

PATIENT SAFETY IN THE CONTEXT OF POST-STATISTICAL RECOVERY: A CONVERGENT ASSISTANCE STUDY

Segurança do paciente no contexto da recuperação pós-anestésica: um estudo convergente assistencial

La seguridad del paciente en el contexto de la recuperación post-estadística: un estudio de asistencia convergente

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ABSTRACT: Objective: To verify the knowledge of nursing professionals about patient safety in the Post-Anesthesia Recovery Room (PARR) after the implementation of a care protocol in the sector. **Method:** This is a descriptive, exploratory, convergent-care study with qualitative approach, involving seven professionals of the nursing team from the PARR of a hospital in Western Santa Catarina. **Results:** Based on the findings, two categories emerged: “Patient safety in post-anesthesia recovery room” and “Care Protocols”, which provided effectiveness of such protocols in the systematization of the care process, considering both the patient’s and the professional’s safety. **Conclusion:** Applying the protocol through a checklist, besides guiding the actions of the team, allowed them to act systematically and quickly, taking into account the service complexity in the PARR.

Keywords: Patient safety. Clinical protocols. Anesthesia recovery period. Perioperative nursing.

RESUMO: Objetivo: Verificar o conhecimento dos profissionais de enfermagem no que concerne à segurança do paciente na Sala de Recuperação Pós-Anestésica (SRPA), após a implantação de um protocolo assistencial no referido setor. **Método:** Trata-se de um estudo descritivo, exploratório, com abordagem qualitativa, do tipo convergente assistencial, envolvendo sete profissionais da equipe de enfermagem, atuantes na SRPA de um hospital do oeste catarinense. **Resultados:** Com base nos achados, surgiram duas categorias: “Segurança do paciente na sala de recuperação pós-anestésica” e “Protocolos Assistenciais” (PA), que proporcionaram efetividade de tais protocolos na sistematização do processo de cuidar, considerando, tanto a segurança do paciente, quanto a do profissional. **Conclusão:** A aplicação do protocolo, por meio de *checklist*, além de nortear as ações da equipe, possibilitou que estas ocorressem de forma sistemática e rápida, levando-se em conta a complexidade do atendimento na SRPA.

Palavras-chave: Segurança do paciente. Protocolos clínicos. Período de recuperação da anestesia. Enfermagem perioperatória.

RESUMEN: Objetivo: Verificar el conocimiento de los profesionales de enfermería en lo que concierne a la seguridad del paciente en la Sala de Recuperación Pos-Anestésica (SRPA), tras la implantación de un protocolo asistencial en el referido sector. **Método:** Se trata de un estudio descriptivo, exploratorio, con abordaje cualitativo, del tipo convergente asistencial, involucrando siete profesionales del equipo de enfermería, actuantes en la SRPA de un hospital del oeste catarinense. **Resultados:** Con base en los hallazgos, surgieron dos categorías: “Seguridad del paciente en la sala de recuperación pos-anestésica” y “Protocolos Asistenciales” (PA), que proporcionaron efectividad de tales protocolos en la sistematización del proceso de cuidar, considerando, tanto la seguridad del paciente, cuanto a del profesional. **Conclusión:** La aplicación del protocolo, por medio de *checklist*, además de guiar las acciones del equipo, posibilitó que estas ocurriesen de forma sistemática y rápida, tomándose en cuenta la complejidad de la atención en la SRPA.

Palabras clave: Seguridad del paciente. Protocolos clínicos. Periodo de recuperación de la anestesia. Enfermería perioperatoria.

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INTRODUCTION

Patient safety has gained ground in the context of health services with the creation of the World Alliance for Patient Safety, in 2004, through the challenge “Safe Surgeries Saves Lives”, launched by the World Health Organization (WHO) in 2013, and in Brazil through the National Program of Patient Safety, also instituted in 2013. Discussions have drawn attention in the scientific community and actions have been implemented around the subject of patient safety both in the academic and in the care settings, aiming to promote care free from adverse events^{1,2}.

In the perioperative context, safety guidelines came through safe multidisciplinary practices and the adoption of specific standards to prevent errors and adverse events, which are the result of this vulnerable moment to both the patient and the surgical team¹. Considered by some authors as a passing territory, the Surgical Center (SC) and the Post Anesthesia Recovery Room (PARR) are places where different bodies, patients, nurses, physicians, and other professionals coexist. The provision of specialized nursing care in this environment aims to ensure the rehabilitation of patients with safety and effectiveness, detecting and acting early on complications possibly to be experienced with different types of anesthesia and surgery³.

