



NURSES' UNDERSTANDING OF THEIR ROLES AND RESPONSIBILITIES FOR PATIENT CARE AND SAFETY MEASURES IN OPERATIVE THEATRE

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Abstract:

Background: The research article delves into the critical role of operating room (OR) nurses in ensuring patient safety during surgery, highlighting the complexity and challenges faced in the intraoperative period. Patient safety in the OR is paramount, with adverse events during surgery being a leading cause of disability and mortality. The World Health Organization emphasizes the importance of safe surgery to prevent avoidable harm and complications. Despite rigorous safety protocols, errors can still occur, underscoring the need for vigilant nursing care and advocacy for patient safety.

Objective: The main objectives of this review are to explore the attitudes and perceptions of OR nurses towards their roles and responsibilities for patient care and safety, investigate how nurses' understanding impacts patient outcomes, and identify factors hindering nurses' comprehension of their roles in patient care and safety measures.

Conclusion: In conclusion, the study underscores the crucial role of OR nurses in maintaining a sterile environment, assisting the surgical team, monitoring patients for post-surgical complications, and providing essential patient education and advocacy. By understanding and fulfilling their roles effectively, OR nurses can significantly enhance patient outcomes and safety measures in the operative theatre. Addressing the challenges and risks inherent in the intraoperative environment is vital for improving patient safety and overall quality of surgical care.

Keywords: operating room, nurses, patient care, safety measures, operative theatre

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DOI: 10.53555/ecb/2022.11.10.138

Introduction:

In the realm of intraoperative practice, a domain fraught with complexity and challenges due to the delicate nature of patients, the process commences upon the patient's arrival at the operating room (OR) and concludes upon their transfer to the postoperative ward. The care dispensed within the OR is characterized by a heavy reliance on advanced technology, setting it apart from care provided in other hospital settings. OR nurses occupy a pivotal role in safeguarding patient well-being by averting infections, upholding aseptic conditions, managing surgical instruments, implementing medical procedures, forestalling complications, and overseeing biological preparations. Furthermore, nurses are integral in devising care plans, fostering collaboration with patients, the surgical team, and fellow healthcare professionals [1].

The paramount concern of intraoperative teams is ensuring patient safety during surgical procedures, as adverse events during this phase are a leading cause of disability and mortality. Patient safety efforts aim to mitigate the risk of unnecessary harm, encompassing the anticipation of errors and preventable adverse events to shield patients from injury. Studies indicate that major complications arise in 3%–22% of surgeries, with reported mortality rates ranging from 0.4% to 0.8%. Recognizing the gravity of patient safety lapses, the World Health Organization advocates for addressing this issue in its publication "Safe Surgery Saves Lives," emphasizing the potential for averting these complications through vigilant patient care during the intraoperative period [2].

Safeguarding patient safety in the OR entails the prevention of all preventable medical and surgical errors, including the occurrence of wrong-patient, wrong-site, wrong-procedure errors, and the retention of foreign objects post-surgery. These errors can be forestalled through structured communication among patients, surgeons, and other members of the healthcare team. Additionally, the accurate identification of patients at risk of significant blood loss, anesthesia-related complications, airway issues, known allergies, and the prevention of surgical site infections are imperative components of ensuring patient safety [3].

Despite rigorous safety protocols, the potential for errors persists, posing a threat of adverse events to surgical patients. Therefore, it is crucial for nurses to possess comprehensive knowledge of patient safety principles and corrective measures as advocates for patient well-being. Emphasizing the significance of nurses in ensuring intraoperative

patient safety, acknowledging the vulnerability of patients undergoing surgical procedures, and recognizing the risks inherent in the intraoperative environment are essential aspects of promoting optimal patient outcomes [4]. Furthermore, Gutierrez et al. (2018) propose various strategies to enhance patient safety during the intraoperative period. Additionally, the International Council of Nurses (2013) asserts that every registered nurse bears a moral and ethical responsibility to advocate for the best interests of patients, demonstrate respect, preserve patient autonomy and dignity, and uphold the accountability crucial for professional nursing practice and patient safety [5].

Objectives:

The main objectives of this review are:

1. To explore the attitudes and perceptions of operating room nurses towards their roles and responsibilities for patient care and safety in the operative theatre.
2. To investigate the impact of operating room nurses' understanding of their roles and responsibilities on patient outcomes and safety measures in the operative theatre.
3. To explore the factors that may hinder operating room nurses' understanding of their roles and responsibilities in patient care and safety measures.

