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Surgical First Assist: An Educational Program for Advanced Practice Providers

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ABSTRACT

SURGICAL FIRST ASSIST: AN EDUCATIONAL PROGRAM
FOR ADVANCED PRACTICE PROVIDERS

As the number of surgical procedures increase, many Advanced Practice Providers (APPs) are being required to scrub in as a First Assist (FA). Unfortunately, many APPs lack any formal surgical training. The Association of perioperative Registered Nurses (AORN) now requires that all advanced practice providers in the perioperative environment to complete a course that complies with Registered Nurse Frist Assist (RNFA) standards. The purpose of this project was to evaluate knowledge acquisition of APPs participating in a surgical FA educational program. A surgical FA course was comprised of five days of didactic learning, which included lecture, small groups, skills lab, and surgical simulation. Each student completed a survey at the beginning of the course and at the end, inquiring about level of confidence, professional experience and prior surgical first assist experience. Students also completed a pre- and post-course knowledge assessment to measure level of knowledge on perioperative management. This course showed an increase in both confidence and competence in surgical skills, in addition to an increase of knowledge base by over 25 percent overall. Advanced practice providers are being utilized as FA on many surgical services without formal training in perioperative management. This course provided the knowledge base and surgical skills necessary to function as an FA, while complying with the mandated content set forth by the AORN.

Keywords: AORN, RNFA, Advanced Practice Providers, First Assist

Sandra Walton Mobley
May 2019

SURGICAL FIRST ASSIST: AN EDUCATIONAL PROGRAM

FOR ADVANCED PRACTICE PROVIDERS

by

Sandra Walton Mobley

A project

submitted in partial

fulfillment of the requirements for the degree of

Doctor of Nursing Practice

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Doctor of Nursing Practice

May 2019

APPROVED

For the California State University, Northern Consortium
Doctor of Nursing Practice:

We, the undersigned, certify that the project of the following student meets the required standards of scholarship, format, and style of the university and the student's graduate degree program for the awarding of the Doctor of Nursing Practice degree.

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ACKNOWLEDGMENTS

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CHAPTER 1: INTRODUCTION

This chapter defines the deficit of First Assists (FAs) in the surgical environment. Advanced practice providers (APPs) can fulfil that deficit, however there is a gap in knowledge and skills that exists with APPs. A background is given as to the etiology of the shortage of FAs and how APPs have successfully stepped into the role. This Doctor of Nursing Practice (DNP) project sought to provide a pilot educational program to disseminate didactic knowledge as defined by the Association of Perioperative Registered Nurses [AORN], (2014), and teach hands-on skills necessary for an APP to confidently and competently fill this perioperative vacancy. This chapter concludes with a theoretical framework defining the foundation upon which this project was constructed.

Background

There is an increasing demand for nurse practitioners, clinical nurse specialists, midwives, and physician assistants to step into the role of First Assist. As defined by the Association of Perioperative Registered Nurses [AORN], (2014), an FA works in collaboration with the surgeon and has acquired a specific body of knowledge necessary to manage patients perioperatively. Expected FA competencies encompass preoperative assessment, collaboration with other healthcare providers in the plan of care, intraoperative assistance to the surgeon, and postoperative management. Skills include identifying instruments and medical devices, providing proper instruments for a multitude of surgical procedures, handling and/or cutting tissue, providing hemostasis, suturing, and managing various wounds.

Advanced Practice Providers are needed to step into the role of FA for a sundry of reasons. The Association of Medical Colleges anticipates a shortage of

61,700 to 94,700 physicians, a significant portion of which are in surgical specialties (HIS, 2016). The predicted deficit of FAs, additionally is a direct consequence of an increase of more than 45 million uninsured individuals who now have access to healthcare after the signing of the Affordable Care Act (ACA) (Kocher, Emanuel, & DeParle, 2010). Parallel to this rise in expanding number of insured persons, the U.S. population is both increasing and aging. All of these factors will add to the greater number of surgical procedures. Another key contributing factor to this phenomenon has been the introduction of resident duty hour schedule restrictions (Johal & Dodd, 2016). The duty time work limitations on residents have been the gateway to many APP opportunities on surgical services.

The presence of APPs on surgical services has been quite successful. A study performed by Johal and Dodd (2016), demonstrated that surgical services with APPs had shorter patient length of stay, improved operating time, unchanged morbidity and mortality, and high patient, nd healthcare worker satisfaction rates. Furthermore, the addition of APPs has been shown to be a safe and cost-effective solution to the quandary of fewer residents.

Problem

It is utterly distressing, as a clinical expert, to find yourself impotent in a clinical situation. Advanced practice providers (APP) are clinical experts, and at an increasing rate, are assuming more duties in the operating room (OR). They are needed to function as an FA during a variety of surgical procedures, but they do not possess the required skillset. The predicament is that there are not enough qualified APPs who have the education and skills necessary to function in the role of an FA. Despite this need, traditional advanced practice programs do not include

these perioperative skills in their practical curricula. The complexity of clinical expertise in perioperative patient management necessitates the APP to seek further education.

Problem Statement

There is a growing need and desire for APPs to step into perioperative environment and function in the role of the FA. Advanced Practice Providers face a barrier; a shortfall in formal education to arm them with the necessary mastery of perioperative expertise. There are more surgical opportunities and APPs with the desire to take advantage of those opportunities. An FA educational program for perioperative management is a platform that APPs can transition from to fulfill this growing deficit. First Assist educational programs are exorbitant in cost and are few in numbers, thus making it challenging for APPs to gain the mandatory knowledge and skills they need to qualify for privileging.

Purpose

The AORN sets the standards for perioperative nursing practice. According to the AORN (2014), as of January 1, 2016, all APPs practicing in the perioperative environment must complete an educational course that adheres to the AORN Standards for Registered Nurse First Assistant (RNFA) Education Programs. The purpose of this project is to raise the knowledge and skill level of the APP to the level of expertise commensurate with their current clinical knowledge base, while complying with AORN Standards. After completion of the FA program, the APP will be qualified for privileges as an FA and can prepare to sit for certification examination for RNFA as delineated by the AORN, (2014). The research question was: Will an APP have the knowledge base and be able to

perform advanced perioperative duties with confidence and competence after completing this Surgical First Assist Educational Program?

Theoretical Framework Defined

The theoretical framework of Benner's Novice to Expert Skill Acquisition Theory was used to guide the maturation of this Surgical First Assist Educational Program and facilitate the transference of instructional learning into clinical practice (Benner, 2001). Benner's conceptual framework of novice to expert seamlessly blends theory and clinical skills. Benner blended nursing theory and the Dreyfus Model of Skill Acquisition (Dreyfus & Dreyfus, 2012) to mold an objective way to observe and evaluate nurses learning a new skill or subject. Benner sought to identify practice variations among nurses at varying stages in their professional lives (Hargreaves & Lane, 2001. She believed that a large component of improving clinical knowledge is actual clinical practice. Experience is highly valued and further clinical competence depends on obtaining that practical knowledge. Benner described stages of clinical competence with five levels of proficiency with the following classifications: Novice, advanced beginner, competent, proficient, and expert (Benner, 2001; Stewart, 2017; Dale, Drews, Dimmitt, Hildebrandt, Hittle & Tielsch-Goddard, 2012).

The novice learner is truly a beginner with no experience in the clinical setting (Benner, 2001). The level of their practice is governed by defined rules and the novice lacks the judgement to deviate from those protocols (Dale et al., 2012). The advanced beginner has had enough exposure to start recognizing situational components that are clinically meaningful. They are just beginning to perceive pertinent aspects which are reliant upon their experience (Dreyfus & Dreyfus, 2004; Benner, 2001). Once the advanced beginner has seen a sufficient number of

similar procedures, he/she draws on that experience and can start to recognize some aspects of the surgeries.

The competent nurse begins to visualize his/her actions in terms of long-range goals and plans for the patient and is consciously aware of these more expanded elements of the situation. The competent nurse evolves a perspective without the crutch of given rules. He/she formulates his/her own rules based on a variety of clinical experiences and adjusts them accordingly by adopting or rejecting them based on various situations (Dreyfus & Dreyfus, 2004). This level of proficiency may be emotion-provoking and frustrating for someone already accomplished in another clinical area. The competent nurse is methodical but still lacks the speed and flexibility of the proficient nurse. The proficient nurse can put the clinical puzzle pieces together and starts to visualize the whole picture. Clinical ques are more apparent to the proficient nurse and he/ she can distinguish those which are important or not in a given clinical situation.

The expert nurse has many years of experience and can automatically prioritize care and recognize deviations from baseline and intuitively grasp the situation (Dale et al., 2012; Ramsburg & Childress, 2012). An expert level nurse has the skillset to assess a patient and determine if he/she is critically ill and at high risk for decompensation. The expert nurse is able to prioritize and can function without consciously going through each body system and processing each sign or symptom that is contributing to the patient's poor clinical status. Benner (2001) described how challenging it is for the expert to describe his/her intuitive performance because of the depth of understanding from a holistic lens.

