ABSTRACT

Three Factors That Positively Shape Open Communication Within the Operating Room

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The purpose of this thesis is to formulate three components that positively shape communication among operating room team members. Creating open communication requires surgical teams to reevaluate the way they visualize teamwork and work with the same mindset as one another. Leaders in the operating room need to strive to have a transformational type of leadership that welcomes other team member's opinions and inputs throughout the operation. Additionally, all surgical team members need to possess the courage to speak up during unsafe situations such as a break in sterile technique or if a patient is at any sort of risk caused by another team member. When an operating room has established a common definition for teamwork, provided quality leadership, and created an environment for all members to have the courage to speak up against unsafe situations, communication is more open and the surgical teams can operate more effectively.

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THREE FACTORS THAT POSITIVELY SHAPE OPEN COMMUNICATION WITHIN THE OPERATING ROOM

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TABLE OF CONTENTS

Chapter One: Introduction	1
Chapter Two: Methodology	2
Chapter Three: Importance of Teamwork	3
Chapter Four: Leadership	10
Chapter Five: Courage to Speak Up	16
Chapter Six: Conclusion	22
References	23

CHAPTER ONE

Introduction

When a patient is anesthetized and lying on an operating room table, they are completely vulnerable and are unable to speak up for themselves especially in terms of safety. In the operating room, each surgical team member needs to be comfortable communicating professionally at all times in order to properly advocate for the patient. From the surgeon to the anesthesiologists and nurses, each team member must feel confident and able to speak up during a surgical procedure. In order to maximize communication within the operating room, each individual needs to prioritize teamwork, there must be strong leadership present, and each team member must possess the courage to speak out to best ensure patient safety. Without effective communication skills, an operating room could not function adequately and patient safety would be jeopardized. Communication failures have proven to be a major cause of sentinel events occurring within the operating room (OR). "Failures in coordination and communication among hospital clinicians have been associated with higher mortality rates in intensive care units, longer lengths of stay and higher nurse turnover" within the hospital setting (Mills, 2008, p. 108). Patients' lives are at increased risk for harm when healthcare workers do not follow a consistent and mutually understood communication pattern.

CHAPTER TWO

Methodology

In order to locate the various articles utilized in the research process, I used the CINAHL database located on the Baylor University online library. Various search terms I used to narrow my search included ‘operating room,’ ‘communication,’ ‘leadership in the operating room,’ ‘courage to speak up,’ and ‘teamwork.’ In addition, I placed filters on my searches that included published within the last ten years, scholarly journals, and peer reviewed in order to increase the credibility of my sources.

CHAPTER THREE

Importance of Teamwork

In order to improve effective communication within the OR, each surgical team member must appreciate the importance of teamwork. Each individual member of the team has a unique role to play in setting up the room, keeping the procedure going, and preparing for the next patient. Circulating nurses' roles consist of receiving report (a brief explanation of the patient) from the preoperative nurse before the surgery, making sure the patient has signed the proper consent documentation for the operation, positioning the patient before surgery, and prepping the patient properly for the scheduled operation. The circulating nurse ensures that all the countable items such as sponges, gauze, needles, and other items that are at risk of being left in a patient are accounted for at all times. Additionally, the circulating nurse charts throughout the case and retrieves any extra items outside the sterile field that the surgeon or scrub technician may request.

The certified registered nurse anesthetist (CRNA) or the anesthesiologist ensures the patient has been given the appropriate anesthesia as well as has all vital sign values within range. The anesthesia providers must keep the blood pressure, heart rate, oxygen saturation levels, and body temperature all within a specific therapeutic range in order to keep the patient stable throughout the operation. Before the operation begins, the scrub technician or scrub nurse sets up the sterile instruments meticulously in a way that will allow him or her to retrieve common instruments that the specific surgeon may use during the operation. The scrub person is also responsible for handing the surgeon all the

correct instruments and assisting in holding them. Lastly, the surgeon is responsible for guaranteeing the patient understands all of the risks and benefits of the surgery prior to the procedure as well as performing the task of operating on the patient. The surgeon must possess adequate knowledge of and training in the specific procedure before performing the operation. A successful surgical operation requires each of these members to understand their role and work as a team in order to best serve the patient.

