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The Development of a Nurse Practitioner First Assistant Orientation Program

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Abstract

The demand for surgical services continues to increase, creating a strain in our healthcare system and causing increasing backlog hours for the operating room. Allowing nurse practitioners (NP) to function in an expanded role in the perioperative environment requires additional training beyond the generic NP program. With this additional training, the NP can function as a first assistant, providing delegated medical functions in the perioperative environment. An in-house NP registered nurse first assistant orientation program was developed based on the adult learning theory as a conceptual framework combined with the AORN perioperative standards as a foundation. The cost of using an NP or physician assistant in the perioperative environment versus a physician and the effectiveness of a structured orientation program were evaluated.

Keywords: nurse practitioner, first assistant, orientation

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Section II. Introduction

In 2010, the Affordable Care Act (ACA), which allows for more than 45 million uninsured individuals access to health care, was signed into law (Kocher, Emanuel & DeParle, 2010). This demand creates a need for organizations to rethink how they do business, as well as stay competitive. The Association of Medical Colleges predicts a shortage of between 61,700 and 94,700 physicians, with a significant shortage in many surgical specialties (IHS, 2016). With this pending shortage of providers, a cost-effective alternative must be considered for providing surgical care. The ACA also affected the practice of medicine by redesigning the care team to include non-physician providers, such as nurse practitioners (NP) with registered nurse first assistant (RNFA) certification. In a large non-profit healthcare system in northern California, this deficit of surgeons and surgical assistants exits, creating a demand for NPs to gain expertise in surgical skills through an RNFA program.

Program Description

An RNFA is a perioperative nurse functioning in an expanded perioperative role (Association of Perioperative Registered Nurses [AORN], 2014). The skills required to effectively provide perioperative nursing care as an RNFA necessitate additional education beyond what is provided in the generic NP programs. In assessing the knowledge, scope, and number of resources available in the trauma department of this large healthcare system, it was noted that there was a significant opportunity to develop a program that would help lessen the demand for surgeons as assistants in the operating room (OR). The number of OR case requests continued to grow and the backlog of OR hours was at an all-time high. In addition to the increasing backlog, there was an increase in number of patients readmitted to the hospital for

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trauma services. This created a need for a business case to increase the number of assistants within the trauma department. The business case outlined the need for an advanced practice provider (APP) six days a week, 16 hours a day. An APP can be either an NP or PA and the terms can be used interchangeably. The responsibility of these practitioners would be to assist with repatriation patients, rounding, clinic visits, performing small procedures, and assisting in the OR.

Available Knowledge

To provide quality healthcare that is cost effective for health plan members, a new approach in our surgical specialty departments was considered that included a redesign to the care team. Incorporating an NP working as an RNFA will help to increase provider efficiency, as well as increase access to our members in the outpatient setting. The purpose of this project was to define this PICOT question: (P) For newly hired APPs, (I) will an in-house perioperative first assistant orientation program (O) improve their OR knowledge and skills (C) to competently assist in the place of a surgeon (T) within 12 weeks? A review of the evidence was completed through a search of the databases of PubMed, CINAHL, and Joanna Briggs Institute using the terms *advanced practice nurse*, *first assistant,* and *nurse practitioner*. The results yielded 21 items from PubMed, 27 items from CINAHL, and 273 items from Joanna Briggs Institute Evidenced-Based Practice database. Four articles were chosen for inclusion in this pilot.

In response to the increasing need for physicians in Wales, the government rethought the traditional skill mix and promoted the development and training of surgical care practitioners (Morgan & Ward, 2005). Morgan and Ward (2005) discussed the implementation of a pilot program, where the surgical care practitioner undertook some of the duties of resident physicians. The practitioner's role consisted of the completion of pre-assessments, surgery

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preparation, performance of invasive procedures, and follow up and discharge of patients. The program was designed to deliver theory and practical aspects over 19 days. Tutorials and didactic teaching sessions also occurred locally with intense intercollegiate basic surgical skills courses. To strengthen the participants' foundation, they were also educated in a surgical specialty, such as orthopedics, gynecology and obstetrics, urology, vascular, or colorectal surgery (Morgan & Ward, 2005). Preliminary results of the orientation program in Wales suggested that the pilot has had a positive effect on patient care, as well as the development of the participants. Results were determined based on feedback from the clinical areas where the practitioners performed. With the implementation of this program, surgical care practitioners have been involved with the care of the patient throughout their entire journey. Providing holistic care transferred into a positive experience for the patient (Morgan & Ward, 2005).

In 2005, an Australian university offered a graduate level perioperative nurse surgeon assistant program designed to prepare registered nurses to be surgical assistants (Lynn & Brownie, 2013). This new role was developed to assist in filling the gap in nursing services in the OR. Lynn and Brownie (2013) conducted a qualitative research study that used in-depth interviews and an online survey to explore the issues and challenges with implementing a perioperative nurse surgeon assistant role. Fifty-four registered nurses participated in the study. These nurses had met the graduation requirements from the Australian university program and lived in an area around the principal researcher. The mixed method of data collection allowed the participants to provide information on their challenges in the role and the contemporary practice in Australia. The analysis of the results showed that nurses were involved in this program for personal development, to provide higher quality of patient care, or due to recommendation from a surgeon. Lynn and Brownie concluded that the perioperative nurse surgeon assistant role led to

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the nurse's ability to better meet the needs of patients, increased job satisfaction and autonomy, and increased the formation of surgeon and clinical perioperative teams.

Poe, Bubb, and Freeman (1997) implemented an RN first assistant role in Virginia that provided a path for career development in the surgical arena. To improve OR efficiency, the RNFA role was developed modeling the Delaware County Community College RNFA program. Five candidates were selected and trained using a cost neutral strategy. The ability to preserve existing staffing and have the RN function as a first assistant without additional resources demonstrated the flexibility and cost effectiveness of the role. Their strategy to integrate the RNFA as part of the surgical services department was to define the role, create a job description, outline the scope of practice, delineate the qualification, and describe procedures and the practice privileges for the RNFA. The strategic plan and goals included contents from the AORN (2014) position statement on RNFAs. The identified benefits of this program were the development, definition, and implementation of a professional nursing practice model (Poe et al., 1997). Implementation of the RNFA proved itself to be cost effective to the organization. Poe et al. found that hiring RNFAs into a salaried position versus hourly had a greater cost savings. One-time expenses included training and start-up salary adjustments. As the program developed, the load of the RNFA increased, as well as the desire to work with them from surgeons in subspecialty services. Being cost effective was not the only benefit to the program. Poe et al. discussed the increase in the quality of patient care, improved communication with surgeons and other OR team members, a successful recruitment strategy, and professional growth for perioperative nurses

A comprehensive postgraduate fellowship program was developed to support new and experienced NPs who lacked critical care at a tertiary medical center (Schofield & McComiskey,

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2015). The 9-month program included a structured clinical and didactic fellowship. An interprofessional team, including NPs, surgeons with a variety of expertise, pharmacists, nurses, and social workers, directed the program orientation. This program was recommended due to the lack of new graduate knowledge of critical care concepts and their ability to practice in a critical care setting after completing orientation. The level of knowledge varied among the group and the lack of readiness to practice led to terminations and resignations (Schofield & McComiskey, 2015). A program was developed using the Theory of Diffusion of Innovation as the conceptual framework. Their plan was to fund a limited number of fellowship positions with the unused portion of the budget due to vacancies (Schofield & McComiskey, 2015).

The first step in the program development was to consider all relevant stakeholders (Schofield & McComiskey, 2015). Several factors went into planning, including future needs of an upcoming trauma/critical care tower and the increased need in resources due to its opening. Resources identified were the need for a director, clinical management, and coordinators. Clinical rotations were decided based on preceptor availability, as well as organizational need. The fellows also could identify two electives, which included a specialty area or to repeat a rotation in one of the clinical areas defined. In addition to the clinical rotations, the fellows participated in simulation training in the organizations simulation center (Schofield & McComiskey, 2015). Each fellow was required to complete a self-assessment of skills before starting each rotation. The coordinators reviewed the results and created an individualized development plan. The survey was then completed again at the end of the rotation. Results of the pre- and post-survey revealed an increase in ratings from a mean pre-score of 2 to a post mean score of 3. The results indicated that the fellows went from little experience to competent. Schofield and McComiskey (2015) concluded that the implementation of a postgraduate

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fellowship eased the difficulty the NP experiences in transition to practice, increased confidence at the entry level, and increased physician satisfaction.

Kunic and Jackson (2013) examined how a nurse residency program could help with the stress of moving into new areas of practice. The Versant RN Residency program for new undergraduate registered nurses, as an example, has a 6-month curriculum that mentors and supports the novice nurse in a transition to the perioperative environment. This program also uses the AORN's Periop 101 course as part of its curriculum. The AORN periop modules are suited for use for the novice nurse or the NP who will be working as an RNFA (Kunic & Jackson, 2013).

The NP's range of knowledge may vary, and it is essential to determine the existing level of competence in each participant in the orientation program. Rothrock (2005) conducted a study to assess the pre-existing level of competence in fundamental perioperative nursing care in NPs at an RNFA program in Delaware. Rothrock examined the perceptions of 16 NPs using a self-rating instrument to measure basic perioperative nursing competencies. Six of the 16 participants had prior knowledge of the OR, but still lacked confidence in interpreting labs, achieving hemostasis in the surgical field, identifying referral services, and identifying fluid and electrolyte imbalances. Those without OR experience noted areas of deficiency in numerous perioperative specific areas, such as maintaining a sterile field, positioning for surgery, and instrument knowledge (Rothrock, 2005). With varying degrees of perioperative knowledge, it is important to have adequate orientation and training to ensure patient safety. From a risk management perspective, the RN working as a first assistant should be able to demonstrate educational preparation that qualifies them to function in the role as an RNFA (Schroeder, 2008). See Appendix A, Evaluation of Evidence Table, for the critical appraisal of evidence.

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After reviewing the literature and assessing our current state, a decision was made to support my project of developing a perioperative nurse practitioner first assistant orientation program as a solution to the projected decrease in the number of surgeons and surgical assistants. Approval was obtained from local leadership and University of San Francisco (USF) as a non-research process improvement project. See Appendix B, Non-Research Approval Documents, and Appendix C, Letter of Support.

