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# Transfer of the care of patients with low risk of mortality in postoperative: experience report

Transferência do cuidado de pacientes com baixo risco de mortalidade no pós-operatório: relato de experiência

Transferencia del cuidado de pacientes con bajo riesgo de mortalidad en el postoperatorio: relato de experiencia

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#### **ABSTRACT**

**Objective:** Describe the implementation of care transfer flow chart in postoperative, based on a risk classification model.

**Method:** Experience report on the implementation of a pilot project between the post-anesthetic recovery room and the surgical hospitalization unit, developed between December/2016 and March/2017, aimed at transferring s the care of patients with low risk of postoperative mortality, in a university hospital in the South of Brazil.

**Results:** The project made it possible to expedite the discharge of the patient from the Post-Anesthetic Recovery Room to the surgical hospitalization unit, to qualify the records regarding nursing care and to optimize the time of nurses in both units for care activities. **Conclusion:** The implementation of a care transfer flow chart from the risk classification for postoperative patients contributed to a

**Keywords:** Hospital communication systems. Patient safety. Nursing. Risk management.

more effective communication, culminating in improvements in patient safety.

#### DECIIMO

**Objetivo:** Descrever a implantação de um fluxograma de transferência do cuidado de pacientes em pós-operatório, a partir de um modelo de classificação de risco.

**Método:** Relato de experiência sobre a implantação de projeto piloto entre sala de recuperação pós-anestésica e unidade de internação cirúrgica, desenvolvido entre dezembro/2016 e março/2017, visando a transferências do cuidado de pacientes com baixo risco de mortalidade pós-operatória, em um hospital universitário do Sul do Brasil.

**Resultados:** O projeto possibilitou agilizar a alta do paciente da Sala de Recuperação Pós-Anestésica para a unidade de internação cirúrgica, qualificar os registros quanto aos cuidados de enfermagem e otimizar o tempo dos enfermeiros, em ambas unidades, para as atividades assistenciais.

**Conclusão:** A implementação de um fluxograma de transferência do cuidado a partir da classificação de risco para pacientes em pós-operatório contribuiu para uma comunicação mais efetiva, culminando em melhorias na segurança do paciente.

Palavras-chave: Sistemas de comunicação no hospital. Segurança do paciente. Enfermagem. Gestão de riscos.

#### RESUMEN

**Objetivo:** Describir la implantación de un diagrama de flujo de transferencia del cuidado de pacientes en postoperatorio a partir de un modelo de clasificación de riesgo.

**Método:** Relato de experiencia sobre la implantación de un proyecto piloto entre sala de recuperación postanestésica y unidad de internación quirúrgica, desarrollado entre diciembre/2016 y marzo/2017, con vistas a transferencias del cuidado de pacientes con bajo riesgo de mortalidad postoperatoria, en un hospital universitario del sur de Brasil.

**Resultados:** El proyecto posibilitó mayor agilidad del alta del paciente para la unidad de internación quirúrgica, calificación de los registros y cuidados de enfermería referentes al cuadro clínico del paciente, y optimización del tiempo de los enfermeros, en ambas unidades, para las actividades asistenciales.

**Conclusión:** La implementación de un diagrama de flujo de transferencia del cuidado a partir de la clasificación de riesgo para pacientes en postoperatorio contribuyó a una comunicación más efectiva, culminando en mejoras en la seguridad del paciente.

**Palavras clave:** Sistemas de comunicación en hospital. Seguridad del paciente. Enfermería. Gestión de riesgos.

### **■ INTRODUCTION**

The technological increase, with consequent modifications in the health services, has caused an increase in demand for the care of hospitalized patients, requiring restructuring in the work processes of organizations in order to guarantee a safe assistance<sup>(1,2)</sup>. Usually, adverse events in the hospital environment are usually associated with human error, however, for a more accurate analysis it is important to consider the conditions of the practice environment where the care actions, structural aspects and complexity of the activities developed<sup>(1,3)</sup>. The process of transferring care is characterized as a complex activity in this context, mainly because it involves effective communication as a barrier to the continuity of safe care and prevention of adverse events.