A major factor that prevents adequate teamwork within the OR is a difference in perception of the definition of teamwork. According to various studies done by the Veterans Health Administration, different surgical team members view teamwork from their own perspectives (Mills, Neily, & Dunn, 2008). For example, "surgeons rate overall teamwork more highly than nurses working in the same OR environment" because their definition of quality teamwork differs significantly than what nurses perceive as effective teamwork (Mills, Neily, & Dunn, 2008, p. 110). Physicians associate strong teamwork skills with nurses' ability to get what they need in a prompt manner or set up supplies in their preferred setting without having to be asked. According to physicians, teamwork is centered on efficiency and their specific goals being met rather than incorporating the other team member's opinions (Mills, Neily, & Dunn, 2008).

On the other hand, nurses define teamwork by deciding whether their opinions are being respected and valued. A circulating nurse is educated to prioritize patient interventions involving correct positioning of the patient to prevent muscle or nerve damage, watching for breaks in sterile technique by the surgeon or scrub person, and thoroughly prepping the patient with cleaning solution to prevent infection. Additionally, according to Lachman (2010) "nurses are trained to view the clinical situation from a

holistic perspective, whereas physicians are trained to formulate a differential diagnosis" and perform their designated tasks in a timely fashion. Surgeons prioritize efficient procedures and quick turnovers between patients. They expect their needed equipment to already be present in the OR. Additionally, surgeons expect the patient to be properly positioned when they enter the room so they can begin their scrubbing process and operate without delays. Although surgeons and nurses' diverse definitions stem from their different roles, both surgical team members need to strive to understand one another's priorities in order to best create an environment that welcomes open communication and most effectively serves the patient.

Another factor that inhibits the benefits of strong teamwork is the hierarchal construct of the hospital setting, especially the OR. Although each member is considered part of the same team, "it appears that perceptions of teamwork and safety culture are largely a function of the position along the authority gradient that one occupies" (Dayton & Henriksen, 2007, p. 40). The hierarchical discrepancies as well as "status differentials among physicians, nurses, assistants, and residents hinder effective communication and put patients at risk" (Dayton & Henriksen, 2007, p. 39). When co-workers view one another in a hierarchy, they are less likely to provide feedback to co-workers on a different level, and there is more room for misinterpretation and miscommunication. Each member should be aware of their specific role but also appreciate and understand the distinction that each role entails. All team members are required to establish a safe and cohesive environment for the surgical patient.

In addition to the hierarchy issue, "providers from different backgrounds and specialty areas have their own distinct jargon, and unless they confirm that others

understand their specialized jargon, important information may be lost" which could have assisted with the patient's care (Dayton & Henriksen, 2007, p. 39). For example, when a patient's blood pressure begins to drop below the therapeutic range during an operation, the anesthesia providers must communicate to the rest of the team to pause what they are doing and to wait until the blood pressure has risen to a stable level before the operation is allowed to continue. Since surgeons have been trained and developed a specific expertise in order to operate on patients, they must learn how to communicate what they need or what they are concerned about to the rest of the surgical team who have not received the same education and learning experiences. Therefore when a surgeon is concerned about a specific issue, he or she should confirm that the rest of the surgical team understands what the issue is and how he or she plans to resolve the problem. For example, if a main artery ruptures during an operation, all team members need to assist the surgeon in retrieving additional laparoscopic sponges and any other supplies necessary to stop the bleeding. Clear communication reduces repeated requests from all surgical team members, which eliminates wasted time that could be better utilized caring for the patient.

When members of the OR team know how to communicate better and focus on their teamwork skills, the patient's care is made much safer. Not only is patient care made safer when communication is clearer, but surgical team members can focus their attention more on performing their job effectively. Teamwork and collaboration lead to "improved communication and briefings with lower morbidity and mortality rates, with the added benefit of increased nursing retention" (Mills et al., 2008, p. 111). When employees are able to fully communicate with their peers, they are less worried about

miscommunications and are able to focus more on the quality of care they plan to provide for their patients.