Framework

A conceptual framework composed of the principles of adult learning and Benner's novice to expert skill acquisition theory was used to guide the program development and helped to transfer instructional learning into clinical practice (Benner, 2011; Dumchin, 2010). The novice to expert skill acquisition theory asserts that textbooks are not enough to explain complex practical situations. Each APP completed a self-evaluation and was individually evaluated prior to starting the program to assess where they were on the novice to expert continuum. Benner's stages of clinical competence have five levels of proficiency classifying the individual as: novice, advanced beginner, competent, proficient, and expert (Benner, 1984). Each orientation plan was individualized based on their classification to fully maximize the amount of learning.

Adult learning theory suggests that experiential learning makes educators responsible for creating, facilitating access, and organizing experiences to facilitate learning (Taylor & Hamdy, 2013). Further research suggested that successful adult learning occurs when these four ingredients are present: the use of concrete experiences, continuous available supervision and advising, encouragement to take on new and complex roles, and the use of support and feedback when introducing new techniques (Trotter, 2006). The adult learning theory was applied in the design of this program, which allowed the APPs to partner with their preceptors in creating and

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evaluating their learning experience. Structuring the didactic content concurrent with practice allowed for full immersion in the subject, ultimately enhancing the experience. Investing in the development of this RNFA orientation program has broadened the scope of practice for APPs and provided a cost-effective solution to the increasing demand for services in surgical specialties (Fairman, Rowe, Hassmiller & Shalala, 2011).

Specific Aim

The aim of this project was that within one year, every new NP without OR experience in the surgical specialties department will attend the RNFA orientation program. The new RNFA will obtain foundational knowledge of the perioperative environment and by the end of the program will be competent to independently practice alongside surgeons and other members of the surgical team as an RNFA. In addition to assisting in OR cases, the NP RNFA will apply their clinical skills to function in the clinic and participate in hospital rounding, providing the surgeon with the flexibility to prioritize and optimize their time. Each APP will complete a minimum of 130 hours of clinical rotations and 48 hours of didactic education depending on experience.

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Section III. Methods

Key Stakeholders

The primary stakeholders in this project are the surgeons within the trauma department, the surgical assistants in the OR, and leaders who these roles report to. The trauma surgeons are also an internal customer, since this new role provides a service to them, as well as our members. In the past, another surgeon or, in less complicated cases, a surgical assistant (SA) completed the work of a first assistant. With the implementation of the RNFA program, the practitioner will now perform the work of a first assistant. The SAs were included in the orientation of the new hire practitioners, which allowed them to provide input to the work they were currently being phased out of. Through attrition, the organization will no longer replace SAs, which also contributes to the need for advanced practitioners in the OR. Allowing the SAs a voice in the program decreased any potential tension or union activity that may have delayed or stalled the project.

Senior leadership remained a key stakeholder throughout the implementation of this project, as they were the approvers of all resources and support for implementation. As the project progressed, their sponsorship removed barriers to working with our OR partners. Other key leaders included the director of trauma and the manager of anesthesia. The trauma director is the primary program developer and the manager of anesthesia was key to coordinating preceptors. See Appendix D, Work Breakdown Structure, which guided critical activities for this project, and Appendix E, Work Breakdown Structure Definitions.

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Planning the Intervention

Acceptance from trauma leadership for the development of a perioperative orientation program for NPs based on the AORN guidelines was obtained in 2016. The program's inception was in response to a need for OR resources from the medical group to tackle the increase in the number of backlog hours the organization was facing. Parallel to developing the orientation's curriculum, the trauma department was working on a business case to increase the department's resources to assist with repatriation of trauma patients from hospitals out of our health system. The responsibility of these new providers would also include supporting the service line in the OR.

Prior to gaining approval for additional APPs for the trauma department, the framework and curriculum for training was developed. This information became useful while we were negotiating with senior leadership on the number of full time equivalents (FTEs) that would be funded for the program. A consultation from the education department was done to ensure we had attainable goals and a sound framework. During this consultation, we also decided on how competency would be validated and recorded.

During our first meeting with the key stakeholders, the preliminary curriculum was presented and feedback obtained. During this meeting, we discussed our timeline and reviewed the evidence that supported the program's framework. A discussion was had regarding the preference of provider into this position, since it was assumed that the physicians preferred a PA over an NP. The reasons for their preference were explored and, surprisingly, it was not actually preference, but the ease of working with a PA versus an NP due to the contractual constraints.

The AORN guidelines were presented as the foundation of the orientation program, which were met with immediate resistance. There was a feeling that the content was heavy in

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nursing and would not pertain to a PA, if they were hired into the position. I presented the argument that our regulatory surveys are conducted using the AORN standards and that whoever is in the position should be taught to those standards. After some in-depth discussion, I received approval to continue forward with the developed curriculum.

We began preceptor selection by reviewing our current talent pool. Under my direction were the SAs, the manager of anesthesia, as well as the only RNFA in the facility. I did not have a budget for this program, so I had to be creative in how I used my resources. The anesthesia manager was key due to her extensive knowledge of the OR, and together, we selected SAs who were very seasoned and who could take on a small role in the orientation of the new practitioners. Our RNFA was hired into an on-call role, which allowed flexibility in scheduling to provide intra-operative orientation.

A meeting was held with OR leadership to inform them of the upcoming orientation, as well as to secure didactic materials needed for educating the new hires. The director of clinical education was very supportive and offered any assistance she could provide. The OR educator provided us access to their library, which included all the AORN videos needed for the program. I began to select the videos that corresponded with the lecture or skills education as outlined in the AORN program guidelines. Contact was made with the AORN representative, who provided me with information on how to order the online modules we planned to use to assess competency. I had the opportunity to review the online modules in their entirety to assess for effectiveness. The modules were presented to the trauma chief and trauma coordinator for input and feedback. The chief of trauma decided that the modules would not be a good fit for any PA candidates, since they were very heavy on nursing care. Although, I did not agree, we decided to move forward with the videos, skills training, and lectures provided by the trauma chief.

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With access to the OR and the scheduling of cases, we could secure an unused OR suite some days to allow for new hire hands-on training. Reservations were made for the trauma conference room for the didactic portion of training. There was a television and DVD player available, so the practitioners could watch the videos alone or in groups.

During the candidate selection process, the number of NP versus PA candidates was far less. The NP applicants lacked OR knowledge and invasive procedure skills, which prohibited them from consideration for these positions. Although, there were some with very strong clinical backgrounds, the requirement of knowledge in assisting with invasive procedures was lacking. The low number of qualified NPs supported the need for an in-house training program that would fill the knowledge gap and provide a solution to our issue with OR coverage; however, the final candidates were two PAs, hired over a 3-month period.

The first PA new hire's background and credentialing process took longer than the usual 12 weeks, and by the time we could on-board her, she had a medical condition that would soon put her on leave for a period of time. The department already had one PA, so the two of them started the program together. The orientation began with each of them completing a self-assessment on OR skills and procedures. This self-assessment was used to customize their orientation into the department. Each candidate was provided a list of videos they needed to view, as well as a lecture schedule provided by the trauma chief. The OR rotations were designed for one PA to orient at a time. This worked out well, because one PA had restrictions, we could focus on the senior PA and start her with skills training. The OR rotations lasted six weeks and covered general surgery, trauma, orthopedic, thoracic, and some vascular cases. While the senior PA was competing her surgical rotations, the new hire began her medical leave. A timeline of all events is documented in Appendix F, Gantt Chart.

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The skills training and the videos happened concurrently during the 6-week training (see Appendix G, Orientation Curriculum). Prior to observing any OR cases, we completed an assessment of basic OR knowledge on scrubbing and OR attire. The SAs then provided the practitioner with an overview of the OR and reviewed protocols and the location of equipment and emergency supplies. Once they became comfortable with the basics, the actual clinical rotations began.

After each surgical day, there was a brief debriefing with the PA and the RNFA or anesthesia manager. The discussion reviewed what went well and where there were opportunities. Early in the training, we discovered that additional training would be needed for the PAs to learn how to correctly handle the microscope for laparoscopic procedures. This was added into the orientation, with education provided by a vendor representative.

Successful completion was determined by the precepting physicians and the RNFA based on actual performance intraoperatively. Using the Wright (2005) model for competency assessment, the initial competency was validated. The Wright model allows for competency to be validated by observation of the employee's daily work. Wright's philosophy is that stemming from the organization's vision, leaders set the expectations and structures that allow for employees to be successful in their roles. Managers and employees together develop the competencies, which creates a level of accountability on both parts. Managers are responsible for ensuring there is an environment that supports the achievement of the identified competency; employees help identify methods that will appropriately validate their level of competency, which will ultimately lead to a culture of success (Wright, 2005).

To evaluate the orientation's effectiveness from the PAs' perspectives, a Survey Monkey was sent to them at the end of their rotations. Each PA was required to complete the survey, the

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videos, and all lectures for successfully program completion. The initial assessment will be given as a reassessment at the end of the year prior to their annual evaluations.

SWOT Analysis

A SWOT analysis was completed to assess the organization's readiness for the program to be implemented successfully (see Appendix H). The organization's reputation and strong community presence is one of the biggest strengths identified. As the hospital is fully equipped with innovative technology and a healthy patient population makes it an environment that is conducive to learning. It is a benefit to have a live environment for the new practitioners to learn and practice. The program's foundation is built upon the evidenced-based AORN standards for RNFAs programs. Having the support of leadership and physicians was an important driver for keeping the development of the program on task.

The identified weaknesses included the availability of the precepting clinical resources. In addition, scheduling needed to be strategic to ensure we were still meeting the needs of our members, as well as freeing up time for orientation by the RNFA and the SAs. Scheduling around the trauma chief's schedule also became a challenge, since most of his administrative time was post-call. At times, the orientation program was very close to deviating from the original project scope. With the physician senior leadership as the major sponsor, plans were often adjusted based on their preference without consideration of the foundational guidelines. These deviations were corrected with frequent reminders of our regulatory requirements for the OR. Many of the proposed changes would not have been brought up for discussion if the orientees were NPs. Due to the contractual obligations, our NP candidates were not selected.