Application of Theoretical
Framework to the Project

The use of past concrete experience as paradigms is critical in this theoretical framework. Advanced practice providers have broad collective clinical experience, are highly skilled, and are accustomed to functioning at an expert level. As a student in this Surgical First Assist Educational Program, the APP will no longer be an expert as in their previous clinical area, nor will they be a novice given their background (Dreyfus & Dreyfus, 2004). To decipher the level of proficiency of the APP's performance, a pre-course survey and pre-course knowledge assessment were completed. The APP was most likely to be functioning at the level of an advanced beginner. He/she had experience that they brought to the course and directly applied whiling learning skills.

Benner's theoretical framework was easily applied to this phenomenon because of its relevance to the acquisition of new skills. There was a clearly defined set of skills (AORN, 2014) the students were expected to master with the completion of the program. The operating room has a specific and distinctive set of protocols, standards of operating procedure, a variety of instruments, instrument sets and standardized procedures that are defined in the FA curriculum. Benner's theoretical framework played an important role in how each student progressed through the described levels of proficiency in their quest of mastery and becoming an expert.

Summary

In 2017, Stewart stated "the expert nurse recognizes that science is vital, but insufficient when applied in the absence of the nurse's knowing" (p. 521). This statement was quite apropos. Benner eloquently blended the nurse's sense of knowing, past experiences, and clinical forethought for a sundry of reasons. Nurse

Practitioners, Clinical Nurse Specialists, Midwives and Physician Assistants are often being requested to work in the OR setting and function as a Surgical FA without formal training. This Surgical First Assist Educational Program armed the APPs with a new knowledge base and skill set to be successful in this new role. Benner's theoretical framework provided structure and an avenue for assessing how the APP turned advanced beginner, and transitioned through the various levels of proficiency during his/her journey to expertise. The confirmation of success in this Surgical First Assist Educational Program was assessed on mastery of surgical skills taught in lab and bestowed during didactic.

CHAPTER 2: LITERATURE REVIEW

Introduction

This chapter discusses studies found in the literature that related to this DNP project. A comprehensive literature search was done utilizing the Cumulative Index Nursing and Allied Health (CINAHL) with Full Text database as provided by the Henry Madden Library at Fresno State University and PubMed search engine, accessing the MEDLINE database as provided by Stanford School of Medicine. The intent of the search was initially to identify literature discussing Nurse Practitioners in First Assist roles, then it broadened to Advanced Practice Providers' direct impact on patient care, performing advanced clinical procedures, and measuring clinical competence from formal clinical education. The review of the literature revealed few studies examining the role of APPs functioning as First Assist. Key words used included first assist, first assistant, nurse practitioner, physician assistant, advanced practice provider, clinical competence, AORN and RNFA.

Studies Reviewed

Swanton et al., (2017) revealed an upward trend in operating room assistance for major urologic surgical procedures and the increasing role for APPs. This was a retrospective study that identified Current Procedural Terminology (CPT) codes for nine urological surgical procedures that were procedures billed by either a urologist or an APP as reported in the Medicare data. The results showed 5% of cases (n=33,895) assisted by APPs as compared with 27% (n=182,842) assisted by a second surgeon. The proportion of cases assisted by APP rose significantly for all procedures (<1% to 7%). The proportion of cases assisted by second surgeon fell from 26% in 2004 to 15% in 2014. This study concluded that

APPs were increasingly being given more responsibilities and performing procedures. That increased the availability of urological services to patients and may have been one good method of improving efficiency in busy surgical practices.

Provided analysis graphs were a strength of this study. They were easily read and showed statistical significance. This study also had great power, with n>1,000,000, and the sample was random. One big limitation of this study was data being limited to surgeries billed to Medicare and didn't include patients with private insurance, which could have increased the *n* exponentially.

Langston et al., (2017) further reported that global shifts of care provided by urologists changed to care provided by an APP, logistically suggesting an expansion of APP role to meet procedural demands for urologic patients. The results showed that between 1994 and 2012, annual Medicare claims for urologic procedures by APPs increased dramatically. The study showed dramatic growth in the provision of urologic procedural care by APPs over the past two decades.

The strength of this study was utilization of a large and comprehensive data base, providing randomization, and vast amount of data. A significant limitation to this study was that it did not describe the analysis method of reviewing the data. There was good descriptive analysis; however, we don't know if these numbers were statistically significant. It would be difficult to repeat this study if the methods were not well defined.

In addition to the number of surgical procedures increasing, performance quality for procedures is not compromised with APP's. Bevis et al., (2008), ascertained that the quality of tube thoracostomies (CTs) performed by APPs was comparable to that performed by trauma surgeons. The purpose of this study was to ascertain if the rate of complications directly relating to the placement of CTs

was attributable to the practitioner type that performed the procedure. The study design was retrospective. Anonymity of the practitioner was maintained by assigning each chart a random number. The sample population was through systematic sampling with inclusion criteria of having a CT placed. No exclusion criteria were mentioned.

The study was over the course of six months. The setting of the CT placement was the emergency department or the ICU within a single medical Center. A total of 55 patient records were identified that documented CT placement during the six-months. The total number of CTs placed was 71 (n=71). There were five APPs and seven trauma surgeons that performed CT placement during the study period. Three different Radiologists viewed chest radiographs to determine CT placement according to set criteria. The one significant difference for the quality indicators based on practitioner type, was for tubes directed caudad. This complication occurred in 21% made by the surgeons and in 2.6% made by the APP's. There were no insertion complications. Length of stay (LOS) was a primary outcome metric. The mean hospital stay was not significantly different according to practitioner type. Overall, the study showed that quality of tube thoracostomies (CTs) performed by APPs was comparable to that performed by trauma surgeons.

One strength of this study was the analysis methods of chi-squared and t-tests. They were valid tools and reliable in determining relationships among variables of interest (Heavey, 2015). The blindness of the study to the reviewers was another strength of the study. Blindness within a study could help prevent bias. The standardization of the CT procedure and the evaluation technique by three radiologists were strengths. The results were evaluated in three dimensions

(quality indicators, complications, and outcomes) which made the study more comprehensive.

Limitations of the study included the small sample size, but the study did provide information specific to that institution which could have been be applied within that medical center. Potential bias could still have been a limitation within the study. Despite the records being assigned numbers, the Radiologist would have known which practitioner was on service and could have potentially had bias towards one type of practitioner or towards a particular person. One other limitation that stood out was that the study did not qualify who the chart reviewers were, nor how they were trained. Overall, the results supported the study's discussion regarding utilizing APP's as a safe and reasonable solution for the deficit of providers within the institution.

In addition to studies demonstrating that APPs provided care with equivalent, if not better patient outcomes, when provided formal education, similar to the Surgical First Assist for APP's Educational Program, APP's can function competently in a variety of clinical settings. Schofield and McComiskey., (2015) discovered that a postgraduate critical care fellowship for Nurse Practitioners (NPs) ensured competency and confidence to practice in an intensive care unit (ICU). This was a qualitative study design, which enabled the researchers to seek out patterns through the process of constant comparison. There were forty applicants for six fellowships. The results of the surveys demonstrated an increase in rating for patient management from a mean pre-score of 2 (little experience) to a post-fellowship mean score of 3 (competent) for this cohort and three subsequent cohorts referred to in the article. The mean rating for procedural competence increased from 0 (no experience) before the procedural training to a mean of 4 (fully competent) at the end of the program.

It was concluded from these results that fellowships were a great way for NPs without particular clinical experience to gain experience. The educational fellowship program was both theories based, and had clinical merit. That was a great strength. One limitation that stood out was the small sample size of 6, and only one institution participated. The small sample size limits generalizability. In addition, the measurement of knowledge increase is strictly subjective. There needs to be an objective way to measure change in knowledge and clinical aptitude. This study showed that care of patients in an ICU by NP's after a formal training program was similar to that of residents.

Similarly, Morris et al., (2012) showed that unit-based nurse practitioners not only had no negative impact on hospital outcomes and readmission rates for trauma patients, but in fact showed a positive effect on patient outcomes. This was a retrospective study design. The trauma database in an urban level I trauma center was queried. The study compared patients on two different units: a resident run trauma unit (RR) and an NP run unit (UBNP). The occurrences of complications during the hospital stay were tracked (pneumonia (PNA), surgical site infection, deep venous thrombosis (DVT), pulmonary emboli (PE) & acute renal failure (ARF)). The total number of patients (n) was 3,859. 2,759 patients were admitted to the UBNP unit (71.5%). 1,100 patients were admitted to the RR unit (28.5%). UBNP patients were more likely to be diagnosed with DVT (p=0.02). UBNP patients were more likely to be discharged home (p=0.02). This shows predictive validity. The mean length of stay (LOS) for UBNP patients was 6.5 days as compared to RR patients with 7.0 days (p=0.17). The 30-day readmission rates were similar for both groups (4.0% vs 4.4%, p=0.63).

This study concluded that care provided on the UBNP unit was equivalent to that provided by the residents. The 0.5-day difference in length of say was not

statistically significant, but could make a clinical and financial difference. This would mean 1300 fewer patient care days. This study had the strength of a large sample and randomization. The temporal relationships between complications were unable to be determined because the data were extracted from an existing database. This was a limitation of the study, as was the large discrepancy in percentage of patients on the perspective units. Unknown readmission rates to other hospitals was also a limitation to this study.