In order for teamwork to be improved among members of the surgical team, members can incorporate preoperative briefings and debriefings as well as the use of the surgical safety checklist. During a preoperative briefing and checklist, the members of the surgical suite team take a brief uninterrupted time-out where the circulating nurse announces the patient's name, procedure, site of procedure, and any precautions to take during the operation. Then, the surgeon agrees with what was said to confirm full concurrence. The scrub technician or scrub nurse describes the fire risk and confirms that all the fire safety precautions that have been taken. The fire safety precautions include placing wet laparoscopic sponges on the back table in case of a fire. In addition, the scrub person describes the fire extinguisher location and whether the proper dry time had passed if the chlorhexidine surgical prep had been used on the patient prior to surgery in order to properly clean the patient's skin. Chlorhexidine surgical prep contains alcohol and requires a three-minute drying period in order to be considered safe to be used in proximity to the bovie tip, a cauterizing instrument used for cutting tissue, which can cause wet alcohol to ignite. This entire time-out process serves to assist in eliminating sentinel events that may occur during surgery such as operating on the wrong patient, on the wrong site, or not identifying important allergies such as latex. Preoperative briefings may vary in each hospital on which team member states specific portions of the checklist.

A briefing is beneficial because it "promotes people-to-people transfer of information in real time and sets the stage for how everyone will communicate" and establishes a "platform for common understanding and gives people permission to be

frank and honest" about anything pertaining to the operation (Mills et al., 2008, p. 108). After the Veterans Health Administration tested its theory on the positive effects of preoperative briefings and debriefings, "there was a significant increase in the number of patients who received prophylactic antibiotics within 60 minutes of incision and the number of patients who received DVT prophylaxis before induction" (Mills et al., 2008, p. 109). Simply taking an extra few minutes to complete a checklist increases patient safety significantly, and helps prevent sentinel events by restating main facts of the surgery such as correct site, procedure and prophylactic measures. For a checklist or preoperative briefing to be most beneficial, all team members must be included and be paying close attention.

In order to increase teamwork in the OR, surgical team members must understand one another's definition of true teamwork, respect all members' questions despite place on hierarchy of job ranking, and incorporate preoperative briefings and debriefings into practice. When team members learn the diverse definitions of teamwork of their peers, they are better able to adapt or explain to the other team member how they can compromise to obtain the same definition. Although each surgical employee is taught to prioritize different tasks, the main goal of a procedure is to keep a patient safe and provide effective care. Safe, effective patient care is best given in an environment with open communication. Furthermore, all team members must respect one another despite rank or position. As previously stated, each co-worker has the same goal of safely caring for the patient. An operation cannot run smoothly without full engagement of each unique member. Lastly, a surgical team would benefit by incorporating preoperative briefings and debriefings that include the whole surgical team to focus and agree on the safest plan

for the patient. Taking away counterproductive definitions and perspectives on hierarchy while adding briefings and debriefings will aid in increasing teamwork, which then improves communication among surgical team members.

CHAPTER FOUR

Leadership

In addition to strong teamwork, an OR must include strong leaders who can set an example of clear and open communication skills. Studies have shown that strong leaders can make a difference in their environment simply by the way they carry themselves in a room (Tinkham, 2015). The surgical theatre is a critical environment that requires team members to feel respected and capable of fulfilling their specific role. Under strong and motivating leaders, members of the OR team strive to do more for their leaders and are more apt to have open communication with all team members. When hospital leaders promote communication within their team, patient's outcomes can be improved because teams are more cohesive and working towards a common goal.

In the OR, there is a strong sense of a hierarchy and tiered leadership present. For example, at the top of the physician hierarchy is the attending physician, which is then followed by the fellows, residents, interns, and medical students. On the nursing spectrum, the nursing supervisor oversees the charge nurse who manages the other nurses. Additionally, the anesthesiologists are in charge of all the CRNAs who then give instructions to the anesthesia technicians. In order to improve communication, all members need to view themselves as one team responsible for a patient rather than superior or inferior.