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Budget

There was not a specific budget assigned to this project, as leadership's perspective was that it would be cost neutral, with any expenses to be absorbed in operational costs (see Appendix I, Budget). The program had three PAs as orientees, with an average hourly wage of $79.96 per hour before taxes and benefits of 29%. The combined cost of the PAs' orientation time totaled $57,571.20 over a period of 18 weeks. There were many hours of preparation and departmental assessments prior to implementing the project. Over the course of the entire project, director hours were approximately 585. These hours included research, planning, implementation, and evaluation of the program. The director's hourly rate was $93, for a total of $54,405.

During the planning and implementation phases, the manager of anesthesia contributed to the project with coordinating schedules and providing input during the stakeholder meetings and planning sessions. Total cost for the manager's time was $2,624 for approximately 32 hours of work. As we began the actual hands-on portion of the orientation, the SAs provided basic training, equipment overview, and OR room orientation for a total of 48 hours, amounting to $2,208. The orientees then transitioned to time with the RNFA, who provided the bulk of the hands-on orientation for six weeks each PA. Preceptor costs incurred for the RNFA were $99 an hour for a total amount of $71,280.

Training costs were incurred for didactic materials from AORN. Each orientee needed the AORN Periop 101 core curriculum at a cost of $105 each. The department would have incurred an additional expense of $1,837 for periop training videos; however, I was able to borrow them from our OR department. These videos were purchased by the department later to

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be used during the spread of the program. The total program implementation costs, less physician preceptor hours, was $190,670.20.

Using the PAs in place of a surgeon as a first assistant has proven to be efficient and cost effective. Our cost avoidance in hiring three PAs versus one surgeon was $254,863. With implementation costs totaling $190,670, there was a 25% return on our initial investment. This provides the department an OR assistant six days a week, approximately 18 to 20 hours per day. In comparison, if we were to hire three NPs instead of PAs, the annualized cost is less, resulting in a negative variance of $150,629.20 with the cost of OR orientation. Without the one-time orientation costs, there is a positive variance of $40,041 for three NP hires.

Communication Plan

Initial communication flowed in a top down approach beginning with the senior leadership team and key stakeholders. As the project progressed, a feedback loop for communication was created providing communication from the frontline staff to senior leadership and back down. Each stakeholder was responsible for providing updates and milestones to their respective teams. The trauma surgeons were introduced to the program idea during a department leadership meeting, where they could provide input and volunteer to provide precepting. During the department meeting, the program benefits were explained, as well as the roles of the PAs within the trauma department.

The perioperative clinical nurse specialist provided a program overview to the OR team during a staff meeting. This was also used as a method to advertise the program for potential NP candidates for future trainings. The SAs were informed by the anesthesia manager during a department meeting, as well, providing them an opportunity to ask questions and to discuss how each role will complement one another (see Appendix J, Communication Plan). Prior to the

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orientation implementation program, the SAs were made aware of the organization's decision to not replace any vacated SA positions. This prior upfront communication prevented animosity over their role being phased out and work being reassigned. Communication to human resources was done when the positions were requested for posting. The hiring criteria was scrutinized against the national bargaining agreement to ensure contract compliance.

Study of the Interventions

Our medical center had come under scrutiny by our regional leadership for having an excess of 1,500 hours of OR backlog, with no immediate plan to correct it. In the trauma department, we had begun to receive an increase in trauma patients readmitted to our facility. Readmitting patients is very important due to the exponential cost of care outside of one of our facilities. Trauma surgeons were stretched very thin, and there was a need to expand in a cost-efficient way.

There was an initial business case to increase the number of practitioners from one to five to handle the volume of trauma repatriations. Receiving patients from an outside facility, the intake can be lengthy and may require timely surgical interventions. Readmitting patients expeditiously is paramount; however, we needed resources to handle the increase in volume, as well as to perform the care required. In the business case, we were expected to identify the exact duties of the practitioners and to justify how their time would be used. Assisting in the OR was an identified responsibility of the new practitioners and a needed resource for the surgeons. With the decreased number of SAs, there was not always adequate OR staff to help with a case. Having a skilled practitioner in the trauma program was a solution to this issue.

The proposal outlined how the practitioner would be responsible for patient rounding in the hospital, seeing patients in the clinic, performing minor procedures, assisting in the OR,

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receiving transfer patients, discharging patients, and consulting on patients in the emergency department. As outlined in the gap analysis (see Appendix K), the issue we were experiencing was that the current PA and the NPs we were interviewing did not have sufficient OR experience, limiting them in their abilities to fully support the surgeon. This finding presented an opportunity for us to intervene and train our current PA, as well as any newly hired NPs or PAs, to the OR as a first assistant.

Planning and studying the intervention was led by the trauma nursing director and chief of trauma. The plan was to create an internal orientation program that every new practitioner would complete upon hire to the trauma department. Having the new employee complete a self-assessment of skills during onboarding is key to individualizing the program to obtain the maximum benefit of the orientation. Identifying key preceptors was necessary to ensure continuity in what was taught in the hands-on skills training.

Upon completion of the orientation program, a survey is required of each participant. The use of a Survey Monkey tool was the methodology used for assessing the value and benefit of the program from the perception of the orientee. A comparison of their pre- and post-self-assessment was also a tool used to study the effectiveness of the intervention. These planning steps were necessary to inform the overall evaluation of the program.

Measures

The program was evaluated on the results of the final Survey Monkey completed by the participants, the successful integration of each participant into the OR schedule at the completion of their orientation, preceptor feedback, and positive cost avoidance of utilizing a surgeon versus an advanced care practitioner. Evaluation of the program relied heavily on the participant's perception of the process and content as it relates to their roles. Their level of increased

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confidence and available resources and support influenced their responses. Since competency was not validated by completion of the AORN online modules, ongoing validation of competency using the Wright model for competency assessment is being used. The results of the participant's initial self-assessment and reassessment at the end of the orientation is being compared to actual clinical performance observed by skilled practitioners or surgeons. See Appendix L, Nurse Practitioner RNFA Perioperative Self -Assessment and Evaluation Checklist. Patient outcome data will be collected and reviewed at future intervals, but is not indicative of trends now due to the limited number of cases completed by the APPs.

Each orientee completed a Survey Monkey at the end of their clinical rotations. The data were analyzed to assess the program's content and the framework of the program overall. Surveys were returned anonymously, providing an opportunity for honest constructive feedback. Each of the participants started the orientation at different phases of their onboarding. One of the PAs had been working in the role for a year before orienting to the OR. Another was a new graduate PA, who started orienting, went on leave, and was just returning to work. The third PA was a seasoned PA who spent most his career working strictly in the emergency room and did not have any OR experience. The results of the surveys could be analyzed from three different perspectives, providing data to make a sound recommendation for future orientations.

Data were reviewed to assess the level of integration of the trauma PAs into the OR assistant schedule. The data are still preliminary, as the rotations are still being worked out with the trauma department and the OR. Currently, the PAs are responsible for patients on their service line who are going to the OR. As the operating room expands, the plan is for the trauma PAs to be fully counted as emergency OR room coverage.

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Responses from face-to-face interviews with the preceptors (surgeons, RNFA, and SAs) were compiled and assessed for common themes. Each preceptor was asked a set of pre-determined questions related to the individual performance of the participants, as well as the program content, structure, and delivery. Integrity was maintained by having two interviewers with each preceptor and confidential responses.

Cost avoidance is still preliminary and being measured by the number of actual cases the PAs are assisting in where there was not a SA available and the need for a surgeon was avoided. The manager of anesthesia is collecting data for a 3-month period. A limitation to this method of collecting data is that reliability cannot be maintained, since the schedule can be manipulated to maximize efficiency and reduce resources, when possible, to contain cost.

Analysis

In analyzing all the data, a descriptive comparative design was used, paying close attention to recurrent themes and feedback for program improvement. All responses were grouped in an Excel document and crossed referenced for similarities. The variation in responses were understood knowing that not all participants started at the same time or had the same educational background and were at different levels within their careers. Data may also have been manipulated due to in-the-moment program adjustments in response to feedback critical to the success of the program. Survey Monkey data were collected and calculated using the Survey Monkey tool.

Ethical Considerations

The high demands to operate efficiently can cause an increased amount of pressure on the organization to work lean, often cutting resources, which may compromise patient care. Throughout pre-planning and implementation of the program, the business needs were

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considered in addition to our responsibility to our patients. Developing an advanced practice nurse first assistant orientation program addresses both the business and professional obligation to our members. Expanding the scope of the APPs to include caring for the members intraoperatively also meant that the nurse would have to deal with the economic pressures that may compete with their moral values (Davis, 2010). What we are learning as the nursing profession evolves is that the patient does remain as our primary focus; however, it is no longer our sole ethical obligation.

As a nursing leader, it is my responsibility to balance the organizational and patient care needs. In dealing with the projected shortage of providers, cost was not the leading driver of my decision to develop a program to expand the responsibilities of our APPs. Our obligation to provide optimum patient care and the incorporation of a provider who can provide continuity of care to our members was the primary focus of the orientation program. With the increased demand for surgical services, the demand for post-operative care increases, as well. Developing an orientation program capable of educating the novice or experienced APP to the perioperative environment and the first assistant role will ensure consistency in practice.

Institutional Review Board

A request was submitted to the committee chair at the USF School of Nursing and Health Professions prior to initiating this project. After review, it was determined that this project qualified as an evidence-based change in practice project. Submittal to the IRB for further approval was not necessary, since this project did not involve research with human subjects. Approval forms are available in Appendix B.

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Section IV. Results

Senior leadership and departmental chiefs supported the orientation program for piloting in the trauma department. An unexpected outcome of this pilot was that the program was designed to educate NPs; however, during the candidate selection process, NP candidates were excluded. The program continued with using PAs as the practitioner. The AORN standards were used as a foundation to the development of the orientation program, and the curriculum was built to include the use of the AORN modules as didactic material and to assess competency. These modules were replaced with lectures provided by the trauma chief and the use of the Wright model to validate clinical competency.

Member Patient Satisfaction Scores

Prior to implementing the orientation program, the member patient satisfaction (MPS) scores for the overall department were assessed and found to range from 91% to 100% in Quarter 4 of 2016. These scores were used as a baseline assessment on the level of service for the department. Implementation of the orientation program was predicted to enhance the overall score due to continuity of care and increased quality of time spent with the member post-operatively. Quarter 1 of 2017 has shown an increase in the department's MPS scores by 2%, narrowing the overall range to 93% to 100%.

