-anesthesia care unit (PACU) handoff tool.

Keywords: preceptor, preceptor workshop, nurse preceptor, CRNA preceptor, and SRNA preceptor workshop, effective communication in nursing, therapeutic communication, assertive communication, constructive feedback, online education in nursing, simulated online education

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Chapter 1: Introduction and Overview of Problem of Interest

Introduction

In many aspects of healthcare, new graduates and students learn from a preceptor. A preceptor holds immense responsibility as both a teacher and mentor in the profession. The role of a preceptor and fulfilling these roles can be stressful, overwhelming, and challenging at times. Certified registered nurse anesthetists (CRNA) are expected to fill this role of teaching student registered nurse anesthetists (SRNA) as early as six months after graduation. It involves knowledge of the profession but also how to share this knowledge in the most effective and appropriate manner. The expectation of teaching others while still being a novice in the profession can mentally taxing.

Clinical education is equally as important as didactic education and integral to a student's learning (Smith & Sweet, 2019). Preceptors can feel rewarded knowing that they play a crucial role in a student's educational experience. At the same time, preceptors who do not feel confident in their skills or teaching abilities may foster frustration and negativity in their preceptees, creating a difficult learning atmosphere (Quek & Shorey, 2018). This feeling can be from a lack of training on how to best be a preceptor or from inexperience in the profession as a whole. Either way, preceptors require their own education and the tools necessary to be effective in this role. An organized preceptor training workshop could help eliminate the frustration and provide preceptors with the tools needed to help eliminate the frustration and negativity.

Developing skills in the preceptor role to support student learning is maturational and challenging. According to Quek and Shorey (2018), 83% of interviewed preceptors experience mild or moderate stress in the role. Many times, preceptors are not required to attend formalized

training in order to precept students. It is important that preceptors use teaching strategies to be effective in their role and decrease their own stress, which can be developed through formalized training on preceptorship (Quek & Shorey, 2018). Smith and Sweet (2019) state that preceptor education programs can create more positive attitudes towards students, increase preceptor comfort levels, and overall effectiveness.

The pandemic of 2020 changed the way many people are educated today. This project was originally designed to create a preceptor workshop to help help CRNA preceptor skills. Due to timing related to Covid-19, an in-person workshop was not able to be carried out due to the need for social distancing and the inability to gather in large crowds. Additionally, the pandemic made individual projects difficult to be completed in a timely fashion. These two factors led to this quality improvement project.

Because implementation was not possible in the hospital setting or where a large group of people would congregate, an online educational module was created to educate the learner on interprofessional collaboration and communication. In lieu of an in-person preceptor workshop, this project will educate the learner on how to effectively communicate with a student. In addition to this project becoming an online education module, it was also redesigned to include two others Doctor of Nursing practice students' projects. The new project highlights the interprofessional collaboration and communication related to preceptor and student communication, enhanced recovery after surgery (ERAS) collaboration, and handoff communication in the post-anesthesia care unit (PACU). Online educational modules offer many benefits to learning. The structure allows for flexibility, accessibility, and convenience (Wu et al., 2018).

Background and Significance

Traditional education of student registered nurse anesthetists (SRNA) in the clinical settings is the pairing of the SRNA with a certified registered nurse anesthetist (CRNA). The CRNA is faced with the challenge of delivering high-quality patient care while transferring this knowledge and skills to the SRNA (Easton, O'Donnell, Morrison & Lutz, 2017). Many CRNAs do not receive and are not required to receive formal education on the best method to precept SRNAs. Without formal training, CRNAs may not have the most effective methods to educate the SRNA which can harbor stress or decreased confidence in their skills (Easton et al., 2017). The relationship between the SRNA and CRNA is crucial in the learning process, which is not always acknowledged by the CRNA. According to Washington (2013), "Being prepared mentally, physically, and emotionally to be a preceptor is necessary to set the environment for new graduates" (p.1).

The relationship between the CRNA and SRNA is important but focusing on the educator is also important. Targeting the needs of clinical educators can increase their own satisfaction and in turn increase student experiences (Elisha, 2008). Educating preceptors on different topics has been shown to increase their effectiveness and overall satisfaction in the role. Evidence suggests that educating preceptors will increase their satisfaction and confidence in the preceptor role (Scott-Herring & Singh, 2017). Additionally, an educational workshop for CRNA preceptors has the potential to positively modify their behaviors and overall knowledge of education in the clinical setting (Elisha, 2008). SRNAs are in clinical to learn but effective educators need to be given the proper tools. Didactic education in the classroom is carried out by individuals with higher degrees, formally trained to do so. It is important to place clinical education at the same standard and formally educate the instructors in the clinical arena.

This project focuses on how preceptors can effectively communicate with students. Effective communication is a vital component to the preceptor/student relationship. Elisha and Rutledge (2011) reported that 69% of students experience verbal abuse in some aspect, which does not allow for effective communication or student education. According to Elisha and Rutledge (2011) the top three most important preceptor characteristics reported by SRNAs include: Calmness during stressful events, ability to offer nonthreatening communication, and the ability to communicate clearly. Effective communication is imperative for SRNA education and healthcare delivery in general.

It was found that a simulated educational module when teaching interprofessional communication can increase knowledge, skill performance, learner satisfaction, critical thinking, and self-confidence (Foronda et al., 2016). As the other two members of the group module will demonstrate, communication is vastly important in many aspects in healthcare. In nursing, effective communication can enhance the interprofessional relationship between student and preceptor, leading to learning experiences and even increased patient care and safety (Foronda et al., 2016).

