Management process in surgicenters from the perspective of nurses

Processo gerencial em centro cirúrgico sob a ótica de enfermeiros Proceso de gestión en el guirófano bajo la óptica de enfermeros

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Abstract

Objective: To describe the management process performed by nurses in surgicenters.

Methods: This is a descriptive, exploratory and qualitative study conducted with 10 nurses in a surgicenters of a university hospital. The data collected from September to October 2019 through semi-structured individual interviews were analyzed with the aid of the IRaMuTeQ software and submitted to inductive thematic analysis.

Results: Similarity analysis demonstrates the role of the nursing team in the surgicenters and their direct relationship with patient care, while the role of nurses is characterized by predominantly management actions related to work organization. Through inductive thematic analysis, three categories related to the management process in surgicenters were listed; people management, material resource management and care management.

Conclusion: The findings indicated that the management process in surgicenters, according to nurses, involves the need to improve skills, as well as knowledge of tools for managing people, for managing material resources and care.

Resumo

Objetivo: Descrever o processo gerencial realizado por enfermeiros em centro cirúrgico.

Métodos: Estudo descritivo e exploratório, de abordagem qualitativa, realizado com 10 enfermeiros do centro cirúrgico de um hospital universitário. Os dados coletados no período de setembro a outubro de 2019 por meio de entrevistas individuais semiestruturadas foram analisados com auxílio do software IRaMuTeQ e submetidos à análise temática indutiva.

Resultados: A análise de similitude demonstra o protagonismo da equipe de enfermagem do centro cirúrgico e sua relação direta com o cuidado do paciente, enquanto a atuação do enfermeiro se caracteriza por ações predominantemente gerenciais relacionadas à organização do trabalho. Por meio da análise temática indutiva, foram elencadas três categorias relacionadas ao processo gerencial em centro cirúrgico: gestão de pessoas, gestão de recursos materiais e gestão do cuidado.

Conclusão: Os achados indicaram que o processo gerencial em centro cirúrgico, segundo os enfermeiros, envolve a necessidade de aprimoramento das competências, bem como do conhecimento das ferramentas gerenciais para a gestão de pessoas, para o gerenciamento de recursos materiais e para a gestão do cuidado.

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Resumen

Objetivo: Describir el proceso de gestión realizado por enfermeros en el quirófano.

Métodos: Estudio descriptivo y exploratorio, de enfoque cualitativo, realizado con 10 enfermeros del quirófano de un hospital universitario. Los datos recopilados durante el período de septiembre a octubre de 2019, mediante entrevistas individuales semiestructuradas, fueron analizados con ayuda del software IRaMuTeQ y sometidos al análisis temático inductivo.

Resultados: El análisis de similitudes demuestra el protagonismo del equipo de enfermería del quirófano y su relación directa con el cuidado del paciente, y la actuación del enfermero se caracteriza por acciones predominantemente de gestión relacionadas con la organización del trabajo. Mediante el análisis temático inductivo, se enumeraron tres categorías relacionadas con el proceso de gestión en el quirófano: gestión de personas, gestión de recursos materiales y gestión del cuidado.

Conclusión: Los resultados indicaron que el proceso de gestión en el quirófano, según los enfermeros, comprende la necesidad de mejora de las competencias, así como del conocimiento de las herramientas de gestión para la administración de personas, de recursos materiales y del cuidado.

Introduction =

Historically, nurses have taken over an increasing number of management positions, and professional training for management position performance has been increasingly demanded. (1) It is worth mentioning that several challenges permeate the nursing work process management, especially prioritizing the essentially management task over care.

Under this view, the concept of care management emerges, which involves articulation between the processes of caring and managing as a focus on users' needs. (2) In an integrative review of national and international studies, it was found that management practices of nurse care should have as a guiding axis improvement of quality of care and working conditions for professionals. (3) Therefore, according to the authors, nurses must act directly in provision of care, in people and material resource management, in leadership, in planning of assistance and in development of the nursing team through training, as well as in nursing care coordination and assessment.