Program Evaluation

The overall response to the implementation of the program was positive from senior leadership, SAs, PAs, and surgeons within the trauma and general surgery departments. Verbal responses received during the preceptor interviews had several recurrent themes that support the need for a first assistant orientation program. Surgeons, SAs, and the RNFA all described the

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value in obtaining an initial assessment of skills prior to starting in the OR. All three disciplines agreed that the PAs' clinical OR skills were nearly nonexistent initially and had grown expeditiously by the end of the program. It was also agreed that there was evidence of learning from the videos and lectures as they progressed in their clinical rotations. Surgeons described the increase in the level of confidence observed from the PAs as they transitioned from being novice to competent. All precepting surgeons felt that the program was successful and would like to continue with any APP hire within the department. The overall review of the program from the RNFA and the SA was positive and that it should be continued.

Results from the Survey Monkey were reviewed and analyzed for effectiveness of the program from the orientee's perspective. Each PA completed the survey after his/her last surgical rotation. The qualitative survey consisted of six descriptive questions evaluating the overall program and two open-ended questions for feedback. The survey used a 5-point Likert scale, with choices of *Strongly Agree* (5), *Agree* (4), *Neutral* (3), *Disagree* (2), and *Strongly Disagree* (1), with the mean responses ranging from 3.7 to 5.0. A rating of 5 was given to *training experience being useful in my work* and the *preceptor's knowledge of the OR environment*. Ratings of 4.7 and 4.3 were given to the *objectives of the training being clearly defined* and the *use of the videos being relevant to their practice*. A mean rating of 3.7 was given to the *allotted time being sufficient to complete the program*. Responses to the open-ended questions highlighted the programs development and the preceptors' effectiveness. Suggestions for improvement included having longer time for training, the use of a textbook to accompany the training, and hands-on skills with the surgeons outside of the OR.

Some changes to the orientation program prior to dissemination would be to return to the original curriculum and include the use of the AORN modules for NPs or PAs. During our initial

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meetings with the key stakeholders, it was decided to not use the modules after review due to the heavy nursing content. At that time, we did not have any viable NP candidates for the positions, so the physician leaders did not value the modules. This change had the potential to derail the entire project; however, we provided a substitution by adding physician lectures in place of the modules. In addition to the lectures, each PA had to be evaluated by their precepting surgeons to assess for competency. Evaluations provided by the RNFA used the Wright competency assessment model as the methodology. This methodology aligned the organization's mission with the content delivered, then assessed the individual in their work environment for use and application. The surgeon's evaluation was based on their personal assessment of skills observed.

As noted in the Survey Monkey response, additional didactic time was needed. This could be obtained with using the modules to educate and validate knowledge. The NP participants using the AORN modules serves as a benefit, since upon completion of the program, they would be able to sit for the national RNFA certification. The program length was shortened due to the omission of the AORN modules; moving forward, the program will be no less than 12 weeks in duration. Additional changes would include more simulation training on aseptic technique and instrument trays prior to going into an actual case.

An unexpected benefit to the orientation program was the implementation timing. During the implementation phase, it was brought to my attention that a detailed orientation plan was needed for our trauma reverification survey. This provided an overwhelming amount of support from physician and nursing senior leadership, which helped propel the program into action. The pending survey may have positively influenced the success of the program with having resources immediately available to us to complete the orientations. This also may have negatively

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contributed to the amount of time given to complete the orientation, which was noted in the survey results.

Unexpected changes in cost was an actual benefit for the pilot, but needs further consideration during the spread. Costs were less than initially expected due to the use of materials we had within the organization and the omission of the AORN modules. When this program is expanded to other departments, those costs will become actuals.

The development of this orientation program has shown a positive impact on the efficiency in the trauma department. Since implementation, there has been an increased curiosity for how this may be implemented in other specialty departments with their teams. The organization is moving towards a team approach for surgeries because of this program. The perception of needing a PA over an NP has diminished, since the education can be provided to either. The contractual limitations for NPs would still exist; however, this can be managed with set operational guidelines. The ultimate outcome shared among all the stakeholders is to provide high quality, affordable patient care. Currently there are four openings in the neurosurgery and general surgery departments, and each of their new hires will go through this orientation program.

The contents of the physician lectures provided to the new hire PAs are not included in this report. Those lectures are the personal property of the trauma chief and permission was not granted to be included in the write up of this pilot. Those lectures will not be a part of the orientation as it spreads to other departments.

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Section V. Discussion

Summary

The aim of this project was to develop an OR training program for experienced or novice NPs working in the trauma department within their first year of employment. The program would provide them foundational OR knowledge, while preparing them to sit for the national RNFA certification. Conceptually, the aim was met. Although, the program did not develop NPs, the knowledge presented through the program is interchangeable between NPs and PAs. The availability of the AORN certification only applies to NPs in the program.

Key Findings and Lessons Learned

A significant finding was that this program is designed to educate NPs or PAs using the AORN standards and educational material. This provides the organization with flexibility and assurance that each practitioner will have the same baseline OR education. The pilot provided a platform to explore two different education options when delivering the didactic portion, with one method being superior over the other. Although, the AORN modules are heavy in nursing, they would have fulfilled the educational need for the PAs. This initial group did not have the opportunity to use the modules, but the groups moving forward will.

Another lesson learned from this pilot is to develop milestones within the clinical rotation to assess learning and additional educational needs. The participants completed an evaluation at the end of the program, but having some of this feedback earlier would have allowed us to make possible changes sooner. The unexpected time constraint of the implementation team resulted in a rush to complete rather than the individualized approach that we started with. None of the

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participants received any remedial education; however, the surgeons have now developed preferences on who they would like to work with.

Moving forward, sticking to the original timeline for program completion and the use of the AORN Periop 101 modules is mandatory for program completion. Each department will have the guidelines upfront, including the cost of orientation and materials. An opportunity moving forward is for the surgical department to collectively identify a pool of preceptors who will be trained separately on the components and requirements of the program. This is important to identify prior to spreading the program to ensure we have adequate resources available with the background knowledge needed to run the program.

Dissemination Plan

With such a positive response from the orientees, as well as the physician preceptors, there have been multiple requests to implement the orientation project in other specialty departments. The orientation curriculum program will be shared with both the general surgery and neurosurgery departments first. Approval has been obtained to use this curriculum for the specialty departments. It has been stressed to leadership that the recommendation is to follow the curriculum, as it is written, interchanging NP and PA when needed. There will be five new hires within the next 90 days who will start the orientation program. This program has the potential to spread to other facilities within the health system.

Implications for Advanced Nursing Practice

Developing an in-house orientation program for NPs to expand their scope to working as a first assistant in the OR can be positive for both the employer and the practitioner. With the increased demand for services and the pending shortage of physicians, increasing the provider pool has been a challenge. This creates an opportunity for nursing to expand and make a strong

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presence in both the inpatient and outpatient settings. Gaining perioperative skills expands the role of a general practice NP, allowing them access to a large patient population, while assisting the surgeon in managing the care of these patients. This also is a benefit to the patients with having continuity of care from beginning to end. Allowing NPs to practice to full extent of their education and skill set is a valuable cost-effective option to the growing problem of provider shortage.

In the perioperative environment, NPs are scarce, partially due to the extensive training required to function in the RNFA role. Providing on-the-job training would attract and retain NPs who are interested in expanding their scope. For the new NP, providing training will help with the transition from education to practice. In a study conducted by Casey, Fink, Krugman, and Propst (2004), results indicated that new graduates do not feel skilled or competent for up to one year in their new role. This supports the need for extended orientation and support for new NP graduates entering practice. The RNFA orientation program provides focused education and support for new practitioners.

Interpretation

A significant finding from pre-program versus post-program is the level of excitement and confidence experienced among the PAs. Prior to starting the program, there was a lot of anxiety shared in the group. I attribute this anxiety to anticipation of being in the OR outside of their learning institution and the expectations they placed on themselves. Each PA had a different background, with only one of them having a general surgery rotation as an elective during their PA program. The literature supports this level of anticipation and lack of confidence in new graduate NPs who are practicing for the first time. In the post-survey results, there was a level of excitement looking forward to their OR experiences, which was not there prior.

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The structure of the orientation program made a significant impact on the PAs' knowledge expansion. Having an organized approach to their learning made them take the opportunity seriously and fully engage in the process. The trauma services providers were equally impressed with the amount of growth in the PAs over a short amount of time. This also led the way for higher expectations from both the physicians and the PAs. An interesting finding was that prior to having the first assistant orientation, the PAs were willing to follow their supervising physicians without any background education in the area they were providing care. After the program, there have been several requests for additional teaching in different areas prior to them performing the delegated duties. In nursing, this is not a new approach, education, training, and competency must be obtained prior to moving forward. For this PA group, this program has created a shift in thinking, creating a culture of accountability in the department.

The first assistant program was developed with the assumption that it would advance the practice of nursing by training NPs. This pilot revealed that the program is able to serve as education for either the NP or the PA, which provides flexibility for the employer. With contractual constraints, there may be difficulty in obtaining an NP to participate in the orientation. This is an unfortunate consequence to the collective bargaining agreement, since many NPs will not qualify.

The conceptual framework used was effective in the implementation of the program. The PAs independently worked on didactic materials and effectively applied their learnings clinically. Each of the PA orientees had some prior experience in healthcare that they could build on through the knowledge obtained from this program. The structure of the program allowed for immediate application of the newly learned material, which motivated the orientees to immerse themselves fully in the didactic content.

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As a result of this program, surgeons are now interested in building physician teams inside and outside of the OR. Transferring the first assistant skills from the SA to the advanced practitioner has proven to be beneficial to the patient, surgeon, and the organization overall. Due to the ability to grow competent first assistants, the tolerance for an unskilled NP or PA intraoperatively is not accepted. With minimal implementation costs, this program has become the new standard for all new specialty department APP hires.

Limitations

Limitations to this pilot included a small initial orienting group consisting of only PAs. There were no nursing participants in this pilot; although, the program was designed for NPs. The setting was in the trauma department and the number of scheduled trauma OR cases can vary. The return on investment may be greater in a service line with a high volume of OR cases, such as general surgery. This pilot deviated from the original scope, which included use of all education materials from AORN. Results may have been skewed due to the personal relationship of the program developer and the orientees. Feedback from the overall evaluations revealed that the participants and the preceptors felt there should have been more didactic time. This feedback led to the recommendation of strictly following the curriculum and having the program length no less than 12 weeks.