Purpose

CRNAs are many times required to educate SRNAs in the clinical arena, without formalized preceptor education, leaving them vulnerable to decreased satisfaction, low confidence, increased stress, and inadequate teaching styles. Utilizing techniques, provided in an educational module, to increase knowledge of effective communication can better prepare the CRNA to educate the SRNA. Understanding the problem at hand and what current evidence demonstrates, the PICO statement for this project is as follows: Among anesthesia providers and anesthesia students, does an online simulation-based educational intervention improve

knowledge on interprofessional communication and collaboration among providers? The purpose of this portion of the collaborate project is to demonstrate how effective communication between a preceptor and student enhances student education and interprofessional communication.

System and Population Impact

Effective interprofessional communication, specifically between a preceptor and a student, can greatly impact the learning process for the student, the quality of the education, and ultimately patient safety. Teaching effective communication by means of therapeutic communication can increase student's competency when communicating with their preceptor or healthcare members (Blake & Blake, 2019). Ineffective communication can lead to errors and patient harm. Assertive communication can improve patient safety and lead to decreased confusion between healthcare professions (Omura et al., 2017). Lastly, effective communication by means of delivering constructive feedback can enhance student learning without intimidating or imposing bias on important educational topics (Altmiller, 2016). Educating a preceptor on how to communicate effectively can impact multiple aspects of a student's education and in turn, create better relationships between the two.

Objectives

The goal of this implementation project was to educate participants on interprofessional collaboration and communication and to increase their overall comprehension of the educational strategy using an online simulated module. Furthermore, this individual topic within the project aimed to educate the learner on effective communication techniques between a preceptor and a student. There were four objectives for the participants engaging in this portion of the educational module. First, the learners would have improved knowledge on how to communicate with a student while precepting in the operating room. The module highlighted

failed communication versus effective communication. The participants would have been able to identify both. Second, the learner would be able to demonstrate knowledge on how to use therapeutic communication skills while precepting a student in the operating room. The use of therapeutic communication was demonstrated as a conversation between a preceptor and student during a preoperative period. Third, the learner would be able to demonstrate knowledge on how to use assertive communication while precepting a student in the operating room. The use of assertive communication was demonstrated in the intraoperative period during a time of increased stress. Fourth, the learner would be able to demonstrate knowledge on how to provide constructive feedback to a student while precepting in the operating room. Effective constructive feedback was demonstrated at the end of the clinical day.

Expected outcomes were that the participants will demonstrate that they learned from these given objectives by completing a pre- and post-module exam consisting of multiple-choice questions. It was expected that there would be a clinically significant increase in correct answers on the post module exam, demonstrating increased knowledge on the topic. This portion of the module had three questions in the pre- and post-module survey out of a total of nine questions between the three topics. The goal for the learner was that they would have increased scores on the post-module survey on at least two out of the three questions related to effective communication.

Chapter 2: Review of Evidence/Literature

Review of Literature

A literature review was performed to identify relevant articles that support the need and use of an educational workshop for CRNAs. Current searches for evidence identifying areas of conflict between a student and preceptor was completed. The review of literature did not focus specifically on CRNAs and SRNAs suggesting a hap in knowledge in this area. The search encompassed other levels of education such as undergraduate nursing or advanced practice degrees other than CRNAs. The literature search began using keywords *preceptor, preceptor workshop, nurse preceptor, CRNA preceptor,* and *SRNA preceptor workshop.* Search engines used include CINAHL, google scholar, ScienceDirect and EBSCOhost. A total of 1,150 articles were populated based off the keywords listed. Articles published before 2010 were eliminated with the exception of a few articles containing landmark information. Due to the pandemic of 2020 and COVID-19, the original project and literature search relating to a preceptor workshop was redirected towards effective communication between a preceptor and student. An in-person preceptor workshop was not feasible due to social distancing guidelines and the national quarantine guidelines in place at that time. The original review of literature was used to demonstrate the need for preceptor training. One part of preceptor training that was uncovered was the importance of effective communication. Moving forward, a second literature search was completed to uncover resources highlighting effective communication techniques along with the benefits of online education modules. Additional keywords used include *effective communication in nursing, therapeutic communication, assertive communication, constructive feedback, online education in nursing, simulated online education.*

The relationship between student and preceptor is unique and complex. First, understanding the relationship from the student's point of view can positively impact how preceptors act, react, and communicate with them. Elisha and Rutledge (2011), Quek and Shorey (2018), and Smith, Swain, and Penprase (2011), explore the clinical experience as seen by the student. In one descriptive study, 696 SRNAs (n=696) were reached via email and surveyed about their own clinical experiences (Elisha & Rutledge, 2011). This study found that aspects of clinical education that dissatisfy students include inconsistent feedback and evaluation, lack of interest from the clinical educator, poor precepting teaching skills, limited access to preceptors, inadequate or unprofessional communication, and intimidation and harassment (Elisha & Rutledge, 2011).

