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Improving Communication Competency in Perioperative Nurse Managers

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Improving Communication Competency in Perioperative Nurse Managers

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I dedicate this degree to my parents, Margaret and Joseph Whelan, who always stressed the importance of life-long learning and encouraged me to “do my best”. They are smiling down on me and I know they are proud of this accomplishment. To my husband Greg, I have to say I couldn’t have done this without you. You provided love and support, never let me get too discouraged and were a darn good editor. Thank you also to my friends, especially Cohort 6, who were there for me throughout the process. A very special thank you goes to Dr. Marjorie Barter, my committee chair and advisor, who provided encouragement and support always, but especially when the path got rocky. Finally, thanks to Dr. KT Waxman for agreeing to complete my committee even when she was on sabbatical. Without all of you, this work would not have been possible.

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Abstract

Aim: This paper outlines the project planning, implementation and evaluation of a project aimed at improving the communication competency of perioperative nurse managers. Leadership development consisted of providing education and simulation practice to managers of the operating room (OR), pre and post anesthesia recovery (PACU) area and sterile processing (SPD). The goal was to improve the OR turnover time, cost per OR hour, patient access and the perception of the participants in their ability and willingness to speak up.

Background: The literature shows that training is needed to improve the ability of teams to understand the factors influencing the ability and willingness to voice concerns (Jones & Durbridge, 2016). Successful managers are able to provide an environment of open communication (Garon, 2012), and to leverage several factors to encourage speaking up among their staff (Nembhard, Labao, & Savage, 2015). The perioperative departments went through dramatic leadership change which afforded the opportunity to develop the perioperative leaders.

Methods: The evidence-based interventions for this project were twofold. After an assessment of the learning needs of the group was completed, education was provided over a period of six months. The leaders were then given the opportunity to practice their new knowledge and skills in a low stress environment using low fidelity simulation scenarios.

Results: Improvement was noted in all of the variables measured with the greatest increase in patient access and leaders' perception of their ability and willingness to speak up.

Conclusion: This project demonstrated that the perioperative management team's (PMT) efforts have a positive influence on outcomes and their leadership makes a difference.

Keywords: communication, experiential learning theory, gravitas, influence, low fidelity simulation, safety, speak up

Section II. Introduction

Problem Description

The 2010 Affordable Care Act has changed the course of healthcare. Focus is placed on prevention through primary care availability and delivering care cost effectively. The need to balance quality, safety, and efficiency is paramount and especially true in perioperative services. Since teamwork and communication are often cited in the literature as keys to success, education and use of simulation scenarios for the development of the perioperative management team (PMT) is the intent of this Doctor of Nursing Practice (DNP) project. The PMT, for purposes of this project, consists of the operating room (OR), preoperative and post anesthesia recovery (PACU) nurse managers (NM) and assistant nurse managers (ANM), as well as the sterile processing department (SPD) manager and assistant managers. The goal is to enable the PMT to improve communication competencies to appropriately influence, speak up and demonstrate gravitas. New managers and management teams are often overwhelmed with the complexity of operations. The manager development was undertaken in a medium sized hospital of a 21-bed hospital system in Northern California. Perioperative services are composed of 10 ORs, a 45-bay PACU which provides pre-and post-procedure patient care for the ORs as well as the interventional radiology, cardiac catheterization, and GI departments and SPD which provides sterile instruments and equipment to the OR as well as sterilization and equipment cleaning services to all medical offices, procedure areas, and patient care units. The management staff for perioperative services consists of nine employees. In 2016-2017 there was a 55% turnover rate. Thirty three percent (33%) of the managers are new to the system and 78% of the group has less than 5 years management experience. This DNP project will provide a framework aimed at developing, improving and evaluating management team communication.

Managing in the perioperative environment, with continuous advances in surgical technique, technology, instrumentation and patient protocols requires entry level perioperative management to develop complex leadership skills quickly. Teamwork is a cornerstone of successful perioperative services. Multiple disciplines must work in sync to produce optimal results. Surgeons, anesthesiologists, registered nurses, surgical, anesthesia and radiology technicians, and environmental services personnel are among the staff needed to provide the inter-operative portion of the service. Scheduling patients, preoperative and post anesthesia care as well as providing appropriately processed instruments, equipment and supplies are also required to complete the patients' experience. More often than not, the PMT is called upon to lead the effort of coordinating the various elements needed to provide surgical services safely and efficiently. How do managers develop and improve the knowledge, skill and ability to provide the necessary leadership to engender a culture of safety while maintaining the effective and efficient operation of their departments?

Hospital leadership has identified the need for a refresh of the perioperative governance structure, so all members will understand and utilize reliable and valid data for business intelligence and decision making. Turnover time, patient access, cost per OR hour, and PMT's perception of ability to speak up will be included in the primary outcome measures of the project. Reduction in variation and improved standardization among the two hospitals and ambulatory surgery center in the Diablo Service Area (DSA) is a secondary outcome measure of the structure redesign and will be outside the scope of DNP student timeline. In addition, the managers need to be able to utilize the electronic medical record, support the World Class Hospital Initiative (safe affordable quality care and outstanding care experience) and ensure their units are compliant with the California Code of Regulations, Title 22, the Joint Commission

requirements relating to perioperative services as well as the California Nurses' Association (CNA) collective bargaining agreement (CBA). Besides functioning in a new governance structure and dealing with the complex operations of perioperative units, the managers must contend with a labor environment that is somewhat contentious.

The PMT, although composed of high quality members, is new to working together. Over the past five years there have been three previous directors with this writer being the fourth during that period. The management and oversight of the perioperative units has been influenced by many stakeholders including medical leadership, hospital senior leadership as well as informal staff leaders. The time has come to coordinate the leadership of perioperative services to provide consistent direction and oversight, which will result in improved patient outcomes and staff satisfaction.

Available Knowledge

To be effective, the PMT must be able to communicate effectively with a wide variety of disciplines and produce a cohesive team. The PMT members must be able to influence the discussion by speaking up when appropriate and exhibiting gravitas. Gravitas is defined in the Cambridge English Dictionary (n.d.) as "seriousness and importance of manner, causing feelings of respect and trust in others." Bates (2013) defined gravitas as executive presence with the three dimensions of style, substance and character. The PMT sets the tone for the culture of safety in perioperative services. A positive safety culture has been shown to lead to fewer adverse events (Jones & Durbridge, 2016) and a healthy OR workplace (Parsons & Newcomb, 2007).

The purpose of this project is to answer the PICOT question: (P) In perioperative managers, (I) does providing leadership development using education and evidence-based simulation scenarios (O) improve OR turnover time, patient access, cost per OR hour, and

PMT's perception of ability to speak up (T) over a period of three months? A review of the literature (see Appendix A) was conducted through a search of the CINAHL, Joanna Briggs Institute EBP Database, Scopus and Fusion databases using the terms communication, experiential learning theory, gravitas, influence, low fidelity simulation, safety, and speak up in various combinations. The filters used were academic journals and English language between the years 2011 and 2018. The search yielded 443 articles from which 10 articles were selected and analyzed for strength and quality of evidence using the Johns Hopkins nursing evidence-based practice rating scale (Dearholt & Dang, 2012).

Jones and Durbridge (2016) stressed the importance of team culture in shaping behaviors such as speaking up and postulated that the reluctance to speak up is often related to fear of repercussions and the desire to "fit in" as part of the team. The ability to have open communications especially related to errors and mistakes is crucial to providing the learning culture necessary to keep patients safe. Factors that affect the team's ability to speak up include culture, power dynamics and degree of perceived psychological safety. Silence is not always a passive process but may be a defensive strategy.

