Interprofessional Collaboration and Communication

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Initial Projects

- Implementation of an Enhanced Recovery After Surgery (ERAS) protocol for spine surgery

- Implementation of a preceptor learning workshop

- Implementation of a postoperative hand off tool

ERAS Protocol

- Combined effects of surgical stress, pain, nausea, vomiting, etc. slow down phase of postoperative recovery (Wainwright et al., 2016)

- Enhanced recovery can be achieved via a multimodal approach to modulate the surgical stress response

- Today, ERAS is a leading example of pathway-based, perioperative care with numerous societies to promote its practice

- Needs assessment of Lehigh Valley Health Network identified that neurosurgery department was looking for ways to improve patient outcomes

- Outcomes could be improved through utilizing ERAS concepts within the spine surgery discipline

Preceptor Workshop

- Many CRNAs do not receive and are not required to receive formal education on the best method to precept SRNAs

- 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)

- Evidence suggests that educating preceptors will increase their satisfaction and confidence in the preceptor role

Handoffs

- Handoffs in the post-anesthesia care unit (PACU) are times where patients are transferred from one area in a hospital to another

- These exchanges are sensitive intervals, and any miscommunication can lead to numerous undesirable outcomes

- If information isn't communicated or heard, such as a medication allergy or pertinent vital signs, morbidity or mortality have been known to occur

- The handoff process in recent years has been inclined to error due to the increased number of handoffs being completed, as well as the increased severity of patient's health comorbidities

- Using a standardized handoff tool can improve the transfer of information during the handoff of patient care

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Developing a Singular Project

- So the big question is... how can we incorporate our individual projects in order to find a common purpose?

- Over the last decade, there has been an increased emphasis placed on interprofessional practice and education in order to reform the delivery of healthcare services (Lutfiyya et al., 2019)

- Ineffective communication has been well documented in the healthcare setting (Foronda, MacWilliams, & McArthur, 2016)

- Misdiagnosis, medication errors, patient injury, and death

- In recent years, the use of interprofessional workshops, online learning modules and interprofessional simulations have expanded

Methodology

- A comprehensive literature review was performed on simulation-based education and common factors improving interprofessional collaboration and communication

- Key words that were searched included: *simulation-based education, interprofessional communication, interprofessional collaboration.*

- Evidence based studies, articles, and educational material published within the past 10 years were used

- A total of 69 articles were identified and 10 publications were selected

Background & Significance

- There has been a shift in healthcare organizations to move towards a blended learning approach

- SBE can be a platform which provides a valuable education tool that can enhance interprofessional and communication skills and team-based competences (Lateef, 2010)

- Simulation-based education (SBE) is being increasingly endorsed as an effective means to teach, educate, train, and coach healthcare professionals

PICO Question

"In anesthesia providers and anesthesia students, does an online simulation-based educational intervention improve knowledge on interprofessional collaboration and communication among providers?"

Objectives

- Three primary objectives:

    - The learner will have improved knowledge identifying interventions with an ERAS spine protocol in the pre-, peri-, and post-operative periods of anesthesia care
    - The learner will have improved knowledge on how to effectively communicate with a student while precepting in the operating room
    - The learner will have improved knowledge on the use of a post-operative handoff tool

System & Population Impact

- This project is geared towards educating certified registered nurse anesthetist and student registered nurse anesthetists

- The goal of the project is to increase CRNA and SRNA knowledge on interprofessional collaboration and communication

- Improving interprofessional collaboration and communication will improve overall patient outcomes

Theoretical Framework

- Utilized the Kurt Lewin Change Theory: Unfreezing, Moving, and Refreezing

- Regarded as classic approach that can be used to help people adapt to and deal with change

- Lewin believed that if you understand how, what and why people do things, change is capable of taking place (Shirey, 2013)

- Framework ideal to enhance the knowledge of providers

- Will come away with new information that they can incorporate amongst themselves to create and sustain collaborative, effective, and meaningful change.

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Project Design

- Cedar Crest IRB approval was first obtained

- Nine-question pre-survey

- A one-hour online simulation-based educational learning module was developed that incorporated three individual presentations

- Nine-question post-survey

- Objective of module implementation is to improve provider knowledge on interprofessional collaboration and communication while simultaneously incorporating research from the needed change each of us found within our clinical settings

Project Design Cont.

- Carried out in three phases:
  - Gathering participants on a voluntary basis
  - Having participants view the learning module
  - Completing a survey to evaluate pre- and post-module learning
  - Four-week period was provided to allow participants to complete all components of the project

Data Collection Tools, Resources, and Budget

- Nine-question survey housed in module that will evaluate pre- and post-module learning outcomes

- Resources required to complete the project were primarily associated with developing the learning module

- On-campus simulation lab with mannequins, hospital equipment and supplies, as well as individual rooms to replicate hospital settings

- Wix subscription to house learning module, survey, and survey responses

- Dual 12MP ultra-wide camara standard on iPhone 11 to record videos

- Video editing with iMovie, standard editing software that comes with all Macintosh OS

- Budget consisted of cost of purchasing 3-month subscription to Wix ($90)

Data Analysis

- Fifteen participants voluntarily watched the learning module and completed the pre- and post-module surveys

- A convenience sample

- Of the nine survey questions, eight were single answer multiple choice and one was select all that apply

- Three questions for each individual subject

- Data analysis revealed that there was increased overall knowledge based on the total number of correct pre- and post-module answers for each participant