Conclusion

The perioperative environment is very specialized, making entry into this area a challenge for new practitioners. This pilot provided an environment for focused learning and specific skill set in a condensed amount of time. Developing a program that delivers on the needs of the novice practitioner and satisfies the desires of a surgeon proved to be a complex task. With

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the use of the AORN RNFA guidelines, the complexity lessened, and a robust orientation program emerged.

Despite the low number of participants, the results of the pilot show promise to continue as an orientation standard for APPs in the specialties areas. Pre-pilot, the level of enthusiasm for assisting in the OR was low and the interest in learning was not there. With the introduction to the concept of having a structured orientation program, the interest grew among the team, although, there was still anticipation. Post-pilot, there has been a tremendous amount of growth and confidence in the PA participants. In the post-pilot survey questionnaire, the PAs complemented the preceptor team and commented on the amount of knowledge they have obtained. The trauma surgeons were satisfied with the outcome of the pilot and positivity have paved the way for future orientations.

The amount of anticipation that is growing in the other surgical departments shows that this program was needed to help expand and grow our surgical practitioners. For future consideration, we still need to work on redesigning the NP job description to include less stringent requirements to work in the specialty areas. At the end of the orientation, the NP participants become qualified to sit for the national certification for first assistants. This should be taken into consideration during the job description negotiation with our local union. Without modification of the job description, we will continue to have NPs left behind, as other professions flourish. An in-house NP first assistant orientation can bridge the gap between the demand for surgical intervention and the number of surgeons available. As our healthcare policies continue to evolve, we must consider how nursing can grow and contribute to the demands placed on our health system. A nurse practitioner functioning as a first assist is one solution to providing high quality healthcare services to improve the health of our nation.

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Section VI. Other Information

Funding

All funding for this pilot were costs incurred by the organization, no external funding was obtained.

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Section VIII. Appendices

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Appendix A

Evaluation of Evidence Table

Evaluation of Evidence Table							
Using the Johns Hopkins Research Evidence Appraisal Tool							
Citation	**Conceptual Framework**	**Design/Method**	**Sample**	**Major Variables**	**Data Analysis**	**Study Findings**	**Appraisal of Evidence**
Schofield et al., 2015	Theory of Diffusion of Innovations	Development of a comprehensive postgraduate critical care fellowship program. A design team convened to consider stakeholders and fellowship elements and expected program outcomes. Length of time determined and the focus of the fellowship identified (trauma and critical care). Roles were identified. Weekly meetings set up, as well as a decision on the type of clinical rotations and simulation training.	6 NP fellows	9 month fellowship of new graduate and experienced NPs; a fellowship director, consulting physician, 2 coordinators	Each NP completed an initial skills assessment using a Likert scale of 0 to 4. Fellows completed the same Likert scale at the end of the fellowship. Results of the pre- and post-surveys indicated an increase of ratings from a 2 to a 3 for each cohort, noting improvement of all fellows by the end of the program.	Improved perception about readiness to practice, performance, decision making, medical director and NP satisfaction, transition to independence, decreased role confusion.	Level III Quality B Limitations: Program funding, preceptor availability, protected time off for fellowship staff.
Rothrock, 2008	None	Pre/post test	16 NPs	None had RNFA experience, 6 had prior OR	Data showed that there are several identified gaps prior	Those without perioperative experience had noted	Level V Quality B

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				experience, 10 had no OR experience	to starting an RNFA program.	deficiencies in multiple fundamental areas.	
Lynn et al., 2012	None	Surveys and in-person interviews	18 nurses	6 in-person interviews and 18 online surveys	An inductive thematic analysis was used. Nurses expressed their commitment to professional development along side of surgeons as a key reason for taking the perioperative nurse surgeon assistant education and training. Data was obtained from 24 total participants. 4 of the face-to-face interviews were in person and 2 were via phone. The total participation rate was 44%. 16 of the participants were experienced periop nurses.	The perioperative nurse surgeon assistant role led to greater autonomy and satisfaction. It was felt that the nurses were better able to meet the needs of patients and surgeons being in the assistant's role. Formal recognition was appreciated.	Level V Quality B Limitations: The only means of contacting potential nurses was via their student email accounts. This did not include those who recently exited the program.
Poe et al., 1997	None	Post implementation feedback.	5 RNFAs	3 RNFAs started the program initially and then 2 additional RNFAs were added.	A financial analysis was done resulting in data that proved it was more cost effective to hire RNFAs. An analysis was conducted of the differences in salary	With reimbursement for first assistants diminishing, the use of RNFAs become	Level IV Quality B

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					and benefits. The cost savings were greater for RNFAs then hourly surgical assistants. Having salaried RNFAs provided the hospital with an annual savings of $19,572.	invaluable. The feedback from physicians was positive and RNFAs are being routinely scheduled with surgeons. Positive benefits have been an increase in quality of care the patient receives, successful recruitment strategy, professional growth opportunity, and cost effectiveness	

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Appendix B

Non-Research Approval Documents

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DNP Statement of Non-Research Determination Form

Student Name: Romoanetia Lofton

Title of Project:

Integration of Nurse Practitioners into the Trauma Department

Brief Description of Project:

To initiate the use of a decision making tool to assess the business needs of the department in regards to hiring a physician assistant versus a nurse practitioner. The purpose is to provide NPs with the opportunity to be integrated into the trauma department as well as the general surgery areas. Currently the preference is to hire physician assistants with little consideration for the NP. Having a systematic method to assist in that decision making process is my aim.

A) Aim Statement:

Within one year, every new advanced practice provider (NP and PA) position will be assessed by department need by using a decision making tool for provider selection in 50 percent of the Surgical Specialties departments.

B) Description of Intervention:

Create a decision making tool that will cover the needs of the department and will objectively assist in guiding the type of resource needed. This tool will be used prior to posting a position and will follow HR guidelines and contractual requirements. Content of the tool will be used during the interview process to obtain information from the candidate that will further aid in the selection process.

C) How will this intervention change practice?

This intervention will change practice by placing the right provider in the right setting that will allow them to function at the top of their scope. Ultimately patient care will be affected by improved satisfaction scores as well as continuity of care.

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D) Outcome measurements:

Outcome measurements will include a survey from new hires after 3 and 6 months of working. The survey will be used to assess the onboarding and orientation process as well as job satisfaction.

A survey from the supervising physician will be conducted at 3 and 6 months of mentoring the new hire to assess appropriate skill set and physician satisfaction

Review member patient satisfaction scores at the end of each quarter until 2nd quarter of 2017.

Analysis of hiring cost (including orientation time) for a NP and PAs pre and post intervention.

Analysis of length of time required to hire a NP and/or a PA from date of position posting.

To qualify as an Evidence-based Change in Practice Project, rather than a Research Project, the criteria outlined in federal guidelines will be used: (http://answers.hhs.gov/ohrp/categories/1569)

☒ This project meets the guidelines for an Evidence-based Change in Practice Project as outlined in the Project Checklist (attached). Student may proceed with implementation.

☐ This project involves research with human subjects and must be submitted for IRB approval before project activity can commence.

Comments:

EVIDENCE-BASED CHANGE OF PRACTICE PROJECT CHECKLIST *

Instructions: Answer YES or NO to each of the following statements:

Project Title:	**YES**	**NO**
The aim of the project is to improve the process or delivery of care with established/ accepted standards, or to implement evidence-based change. There is no intention of using the data for research purposes.	X	
The specific aim is to improve performance on a specific service or program and is	X	

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a part of usual care. ALL participants will receive standard of care.		
The project is **NOT** designed to follow a research design, e.g., hypothesis testing or group comparison, randomization, control groups, prospective comparison groups, cross-sectional, case control). The project does **NOT** follow a protocol that overrides clinical decision-making.	X	
The project involves implementation of established and tested quality standards and/or systematic monitoring, assessment or evaluation of the organization to ensure that existing quality standards are being met. The project does **NOT** develop paradigms or untested methods or new untested standards.	X	
The project involves implementation of care practices and interventions that are consensus-based or evidence-based. The project does **NOT** seek to test an intervention that is beyond current science and experience.	X	
The project is conducted by staff where the project will take place and involves staff who are working at an agency that has an agreement with USF SONHP.	X	
The project has **NO** funding from federal agencies or research-focused organizations and is not receiving funding for implementation research.	X	
The agency or clinical practice unit agrees that this is a project that will be implemented to improve the process or delivery of care, i.e., **not** a personal research project that is dependent upon the voluntary participation of colleagues, students and/ or patients.	X	
If there is an intent to, or possibility of publishing your work, you and supervising faculty and the agency oversight committee are comfortable with the following statement in your methods section: *"This project was undertaken as an Evidence-based change of practice project at X hospital or agency and as such was not formally supervised by the Institutional Review Board."*	X	

ANSWER KEY: If the answer to **ALL** of these items is yes, the project can be considered an Evidence-based activity that does NOT meet the definition of research. **IRB review is not required. Keep a copy of this checklist in your files.** If the answer to ANY of these questions is **NO**, you must submit for IRB approval.

*Adapted with permission of Elizabeth L. Hohmann, MD, Director and Chair, Partners Human Research Committee, Partners Health System, Boston, MA.

STUDENT NAME (Please print): RUMOANETIA LORTON

Signature of Student: _____ **DATE** 4.12.16

SUPERVISING FACULTY MEMBER (CHAIR) NAME (Please print):

Signature of Supervising Faculty Member (Chair): _____ **DATE** 4/13/2016

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Appendix C

Letter of Support

trauma
KAISER PERMANENTE
Kaiser Foundation Hospital – Vacaville
Level II Trauma Center
Department of Trauma and Emergency Surgery
1 Quality Drive
Vacaville, California 95688
Office 707-624-1574
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W. Christopher Bandy, MD, FACS
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Performance Improvement Coordinator
Paula Green, BSN, RN, MS, CCRN, CFRN
Trauma Educator, Injury Prevention, Outreach Coordinator
Anneyln Ison
Trauma Senior Staff Assistant
Jennifer Gant
Hospital Operations Director

4 August 2016

To Whom It May Concern,

As the Chief of Trauma and Emergency Surgery, I am the direct clinical supervisor for all 'mid-level providers' (Physician Assistants & Nurse Practitioners) working within this scope of practice at Kaiser Foundation Hospital – Vacaville.