In a 2009 multi-site retrospective study of 700 'silences' between surgeons and scrub nurses, Gardezi et al., identified three types of recurring silences. The original aim of the study was to assess whether a preoperative team briefing was an effective communication strategy in the OR. The findings revealed that various types of silence were among the most prevalent forms of inter-professional communication used. The three forms of silences identified were absence of communication, not responding to queries or requests and speaking quietly, none of which were solely attributed to perceived lack of power. Gardezi et al. concluded that interpersonal

communication was more nuanced than actual verbal speech and professionals need to be able to interpret the multitude communication modalities involved in the perioperative setting.

The perception of psychological safety in the PMT will inform the safety culture in perioperative services. Psychological safety, the belief that it is safe to speak up in spite of any perceived risks or consequences that may result, must be provided (Edmondson, 2004). Edmondson identifies lack of psychological safety for speaking up about small, ambiguous issues that cause potential concern along with a work environment that focuses on production pressure and worker independence as two factors that hinder learning from failure. The ability of nurses to manage work process problems can have a negative impact on preventing and learning from failure. The ability to provide first order problem solving (93% of time) along with the large number of process problems managers and staff must deal with (15% of work hours), hinders identifying solutions and improving the system. Three barriers to second order problem solving and organizational learning were identified. The emphasis on individual vigilance causes nurses to solve problems in the moment without looking for the root cause. The focus on efficiency also inhibits taking time to understand root causes and system design flaws. Finally, the desire to empower the work force can lead to limited management oversight leaving nurses to deal with problems they have no control over. A learning environment and team-based structure is necessary to provide psychological safety and freedom to learn from failure.

Morrow, Gustavson and Jones (2016), in a meta-synthesis of qualitative research studies identified four main themes: “1) hierarchies and power dynamics negatively affect safety voice, 2) open communication is perceived as unsafe and /or ineffective, 3) embedded expectations of ‘nurse’ behavior affects safety voice, and 4) nurse managers have a powerful positive or negative affect on utilization of safety voice” (p. 43). Leaders must first examine their feelings related to

safety voice and ultimately identify strategies to effectively support workers, role model appropriate behaviors and set expectations that provide an appropriate environment for psychological safety.

Nembhard, Labao and Savage (2015) conducted a qualitative study through 99 interviews from health professionals working in 12 randomly sampled hospitals in the United States. The hospitals were selected from the over 1000 international hospitals participating in the Door-to-Balloon Alliance, an EBP project intended to reduce delays in treatment to patients presenting with myocardial infarctions. The purpose of the study was to examine the drivers that influence voice or speaking up in health professionals. Individual, work configuration, organizational context and culture, as well as performance data and external environment are the factors influencing the voice of health professionals. These factors establish the professional's sense of safety, efficacy, opportunity, legitimacy and willingness to speak up related to the perceived risks and benefits. Through the management of a multitude of factors, leaders have the ability to leverage several factors including work design and organizational culture to encourage speaking up among their teams.

A qualitative study by Garon (2012) supports the contention that the manager is important in providing a culture of open communication allowing the staff to speak up and be heard. Through focused interviews of RN staff and managers, Garon identified three categories impacting the nurses' perception of their ability to speak up and be heard. The first category, influences on speaking up, included personal and organizational culture. Message delivery, both transmission and reception, as well as the outcomes of speaking up were also categories integral to allow the RNs to speak up and be heard. Successful managers create an environment of open

communication without blame or criticism, provide timely feedback and reward and recognize staff who speak up.

Stanley (2009) contends that leaders are identified and recognized because of how they act and what they stand for. Influential leaders are visible, approachable and open, effective communicators, empowered decision makers and clinically knowledgeable and competent. In addition, influential leaders display their values and beliefs and hold fast to their guiding principles. In a qualitative study, aimed at identifying the significance of leadership theory in the development of clinical leaders in the OR, Stanley found that congruent leadership theory provides a useful model on which to base leadership development.

Pollard and Wild (2014), after a review of the literature from 2010-2014 conducted a qualitative study and identified that the problems in leadership development training stem from the practice gap between training and practice. The need for leaders to be able to assert their opinion in a way that can be understood by all team members, combined with a focus on quality and access for the patient can be a challenge based on the individual and organizational behavior patterns. The purpose of this qualitative study was to determine whether leadership and fellowship simulation exercises, including feedback and debriefing, could improve situational awareness and team communication skills. Nine hours of low-fidelity leadership and fellowship simulation exercises were included in a 45-hour classroom program for senior BSN students. Pollard and Wild (2014) concluded that adding the andragogic strategies of simulation and debriefing to the program, increased the satisfaction with the program and ability of student to identify how the leadership skills could be used in future clinical situations and as part of a nursing career.

Komasawa and Berg (2016) proposed a conceptual framework for effective inter-professional PMT development involving simulation training. The simulation scenarios should represent realistic situations that are useable and relevant to the entire team participating in the training. Effective feedback and debriefing are essential components of the training and allow for retention of learning through guided reflection and exposure to both excellent performance as well as errors.

The literature review highlights the complexity of communication competency as well the importance of developing a culture of psychological safety, positive management influence, gravitas and speaking up. In order for the PMT to provide an environment where staff feel empowered and confident, the PMT must acquire and role model appropriate knowledge, skill and abilities.

Rationale

Knowles Adult Learning Theory and Kolb's Theory of Experiential Learning provide the conceptual framework for this project. Knowles identified 5 assumptions of adult learners that differentiated them from child learners. The mature adult learns best when consideration is given to (a) self-concept development towards self-direction, (b) accumulated experience as a resource for learning, (c) readiness to learn is oriented to the tasks related to social roles, (d) orientation to learning is problem centered and (e) the internal motivation to learn (Papas, 2013, Knowles 1984). The 4 principles of andragogy according to Knowles include:

1. "Adults need to be involved in the planning and evaluation of their instruction.
2. Experience (including mistakes) provides the basis for the learning activities.
3. Adults are most interested in learning subjects that have immediate relevance and impact to their job or personal life.

4. Adult learning is problem-centered rather than content-oriented” (Papass, 2013, p. 1).

Clapper (2010) presented a review of literature expanding on Knowles’ adult learning theory by providing additional learning theories to be considered when offering leadership development using simulation and how they relate to the motivational factors that make adults want to learn. The review includes theories that support creating an environment for adult learners that allows for lifelong learning. Over the years since adult learning theory was first introduced, several theories have brought the understanding that the increase in responsibilities and workloads, the emotional aspects of being involved in simulation training, the use of debriefing, and reflection on action must be contemplated (Clapper, 2010).

Kolb’s Theory of Experiential Learning also provides context for this project. Kolb identified four elements in his model for learning. The four components include the need for abstract conceptualization, active experimentation, concrete experience and reflective observation (Chmil, Turk, Adamson & Larew, 2015). The adult learner must be aware of the elements and understand that learning is a continuous process and knowledge is gained by integrating experience into existing cognitive frameworks (Lisko & O’Dell, 2010).

Specific Aim

The AIM statement for the DNP project is to improve the perioperative patient experience by decreasing room turnover time 5%, improving patient access 10%, decreasing the cost per OR hour by 5%, and increasing the PMT’s perception of ability to speak up, as measured by a 2-point increase on selected questions from the speaking up index of the People Pulse staff satisfaction survey, by May 31, 2018. The PMT will complete identified education and participate in simulation scenarios, as part of the leadership development. The scenarios will

be based on realistic situations requiring the demonstration of leadership competencies and behaviors related to influence, gravitas and speaking up.

Section III. Methods

Context

The key stakeholders in any perioperative department are the hospital and medical staff leadership, the unit managers and the medical and frontline staff. Although the stakeholders all have the common characteristics and concerns related to positive patient outcomes, satisfied patients and staff as well as meeting regulatory compliance (see Appendix B), the focus of each group is somewhat divergent. The executives have a greater focus on financial performance, while the managers focus much of their energy on resource allocation. The frontline and medical staff focus on their workload and how smoothly the workday flows (see Appendix C). All stakeholders involved are aware of the needed changes in the communication of the frontline managers and indicate the need for increased oversight of the perioperative services operations.

