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Implementation of a CRNA clinical faculty preceptorship workshop: A quality improvement project.

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Implementation of a CRNA Clinical Faculty Preceptorship Workshop:

A Quality Improvement Project

by

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Abstract

Background/Significance: Certified Registered Nurse Anesthetists (CRNAs) undergo extensive didactic and clinical training when earning their doctoral practice degrees. However, there is inconsistency of preceptor clinical training.

Purpose: The purpose of this quality improvement project was to improve the consistency in preparedness of CRNA clinical faculty preceptors who train nurse anesthesia residents (NARs).

Methods: A pre-post approach was used. A MeSH search was conducted that resulted in 13 studies that were examined for quality and applicability for this project. The Plan-Do-Study-Act model was the framework to guide this quality improvement project.

Intervention: Participants attended one 3-hour educational training workshop. The Preceptor Education Workshop Survey, the Workshop Effectiveness Survey, and the Knowledge Application Survey were used.

Results: There were 21 participants. The Preceptor Education Workshop Survey showed increased satisfaction, comfort, and confidence ($p < .05$) from pre-intervention to post-intervention. The Workshop Effectiveness Survey showed a total score of 39.85 ($M = 4.98$, $SD = .037$, $p < .001$) which demonstrated excellence in intervention effectiveness. The Knowledge Application Survey showed integration techniques, usage of strategic questioning and provision of effective feedback.

Conclusion: This QI project shows that there was improvement in all categories. Thus, a CRNA workshop can become a sustainable educational opportunity to improve satisfaction, comfort, and confidence for CRNA clinical faculty preceptors teaching in a Nurse Anesthesia Program.

Keywords: nurse anesthetist; nurse practitioner; advanced practice nursing; preceptor training; preceptorship

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Implementation of a CRNA Clinical Faculty Preceptorship Program: A Quality Improvement Project

Providing anesthetic care in the United States since the American Civil War, Certified Registered Nurse Anesthetists (CRNAs) continue to play an integral part in perioperative care daily. To attain a Doctoral degree in Nurse Anesthesia an individual must complete both didactic coursework and clinical training. Though these individuals are graduate students at their respective universities, they are identified as Nurse Anesthesia Residents (NARs) by their programs. The NAR terminology reflects a nurse who has completed nursing school, is licensed to practice, has obtained a minimum of one-year critical care experience, and is furthering their training in the anesthesia specialty. On average, a NAR will amass over 9,000 clinical hours throughout the educational process with exposure to a multitude of practice settings and anesthetic techniques (American Association of Nurse Anesthesiology, 2022). This rigorous training equips new providers with the knowledge and skills necessary to have a positive impact in healthcare upon their entry to licensed practice.

CRNAs or physician anesthesiologists can serve as clinical faculty preceptors. Their role is to teach NARs during the perioperative period and provide feedback on a resident's evolution throughout the clinical experiences (Council on Accreditation of Nurse Anesthesia Educational Programs, 2022). The concept of andragogy works well in the clinical environment as adult learners gain more from their training when included in the preparation and execution of a plan (Scott-Herring & Singh, 2017). As NARs enact the care plans they develop, they begin to see the relevance of each step and the impact it can make on patient care.

Clinical education has been identified as critical to future CRNA success, as noted in a seminal paper on the topic. In 1997, Hartland and Londoner noted the direct correlation between

a resident's clinical education and a preceptor's teaching efficacy (Scott-Herring & Singh, 2017). NARs are exposed to a variety of clinical faculty preceptors during training, although each uses an independent teaching style along with an opinion of what is most relevant (Scott-Herring & Singh, 2017). Thus, inconsistency of NAR training occurs. The American Association of Nurse Anesthesiology (AANA), the national organization representing the nurse anesthesia profession, provides continuing education hours when a CRNA serves as clinical preceptor faculty, leading to additional professional development and time towards recertification. However, there is no required national competency for preceptor training that clinical faculty working with NARs must maintain. The lack of evidence-based, standardized clinical faculty preceptor training has contributed to inconsistent readiness of clinical faculty preceptors to train NARs.

The same disparity in preparedness to fulfill the role of clinical faculty preceptor has also been seen in other areas of advanced practice nursing. The National Task Force for Quality Nurse Practitioner Education has been a collaboration among multiple advanced practice nursing organizations since its inception in 1997. The group is responsible for continually reviewing and updating the standards to which quality nurse practitioner (NP) education is held (National Task Force, 2022). There are multiple criteria that a program must maintain, with specific consideration given to clinical training. According to these standards, to be a clinical preceptor requires documentation of a written, verbal, virtual, or face-to-face orientation. Communication between clinical faculty and didactic faculty on student expectations is necessary, as well as a continual correlation connecting coursework to clinical work. In addition, credentials representing the preceptor's expertise and ability to provide an appropriate environment to ensure student accomplishment of clinical goals is needed (National Task Force, 2022).

Within the Task Forces 2022 Standards, a preceptor is defined as a credentialed provider who collaborates with program faculty to oversee an NP student's clinical experiences in approved settings. However, the definition is less specific in nurse anesthesia programs which states a CRNA or physician anesthesiologist, credentialed through the facility and is immediately available, may oversee the residents' clinical experience (Council on Accreditation of Nurse Anesthesia Educational Programs, 2022).

An R01 research university provided three primary rotation sites for a newly accredited Nurse Anesthesia Program (NAP) offered at the university. The academic healthcare system's facilities were chosen as primary rotation sites for the program due to the variety of cases performed at each hospital and the range of experience that were available to NARs on multiple shifts throughout their clinical experience. Between the three facilities there are over 36,000 anesthetics performed annually. CRNAs working at these facilities were planned to provide clinical education to an initial cohort, comprised of 16 NARs, as well as future classes. As this was a new program, the adoption of CRNA preceptor-resident clinical education processes was needed. There was no formal CRNA Clinical Faculty Preceptorship Program or curriculum for clinical faculty preceptors in place at these facilities. As CRNAs do not receive specific training on how to precept NARs, either during or following the achievement of their own practice degree, there is likely going to be variability in success when the opportunity to teach presents itself during one's career (Easton et al., 2017).

Literature Review

A literature review was performed to assess for a beneficial intervention to the problem of clinical faculty preceptorship consistency among CRNAs providing education to NARs. This review demonstrated a significant limitation in the quantity of research currently available

relating to nurse anesthesia clinical education. The literature search was expanded to include all areas of advanced practice nursing for applicability and similar foundation of the clinical faculty preceptor role. The literature was searched utilizing PubMed, CINAHL, Medline, Embase, PsycINFO, and Cochrane Library using two main groupings. The first row set of terms included nurse anesthetist, nurse practitioner, and advanced practice nursing. Each of these terms was separated by the Boolean operator OR and was searched in MeSH format so that all associated terms would apply. The second row of terms was connected to the first row via the Boolean operator AND and included the terms preceptor training and preceptorship using the Boolean operator OR. Again, the MeSH format was utilized to ensure applicable synonyms would be returned. Both rows were specified to be included in the title or abstract.

The initial search on PubMed returned 253 articles. After filtering for references within the last six years (2017 to present) 66 results remained. Title and abstract review were performed leaving 20 articles for further screening. The same search in CINAHL resulted in 54 articles which were further narrowed to 33 after filtering for publication from 2017 to present. Duplicates were removed and five additional articles were added for screening. Medline and Embase were searched in the same manner resulting in six additional articles after filtering for publication date and eliminating duplicates. Neither PsycINFO nor Cochrane Library produced additional usable references. The final number of publications after all searches yielded 31 for further integrative review. Utilizing the Cincinnati Children's LEGEND tool, 13 articles were deemed applicable for this review.