Student learning is also hindered by preceptors being impolite, difficult to approach, and treating students as if they are irresponsible, making the students' stress levels increase and decrease overall learning ability (Smith, Swain, & Penprase, 2011). Smith, Swain, and Penprase (2011) utilized a descriptive, quantitative research approach, measuring SRNAs perception of their preceptors (n=89). The study allowed students to demonstrate what they think is important or less important in their clinical experience. Lastly, preceptees who have low self-esteem admit to having difficulty communicating with their preceptor (Quek & Shorey, 2018). Quek and Shorey (2018), by means of an integrative review, measured both students and preceptors' perceptions, through review of 20 articles consisting of quantitative, qualitative, and mixed methods. Ultimately, preceptor behaviors, at times, can impact students and create a negative atmosphere not conducive to learning. Educating preceptors to avoid these tactics could increase student learning and improve the overall relationship between preceptor and preceptee.

On the other side of the relationship is how preceptors perceive their own role. According to Smith and Sweet (2019), preceptors can find reward when precepting through self-development and promotion, helping students apply knowledge to practice, and through leadership preparation. While this is true, there are also many challenges perceived by preceptors such as having insufficient time, working with challenging students, high-acuity environments, and lack of support (Smith & Sweet, 2019). Smith and Sweet (2019) used an interpretive design with two separate focus groups with a total of 12 participants, exploring nurse's perspectives and experiences of precepting undergraduate nursing student in high acuity hospitals. It was found that novice nurse preceptors lack skill and knowledge at times to adequately precept students, leaving them unable to cope with their responsibilities as a nurse and their responsibility to the student (Smith & Sweet, 2019).

The relationship between a preceptor and student can be better understood through an educational forum. An educational workshop for the preceptor can identify the needs of students and preceptors. Multiple scholarly articles describe the use of a workshop and the benefits of using this type of educational strategy. To begin, Scott-Herring and Singh (2017) discovered that a four-hour preceptor workshop significantly increased CRNA satisfaction, preparation, confidence, and comfort in their precepting abilities. This quality improvement project utilized a survey method pre and post-workshop and had a total of 33 CRNAs participate (n=33). The result was statistically significant that a preceptor workshop can increase preceptor satisfaction, confidence, and comfort in the role (Scott-Herring & Singh, 2017).

In 2019, Liao et al. conducted a quasi-experimental study to determine if a clinical reasoning teaching workshop will impact a preceptor's teaching ability, self-efficacy, and clinical reasoning teaching. The study had two groups; the first 22 nurses' preceptors who

underwent the workshop compared to the second group consisting of 70 nurses' preceptors who did not undergo workshop training. The research yielded statistically significant results indicating that the clinical reasoning education workshop increased preceptors' confidence and ability to teach (Liao et al., 2019).

Another quality improvement project completed by Easton, O'Donnell, Morrison, and Lutz (2017) created an online workshop for preceptors, approved by AANA, to enhance overall preceptor effectiveness in the precepting role. The four modules were designed by students and CRNAs to help enhance clinical education effectiveness. The modules outline the role of the preceptor, how to promote student success, ensuring skill transfer and effective evaluation, and how to handle challenging situations (Easton et al., 2017). This study does not specifically outline the effects of a preceptor workshop but rather explores what students and preceptors would find useful in a workshop to increase their satisfaction in their roles. Input was received from 20 CRNAs and 24 SRNAs to help create the core concepts for the modules.

An exploratory study by Elisha (2008) was reviewed. The study sought to determine if an 8-hour educational course modified the behavior and knowledge of clinical educators. 33 CRNA clinical educators (n=33) participated in the course. It was determined that the course positively modified their behavior and knowledge towards clinical education (Elisha, 2008). An important aspect to include in future workshops includes the use of effective communication. A discrepancy was found between students and CRNAs pertaining to effective communication, and it is recommended that this be addressed for increased educational techniques (Elisha, 2008). While this study exceeds the timeframe of relevancy, it is cited in future works and exhibits relevant information.

These studies have indicated that without a workshop there is documented frustrations or gaps in education between the preceptor and preceptee. The educational workshops have demonstrated the ability to close this gap and improve preceptors' ability to educate in the clinical setting.

With the pandemic of 2020, it was important to narrow down the scope of this project to focus on one problem area. The main theme, which emerged from the literature review, is how ineffective communication negatively impacts both the preceptor and the preceptee's educational experience and satisfaction with respective roles. Strategies to improve communication became the focus of the educational intervention in this project. One style of effective communication is assertive communication. Assertive communications programs, especially when dealing with a hierarchical structure, have proven to be effective (Omura et al., 2017). Assertive communication between staff members includes the ability to respectfully express concerns and share opinions in order to maintain patient safety (Omura et al., 2017). Through the review of eight papers, the authors concluded that interventions aimed at improving assertive communication can improve clinically relevant clinical communication and improve safety when communicating about patient care (Omura et al., 2017).

Another method of a preceptor effectively communicating with a student includes the use of constructive feedback. Feedback is important in order to progress with clinical skills and knowledge (Myers & Chou, 2016). Aspects that are included to enhance the effectiveness of feedback include goal setting, specificity, and increased use of feedback (Myers & Chou, 2016). Effective feedback also needs to establish trust and respect between the two participants, lending to a constructive relationship and the accomplishment of established goals (Myers & Chou, 2016). Utilizing constructive feedback can enhance communication between preceptor and

student, increase comfort for both parties, and teach the student on the importance of interprofessional communication (Myers & Chou, 2016).