The local care environment provides many positive elements likely to influence change and improvement. The senior leadership developed and implemented GPS Navigation, a program based on lean methodology as the pathway to identify and solve problems. Strong support for change and improvement initiatives is evident, with senior leader and medical leadership participation in initiatives which include all levels of the organization. Frontline staff participation is a cornerstone of the GPS program with the understanding that frontline staff are one of the key components of success. Care environment elements identified and characterized as opportunities for improvement included the need for stronger middle management leadership in the perioperative environment as well as a better understanding of standard work. Oversight

and direction were not clear to the PMT or the frontline staff with many parties providing sometimes conflicting guidance and recommendations.

As the patient care director for perioperative services, this writer has been designated project manager to lead the development of the PMT. The DNP statement of non-research determination form is included in Appendix D and the letter of support from the setting in Appendix E. The Chief Nurse Executive (CNE) has indicated full support for the improvement project and will provide feedback to the project manager during the project. Metrics such as turnover time and patient access are measured and a decrease of 5% in turnover time and an increase of 10% in patient access is expected by senior leadership over the next several months.

Interventions

The development of the interventions to improve communication competency for the PMT required a multipronged approach. A work breakdown structure (WBS) was used to divide the project into three phases, planning, implementation and evaluation. The high-level work breakdown structure is outlined in Appendix F. Interventions were focused first on providing appropriate education to the PMT as a foundation for effective communication. The second intervention, conducting low fidelity simulations developed using the California Simulation Alliance template was intended to help the PMT hone their knowledge, skills and abilities in a low stress environment. The plan was to complete the simulations and debriefings with the entire PMT when possible. Smaller groups would be used for simulations not applicable to the entire team.

GANTT.

The Gantt Chart in Appendix G delineates the timeline and critical milestones for completion of the project. The planning phase included obtaining support to conduct the project

from the CNE, reviewing and selecting communication competencies and developing a post intervention questionnaire to measure the competency improvement in the PMT. Implementation was projected to take six months and included confirming participants and administering the leadership education and simulation scenarios. After selecting the efficiency metrics, data collection for pre and post intervention was planned for the evaluation phase. Project completion included reporting metrics to the PCS leadership and developing and delivering the final DNP presentation.

SWOT analysis.

To identify interventions to improve communication competency in the PMT, a SWOT analysis was conducted of the baseline perioperative situation (see Appendix H). All PMT positions were filled with well-educated managers. Strong support for leader development already existed in the organization. A performance improvement methodology, GPS navigation, has been in effect for over a year and is being spread throughout the organization. The opportunity for the PMT to participate in a 24-hour GPS navigation training session was identified as the first educational activity for the project. Based on the tenants of Adult Learning Theory, the PMT, along with perioperative medical leadership, were scheduled to participate in the same training group to provide an environment that was problem oriented and relevant and to provide an opportunity for the new leaders, PMT and medical, to get to know each other.

Identified weaknesses centered around the short time the PMT had worked together and the limited management experience of several of the members, leading to a lack of understanding of the necessary management competencies and span of control. Fortunately, a new perioperative governance structure had been identified but not implemented allowing the PMT to participate in its evolution. Several threats were identified and included dependence on the collaboration and

cooperation of the medical staff to the success of the governance structure, potential dissatisfaction of any member of the PMT could cause a manager to select another position and a potential labor disruption related to contract negotiations was pending. Formalizing succession planning through participation in the organization talent calibration was an opportunity to offset the threat of managers leaving and would also inform discussions with the PMT related to job expectations and growth.

Planning.

Planning consisted of a review of the current job descriptions and competency expectations around communication of the PMT. No formal communication competency was available for the PMT positions so a review of the American Organization of Nurse Executives (AONE, 2015) nurse manager competencies was completed and competency elements supporting the job descriptions were identified. AONE Competencies were used to provide a foundation for the education and simulation development. The expectation that with the proper preparation, the PMT would be able to exhibit appropriate gravitas, influence and be feel comfortable speaking up.

Low fidelity simulation scenarios depicting real life situations were developed using the CSA scenario template to allow the PMT to practice dealing with situations requiring gravitas, influence and speaking up. The simulations were focused on the competency to be developed and kept at the low fidelity range to allow the participants to understand the competency being simulated without the distraction of extraneous factors that often are part of actual management communication (Munshi, Lababidi, & Alyousef, 2015, Simstaff, 2016). Four scenarios mimicked real situations in which the PMT are expected to participate, including the biweekly operational budget review with senior leadership including the area finance leader and CNE, meeting with

union leader to resolve a grievance, discussion with staff member related to an attendance issue and staff meeting to enforce the surgical attire policy. The CSA scenario template was used for the debriefings

The PMT results from the People Pulse (staff satisfaction) survey, specifically selected questions from the speaking up index, was used as the pre-intervention baseline related to the PMT's feelings of psychological safety and ability to influence and speak up (see Appendix I).

Gap analysis.

A gap analysis was conducted related to the knowledge, skills and abilities of the PMT. Through the staff satisfaction survey, the PMT indicated that their data needs are not being met. In addition, they expressed the need for greater support from their colleagues to accomplish their work and did not feel respected by those they work with. Understanding of the job expectations and competencies for each member of the PMT is necessary but it was clear that the PMT did not have a true understanding of their accountabilities and identified that the work processes on their units were not efficient. The risk matrix in Appendix J identifies the potential outcomes, including efficiency metrics not being met, increased costs related to lack of knowledge and oversight as well as adverse patient outcomes, if the situation is not rectified.

Implementation.

Management education was conducted in various topics including the four-day GPS Navigation (LEAN methodology) training to provide the PMT with the knowledge and tools needed to participate in performance improvement in the DSA. Additional education topics included financial fundamentals, goal setting, functioning in the union environment, patient care experience, and regulatory requirements for perioperative services. A combination of leadership meeting lectures, discussions and classroom learning, as well as individual instruction and

feedback was used to conduct the education. A list of the education conducted for the PMT group is in Appendix K.

PMT members participated in low fidelity simulations related to demonstrating influence, gravitas and speaking up (see Appendix K). Implementation of each simulation was conducted to reinforce the knowledge gained and demonstrate how the knowledge can be utilized in real situations to further goals and objectives. Debriefing and feedback, with the PMT, occurred after each simulation and during weekly team meetings to provide the opportunity to identify best practice as well as opportunities for improvement.

The planning and implementation was completed over a six-month period with formative evaluations including appropriateness and relevance of the scenarios to the perioperative leadership environment occurring for the three months following scenario participation and debriefing. A summative evaluation was conducted at the conclusion of the debriefing to evaluate the PMT's perception of skill acquisition related to their ability to perform in high pressure leadership situations.

Financial considerations.

There were few cost constraints as this project was conducted during paid time for the PMT members. The salary costs for the education of the participants constituted the major expense for the project at \$16,800 (see Appendix L). In addition, a differential of 5% was paid to two staff nurses to assume the charge role for each of the GPS navigation training days adding an additional \$192.00. The cost of the instructors for the 24-hour GPS navigation course, as well as, the additional 10 hours of instruction was \$5380.00. Lunch was provided to the PMT for five leadership meetings where education was provided as well as for all three days of the GPS navigation training for a total food cost of \$990.00. The total cost of the program was \$23,392.