Adverse events have important implications for patient safety and should be analyzed from a systemic and multifactorial approach in order to contribute to better care outcomes. Among the measures that favor the adoption of a culture of patient safety is the improvement of communication between the teams<sup>(4-5)</sup>.

In nursing, one of the most frequent adverse events is related to failures in communication and exchange of information during patient care transfers<sup>(1)</sup>. The efficient and accurate care transitions are actions that could improve the flow of patient care and optimize the use of resources ensuring that care is more responsive to patient needs<sup>(6)</sup>.

To ensure the effectiveness in assistance and care transfers, it is necessary for professionals to be prepared and able to build effective communication<sup>(7)</sup> which is one of the strategies for patient safety<sup>(8)</sup>. Failures in communication processes can be contributory factors to patient safety incidents and promoters of adverse events in inpatient care.

Communication can be presented in verbal, written or electronic form. It must be accurate, bi-directional, complete and timely so as to minimize the occurrence of errors<sup>(8)</sup> and determine the quality and safety of care transfers<sup>(9)</sup>. In this context, unstructured communications and the pressures for the rapid transfer of patient care are highlighted as some of the elements that may prevent this transition from occurring safely<sup>(10)</sup>.

Structured patient transfer systems, using tools such as acronyms to organize the passage of information, are efficient to guarantee delivery elements, optimize time and reduce interruptions<sup>(11)</sup>. For example, patients who underwent surgical procedures may be vulnerable to complications and errors due to innumerable transfers between different care units and multiple professionals<sup>(4)</sup>. This fragmentation of continuity of care, even if necessary, can lead

to weaknesses in the whole system of compromising the safety of care<sup>(12)</sup>.

Some strategies, such as adherence to protocols that standardize the execution of activities and lifelong education, can prevent and reduce the risks of adverse events, ensuring a more secure and qualified care, even if they do not represent a complete and infallible solution<sup>(1,3)</sup>. In this context, the importance of continuously investing in improvements in the effectiveness of communication focusing on the processes of transfer of care is highlighted, since this is one of the fundamental aspects to ensure patient safety and continuity of care among the multiprofessional team. In order to do this, it is mentioned the implementation of work tools and the alignment of care processes that involve the transfer of care among professionals, as strategies that can contribute to the communication and patient care to be carried out more safely and efficiently.

The visibility of risks and the early identification of potential complications in the postoperative period are elements that can contribute to the improvement of patient care and the processes of transfer of care. In this regard, in order to evaluate the risk of postoperative mortality early, the Service of Anesthesia and Perioperative Medicine (SAMPE) of a University Hospital in the South of Brazil, developed a model of probability of death in the postoperative period within 30 days and named it the SAMPE model.

The model is applied to patients over 16 years old and uses four variables identified in the preoperative period related to the patient's clinical conditions (age and comorbidities) and to the characteristics of the procedure (size of the surgery and nature of the procedure -urgency/emergency or elective). Cut-off points were established to identify risk classes, indicated by color: green or low risk (probability of death at hospitalization up to 30 days <2%), yellow or intermediate risk (probability between 2 and 5%), orange or high risk (probability between 5 and 10%) and red or very high risk (probability above 10%)<sup>(12)</sup>.

Therefore, the purpose of this manuscript is to describe the implantation of a flowchart of transference care of patients with low risk of postoperative mortality, based on the classification of the SAMPE model.

#### **■ METHODOLOGY**

This is an experience report about the process of implementation of a pilot project that used the SAMPE risk model to qualify and optimize the transfer of patient care in the immediate postoperative period, from the Post Anesthesia Recovery Room (PACU) to surgical hospitalization unit, in a University Hospital in the South of Brazil.

The preparation of the proposal began in October 2017, based on systematic meetings between the leaders of the PACU and a unit of surgical hospitalization of the local field of study, which was included because it presents a great demand for hospitalizations of post-operative patients classified as green SAMPE, inclusion criterion for the proposed project. Patients classified as SAMPE yellow, orange or red and/or transferred to other surgical hospitalization units were excluded.