The role of nursing technician in operative theatre:

In the realm of surgical procedures, qualified nurses hold a significant position in the operating room, contributing their expertise before, during, and after surgery. While surgeons are typically the focal point of the surgical team, it is crucial to recognize that they are just one component of a group of skilled professionals who work together to ensure the success of the procedure. These professionals, including nurses, play distinct roles and provide essential support to the surgeon. In various regions across the globe, nurses in the operating room are known to fulfill various responsibilities, highlighting their versatility and importance in the surgical setting [6].

Before surgery:

The primary duty of the perioperative nurse is to uphold a sterile environment for both the patient and the surgical team throughout the entire surgical process, including before, during, and after the surgery. This role often involves juggling multiple tasks, particularly in situations where there is a shortage of skilled healthcare professionals. Prior to the surgery, the perioperative nurse is responsible for overseeing the transportation of

patients to and from the operating theatre and wards, as well as preparing the patient for the upcoming surgical procedure. The perioperative nurse typically arrives early to set up the operating room, ensuring that it is clean, safe, and well-equipped for the procedure. This involves checking the room's condition, ensuring the availability of necessary supplies, and verifying the correct positioning of the patient on the surgical table, the surgeon's stool, and any other equipment such as microscopes [7].

In addition to these tasks, perioperative nurses must be knowledgeable about the proper operation of all equipment in the operating room, including machines such as phacoemulsification machines, vitrectomy machines, and lasers, if applicable. They are also responsible for gathering, inspecting, and returning the equipment required for each specific procedure. For instance, prior to a retinal detachment surgery, the perioperative nurse must ensure that the cryotherapy cylinder contains enough liquid nitrogen, even if the surgeon ultimately decides not to use it. Furthermore, perioperative nurses must be prepared to anticipate potential complications that may arise during the procedure, as well as accommodate the preferences and skill levels of multiple surgeons involved in the operation [8].

During surgery:

In the role of a perioperative nurse, one of the primary responsibilities involves ensuring the availability of gloves in appropriate sizes. This individual is typically the first to scrub in for a procedure, aiding other team members in the process of gowning and gloving. Throughout the surgical operation, the perioperative nurse plays a pivotal role by passing necessary instruments, sponges, and other essential items to the surgeon, while also offering retraction, suction, or irrigation of the eye as instructed. This demanding position necessitates a profound understanding of the procedure to anticipate the surgeon's requirements and have the correct tools readily accessible. By possessing this foresight, the perioperative nurse enables the surgeon to maintain focus and address any potential complications effectively. Seasoned nurses often provide invaluable guidance to novice surgeons, offering suggestions like, "Perhaps you should consider enlarging the incision?" Such insights are highly valued and underscore the significant contribution of perioperative nurses in the surgical theater [9].

Moreover, within the confines of the operating room, the perioperative nurse may also function outside the sterile field, a role commonly referred

to as the circulating nurse. In this capacity, circulating nurses play a vital role by supplying additional resources and sterile instruments as necessary during the procedure. They also support the team by monitoring the patient's condition and assisting in patient repositioning throughout the operation [10].

After surgery:

After the operation, the surgeon often writes her or his notes and leaves the room. The perioperative nurse may then be responsible for monitoring the patient's condition and remaining alert for any indicators revealing a good or bad outcome. The nurse will often be responsible for giving the correct postoperative instructions to patients before they go home - something that can greatly impact outcomes. In cases where general anaesthesia was used, such as in paediatric operations, nurses will continually evaluate the patients until they wake up and help them understand where they are and what is going on as they awaken from the anaesthesia. Other nursing interventions will include monitoring vital signs, airway patency, and neurologic status; managing pain; assessing the surgical site; assessing and maintaining fluid and electrolyte balance; and providing a thorough report of the patient's status to the surgeon and the patient's family [11].

Post-surgical complications in perspective of operating room nurses:

Postoperative complications present a significant challenge for nurses in the operating room, as they are pivotal in providing immediate postoperative care to patients. These complications can vary from minor issues like nausea and vomiting to more severe problems such as wound infections, deep vein thrombosis, and respiratory issues. Vigilance in monitoring patients for signs of complications is crucial for operating room nurses, who must be ready to take prompt and appropriate action. Among the most common post-surgical complications is surgical site infection (SSI), which can stem from factors like substandard surgical techniques, inadequate sterilization of equipment, or compromised patient immunity [12]. It falls on operating room nurses to ensure thorough assessment and care of surgical wounds to minimize the risk of SSI. Moreover, they should be well-versed in recognizing signs and symptoms of other potential complications such as pulmonary embolism, urinary retention, and postoperative delirium, and be prepared to intervene as necessary [13].