It is important to consider that each service has specificities and particularities, which need to be analyzed in the nursing management process. Surgicenters, in particular, are considered to be one of the most complex sectors in a hospital organization. This sector involves several work processes and presents several situations of unpredictability. (4) Moreover, operating room professionals, eventually, are subjected to a great emotional burden due to the high expectations placed by users and the constant tension to avoid errors related to surgical treatment. Also noteworthy is the fact that it has a high cost for the institution, as it uses high technology to maintain the quality of procedures. (5,6)

In this setting, nurses play a fundamental role, as they are recognized as the main articulators and responsible for the surgical treatment process in all phases (before, during, and after surgery). Furthermore, nurses are essential for work organization and people management. They perform team integration, communication, continuing education, decision-making, analysis, discussion, programming and assessment of nursing practices. (4)

All of these elements refer to the need for nurses to develop skills for the management process, as well as knowledge about management tools, taking as a prism quality of care to users undergoing surgical treatment. According to Fleury, (7) competencies refer to the knowledge of individuals, their technical and non-technical skills and a proactive attitude; defined as knowing how to act responsibly and recognized, which implies mobilizing, integrating and transferring knowledge, resources and skills that add economic value to organization and social value to individuals.

The Brazilian National Curriculum Guidelines (*Diretrizes Curriculares Nacionais*) for Undergraduate Nursing Courses establish that the training of nurses aims to provide professionals with the knowledge required to exercise health care, decision-making, communication, leadership, administration and management and permanent education. (8) It appears that five of these competencies are related to management, which reinforces the need for nurses' management actions in the various settings of performance, (9) including in surgicenters.

A qualitative approach study carried out with nurses showed the importance of using and adapting management tools, generally used to guide, assess and adapt processes or systems, in order to meet the sector's purposes, such as flowchart and some protocols for operational procedures. Another survey carried out with nurses highlighted the relevance of developing some skills for working in a highly complex sector: supervision and leadership, decision-making, conflict management, human, material, financial and continuing education, among others. However, the referred researches did not analyze management in surgicenters, which will be the object of investigation in the present study.

Based on this, the question is: how does management in surgicenters take place from the perspective of nurses? What management skills and tools do these professionals need to manage surgicenters? It is believed that this understanding may support reflections on the process of development of management competencies necessary for professionals in training and in practice in an surgicenters environment.

Given the above, the objective of this research was to describe the management process performed by nurses in surgicenters.

Methods =

This is a descriptive, exploratory and qualitative study carried out in the surgicenter of a university hospital in center-western Brazil.

Participants were nurses allocated to the surgicenter of that institution. Therefore, nursing division was required to list the number of nurses assigned to this sector, totaling 13 professionals.

Professionals from the institution's staff and who were part of the surgicenter team for at least six months have been included. Professionals who were not present in the sector during the data collection period due to certificates, vacations or leave have been excluded. Therefore, 10 nurses met the adopted eligibility criteria. Three were excluded, one for not being present in the sector during the collection period due to vacation leave, and two for not being part of the sector's effective staff for less than six months.

Data collection was performed by an undergraduate nursing student after training on ethical aspects, participant's approach and study method. The data were collected between September and October 2019, in a reserved place, through individual semi-structured interviews. As recommended by Minayo and Costa, (10) this technique gives interviewers greater control over the information they need to obtain during interviews; at the same time, it allows a free and spontaneous listening of interviewees on the topics addresses.

To this end, a script composed of two parts was developed: the first to characterize socio-professional identification data and the second to address central questions that answer the objectives of this study. Expert judges analyzed this script in relation to subject and, subsequently, it was subjected to a pilot test. They were composed as central questions of this script: how is management in surgicenters? What skills do nurses need to manage surgicenters?

The data were analyzed with the aid of IRaMuTeQ (acronym for *Interface de R pour les Analyses Multidimensionnelles de Textes et de Questionnaires*) and submitted to inductive thematic analysis proposed by Braun and Clarke, (11) following the following steps: transcription and deepening of the data; creation of codes of interesting data characteristics in a systematic way throughout the data set; search for themes through grouping codes; review of themes generating the thematic map; naming of themes and ongoing analysis to improve the specifics of each theme; final analysis of the selected excerpts in relation to the guiding questions of the research and literature.