Considering that the work of the team needs to be fast, individualized, human and holistic, it also requires a theoretical basis that aims to systematize, organize and render assistance that is safer and safer. Nursing care in the SC, particularly in the PARR, focuses on patient safety, trained human resources and oriented material, procedures and interventions, all backed by practical and scientific knowledge on the basis of safe behaviors, attitudes and habits, avoiding adverse events and, consequently, complications, which mostly result from the high complexity inherent to the anesthetic-surgical process⁴.

However, each day, many obstacles hamper the care provided by the nursing team in the PARR. For example, lack of workflow organization, lack of standard procedures or care protocols, insufficient number of professionals, inadequate structure and lack of multiprofessional work. In addition, a non-attentive look at safety-oriented care also poses a number of risks to patients and professionals involved.

Adapting the WHO Checklist to the postoperative period provides professionals with a view to strengthening the quality of care and patient safety to minimize risks and adverse events in the PARR. In addition to checklists, care protocols are of great applicability to Nursing, as they allow the revision of professional practice, defining therapeutic objectives and evidence-based behaviors. It contributes, therefore, to an effective and efficient decision-making⁵.

The quality of care is related to the high complexity of the care in a PARR⁶. Therefore, strategies that connect quality and patient safety must be considered by the Nursing staff, care protocols included⁷.

The nurse, in this context, needs to keep up to date and apply, in practice, the knowledge acquired in line with the duties of the function. According to Law 7,498, dating June 25, 1986, it is up to the nurse to prevent and control any harm that may be caused to the patient during nursing care provision⁸. From this perspective, we ask: What are the nursing professionals' conceptions about patient safety within the PARR at a mid-size hospital in the southern region of Brazil?

In order to answer such questioning, we sought to verify the knowledge of Nursing professionals about patient safety in the PARR after the implementation of a care protocol.

OBJECTIVE

To verify the knowledge of Nursing professionals about patient safety in the PARR, after the implementation of a care protocol in the sector.

METHOD

This is a descriptive, exploratory, convergent-care study with a qualitative approach aiming to characterize the articulation of theory and professional practice, allowing the researcher to assist in the proposition of actions that qualify assistance rendered⁹.

The present study is in line with the guidelines for the conduct of research involving human beings, pointed out in Resolution 466 of December 12, 2012, by the National Health Council¹⁰, ethical opinion 952184 and CAAE 33713614.1.0000.5564, issued by the Research Ethics Committee of *Universidade Federal da Fronteira Sul*.

The description of steps adopted begins with the conception phase, based on the experiences of the researchers related to the perioperative context. Then, the instrumentation phase, where we opted for the PARR of a medium-sized private hospital in the city of Chapecó, western Santa Catarina state, as the study scenario. Seven professionals were selected to the research, considering the team that only works in daytime period, with at least six months of activity in the sector, minimum age of 18 years and who accepted to participate in the research, by signing the Informed Consent Form. Participants were assigned pseudonyms (names of surgical tweezers) to ensure information anonymity and no distinction of professional class. However, they were all part of the nursing team of the unit.

Data collection had different stages. First, there was observation (immersion), which was made individually, naturally and systematically by participants. After that, the planning of the items to be observed was made through previous elaboration of a data collection instrument, which was called "Field Diary", aimed at guiding researchers as for the organizational aspects of nursing care to patients in the immediate postoperative period in PARR⁹. The semi-structured questionnaire was also used as an instrument for data collection, with open and closed questions. This was applied in two moments to understand and implement the practice, ensuring patient safety.

After the initial survey, participants were proposed to create a study group composed of nursing professionals working in the PARR of the institution. The meetings took place for three months, mediated by researchers, through open talks with defined dates and times, according to availability of the sector. This methodology allowed the collective building of the knowledge underlying the implementation of the care through a protocol and a checklist.

It should be noted that no difficulties were faced in data collection, as it took place in a closed and specific sector, where the researcher had access to professionals and had the team participating as a unit.