I wholeheartedly support Romoanetia Lofton's project to assess competencies during our hiring processes for new mid-level providers. I believe this will be an invaluable assessment tool, not only to evaluate the level of competency for each provider, but to provide a snapshot evaluation of the individual applicant's clinical judgment.

Sincerely,

W. Christopher Bandy, MD, FACS
Trauma Medical Director
Chris.Bandy@kp.org
707-624-1574

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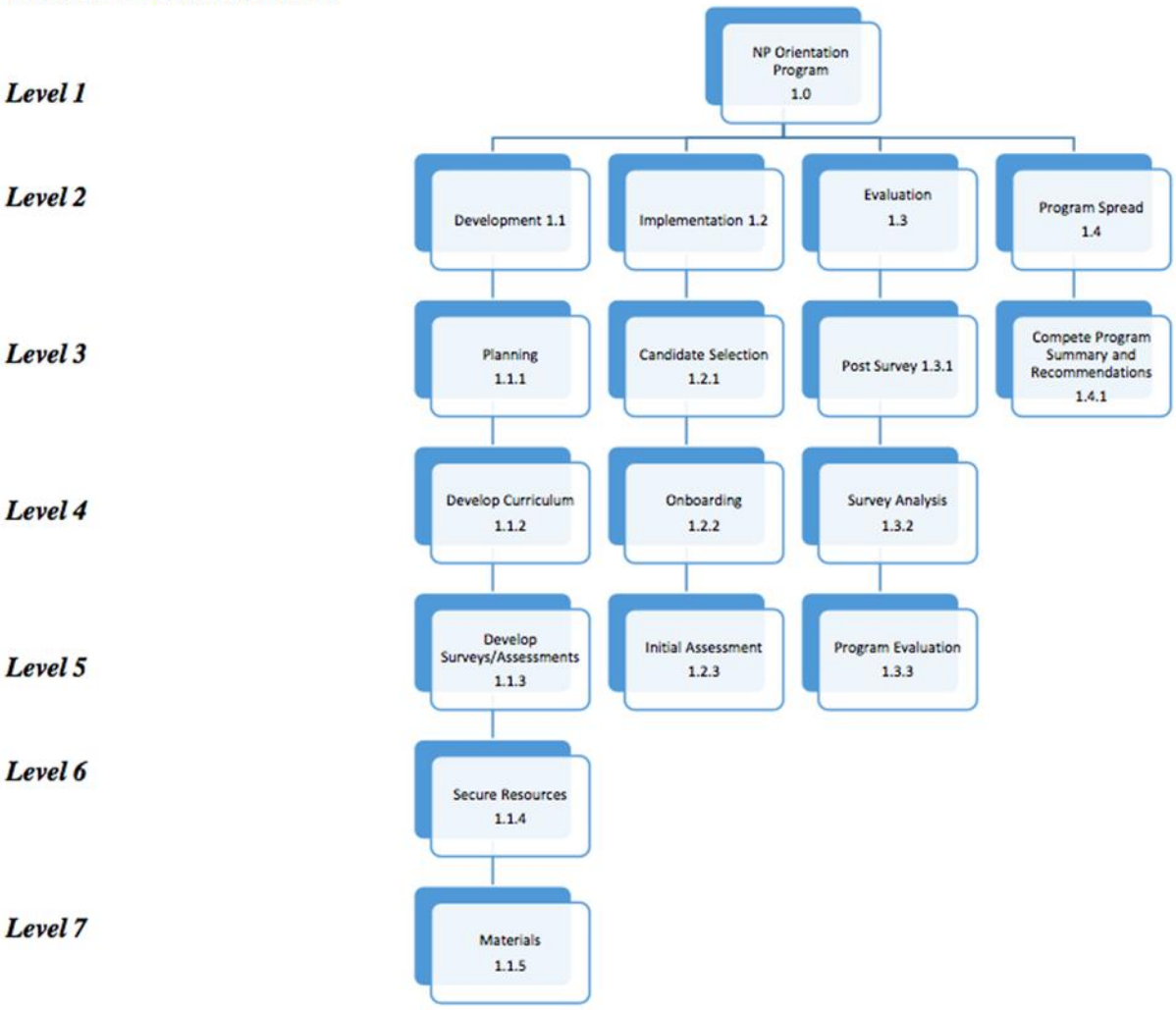
Appendix D

Work Breakdown Structure

Work Breakdown Structure



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Appendix E

Work Breakdown Structure Definitions

Project Functions and Roles

Level	WBS #	Description of Task	Leader
1	1.0	Work to implement a new NP orientation program in the trauma department	Trauma RN Director
2	1.1	Program development that includes obtaining project approval and framework	Trauma RN Director Trauma Chief
3	1.1.1	Establishment of the project team, researching of EBP competencies, and working to plan out how the program will flow.	Trauma Director Anesthesia Manager Trauma Chief
4	1.1.2	Development of the orientation curriculum, guidelines and competencies.	Trauma Director
5	1.1.3	Creation of the initial assessments and post survey questionnaire	Trauma Director
6	1.1.4	Decide on resources and check for availability. Consult with education department and trauma chief.	Trauma Director Anesthesia Manager
7	1.1.5	Acquire program materials. Work with education to gain access to KPHC. Work with OR educator to use AORN videos.	Trauma Director OR Educator
2	1.2	Actual implementation of the developed program.	Trauma Director Trauma Chief
3	1.2.1	Conduct interviews and select candidates for the open positions.	Trauma Chief Existing Trauma PA Trauma MD's Anesthesia Manager
4	1.2.2	Complete the on-boarding process including successful credentialing and new employee orientation.	Human Resources Credentialing & Privileging Dept
5	1.2.3	Orientee completes the initial self assessment.	Trauma Director Employee
2	1.3	Evaluation of the program with input from the preceptors and physicians.	Preceptors Surgeons Trauma Director Anesthesia Manager
3	1.3.1	All participants completed a post survey via survey monkey.	Trauma Director Employees
4	1.3.2	Review all survey responses and analyze results.	Trauma Director
5	1.3.3	Overall review of the program making note of any deviations from the original curriculum.	Trauma Director
2	1.4	Spread the final orientation curriculum to other departments.	Trauma Director
3	1.4.1	Complete the program summary and any future recommendations.	Trauma Director

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Appendix F

Gantt Chart

Development of a RN First Assistant Orientation Program					2016							2017								
ID	Event	Start	Finish	Duration	JUNE	JULY	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEP
1	Obtain Project Approval	4-Aug	4-Aug	1 day																
2	Establish Framework	15-Aug	10-Sep	2w 5 days																
3	Research EBP Competencies	15-Aug	3-Sep	2w 5 days																
4	Develop Program Guidelines	15-Aug	3-Sep	2w 5 days																
5	Develop Program Curriculum	12-Aug	5-Sep	3 weeks																
6	New Position/Budget Approvals	19-Sep	10-Oct	3 weeks																
7	Consult with Education Department	10-Nov	10-Nov	1 day																
8	Establish Competency Assessment	15-Nov	17-Nov	2 days																
9	Posting of NEW Postitions (Internal)	1-Nov	5-Nov	5 days																
10	Posting of NEW Positions (External)	7-Nov	2-Dec	3w 4 days																
11	Stakeholders Meeting	1-Dec	5-Dec	5 days																
12	Secure Resources	5-Dec	19-Dec	2 weeks																
13	Review MPS Scores	15-Dec	18-Dec	3 days																
14	Planning Meeting	19-Dec	21-Dec	3 days																
15	Identify Preceptors	19-Dec	21-Dec	3 days																
16	Secure Didactic Training Location	5-Dec	7-Dec	2 days																
17	Interviewing of Candidates	5-Dec	9-Dec	4 days																
18	Hiring selection/Onboarding/Credentialing	12-Dec	23-Jan	6 weeks																
19	Stakeholders Meeting	9-Dec	14-Dec	5 days																
20	Acquire Materials	2-Jan	9-Jan	1 week																
21	Planning Meeting with Preceptors	10-Jan	14-Jan	4 days																
22	Start orientation program	6-Feb	1-May	12 weeks																
23	Develop Initial Assessment	1-Feb	6-Feb	6 days																
24	Deliver Initial Assessment	6-Feb	31-Mar	7w 4 days																
25	Review Assessment Results	31-Mar	12-Apr	2 weeks																
26	Develop Post Survey	10-Apr	1-May	3 weeks																
27	Administer Post Survey	12-Apr	10-May	3w 5 days																
28	Stakeholders meeting	1-May	1-May	1 day																
29	Survey Results Analysis	11-May	15-May	3 days																
30	Sharing of data with Dept Chief	15-May	15-May	1 day																
31	Evaluation of Project	22-May	31-May	1w 2 days																
32	Complete summary of evaluation	1-Jun	8-Jun	1 week																
33	Share recommendations and plan for spread	1-Jun	8-Jun	1 week																

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Appendix G

Orientation Curriculum

APNP RNFA Orientation Curriculum
2016

The registered nurse first assistant (RNFA) is a registered nurse that works in collaboration with the surgeon and other surgical team members to obtain optimal patient outcomes. RNFAs have acquired the necessary knowledge, judgement, and skills specific to the expanded role of the RNFA clinical practice. RNFAs intraoperatively practice at the direction of the surgeon (AORN, 2014).

This orientation program is designed to provide advanced practice nurse practitioners (APNP) with the education preparation necessary to perform in the role of a first assistant during operative and other invasive procedures (AORN, 2014). Using the RNFA standards provided by AORN and a conceptual framework combining the principles of adult learning and novice to expert skills acquisition, this orientation program will sufficiently transition and support the APNP into the perioperative environment.

GOAL: Students will obtain a foundational knowledge of the perioperative environment and will be competent in independently practicing as an RNFA within six months.

Learning Objectives:

- Students will have knowledge of all statutes, regulations, and policies relevant to their role as an RNFA evidenced by successfully completing weekly written examinations of presented content.
- Successfully complete the AORN perioperative learning modules by the end of the didactic component of the orientation program prior to beginning the clinical rotations.
- Students will demonstrate competence in the expanded functions of the RNFA during surgical rotations evidenced by successful performance evaluations from clinical preceptors.