In many cases, leaders can be placed into one of two categories, either a transformational leader or a transactional leader (Hu et al., 2016). Transactional leaders

are focused more on "contingent reward (clear assignation of responsibility for performance targets and the rewards for achieving them) and management by exception (concentration of attention on mistakes and failures)" (Hu et al., 2016, p. 41). On the other hand, "transformational leaders are characterized by idealized influence (emphasis on the collective mission), inspirational motivation (optimism/enthusiasm), intellectual stimulation" and taking others perspectives into account (Hu et al., 2016, p. 41). Transactional leaders in the OR wish to complete the surgery in a quick and efficient manner with minimal questions and interruptions. In their view, more disruptions lead to increased frustration and pointing out of failures. With a transactional leader, a nurse or CRNA is hesitant to speak up because he or she is more concerned with their mistakes being placed on display or being greeted with harsh responses than the safety of the patient. In contrast, a transformational leader in the OR consistently welcomes questions and curiosity because there is always something new to be learned. Transformational leaders "influence others to become actively engaged in practice accountability and self-development" (McNaron, 2009, p. 852). True leaders seek to improve those around them and create an environment for everyone to engage in the most effective patient care.

During a study of transformational and transactional leaders, researchers recorded five surgeons and measured them utilizing a "Multifactor Leadership Questionnaire, a validated method for scoring transformational and transactional leadership styles, by an organizational psychologist and a surgeon researcher" to determine whether the surgeons were more of a transactional leader or transformational leader (Hu et al., 2016, p. 41). After being measured in comparison with other surgeons, "the surgeon with the lowest transformation score entered the OR and immediately confronted the anesthesiologist"

concerning the blood utilized in the last case (Hu et al., 2016, p. 46). Rather than responding to the situation calmly with calculated ways to improve, the surgeon immediately jumped to what the anesthesiologist did wrong and started to assign blame. Situations such as a surgeon snapping at nurses, anesthesiologists or scrub persons are bound to occur during high stress scenarios, but a harsh tone is not beneficial when a calmer approach can be taken instead. When the most transformational leader was measured, "everyone spoke up throughout the case, both to ask for or provide clarification and to warn others" (Hu et al., 2016, p. 46). When a leader establishes an environment that is conducive to asking questions and clarification, communication is much clearer and easier to participate. Additionally, each member feels they have the right to speak up when necessary in any unsafe situations or out of pure curiosity.

In certain emergencies or high stress situations, a more transactional leader is required in order to get the task done as soon as possible for the patient's benefit. For example, when a patient is coding and chest compressions should begin, the surgeon has every right to demand someone to start chest compressions and retrieve the crash cart immediately. There is not room for questions or becoming acquainted with every person in the room. The emergency or high intensity situations should be the exception to the transactional leadership style rather than the rule. For the majority of situations, surgeons should strive to embody transformational leadership. Higher transformational scores were "associated with increased scores in effectiveness, subordinate satisfaction, and subordinate extra effort, as well as clinical goal achievement" (Hu et al., 2016, p. 48). Nurses and scrub technicians will strive to go above and beyond for a leader who appreciates their input as well as their role during an operation.

When a team is well informed and educated, each member is more equipped to provide exceptional patient care. In the case of a transformational leader, the surgeon gladly welcomes questions because a transformational leader would rather a team member ask and receive an answer than guess on any aspect of patient care. "Transactional (task-focused) leaders achieve minimum standards and transformational (team-oriented) leaders inspire performance beyond expectations" especially in the OR (Hu et al., 2016, p. 41). Surgical team members end up working harder for a leader who appreciates everyone's specific role and welcomes open communication. Additionally, transformational leaders "encourage positive change in those being lead and transform followers into leaders" (Tinkham, 2015, p. 13). Nurses, CRNAs, and scrub technicians are more likely strive for their surgeon if he or she allows for questions and continually motivates the team to excel. Displaying a transformational attitude and leadership style in the OR allows for more open communication among surgical team members throughout the procedure as well as a more positive work environment.