In the phase of data analysis and interpretation, participants were organized and categorized, in a process to acquire a simplified representation of them. This strategy aims to facilitate the recognition of information such as most common words, phrases and themes across the participants' reports. Following the rigorous analysis of data collected, interpretation was based on a synthesis that is characterized by the moment in which associations and variations

of information are examined until one can synthesize and memorize the whole work process; then the theorizing phase, which consists in analyzing information; and reflexes to theory, to extract meanings that could help form assumptions and questionings⁹.

The analysis of speeches during the meetings of the group complied with the precepts of Bardin. The steps of pre-analysis, material exploration, interpretation and data transfer were used to create analytical categories¹¹.

RESULTS

The participatory observation technique by means of a Field Diary allowed us to understand how the PARR is structured for the work processes, which reflected in the care from the perspective of patient safety. The PARR in this unit has 30 beds divided into two areas, with two nursing stations, where different actions of the staff were observed: bed preparation and patient admission, stay and discharge. Nursing care was restricted to checking vital signs, administering medications, writing down catheter and/or drainage debit, evaluating bleeding by surgical incision, and the use of scales (Aldrete and Kroulik, and Kendall). The PARR's discharge criteria depended on the type of surgery, anesthesia and destination within the hospital¹².

After data collection and analysis, we identified which were the scientific-based topics of patient care and which needed improvement. From then on, the care protocol and the checklist started being assembled in cooperation with the nursing team at the meetings proposed by the researchers, which consisted in the convergence group¹³, composed of the study participants and aimed at organizing the nursing care offered in the sector.

At the meetings, the care protocol and the checklist were elaborated in accordance with the precepts of surgery safety, with emphasis on patient safety, as the WHO advocates. The checklist was designed to take into account the patient's personal data and perioperative data such as surgical procedure, anesthesia, surgeon and anesthetist. Therefore, aspects inherent to admission and stay in the PARR were considered as primary evaluation, focused on airway permeability, respiratory pattern and circulation, as well as the initial evaluation of body systems. Aspects of prevention (risk of fall, phlebitis, skin lesions, dermatitis, allergies, infections) were highlighted, as well as the procedures performed during the patient's stay in the sector.

Regarding discharge, aspects of patient evolution such as respiratory pattern, vital signs, reflexes, blood volume, and evaluation by specific scales, justified and passed on to the sector receiving the patient after discharge from the PARR, were contemplated^{1,2}.

After the elaboration and implementation of the care protocol in the meetings, all professionals were individually approached to fill in a questionnaire aimed at collecting information about the effectiveness of instruments and the systematization of the work process focusing on patient safety. From then on, the meaningful units and statements about changes in care practice were highlighted, after the implementation of the care protocol/checklist. From the qualitative analysis, two categories emerged: "Patient Safety in PARR" and "Care Protocols". From each category, three units were extracted, as one can see in Charts 1 and 2.

DISCUSSION

Over the last decades, the nurses' role in the surgical environment has gained a different character, focusing on quality and safety through the provision of qualified, specialized and humane care.

Safety is a basic criterion for the quality of patient care to occur and errors and adverse events to be reduced in health facilities. Errors can be prevented with the implementation of simple and safe measures that need to be adopted and disclosed¹⁴. During the research, the participants' statements expressed safety aspects that they consider to be part of safe care in the PARR, when there are mechanisms that standardize safe practices:

"Observation and consultation necessary for an immediate postoperative period free of possible errors" (Mayo)

"Safety in the recovery room depends directly on the elaboration and application of care protocols" (Backaus)

The speeches show the connection of a safety-oriented care with care protocols. These professionals acknowledge the importance of establishing guidelines for the team's performance and prevention of possible errors. Sometimes, several patients are admitted simultaneously

and this requires a fast acting and decision making by the nursing team. Care protocols allow systematized care based on scientific evidence¹⁵.

Participants' statements also reflect the relation between safe care and the human resources dimension:

"Enough employees to guarantee safety. Trainings, adaptations, enthusiasm to develop such activity" (Mayo).

"Through implementation of care protocols for each type of surgery, constant training and a sufficient number of employees for the sector's demand" (Adson)

The PARR is a critical care unit and, for this reason, the nurse is required⁸. According to recommendations of the Brazilian Society of Surgical Center Nurses, Anesthetic Recovery and Sterilization Material Center (SOBECC), the proportion of nurses for patients who depend on mechanical ventilators is one for every three or four patients and a nursing technician for each three patients. For those who do not rely on respiratory support, the recommended minimum number is one nurse per eight beds, the number of nursing technicians being the same as mentioned previously⁸.