In addition, Collins et al., (2013) determined that using an experienced Acute Care NP (ACNP) on a step-down improved patient flow, decreased length of stay, and additionally improved physician and nursing satisfaction. This study was a retrospective report of the ACNP role and cost effectiveness. The setting was a single institution, level I trauma center. Five ACNPs were selected to manage trauma patients on a step-down unit. Confidential surveys were administered to Attending Physicians, NPs and dayshift RNs. For the previous two years, n=972, average LOS was 2.8 days. During the study period, n=999, the average LOS was 2.3 days. After the addition of an ACNP, the average LOS decreased by 0.35. Per patient case, there was a $9,111.50 difference in hospital charges resulting in $27.8 million reduction in hospital charges. One-hundred percent of those surveyed, agreed having ACNPs on the stepdown unit was beneficial. One-hundred percent of the dayshift trauma nurses surveyed agreed or strongly agreed that the ACNPs were knowledgeable and improved patient care overall.

Strengths of this study included a large sample, a reliable tool to gather data, and randomization. Including both LOS and cost benefit were additional strengths, as was looking at professional satisfaction. Limitations of this study included a narrow view of only looking at one service, hence limiting its'

generalizability and subjectivity within the sample taking the surveys. An additional limitation, which was difficult to account for, were the unknown and unaccounted variables which may also have affected the metrics that were tracked. An example was the co-morbidities of patients. A prospective study might have been more benefit than a retrospective study, however this study reaffirmed that patient outcomes are improved with NP's caring for patients.

In this last study, (Khan et al., 2015) hypothesized that residents would have an overall positive perception of their training experience with APP's staffed simultaneously with residents on an ICU service. This study was prospective and qualitative. A survey of 17 questions was designed with the purpose of assessing the surgical resident's perception of the impact of APP's on resident experience in an ICU. A total of 1178 residents were surveyed and the number of completed surveys was 354 (n=354); 222 male and 132 female residents. The greatest benefit perceived by the residents was a reduced resident workload (79.8% of respondents). Approximately five percent reported no positive benefits to working with APP's. Overall, 69% of residents reported a positive or neutral effect of APP's on their overall ICU experience.

One strength of this study was the varied population sample with resident programs from all over the United States participated in the survey. The sample included residency programs from large academic centers, small academic centers and non-university or community-based residency programs. This enhanced the generalizability and thus the validity of the study. A second strength of the study was that the responses were anonymous. Anonymity avoids bias.

One limitation to this study included the small sample size. Despite the diversity in responses, not all surgical trainees in the United States were reached. This might be a recruitment bias. Of the responses, 69% of the residents were from

a university and/or academic program, 28.8% were in community residencies, and 2.6% were in community programs. Another limitation of the study was the great difference in the privileges of APP's and the variability of their role on different ICU services. This hinders the broad applicability of the results. Overall this study suggests that the majority of residents believe the APP is a positive or neutral effect on their ICU experience.

Summary

Advanced Practice Providers making statistically significant differences in patient care on surgical and critical care services was a consistent conclusion in all of the studies reviewed. The differences were measured by such variables as length of stay, associated patient costs, the number of successful procedures performed, resident and staff satisfaction. For future research, instead of focusing on the comparison between the APP and physicians, studies should include the APP as an integrated part of the various services.

Further implications for future research should entail expanding the studies to include multiple centers with greater sample sizes to enhance the power. This would increase validity and reliability of the research. We need to do similar studies with APP's on different provider care teams and different hospital units, to include medical units, the operating room, and other surgical services such as neurosurgical, orthopedic, ENT, etc. Scholfield & McComiskey (2015) demonstrated that the skill and competence level of APP's in critical care can be significantly increased with a formal fellowship. We need to evaluate if these APP fellowship graduates are making a difference in patient outcomes as measured by length of stay, mortality and morbidity rate, cost savings, and patient satisfaction. As the population grows and ages, accompanied by the anticipated shortage of

physicians, APP's are assuming more duties on surgical and critical care services. To justify this transition, research needs to continue looking at how APP's make a statistically significant difference when stepping into the roles previously held by physicians, particularly in surgical suites. This DNP research was designed to address this gap in the literature by providing a valuable educational program to prepare the APP to step onto a surgical service and function as a First Assist with confidence and competence. This Surgical First Assist Educational Program would alleviate deficits and fill in educational gaps by raising the knowledge and skill level of the APP to the level of expertise commensurate with their current clinical knowledge base.

CHAPTER 3: METHODOLOGY

Design

This research design was cross-sectional, qualitative descriptive, which was the most appropriate and feasible design for the presented problem. The goal was to describe the change in knowledge and level of competence in performing the skills of a First Assist after attending the Surgical First Assist Educational Program. The instrument that was chosen to evaluate the progression of student knowledge was a pre-course and post-course knowledge assessment (see Appendix A). The knowledge assessment was comprised of 32 questions, all of which were validated questions from a public Registered Nurse First Assist (RNFA) examination practice question data base and RNFA skills course practice questions. The knowledge assessment was the same both pre- and post- course for continuity and to better measure changes in knowledge base.

The instrument chosen to evaluate the level of competence was a pre-course and post-course survey (see Appendix B). The survey was developed through an online survey platform. Advantages of surveys include allowing a rapid data collection and flexibility in creating the questions to elicit the desired data. Less than favorable attributes of surveys are the low response rate. This was not contributory in this research because all the students completed the surveys as condition of participating in this pilot course. Many surgical skills, were taught in the course and return demonstration of skills occurred throughout the course.

Sample

Advanced Practice Providers working at Stanford Healthcare were the targeted sample. This included Nurse Practitioners, Clinical Nurse Specialists, Midwives, and Physician Assistants (PA's). The Surgical First Assist Educational

Program was a pilot program for an annual course to be offered at Stanford Healthcare. To randomize who participated in the course, a flyer (See Appendix C), with course details was distributed to all APPs at Stanford Healthcare via email. Eligibility to take the FA course was defined by the AORN ("Association of perioperative registered nurses," 2014). Interested APPs needed to be an APP currently working at Stanford, provide BLS or ACLS certification cards, and submit two letters of recommendations. Students were accepted on a first-come, first-serve basis. The sample size was limited to six students. We received documentation for the sample of six within 48 hours of the emails and had several other APPs on a waiting list. Our sample consisted on four NP's and two PA's.

Implementation

This surgical First Assist course took place at the Goodman Surgical Education Center, located within Stanford Healthcare main campus. It was five days long, with 8 hours of instruction each day. The course encompassed lectures, small group discussions, and hands on skills labs (see Appendix D). The didactic course outline was based on the AORN Core Curriculum modules. The course was had a Board certified surgical Medical Director and was taught by an array of Surgeons, APPs, Certified Operating Registered Nurses, Surgical Techs and two Surgical Education Fellows. One week prior to the course, each student received a hard copy of all eight Core Curriculum modules, in addition to the text book, *Care of the Patient in Surgery,* 2019 with assigned readings (see Appendix E). The students were exposed to each model by employing video and/or lectures in a classroom setting, followed by daily the hands-on skills lab. All students had opportunity with surgical instruments in conjunction with small group discussion about surgical procedures, patient safety, knot tying, and wound management. All

students were provided with a suture model, suture materials, instruments, and a knot tying practice model. Students had instruction on each skill and time to practice. In addition to procedural skills, the students learned about and practiced scrubbing, sterile gowning, sterile gloving, patient draping, two-handed and one-handed knot tying. The students were trained on laparoscopic instruments and timed for completion of a task called PEG Transfer. The immediate application of new information, and in a non-threatening environment, reinforced the content and acquisition of skills.

Data Collection Procedure

Students received the pre-course survey 24 hours prior to day one. All students completed the online survey. The knowledge assessment was distributed during the introduction of the course on day one. All six students completed the assessment. The post-course survey was emailed to the students during the latter half of day five. The students were requested to complete the survey online prior to receiving their certificate of completion (see Appendix F). One survey was not submitted properly, thus only 5 surveys were included in final data analysis.

A Human Subject Research Determination Application to the Institutional Review Board (IRB) at Stanford School of Medicine was completed. This is a preliminary form, specific to Stanford, to ascertain whether formal IRB approval was mandated. It was determined that formal IRB approval was not mandated (see Appendix G). Internal Review approval was sought and received from California State University, Fresno School of Nursing (see Appendix H). This researcher completed the online training course "Protecting Human Research Participants" (see Appendix I).

Data Analysis

Data were exported from the online survey platform and uploaded into an electronic worksheet and statistical package. Demographic questions interrogated the students on type of surgical service they work for, quantity of years of first assist experience (if any), if First Assist requirements were part of their current job requirements, and if they were interested in working for a surgical service as a First Assist. Questions regarding levels of confidence and competence were asked in the format of Likert scales. Answers were not given numeric scores.

CHAPTER 4: RESULTS AND FINDINGS

The research question asked was: Will an APP have the knowledge base and skills to perform advanced perioperative duties with confidence and competence after completing this Surgical First Assist Educational Program? This chapter presents the data from participants in the Surgical First Assist Educational Program.

Demographics

The demographic composite of the six participants were four NP's and two PA's. Two NP's work on a cardiothoracic surgical service and they will be expected to function in the role of First Assist. The other two NP participants work on Neurosurgical service and Interventional Radiology. Neither of these participants are expected to function as a First Assist, but both NP's have an interest in doing so. Both the PA's are currently working in the OR but are fairly new to the position. One is on a General Surgery service and the other is on Vascular Surgery service. The data focus on two areas: Level of knowledge and both competence and confidence in First Assist skills.