Finally, therapeutic communication is traditionally taught as a skill between nurses and patients, but it is also necessary for effective communication between healthcare team members. Practicing therapeutic communication between health professionals can build healthy relationships, prevent mistakes, and improve patient care (Blake & Blake, 2019). Learning how to use therapeutic communication will improve the providers patient care and ability to communicate with all members in the healthcare team including preceptors. Blake and Blake (2019) examined 35 nursing students and the impacts that a therapeutic communication simulation had on their knowledge of the topic. Following the simulation, the participants felt more comfortable using therapeutic communication in practice (Blake & Blake, 2019). Demonstrating therapeutic communication in a simulated module can help the learner adapt the technique to their individual practice.

Limitations

Limitations exist for this literature search. There not many articles relating effective communication strategies directly to CRNAs and SRNAs. The information used was taken from articles referring to other nursing degrees such as undergraduate nurses. The information was translated to CRNAs and SRNAs in the operating room due to the similarity in teaching habits, clinical settings, and preceptor/student relationships.

Chapter 3: Organizational Framework of Theory

The Kurt Lewin Change Theory is widely accepted within the healthcare community as an effective process for implementing meaningful and successful change. Considered one of the founding fathers of change management (Lock, 2017), Lewin and his model are regarded by many as the classic or fundamental approach that organizations can use in order to help people adapt to and deal with change. Lewin believed that if you understand why people do things, how they do things, and what can be done to influence the forces that impact them, change is capable of taking place (Shirey, 2013). With this understanding in mind, this DNP project chose to adopt his theory for implementing this project. As a change process model, the Kurt Lewin Change Theory involves three simple change stages that are designed to improve the odds of success and subsequent practice improvement (Barrow et al., 2017). These stages include: (1) unfreezing, where there is a recognized understanding that change is needed, (2) moving, which is the process of initiating change, and (3) refreezing, which is the establishment of a new status quo (Barrow et al., 2017).

The first stage, unfreezing, includes identifying a problem, recognizing a need for change, and organizing the correct people to make change happen (Shirey, 2013). During this period, there has to be an internal realization that the potential benefits of the proposed or recommend changes outweigh the potential negatives that are associated with the change process as a whole (Batras et al., 2016). This is reliant on groups of individuals working together in order determine what needs to be changed, accomplished most effectively through communication and education with each the stakeholders who are involved.

Understanding these objectives, the DNP authors created an online educational module that recognized three anesthesia practices in which change can occur: the use of an ERAS

protocol for spine surgery, effective communication techniques between a preceptor and student, and the use of a post-operative handoff tool. With each subject, extensive research was conducted in order to determine the best practices related to there implementation. Once best practices were identified, it served as a means of demonstrating that change was needed, and that a justification existed to unfreeze current practice. This simulation module not only promoted the unfreezing stage by demonstrating current practices, but it also set the stage for what the newest research says while simultaneously comparing it to current practice. As identified by Deborah (2018), in order to effectively prepare an organization for change, the process has to begin at the main point, keenly scrutinize current fundamentals, and motivate participants, all while simultaneously cultivating trust and a recognition for change.

During the second stage of Lewin's change theory, there is a shift from what is planned in the unfreezing phase towards a new and desired behavior. Appointed the change or movement stage, this period is where the actual implementation and trialing component of the proposed change takes place, utilizing extensive research, action and learning in order to effectively achieve its results (Batras et al., 2016). Initiated with new approaches to current problems that arrive at new learning outcomes (Lock, 2017), it's during this stage that resistance is overcome and compliance to the new change is verified (Sullivan, 2012). In order to accomplish this, two factors play an important role: employee resistance and the openness to change (Hussain et al., 2018). According to Hussain et al. (2018), in order to overcome the resistance to organizational change, the oldest and most effective strategy is to have healthcare employee involvement. By communicating clearly and widely about the planned implementation, who will be impacted, and the overall benefits that are associated with its outcomes, the sharing of information will both involve and empower its participants while simultaneously promoting the change process.

In order for our group to gain involvement and have a platform for its learners, an online educational module was created. This educational module was used to demonstrate simulated scenarios to the learner, clearly communicating evidence-based research with regards to the proposed best practices. Understanding that resistance to change is a factor of success, it was important to present the information in a way that engages the learner, while also helping them to understand the need for change within their own practice. The simulated module was designed to first present the new information that was gathered from the literature, followed by a demonstration of its use in everyday practice compared to the current standard. In conjunction with the module, this is where a pre- and post-survey was implemented, allowing the authors to measure the transition (or change) from old practice to new. This demonstrated the knowledge that the participants have gained from watching the module.

The final phase of Lewin's change theory is known as refreezing. During this time, new attitudes, values, and behaviors are established as the new status quo (Lock, 2017). At this point, the goal is that those who were involved in the change process now consider the change as the new norm, however, these individuals will also have to work with each other in order to develop strategies that are aimed at reinforcing the new changes that have been implemented. Without establishing the new status quo (refreezing), healthcare employees have an increased risk of returning back to old habits.

As such, it's important during the refreezing phase to not only identify what supports change, but also the barriers against sustainability. Batras et al. (2016) identifies that at this time, organizational norms, culture, practices and policies should now become realigned in order to support the continuation of implemented change. This begins through an analysis of the data collected after institutional implementation of the module. Ultimately, the goal was that

providers will come away with enhanced knowledge so they can incorporate the information amongst themselves to sustain change. Furthermore, proponents for the new change will become an essential aspect of the refreezing phase. This is because they will communicate with providers to reinforce their newly learned knowledge, creating sustainable change that is collaborative in nature, in additional to being effective and meaningful. To accompany this, Deborah (2018) concludes that the best action to implement the refreezing phase is to institutionalize the change, ensuring that it becomes a normal part of day-to-day processes within the organization.

