PATIENT SAFETY AND PREPARATION OF THE OPERATING ROOM: REFLECTION STUDY

SEGURANÇA DO PACIENTE E MONTAGEM DE SALA OPERATÓRIA: ESTUDO DE REFLEXÃO

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RESUMO

Objetivo: provocar a reflexão do enfermeiro de centro cirúrgico sobre a montagem de sala operatória. Método: estudo descritivo com busca na literatura versus a vivência dos autores para trazer reflexões acerca da segurança do paciente e do processo de montagem de sala operatória, chamando a atenção do enfermeiro para o olhar diferenciado deste processo rotineiro como proposta para melhoria do cuidado focado no paciente. Resultados: quaisquer que sejam as práticas aplicadas para a montagem de sala, a segurança do paciente é fator primordial para repensar os processos. É possível reorganizá-los e obter melhores resultados no processo. Conclusão: a reflexão deste tema permite ao enfermeiro de centro cirúrgico aliar as atividades do bloco operatório a novas metodologias de trabalho em busca da segurança do paciente. O processo de montagem de sala, mesmo que envolto por unidades diferentes, pode ser valorizado pelos profissionais da enfermagem e ser visto como um dos processos que pode interferir na segurança do paciente. Descritores: Segurança do Paciente; Enfermagem Perioperatoria; Salas Cirúrgicas; Enfermagem de Centro Cirúrgico.

ABSTRACT

Objective: to promote reflection of nurses on surgical centers on the preparation of the operating room. Method: descriptive study with search in literature versus authors’ experiences to stimulate reflections concerning the safety of patients and the process of operating room preparation, calling nurses’ attention to a differentiated view of this routine process as a proposal for improving care focused on patients. Results: whatever actions are performed for the room preparation, patient safety will be an essential factor to rethink the processes. It is possible to reorganize them and obtain better results. Conclusion: the reflection of this subject allows nurses of surgical centers to join the activities of the operative block to new working methodologies in search of patient safety. The process of room preparation—even though related to different units—can be valued by nursing professionals and be seen as one of the processes that can influence on patient safety. Descriptors: Patient Safety; Perioperative Nursing; Operating Rooms; Surgical Center Nursing.

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INTRODUCTION

In an attempt to contextualize patient safety, we base it on human error theory and the function of hospital accreditation institutions, focusing on improving the process of the surgical center to promote patient safety.

In the last decade, patient safety has been highlighted in discussions on patient care and in the processes related to it. Several studies have sought better practices to ensure safety, as well as institutions have been concerned to constantly improve their processes with accreditation certificates.

For their complexity, surgical centers deserve a differentiated look concerning patient care activities performed by different professionals and the integration of various units. Its specificity deserves attention in the processes related to patients.

Based on this premise, it is understood that the activities in an operating theatre involves complex tasks, full of changes and uncertainties, carried out under conditions dominated by pressure and stress. Consequently, these activities require increased attention on the part of professionals responsible for processes that involve the patient.

The reflection of this work arises from nurses' experiences at a large surgical center in the municipality of São Paulo. The theoretical background that will support our reflections is based on multi-referentiality and the theories that discuss patient safety and the process of preparing the operating room.

• Contextualizing patient safety

To better contextualize the discussion on patient safety, we build on discussions of global organizations and recommendations of hospital accreditation bodies, which are present in our professional experience.

Currently, 234 million surgeries are performed worldwide each year, which means an operation every 25 people, highlighting that client safety is of significant importance for public health. In addition, previous estimates obtained in 2006 showed that seven million patients suffered complications after surgery, of which 50% could have been avoided.1,2

In this context, discussions about patient safety have expanded considerably in the scientific and care arenas, since the occurrence of adverse events have increased in hospitals, representing a serious public health problem. Adverse events can be defined as negative results in the practice of medical and nursing services, as well as concerning any other member of the team involved in the assistance.3 In the operating room, these events also result from the lack of registers in the medical record, which makes cohesion and communication between multi-professional teams difficult. Nursing records are an essential element in the working process.4

In 1999, the publication of the report "To Err is Human" by the American Institute of Medicine gave rise to North American's interest for medical safety issues. This report revealed the occurrence of about 44,000 to 98,000 deaths each year in the United States due to errors in medical-hospital care.5 Patient safety has become one of the most discussed topics in this century. It started in the USA and then gradually spread throughout the world. Issues related to the various spheres of surgical patient care question the safety of care, procedures and the environment.

The first meeting on security had anesthesia as its theme and took place in the USA in 1984 and since then the practice started to be regulated and improved. Some measures were truly seminal to this improvement and led anesthesiology to be safer and more practical. These measures include: use of pulse oximeter, capnograph, better quality surgical carts, medical residency programs and use of protocols.6

Organizations and health policies have invested in the awareness of health professionals and involved the general public for clarification about the conditions of health and safety measures. This movement is currently present, but is still walking slowly in order to reach the Brazilian population.