The research was approved by the Research Ethics Committee (REC) of the Faculty of Health Sciences of *Universidade de Brasília*, under Opinion 3,397,247. Participants signed the Informed Consent Form. Data collection started only after delivery of a duly signed copy with the interviewee's consent.

Results

Characterization of participants

Ten nurses participated in the study, eight female and two male, all between 26 and 54 years old. Three participants were from Federal District

and seven from other states, such as Bahia, Ceará, Minas Gerais, Pernambuco, Piauí, and São Paulo. The total training time in nursing ranged from 6 to 13 years and professional experience from 4 to 13 years, with working time in surgicenters from 2 to 5 years. With regard to professional training, all mentioned specialization in some area of nursing.

Similarity analysis

With the help of IRAMUTEQ it was possible to perform similarity analysis of the terms present in all interviews. This analysis evidenced nursing as a team as a central nucleus in direct connection with nurses, patients and the surgicenter, for configuring the central system of connections in a grouping that helps us to understand the elements of representation and the meanings attributed to them. Thus, through the analyzes carried out with IRAMUTEQ, representation of surgicenter nurses was identified with a strong emphasis on the administrative process and work organization in this sector, including in relation to the work of other professionals besides nursing. Care management is also presented in connection with nurses; however, the most evident relationship occurs with the nursing team.

Management process in surgicenters

Through thematic analysis of all interviews, three main themes were identified in the management process of surgicenter nurses, as shown in Figure 1.

People management

According to nurses, people management involves three sub-themes: competency development, multidisciplinary teamwork and interpersonal relationships.

Competency development

Nurses identified key points for the development of people management skills in surgicenters. As attributes necessary to nurses in this sector for care management are mainly leadership, agility, decision-making, flexibility and empathy.

"In my opinion, you are born with the spirit of leadership, you are born with the spirit of taking

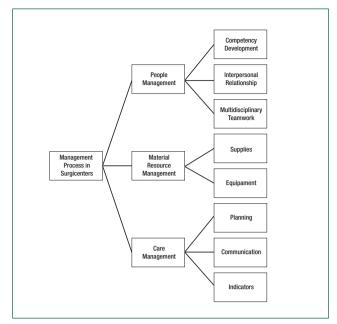


Figure 1. Thematic analysis of the management process in surgicenters

the lead [...]. But the other characteristics that are necessary for nurses can be acquired over time." (109)

"[...] nurses have to be agile, they have to be aware of several things at the same time and have resoluteness." (108)

"Having decision-making, although it is often not up to us, but up to the boss." (E07)

"[...] that the changes that occur are flexible, because nothing is static and everything changes every day." (105)

"It has to be an empathetic person, who is always with patients, but mainly someone who to deals with surgical teams." (I10)

Concerning competency development, continuing education was cited by professionals as the main factor for improving and updating routines, as well as for acquiring skills, resolving deadlocks and improving care in surgicenters.

"I think that continuing education is something very important that we don't have in the sector, we

started to develop it from last month. We started to provide it to each nurse, so that he or she can present a topic that we have difficulty in here." (109)

"There is a lot of routine that is lost, continuing education here is very difficult to do, because of the sector's routine." (I10)

Interpersonal relationship

Surgicenter nurses recognize that interpersonal relationships are one of the pillars for a good functioning of the sector, as it provides greater integration between individuals and teams. Despite this, they mentioned the presence of conflicts between the teams as a barrier to interpersonal relationships.