Chapter 4: Project Design

Ethical Considerations/Protection of Human Subjects

Cedar Crest College (CCC) Institutional Review Board (IRB) approval was obtained prior to the start of this DNP project. All information obtained from participants who watched the educational module and completed the in-module surveys was kept anonymous. Participation was done on a voluntary basis.

Implementation Plan

Implementation of the educational module was to be completed in three phases. The first phase was designed to be completed by obtaining participants to complete the educational module. Staff members from local hospitals, along with students enrolled in CRNA programs were contacted requesting their participation in the project. The second phase included the completion of the module. Once a list of participants was obtained with their email addresses, a link to the educational module was sent via email. The participants were asked to watch and complete the surveys by no later than March 5th, 2021. The third and final phase of implementation was data collection from the in-module surveys. The results of the pre and post-module surveys were used to help determine if there was increased knowledge on the individual topics.

Implementation was dependent on identifying key stakeholders. It was important to reach out to the stakeholders and gain their participation in completing the module. Stakeholders were identified in the beginning of the project as CRNAs who expressed interest in participating in a CRNA preceptor workshop. The original project design included having the stakeholders attend and promote the preceptor workshop. Due to Covid-19 restrictions, the stakeholders helped by gaining support from fellow CRNAs to watch the educational module.

Data Collection Tools

Data was collected using pre and post-module surveys. The questions were identical for both surveys. Completion of the surveys was done anonymously by using a participant identifier to keep track of individual pre and post-surveys. The surveys were composed of ten questions, including questions from each member of the DNP project. Questions specific to effective communication between a preceptor and student were included and focused on different styles of communication while educating a student. The surveys were embedded into the module website using Wix.com. See Appendix A for survey questions.

Resources Needed

The simulation center at Cedar Crest College was used to create the simulated module for this project. The center is free for students and included all the necessary tools included in the module. The three DNP students included in this project filmed the module together using cell phones and iMovie on MacBook laptop computers. This decreased the outside resources needed and help to efficiently complete the module.

Budget Justification

The total cost for the project came out to ninety dollars, split between the three doctorate students. The ninety dollars was the cost of creating a Wix homepage that housed the surveys and educational module videos. The modules were recorded with personal iPhones and edited with personal computers, leading to no extra cost. All resources utilized were available for free by Cedar Crest College including use of the simulation center.

Chapter 5: Implementation Process and Procedures

The implementation of this DNP project was centered around a common basis of improving interprofessional collaboration and communication amongst anesthesia professionals. Due to Covid-19 and the pandemic of 2020, the nursing administration at Cedar Crest College met to review each individual student project, leading to the creation of this DNP group. During these meetings, it was determined that a recorded simulated module would allow for project implementation while maintaining social distancing guidelines to ensure the safety of participants. Initially, three individual topics were researched towards improving best practice: (1) the use and implementation of an ERAS protocol for spine surgery, (2) effective communication between a preceptor and student, and (3) the use of a handoff tool in the PACU.

During DNP Project I, thorough research was initially conducted by each individual to support why their topic was of importance to clinical anesthesia practice. Once interprofessional communication and collaboration became the primary focus for a group project that incorporated each individual subtopic, new research was conducted to identify how we as a group could implement best practice, specifically through the use of an educational module. Utilizing evidence-based research, creation of the actual module began with each group member writing out scripts that demonstrated current or poor practice followed by improved clinical practice. Incorporating a voice-over PowerPoint was used to enhance participant learning. This design of the simulated module showed how the theme of interprofessional communication and collaboration can demonstrate evidence-based best practice for each individual topic.

During DNP Project II, the simulated module was filmed at Cedar Crest College in the graduate simulation center. The three team members for this DNP project were utilized as actors and helped each other with the individual components of the project. All props and equipment

were included in the simulation center. The simulated module was filmed using an iPhone 11 and editing for the final project was completed on a MacBook using iMovie. Upon completion, a Wix page was created as a platform to store and access the module. In order to demonstrate increased knowledge from the educational module, pre and post-module surveys were created. These surveys are housed in the Wix page using a survey application, allowing for all components of the module to be accessed in one primary location.