Throughout the published works evaluated, themes emerged regarding clinical faculty preceptorship and the underlying aspects of why it is done, the resources required, and how to

implement training to benefit those providers willing to commit to the education of future practitioners.

Motivation

Amirehsani et al. (2019) found that dedication to an institutional program, a sense of giving back to one's profession, and the connectedness to one's former mentors are among the motivators for providers to precept. In addition, a need for shared responsibility and creating a quality student experience motivates many clinical instructors as found in both descriptive and qualitative studies (Amirehsani et al., 2019; Lofgren et al., 2021). To maintain that willingness to continue precepting, it was noted that access to continuing education opportunities and the option to connect and build relationships with the faculty of the student's program was paramount to this small sample size (n=29) (Amirehsani et al., 2019).

Compensation

Incentives relating to continuing education, invitations to onsite lectures given by fellow nurse practitioners, recertification credit, and discounted educational workshops were the most preferred forms of compensation (Gaynor & Barnes, 2021; Lofgren et al., 2021). Though both sample sizes were small, with 70 and 757 participants respectively, the desires of these practitioners were found to be the same. Honorariums, discounted university educational access, payments towards licensure or certification, or monetary earnings were mentioned as compensation for the increase in workload across multiple study types (Burt et al., 2022; Gaynor & Barnes, 2021; Lofgren et al., 2021). Miura et al. (2020) found that following the training on the One-Minute Preceptor model in their quality improvement project, participants' perception of important considerations to teach changed from time and money to training, communication, and the value of teaching others to enhance ones' own skills.

Resources Requested

To maintain clinical faculty effectiveness, resources relating to the accessibility of course syllabi and specific learning objectives were requested (Amirehsani et al., 2019). This theme was found once more in the Davis et al. (2021) study. A statistically significant improvement was seen in the support received from the school of nursing faculty ($p<.039$) and greater clarity regarding preceptor responsibilities ($p<.018$) following the intervention of a quality improvement project. The project included the provision of an instructional manual containing syllabi, quick reference guides, and the outlining of roles and responsibilities of all persons involved in a student's education. Another form of information sharing was found in the Burt et al. (2022) descriptive study in which more than 95% of individuals stated they would utilize a technology-based resource such as a smartphone app if it were made available. These tools have been shown to have a positive influence on all aspects of the clinical experience, though are typically specific to the program creating them. A start to this enhanced communication with programs could be achieved through the supplying of current policies and documentation required to adequately educate students as found in the thematic analysis of a qualitative study of nurse practitioners in Iowa (n=757) (Lofgren et al., 2021).

Communication

An overarching theme repeated throughout all publications was that of communication. Burt et al. (2022) noted a clinical faculty preceptor's desire for increased communication, skills to be assessed, and outcomes expected of both student and instructor in their descriptive study (n=239). In addition, the conveyance of clinical faculty policies and documentation would further develop the preceptor-institution relationship (Lofgren et al., 2021). Amirehsani et al. (2019) and Lofgren et al. (2021) found not only an increase in communication but consistent

communication with faculty to be of benefit, creating a relationship with the program. A request for those conversations to be specific to student goals and needs, and knowledge of a student's prior experience, both within the program and before, would also prove helpful to faculty (Amirehsani et al., 2019; Burt et al., 2022). Going one step further and having students generate their own objectives while in clinical would be of assistance according to a cross-sectional descriptive study when clinical faculty preceptors attending a national conference (n=195) were surveyed (McNeil & Konicki, 2021).

In the Easton et al. (2017) quality improvement project, it was found via survey on communication that during educational encounters, CRNAs and NARs had statistically significant differences in the perception of conversations undertaken during clinical time. Gaps were identified in resident learning level ($p<.003$), prior experience ($p<.012$), goal establishment ($p<.001$), ongoing feedback ($p<.0001$), debriefing following each case ($p<.007$), written evaluation ($p<.0001$), and assessment of resident preparation ($p<.003$). A meaningful evaluation process would be of benefit to both residents and preceptors (Easton et al., 2017; Lofgren et al., 2021).

Formal Training

A desire for formal training so that clinical faculty could better prepare themselves to teach adult learners was found in both descriptive and qualitative studies (Amirehsani et al., 2019; Lofgren et al., 2021). It is speculated that with enhanced training the retention of clinical faculty preceptors could be improved (Amirehsani et al., 2019). McNeil & Konicki (2021) found a statistically significant positive correlation between the attendance of preceptor training and being prepared to precept ($t_b=.244$, $p=.000$), as well as having a clear understanding of clinical objectives ($t_b=.174$, $p=.009$). This descriptive study found that the preferred format for training

would be a web-based course, with a conference workshop as the second preference (McNeil & Konicki, 2021).

Multiple quality improvement projects with the completion of formalized training were identified in the literature. Easton et al. (2017) developed an online training specifically for CRNA clinical faculty (n=88). The program was then assessed by both CRNAs and NARs to bridge the gap between current and best practice. The modules implemented addressed four key areas: the preceptorship role, resident success, knowledge sharing, and dealing with difficult situations. A majority of both groups believed formal training to be beneficial, with NARs expressing a higher percentage of support than CRNAs at 94% versus 62%. The study found that there was a difference of opinion on what teaching methods were commonly being used in the clinical environment with NARs reporting higher usage than their CRNA instructors in several areas. Statistically significant differences were noted regarding modeling ($p<.047$), case presentation ($p<.009$), sequential questioning ($p<.002$), and use of rapid-fire questioning meant to uncover knowledge deficiencies ($p<.0001$) (Easton et al., 2017).

Scott-Herring & Singh (2017) offered a four-hour workshop with topics designed to increase the satisfaction, confidence, and comfort of CRNAs precepting NARs (n=33). The curriculum was developed using a literature review and a clinical faculty preceptor needs assessment survey sent to shareholders of the healthcare institution's two facilities. The final topics included were accreditation requirements, self-efficacy, learning theory and styles, conflict management, feedback provision, and current educational issues. The post-test surveys indicated statistically significant ($p<.001$) improvement in all aspects – satisfaction (z-value -4.42), confidence (z-value -3.72), and comfort (z-value -4.22).

Hallas et al. (2021) developed a web-based preceptor development program for those clinically teaching pediatric and family nurse practitioner students. The module topics were determined via a survey of thirty nurse practitioners to assess for knowledge gaps, as well as faculty expert identification of areas where students could use assistance in the application of clinical knowledge. Clinical faculty preceptors showed statistically significant ($p<.001$) improvement from pre- to post-test in all modules apart from telehealth and billing which was thought to be attributable to the low sample size (Hallas et al., 2021).

Perryman (2022) found statistically significant ($p<.001$) improvement in preparedness following the launch of an online, self-directed resource webpage for clinical faculty. Items included were freely available for duplication and pertained to multiple student and faculty-based topics. Ultimately, fifty-five preceptors completed the study in full. Following the pre-test using the modified Clinical Supervision Self-Assessment Tool – Skills (mCSAT-Skills) instrument (Cronbach alpha >.90), access was given to the newly established site where individuals listened to a virtual presentation and explored the information. Immediately following the education provided on the website, participants completed the mCSAT-Skills once more as a post-test evaluation (Perryman, 2022).