Knowledge Assessment

The level of perioperative knowledge was measured by the students taking the knowledge assessment test both pre-course (day 1) and post-course (day 2). This was a thirty-two-question assessment that the students were given as much time as they needed to complete. The questions were all multiple choice with a single correct answer. These results demonstrated that a formal educational program did increase the APP's level of comprehension in perioperative management, specific to a First Assistant.

Surveys

The level of confidence and competence in First Assist hands on skills were measured by a pre-course survey and a post-course survey querying the participants on their levels of each. Choices of answers on the Likert scale utilized to assess confidence and competence were: A little confident/competent, somewhat confident/competent, moderately confident/competent and very confident/competent. The level of competence in scrubbing in and performing as an FA was queried and the participants rated themselves on a Likert scale with one of the options: Not at all competent (no experience), a little competent, need much proctoring, somewhat competent, but need some proctoring, moderately competent and feel comfortable functioning as a First Assist independently, or very competent, can teach. Competence in suturing was another question asked of the participants and they rated themselves on a Likert scale with one of the options: Not at all competent (no experience), a little competent, need much proctoring, somewhat competent, but need some proctoring, moderately competent and feel comfortable suturing independently, or very competent, can teach suturing.

Results and Findings

Five of the six participants had an increase in knowledge by an average of 14.6%. One student had a decrease in knowledge. Ironically, this student had the highest score (81%) on the pre-course knowledge assessment. These results demonstrated that this formal educational program did increase the APP's level of comprehension in perioperative management, specific to a First Assistant (See Table 1 and Figure 1).
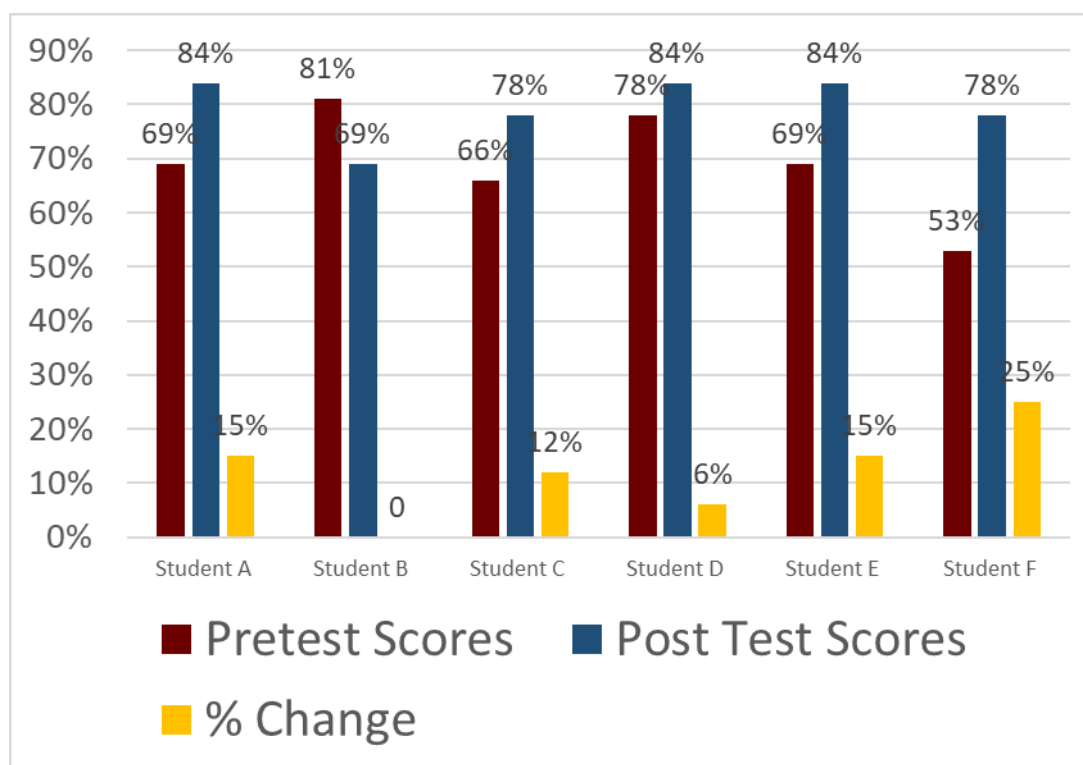
Figure 1. Pre- and Post-Course Knowledge Assessment Scores by Student

Table 1

Pre- and Post-Course Knowledge Assessment Scores by Student

Students	Pre-Course Scores	Post-Course Scores	% Change
Student A	69%	84%	15%
Student B	81%	69%	(-) 12%
Student C	66%	78%	12%
Student D	78%	84%	6%
Student E	69%	84%	15%
Student F	53%	78%	25%

Four of the six participants rated themselves as being a little confident for

scrubbing in and functioning as a First Assist on the first day of the course. One of

the other two participants rated themselves as somewhat confident and the other as moderately confident. None of the participants rated themselves as very confident. Post-course, only five of the students' surveys were uploaded with all of their answers properly and were counted. The level of confidence in the participants improved overall, with only two of the five rating themselves as a little confident. Two other participants rated themselves as somewhat confident and one moderately confident. We don't know where the missing participant had originally rated his/her self. Overall, the level of confidence was increased after completing this educational program by 26.66% (see Table 2).

Table 2

Confidence Level for Scrubbing in and Functioning as a First Assist

Likert Scale	Count (Pre-)	Pre-Course Survey	Count (Post-)	Post-Course Survey	% Change
A little confident	4	66.67%	2	40%	(-)26.67%
Somewhat confident	1	16.67%	2	40%	23.33%
Moderately confident	1	16.67%	1	20%	3.33%
Very confident	0	0%	0	0%	0%
Totals	6	100%	5	100%	26.66%

Fifty percent of the participants rated themselves as not at all competent pre-course (Figure 1), which decreased to 16.67% post-course (Figure 2). Thirty-three percent of the participants rated themselves as somewhat competent pre-course, which decreased to 16.67%. The largest measured changed was in the moderately competent level, which increased by 49.99% to 66.67% of the participants. Half of the participants rated themselves as not at all competent at