Results

Pretest vs Posttest Scores per Question
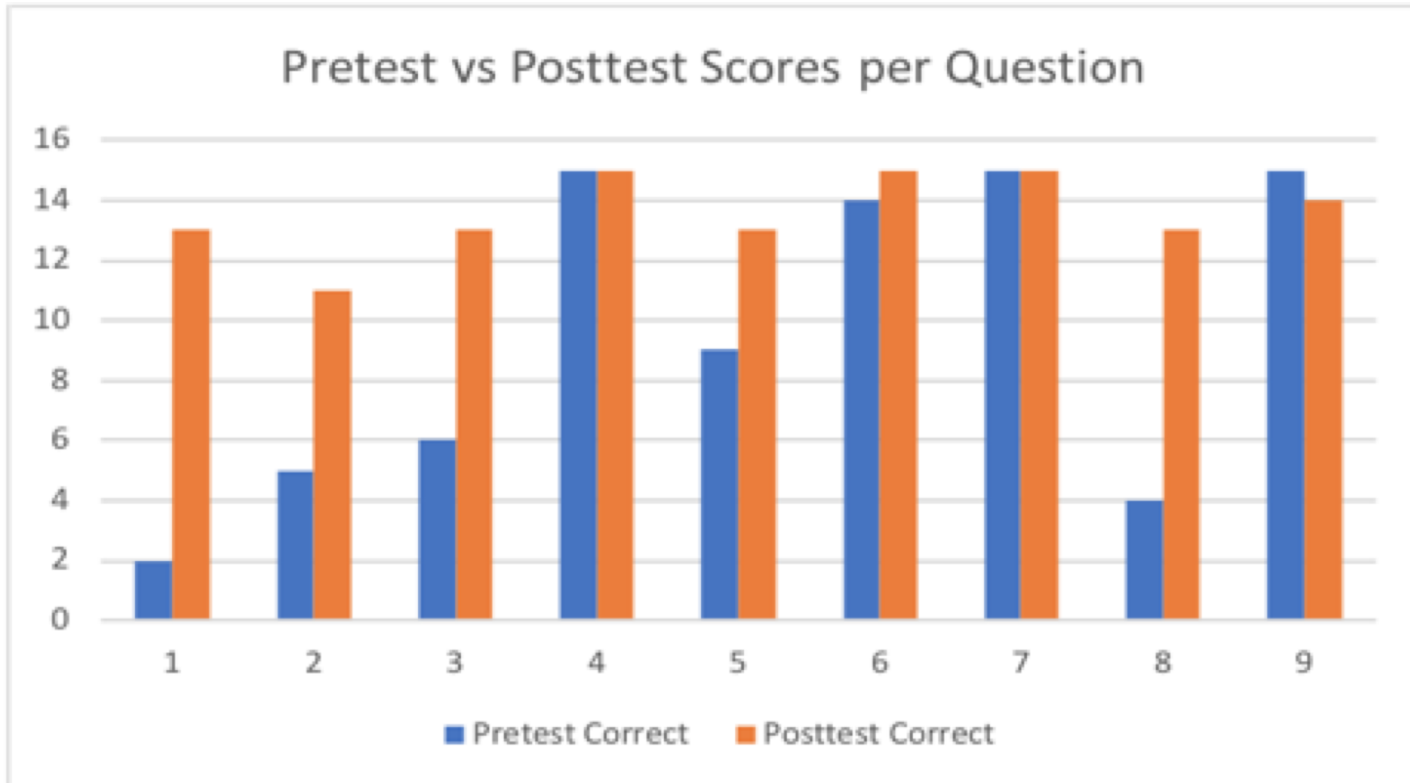
Association of Objectives to Results

- The learner will have improved knowledge on the use of a post-operative handoff tool ✓

- The learner will have improved knowledge on how to effectively communicate with a student while precepting in the operating room ✓

- The learner will have improved knowledge identifying interventions with an ERAS spine protocol in the pre-, peri-, and post-operative periods of anesthesia care ✓
  - All objectives were measured by accessing and analyzing data collected by the DNP group after a pre- and post-implementation survey

Strengths and Limitations

- Strengths:
  - Individualized, asynchronous learning
  - Able to be utilized by students and CRNAs alike
  - Project housed in a singular location
  - Short, nine-question survey that focused on key learning points towards improving professional practice

- Limitations:
  - COVID-19 pandemic
  - Inaccessibility to resources, put on hold by institutional IRB's, implementing in a socially distanced manner
  - Four-week timeframe for project implementation
  - Convenience sample of 15 participants
  - Individual Recruitment of project participants

Dissemination Plans

- Carried out at LVHN

- Educational leaders and staff members will be invited to complete modules

- Educate current and future staff on importance of interprofessional collaboration and communication

- Survey results demonstrated clinical significance of using an online simulation-based educational module

Implications for Practice

- Project demonstrated the importance of SBE as a viable and effective educational strategy

- By utilizing online learning module, participants improved their knowledge via simulated scenarios that presented information through the examples of professional collaboration and communication

- Increased knowledge on:
    - ERAS spine protocols as an effective means of improving patient outcomes
    - Effective communication between a preceptor and student
    - Implementation of a standardized handoff using the I-PASS pneumonic

Conclusions

- The COVID-19 pandemic has forced educators and healthcare providers alike to adapt

- The literature identifies that SBE is increasingly being endorsed as an educational strategy towards effectively teaching, educating, training and coaching healthcare professionals (Piryani et al., 2019)

- The use of an online simulation-based educational module was an effective means of improving knowledge on interprofessional collaboration and communication though the education of:

  - Identifying interventions with an ERAS spine protocol in the pre-, peri- and post-operative periods
  - Effectively communicating with nurse anesthesia students
  - Using a postoperative handoff tool

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