In a study carried out to examine the number of nurses associated with the risk of mortality among surgical patients with complications, the high proportion of these professionals was found to be related to low mortality and complication rates¹⁶.

Therefore, full-time nurses in the PARR is emphasized as an essential element to promote patient safety. An important function of this professional is to manage nursing care, organizing the admission of patients according to complexity, in line with current legislation.

Another important aspect, perceived as a means to ensure patient safety, is the use of a Surgical Safety Checklist, adopted by the institution of this study during the perioperative period. The lines of participants reaffirm this:

"Confirming relevant postoperative care with the checklist" (Kelly).

"Checking the checklist" (Maryland).

"Because we are aware of the primary care we must provide the patient with" (Mixer)

It is vital to create a link between the phases of nursing care in the perioperative period, that is why instruments/ documents that guarantee the continuity of the care provided to surgical patients, such as checklist and nursing notes, are so important¹⁷.

Paperwork facilitates communication between members of the healthcare team and can favor the continuity of care, ensure follow-up, and serve as a legal record of the care provided^{17,18}. Personal data, hospitalization diagnosis, pathological antecedents, drug allergies, types of surgery and anesthesia, problems and complications during surgery, among others, are strictly necessary for the postoperative nursing care to be established⁸.

Data recording promotes continuity of care and allows for critical thinking. Since the surgical environment requires professionals' agility whilst they need to take note of the care provided, the elaboration of instruments based on a theoretical framework and easy to apply simplifies the process¹⁸. The creation of a checklist for safe management of a patient in the PARR sought to contemplate all issues

previously discussed, associating relevant data with care by standardizing care.

Based on analyses of participants statements and the answers obtained in the questionnaires, professionals were found to be aware of the existence and importance of protocols, but, in daily routine, they end up not applying them effectively, either because of work demand or lack of habit.

Therefore, when designing a Patient Safe Handling Protocol in the PARR in the form of a checklist, the professionals could think of an instrument that privileges PARR patients, compared to the various protocols already available in the institution, thus guaranteeing effectiveness and consequent promotion of patient and team safety.

Also regarding patient safety, the participants uphold the importance of professional training:

“Through care protocols with systematized and standardized practice, with training (continuing education) of the team” (Backaus)

Chart 1. Category: Patient Safety in Post-Anesthesia Recovery Room.

Meaningful units	Participants' comments
Protocols	<p>“Through implementation of care protocols for each type of surgery, constant training and a sufficient number of employees for the sector's demand” (Adson).</p> <p>“Through care protocols with systematized and standardized practice, with training (continuing education) of the team” (Backaus).</p>
Error prevention	<p>“Safety in the recovery room depends directly on the elaboration and application of care protocols” (Backaus).</p> <p>“Observation and consultation necessary for the immediate postoperative period free of possible errors” (Mayo).</p> <p>“Enough employees to guarantee safety. Trainings, adaptations, enthusiasm to develop such activity” (Mayo).</p>
Checklist	<p>“Confirming relevant postoperative care with the checklist” (Kelly).</p> <p>“Checking the checklist” (Maryland).</p> <p>“Because we are aware of the primary care we must provide the patient with” (Mixer).</p>

Chart 2. Category: care protocols.

Meaningful units	Participants' comments
Safety	<p>“Care protocols reduce problems and constantly stimulate the improvement of healthcare units' processes, assuring the quality of care” (Backaus).</p>
Knowledge	<p>“By following institutional protocols correctly and always being sure of what you are doing, after all, we work with lives” (Maryland).</p> <p>“Through care protocols we have been able to ensure more safety to patients” (Kelly).</p>
Error reduction	<p>“It is necessary for there to be fewer errors upon care and to ensure a posture to follow in isolated cases, as well as routines, so that one knows the correct decision to make” (Mayo).</p> <p>“Protocols give us confidence to follow appropriate routines with patients” (Faure).</p> <p>“Through protocols that ensure safety to our work and especially to patients” (Maryland).</p>

Research points to knowledge as one of the main tools that health professionals have to guarantee safe and high-quality care to patients¹⁹⁻²². Trainings, through continuing education programs, contribute to the qualification of care, since it fills knowledge gaps identified in professional practice that are reflected in patient care.