The costs of the project were more than offset by the results in the cost per OR hour analysis. Although the cost per OR hour remained the same from 2017 to 2018, the salary increases for staff and managers in all departments was estimated to be 4 % resulting in a \$66.00 reduction in the payroll cost per OR hour. The OR averages about 16,000 case hours a year, resulting in an annual savings of \$1,056,000. If only half this savings is attributed to the DNP project after considering other initiatives which may influence the cost per OR hour, the cost avoidance is \$528,000. When the project expenses of \$23,492 are deducted, the total cost avoidance is \$504,508 (see Appendix M).

Responsibility/ Communication Matrix.

The responsibility/communication matrix (see Appendix N) followed the new perioperative governance structure with two goals in mind. First, the matrix assured that appropriate stakeholders were aware of the project outcomes and second, since the structure is new, it allowed the PMT to become familiar and understand the expected lines of communication and responsibility. The structure encompasses oversight for two hospitals with a combined executive team including the Area Manager, Chief Operating Officers (COO), Chief Financial Officers (CFO) and the CNEs from each of the two hospitals included in the area. The Peri-Op Executive Team (POET) reports to the Executive team and has oversight of all perioperative operations in both facilities. On the medical leadership side, the OR committees, report to the Performance Improvements (PI) committees and up to the Medical Executive committees. The managers of all PMT departments are members of the OR committees and along with their medical leadership counterparts they provide an interdisciplinary council to improve patient outcomes. Three new committees were formed to deal with the operational issues and work. Two work teams (WT), one from each hospital, are convened with the purpose

of addressing issues identified by committee members and front-line staff related to methods, equipment, supplies and staffing. The WTs identify and develop best practices and standard work, ensure effective OR utilization, monitor key metrics and prioritize and ameliorate risks. All members of the PMT are either standing or ad hoc members of the WTs. The final committee, the Block Committee, was designed to develop rules for allocating surgical blocks and agreeing on metrics for efficient block use. Putting the PMT on these committees allows for effective communication among the entire perioperative team.

Study of the Intervention

The approach chosen to study the impact of the interventions was three-fold. First, existing metrics related to OR turnover time, patient access and cost per OR hour were compared for three months after the interventions to the same three-month period of the prior year. The increased knowledge, especially related to performance improvement methodology and understanding of the basic responsibilities and accountabilities of the PMT, should result in an improvement in the various units' efficiency. The second approach was to measure the PMT's perception of their ability and willingness to speak up and understand their influence and gravitas through comparison of selected questions from the staff satisfaction survey pre and post implementation. Finally, discussions with the PMT members regarding their self-assessment of the impact of the education and simulations as well as observations of their performance and behavior indicated the interventions were a positive influence on the outcomes.

Measures

The organizational climate set the context for this DNP project and contributed to the mostly positive results. Strong senior and medical leadership support as well as clear expectations set for the PMT provided guidance for the interventions and the measures.

The efficiency metrics of turnover time and patient access were retrieved from the regional quality and operations support website and cost per OR hour, from the area business strategy and finance website. The data were measured for the time period March through May of 2017 and compared to the same months in 2018 to reduce variation related to factors such as seasonality. Appendix O details the description and data sources for the variables as well as the expected improvement and timeframe for collection.

Baseline data were collected prior to the implementation of the project. Turnover time was 27%, cost per OR hour was \$2,687 and four-week access was 72%. Appendix I provides baseline data related to the satisfaction survey. Questions 1, 4 and 5 were selected to measure the ability and willingness to speak up. Questions 2 and 6 were selected to measure influence and question 3 was intended to measure gravitas. The questions were taken from a nationally validated staff satisfaction survey (Linking employee survey, 2013).

Although the variables measure efficiency and the PMT's perspective, this writer did survey leaders, including the COO, the Financial Analyst assigned to perioperative services, the Associate Physician in Charge and the CNE, related to their perceptions of the validity of the variables as well as the performance of the PMT. All measures used were available prior to the project except for the post implementation questionnaire.

Analysis

Both qualitative and quantitative methods were used to draw inferences from the data. Efficiency variables, quantitative method, were used to ascertain if the education

had any effect on the performance of the PMT while the questionnaire represented a qualitative method based on the perceptions of the participants. The time frame for the data collection was selected to reduce variability by collecting data from the same months in two consecutive years. The PMT was composed of the same individuals for the entire project with no turnover of staff involved. The post implementation questionnaire was administered using Survey Monkey™ software. On questions 4 and 5, one participant was able to provide more than one answer to the questions. The least favorable answer was used in the data analysis.

Ethical considerations

This evidence-based project does not raise any ethical considerations and meets the criteria as non-research with no conflicts of interest identified. It supports the Jesuit values of promoting excellence through education and social responsibility (Tom, 2015) by encouraging the PMT to be true to their values. The PMT learned ways to provide an environment that encourages psychological and physical safety for staff and patients. The project also supports the ethical standards of the American Nurses Association (2015) by improving the PMT's relationships with colleagues and encouraging appropriate use of authority, accountability and responsibility of the PMT.

Section IV. Results

Results

The project interventions did not change significantly but the time line was delayed by about three months due to the fact that this writer was new to the organization. Time was needed to assess the departments and managers. Once the

initial assessment was completed, the timeline for education was extended for two months and additional topics were added.

OR turnover time percentage increased by 3.4% which was short of the 5% expected result. Organizational factors including new physician leadership in the physician OR director role as well as delays and eventual suspension of the turnover performance improvement project contributed to the lower than expected improvement. Although there was no significant change in the cost per OR hour, the result was not adjusted for inflation and salary increases which are estimated at 4%. Patient access showed the greatest improvement at 11%. This result stemmed from increased team activities, including weekly team meetings, daily case planning huddles involving all perioperative departments and a better understanding and knowledge by the PMT of the data and contributing factors to patient access (see Appendix P).

The results for the PMT's perception of improvement in skill and ability related to gravitas, influence and speaking up were mixed. Appendix Q details the variance pre and post interventions to the six questions designed to measure the three competencies (see Appendix R). The pre-intervention questionnaire was completed by eight of nine participants and the post intervention questionnaire by 100% of the participants. Questions 1, 4 and 5 which measured the ability and willingness to speak up were very positive, indicating the PMT were more inclined to speak up after the interventions. The organizational culture supported this increase through daily huddles often attended by hospital senior and medical leadership. The leaders provided positive reinforcement to disclose issues and concerns by responding with assistance in

removing barriers and supporting managers decisions. The weekly perioperative leadership meetings also provided an environment where problems, errors and potential improvements could be examined, supporting the work of Garon (20112) indicating that speaking up is more likely when there are positive outcomes. Questions 2 and 6, selected to measure influence showed mixed results with question 2 indicating improvement and question 6 showing a decline in the amount of influence the PMT members believe they have. Question 3 intended to measure gravitas showed negative results (see Appendix P).

Education staff on the GPS navigation early in the process provided an unexpected benefit in that it provided the PMT with a common language and process for identifying and solving problems. It also allowed the PMT to communicate with the senior and leadership in an organized and professional manner when describing issues and concerns as well as to describe the work being accomplished.

One failure which may have led to the mixed results in feelings of influence and gravitas by the PMT was the ability to complete all scenarios for the entire group. Two scenarios were completed in the leadership meeting with the entire team and two were completed with individuals and small groups which lead to a less robust debriefing. Komasa and Berg (2016) stressed the need for effective debriefing to make simulations most effective.

Section V. Discussion

Summary

The aim of this DNP project was to assess if the combination of leadership education and simulation scenarios focusing on the communication skills of gravitas, influence and

speaking up could improve the patient experience by decreasing turnover time and cost per OR hour and increasing patient access. The secondary aim was to ascertain if the PMT perceived an increase in their ability and willingness to speak up as a result of participation in the interventions. The results showed improvement in all three of the efficiency metrics as well as an increase in speaking up behavior by the PMT. The results related to increased feelings of gravitas and influence were less compelling leading to the need to review what additional education or simulation scenarios may be needed.