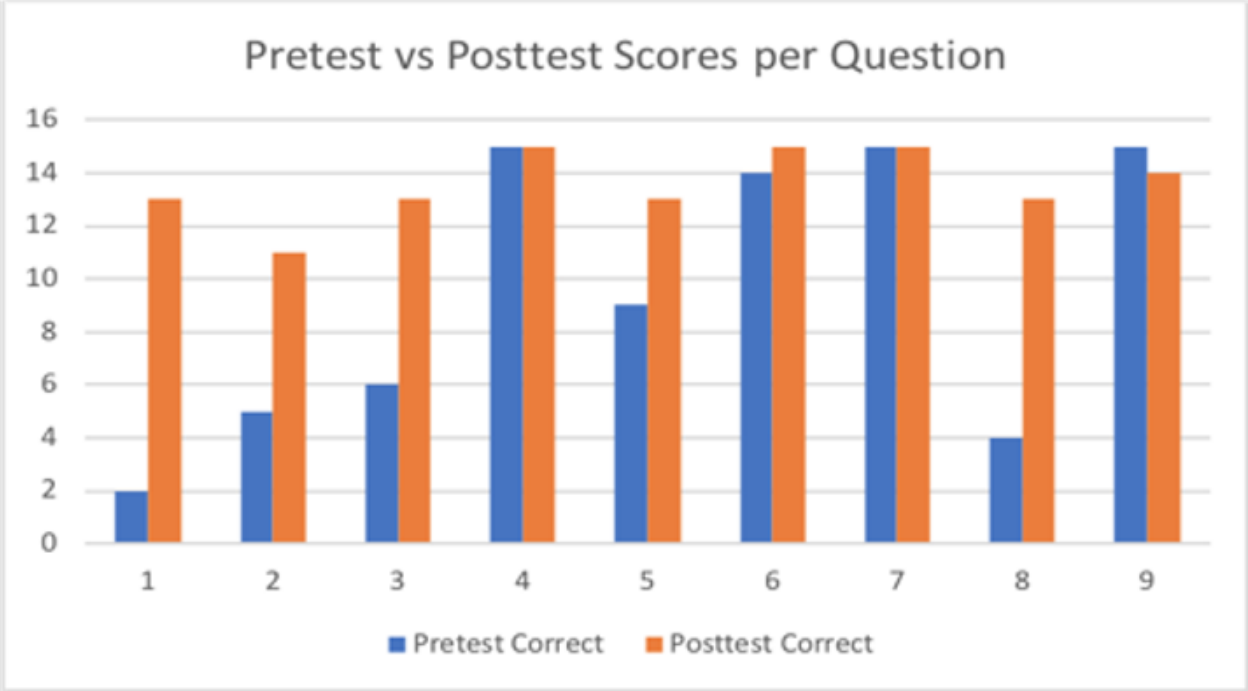
During DNP Project III, the project was implemented over a four-week timeline beginning on February 5th, 2021. During implementation, the educational module was sent out via an email link to students and certified registered nurse anesthetists. Participants were asked to sign a waiver or agreement prior to Wix page access that houses the module and its corresponding surveys. Participants were given a four-week period to complete the educational module and weekly reminders were sent to all potential participants. Participation was performed on a voluntary basis.

Chapter 6: Evaluation and Outcomes

Evaluation

Following implementation of the project, data was evaluated using SPSS software. The purpose of data evaluation was to determine whether the participants had increased knowledge of interprofessional collaboration and communication following completion of the educational modules. A total of fifteen surveys were collected from the implementation period. Only surveys that had a unique identifier which matched the pre and post-module survey were analyzed. The data was first evaluated by scoring each participant's survey. The score was given based on how many of the questions they answered correctly. Once the pre and post-surveys were scored, the results were entered into SPSS. A paired t-test was run to determine significance.

Using SPSS, the paired t-test was run to determine mean, standard deviation, and statistical significance where $P<0.05$. The test resulted in a P value of .000 and a standard deviation of 1.183. The mean score for the pretest was 5.73 out of 9 while the mean score of the posttest was 8.13 out of 9. See Appendix B for SPSS data. According to these statistics, participants increased their score from the pretest to the posttest, demonstrating an increased knowledge following completion of the educational module. See graph below for pre vs post module participant scores.



Outcomes

Thirty emails containing the link to the educational module were sent out to potential participants and fifteen were received fully completed and eligible for evaluation. Participants received an email with a link to the educational module and they were able to complete the module at their leisure within the given time frame. After evaluation of the completed surveys, it was deducted that there is a knowledge gap relating to interprofessional collaboration and communication in regard to an ERAS protocol, preceptor and student communication, and PACU handoff reports. After viewing the educational module, survey scores improved. This demonstrates increased knowledge on the subjects.

After reviewing the data, it can be concluded that the educational modules presented to the participants increased their knowledge on interprofessional collaboration and communication. If this project were to be repeated, it would be useful to have a larger sample for evaluation. Additionally, a larger implementation period may be helpful to obtain this given the

fact that the module is approximately one hour long. Participants may benefit from more time to complete it resulting in an increase sample. In general, the implementation was successful and can be useful for other topics in which there is a knowledge deficit. Future needs assessments can be completed to determine where the knowledge deficit is and can be addressed using online educational modules.

Discussion

This quality improvement project was developed during the pandemic of 2020 because of Covid-19. Three individual topics were combined to allow for implementation during this difficult time. The focus of this paper, effective communication between a preceptor and student, is an important topic in the education of a SRNA. Decreased pre-module survey scores demonstrated a lack of knowledge related to effective preceptor and student communication. The educational module discussed three forms of communication; therapeutic communication, assertive communication, and constructive feedback. Understanding the different ways to effectively communicate can enhance the relationship between preceptor and student and among other healthcare providers during an interprofessional approach to care (Omura et al., 2017). In this project, the learners gained knowledge on effective communication demonstrated by increased post-module survey scores.

This project utilized online-simulated modules to deliver the education. This method can be concluded as successful and allows for individualized education. With current uncertainty related to the pandemic and large gatherings of people, this platform allows for socially distanced education. The fifteen surveys that were evaluated were a convenience sample, obtained by the three students in this project. Future projects will benefit from a larger sample size. While the sample size was small, it was still clear that there was a knowledge gap in the

pre-module survey. It was also very evident that this knowledge gap was decreased following the educational modules. There was a significant increase in post-module survey scores.