The utilization of existing tools was also evaluated in two quality improvement studies. Following the Miura et al. (2020) training on the One-Minute Preceptor (OMP) model, participants (n=9) showed significant improvement in self-efficacy. This was noted in a comparison of scores on the Nurse Practitioner Self-Efficacy Questionnaire, as it relates to knowledge base and ability to precept students. In addition to self-efficacy, willingness to serve as a clinical faculty preceptor was positively impacted following the intervention (Miura et al., 2020). OMP model training was also provided in the Fincham et al. (2021) study (n=58) and

along with education regarding the use of orientation checklists and application of the Recorder/Reporter-Interpreter-Manager-Educator (RIME) framework the interventional data were moderately to very useful.

Klein et al. (2021) utilized focus groups (n=23) comprised of recently graduated fellows who had undertaken a one-year training in acute, ambulatory, or primary care. This qualitative study aimed to create a modified preceptor evaluation tool (PET) through the identification of themes specific to advanced practice providers. The content analysis described placing greater emphasis on guidance versus teaching and autonomy versus independence, data interpretation for patient benefit, skill development, opportunity seeking, self-care, support, leadership, and overall growth and development as a provider. Utilization of this tool would provide invaluable feedback to program administrators on clinical faculty preceptor experiences. The Cronbach alpha coefficient of the original PET was >.8 and would need to be retested for reliability and validity using a larger sample size with the questions modified by the groups (Klein et al., 2021).

Summary

These publications were reviewed to assess for a beneficial intervention to the problem of clinical faculty preceptorship consistency among CRNAs providing education to NARs. This review demonstrated a significant limitation in the quantity of research currently available on nurse anesthesia clinical education. The literature search was expanded to include all areas of advanced practice nursing for applicability and similar foundation of the clinical faculty preceptor role. The level of evidence was level four for the majority, with two achieving a level two. Five of the studies were deemed to be of lesser quality with the underlying issue of small sample size.

Themes within the literature describe the concept of communication. The concept was directly mentioned in eleven of the thirteen studies. Consistent and increased frequency of communication between clinical and program faculty was a desire of most participants across multiple samples and demographics (Amirehsani et al., 2019; Burt et al., 2022; Lofgren et al., 2021). Through the dissemination of evolving policies, procedures, and evaluation processes the relationship between didactic and clinical faculty could be improved for all involved (Lofgren et al., 2021). Regarding residents, open dialog with preceptors was identified as an area for growth as it relates to personal objectives, program objectives, and ongoing feedback (Easton et al., 2017; McNeil & Konicki, 2021).

The establishment of formal training programs was the second most prominent concept for quality improvement in clinical faculty preceptorship. Both in-person workshops and web-based programs were trialed with statistically significant results found in each study. Time and again the participants who underwent some form of educational training related to precepting showed improved scores in their preparedness to precept, ability to teach clinically, comfort and satisfaction level in doing so, and willingness to participate in the role (Easton et al., 2017; Fincham et al., 2021; Hallas et al., 2021; McNeil & Konicki, 2021; Miura et al., 2020; Perryman, 2022; Scott-Herring & Singh, 2017). A potential barrier to attending a training course for preceptorship would include course availability, time required, and cost (McNeil & Konicki, 2021).

Additional themes found included motivation, compensation, and resources desired. Those surveyed enjoyed giving back to their profession and enjoying a lasting connection to a university program while benefiting from the opportunities for continuing education (Amirehsani et al., 2019; Gaynor & Barnes, 2021; Lofgren et al., 2021). Clinical faculty preceptors' requests

for resources often centered around access to syllabi, learning objectives, and faculty support of the preceptor role (Amirehsani et al., 2019; Davis et al., 2021).

Rationale

Needs Assessment

Focus group discussions held by the DNP project lead, revealed CRNA staff felt unprepared to effectively precept. Questions relating to adult learning, adjusting one's precepting style for NARs at varying levels of training, and individual expectations for performance were disclosed. The discussions demonstrated inconsistent philosophies on how to precept incoming NARs, the shifting role from provider to educator and the added work it may command. However, the assessment also revealed excitement about the opportunities a new NAR training program would bring, as well as the opportunity to earn AANA credit for serving in a clinical preceptor faculty role. These advantages in conjunction with the prospect of training the next generation of CRNAs were identified as facilitators of the project.

Additional discussions were held by the project lead with the chief CRNA of the organization's anesthesia department, as well as the NAP director. The CRNA stakeholders communicated support for a quality improvement project to address the inconsistencies identified.

Purpose and Specific Aims

The purpose of this quality improvement project was to prepare CRNAs for the role of clinical faculty preceptor. The goal was to increase CRNAs' knowledge and application of evidence-based strategies to provide clinical education to NARs. The Specific Aims of this project were 1. Increase CRNA satisfaction, comfort, and confidence in the clinical faculty preceptor role; 2. Evaluate the effectiveness of the CRNA Clinical Faculty Preceptor workshop

session in meeting learning objectives; and 3. Assess application of the knowledge acquired during the workshop in the participant's daily practice. The data obtained through the completion of these aims will ensure the opinions of the participants in attendance are examined before and after the intervention.

QI Model

The Plan-Do-Study-Act model (Appendix A) was used to guide this project. Developed by Dr. W. Edward Demings, the model systematically evaluates a process for continual improvement (The W. Edwards Deming Institute, 2024). The Plan stage consisted of the formation of a workshop formatted to address topics pertinent to effective and successful clinical faculty preceptorship. The Do stage was the educational workshop and data collection. The Study stage analyzed the data and examined the outcomes of the project through the evaluation of post-workshop surveys and participant feedback. The Act stage reviewed the results of the workshop. Feedback received from all three surveys, the Satisfaction, Comfort, and Confidence survey, the Workshop Effectiveness survey, and the Knowledge Application survey provided the data to improve the offering for future educational sessions geared towards the preparation of CRNA clinical faculty preceptors.

Methods

Design

The project design was a pre- and post-test format and invited CRNA participants from each of the three hospital locations within the healthcare organization. NARs receive clinical experience in not only the main operating rooms of the facilities, but in outpatient care centers, endoscopy, and radiology. The three locations were chosen based on hospital size, number of surgeries performed annually, and variety of patient experiences available. These facilities

encompass a wide range of patient demographics and health statuses and provide case opportunities in all surgical specialties thus providing a well-rounded clinical education.

Context

Key Stakeholders

The key stakeholders for this project were the CRNAs interested in becoming clinical faculty, the nurse anesthesia residents coming to the primary sites for their clinical education, the nurse anesthesia program director, and the chief CRNA of the healthcare organizations anesthesia department.

Improving clinical faculty preceptorship training for CRNAs was anticipated to increase consistency in the delivery of clinical education to NARs. Though the body of evidence concerning existing programs is limited by study design, the themes identified provide fundamental support for interventions aimed at improving clinical faculty preceptor training. With information on the motivators for becoming and remaining a preceptor, the critical nature of communication amongst all shareholders involved, and the topics to build upon for successful interventional workshops specific to educational enrichment, a successful program can be designed. Through curriculum composition based upon these cornerstones, consistency for CRNA clinical preceptor faculty can be improved.

Proposed Outcomes

In 2011, the nursing profession set about improving educational standards, with specific attention to the training of advanced practice nurses (Pitts, et. al, 2019). Key areas identified for review and room for improvement centered around organizational support and competency of clinical educators. The utilization of evidence-based research to enhance and optimize the continual revision of programs and processes will be vital to the progression of nursing education

(Pitts, et. al, 2019). Through the establishment of consistent clinical faculty training used in CRNA education, a NAR will have a greater chance of success, and CRNAs will have the opportunity to convey their valuable knowledge of high-quality care and safety to the next generation of providers.