start of the course (Figure 3). None of the students rated themselves as moderately competent or very competent. Post-course, one third of the participants rated themselves as moderately competent and felt comfortable suturing independently (Figure 4). A second third of participants rated themselves as moderately competent, requiring some proctoring. This showed an overall increase in competence of First Assist suturing skills.
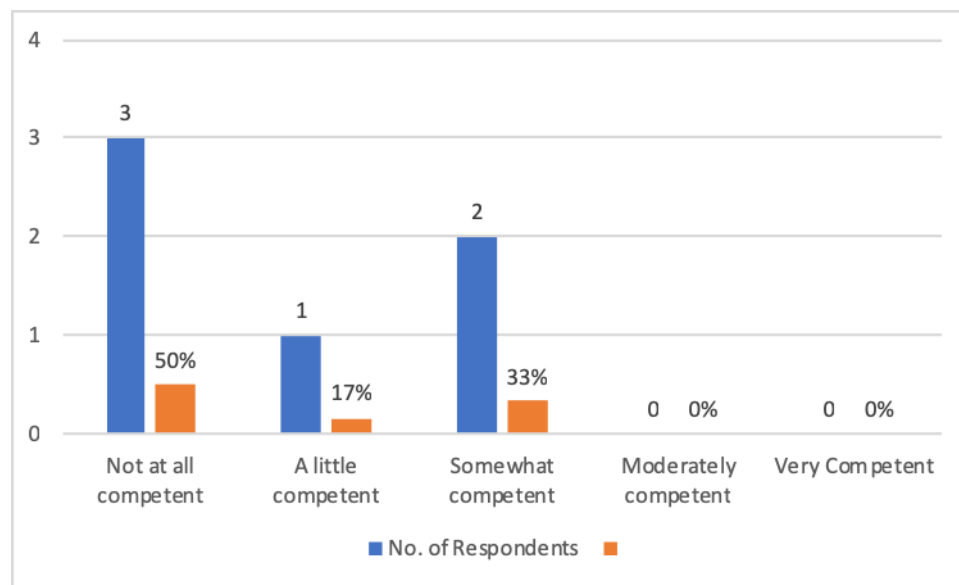
Figure 2. Competence in scrubbing in and functioning as a First Assist: Pre-course.
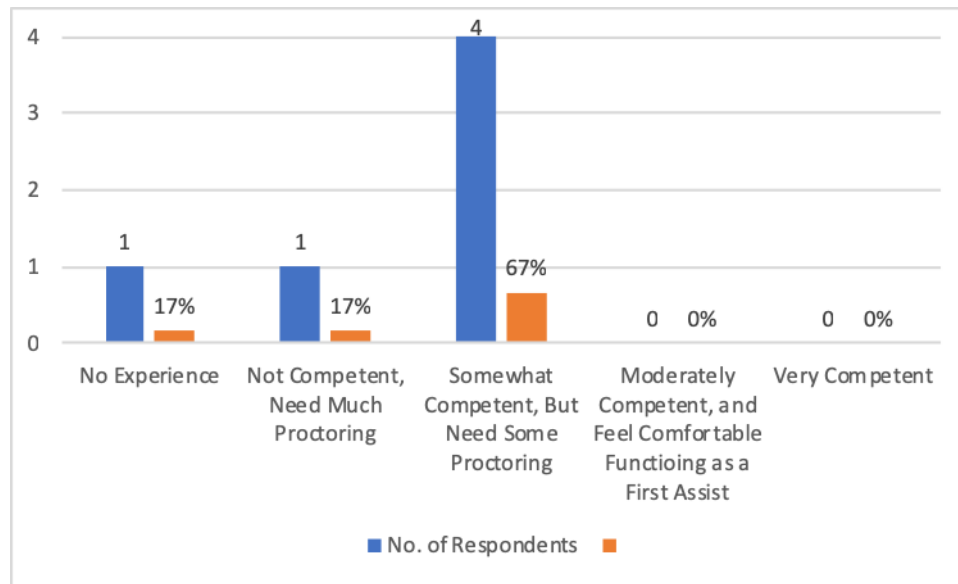
Figure 3. Competence in Scrubbing in and Functioning as a First Assist: Post-Course.
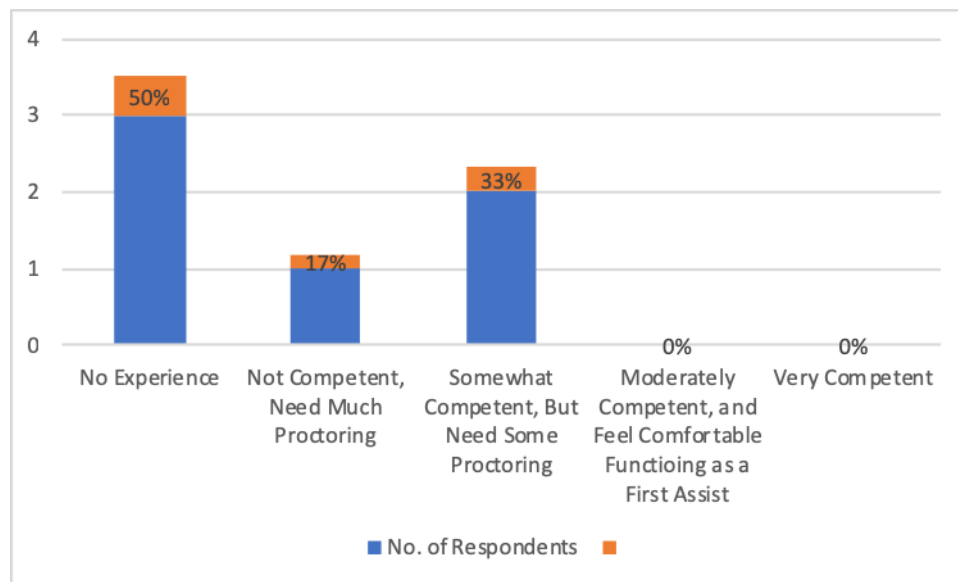
Figure 4. Competence in suturing (Pre-course).
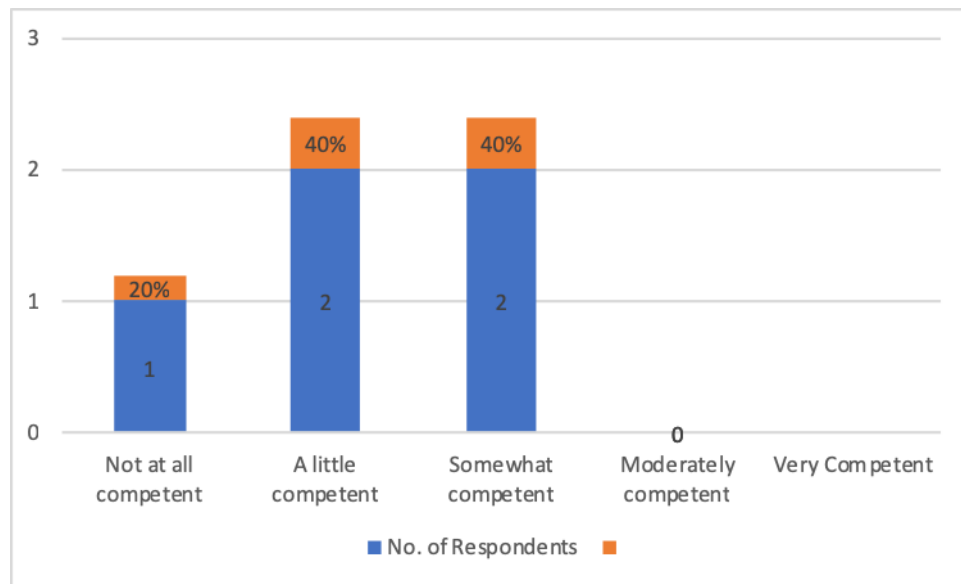
Figure 5. Competence in Suturing (Post-course).

Discussion of Results and Findings

This research study was specifically to increase the level of perioperative management knowledge base and increase the level of confidence and competence in performing hands on surgical skills of a surgical First Assist. Descriptive statistics provided measurements for each of the surveyed questions. The level of confidence and competence performing the skills of the First Assist was raised. The confidence of the participants in performing skills of a First Assist increased just over 25% overall. The competence level paralleled that increase. In addition to the surveys, which subjectively assessed mastery of these hands-on skills, the participants did return demonstrations of each skill numerous times. Once the participant met the competency standard, the Surgical Fellow signed off the participant's skill's check off sheet. This sheet which was used to document competency and will be shown as proof of competency for each skill (see Appendix J).

Knowledge base of perioperative skills was increased in 80 percent of the participants; one participant by 25%. There was one of the students who had a

decrease in their post-course score as compared to their pre-course score. This student had the highest score on the pre-course knowledge assessment. The student did verbalize that she was over thinking the questions on the post-course assessment. The pre-course assessment scores were not provided to the students until after the post-course assessment was completed and corrected. In addition to the desired increases in knowledge base, confidence, and competence, the participants all indicated on their surveys that they would recommend the course to other APPs (see Figure 6). The APPs that successfully completed this Surgical First Assist Educational Program are now eligible for privileging as First Assist at Stanford Healthcare.
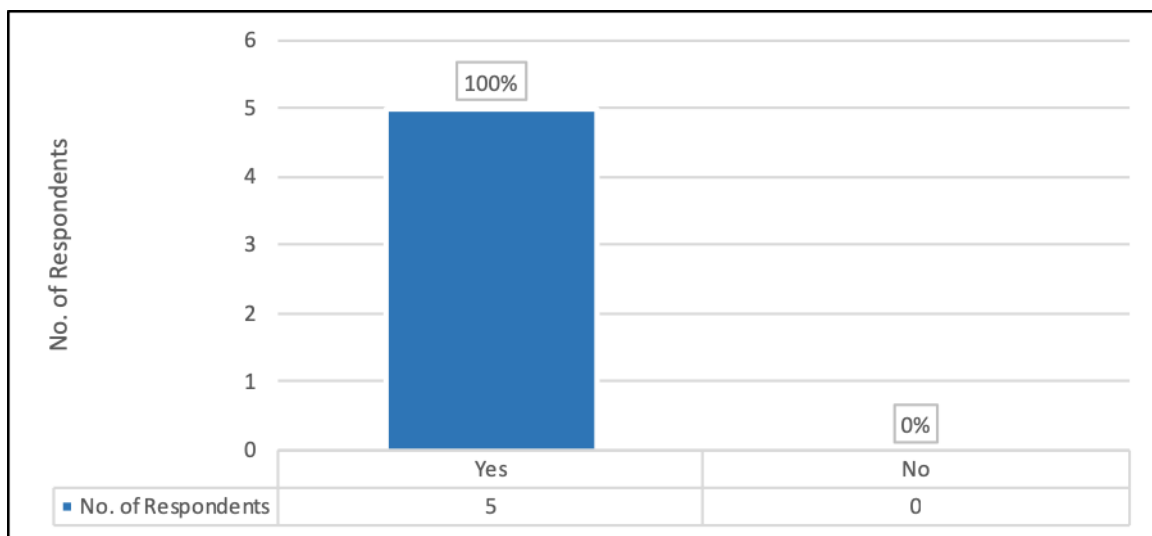
Figure 6. Would you recommend this course to your colleagues?