Week	Instructor(s)	Course	Hours
1	Human Resources Quality Risk Management Periop RN Educator AORN Online Modules and Videos	Perioperative Administrative Activities Advanced Directives Code of Conduct Communication Video Effective Communication in the Perioperative Setting Culture of Safety Documentation Employee Rights and Safety Video Workplace Safety in a Perioperative Setting HIPAA Compliance Informed Consent	16*

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		Introduction to Perioperative Nursing Order Sets Legal Issues Video Risk Management in Perioperative Practice Organizational Structure Regulatory Issues Scope of Practice Terminology Vendor Policies Surgical Attire AORN Module Perioperative Health Care Information Management *Applicable topics to be completed during hospital orientation for new NP employees	
1	Periop CNS/ Trauma Chief	Emergency Management BLS skills (Review) Response to codes and crash cart overview Disaster planning OR fire safety Latex allergy Malignant hyperthermia Video Malignant Hyperthermia Crisis: Team in Action	6
2 – 3	Periop CNS/KP Learn AORN Online Modules and Videos	Delivery of Safe Care Advocacy AORN Modules Perioperative Safety: Patient Focus Patient and Family Education Age Specific policies Anesthesia/Intubation AORN Modules Anesthesia Medications and Solutions Assessment of patients AORN Modules Perioperative Assessment Perianesthesia Nursing Conscious Sedation (didactic only not including individual observations to be signed off during clinical rotations) OR count policy/procedure Video Prevention of Retained Surgical Items: Patients are Counting on You Population specific/ Diversity Video Care of the Pediatric Patient in Surgery: Neonatal Through Adolescence Care of the Older Adult in Surgery Electrosurgical safety Fire and Laser safety	40

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		AORN Modules Perioperative Safety: Introduction Use of Surgical Energy Medication safety (completion of medication safety quiz) Video Perioperative Medication Safety Practices Performance improvement Positioning of patients AORN Module Positioning the Surgical Patient Radiation safety Video Radiation Safety in Perioperative Practice Smoke evacuation Specimen/lab handing Video Management of Surgical Specimens Time out procedure	
4	Periop CNS/AORN Online Modules	Aseptic Technique Aseptic technique principles AORN Modules Preoperative Skin Antisepsis Scrubbing, Gowning and Gloving Sterile Technique The Perioperative Environment Surgical Draping Environmental responsibilities AORN Modules Environmental Sanitation and Terminal Cleaning Infection Control: verifying sterility developing a surgical conscience, opening supplies and delivery to the sterile field AORN Modules Hemostasis, Sponges and Drains Specimens Transmissible Infection Prevention	20
5	Periop CNS/AORN Online Modules	Equipment/Instrumentation/Supplies Basic Instrumentation AORN Module Perioperative Safety: Equipment Focus Basic OR equipment Care and Cleaning of instruments and equipment MIS equipment AORN Module Endoscopic and MIS Powered equipment Video Powered Surgical Instruments: Components of Safe Care and Handling Rotation in clean holding/workroom/preference cards	

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		Instrument processing/ Sterilization and Disinfection equipment (care and handling) AORN Modules Sterilization and Disinfection Surgical Instruments Tourniquets Video Pathophysiology and Risks of Pneumatic Tourniquet Use	
6 – 24	RNFA/ Trauma and GS Surgeons Periop CNS	Surgical Rotations Bariatric Cardiac ENT General GYN/OB Neurosurgery Ophthalmology Ortho Pain Pediatrics Plastics Podiatry Urology Vascular Completion of AORN Perioperative Final Exam	130

*Total Didactic Hours New NP Employee: 106
Total Didactic Hours Existing NP: 90
Total Internship Hours: 130
AORN Perioperative Orientation Resources, 2016

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Appendix H

SWOT Analysis

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Appendix I

Budget

2017 Trauma RNFA Orientation Start-Up Budget
Napa Solano Service Area

TRAUMA Svc Cost Center				
Actual				
Expenses				
Fund	**Description**	**FTE**	**Reg Amount/hr**	**Total Amount**
Other Providers				
Physician Assistant	6 weeks OR orientation	3.00	$ 79.96	$ 57,571.20
Surgical Assistant	2 days with each orientee	0.40	$ 46.00	$ 2,208.00
CNS Educator	Consultation	0.20	$ 80.00	$ 640.00
Director	Prep time	0.20	$ 93.00	$ 54,405.00
Manager	Prep/scheduling time	0.20	$ 82.00	$ 2,624.00
RNFA	Prep/skills orientation	1.00	$ 99.00	$ 71,280.00
Total				$ 188,728.20
Education Materials				
Education Tools	AORN Core Curriculum		$ 105.00	$ 105.00
	AORN Videos		$ 167.00	$ 1,837.00
Total				$ 1,942.00
Total		5.00	$ 751.96	**$ 190,670.20**
Return on Investment				
PA Option				
Fund	**Description**		**Average Hourly Amount**	**Total Amount**
MD Providers				
Surgeons	Annualized: OR time using a surgeon as a first assist			$ 898,573.00
Non-MD Providers				
Physician Assistant	Annualized: 3 PA's working as first assist		$ 79.96	$ 643,710.00
Cost Avoidance				$ 254,863.00
Investment Cost				$ 190,670.20
ROI				$ 0.25
ROI%				**25%**
NP Option				
Fund	**Description**			**Total Amount**
MD Providers				
Surgeons	Annualized: OR time using a surgeon as a first assist			$ 898,573.00
Non-MD Providers				
Nurse Practitioner	Annualized: 3 NP's working as first assist		$ 87.00	$ 858,532.00
Cost Avoidance				$ 40,041.00
Investment Cost				$ 190,670.20
Initial ROI				$ (150,629.20)
ROI after 1 year	Reduced by initial investment cost			0.04
ROI % after 1 year				**4.45%**

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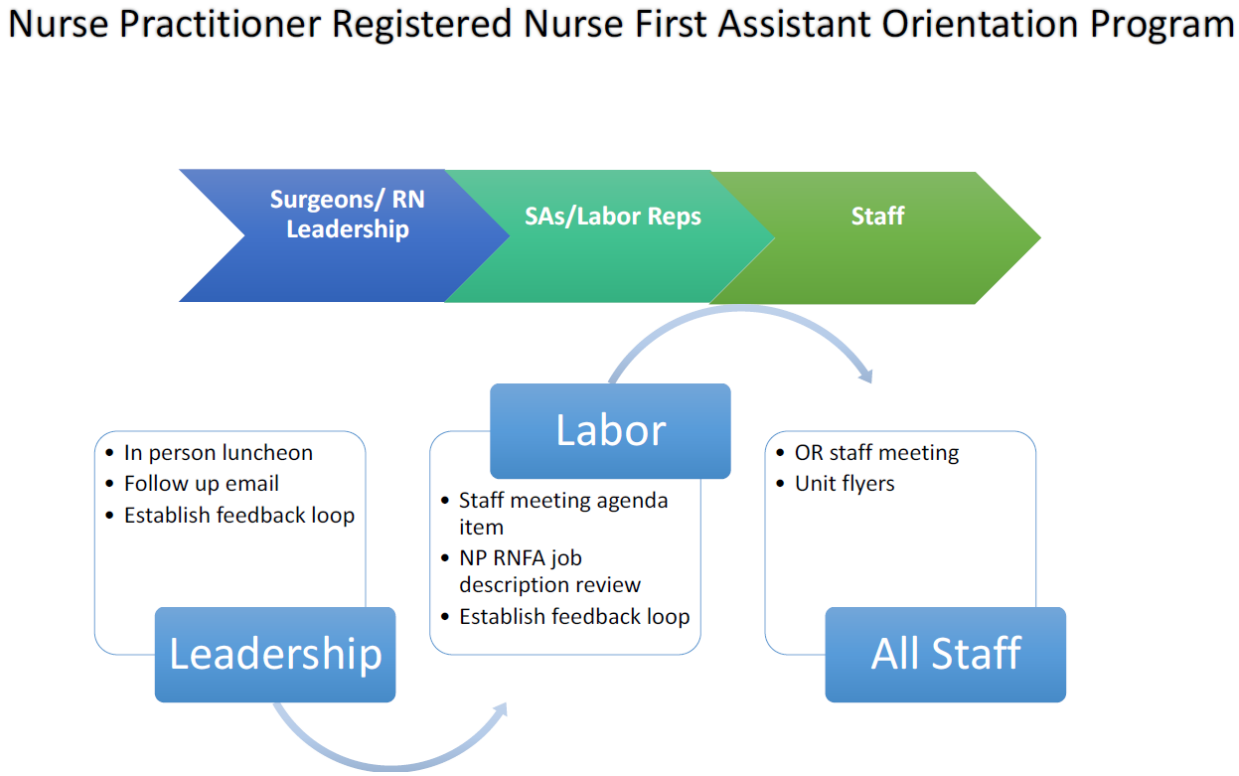
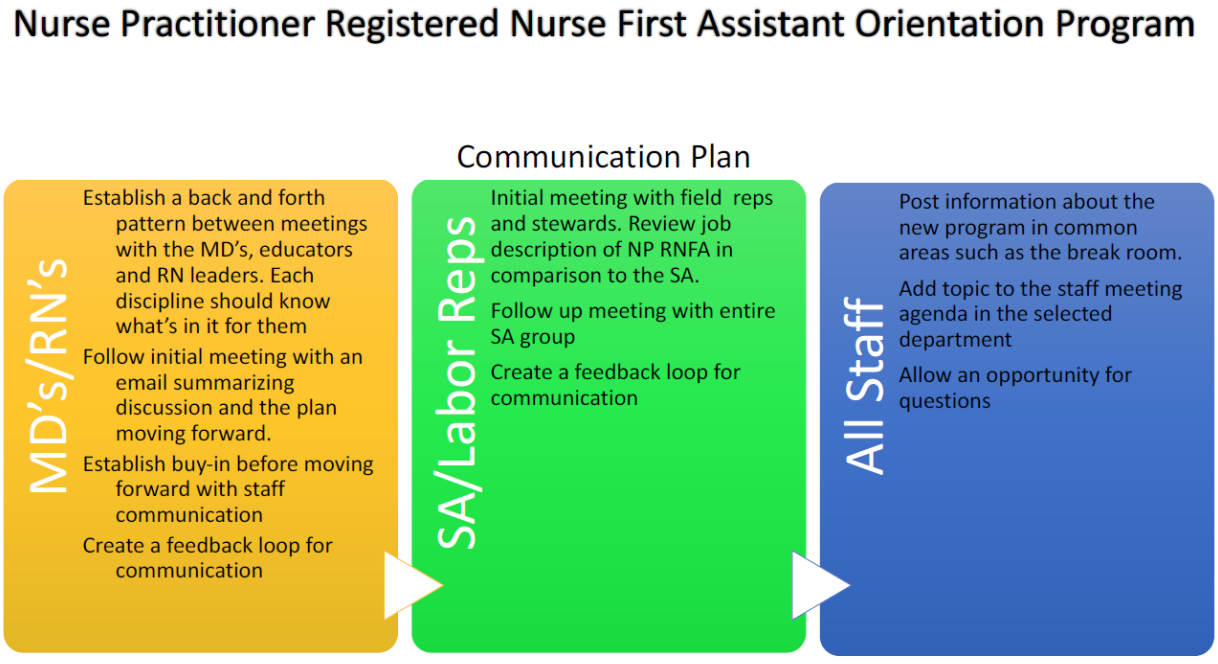
Appendix J