Environmental Culture

When evaluating the environment where this quality improvement project was to take place there were multiple facilitators that supported the educational workshop proposed. Current CRNA staff are excited to welcome NARs to their clinical areas and viewed the workshop as a foundational opportunity for themselves to be better prepared for their new role as clinical preceptor faculty. In addition, the Program Director and the Chief CRNA of the organization offered their support early on. Both expressed enthusiasm at the creation of an evidence-based intervention that provided a consistent structure for the NARs.

Each of the three facilities accommodate experiences in the main operating room and endoscopy but have specialty experiences to enhance the rotation. Hospital one employs 31 CRNAs with plans for six NARs providing specialty experience in trauma, interventional radiology, and outpatient environments. Hospital two employs 30 CRNAs with plans for six NARs and will provide specialty experience in cardiac and transplant surgeries. Hospital three employs 10 CRNAs with plans for four NARs and provides specialty experience in bariatrics and community-based care.

Barriers to Implementation

The known barriers to attending a training course such as this one include course availability, time required, and cost (McNeil & Konicki, 2021). In efforts to minimize those common barriers a date was chosen to maximize the number of CRNAs in attendance. To

achieve a high participation rate, operating room staffing schedules were consulted. By holding the workshop on a Saturday morning there was minimal impact on the need for CRNAs to staff each of the three operating rooms as weekend schedules are lighter. Local school calendars were also consulted in attempts to avoid conflicting with any planned breaks. The barrier of cost was eliminated as the workshop will be offered at no expense to participants.

Setting

The setting was within an urban academic medical health system that performs over 36,000 anesthetics annually. The health system consists of three primary rotation sites that will provide clinical education to NARs. Each of the site's anesthesia departments has a dedicated CRNA staff that will be working with the incoming residents. Two of the three locations have no recent experience in fulfilling the role of clinical faculty preceptors, while the third currently has NARs from other regional NAPs.

Sample

The target population for this intervention was CRNAs interested in precepting Nurse Anesthesia Residents. The optimal number of participants for this quality improvement project was 35 individuals calculated with a confidence interval of 90% and a margin of error of 10% (Qualtrics, 2023). Inclusion criteria included: full-time CRNAs working day or night shift. Exclusion criteria included: locums CRNAs, full-time CRNAs with less than one year of practice experience, and participants who did not complete both the pre- and post-intervention Preceptor Education Workshop survey. Continuing education credit from the AANA, as a benefit to attendance, was offered to help facilitate optimal participation.

Intervention Implementation

Intervention Team

The workshop team consisted of the DNP project lead and the Director of the Health Sciences Campus Office of Education and Professional Development. CRNA stakeholders were notified by email and were invited to participate three weeks prior, with one follow-up reminder one week prior to the intervention.

A 3-hour educational workshop was created to prepare clinical faculty preceptors at the healthcare organization. The lectures utilized were an existing model used within the medical school of the same university and were specific to precepting healthcare professionals. The workshop agenda (Appendix B) included selected topics of importance according to current literature outlining success in clinical education. The best evidence demonstrated that the educational workshop included knowledge of the clinical faculty preceptor role, andragogy, communication, the best methods of providing feedback, and coaching critical thinking. The workshop was interactive using didactic presentation, case study discussion, simulation, and practical use of the Questioning Aid for Rich and Real-time Discussion (QARRD). The QARRD was developed by health professions educators to integrate Bloom's Taxonomy into clinical education via strategic questioning (Farmer et al., 2021). Participants were given pocket QARRDs for easy reference when returning to their clinical sites in an effort to increase sustainability. The structured consistency for potential preceptors was created to provide an evidence-based standard for CRNAs serving as clinical faculty preceptors.

The design of the workshop considered the possibility of the intention to become an annual opportunity for CRNAs to obtain continuing education credit for recertification purposes while providing a benefit to their future colleagues. Through the efficient use of clinical time with proficient clinical faculty, the workshop helped providers prepare NARs for clinical practice and their certification examination. The workshop was designed to become a benchmark

for other NAPs interested in creating similar educational programs. This was accomplished by building a foundation for clinical faculty education and establishing a strong program aimed to benefit all current and future practitioners.

A timeline was developed to provide a quick reference for the steps leading up to workshop administration (Appendix C). The development of the topics to be discussed were determined, with the educational session centering around how learning works, andragogy, strategic questioning, and the provision of feedback.

Invitations to prospective participants were sent via email three weeks prior to the intervention date with one follow-up reminder one week prior to the workshop. The Demographics (Appendix D) and Preceptor Education Workshop (Appendix E) surveys were administered prior to the start of the educational session on the day of the workshop. The same Preceptor Education Workshop (Appendix E) survey was administered post-intervention to determine any change to participants' self-evaluations. The Workshop Effectiveness (Appendix F) survey was also administered post-intervention. The Knowledge Application (Appendix G) survey was emailed to participants two weeks after the initial cohort of NARs arrived to the three facilities in June 2024.

Data Collection

Microsoft Forms (Seattle, WA) were utilized for survey administration. On the day of the education workshop, participants completed the Demographics (Appendix D) and Preceptor Education Workshop (Appendix E) surveys following sign-in. Upon completion of the workshop, participants completed the Preceptor Education Workshop (Appendix E) and Workshop Effectiveness (Appendix F) surveys prior to leaving. The Demographics, Preceptor Education Workshop, and Workshop Effectiveness surveys were available with a QR code for

data submission via smartphone and completed online. Paper copies of each survey were available to anyone preferring to provide a written response.

The Knowledge Application survey (Appendix G) was completed two weeks following the arrival of the initial cohort of NARs to the organization's three primary rotation sites. The Knowledge Application survey was emailed to the participant's emails with accompanying link and QR code for ease of completion via smartphone and completed online.

All responses were confidential and only the project team had access to completed surveys. To maintain confidentiality, all responses were coded with an identifier unique to the participant that only he or she knows. The coding used was the participants mothers' initials followed by the participants zip code. The data were stored on an encrypted and password-protected laptop that is only accessible by the DNP project lead.

Financial Considerations

A budget was prepared to demonstrate costs of the project (Appendix H). To provide participants with three hours of continuing education credit an application was made to the AANA to gain accreditation for the course. This certification of hours through the AANA cost $360. Additional costs were in the form of light pastries, fruit, and coffee at $125.00, as well as $5.00 for handouts provided. Indirect costs considered included a decrease in available CRNA staff for the operating room during the meeting time and usage of a classroom with its accompanying technology resources. These were incurred without monetary value however as the workshop was provided on a weekend when less staff was required, and classroom facilities were more readily available. The total expense to provide the workshop was $490.

When evaluating the return on investment in such a workshop staff retention was used as a basis for comparison. Currently, one site within the organization has an average turnover of

two CRNAs per year. There is a belief that with enhanced training the retention of clinical faculty could be improved thus boosting staffing within departments (Amirehsani et al., 2019). The calculated cost of hiring a new CRNA is $5392. This figure includes credentialing fees from the city's Medical Society and all the orientations that an individual attends, both hospital and department based. The cost of the staff CRNAs involved in the interview process is also included, as this takes those providers out of the OR, decreasing available staff. Numbers were calculated using the current hourly rate of the organization's CRNAs.