Limitations

As many studies, this study did have limitations. Maturation might have been a threat. I cannot be sure that the increased level of education and skills assessed at the end of the program were the primary reason for the increase level of competence or only a contributing factor. To try and placate this, I collected

specific data on previous knowledge and exposure to surgical procedures (see Figure 7). Enhancement of their performance may have been from exposure to more surgical cases. Limitations to my research additionally included the sample population. The sample was somewhat random, in that anyone could have applied, however the students had to have met the eligibility requirements as defined by the AORN. This may have made the population more homogeneous. The size of the sample was also a limitation and may only have been validated within Stanford healthcare due to the lack of power and reliability in the general population of APP's. Lastly, it is not clear how these skills and knowledge base will be translated when caring for real patients. All practicing was done on simulation models.
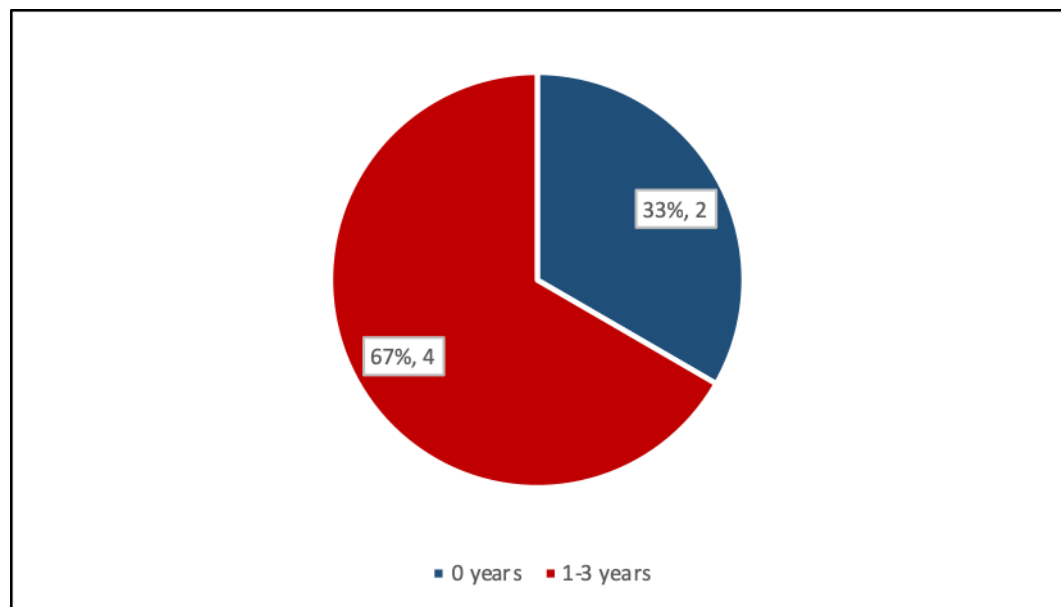
Figure 7. Years of APP Students' Experience.

CHAPTER 5: CONCLUSION

This chapter summarizes the results and discusses the implications of a pilot Surgical First Assist Educational Program for Advanced Practice Providers at Stanford Healthcare. The APP's knowledge base and clinical experience was folded into the program at an individual level. The didactic curriculum was standardized but the method of teaching and new clinical exposures was tailored to the individual adult learner.

As Schofield and McComskey., (2015) elicited in their study, APPs need a formal education program, and with that, will possess the knowledge base and the necessary surgical hands on skills to function as a First Assist. There is currently no exposure to perioperative training in graduate level nursing schools and exposure of PA's is variable. If provided with this formal education, APPs can function successfully in a variety of clinical settings and positively impact patient care as Collins et al., (2103) demonstrated in their study. This project was a formal educational program which did provide a knowledge based, as shown by an increase in knowledge from pre-course to post-course. This study was in congruence with the current literature and validates that Advanced Practice Providers can fill the role of a First Assist on a surgical service and be able to perform surgical skills with confidence and competence after completing a formal Surgical First Assist Educational Program.

The literature has shown us that Advanced Practice Providers can make a statistical difference in efficiency of surgical services, staff satisfaction, personal satisfaction, cost savings to hospital, and patient outcomes as measured by length of stay, rate of post-operative infection, rate of post-operative complications, and OR time (Morris et al., 2012). This can greatly impact nursing practice. The

number of studies on outcomes with APP's assisting in the OR are very limited. Several of the studies found are on urological services only and they are comparing APPs to physicians. Future research should include the APP as an integrated part of different surgical services. It should also include patient satisfaction metrics. Research needs to be expanded to include larger centers with greater and more diverse population samples than are in the current literature.

This project also has implications for nursing education. There are a few independent surgical First Assist programs and fewer offered at an academic center. This pilot surgical First Assist course was for Stanford employees only. The need extends beyond Stanford. With this research, I would like to facilitate fulfilling that need and open this program up to more medical centers within the bay area and then expand from there. In addition, I would like to follow the students who complete this educational program and have them take the same post-course survey six months and one year post-course to observe the mastery of surgical skills.

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APPENDICES

APPENDIX A: KNOWLEDGE ASSESSMENT

Stanford First Assist Course for Advanced Practice Providers

Goodman Surgery Education Center, Stanford Main Campus

March 27, 28 & April 3, 5, & 8th, 2019

Knowledge Assessment

1. The patient would most likely be placed in the lithotomy position for which type of surgery?

      a. Spinal

      b. Cranial

      c. Gynecological

      d. Thoracic

2. Retractors are used to:

      a. Cut or separate tissue.

      b. Remove tissue or other materials.

      c. Close the severed ends of a vessel.

      d. Hold back wound edges.

3. During what phase of wound healing does granulation occur?

      a. Proliferative phase

      b. Remodeling phase

      c. Inflammatory phase

      d. Cytokine phase

4. Which type of suture is absorbable?

    a. Surgical silk

    b. Surgical cotton

    c. Collagen

    d. Nylon

5. A stitch that is tied and cut before placing another stitch is called _____?

    a. Complex

    b. Running

    c. Buried

    d. Interrupted

6. When closing a wound, you need to make sure that there is appropriate tension on the suture line. Take into consideration the potential for _____?

    a. Hematoma formation

    b. Dehiscence

    c. Swelling

    d. Formation of sinus tracts

7. All of the following are common signs and/or symptoms associated with malignant hyperthermia EXCEPT:

    a. hypoxia.

    b. tachycardia.

    c. vomiting.

d. cardiac dysrhythmias.

8. Which of the following is an example of a preventative measure taken in order to reduce pressure ulcers in the operative patient?

a. Place a pillow under the lower legs in order to raise the heels off the

OR bed.

b. Ensure the patient remains immobile during the procedure.

c. Lift the patient every few minutes.

d. Place the patient's legs in stirrups.

9. Which of the following is NOT a responsibility of the RNFA during the perioperative experience?

a. In collaboration with the surgeon, examines the surgical wound for

sponges,

needles/sharps, and instruments prior to counts.

b. Conducts ongoing assessment of the patient's condition and relevant

patient

responses throughout the perioperative experience.

c. Verifies that instruments function properly.

d. Controls the patient's pain and level of consciousness

intraoperatively

10. Please choose the correct order of a midline abdominal closure.

a. Subcuticular, peritoneum, fascia, muscle, subcutaneous, skin

b. Peritoneum, muscle, subcutaneous, subcuticular, skin

c. Peritoneum, fascia, muscle, subcuticular, subcutaneous, skin

d. Peritoneum, fascia, muscle, subcutaneous, subcuticular, skin

11. Which of the following instruments are generally included in a major

laparotomy set?

a. Army retractor

b. Yankauer suction tip

c. Backhaus towel clamp

d. All of the above

12. Which is a good general rule to use when using a simple suture to close a

wound?

a. The distance between each suture should be 1 mm.

b. The width of each stitch equals the distance between the sutures.

c. The width of each stitch should equal 1 mm.

d. The distance between each suture should be twice the length of each

stitch.

13. DeBakey forceps:

a. are heavy toothed forceps.

b. are used for delicate tissues.

c. are used for handling packing gauze and prosthetics.

d. All of the above

14. Silk is categorized as non-absorbable because it _____.

    a. Does not absorb

    b. Takes two years to absorb

    c. Is monofilament

    d. Is multifilament

15. What kind of needle would be used on the skin?

    a. Acutely curved

    b. Blunt

    c. Cutting

    d. Taper

16. A patient is scheduled for a total knee replacement. Which of the

following is indicated for this patient prior to surgery?

    a. Stop NSAIDs at least two weeks prior to surgery.

    b. Bed rest for one week prior to surgery

    c. A CAT scan

    d. Heparin injections

17. Why is glycopyrrolate given preoperatively?

    a. To sedate the patient

    b. To suppress secretions during surgery

    c. To aid in coagulation

    d. To decrease heart rate

18. Please choose the best definition for insufflation:

    a. Expansion of a body cavity with CO2 gas

    b. Closing a wound using a laser

    c. Injecting lage amounts of saline into a body cavity

    d. Using CO2 gas to clear the surgeon's field of view during knee surgery

19. What type of incision is typically used for an open cholecystectomy?

    a. Subcostal or Kocher

    b. Lower midline

    c. Thoracoabdominal

    d. Transpleural approach

20. What kind of stitch is needed if the patient has poor tissues that tear easily?

    a. Simple stitch

    b. Running stitch

    c. Complex stitch

    d. Buried stitch

21. Sterile gowns are considered sterile:

    a. from the neckline in front, from the shoulders to the level of the sterile field, and at the sleeves from 1 inch above the elbows including the cuffs.

b. in front from the shoulders to the level of the sterile field and at the sleeves from 2 inches above the elbows to the cuffs.

c. from the neckline in front and back, from the shoulders to the level of the sterile field, and at the sleeves from 1 inch above the elbows to the cuffs.

d. in front from the axillary area to the level of the sterile field and at the sleeves from 2 inches below the elbows to the cuffs.