The nursing team is vulnerable to multiple interruptions and distractions that can affect their memory and attention capacity during critical periods, causing lack of focus and failure to follow protocols²⁰. Therefore, health services need to ensure a safe environment for both professionals and patients. The preparation of a care protocol contributes to a qualified assistance, but if these are difficult to apply, if the number of professionals is insufficient for the demand for activities, and if they work unmotivated, errors are likely to occur.

Therefore, actions, attitudes, and values need to be applied to health services, so that the political and professional awareness of patient safety proposed by the Global Patient Safety Alliance¹ becomes effective.

The creation of a care protocol for the safe management of a patient in the PARR allows the actions to be carried out in an empirical way and to be scientifically based, systematized and safe, through reliable and easy-to-apply instruments. As shown, most answers obtained refer to care safety based on care protocols:

“Care protocols reduce problems and constantly stimulate the improvement of healthcare units’ processes, assuring the quality of care” (Backaus)

“By following institutional protocols correctly and always being sure of what you are doing, after all, we work with lives” (Maryland).

“Through care protocols we have been able to ensure more safety to patients” (Kelly).

“It is necessary for there to be fewer errors upon care and to ensure a posture to follow in isolated cases, as well as routines, so that one knows the correct decision to make” (Mayo).

Statements show the relationship between care protocols and the prevention of errors and events. Adverse events and events that compromise patient safety is a major challenge for the improvement of quality in the health sector²¹, since

the non-adherence of professionals to norms, protocols or clinical guidelines favors their occurrence²².

Patient care in the PARR requires preparation of the professionals to act in the prevention and treatment of complications arising from the anesthetic-surgical process and, thus, the establishment of guidelines can help in rapid and safe decision making, preventing the patients’ exposure to risks, possible errors and avoidable events^{21,22}.

According to the National Program of Patient Safety, barriers that prevent risks include up-to-date professionals, use of clinical protocols and safety checklists²³. The perception that care protocols ensure patient safety goes beyond in some reports, where respondents recognize the importance to their own professional safety.

“Protocols give us confidence to follow appropriate routines with patients” (Faure).

“Through protocols that ensure safety to our work and especially to patients” (Maryland).

In this sense, care protocols aim at a systematic, organized and scientific-based assistance, reflected in reduction of errors and a legally supported care. These aspects are recognized to establish safe routes to be followed and that keep the record of the care provided, which favors the qualification of assistance and, thus, brings safety to the team.

Therefore, care protocols lead to a nursing staff seeking to increase knowledge and establish its craft as a science, using the best practices that make patient and professional safety feasible, providing learning and ensuring effective, excellence assistance.

FINAL REMARKS

Applying the protocol through a checklist guides the actions of the team, besides enabling these to occur in a systematic and fast way, given the complexity of the service provided in a PARR. However, it should be noted that this research demonstrates that, in addition to care protocols, other factors contribute to patient safety in the PARR, including recommended number of professionals, qualification, continuing education and availability of resources. In addition, a safe environment is possible if the professionals who work in it recognize the importance and are aware of actions such as the use of care protocols.

Although the PARR is considered a passing territory, its purpose is not only to wait for the “effects of anesthesia to pass”, so it should be acknowledged as a critical and complex environment, where multiprofessional care, not only nursing, must be intensive to guarantee the continuity and success of the anesthetic-surgical procedure. Preventive measures also need to be employed, including prevention of skin lesions, prevention of infections, and not only in hospitalization units.

Although the Surgery Safety Checklist recommended by the WHO is widely applied by health services, it is still little used in the PARR, since only one item contemplates relevant post-operative care. However, it contains valuable and essential information for nursing care this environment, such

as identification data, patient history, intraoperative complications, besides allowing a communication between professionals. Therefore, the socialization of strategies created by the nursing team to promote patient safety and value the PARR is emphasized.

Therefore, this study represents the importance of using safe care in all phases of the perioperative period, considering that care protocols contribute to the implementation of the Global Alliance on Patient Safety, “Safe Surgery Saves Lives” challenge, and the National Patient Safety Program. Finally, we hope that further research is conducted to promote patient safety and improve the profession, and that the awareness of the importance of this topic be extended to all health services and educational institutions.

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