Assessment of the numbers when subtracting expenses from the revenue from retaining one CRNA shows a positive of $4902. This cost savings to the organization could compound across the system and multiply over the coming years. An additional healthcare savings can be seen when evaluating NAR happiness. If a resident receives a consistent training experience at a clinical site, the option of obtaining a permanent position following graduation and licensure can be explored. Training individuals and introducing them to a department's culture before their hiring can decrease orientation time and increase retention of that provider in the future.

Ethical Considerations

The workshop proposal was submitted to the university's IRB for approval and requested designation as a non-human subject's quality improvement project. Consent for workshop administration and approval was obtained from the academic medical health systems anesthesia department chief CRNA. Data collected from the Demographics (Appendix D), Preceptor Education Workshop (Appendix E), and Knowledge Application (Appendix G) surveys was confidential and contained no identifiable information. The Workshop Effectiveness (Appendix F) survey required a participant to list their name and AANA member number so that continuing

education credit could be submitted. All surveys were stored in a password-protected electronic file on a secure, password-protected network system with access limited to the DNP project lead.

Measures

Demographics

Demographic data (Appendix D) were collected and analyzed as either nominal or ordinal. Nominal data included education broken down into highest degree achieved to practice anesthesia, yes/no questions relating to any previous experience precepting NARs, and any previously completed training in precepting NARs. Years practicing as a CRNA was divided into five-year increments ranging from one to thirty and analyzed as ordinal data.

CRNA Clinical Faculty Preceptor Satisfaction, Comfort & Confidence

CRNA satisfaction, comfort, and confidence in the clinical faculty preceptor role was measured using the Preceptor Education Workshop survey (Appendix E).

The Preceptor Education Workshop survey was developed to evaluate preceptors' satisfaction, comfort, and confidence in achieving critical roles in the clinical education of nurses before and following the intervention of a professional development workshop (Sandau et al., 2011). Good validity and reliability were established for the instrument. To provide construct validity, survey questions were developed by the primary investigator to relate to the curriculum content of the workshop and based on adult learning concepts from the Benner (1984) study with attention to the framework for novice to expert (Sandau et al., 2011). Content validity was determined by a three-expert panel comprised of the hospital orientation specialist and two clinical nurse specialists. To ensure internal reliability a Cronbach's alpha of 0.82 was calculated (Sandau et al., 2011). Permission to utilize the Preceptor Education Workshop Survey was

granted by the original author and creator of the instrument, Dr. Kristen Sandau (Sandau et al., 2011).

The survey uses a Likert scale to gauge the perception of roles considered paramount in clinical faculty preceptorship. Responses are rated 1 through 5; with 5 being the highest and indicating the participant is very satisfied, very comfortable, or very confident. A score of 1 indicates that the participant is not at all satisfied, not at all comfortable, or not at all confident. The questions evaluate the participants' self-reported satisfaction with previous precepting education, comfort in working with someone who has a different personality or learning style, comfort in coaching critical thinking, confidence in providing feedback, and confidence in ability to precept. The scores were converted to ranks and a comparison was made of pre-workshop and post-workshop results. This determined if the two sets of scores were significantly different following the workshop intervention. All responses were analyzed as ordinal data.

Workshop Effectiveness

Effectiveness of the workshop session was evaluated post-intervention using the Workshop Effectiveness survey (Appendix F).

A Likert scale was employed to assess the extent to which learning objectives were met. Responses on the survey were rated 1 to 5, with 5 being highest and indicating excellence in meeting the stated learning objectives, effectiveness of the presenters, relevance of the content to the objectives, effectiveness of the teaching methods used, participants achievement of personal learning objectives, and physical facilities facilitated learning. A score of 1 indicated a poor level of achieving the stated measures. A mean score was calculated for the group for each question and a total score was determined through the summation of each questions mean score for an overall workshop effectiveness score ranging from 7 to 40. This data were analyzed as ordinal.

To inquire about participants' opinions for future educational sessions nominal data were collected to determine if in-person, online, or a mix of in-person and online was their preferred format for learning.

Additionally, two qualitative open-ended questions were added to the program evaluation to inquire about participants' expected improvement to their current practice and any barriers to the implementation of knowledge gained in the educational session.

Knowledge Application

The Knowledge Application survey (Appendix G) was developed by the DNP project lead to assess the application of knowledge acquired during the intervention. A Likert scale was used with responses rated 1 to 5. A response of 5 indicated frequent usage in practice of the concepts learned during the workshop while 1 indicated no usage of the concept. The follow up question asked about desire for further education on each of those topics to assess for increased benefit and to increase future usage. A response of 5 indicated strong desire for further education, while a response of 1 indicated no further education was desired. The concepts that were asked about included strategic questioning, use of the QARRD, and the provision of effective feedback. Frequencies were calculated to determine how frequently participants were utilizing the techniques they were taught during the intervention and their desire for further education on those topics. This data were measured as ordinal. Two qualitative open-ended questions were asked to inquire about future topics of interest and helpful tools to be provided at future workshops.

Data Analysis

The SPSS version 29 was used for statistical analysis of data.

Demographics

Demographic data (Appendix D) were analyzed, and descriptive statistics identified the population in education, years practicing as a CRNA, experience in precepting NARs and if they had any prior education in how to precept NARs. Data were described using frequencies and percentages.

CRNA Clinical Faculty Preceptor Satisfaction, Comfort, & Confidence

The Preceptor Education Workshop survey (Appendix E) was administered pre- and post-workshop. Each question was analyzed individually using the Wilcoxon Signed-Rank test. Using this test, the scores were converted to ranks and compared pre-workshop and post-workshop results, allowing them to be matched. Two tailed significance allowed for the possibility of effect in either positive or negative direction. This determined if the two sets of scores were significantly different when evaluating the participants perceived satisfaction, comfort and confidence following the workshop intervention. Effect size was calculated using Cohen (1988) criteria.

Workshop Effectiveness

For the Workshop Effectiveness survey (Appendix F), each question was analyzed individually. A mean score was calculated for the group for each question and a total score was determined through the summation of each questions mean score for an overall workshop effectiveness score ranging from 7 to 40. When evaluating workshop success, the overall effectiveness score was analyzed as a continuous variable. A minimum score of 21 was the lowest achievable total score to deem the intervention adequate. A total score ranging from 21 to 25 indicated adequate. A total score ranging from 25.1 to 30 indicated good, while a score 30.1 or greater indicated excellence in effectiveness. Participants' preference for future educational sessions was collected to determine if in-person, online, or a mix of in-person and online was

their preferred format for learning. The written questions addressing changes to current practice and barriers to implementation were analyzed to determine frequency of concepts present.

Knowledge Application

For the Knowledge Application (Appendix G) survey, descriptive statistics were calculated to determine how frequently participants were utilizing the techniques they were taught during the intervention and their desire for further education on those topics. The written questions addressing future topics of interest and helpful tools requested were analyzed using thematic analysis to determine any themes present.

Evaluation of Process

Facilitators

Facilitators of this project included the DNP project lead and the director of the health sciences campus office of education and professional development.Throughout the educational offering interaction with attendees was gauged by the intervention team to determine the efficacy of the information being delivered. Active engagement with the participants through various types of educational interaction allowed those present to practice the skills they were learning in real time. Following workshop completion, survey data were analyzed by the DNP project team lead.