A combination of factors contributed to the successful changes achieved. The PMT has a better understanding of their roles and accountabilities. Leadership support was given to allow the PMT to set standard work and rules surrounding processes in their departments and establishing criteria to be used by all services provided equitable distribution of OR resources. Providing weekly team meetings for the PMT helped develop the connection needed between the departments to maximize efficiency and demonstrate that success could only be achieved by working as an effective team.

At this time, work will continue with the PMT and plans are in place to disseminate the work to the staff level. A needs analysis is in process and plans for a perioperative safety summit are in the works using education and simulations in all departments. The annual staff satisfaction survey is scheduled in the next quarter and will serve as a base line to the staff's feelings of gravitas, influence and speaking up. Efficiency metrics will continue to be measured and plans for additional metrics to be included are ongoing.

The implications for Advanced Nursing Practice are yet to be determined. Several of the PMT members are considering or perusing additional degrees including masters and

doctorates. The project supports the literature in providing education and simulation when developing managers and additional study will most likely show the same results for staff

Interpretation

The literature supports the combination of education and low fidelity simulation to improve communication competencies in perioperative leaders. Jones and Durbridge (2016) stress that training is important to improve the awareness in teams of the factors necessary to increase the ability and willingness of team members to speak up. Adult Learning Theory directs that the interventions contemplated are relevant and problem centered (Clapper, 2010). Setting an environment where there is open communication and the hierarchies and power dynamics are understood and non-threatening is essential to improving leadership communication (Morrow, Gustavson, & Jones, 2016). It will be important to provide the combination of education and simulation in leadership development. To achieve successful results, both modalities are needed, which can be forgotten in the fast-paced environment of perioperative operations.

Limitations

The barriers to implementation for this project were a short time frame for implementation and evaluation and competing priorities for the members of the PMT. Since development of the leadership team is already a responsibility of the project manager, the plan was to integrate the education for the team as well as the administration and debriefing of the simulation scenarios into the team's daily. Focusing the use of time currently designated for leadership team meetings and quality improvement activities on PMT development helped achieve this objective. To compensate for the competing priorities and stay true to the tenants of

Adult Learning Theory, the pre-learning and simulation exercises focused on real world problems and responsibilities.

Conclusions

In 2017, the PMT struggled with perioperative operations. The newness of the team and limited management experience, along with the multitude of priorities, did not provide an environment conducive to effective communication. The focus on the development of the PMT by the leadership of the organization, set the stage for their understanding of the effect they could have on staff, patients and medical providers. This project demonstrated that the PMT's efforts have a positive influence on outcomes and their leadership makes a difference.

Section VI. Other information

Funding

All costs of the project were those incurred by the organization. No external funding was obtained.

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Section VIII. Appendices

Appendix A

Literature Review Evaluation Table

Citation	Design/Method	Results	Findings	Appraisal: Strength/Quality
Jones, C., & Durbridge, M. (2016). Culture, silence and voice: The implications for patient safety in the operating theatre. <i>Journal of Perioperative Practice</i> , 26(12), 281–284.	Literature review	Psychological safety, communication, speaking up behavior and silence vs voice all influence team culture.	Training is needed to improve awareness in teams of the factors that influence the ability and willingness of members to voice concerns. There is limited evidence that simulation settings can be effectively used to provide training and coaching in speaking up behaviors.	V/B
Gardezi, F., Lingard, L., Espin, S., Whyte, S., Orser, B., & Baker, G. R. (2009). Silence, power and communication in the operating room. <i>Journal of Advanced Nursing</i> , 65(7), 1390-1399.	Retrospective study	Multisite observational study of inter-professional communication in the operating room. Unresolved and unarticulated issues identified and analyzed from a critical ethnography perspective	Three forms of recurring ‘silences’ identified: a) absence of communication, b) not responding, and c) speaking quietly. No single answer to why staff do not speak up. Silence must be explored in relation to power.	III/A
Edmondson, A. (2004). Learning from failure in health care: Frequent opportunities, pervasive barriers. <i>Quality & Safety in Health Care</i> , 13(Suppl 2), ii3–ii9.	Ethnographic study	Study of hospital nursing care in 9 sites with an emphasis on quality improvement. Hospitals were not learning from the errors and problems of workers despite an emphasis on root cause and systems analysis	Three barriers to second order problem solving and organizational learning identified: a) emphasis on individual vigilance, b) focus on efficiency and c) empowerment of the work force inhibit learning from errors	III/A
Morrow, K. J., Gustavson, A. M., & Jones, J. (2016). Speaking up behaviours (safety voices) of healthcare workers: A metasynthesis of qualitative research studies. <i>International Journal of Nursing Studies</i> , 64(Supplement C), 42–51.	Literature review/meta-synthesis	Four themes identified: “1) hierarchies and power dynamics negatively affect safety voice, 2) open communication is perceived as unsafe and /or ineffective, 3) embedded expectations of ‘nurse’ behavior affects safety voice, and 4) nurse managers have a powerful positive or negative affect on utilization of safety voice (p.43)”.	Nurses demonstrate hesitance to speak up and low self-efficacy related to safety voice. Caring leaders, peer support and positive organizational safety culture can improve nurses and healthcare workers willingness to speak up.	III/A
Nembhard, I. M., Labao, I., & Savage, S. (2015). Breaking the silence: Determinants of voice for quality improvement in hospitals. <i>Health Care</i>	Qualitative study using data from 99 interviews from 12 randomly sampled U.S. hospitals	Individual, work configuration, organizational context and culture, as well as performance data and external environment, are the factors influencing the voice of health professionals.	Leaders have the ability to leverage several factors including work design and organizational culture to encourage speaking up among their teams.	III/A

<i>Management Review</i> , 40(3), 225–236.				
Garon, M. (2012). Speaking up, being heard: Registered nurses' perceptions of workplace communication. <i>Journal of Nursing Management</i> , 20(3), 361–371.	Qualitative study using data from interviews of 33 RNs (staff and management) from healthcare settings in California. Thematic content analysis was used to analyze the data.	Three categories impacting the nurses' perception of their ability to speak up and be heard were identified: a) influences on speaking up, included personal and organizational culture, b) message delivery, both transmission and reception, and c) the outcomes of speaking up.	Successful managers create an environment of open communication without blame or criticism, provide timely feedback and reward and recognize staff who speak up.	III/B
Stanley, D. (2009). Leadership: Behind the mask. <i>ACORN</i> , 22(1), 14-20.	Literature review/qualitative study	Congruent leadership theory (match between leaders' actions and values about care) proposed as an appropriate theoretical framework to understand clinical leadership.	Focused education for clinical leaders should be based on developing skills and behaviors that encourage responding to challenges with actions congruent with their beliefs.	IV/B
Pollard, C. L., & Wild, C. (2014). Nursing leadership competencies: Low-fidelity simulation as a teaching strategy. <i>Nursing Education in Practice</i> 14(2014), 620-626.	Review of the literature between 2010 and 2014 focused on key terms team communication, leadership, followership, simulation, learning, safety, and inter-professional education. Qualitative study to determine whether leadership and followership simulation exercises including debriefing could be used to change the current pedagogical modality to a more andragogic strategy in a BSN senior leadership program to facilitate team communication and situational awareness.	The purpose of the qualitative study was to determine whether leadership and fellowship simulation exercises, including feedback and debriefing, could improve situational awareness and team communication skills.	After completing the course including simulation and debriefing, students could identify how the skills and attributes of leadership and followership could be used in practice as well as in their career.	III/A