"[...] technicians, either because they are nurses, have more performance here, or because they don't have a leadership skill; thus, these conflicts are generated in relation to professionals who do not accept how the scale was made, do not accept a request that a superior makes, so we have this interpersonal difficulty" (104)

"There should be greater integration, a more faithful preparation of the map, continuing education and an interpersonal relationship between the teams and between the managers. Because, when something arrives here in the surgicenter, we can solve little" (103)

"One of the barriers is the issue of connecting the team at work. Sometimes, one or another professional, nurse or technician who does not have this vision of a team and wants to develop only his or her work says: "this is not up to me, I am assigned to this room.". Then it ends that these interpersonal conflicts occur." (106)

Multidisciplinary teamwork

Multidisciplinary teamwork is essential to achieve the purpose of the profession, which is to provide quality and safe care to surgical patients. Some participants pointed out that this work is developed in a harmonious way in the sector, but others reported a noticeable difficulty in collective action. "[...] we have several other professionals with us and the surgicenter is an area that we have to work in harmony with all other sectors." (103)

"[...] at the beginning, they had two divisions, nursing and medicine, which are interns, residents. So, now that we are able to work even in a multidisciplinary team, interacting." (102)

"They are well trained people and well committed to the service, our human resources are very good both in quantity and quality." (IO3)

Material resource management

Material resource management, from the perception of professionals, was approached as one of the barriers to achieving quality of care in surgicenters, both for old equipment and lack of supplies, causing surgeries to be postponed or rescheduled. From participants' statements, two sub-themes associated with material resource management.

Supply management

Considering the professionals' statements, supply management must be performed by nurses in sector organization, to meet all needs and provide better assistance. However, the interviews demonstrate that the nurses' participation is limited to a part of the supply acquisition process, as they manage the supplies that were directed to surgicenters, when, in reality, they should be present in the entire process, including material selection and acquisition.

"Nurses have a role in addition to leadership, also keeping an eye on the issue of supllies, if they are insufficient, what is missing or what they are using in excess, but for nurses to have this view, they need to have a global view." (I01)

"That is, they make a purchase, but they do not make the complete purchase. I think that the people who manage these materials are not in assistance, so they do not know the need that we have here, we are not consulted about it either." (109)

"[...] I think a lot about cost saving, irrational use of resources.

Equipment management

In the same way, nurses must be in charge of equipment management, to communicate to the higher management the sector's needs.

"In this surgicenter we have problems with equipment, because they are very old. They break a lot, you waste a lot of time changing monitors." (101)

"Lack of many materials and equipment here in the surgicenter is one of the barriers, so surgical and anesthetic teams are always at a high level of stress." (108)

"Having materials available and that the recovery room equipment is not as old as we have. There should be equipment enough left so you don't have to replace from one location to another." (IO2)

Care management

Themes were identified that can be classified as management tools, since they are used for the best composition and execution of care in surgicenters, such as planning, communication, and indicators.

Planning

Adequate planning for the sector aims to provide better assistance, organization and care in the pre, intra and postoperative moments with the patient. Nurses are the main organizer of planning.

"He wants us to provide it, since they skip all stages of our planning and they want us to find a way to get by and sometimes it doesn't happen because of that." (103)

"(...) it has to be organized, because we handle with many people, with many materials, with many scales." (I01)

Communication

Communication is an inherent part of the nature of organizations, which are formed by people who in-

teract with each other and who, through interactive processes, enable the functional system for survival and achievement of organizational objectives, even in contexts of diversity and complex transactions. Communication in surgicenters is recognized as one of the most important tools for the functioning of the sector and also as one of the most complex points.

"When there is a uniform communication, there is no barrier, if everyone speaks the same language, there is no difficulty." (107)

"[...] even though we lack material and communication, I think we do a good job." (108)

"The issue of communication, as we work with many people, sometimes communication does not reach the other co-worker directly, so it ends up generating a conflict. Communication in surgicenters is very important, I think it is one of the most difficult factors because not having such effective communication is what makes it difficult. At the same time, if we had better communication, it would facilitate our process." (101)

Although communication flow needs to be harmonious, it was reported that it was difficult to maintain it that way among multidisciplinary teams, between assistance-management in the sector and between management-superintendence. As for the nursing team, communication flow was considered effective, as can be seen in the statements below:

"[...] to have good communication with the whole team, especially because we work with the multi-disciplinary team" (I01)

"[...] but, until then, there is no communication with the head. Our bosses are in their office solving problems, and they sometimes don't even know what's going on here." (I01)

"[...] it could improve the issue of communication between the multidisciplinary teams in relation to

our map, our map changes a lot, there are many substitutions." (103)

"[...] communication in nursing is a positive point that I find here." (I07)

Team meetings were presented as an opportunity to improve communication, as they favor the exchange of information, general clarifications and team alignment.