In industrialized countries, major complications are reported in 3 to 16% of surgical procedures in patients admitted, with permanent incapacity or death rate of approximately 0.4 to 0.8%. In developing countries, the mortality rate reported reaches 5 to 10% during more extensive surgeries.7 Human factors are still pointed out as a common problem with their own characteristics and consequences, including greater morbidity and mortality.8

The operating room has a unique set of group dynamics, such as professionals from different sectors, whose training and objectives are different and must work as a team. However, this complex environment provides opportunities for communication failure, conflicting motivations and errors that result not from technical incompetence, but from poor interpersonal skills.9 Would human
error be only one of the existing factors concerning failures in the safety process? May other factors be related to errors? These issues were addressed in other studies that resulted in new questions regarding the surgical center.

Errors in the surgical room may be beyond error committed in surgical techniques. A study carried out in the United Kingdom showed that errors related to the operating room staff (nurses and anesthesiologists) increased the time of surgeries. In this study, errors related to nursing and anesthesiologists are: leaving the room, communication errors and distraction. Other errors are related to problems of equipment, planning and resources available.

Interpersonal relationships and dynamics in the surgical environment could influence on patient safety. In this context, new opportunities for improvement are highlighted and deserve the attention on the part of nurses to other working processes that still does not resonate with such emphasis, but indirectly affect patient safety.

A study carried out in Rio de Janeiro observed the time of distractions and interruptions in the operating room and concluded that parallel conversations and cell phone ring tones did not have much influence on the interruption of the surgical procedure. However, failures of equipment or the absence of materials required generated high incidences of interruptions, sometimes up to thirty minutes.

In this way, one of the surgical center processes to which we call nurses' attention as an opportunity for improvement is the preparation of the operating room, as the placement of equipment and materials in the operating room for the specific type of surgery is within this process and they should be monitored before the patient comes into the operating room.

Although treated as a commonplace procedure of this environment, a mistaken preparation may indirectly influence on patient safety. This process seems not to be given the necessary attention by professionals, since it is seen as routine within the unit. However, if we look from another perspective, we realize the importance of this process as a factor for providing patient safety and part of the care provided.

Pro-activity and anticipation of problems are integral parts of the safety culture in any organization, as well as recognizing their vulnerability to errors. The World Health Organization (WHO) states that client safety can be achieved through three complementary actions: avoiding the occurrence of adverse events; making them visible if they occur; and minimizing their effects with effective interventions.

In 2004, the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), implemented the Universal Protocol, which includes the following elements: preoperative verification; labeling of the surgical site; and timeout process during the intra-operative period.

The first step of the JCAHO Universal Protocol (i.e., the pre-operative verification) aims to ensure that all documents, relevant information and equipment are available, as well as correctly identified and labeled before the start of the procedure. They must be concordant with the patient identification recorded and consistent with each other regarding the patient's expectations and the understanding of the team about the patient, procedure and surgery site. The lack of information or discrepancies must be addressed and resolved before the beginning of the surgical procedure.

However, the occurrence of surgical errors is part of a multifaceted phenomenon and following the protocols might only be part of the answer. Other factors that indicate errors still need to be studied. Patient safety will not be guaranteed with the inclusion of protocols only, but changing the mentality of the people involved in the process.

Involving people in this process is the great challenge of nurses of operating rooms. In addition to human errors, the attention to other factors that precede the possible error must be part of the critical eye of a nurse. Some of these factors are: anesthesia equipment failures; lack of trained personnel; surgical team under pressure; and use of new technologies with little knowledge, which are described in different studies and called for attention to enlarge the look of nurses. We leave the reflection open on how to involve the team to value the surgical center processes as prospect of improvement to patient safety.

- The preparation process of the operating room

With the evolution of surgeries and the increasing complexity of procedures, the role of coordinating human and material resources have been expanded. In the mid-twentieth century, the search for scientific evidence of care in the operating room begun by means of research and the creation of professional organizations for discussion and improvement of nurses of operating rooms.
Nurses’ activities grew and expanded their view to activities beyond organization and management. Currently, the major focus of these professionals is patients’ care, in the constant quest to provide the best care combined with safety, within the hospital context full of technologies.

The Association of Operating Room Nurses (AORN), founded in 1949, has been working on updating and awareness of nurses regarding surgical centers for patient safety. Their several publications have discussed the implementation of the Universal Protocol and different strategies that involve these professionals. This association, among others, influenced the perioperative nursing to pursue best practice and currently has strong influence on research and surgical patient care.

Despite the working progress of the nursing staff, the responsibility for providing and maintaining all the resources necessary during the intra-operative period and prevent failures is a current practice. This way, checking the preparation of the operating room, to ensure that materials and equipment are available and suitable, is part of the activity of operating room nurses and can contribute to the improvement of the patient safety process.

The preparation of the operating room is not a new activity for nursing, but with the evolution of technology and variety of materials available in the health area, in addition to the increase of surgical interventions in hospitals, nursing requires greater involvement in this process and updating of nursing professionals.

In general, the preparation process of the room begins with the surgical cart in the sterilization unit. The professional of this unit provides the instruments in accordance with the surgery proposed. Subsequently, disposables materials related to the procedure are placed in the surgical cart by the satellite pharmacy or by nursing professionals.