Chapter 7: Implications for Nursing Practice

Implications for Practice

The implications for this project are clear. Without education, there is a lack of knowledge related to interprofessional collaboration and communication. Future practice will benefit from staff education to increase their overall knowledge on how to properly engage in interprofessional collaboration and communication. With the use of an online-simulated educational module, staff can be instructed on how to maintain professional and effective working relationships to increase overall productivity at work. Moving forward, the online-simulated educational module is a safe, socially distanced form of education that allows individuals to complete according to their own schedule without the need for face to face interaction. Overall, the nursing profession will benefit from this form of education while also understanding the need for increased knowledge related to interprofessional collaboration and communication.

Strengths

The first strength identified in this quality improvement project is the use of an online educational module. The module allowed for socially distanced education. The original proposal for this project was an in-person preceptor workshop. Due to Covid-19 this was not able to be carried out. The method of implementation allowed for this project to be successfully implemented. A second strength identified is also related to the online module. The strength is individualized, asynchronous learning. Participants are able to complete the module on their own timeline and at their own pace. Individuals do not learn at the same pace. This method, as compared to an in-person workshop, allows the participant to take the time they need to process and understand the information being presented.

Limitations

After implementation of this quality improvement project limitations were identified. First, a convenience sample was used. Volunteers were asked to complete the surveys and educational modules. Using a convenience sample does not allow for generalization of the results. Another limitation is a small sample size. A sample size of fifteen also does not allow for generalization. The sample size was also taken from a small geographical area potentially impacting the overall generalization. A third limitation identified is the length of the module. The module is approximately one hour in length. Volunteers may have seen this as a burden and did not fully engage an hour of their personal time.

DNP Essentials

The eight DNP essentials were used as a guide to help carry out this quality improvement project as outlined by the American Association of Colleges of Nurses (2006). All essential activities were met to maintain rigor of the project. To begin, essential one addresses with scientific underpinnings for practice. The basis of this essential is finding evidence to support better practice. Here, a thorough literature search was completed to demonstrate the need for effective communication between a preceptor and student. Evidence was also found supporting the use of online educational modules as a delivery for this project. From here, a PICO question was formed and presented to the graduate faculty at Cedar Crest College. Following feedback from the faculty and revision of the PICO question, a final literature review was synthesized and became the basis of this quality improvement project.

The second essential relates to organizational and systems leadership for quality improvement and systems thinking. The first step in fulfilling this essential was to complete a needs assessment. It was identified that there is a lack of education related to preceptor

education. Next, stakeholders were identified. For this project, key stakeholders were preceptors that expressed an interest in being educated on how to best interact with students. Their support and involvement in the project was key to successful implementation. A budget for the project was developed and reviewed by group members as laid out in this essential.

The third DNP essential is clinical scholarship and analytical methods for EBP. The first way this essential was met was by developing a DNP project proposal. Once the proposal was accepted by the graduate faculty at Cedar Crest College, the project was submitted for IRB approval at Cedar Crest College. Approval was obtained and the project was then ready for implementation. A four-week implementation period was used where the project was emailed to CRNAs and SRNAs for completion. Dissemination planning was also completed. A professional portfolio was built along the way as a means to organize and demonstrate how coursework was also utilized to meet the criteria for DNP essentials. This essential is key to a successful project and demands many hours being spent meeting the requirements.

DNP essential four is information systems technology and patient care technology for the improvement and transformation of healthcare. The essential was successfully met with the implementation of the project by means of a student generated online interactive website. The website was designed to house the educational modules along with the pre and post surveys. The technology allowed for implementation during a time when face to face education was not possible due to Covid-19.

DNP essential five is healthcare policy and advocacy in healthcare. Identifying advocates in healthcare is a critical step in creating change. Advocates help create change. This project sought out healthcare professionals who advocate for better and more effective communication between preceptors and students. Without these leaders, ineffective communication would

continue to dampen student's education. These advocates were identified and also recognized as key stakeholders.

DNP Essential six is interprofessional collaboration for improving patient and population health outcomes. Using a team approach helped this project become successful. This essential was met by consulting with DNP chairs from Cedar Crest College along with mentors from the profession. The identified stakeholders were also consulted to review their take on the various topics included in this project. This essential exemplifies the team approach and interprofessional collaboration.

DNP essential seven is clinical prevention and population health for improving the nation's health. This essential was met with the dissemination of results to healthcare experts. The project will be presented to staff at local hospitals to demonstrate the need for education on interprofessional collaboration and communication. Dissemination will lead to improvement in effective communication strategies between a preceptor and student. Lastly, DNP essential eight was fulfilled with program specific clinical hours. Clinical hours were completed at Lehigh Valley Health Network between multiple campuses.

Chapter 8: Summary of Project

Conclusion

In conclusion, interprofessional collaboration and communication are important aspects of healthcare delivery. More specifically, effective communication has many benefits including an enhanced relationship between students and preceptors, improved education of a student, and even improved patient safety. The review of literature demonstrates that both preceptors and preceptees have vulnerabilities when it comes to education in the clinical arena. Previous preceptor workshops appeared effective and have led to the creation of this quality improvement project. The design and implementation of this project will help CRNAs who act as preceptors for SRNAs feel better prepared in their role and be better equipped when it comes to effectively communicating. It is not only students that feel stress during the learning experience. Preceptors can also feel the burden of stress while educating students, leading to difficulty educating the student. The module will give the preceptors knowledge and tools to effectively communicate with their student. The module will also help improve the learner's knowledge on interprofessional collaboration and communication related ERAS and handoff reports in the PACU.