<p>Komasawa, N., & Berg, B. W. (2016). Interprofessional simulation training for perioperative management team development and patient safety. <i>Journal of Perioperative Practice</i>, 26(11), 250–253.</p>	<p>Literature review</p>	<p>Proposed inter-professional simulation training framework for perioperative management team development</p>	<p>Simulation training is most effective when scenarios are relevant to the participants. Effective debriefing and feedback are essential for successful simulation-based training</p>	<p>IV/B</p>
<p>Clapper, T. C. (2010). Beyond Knowles: What those conducting simulation need to know about adult learning theory. <i>Clinical Simulation in Nursing</i>, 6(1), e7–e14.</p>	<p>Systematic review of the literature expanding from Knowles adult learning theory.</p>	<p>Discussion of learning theories starting with Knowles to enable understanding of how adults learn best. What conditions can be replicated in simulation settings to help adult learners understand, meet clinical and organizational objectives and become life-long learners.</p>	<p>Technology and information will rapidly increase Aging population will soon outnumber the young Increased numbers of adult learners entering the workforce One goal of educators should be to develop more self-directed life-long learners. When developing education programs, the increase in responsibilities and workloads of the learner, the emotional aspects of being involved in simulation training and the use of debriefing and reflection on action must be contemplated.</p>	<p>IV/B</p>

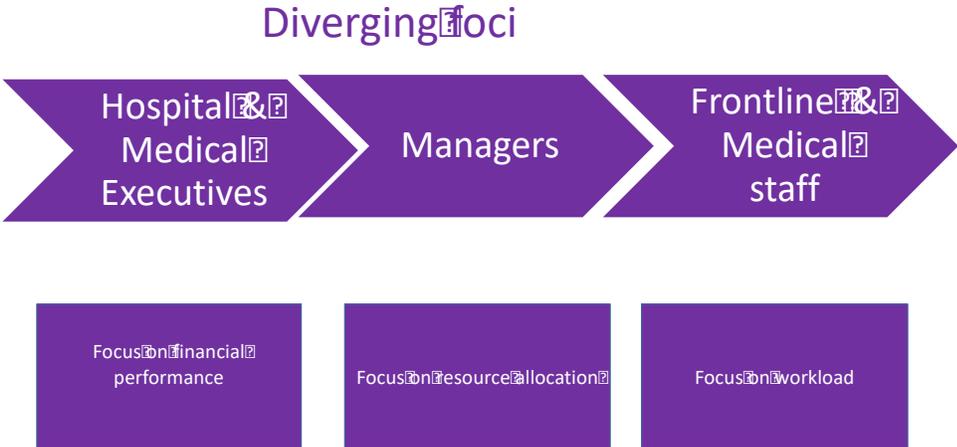
Appendix B

Stakeholder Common Characteristics

STAKEHOLDERS	Common Characteristics & Concerns
❖ Hospital & Medical Staff Executives	• Positive patient outcomes
❖ Managers	• Satisfied patients
❖ Frontline Staff	• Satisfied Staff
❖ Medical Staff	• Regulatory compliance

Appendix C

Stakeholder Divergent Foci



Appendix D

Statement of Non-Research Determination

**DNP Statement of Non-Research Determination Form****Student Name: Philomena Whelan****Title of Project:**

Improving Communication Competency in Perioperative Nurse Managers

Brief Description of Project:

The literature shows that training is needed to improve the ability of teams to understand the factors influencing the ability and willingness to voice concerns (Jones & Dunbridge, 2016). Successful managers are able to provide an environment of open communication (Garon, 2012), and to leverage several factors to encourage speaking up among their staff (Nembhard, Labao, & Savage, 2015). The intent of this DNP project is to enable the perioperative management team (PMT) to improve communication competencies to appropriately influence, speak up and demonstrate gravitas.

A) Aim Statement: To improve the perioperative patient experience by decreasing room turnover time 5%, improving patient access 10%, decreasing the cost per OR hour by 5%, and increasing the PMT's perception of ability to speak up, as measured by a 2-point increase on selected questions from the speaking up index of the People Pulse staff satisfaction survey, by May 31, 2018.

B) Description of Intervention: Develop standardized education focusing on improving the selected communication competencies of the nurse manager. In addition, develop and administer low-fidelity simulation scenarios to provide opportunities for the PMT to practice their communication skills and abilities.

C) How will this intervention change practice? Nurse managers are often promoted after demonstrating excellent clinical competence. As a result, the manager may find themselves in situations where they have inadequate knowledge and skills to complete the task at hand. The focus on the development of communication competencies allows the leaders to understand the effect they have on staff, patients and medical providers. Positive communication can lead to better patient outcomes and improved job satisfaction.

D) Outcome measurements:

Variable	Description	Data Source	Level of Measurement/ Expected Improvement	Timeframe for Collection
Manager confidence	Measure of comfort with speaking up, perception of the ability to influence and exhibit Gravitas.	2017 staff satisfaction survey and post survey questionnaire using survey monkey software	M (SD)/ 2-point increase	Prior to start of interventions compared to 3 months post implementation
Turnover time	Percent of cases when patient leaves an OR and the next patient enters is less than 30 minutes	Regional quality and operations support website which pulls data from the EMR	M (SD)/ 5% increase	3 months post implementation compared to same 3 months in prior year.
Cost per OR hour	Measure of cost for each hour of operating time	Area business strategy and finance website using the general ledger	M (SD) 5% decrease	3 months post implementation compared to same 3 months in prior year.
Patient Access	Measure of patients receiving surgery within 4 weeks of the date they are available	Regional quality and operations support website which pulls data from the EMR	M (SD)/ 10% increase	3 months post implementation compared to same 3 months in prior year.

Garon, M. (2012). Speaking up, being heard: Registered nurses’ perceptions of workplace communication. *Journal of Nursing Management*, 20(3), 361–371.

<https://doi.org/10.1111/j.1365-2834.2011.01296.x>

Jones, C., & Durbridge, M. (2016). Culture, silence and voice: The implications for patient safety in the operating theatre. *Journal of Perioperative Practice*, 26(12), 281–284. Retrieved from <http://0-search.ebscohost.com.ignacio.usfca.edu/login.aspx?direct=true&db=ccm&AN=120180519&site=ehost-live&scope=site>

Nembhard, I. M., Labao, I., & Savage, S. (2015). Breaking the silence: Determinants of voice for quality improvement in hospitals. *Health Care Management Review*, 40(3), 225–236. <https://doi.org/10.1097/HMR.0000000000000028>

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 a part of usual care . ALL participants will receive standard of care.	X	
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: <i>“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.”</i>	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): Philomena Whelan

Signature of Student

Philomena Whelan _____ **DATE** 03/12/2017 _____

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

Signature of Supervising Faculty Member (Chair):

Dr. Marjorie Barter _____ **DATE** 3/15/17 _____

Appendix E

Letter of Support



Kaiser Permanente Medical Center

University of San Francisco School of Nursing
2130 Fulton Street
San Francisco, CA 94117-1080

To whom it may concern:

I am writing to express support for Philomena Whelan's evidence based practice performance improvement project to be conducted in Walnut Creek Medical Center. The project will fulfill a requirement for completion of the Doctor of Nursing Practice degree through the University of San Francisco's Executive Leadership DNP program.

The project, entitled *Improving Communication Competency in Perioperative Nurse Managers*, will focus on the use of standardized education and low fidelity simulation to enable the perioperative management team to improve their communication competencies to appropriately influence, speak up and demonstrate gravitas. The project will involve evaluation of the managers' perception of their willingness and ability to speak up, as well as the outcome measures of OR room turnover, cost per OR hour and patient access.

This letter also verifies that Kaiser Permanente has an existing contract with the University of San Francisco School of Nursing.