The PACU consists of 29 beds, of which 18 are for adult patients, five are pediatric, five are post-operative intensive care, and one is an isolation bed. The patients are submitted to small-, medium- or large-sized anesthetic-surgical procedures, remaining in place until regaining consciousness and protective reflexes, as well as stability of vital signs. The surgical hospitalization unit comprises 18 beds, of which 12 are for adult patients and six for pediatric patients, submitted to surgical procedures or elective diagnoses, of small and medium size, that require care and hospitalization for up to 72 hours.

In December 2017, after the sensitization and training of the teams in the areas involved, such as nursing, administrative and medical, the pilot project was started with a forecast of reevaluation of the results in three months.

### ■ RESULTS AND DISCUSSION

The quantity of PACU beds for the care of adult patients in the postoperative period, has proved insufficient in face of institutional demand, often leading to the patient being in the surgical block for a longer time than necessary. This unavailability of beds exposes the patient who is awakening from anesthesia to incidents and risks, such as falls and skin lesions, for example due to the positioning and vulnerability that are found in the operating room<sup>(13)</sup>.

It is understood that some factors may contribute to overcrowding of PACU, such as the high demand for procedures performed on the surgical block, the complexity of care resulting from the surgeries performed and the changes in the patients' clinical profile, as well as the prolonged time to exit after being discharged to the hospitalization unit. This last aspect is influenced by some variables, among them the difficulty of telephone contact among nurses in both units, considering that these professionals have several functions in their work places, which do not always allow the same time they are available for the transfer of patient care in the postoperative period.

The institutional work process prior to the implementation of this project, assumed that the PACU nurse would make telephone contact with the nurse of the surgical

hospitalization unit, passing the patient's pertinent information in discharge conditions after the surgery. In addition, this information was recorded on developments in the electronic medical record. After the transfer of care, by phone, the patient was inserted in a transportation list of the hospitalization unit. The transportation of the patients between the units is carried out by the assistant nurses of the involved areas who, when seeking the patient, received pertinent information to guarantee continuity of care.

In view of the need to optimize bed rotation in the PACU and transfer of care to the surgical unit, it was proposed the development of a flowchart based on a postoperative mortality risk model as a strategy to favor the movement of patients between the areas. The use of risk classification is a methodology that favors the decision-making of professionals involved in direct patient care<sup>(14)</sup>.

Initially, it was decided to include in the flowchart patients with low risk of complications, which are classified as green SAMPE and present likelihood of postoperative complication less than 2%. Added to this criterion, it was included the need for the patient not to have presented any type of intercurrence and/or instability in the trans and postoperative period, such as significant blood loss, sustained hemodynamic instability, sustained arrhythmia, surgical complications (perforation and/or laceration of structures), pain and/or the presence of nausea and difficult to control vomiting, which were listed and validated by the professionals involved.

Thus, patients who met the agreed criteria between the areas were transferred from the PACU to the hospitalization unit without the need for telephone contact among the nurses. The safety in the care transfer process was maintained by the evolution of nursing in the electronic medical record and the sharing of information between the nurses of the PACU and the hospitalization unit at the time of the physical transfer of the patient from one unit to another. In those cases where the patient presented a risk above 2% or intercurrent/instability in the trans and/or postoperative period, the transfer of care via telephone contact among the nurses was maintained, in addition to the other communication strategies already described. Figure 1 illustrates the flowchart of transference care of patients with low postoperative mortality risk.

In the initial phase of the pilot project, a low security impression was identified in the nursing team, mainly among nurses, because they referred and/or received the patient without transferring care through telephone contact, which was traditionally part of the organization of the work process. Throughout the project's development, however, the qualification of the records in patients' discharge

evolution minimized the initial low security judgments, which assumed negligence of relevant information, leading to improvements in trust between the teams. Another improved aspect was the transfer of care among nursing assistants, enabling these professionals to appropriate the conveyed information, understanding the importance of this step in the continuity of patient care.