Barriers

Barriers to the success of this workshop included course availability and any preconceived notions on precepting held by potential CRNA preceptors. Hesitation to participate due to current teaching beliefs and practices informed by their individual experiences were considered. This could become a potential barrier due to the perception among those CRNAs that adult learning and nursing theories are not critical to clinical faculty preceptorship training

(Scott-Herring & Singh, 2017). Many CRNAs trained when a teaching method consisting of a succession of rapid-fire questioning meant to uncover knowledge deficiencies was highly used (Easton, et al., 2017). This method has demonstrated to be least helpful when assessing the role that stress, both eustress and distress, plays in the clinical learning environment (Easton, et al., 2017). This barrier can be overcome because CRNAs desire to participate in the growth of the profession and the preparation of the next generation of providers.

Results

Demographics

Invitations were sent to sixty-five CRNAs working at the three primary rotation sites. Twenty-one participants attended the workshop and fulfilled the inclusion criteria for this project. Demographic data is presented in Table 1 (Appendix K). Results demonstrate that the majority of highest degree held by participants was a Master's degree (81%) followed by Doctorate (14%) and Diploma/Certificate (5%). The years practicing as a CRNA ranged from 0-30 years. The majority (24%) had 16-20 years of experience whereas 5% had 26-30 years of experience. The majority (57%) had previous faculty experience and 95% of participants had no previous clinical faculty training.

CRNA Clinical Faculty Preceptor Satisfaction, Comfort, & Confidence

Preceptor Education Workshop survey data is presented in Table 2 (Appendix L). Statistically significant results were found for each question asked on the survey. Satisfaction with previous training improved following participation in the workshop with $z = 2.106$, $p < .05$, and a medium effect size ($r = .32$). The median score increased from pre-program (Md = 3) to post-program (Md = 5). Comfort when working with someone with a different personality improved following participation in the workshop with $z = 2.801$, $p < .05$, and a medium effect

size (r = .43). The median score remained the same from pre-program to post-program (Md = 4). Comfort with coaching critical thinking improved following participation in the workshop with z = 3.223, p < .001, and a large effect size (r = .5). The median score increased from pre-program (Md = 3) to post-program (Md = 5). Confidence in providing feedback improved following participation in the workshop with z = 2.299, p < .022, and a medium effect size (r = .35). The median score remained the same from pre-program to post-program (Md = 4). Confidence in ability to precept improved following participation in the workshop with z = 2.652, p < .008, and a medium effect size (r = .41). The median score increased from pre-program (Md = 4) to post-program (Md = 5).

Workshop Effectiveness

Workshop Effectiveness mean scores are presented in Table 3 (Appendix M). The summation of the mean scores led to a total score of 39.85 (M = 4.98, SD = .037, p < .001) indicating excellence in intervention effectiveness. A score of 5 was given by all participants to meeting the learning objectives concerning strategic questioning and providing feedback, effectiveness of the presenters, relevance of the content to the objectives, effectiveness of the teaching methods used, and physical facilities facilitated learning. One participant gave lesser scores to the remaining questions, a 4 for the learning objective concerning how learning works and a 3 for whether that participant's personal learning objectives had been met. When questioned about future education program preferences fifteen participants preferred an in-person opportunity, while six preferred a hybrid option.

Analysis of the open-ended question which asked participants to describe one item they plan to use to improve their clinical teaching highlighted ten different concepts. The predilection to use strategic questioning was the most frequent response. Understanding that learning should

be hard, better ways to interact with NARs, and use of the QARRD closely followed in participants choices. Additional response items included encouraging the use of prediction, how to teach critical thinking, how people learn, providing feedback, Bloom's Taxonomy, and the use of patience when teaching. Assessment of the barriers participants foresaw in implementing these changes included time constraints, personal continuing education, inexperience, work stress, generational differences, and adapting to individual personalities. Nine participants cited no barriers to the implementation of the knowledge they had gained.

Knowledge Application

The Knowledge Application survey was emailed to the twenty-one participants who completed the workshop and satisfied the inclusion criteria for this project. Five surveys were returned, and that data is displayed in Table 4 (Appendix N). There were 80% of respondents who had the opportunity to work with a Nurse Anesthesia Resident since the intervention. The use of strategic questioning was affirmed as always by 60% and very often by 40%. Effective feedback usage was declared as always by 40% and very often by 60%. Responses questioning use of the QARRD included 20% each for always, very often, and rarely and 40% for sometimes. There were no responses reported as never for any of the techniques in question.

When asked about the option to receive additional instruction on the three techniques, there was a 100% response of very interested in further education on each subject. Analysis of the open-ended question relating to future topics of interest determined that effective teaching strategies and how to efficiently teach such a large body of information was of most significance. Knowing the signs of NAR stress overload and encouraging the development of healthy coping mechanisms were also noted. Assessment of helpful tools for future workshops found that two

participants would like further information on the QARRD, while the other responses read as not applicable.

Discussion

Summary

The academic healthcare system's facilities chosen as primary rotation sites for the newly accredited nurse anesthesia program demonstrated inconsistency in a clinical faculty preceptor education process. Through the implementation of the CRNA Clinical Faculty Preceptorship Workshop, knowledge was offered to those providers wishing to enhance their preparedness to teach. The specific aims of this quality improvement project were to increase the satisfaction, comfort, and confidence in the preceptor role, evaluate the effectiveness of the workshop as determined by the participants, and assess application of the knowledge acquired in a providers daily practice. Each of these aims were met as evidenced by the survey responses received and the statistically significant results obtained.

Interpretation

Demographics

Demographic data collected during the workshop showed that 95% of participants had no previous clinical faculty training. This trend has been noted in similar workshop interventions performed at other institutions. Scott-Herring & Singh (2017) found that 93.9% of their participant population had no prior CRNA preceptor education. Interestingly it was noted that 18.2% of those providers surveyed had received a type of preceptor training at some point in their studies, though unrelated to anesthesia (Scott-Herring & Singh, 2017). Easton et al. (2017) showed that 78% of participants had no prior formal training in precepting, and of the 22% who endorsed previous education it was non-specific as to whether it related to NAR instruction. This

variability of formal instruction is also seen in other advanced practice nursing programs. Approximately, 23% of providers have ever attended a preceptor development or training program (McNeil & Konicki, 2021).

CRNA Clinical Faculty Preceptor Satisfaction, Comfort, & Confidence

The findings from this intervention align with similar studies that have been evaluated in recent years. Utilizing the same instrument as this quality improvement project, Scott-Herring & Singh (2017) found statistically significant improvement in each of the themes evaluated – satisfaction, confidence, and comfort. The cohort data from the Scott-Herring & Singh (2017) study shows a demographic resemblance to this projects' cohort which supports the idea that similar findings may be seen in other populations at other academic centers within the United States following a similar intervention. The improvement seen in CRNA preceptors' satisfaction following an evidence-based training course, as well as the development of a continuing education opportunity cannot be overlooked (Easton, et al., 2017; Fincham, et al., 2021; Scott-Herring & Singh, 2017). Thus, the specific aim to increase CRNA satisfaction, comfort, and confidence in the clinical faculty preceptor role was met.

Workshop Effectiveness

Application of strategic questioning as the abundant takeaway from the workshop aligns with current evidence in healthcare education. The use of higher order thinking skills enlists involvement from the learner leading to discussion of topics and development of critical thinking skills (Farmer et al., 2021). This form of clinical education in the operating room is becoming increasingly found in anesthesia's colleagues as well. According to Barrett et al. (2017), the introduction of learning science methodologies during surgical residency potentiates enhanced knowledge, increased competency, and success following graduation to independent practice.