Communication Plan





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Appendix K

Gap Analysis

Current State	Future State	Action Plan
Existing PA has minimal to no OR knowledge and currently does not support any of the surgeons as a first assistant.	Hire APPs with OR knowledge/background. Provide a trauma APP as a first assistant on all trauma cases.	Develop an APP perioperative training program. All new APP hires will be oriented.
Currently trauma cases are being supported by any available surgeon or SA. Cases have been delayed due to lack of assistants.	Have a pool of APPs to assist trauma surgeons with their cases. Prevent future case delay by having trained APPs.	As SAs leave, replace with PAs for a select service line.
High volume of patients readmitted for trauma care including surgery from outside facilities; not enough resources to support the volume.	Up to 5 PAs with schedules that provide coverage 18-20 hours per day 6 days per week to assist with readmissions, surgery, and discharges.	Defend business case for additional resources. Currently, there are 3 PAs. The plan is to recruit 2 more if the readmission volume continues to increase.
OR training program in place for new RN OR staff, does not include staff from the medical group.	Develop a comprehensive perioperative first assistant training program for APPs.	Standardize OR training by implementing the developed perioperative training program for APPs across all specialty areas. All new APP hires will complete the training within 1 year of hire.
APP training for specialty departments unorganized and lacks structure.	Standardized onboarding orientation for all APPs.	Standardized orientation program will be disseminated to all surgical specialty departments.

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Appendix L

Nurse Practitioner RNFA Perioperative Self -Assessment and Evaluation Checklist

Name: _____ **Preceptor**: _____

Instructions: *Place a C and/or an S in each box to indicate level of proficiency in the circulating* (C) and scrub (S) roles. Rate your skills from 1 to 4 using the following scale.

1. No experience. You have never done the stated task/skill.
2. Minimal experience You have performed the task/skill infrequently.
3. Moderate experience You can perform the task/skill independently. with help of resource person.
4. Extensive experience You can perform the task/skill proficiently without assistance.

TASKS/SKILLS	1	2	3	4
Perioperative Patient Assessment				
Patient interview				
Develop nursing diagnosis and care plan				
Monitoring Ventilation, Circulation, Intake, Output, and Temperature				
Assist anesthesia professional during induction				
Application of cardiac monitor electrodes				
Application of antiembolitic compression units				
Sequential compression boots				
Ace wrap				

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TASKS/SKILLS	1	2	3	4
TED hose				
Defibrillator operation				
Interpret cardiac monitors				
Use of intra-aortic balloon pump				
Use of automatic blood pressure monitor				
Use of oxygen saturation monitor				
Administration of blood and blood products				
Urinary bladder catheterization				
Aseptic connection of drainage devices				
Monitoring patient under conscious sedation/local anesthetic				
Practice Aseptic Technique				
Proper surgical attire				
Surgical hand scrub				
Gowning and gloving				
Closed gloving – self				
Open gloving – self and others				

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TASKS/SKILLS	1	2	3	4
Creating and maintaining a sterile field				
Preoperative skin preparation				
Standard and universal precautions				
Decontaminating instructions				
Wrapping and packaging items for sterilization				
Verification of the sterilization process				
Handling Equipment				
Electrosurgical units				
Monopolar (indicate types)				
Bipolar				
Argon beam coagulator				
Microscopes				
Steam sterilizers				
Low temperature hydrogen peroxide gas plasma sterilizer				
Peracetic gas sterilizer				
Ethylene oxide gas sterilizer				

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TASKS/SKILLS	1	2	3	4
EKG monitor				
Lasers				
CO2				
KTP				
Argon				
YAG				
Others				
Laparoscopes				
Pneumatic tourniquet				
Powered surgical instruments				
Arthroscope				
Irrigation and aspiration units				
Occutome				
Vitrectomy unit				
Cell saver				
Hypo/Hyperthermia units				

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TASKS/SKILLS	1	2	3	4
Fiberoptic light sources and cords				
Chest drainage units (indicate types)				
Stereotactic units				
Sternal saw				
Fracture table				
Midas Rex				
OR beds				
Positioning devices (indicate types)				
Specialty table (indicate type)				
Gastrointestinal Surgical Procedures				
Appendectomy				
Bowel resection				
Colectomy				
Colostomy				
Sigmoid resection				
Low anterior resection				

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TASKS/SKILLS	1	2	3	4
Cholecystectomy (open)				
Colon interposition				
Esophageal resection				
Esophagoscopy				
Gastrectomy				
Gastroplasty				
Gastroscopy				
Hemorrhoidectomy				
Laparoscopic cholecystectomy				
Liver				
Biopsy				
Resection				
Transplantation				
Pancreatectomy				
Splenectomy				
Transthoracic hiatal herniorrhaphy				

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TASKS/SKILLS	1	2	3	4
Vagotomy/Pyloroplasty				
Genitourinary System Surgical Procedures				
Artificial urinary sphincter insertion				
Cystoscopy				
Cystectomy				
Cystotomy				
Hydrocelectomy				
Ileal loop				
Marshall Marchetti Krantz				
Nephrectomy				
Penile prosthesis insertion				
Rigid				
Flexible				
Inflatable				
Prostatectomy				
Perineal				

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TASKS/SKILLS	1	2	3	4
Suprapubic				
Transurethral resection				
RAZ procedure				
Renal procurement				
Cadaver donor				
Homograft				
Ureterolithotomy				
Reproductive System Surgical Procedures				
Abdominal hysterectomy				
Anterior/Posterior repair				
Augmentation mammoplasty				
Breast biopsy				
Breast reconstruction				
Latissimus flap				
Rectus abdominis				
D & C				

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TASKS/SKILLS	1	2	3	4
Laser laparoscopy				
Mastectomy				
Microscopic tubal reanastomosis				
Pelvic exenteration				
Peritoneoscopy/Laparoscopy				
Reduction mammoplasty				
Tubal irrigation, microscopic				
Tubal ligation				
Vaginal hysterectomy				
Vasectomy				
Vas reanastomosis, microscopic				
Vaginal sling				
Cardiovascular System Surgical Procedures				
Coronary artery bypass graft				
Mitral valve replacement				
Aortic valve replacement				

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Atrial septal defect (adult) repair				
Atrial septal defect (peds) repair				
Heart recovery (procurement)				
Heart transplantation				
Heart/lung transplantation				
Insert left ventricular assist device				
PDA (infant patient ductus arteriosus)				
Respiratory System Surgical Procedures				
Bronchoscopy				
First rib resection				
Laryngoscopy				
Mediastinscopy				
Pericardial window				
Pneumonectomy				
Thoracotomy				
Tracheotomy				
Lung resection				

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TASKS/SKILLS	1	2	3	4
Peripheral Vascular System Surgical Procedures				
Abdominal aortic aneurysm (AAA) repair				
Aorta-femoral bypass				
Axillary-femoral bypass				
Carotid endarterectomy				
Embolectomy				
Femoral-popliteal bypass graft				
Insertion vena caval filter				
Saphenous vein ligation/stripping				
AAA repair using stent graft				
Neurological System Surgical Procedures				
Burr holes				
Subdural hematoma				
Shunt insertion				
Craniotomy				
Aneurysm				

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TASKS/SKILLS	1	2	3	4
Tumor				
A-V malformation				
Anterior cervical fusion				
Postcervical fusion				
Laminectomy				
Cervical				
Lumbar				
Thoracic				
Percutaneous rhizotomy				
Stereotactic procedures				
Transphenoida hypophysectomy				
Ventriculo-peritoneal shunt insertion				
Sensory System Surgical Procedures				
Acoustic neuroma excision				
Blepharoplasty				
Cataract extraction				

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TASKS/SKILLS	1	2	3	4
Corneal transplant				
Enucleation				
Facial nerve decompression				
Glomus tumor excision				
Intraocular lens implant				
Labyrinthectomy				
Mastoidectomy				
Myringotomy with ear tube insertion				
Rhytidectomy				
Scleral buckle				
Stapedectomy				
Strabismus repair				
Tonsillectomy and adenoidectomy				
Tear duct exploration				
Tympanoplasty				
Vitrectomy				

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TASKS/SKILLS	1	2	3	4
Musculoskeletal System Procedures/Equipment				
Amputation				
Arthroscopy				
Ankle				
Elbow				
Knee				
Shoulder				
Bunionectomy				
Carpal tunnel release				
Closed reduction nasal fracture				
Compression hip nailing				
External fixation devices				
Fred Thompson prosthesis				
Harrington rod insertion				
Hip reconstruction				
With cement				

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TASKS/SKILLS	1	2	3	4
Without cement				
Intermedullary nailing				
Jewitt hip nailing				
Knee reconstruction				
Knowles pins insertion				
Ligament reconstruction				
Mandibular osteotomy				
Maxillary osteotomy				
ORIF of fractures				
Shoulder reconstruction				
Silastic implants				
Skeletal traction				
Tendon repair				
Tibial osteotomy				
Zygomatic fracture				

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TASKS/SKILLS	1	2	3	4
Endocrine/Lymphatic System Surgical Procedures				
Adrenalectomy				
Axillary node dissection				
Parathyroidectomy				
Radical neck dissection				
Staging laparotomy				
Thyroidectomy				

Preceptor Signature: _____ **Date:**_____

Employee Signature: _____ **Date:**_____

Competent: Yes/No

Areas where further instruction is needed:

_____
_____
_____

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