Leadership in the OR applies to more than just the surgeon. The nurse managers can effectively lead their team by "providing support and creating an environment of open communication and shared governance" (Tinkham, 2015, p. 13). Also, nurses can be considered leaders among their peers. Each employee, especially the nurse, has the potential to develop into a transformational leader. Nurses "possess unique insights for offering viable solutions," since they are on the frontlines of challenges in the OR (Tinkham, 2015, p. 14). In order for nurses to begin the process of becoming leaders, they must acknowledge their own strengths and weaknesses before striving to help other nurses or team members with theirs. Furthermore, nurses need to possess "clear values

that they demonstrate throughout their daily activities" which are focused on "a commitment to patient-centered care, a team approach to patient care, and a belief that change can occur" (McNaron, 2009, p. 852). Whether a surgical team member is a surgeon, a nurse manager, or a nurse, he or she has the potential to influence communication and become a transformational leader.

In addition to motivating their team members via transformational leadership, strong leaders in the surgical suite assist in launching new safety initiatives. Studies prove that when the nurse manager or attending physician participates in new safety protocols, the other members are more likely to participate as well (Robinson et al., 2010). Surgical team members have a platform to lead by example and inspire followers. For example, when the Veterans Health Administration began to initiate preoperative briefings and debriefings, they argued that the "OR Nurse Manager on the preparation and calls was a stronger predictor than either leadership involvement or physician attendance at the learning session for successful implementation" (Robinson et al., 2010, p. 304). Briefings and debriefings are vital because they have "reduced the number of communication failures, promoted proactive and collaborative team communication," and "reduced unexpected delays in the OR" (Carney, West, Neily, Mills, & Bagian, 2010, p. 723). A quick debriefing allows for "effective communication and analysis of each procedure in a non-blaming atmosphere" that leads to increased team commitment to patient centered care through identifying clear expectations to be met (McNaron, 2009, p. 856). The nurse managers took their position of power and led the way for positive change for increased patient safety and enhanced communication.

Change is difficult for surgical team members especially when their practice has been set in specific ways for an extended period of time. In many cases, new programs bring about positive change that will lead to better communication and enhanced patient safety. A transformational leader is pivotal in creating an environment where team members feel allowed to speak up during an operation whether that is for clarification or to pinpoint an issue. Additionally, a strong leader heads new projects that will maximize patient safety and establish an example to follow to improve vital communication in the OR.

CHAPTER FIVE

Courage to Speak Up

In the surgical theatre, one of the most important concepts to be aware of is any individual's right to stop the line during a procedure. Stopping the line consists of an individual, whether that person is an employee or someone shadowing an OR team member, telling the room to stop what they are doing because a break in sterile technique has occurred or the patient's safety is at risk. A break in sterile technique can present in many forms. For example, when surgeons or scrub persons are scrubbed in for surgery, they are not allowed to touch anything below the level of the OR table, above their shoulders, or anything outside the sterile field. A sterile field in the surgical suite consists of any cloth that is blue or handled by an individual with sterile gloves on. Additionally, the sterile field includes all instruments, needles, and equipment needed for the operation arranged on the blue cloths. Sterile technique in the OR is critical to enforce in order to avoid causing an infection. Although it is the circulating nurse's responsibility to keep a watchful eye for a break in sterile technique, any member in the OR can stop the situation to prevent potential harm that can be brought to the patient.

An example of an individual breaking sterile technique would be a surgeon adjusting their mask with sterile gloves on or allowing a suction tip to fall below the level of the table and continuing to use the tool. Additionally, someone may stop the line if a surgeon is supporting his or her body weight on the sedated patient, the patient is not properly grounded prior to utilizing the bovie, or the surgeon specified the wrong side for

an operation during the preoperative timeout. Any of these scenarios would warrant someone stopping the line. When a surgeon does not create an environment conducive to open communication, observers and employees are less likely to have the courage to speak up and advocate for the patient's safety.