22. When you walk into the OR suite, the information that you need to share with the OR nurse includes:

    a. Name, title, gown size, shoe size

    b. Name, title, glove size, attending you are working with

    c. Name, glove size, attending you are working with

    d. You need not give the OR nurse any personal information

23. "Flipping" describes:

    b. a. Positioning the patient

    b. Turning scissors so that screw it on the upside facing you

    c. Technique for placing sterile gloves onto a sterile field

    d. Lifting mask up to de-fog the face shield

24. Which of the following is NOT considered a normal reading for fasting glucose?

a. 65mg/dL

b. 85mg/dL

c. 72mg/dL

d. 120mg/dL

25. If a foreign object is left in a patient, which of the following could it cause?

a. Infection

b. An abscess

c. Both a & b

d. None of the above

26. When scrubbed in, your boundaries (the box) of where you can move

your arms are:

a. Head, shoulders, waist

b. Head, shoulders, axilla

c. Head, shoulders, waist

d. Shoulders, axilla & waist

27. When selecting the most appropriate suture material, one needs to

consider the following:

a. Type of procedure, type of reapproximation, & surgeon's

preferences

b. Size of the wound, mood of the surgeon, estimated blood loss

c. Type of reapproximation, type of procedure

d. Size of the wound, scrub technician's preferences, length of surgery

28. Which of the following pH results indicates a severe, life-threatening acidosis?

   a. 7.35

   b. 6.9

   c. 7.45

   d. 7.4

29. If the patient is placed in a supine position, which of the following would not be included in potential pressure areas?

   a. Sacrum

   b. Abdominal

   c. Calcaneus

   d. Scapulae

30. Which of the following is a complex stitch?

   a. Simple running

   b. Continuous

   c. Running locking

   d. Figure-of-eight

31. Complications of a knot coming untied are:

   a. Evisceration

   b. Dehiscence

c. Loss of assisting opportunities

d. Infection

32. In cardiothoracic surgery, patient draping follows to that the following

areas are accessible:

a. Head, anterior chest, abdomen

b. Anterior chest, abdomen

c. Anterior chest, abdomen, inguinal area

d. Neck, abdomen, inguinal area

APPENDIX B: PRE- AND POST-COURSE SURVEY

Survey Questions for Surgical First Assist Course Participants

__Specific questions pre-course & post-course__

1. What experience, if any do you have first assisting in any surgical cases in the

operating room?

    A. Ortho

    B. General surgery

    C. Cardiothoracic

    D. Cardiovascular

    E. Urology

    F. Neurosurgery

    G. Peripheral vascular

    H. Obstetrics/Gynecology

    I. Plastics

    J. Transplant

    K. Other

2. How many years have you assisted in surgical cases?

    A. 1-3 years

    B. 4-6 years

    C. < 1year

    D. None

3. Does your current position require that you scrub in and assist in surgical

procedures?

    A. Yes

B. No

4. Does a position that you are interested in require you to scrub in as first assist?

   A. Yes

   B. No

5. Does a position that you are interested in require you to have experience as a

first assist in order to scrub in?

   A. Yes

   B. No

6. Please rate your confidence level for scrubbing in and functioning as a first

assist:

   A. Not at all confident

   B. A little confident

   C. Somewhat confident

   D. Moderately confident

   E. Very confident

7. What is your familiarity with surgical instruments:

   A. Not at all

   B. A little

   C. Somewhat

   D. Moderately

   E. Very

8. Where would you rate your competence in scrubbing in and functioning as a

first assist?

A. Not at all competent (no experience)

B. A little competent, need much proctoring

B. Somewhat competent but need some proctoring

C. Moderately competent and feel comfortable suturing independently

D. Very competent, can teach

9. Where would you rate your competence in suturing?

   A. Not at all competent (no experience)

   B. A little competent, need much proctoring

   B. Somewhat competent but need some proctoring

   C. Moderately competent and feel comfortable suturing independently

   D. Very competent, can teach

Specific question pre-course only

10. What is your goal for taking this course:

   A. General knowledge

   B. To gain employment as an APP on a surgical service

   C. To increase knowledge base for current position as an APP

   D. To prepare to take certification examination as an RNFA

   E. Other _____

Specific questions post-course

10. How would you rate this course in preparing you to scrub in and function as a

first assist?

   A. Not at all: I don't feel prepared at all

B. A little: I feel poorly prepared and need more education/experience before I feel comfortable scrubbing in and functioning as a surgical first assist.

C. Somewhat: I feel somewhat ready to scrub in and function as a surgical first assist.

D. Moderately: I feel ready to scrub in and function as a surgical first assist.

E. Very: I'm ready to scrub in and function as a surgical first assist and mentor others.

11. Would you recommend this course to your colleagues?

A. Yes

B. No

12. What content would you add to this course to improve it?

13. What content would you remove from the class to improve it?

APPENDIX C: COURSE FLYER

First Assist Course for Stanford Healthcare Advanced Practice Providers

What: Stanford Healthcare is hosting a First Assist pilot class to prepare APPs to perform as a First Assist in surgical procedures. There is a didactic portion then clinical time in the OR which will be done on your specialty service. The didactic portion includes lab time every day learning stitches, positioning, instruments, etc.

When: The five-day didactic portion of the course will be held **March 27, March 28, April 3, April 5, and April 8th**

Where: Goodman Surgical Education Center

Who: NP's, PA's, CNS's & Midwives working at Stanford Healthcare are eligible to register for this class. This pilot course is for 6 students and is **first come-first serve.**

How: Proof of BLS, ACLS and two letters of recommendation are required and must be emailed ASAP with the deadline of March 8th to smobley@stanfordhealthcare.org. **Cost is $1,500** and tuition funds can be used. **The first 6 APPs to send in their documentation will be selected to take the class**.

APPENDIX D: COURSE AGENDA

STANFORD
HOSPITAL & CLINICS
Center for Advanced Practice

Stanford First Assist Course for Advanced Practice Providers

Goodman Surgery Education Center, Stanford Main Campus

March 27, 28 & April 3, 5, & 8th, 2019

Learning Outcomes

- ✓ Formulate a perspective on the First Assist practice model and how an APP can assimilate into that practice model.
- ✓ Describe the factors that enhance patient safety in operating rooms and interventional suites.
- ✓ Describe aseptic technique and the appropriate way to scrub.
- ✓ Describe the proper technique for the use of specific surgical instruments and medical devices.
- ✓ Identify anatomical and physiological considerations related to specific surgical sites.
- ✓ Discuss the proper way to provide surgical site exposure
- ✓ Describe effective techniques as related to tissue handling and cutting tissue.
- ✓ Discuss the confirmatory assessment of surgical patients for various surgical specialties.
- ✓ Describe the indications for surgery for various surgical specialties.
- ✓ Discuss potential perioperative complications and management strategies.
- ✓ Describe knot tying techniques.
- ✓ Discuss the differences between suture materials.
- ✓ Identify wound dressings.
- ✓ Discuss wound management strategies.
- ✓ Discuss the differences between needle types.
- ✓ Describe scenarios for different suture types.
- ✓ Describe strategies for cameral trouble shooting in laparoscopic surgery.

Stanford First Assist Course for Advanced Practice Providers

Goodman Surgery Education Center, Stanford Main Campus

March 27, 28 & April 3, 5, & 8ᵗʰ, 2019

DAY ONE: Wednesday, March 27th

Time	Time in Min.	Lecture / Lab	*Core Curriculum* *Reading*	*Care of the Patient in Surgery Reading*	Instructors
0645-0700		**Registration**			
0700-0800	60	Course Introduction Pre-test Peg transfer Survey			**Sandy Mobley, NP** **Dr. Ed Lee** **Dr. Tiffany Anderson**
0800-1130	210	Neurosurgery	Module IV, section 5	Chapter 21	**Dr. Adrienne Moraff**
1130-1200	30	**LUNCH**			
1200-1500	180	CT Surgery Didactic, draping, positioning, skills	Module IV, section 6	Chapter 6 Chapter 25	**Megan Atashroo, RNP, PA-C** **Hilary Hammond, PA-C**
1500		**Debrief - Adjourn**			**Sandy**

Stanford First Assist Course for Advanced Practice Providers

Goodman Surgery Education Center, Stanford Main Campus

March 27, 28 & April 3, 5, & 8ᵗʰ, 2019

DAY TWO: Thursday, March 28th

Time	Time in Min.	Lecture / Lab	*Core Curriculum* *Reading*	*Care of the Patient in Surgery Reading*	Instructors
0745-0800	15	**Sign In**			
0800-0900	60	Laparoscopy	Module IV, section 2	Chapter 8	**Sophie Mintz, APP** **Dr. Jim Lau** **Stryker rep - Ed Muth**
0900-1045	105	ENT	Module IV, section 8	Chapter 19	**Dr. Julia Noel** **Ashley Jezierski, APP**
1045-1100	15	**Break**			
1100-1200	120	Ortho	Module IV, section 3, 4	Chapter 20	**Ashley Schnell, PA-C** **Dr. Phillip Homier**
1200-1230	30	**LUNCH**			
1230-1300	30	Suturing and knot tying time			**Dr. Ed Lee** **Dr. Tiffany Anderson**
1300-1400	60	LAB: Scrub training - Glove and gowning Instrument intro			**Dr. Ed Lee** **Dr. Tiffany Anderson**
1400-1600	120	Instrument identification			**Josh Avery, Scrub tech**
1600		**Debrief - Adjourn**			Sandy