In the realm of post-surgical complications, operating room nurses also undertake a critical role in patient education and advocacy. Effective communication with patients and their families regarding the possible risks and warning signs of complications, as well as the significance of adhering to postoperative care instructions, is essential. This encompasses providing guidance on medication management, wound care, and the importance of early mobilization to prevent issues like deep vein thrombosis [14]. Advocating for patients involves ensuring appropriate pain management and addressing their concerns promptly within the healthcare team. Additionally, coordinating care for postoperative patients is a key responsibility, which involves collaborating with various healthcare professionals to ensure a holistic approach to post-surgical recovery. This collaboration includes close work with surgeons, anesthesiologists, and other nursing staff to monitor vital signs, assess pain levels, and manage any postoperative complications that may arise. Operating room nurses must also be proficient in utilizing medical technologies and equipment to monitor patient conditions and administer necessary treatments, responding swiftly and effectively to any changes in a patient's status and escalating care as needed to prevent or address complications [15].

Beyond their clinical duties, operating room nurses are also engaged in documenting and reporting post-surgical complications. Precise and comprehensive documentation of patient assessments, interventions, and outcomes is vital for maintaining care continuity and identifying areas for improvement in the surgical care process. Operating room nurses must meticulously document any signs of complications, the actions taken to address them, and the patient's response to treatment. This information is crucial for guiding the patient's ongoing care and for supporting quality improvement efforts within the healthcare setting [16].

Recognizing the emotional and psychological impact of post-surgical complications on patients and their families is crucial, and operating room nurses often provide frontline emotional support and reassurance during these challenging times. They must possess strong interpersonal skills and empathy to effectively communicate with patients and their families, offering the necessary support and guidance as they navigate the recovery process. Operating room nurses should also be prepared to address any concerns or fears patients may have regarding their postoperative

complications, providing education and reassurance as needed [17].

Recommendations for management of post-operative complications:

According to recent research, it is essential for operation room nurses to be well-prepared to manage post-operative complications effectively, as these can arise in patients following surgical procedures. One of the key recommendations for managing post-operative complications is to ensure thorough monitoring of the patient's vital signs and overall condition. This includes regularly checking the patient's blood pressure, heart rate, respiratory rate, and temperature to identify any signs of distress or deterioration promptly. Additionally, nurses should closely monitor the patient's level of consciousness, pain levels, and fluid intake and output to detect any abnormalities that may indicate a complication [18]. It is also important for operation room nurses to have a good understanding of the specific surgical procedure the patient underwent, as different surgeries may present unique complications that require specific interventions.

Another important recommendation for managing post-operative complications is to provide adequate pain management for the patient. Pain can not only be distressing for the patient but can also lead to complications such as decreased respiratory function and delayed recovery. Operation room nurses should assess the patient's pain levels regularly and administer pain medication as prescribed by the surgeon. It is important to educate patients on the importance of effective pain management and encourage them to communicate any changes in their pain levels promptly [19]. In addition to monitoring vital signs and managing pain, operation room nurses should also be vigilant for signs of common post-operative complications such as infection, bleeding, and respiratory distress. Nurses should closely monitor the patient's surgical incision for signs of infection, such as redness, swelling, warmth, or drainage, and report any concerns to the surgeon immediately. In cases of excessive bleeding, nurses should apply pressure to the site and elevate the affected limb to control bleeding while notifying the surgical team [20]. Respiratory distress can be a life-threatening complication following surgery, and nurses should be prepared to provide oxygen therapy, suctioning, and respiratory support as needed to maintain adequate oxygenation.

Furthermore, operation room nurses should prioritize patient education and communication to help prevent and manage post-operative

complications. Patients should be informed about the signs and symptoms of common complications and instructed on how to care for themselves following surgery. Nurses should provide clear instructions on wound care, medication management, activity restrictions, and follow-up appointments to empower patients to take an active role in their recovery. Effective communication between nurses, patients, and the surgical team is essential for early detection and prompt management of complications [21].

Conclusion:

In conclusion, patient safety during surgery is of utmost importance, with intraoperative nurses playing a crucial role in ensuring a safe and successful outcome. Their responsibilities encompass a wide range of tasks before, during, and after surgery, with a focus on maintaining a sterile environment, assisting the surgical team, monitoring patients for post-surgical complications, and providing essential patient education and advocacy. By understanding their roles and responsibilities, operating room nurses can positively impact patient outcomes and safety measures in the operative theatre. It is imperative to address the challenges and risks associated with the intraoperative environment to enhance patient safety and overall surgical care.

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