In order for an environment to allow for open communication, the surgeon must be respectful of the other surgical team members and pay attention during the timeout. Although a surgeon is in a position of power over the other members of the OR team, he or she does not have the right to ignore sterile technique or any effort to stop the line. The sole purpose of an individual having the right to stop the line stems from the fact that everyone in the room needs to be an advocate for patient safety. Stopping the line is not meant to be a sign of disrespect; it is meant to establish a safer environment for the patient. When someone calls out a team member for breaking sterile technique, the questioned team member should listen and follow the proper steps to reestablish sterility. In some cases, a surgeon will have to put on new sterile gloves after touching an unsterile item or put on a sterile sleeve if they bumped into an item outside the sterile field. Whenever a piece of equipment falls to the floor, a new piece of equipment must be retrieved in order to replace the dirty one. It is never acceptable for a surgeon to pick an item up outside of the sterile field.

In order to speak up in the OR, a team member must be in an environment that encourages all team members to advocate for patient safety, and a team member must possess the confidence to stand up to a superior for what is right. In many cases, a superior will take offense to being called out for breaking sterile technique or for leaning on patient out of a sense of pride that comes with being in charge. Additionally, seasoned

members of the OR sometimes lose sight of breaks in technique because it has become routine for them. Leaders in the surgical theatre "set the tone to encourage or discourage their team members to speak up" (Hu et al., 2016, p. 44). A leader who welcomes criticism and respects someone calling him or her out shows that he or she would rather take an extra minute to fix the break in technique than risk the patient developing an infection. More often than not "individuals speak up and perhaps feel a bit foolish because they are wrong and other times when they do not speak up and deeply regret it because they would have been right" (Dayton & Henriksen, 2007, p. 44). Possessing a strong sense of confidence as a surgical team member is fundamental in preventing communication failures in the OR and keeping the patient safe.

One of the most common factors that prevent a surgical team member from speaking up in the surgical suite is the lack of courage. According to Hamric (2015), "courage is a virtue required for performance of one's duty" particularly in the OR (p. 35). All healthcare workers whether the individual be a physician, a nurse, a CRNA, or a scrub technician are expected to demonstrate courage in the hospital especially when advocating for a patient. Demonstrating courage is not always an easy task in the hospital setting because hospitals have established a hierarchal environment that discourages those seen lower than physicians to speak up. Lachman (2010) emphasizes that "moral courage involves the willingness to speak out and do that which is right in the face of forces that would lead a person to act in some other way" such as the fear of standing up to a superior.

Often times a surgical team member's fear of being ostracized for speaking up overpowers the responsibility to speak up for the patient's safety. A seasoned circulating

nurse or a scrub person can easily take offense to a new employee calling them out for breaking sterile technique. Additionally, an attending physician who has been a surgeon for over twenty years is not quick to welcome criticism from a new intern because of the drastic difference in years of experience. In order for a nurse or new intern to face possible criticism, both employees must stand strong and possess moral courage. According to Bickhoff, Levett-Jones, & Sinclair (2016), "moral courage bridges the gap between knowing one's personal values and professional obligations, and acting on them despite risks such as social ostracism, embarrassment or loss of employment" (p. 35). Although demonstrating courage is difficult, it is each surgical team member's duty to incorporate beneficence (to do good) and non-maleficence (to do no harm) into their ethical practice of caring for a patient.

In many hospitals, "nurses who exhibited courage were often ostracized by other team members" and "they experienced alienation in communications with team members who felt that they had gone above their level of authority in calling for an ethics consultation" (Hamric, Arras, & Mohrmann, 2015, p. 38). Nurses should not be punished for doing what is right and protecting a patient's best interest. Although physicians possess a large quantity of knowledge due to their many years of schooling and practice, each surgical team member deserves respect and the courtesy of being heard. When providers ostracize nurses for advocating for the patient and stopping the line, their lack of respect is "the antithesis of effective team communication" (Hamric, Arras, & Mohrmann, 2015, p. 38). Harsh responses lead to increased fear among fellow surgical team members to speak up for the patient, and open communication is no longer as easily practiced.