"As the main problem here today is lack of meeting, we don't have a meeting, we don't have effective communication." (I01)

"Periodic meetings to point out problems, solutions and better indicators, continuing education." (104)

"There are meetings, talk, but I don't know how far the other teams are really doing. We see that, in practice, communication between managers does not happen." (107)

"[...] having a greater integration, a more faithful production of the map. Continuing education and interpersonal relationships between teams and between managers." (103)

Indicators

The safe surgery protocol was identified as a reference for best indicators in surgicenters. This management tool aims at reducing adverse events and surgical mortality, increasing safety in carrying out such procedures. Despite this, through nurses' statements, it appears that the protocol is not yet fully implemented in the sector.

"We have safe surgery, this part still needs to improve a lot, the medical connection and the nursing part, to really work the two teams together. We are still unable to achieve what is proposed in safe surgery." (102)

"Today we have a safe surgery checklist that is more targeted at nurses. We still have this difficulty, that

the team is not always fully adapted to the absence of nurses, technicians will not always act and will perform this procedure." (106)

Discussion

Nurses have increasingly occupied management positions in health services. Care management, which refers to an interconnection between care and management processes with an emphasis on care quality, (2) emerges as a contemporary concept for the exercise of this function. However, when it comes to surgicenters, it is still observed that nurses' care management is concentrated in the sector's administrative activities. (12) Care activities are performed predominantly by the other nursing team members, corroborating the data evidenced in similarity analysis of the present study.

With regard to thematic analysis, people management in surgicenters was one of the main themes listed by nurses in this study, with competency development being the greatest highlight for this management activity. In a study on the training of skills required of nurses working in a cardiac postoperative unit, there was a need for leaders to direct tasks to the team, due to constant demand for attention in high complexity units. (3) Thus, an adequate development of work team members' skills is essential to maintain the quality of activities delegated to these professionals.

In people management, leadership has been a group phenomenon that involves an individual's influence over others, in order to achieve a certain goal. The mark of modern leadership is to strengthen the work team by valuing individual skills. Although some interviewees mentioned the understanding of leadership as a natural attribute, the literature shows that the teaching-learning process contributes to exercise this competency by students in hospital practice, although it is developed more strongly during the experiences lived in the nurses' daily work. (13) Therefore, it is essential that managers from health institutions recognize the relevance of investments in developing people manage-

ment with an emphasis on leadership during professional practice. (14)

Considering that the study setting is marked by uncertainties and unpredictable situations related to surgical procedures, (15) it is necessary that nurses also develop other skills such as agility, decision-making, flexibility and empathy, as evidenced in the participants' statements. Moreover, constant technological transformations incorporated, especially with regard to minimally invasive surgeries, require skills and continuous improvement, without losing sight of humanization of care.

In this setting, management nurses should consider continuing education for the development of team competencies consistent with the service's needs. Educational strategies, however, have been carried out in a timely manner and disarticulated from the improvement of skills, although nurses recognize the relevance of this resource. (3) Still in relation to the people management category, in the interviews, we highlighted challenges related to the multidisciplinary team, being linked to the search for a collective and harmonious exercise of the work process. Conflicts that exist within the nursing team (nurses x nursing technicians) and between physicians and nurses are present daily in surgicenters. For these professionals, interpersonal relationships are one of the essential elements for a good functioning of the sector and, therefore, for care management.

Meeting these findings, a study on all challenges and strategies of nurses in management activities in surgicenters identified conflicts between the medical team in understanding nursing work. (4) In order to deal with this problem and enable more harmonious work processes, measures have been proposed, such as shared management and the construction of more dialogical and mutual respect spaces between teams, (4,15) which would characterize a transition from multidisciplinary to interprofessional work.