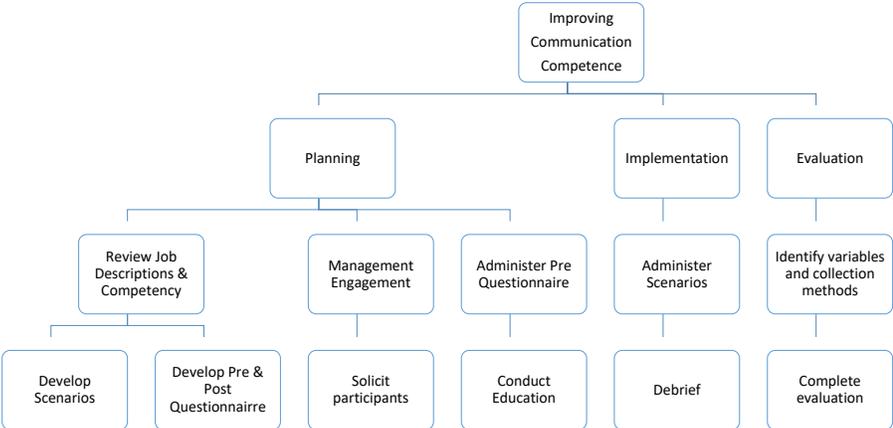
Sincerely,

A handwritten signature in black ink that reads "Jodi Galli, RN".

Jodi Galli
Chief Nurse Executive
Kaiser Permanente
Walnut Creek Medical Center

Appendix F

Work Breakdown Structure



Appendix H

SWOT Analysis of Current State

Strengths	Weaknesses	Opportunities	Threats
All PMT positions currently filled	Leadership competency expectations not well understood by managers	Strong organizational support for leader development	Manager selects another position
Current PMT well educated (all with Bachelors degree and some Masters prepared)	Managers have worked together as a team for less than 1 year	New perioperative governance structure identified	Success of governance structure dependent on collaboration and cooperation of the medical staff
GSP navigation training scheduled for PMT and medical staff partners scheduled for November	Span of control not well understood by managers	Formalize perioperative succession planning	Potential labor disruption related to contract negotiations

Appendix I

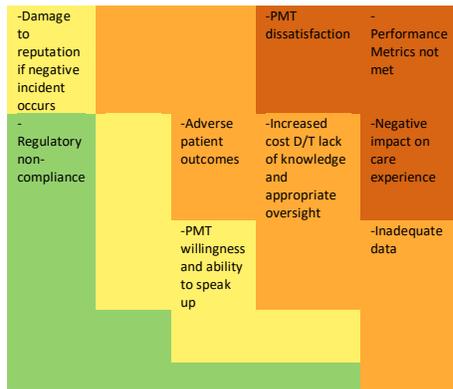
Preintervention Questionnaire

Preintervention Questionnaire			
	% Favorable	% Neutral	% Negative
Q1. I would feel comfortable raising an ethical concern or compliance-related issue to my immediate supervisor or someone else in management.	88	0	13
Q2. I have enough say in how I do my job.	75	25	0
Q3. I feel valued as an individual	75	13	13
Q4. In my department or work unit, I feel comfortable voicing my opinions, even when they are different from others'.	63	38	0
Q5. In my department or work unit, it is easy to speak up about errors and mistakes.	75	13	13
Q6. In general, how much say or influence do you have over decisions affecting your work?	63	13	25

Appendix J

Risk Matrix/Gap Analysis: Peri-operative Communication

Impact



Likelihood

Appendix K

Education and Simulations

Topic	Competency	Instruction Method	Simulation
Job description review/ Compliance competencies	Demonstrates understanding of job parameters	Lecture	NA
GPS Navigation (LEAN methodology)	Demonstrate understanding of GPS tools especially A3	Lecture	NA
Financial fundamentals	Participates in budget monitoring, able to identify variances	Lecture & discussion	Participation in biweekly finance meeting
Goal setting	Develops learning goals	Discussion	NA
Functioning in the union environment/Labor relations	Demonstrates understanding of collective bargaining agreements and Weingarten rule	Discussion	Gravitas-Meeting with union leader related to grievance
Patient care experience/ Outpatient Ambulatory Surgery (OAS) CAHPS	Demonstrates understanding of the OAS/CAHPS	Lecture	NA
Regulatory requirements for perioperative services	Identify how to find appropriate (CA code of regulations, Title 22, Joint Commission etc.) regulations on line	Demonstration	NA
Reward and recognition	Identify appropriate reward and recognition programs for units	Discussion	NA
Attendance management	Demonstrates understanding of attendance management tool and appropriate actions when attendance is an issue	Discussion	Influence - Discussion with staff member with attendance issue

Workplace safety	Demonstrates understanding of "Code Care" process	Lecture & Discussion	NA
Infection prevention	Demonstrates understanding of Surgical Attire Policy	Discussion	Speaking up - Enforcing surgical attire policy

Appendix L

Operational Cost and Expense Detail

Salaries and Wages

1. PMT salary
 Average salary for 9 Perioperative managers $9 \times \$55.00 = \$495.00/\text{hour}$
 9 managers for 24 hours (GPS navigation) $\$495.00 \times 24 = \$11,880$
 9 managers for 10 hours (additional training) $\$495.00 \times 10 = \$4,950$
2. Relief in higher classification differential
 Average salary for 2 staff RNs $2 \times \$80.00 = \$160.00/\text{hour}$
 5% for 2 staff for 8 hours for 3 days
 $.05 \times \$160 \times 24 \text{ hours} = \192.00
3. Instructor Salary
 3 instructors at \$65.00/hour for 24 hours of instruction
 $\$65.00 \times 3 = \$195.00 \times 24 \text{ hours} = \$4,680.00$
 Average salary for instructors at \$70.00/hour for 10 hours = \$700.00

Total instructor cost $\$4,680 + \$700.00 = \$5380.00$

Other Costs

1. Lunch for 13 (9PMT, 3 instructor and project lead at \$10.00/meal for 3 days
 $13 \times \$10.00 \times 3 = \390.00
2. Lunch for 12 (9PMT, 1 instructor and project lead at \$10.00/meal for 5 meetings
 $12 \times \$10.00 \times 5 = \600.00