Each surgical team member, especially nurses, must "exhibit courage in the face of institutional obstacles" to ensure the proper care of their patients whether or not the surgeon welcomes the criticism (Hamric, Arras, & Mohrmann, 2015, p. 33). Furthermore, a surgical team member must prioritize the patient's overall safety over the "potential negative consequences of an interpersonal interaction" with a fellow team member (Lachman, 2010). There is no guarantee that a superior or fellow team member will reward a peer for standing up for the patient, but there is a strong chance that the patient will experience safer care because a team member had the courage to advocate for him or her. Hamric, Arras, & Mohrmann (2015) emphasize the need to "build environments that support change" rather than remaining stagnant and ridiculing nurses or residents for speaking up for the patient's well-being (p. 36). Surgeons and nurse managers have an essential platform to allow for open communication that encourages anyone to stop the line when necessary.

Before a nurse can speak up, he or she must possess sufficient knowledge of the situation at hand. According to Lachman (2010), in order for a nurse to speak up, the nurse must have "knowledge of the situation (wisdom), emotional control (temperance), management of the risk, and ability to address assertively the moral problem (courage)." Missing any of these four items puts the nurse at a disadvantage. A strong knowledge, emotional control, management of the risk, and an assertive manner immediately places the nurse in a stronger position to demand respect from a superior. If a nurse advocates for a patient but does not exactly know why or approaches the physician in a shy manner, he or she may not receive the same respect a confident and knowledgeable nurse would.

Several studies concerning speaking up in the OR are influenced by aviation studies from inside the cockpit of an airplane. There are many parallels between the cockpit and the surgical suite. As in the OR, the cockpit requires a strong leader, the main pilot, to take control and issue orders. Furthermore, the pilot relies on a co-pilot similarly to the way a surgeon relies on a resident, circulating nurse, or scrub technician to assist with the procedure. A major parallel between the OR and the cockpit of an airplane is the courage to stop the line. Cockpit crewmembers must have the same courage to speak up in dangerous situations that circulating nurses and scrub technicians need to have. Members of a surgical team or cockpit crewmembers must be "comfortable expressing opinions that differ from the prevailing thought or situation" (Hu et al., 2016, p. 44). Flying a plane or operating on a vulnerable patient requires communication to be open and that each member possess ample courage to stand up for what is right to ensure the safety of others.

Appropriate leadership styles, an open environment, and the confidence to speak up during a potential adverse event are critical in the OR to protect the patient. Overall, the surgical team must create an environment conducive to stopping the line as well as possess sufficient courage to speak up for the patient's safety despite the potential repercussions. Displaying courage against all odds is a difficult task that requires practice and needs superiors who welcome criticism. The most important item to remember is that a patient who is under any form of anesthesia is unable to speak up for himself or herself. Courageous advocacy stems from the surgical staff keeping a watchful eye for a break in sterile technique or other possible actions that can harm the patient and a willingness to prioritize safety over ego and popularity.

CHAPTER SIX

Conclusion

In conclusion, in order to create an environment for open communication, the surgical team must emphasize teamwork, incorporate effective leadership, and encourage the right to stop the line whenever necessary. Strong teamwork enables each member to know his or her role in the OR and understand the various definitions of teamwork from all of the surgical team members. Also, effective teamwork focuses more on a common goal of caring for the patient rather than the hierarchy of team members. A quality leader welcomes questions by other team members, accepts criticism as well as gives it out in a respectful manner, and leads his or her team with new safety initiatives. Lastly, all surgical team members must have the courage to stop the line whenever necessary, and the surgical leaders must encourage each member to prioritize the patient's safety over the possible consequences of standing up to a superior. An open environment, a transformational leader, and confidence all factor into one's ability to stop the line before an adverse event occurs. When an OR has quality teamwork, effective leadership, and a surgical team that feels confident advocating for the patient whenever necessary, the surgical environment possesses the three main components that maintains an atmosphere of open communication in the OR.

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