Dissemination Plans

Dissemination of this project will be carried out in two distinct ways. First, the project will be shared with students and faculty at Cedar Crest College. The project will be presented to the graduate faculty and students at the college on April 15th, 2021. There will be a live presentation done with a poster presentation along with a power point presentation with all three members of the group. In-person attendance will be limited due to Covid-19 precautions. The presentation will also be available for online attendance via Microsoft Teams.

The second means of dissemination will be carried out at Lehigh Valley Health Network. Educational leaders and staff members will be invited to view the educational modules and results as a means to further their own knowledge on interprofessional collaboration and communication. Dissemination at LVHN will be completed in the hopes that this quality improvement project is used as a means to educate current and future staff on the importance of collaboration and communication among coworkers. The results from the pre and post surveys demonstrate clinical significance and the benefits of using this module as an educational tool to improve to communication.

Future Implications

This quality improvement project can serve as template for future projects aiming to improve interprofessional collaboration and communication. This specific paper and portion of the project can be used to improve the relationship between students and preceptors in order improve the learning experience for the student while also enhancing preceptors' ability to teach. The original project prior to Covid-19 restrictions sought to design a preceptor workshop. This project can serve as a starting point or crucial aspect of a future workshop. The research and work completed will hopefully be repeated and used to guide future evidence-based projects to improve communication between student registered nurse anesthetists and certified registered nurse anesthetists.

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Appendix A

1. **Which multimodal intervention for spine surgery has demonstrated the property of reducing spinal cord edema?**

A. Ketamine
B. Toradol
C. Lidocaine
D. Dexmedetomidine

2. **Select all appropriate interventions when performing ERAS for spine surgery. (Select 3)**

A. 15mg of Toradol at the end of surgery
B. N2O to enhance depth of anesthesia
C. Scheduled oxycodone for postoperative pain management
D. TIVA with propofol
E. Ketamine 0.25 mg/min infusion
F. Carbohydrate loading 6 hours before surgery

3. **During the intraoperative phase of anesthesia care, the primary objective of ERAS for spine surgery is to...**

A. Limit the amount of narcotics that we administer to patients
B. Reduce the overall surgical stress response
C. Promote early oral intake and ambulation after surgery
D. Maximize physical and functional status

4. **You are with your student as they are having difficulty intubating. Which action and response would be most effective?**

A. You stop them immediately and take over the procedure stating, "you need more practice before I let you try this on a person again."
B. You assess the situation to determine the cause of the difficulty and say, "o.k. You have time. What do you see? What can we change to help you have a better view?"
C. Joke with the patient to try to decrease the tension and redirect the attention away from the student to ease anxiety.
D. Take over for the student and state, "don't worry, it gets easier."

5. **You meet with your student for the first time in the morning before surgery. You discuss the day, the cases, and any questions the student might have. The student, in turn, feels at ease going into the day and confident in their preparation. This type of communication is known as…**

A. Assertive Communication
B. Validation
C. Therapeutic Communication
D. Verbal Communication

6. **It is the end of the day and your student hands you their evaluation for the day. The most appropriate action is…**

A. Take the evaluation and fill it out at a later date
B. Tell the student they did a good job today and for them to put the evaluation in your mailbox
C. Sign your name on the bottom and tell the student to fill out the rest
D. Sit down with the student and discuss the pros and cons for the day, giving them feedback both verbally and on the evaluation

7. The use of structured or standardized template

A. Is not necessary because the receiver can look up all the information before
B. Aids in delivering a faster handoff
C. Should only be utilized when the patient is an ASA 3 or higher
D. Ensures consistency in information communicated between the sender and receiver.

8. What does the I-PASS acronym stand for?

A. I: Illness severity P: Patient summary A: Action list S: Situation awareness and contingency planning S: Synthesis by receiver
B. I: Introduction P: Positioning during surgery A: Antibiotics S: Summary of anesthetics S: Summary of Fluids
C. I: Introduction P: Patient Summary A: Antibiotics S: S: Summary of anesthetics S: Summary of Fluids
D. I: Illness severity P: Positioning during surgery s A: Action list S: Summary of anesthetics S: Synthesis by receiver

9. The IPASS handoff system has been shown to

A. Increase efficiency
B. Decreases time spent during handoffs
C. Decrease medical errors and near misses
D. All of the above

Appendix B

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pretest	5.73	15	1.163	.300
	Posttest	8.13	15	.915	.236

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	Pretest & Posttest	15	.371	.173

Paired Samples Test

		Paired Differences					t	df
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper		
Pair 1	Pretest - Posttest	-2.400	1.183	.306	-3.055	-1.745	-7.856	14

Paired Samples Test

		Sig. (2-tailed)
Pair 1	Pretest - Posttest	.000

Paired Samples Effect Sizes

			Standardizer[a]	Point Estimate	95% Confidence Interval Lower	Upper
Pair 1	Pretest - Posttest	Cohen's d	1.183	-2.028	-2.916	-1.118
		Hedges' correction	1.216	-1.973	-2.837	-1.087

a. The denominator used in estimating the effect sizes.
Cohen's d uses the sample standard deviation of the mean difference.
Hedges' correction uses the sample standard deviation of the mean difference, plus a correction factor.