The members of the nursing staff are responsible for distributing these materials in the surgical room and based on prior knowledge acquired must evaluate the missing materials, in addition to test the equipment during the preparation process of the room.

In our institution, a folder for preparing the rooms according to each specialty was developed by nurses of the surgical center along with surgeons, in order to standardize, facilitate and ensure proper preparation of the rooms. In this way, the nursing technician has a guide of how to position the equipment in the operating room for each procedure and specialty.

In the Brazilian perioperative nursing practice, nursing technicians are the direct contact for patients and the elements of the surgical team, enabling the completion of surgeries with the provision of materials, equipment, emergencies assistance, requests and needs in patient care.

The perioperative nurse’s skills are proposed in three areas of knowledge: scientific (understanding of technical and procedural language, technical and procedural familiarity with the surgical and anesthetic procedures, adherence to the guidelines for infection control, hospital policies and protocols); practical (ability to anticipate the needs of the patient and the team based on clinical experience gained; perform in diverse situations and inform nursing actions taken); and ethical (nursing skills that extend from technical functions to the function of caregiver, a role that involves greater empathy with the patient in a psychosocial level; the nurse is placed in the position of “lawyer of the patient”).

In this process of room preparation, the nurses apply all spheres of knowledge and when they supervise the process closely, they can intervene quickly in possible gaps (failures of equipment, lack of materials, ensuring security devices and providing best-practice methods of assistance) and consequently ensure the safety of patients.

The way this process is carried out is not yet well defined. Some professionals perform visual inspection, which may be questionable when there are a large number of operating rooms, since it may confuse the professional and generate the failure by the excessive amount of materials and operating rooms. Others delegate the activity to nursing technicians or to the surgical team, who have to check the materials before the procedure is carried out.

Professional experience is a factor that can make a difference in this process, because a more experienced professional knows better the different materials and equipment. However, we question whether this professional would have a vitiated view and details could no longer be seen.

In search of new methods that could help these professionals and enable ensuring the safety of the process, it should be noted that the use of checklists has been well established in industries and proven to be very effective in security check; however, it is still not much used in medicine. A checklist can confirm the availability and functioning of equipment.
before surgeries start. For surgeries that require greater amount of equipment, proper functionality is essential to lessen possible intra-operative failures. The use of the checklist for anesthetic equipment control before its use demonstrated a failure decline of 4 to 4%, assuring safety to the anesthetic procedure.

In accordance with the JCAHO Protocol and the perioperative nurses' skills, the checklist can be a strategy to assist checking the operating room, as a guide to ensure that all necessary items to the procedure are available and in proper conditions for safe use. This measure can intervene in failures detected before bringing the patient and prevent adverse events.

For example, in the case of prostheses requested for a particular surgery in which it is not checked during the room preparation process and that the surgical technologist or the surgeon have not given importance to this control procedure when they come into the operating room, the patient is subjected to the anesthetic-surgical procedure and at the time of use of the prosthesis a failure is perceived. How much time would be lost to reorganize this situation? What is the risk to which patients are exposed when extending their anesthesia and surgical time?

These are questions that we have arisen in our daily practice, seeking to improve the process and prevent adverse events or minimize errors, emphasizing the importance of preparing the operating room.

In our practice, we emphasize the need for having the operating room checked by nurses, seeking to ensure that all requests are met and that the necessary equipment is available. This procedure has been carried out in a fragmentary way in our institution. On the day before the surgery, the requests are verified by the nurse responsible for the surgery scheduling and the nurse of the Sterilizing Unit and the necessary items are checked at this time.

The next checking procedure occurs in the operating room, during the provision of the materials in the room. The request of materials made by the surgical team is checked and it is ensured that the needs of the team are provided before the patient is brought to the operating room.

Patient safety in the operating room is based on a set of activities: preoperative verification, marking of laterality; and time out. All processes are essential and should not be excluded from care. There is not a process more important than other. We believe that all of them are essential, as well as the everyday processes of the surgical center.

The skills of the surgical team comprise a combination of good decision making in the perioperative period, satisfactory performance of the team and effective communication among these professionals, in addition to technical skills. This emphasizes this reflection on questions regarding the improvement of the process and making nurses aware of the importance of preparing the operating room for patient safety.

**FINAL REMARKS**

We conclude that the reflections on patient safety and processes of the surgical center need to be further developed. We suggest new studies on the subject for further discussions and search for best practices. We believe that the process of room preparation—even though related to different units—can be valued by nursing professionals and be seen as one of the processes that can influence positively on patient safety.

It is crucial that medical staffs fulfill their role bringing important, true and particular information for patients care and nursing staffs have the role to manage and ensure that all materials and equipment are available and working properly for surgical practice.

It would be useful to understand the skills of operating room nurses beyond making organizational practices happen and look at the relationship between these practices and patient safety. It is not an exaggeration to say that the nurse becomes the "lawyer of the patient" when they are exposed to any procedure, because nurses have a fundamental supervising role so that all members of any team could perform "safety practice".

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