Lower-level questions are beneficial when determining a learners foundational understanding, however using questioning strategies that scaffold existing knowledge through deeper dialogue ultimately enhance complexity (Barrett et al., 2017). The effectiveness of this workshop in meeting learning objectives was confirmed, thus the specific aim in evaluation of the workshop was met.

Knowledge Application

The frequent use of strategic questioning and the provision of effective feedback by those who responded to the follow-up survey showed that the importance of how to question as mentioned in Farmer, et al. (2021), can be learned and achieved. Those participants who are actively using these techniques, in addition to using the QARRD, can encourage critical thinking in their learners if they themselves do not retreat into a lower level of questioning methodology (Farmer, et al., 2021). With each respondent very interested in further education on each of the three main techniques taught during the workshop, continued improvement may be seen in the clinical learning environment. Assessment of application of the participants knowledge acquired during the intervention confirms integration of the education into daily practice, thus the specific aim of knowledge acquisition and implementation was met.

Limitations

The primary limitation of this project was the high attrition rate leading to only five participants in the knowledge application phase. Future work in this area should examine ways to keep participants involved through the action phase of the project thus ensuring the education was effective. Additionally, the results obtained are unique to the institutions involved. This project focused on three primary sites at one healthcare organization with participants self-selecting to attend and only 32% of available CRNAs participated. A higher rate may have been

achieved if more advanced notice of the intervention had been provided. For future workshops, securing a date at least three months in advance would ensure that adequate staffing coverage could be secured for the sites operating rooms. The ability of CRNA preceptor faculty to plan for attendance beforehand and opt to attend the educational opportunity locally as opposed to traveling to obtain continuing education credits would also increase enrollment. Though the training was offered to a specific CRNA population, the program implemented was supported based on current educational evidence and would be beneficial to all within the nurse anesthesia profession.

Conclusions

A three-hour workshop based on current evidence was developed to improve the satisfaction, comfort, and confidence of CRNA clinical faculty preceptors employed at one of three primary sites within a healthcare organization. Twenty-one participants attended and completed the workshop. The results indicated that CRNA clinical faculty preceptor self-assessments significantly improved in all categories evaluated following attendance. Based on feedback received and statistical analysis performed, the project workshop can become a sustainable educational opportunity to improve satisfaction, comfort, and confidence for the organization’s CRNA clinical faculty preceptors. The results of this quality improvement project add to the existing evidence of the need and willingness for a formal CRNA clinical faculty preceptorship program.

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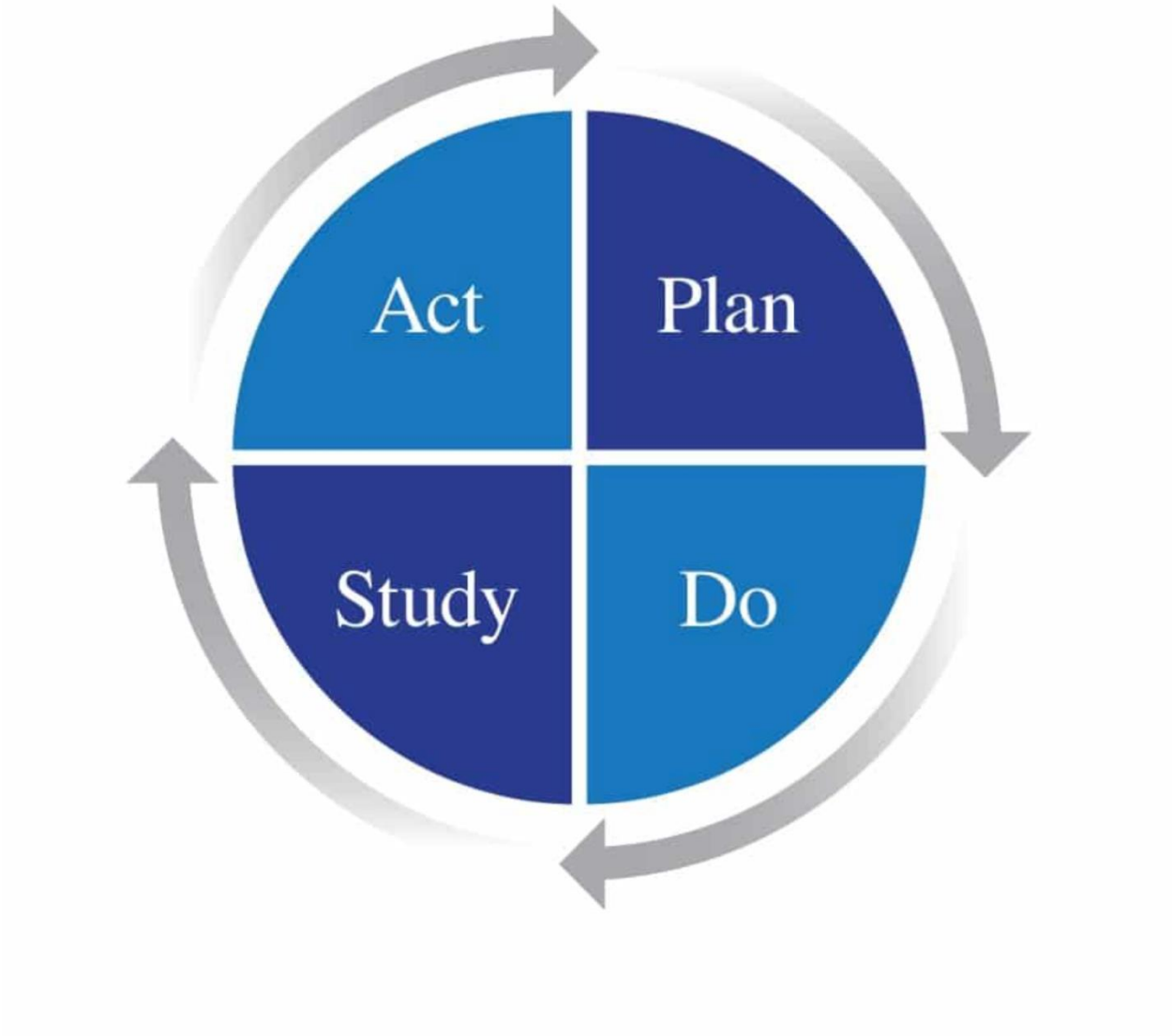
Appendix A



Appendix B

CRNA Clinical Faculty Preceptorship Workshop Agenda

Hour 1

How Learning Works:
This hour will provide participants with an overview of learning science and evidence-based practices for teaching adults. The information will be pulled from books such as Make It Stick, Small Teaching, and resources from the Learning Scientists. Topics will include items such as – creating durable memories and the problem with classic study techniques. We will discuss how to study for learning, such as retrieval practice, active learning, interleaving, guided practice, and effective reading strategies.

Hour 2

Andragogy:
This hour will introduce the difference between andragogy and pedagogy, discussing the continuum from pedagogy to andragogy and examples of instructional strategies from each. Introduce the work of Malcolm Knowles and how he defines adult learning. We will dive into the characteristics of adult learning and allow participants to develop activities that will contain multiple attributes of adult learning. Other topics in this hour will include an introduction to critical thinking and clinical reasoning and how the educator can teach to help students develop those skills.

Hour 3

Strategic Questioning:
One of the most effective teaching strategies a clinical educator can employ is strategic questioning – but the educator needs to create a safe and inclusive learning environment before they start asking questions. This session will emphasize the importance of a safe learning environment and how to do just that. Next, the session will discuss how to ask questions to help a student use more complex cognitive skills, such as applying, evaluating, and analyzing. The participants will also practice developing questioning prompts for their area of interest.