Stanford First Assist Course for Advanced Practice Providers

Goodman Surgery Education Center, Stanford Main Campus

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DAY THREE: Wednesday, April 3rd

Time	**Time in Min.**	**Lecture / Lab**	*Core Curriculum Reading*	*Care of the Patient in Surgery Reading*	**Instructors**
0645-0700	15	**Sign In**			
0700-0900	120	LAB: Knot tying Suture/stitch PEG practice			**Dr. Ed Lee Dr. Tiffany Anderson**
0900-1045	105	General Surgery	Module IV, section 1	Chapter 11	**Dr. Jim Lau**
1045-1100	15	**Break**			
1100-1230	90	Wound Management	Module III	Chapter 9	**Chungmei Shih, MSN, RN, CNS, CWON**
1230-1300	30	**LUNCH**			
1300-1400	60	Suture Material		Chapter 7	**Adeline Moran, Ethicon**
1400-1500	60	LAB: Knot tying Suture/stitch PEG practice			**Dr. Ed Lee Dr. Tiffany Anderson**
1500		**Debrief - Adjourn**			**Sandy**

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DAY FOUR: Friday, April 5th

Time	Time in Min.	Lecture / Lab	*16 Reading*	*Care of the Patient in Surgery Reading*	Instructors
		Gyn Oncology	Module IV, section 1	Chapter 14	**Self-learning**
0745-0800	15	**Sign In**			
0800-0900	60	Minimally Invasive Surgery	Module IV, section 2	Chapter 8	**Dr. Jim Lau**
0900-1100	120	LAB: Knot tying Suture/stitches			**Dr. Ed Lee** **Dr. Tiffany Anderson**
1100-1130		**Lunch**			
1130-1330	60	Perioperative complication	Module V		**Dr. Joe Forrester**
1330-1600	150	LAB: Knot tying Suture/stitches PEG practice			
1600		**Debrief - Adjourn**			**Sandy**

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Goodman Surgery Education Center, Stanford Main Campus

March 27, 28 & April 3, 5, & 8th, 2019

DAY FIVE: Monday, April 8th

Time	Time in Min.	Lecture / Lab	*Core Curriculum Reading*	*Care of the Patient in Surgery Reading*	Instructors
0745-0800	15	**Sign In**			
0800-1100	240	OPEN LAB: Knot tying Suture/stitches			**Dr. Ed Lee Dr. Tiffany Anderson**
1100-1230	120	General OR/Patient Safety		Chapter 2 Chapter 3	**Ana Chozet-Griggs, CNOR, Perioperative Nurse Educator**
1230-1300	60	**Lunch**			
1300-1400	60	**Robotics**	**Module IV, section 2**	**Chapter 8**	**Pam Piacente, PA**
1400-1600	120	**PEG final time Post-test Survey**			**Sandy Mobley, NP Dr. Ed Lee Dr. Tiffany Anderson**
1600		**Debrief - Adjourn Certificates distributed**			

APPENDIX E: COURSE PREPARATION/ASSIGNED READING

Course Dates: *March 27, March 28, April 3, April 5, & April 8th.*

- ✓ All five days must be attended.
- ✓ Start times vary, so please read schedule carefully
- ✓ A detailed schedule will be distributed in class

Course Location: Goodman Surgery Education Center (GSEC), room number H3552.

Walking Directions from the Main Hospital Entrance:

From the front of the main hospital entrance (fountain side), turn left past the information desk and then proceed down the main corridor past the gift shop and the cafeteria. You will then see a set of stairs and elevators leading down to the atrium or up to the second and third floors. Go to the third floor via the stairs or the elevator. When exiting turn left down the hallway towards **Pavilion F.** Continue down the hall until you reach an overhead sign that says **F33**. Make a right at the sign and proceed up the small set of stairs. Once you reach the top, you will see a sign that says **Surgical Simulation**. Go through the door next to the sign and the **Goodman Surgical Education Center** will be down the small hallway on your right, room **H3552.**

Mandatory instructional resources (provided):

- ✓ Seifert, P. *Core Curriculum for the RN First Assistant The current edition of Core Curriculum for the RN First Assistant (E-book).* 5th ed. Denver, CO: AORN, Inc.; 2014. (Possible Healthstream Modules)

- ✓ Rothrock, J.C., (2019). Alexander's Care of the Patient in Surgery (16th edition). St. Louis, Missouri: Elsevier. ISBN-13: 978-0323479141

- ✓ https://www.youtube.com/watch?v=72nmm6bV1NY

Reading Assignments/Class Preparation

Class Date	Care of the Patient in Surgery	Core Curriculum	Other
March 27, Day #1 0645-1500	Chapters 21, 6, & 25	Module I Module II Module IV, Section 5, 6	Watch YouTube Scrubbing video (link is above)
March 28, Day # 2 0800-1600	Chapters 8, 19, & 20	Module IV Section 2, 8, 3, & 4	
April 3, Day #3 0700-1500	Chapters 11, 9, & 7	Module III Module IV, Section 1	
April 5, Day #4 0800-1600	Chapters 8 & 14	Module IV, Section 2, 1 Module V	
April 8, Day #5 0800-1600	Chapter 8	Module IV Section 2	

APPENDIX F: CERTIFICATION OF COMPLETION

Stanford
HEALTH CARE
STANFORD MEDICINE

In recognition of successfully completing the
Five-Day
Surgical First Assistant Course for Advanced Practice Providers,
Which Encompassed both Didactic & Hands-On Skills

This certificate is presented on this 8th Day of April 2019 to

Daniel Yee

James Lau, MD, MHPE
Course Medical Director

Sandra W. Mobley, DNPc, ACNP-BC
Course Coordinator

APPENDIX G: STANFORD IRB APPROVAL

Mobley, Sandra

From:	tkhap@stanford.edu
Sent:	Wednesday, September 12, 2018 3:01 PM
To:	Mobley, Sandra
Subject:	HSR Form Processed 47741, Sandra Mobley

Protocol Number: 47741 (NEW)
Review Type: HSR
Protocol Director: Mobley
Department: NEUROSCIENCES - SL (HOSP) - SHC Protocol Title: Surgical Assist Education Program for Advanced Practice
Providers

Thank you for your submission. On the basis of the information provided, the IRB has determined that this project does
not meet the definition of human subject research as defined in federal regulations 45 CFR 46.102 or 21 CFR 50.3. No
further IRB review is required. Please see your HSR application form in eProtocol for the completed determination and
any additional instructions.

Thank you,

Tessa Kennedy Hapanowicz

IRB 98 Manager
email: tkhap@stanford.edu
phone: (650) 725-0650

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APPENDIX H: FRESNO STATE IRB APPROVAL

FRESNO STATE
College of Health and Human Services

California State University, Fresno
School of Nursing
IRB Approval

Date: December 7, 2018

RE: DNP1833 RNFA Preparation Course for Advanced Practice Providers

Dear Sandra Mobley,

As the Chair of the School of Nursing Research Committee, serving as the Institutional Review Board for the School of Nursing, I have reviewed and approved your review request for the above-referenced project for a period of 12 months. I have determined your study to meet the criteria for Minimal Risk IRB review.

Under the Policy and Procedures for Research with Human Subjects at California State University, Fresno, your proposal meets minimal risk criteria according to section 3.3.7: Research in which the risks of harm anticipated are not greater, probability and magnitude, than those ordinarily encountered in daily life or during the performance of routine physical or psychological examinations or tests.

The Research Committee may periodically wish to assess the adequacy of research process. If, in the course of the study, you consider making any changes in the protocol or consent form, you must forward this information to the Research Committee prior to implementation unless the change is necessary to eliminate an apparent immediate hazard to the research participant(s).

This study expires: December 7, 2019

The Research Committee is authorized to periodically assess the adequacy of the consent and research process. All problems having to do with subject safety must be reported to the Research Committee. Please maintain proper data control and confidentiality.

If you have any questions, please contact me through the CSU, Fresno School of Nursing Research Committee at nishanair@csufresno.edu.

Sincerely,

Nisha Nair, DNP, RNC, CNS, CNE, IBCLC
School of Nursing, Research Committee, Chair

School of Nursing
California State University, Fresno
2345 E. San Ramon M/S MH25 · Fresno, California 93740
P 559.278.2041   F 559.278.6360   www.FresnoState.edu/nursing

THE CALIFORNIA STATE UNIVERSITY

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APPENDIX I: OFFICE FOR HUMAN RESEARCH
PROTECTIONS TRAINING

Training Certificate of Completion

This certificate indicates that:

___Sandra Mobley___
(Name)

has completed the OHRP online Assurance training on:

___9.29.18___
(Date)

OHRP
Office for Human Research Protections

APPENDIX J: HANDS-ON SKILLS CHECKOFF

Student Name: _____ **Instructor Signature:** _____

Skill: Knot Tying	Needs Practice	Competent	Advanced
Two-Handed Knot Tying			
One-Handed Knot Tying Right Hand			
One-Handed Knot Tying Left Hand			
Instrument Knot Tying			
Skill: **Suturing**			
Simple Interrupted			
Simple Continuous			
Horizontal Mattress			
Vertical Mattress			
Deep Dermal			
Subcuticular			
Skill: **Laparoscopic Skills**			
Peg Transfer			
Pattern Cut			
Skill: **Specialty Surgery Stitches**			