The communication made by telephone only may be more error-prone, since different accents, dialects or pro-

nunciations, background noises, interruptions and unknown terminologies could make it difficult to understand the receiver and promote failures. In this sense, the exclusion of this step, with consequent qualification of the records in the patient's chart and greater investment in quality in the sharing of information verbally among nursing professionals at the moment of the transfer of care, is in line with the requirements of international security goals in the area of communication<sup>(8)</sup>.

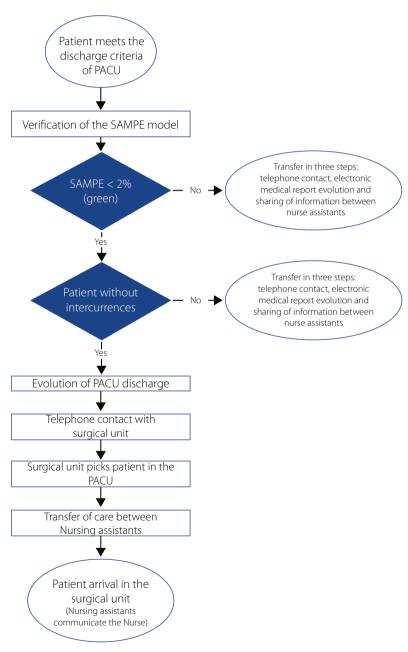


Figure 1 - Flowchart of transference care from patients with low postoperative mortality risk Source: HCPA, 2018.

Teamwork can booster transformations related to effective communication and, for a positive organizational culture, an aspect that represents a constant challenge, since it requires permanent evaluation of the processes added to values, habits, beliefs, norms and experiences lived and shared by the managers and professional organizations. In this perspective, the effective communication will reflect favorably in the care processes and, consequently, in the quality of services and patient safety<sup>(15)</sup>.

During the pilot project, some situations that generated doubts among the nursing team were identified and required review and clarification, such as inclusion of patients who stayed overnight in PACU and patients with continuous analgesia in epidural catheter. It was defined by the teams involved that if there were no intercurrences with these patients, they could remain in the defined flow for low risk patients, i.e., green SAMPE.

The main results observed by the professionals in both units after three months of project implementation were: the agility of the PACU patient discharge due to the reduction in the average of seven minutes of stay per patient, totalizing one hour per day; reduction in the frequency of the formation of a queue waiting for stretches to the Surgical Block at the end of the shifts; qualification of records regarding nursing care referring to the clinical condition of the patient; and optimization of nurses' time for care activities. It is highlighted that, during this period, no intercurrences were observed related to the proposed transfer of care.

### **■ FINAL CONSIDERATIONS**

The elaboration and application of a specific flowchart of transference care with a focus on effective communication for postoperative patients allows visibility to eventual complications, which during hospitalization contributes to patient safety. Moreover, the fact that this model has been created and directed to the profile of the population, which uses the services in the hospital field of study, makes it contemplate the real needs and specificities of the institution.

The proposal of this project between the units involved seeks improvements in reducing the time of permanence of the low risk patient in the PACU and the possible adverse events to which it is exposed. The implementation of the pilot project and the necessary adjustments throughout its execution made it possible to adopt the proposed flow-chart on a permanent basis, providing for its expansion to the other surgical units, also contemplating the other SAMPE classifications based on specific flowcharts care for each of the classes of risk.

It is necessary that the work processes aimed at the transfer of the patients are constantly evaluated and restructured, being able to undergo adaptations according to the needs of the users and also of the health institutions. Because it is an innovative process, a critical managerial view of the process is fundamental, in order to culminate in the reduction of risks and damages, and in the incorporation of good practices that favor the effectiveness and safety of nursing care. Due to these implications, the implementation of the specific flowchart of transference care focusing on effective communication for post-operative patients may bring contributions to teaching, research and nursing care.

The limitations of this study are related to observational data from a pilot project involving a specific surgical hospitalization unit. It is suggested that studies be carried out to evaluate the relationship between length of stay in PACU, nursing record qualification and reduction of adverse events, using the flowchart of transference care of patients with low postoperative mortality risk.

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