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Appendix C

	Feb 2024	Mar 2024	Apr 2024	May 2024	Jun 2024
Invitations Sent to Participants					
Follow-up Reminder Sent					
Preceptor Education Workshop Survey Pre-intervention					
Workshop Offering					
Preceptor Education Workshop Survey Post-intervention					
Workshop Effectiveness Survey Post-intervention					
Analyze Pre- & Post-Intervention Surveys					
Knowledge Application Survey – 2 Weeks after primary sites begin precepting initial cohort of NARs					

Appendix D

Demographics Survey

1. What is your highest degree of education achieved to practice anesthesia?

    - Diploma / Certificate
    - Masters
    - Doctorate

2. How many years have you been practicing as a CRNA? *

    - 1-5
    - 6-10
    - 11-15
    - 16-20
    - 21-25
    - 26-30

3. Have you previously served as a Clinical Faculty Preceptor with Nurse Anesthesia Residents?

    - Yes
    - No

4. Have you attended/received any Clinical Faculty Preceptor training to work with Nurse Anesthesia Residents?

    - Yes
    - No

Appendix E

Preceptor Education Workshop Survey

1. How satisfied are you with your previous education on training a Nurse Anesthesia Resident?

- 1 – Not at all satisfied
- 2
- 3
- 4
- 5 – Very satisfied

2. How comfortable are you in working with a Nurse Anesthesia Resident who has a different personality or learning style than yours?

- 1 – Not at all comfortable
- 2
- 3
- 4
- 5 – Very comfortable

3. How comfortable are you in actively coaching critical thinking with a Nurse Anesthesia Resident?

- 1 – Not at all comfortable
- 2
- 3
- 4
- 5 – Very comfortable

4. How confident are you in providing both positive and constructive feedback to a Nurse Anesthesia Resident?

- 1 – Not at all confident
- 2
- 3
- 4
- 5 – Very confident

5. How confident are you with your ability to precept a new Nurse Anesthesia Resident?

- 1 – Not at all confident
- 2
- 3
- 4
- 5 – Very confident

6. To maintain confidentiality please enter your mother's initials followed by your zip code - ie. SGL40202

Appendix F

Workshop Effectiveness Survey

1. Name

2. AANA ID#

3. Indicate your level of achievement for each learning objective:

Describe how learning works
- 1 – Poor
- 2 – Fair
- 3 – Adequate
- 4 – Good
- 5 – Excellent

Demonstrate strategic questioning
- 1 – Poor
- 2 – Fair
- 3 – Adequate
- 4 – Good
- 5 – Excellent

Demonstrate the provision of effective feedback
- 1 – Poor
- 2 – Fair
- 3 – Adequate
- 4 – Good
- 5 – Excellent

4. Indicate your agreement with the following statements:

The facilitator was effective in presenting the material

- 1 – Poor
- 2 – Fair
- 3 – Adequate
- 4 – Good
- 5 – Excellent

The content was related to the objectives

- 1 – Poor
- 2 – Fair
- 3 – Adequate
- 4 – Good
- 5 – Excellent

Teaching methods were effective

- 1 – Poor
- 2 – Fair
- 3 – Adequate
- 4 – Good
- 5 – Excellent

My personal learning objectives were met

- 1 – Poor
- 2 – Fair
- 3 – Adequate
- 4 – Good
- 5 – Excellent

Physical facilities facilitated learning

- 1 – Poor
- 2 – Fair
- 3 – Adequate
- 4 – Good
- 5 – Excellent

5. State one item learned that will improve your Nurse Anesthesia practice:

6. State any barriers to implement this change:

7. For future educational programs would you prefer:

- In-person
- Online
- Hybrid (in-person & online mix)

Appendix G

Knowledge Application Survey

1. How frequently are you using the following concepts in your practice?

   Strategic questioning
   - 1 – Never
   - 2 – Rarely
   - 3 – Sometimes
   - 4 – Very Often
   - 5 – Always

   Provision of effective feedback
   - 1 – Never
   - 2 – Rarely
   - 3 – Sometimes
   - 4 – Very Often
   - 5 – Always

   The “QARRD”
   - 1 – Never
   - 2 – Rarely
   - 3 – Sometimes
   - 4 – Very Often
   - 5 – Always

2. Would you be interested in further education on the following topics?

   Strategic questioning
   - 1 – Not at all interested
   - 2
   - 3 – Somewhat interested
   - 4
   - 5 – Very interested

Provision of effective feedback
- 1 – Not at all interested
- 2
- 3 – Somewhat interested
- 4
- 5 – Very interested

The “QARRD”
- 1 – Not at all interested
- 2
- 3 – Somewhat interested
- 4
- 5 – Very interested

3. What future topics pertaining to the Clinical Faculty Preceptor role would you be interested in learning about?

4. Are there any helpful tools that could be provided at future workshops to assist you in your role as a Clinical Faculty Preceptor?

Appendix H

DNP Project Budget

Item	Cost
AANA Continuing Education Credit	**$360.00**
Catering	**$125.00**
Handouts	**$5.00**
Total	**$490.00**

Appendix I

Table 1

Demographics Data, n = 21

	Frequency	%
Highest Degree of Education		
Diploma/Certificate	1	4.8
Masters	17	81.0
Doctorate	3	14.3
Years Practicing as a CRNA		
0-5	4	19.0
6-10	4	19.0
11-15	4	19.0
16-20	5	23.8
21-25	3	14.3
26-30	1	4.8
Previous Clinical Faculty Experience		
Yes	12	57.1
No	9	42.9
Previous Clinical Faculty Training		
Yes	1	4.8
No	20	95.2

Note. %, percent

Appendix J

Table 2

Preceptor Education Workshop Pretest and Posttest Scores, n = 21

Theme	Pretest Median (IQR)	Posttest Median (IQR)	Z-value	P-value
Satisfaction with Previous Training	3	5	2.106	.035*
Comfort with Different Personality	4	4	2.801	.005*
Comfort with Coaching Critical Thinking	3	5	3.223	.001*
Confidence in Providing Feedback	4	4	2.299	.022*
Confidence in Ability to Precept	4	5	2.652	.008*

Note. IQR, interquartile range
*$p < .05$

Appendix K

Table 3

Workshop Effectiveness, n = 21

	Group Mean Score	**Standard Deviation**	***p*-value**
Describe how learning works	4.95	.218	< .001*
Demonstrate strategic questioning	5	.000	> .05
Demonstrate the provision of effective feedback	5	.000	> .05
The facilitator was effective in presenting the material	5	.000	> .05
The content was related to the objectives	5	.000	> .05
Teaching methods were effective	5	.000	> .05
My personal learning objectives were met	4.9	.436	< .001*
Physical facilities facilitated learning	5	.000	> .05
Total Score	39.85	.037	< .001*

*$p < .05$

Appendix L

Table 4

Knowledge Application, n = 5

	Frequency	%
Worked with NAR since Workshop		
Yes	4	80.0
No	1	20.0
Use of Strategic Questioning		
Always	3	60.0
Very Often	2	40.0
Sometimes	0	0
Rarely	0	0
Never	0	0
Use of Effective Feedback		
Always	2	40.0
Very Often	3	60.0
Sometimes	0	0
Rarely	0	0
Never	0	0
Use of the QARRD		
Always	1	20.0
Very Often	1	20.0
Sometimes	2	40.0
Rarely	1	20.0
Never	0	0

Note. %, percent