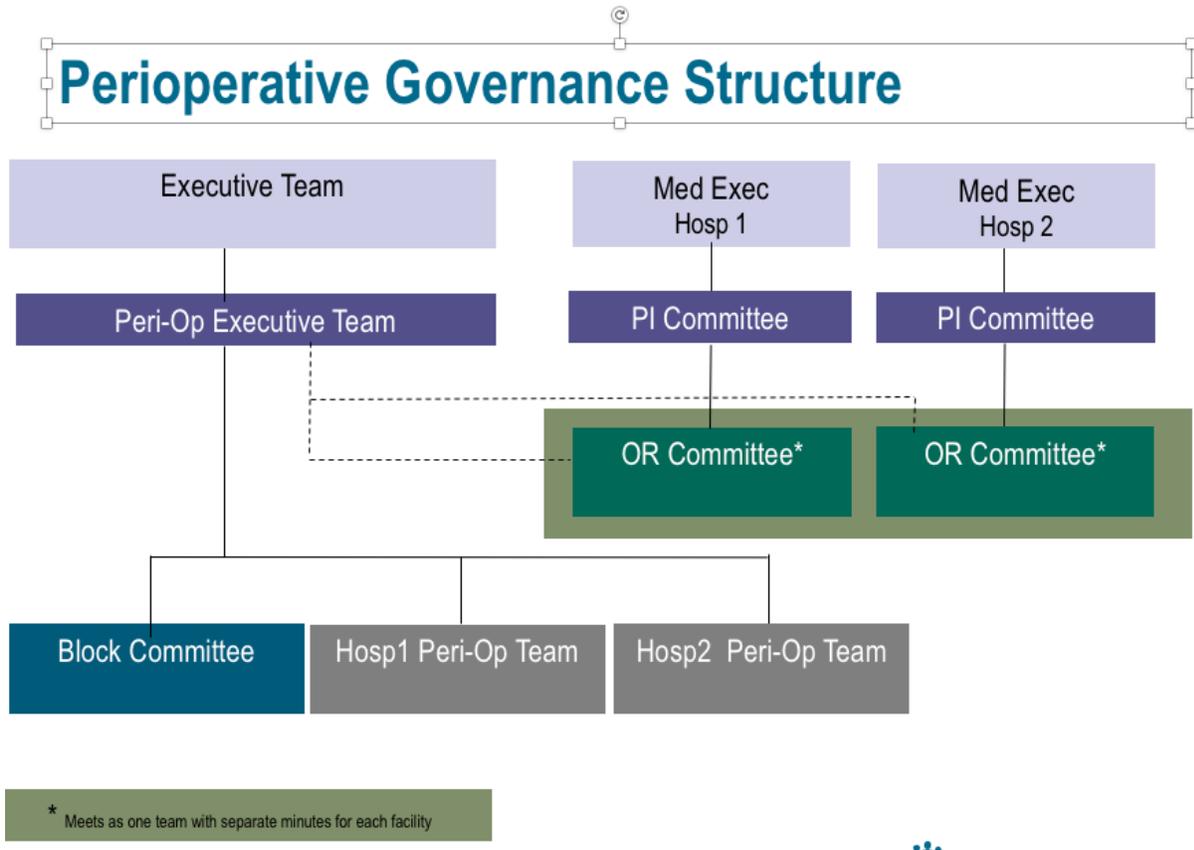
Appendix M

Total Cost Avoidance

	Costs	Totals
REVENUE (Cost Avoidance)		
Cost avoidance – see Appendix P		
Decrease in Cost per OR Hour (See financial considerations p.22)		\$528,000
<i>Total Revenue</i>		<i>\$528,000</i>
Expenses		
Salaries and Wages (S/W) – see Appendix L for calculation details		
PMT salaries	\$16,830	
Relief in higher classification	\$192	
Instructors	\$5380	
Subtotal S/W		\$22,402
Food – see Appendix L for calculation details	\$990	
Stationary and supplies	\$100	
Subtotal Other		1090
<i>Total Expense</i>		<i>\$23,492</i>
	REVENUE	\$528,000
	EXPENSE	\$23,492
ANNUAL COST AVOIDANCE ATTRIBUTED TO PROJECT		\$504,508

Appendix N

Responsibility/ Communication Matrix



Appendix O

Variable Table

Variable	Description	Data Source	Level of Measurement/Expected Improvement	Timeframe for Collection
Manager confidence	Measure of comfort with speaking up, perception of the ability to influence and exhibit Gravitas.	2017 staff satisfaction survey and post survey questionnaire using Survey Monkey™	M (SD)/ 2-point increase	Prior to start of interventions compared to 3 months post implementation
Turnover time	Percent of cases when patient leaves an OR and the next patient enters is less than 30 minutes	Regional quality and operations support website which pulls data from the EMR	M (SD)/ 5% increase	3 months post implementation compared to same 3 months in prior year.
Cost per OR hour	Measure of cost for each hour of operating time	Area business strategy and finance website using the general ledger	M (SD) 5% decrease	3 months post implementation compared to same 3 months in prior year.
Patient Access	Measure of patients receiving surgery within 4 weeks of the date they are available	Regional quality and operations support website which pulls data from the EMR	M (SD)/ 10% increase	3 months post implementation compared to same 3 months in prior year.

Appendix P

Efficiency Variable Results

Variable	Pre-implementation	Post Implementation	Expected Results	Actual Results
Turnover time (see Appendix O)	27%	30.4%	5% decrease	3.4% increase
Cost per OR hour	\$2,641	\$2,687	5% decrease	No change unless adjusted for salary increases Assume 4% decrease when adjusting for salary increases
Patient Access (see Appendix O)	72%	83%	10% increase	11% increase

Appendix Q

Pre/Post Questionnaire Results

	Preintervention			Post Implementation			% Variance
	% Favorable	% Neutral	% Negative	% Favorable	% Neutral	% Negative	
Q1. I would feel comfortable raising an ethical concern or compliance-related issue to my immediate supervisor or someone else in management.	88	0	13	89	11	0	Favorable + 1 Neutral +11 Negative -13
Q2. I have enough say in how I do my job.	75	25	0	78	11	11	Favorable + 3 Neutral - 14 Negative +11
Q3. I feel valued as an individual.	75	13	13	67	0	33	Favorable -8 Neutral -13 Negative +20
Q4. In my department or work unit, I feel comfortable voicing my opinions, even when they are different from others'.	63	38	0	89	11	0	Favorable +26 Neutral -17 Negative =
Q5. In my department or work unit, it is easy to speak up about errors and mistakes.	75	13	13	89	11	0	Favorable +14 Neutral -2 Negative -13
Q6. In general, how much say or influence do you have over decisions	63	13	25	56	11	33	Favorable -8 Neutral -2 Negative +8

affecting your work?								
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Appendix R

Post implementation questionnaire (administered by Survey Monkey™ software)

What department do you work in?

- Answered: 9
- Skipped: 0

ANSWER CHOICES	RESPONSES
Operating Room	44.44% 4
PACU/HAS	33.33% 3
SPD	22.22% 2
TOTAL	9

What is your departmental role

- Answered: 9
- Skipped: 0

ANSWER CHOICES	RESPONSES
Manager	22.22% 2
ANM	44.44% 4
Supervisor	11.11% 1
Systems Administrator	11.11% 1
Scope Oversight Coordinator	11.11% 1
TOTAL	9

Q1. I would feel comfortable raising an ethical concern or compliance-related issue to my immediate supervisor or someone else in management.

- Answered: 9
- Skipped: 0

ANSWER CHOICES	RESPONSES
Strongly Disagree	0.00% 0
Disagree	0.00% 0

ANSWER CHOICES	RESPONSES
Neutral / Neither agree or disagree	11.11% 1
Agree	33.33% 3
Strongly Agree	66.67% 6

Total Respondents: 9

Q2. I have enough say in how I do my job.

- Answered: 9
- Skipped: 0

ANSWER CHOICES	RESPONSES
Strongly Disagree	0.00% 0
Disagree	11.11% 1
Neutral / Neither agree or disagree	11.11% 1
Agree	33.33% 3
Strongly Agree	44.44% 4

Total Respondents: 9

Q3. I feel valued as an individual.

- Answered: 9
- Skipped: 0

ANSWER CHOICES	RESPONSES
Strongly Disagree	11.11% 1
Disagree	22.22% 2
Neutral / Neither agree or disagree	0.00% 0
Agree	22.22% 2
Strongly Agree	44.44% 4

ANSWER CHOICES	RESPONSES
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Total Respondents: 9

Q4. In my department or work unit, I feel comfortable voicing my opinions, even when they are different from others'.

- Answered: 9
- Skipped: 0

ANSWER CHOICES	RESPONSES
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Strongly Disagree	0.00% 0
Disagree	0.00% 0
Neutral / Neither agree or disagree	11.11% 1
Agree	55.56% 5
Strongly Agree	44.44% 4

Total Respondents: 9

Q5. In my department or work unit, it is easy to speak up about errors and mistakes.

- Answered: 9
- Skipped: 0

ANSWER CHOICES	RESPONSES
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Strongly Disagree	0.00% 0
Disagree	0.00% 0
Neutral / Neither agree or disagree	11.11% 1
Agree	55.56% 5
Strongly Agree	44.44% 4

Total Respondents: 9

Q6. In general, how much say or influence do you have over decisions affecting your work?

- Answered: 9
- Skipped: 0

ANSWER CHOICES	RESPONSES
A great deal	33.33% 3
A lot	22.22% 2
A moderate amount	11.11% 1
A little	22.22% 2
None at all	11.11% 1
Total Respondents: 9	