Another theme listed in the current research was material resource management. According to interviewees, supply management can compromise quality of care in surgicenters. Inadequate

quality and quantity of these materials can contribute to surgery postponement or rescheduling. Such results were also evidenced in other studies^(3,16), reinforcing the assumptions that administrative and care management are interdependent attributions, i.e., lack of adequate management in the sector, (in) directly impacts quality of care and patient safety.

In this perspective, management tools for care management emerge as essential elements for decision-making in surgical centers, as they contribute to preventive and corrective actions in the work process as a whole. Management tools allow analyzing the events that affect quality of care, i.e., defining and measuring the problem and, therefore, proposing solution strategies. (16) The interviews presented planning, communication and indicators as three tools of great importance for care management.

The challenges related to the surgicenters' work dynamics referred to above require nurses to constantly (re) plan actions. Planning, however, must encompass both sector (re) organization in relation to routine unforeseen events and redefinition of goals and interventions in the medium and long term, with a view to professional and patient safety. It is essential that this planning is carried out collaboratively with all team members, without losing sight of the institution's organizational aspects, such as its values, mission and goals in force in institutional planning.

Strategic planning is an institutional prerogative that contemplates the institution's own characteristics. In the study setting, the current Strategic Master Plan is available in the public domain. As highlighted in this document, developing this plan not only involved the different sectors and social actors, but also used systematic methodological paths for an expanded diagnosis of the analyzed setting. It should be noted that developing this document also considered the population's health needs according to the District Health Plan and the institutional vision and values. (17-19)

With regard to communication, surgicenter nurses is responsible for articulating work processes, (6) which was also evidenced in the findings

of similarity analysis, in which nursing emerged as a central nucleus in direct connection with nurse, patient and surgicenter. Such findings reinforce communication as an essential element for the functionality of this sector, so that it needs to be effective and reach all team members clearly and without noise, (17) including multidisciplinary teams, sector assistance-management and management-superintendence.

Clinical practice in surgicenters is changeable and marked by uncertainties in the daily surgical program. Furthermore, professionals working in this sector are highly interdependent and work under constant pressure, (15) which requires assertiveness in communication flow to ensure quality of care and patient safety. To optimize this communication flow, team meetings are important strategies, as they contribute in a practical and dynamic way to dissemination of new decisions, norms and rules, (6) and better integrate the different multidisciplinary team members.

Despite this, nurses reinforced the need for periodic meetings in the sector, in order to discuss, plan and assess the work process. They also mentioned that these meetings should not be held only in the face of failures, but should be a constant space for exchanging experience, dialogue, suggestions and even developing educational processes. Similarly, the literature highlights that overcoming the challenges of articulation between the administrative and clinical spheres in hospital institutions is necessary to strengthen communication and create a culture of cooperation and collaboration. Nursing managers can make use of these management models to qualify nursing care. (18)

Another tool mentioned by nurses in the research is the use of indicators for maintaining quality. In this regard, the Safe Surgery Protocol developed by the World Health Organization (WHO) stood out, through the program "Safe Surgery Saves Lives", which aims to increase patient safety and professional effectiveness through ten objectives. Such objectives are the foundation of good care practices and contribute to a greater awareness of the need to develop a safety culture

and better target public policies that aim for safer surgeries. (20)

However, despite mentioning the relevance of this protocol for the sector, there is still weakness in the patient safety culture, as evidenced in a study carried out in Thailand with 39 surgicenter nurses. This research identified barriers related to safe surgeries with regard to the implementation of the World Health Organization's Surgical Safety Checklist, (21) especially resistance from the surgical team, corroborating the results found in the current study.

In short, this study identified weaknesses in the nursing work process in surgicenters, mainly in articulation between administrative demands and the care process. Care management focuses on meeting users' needs. It is noteworthy that, in the interviews, there was no reference to the Systematization of Perioperative Nursing Care as an assistance tool for working in surgicenters. According to the study, effective implementation of the Systematization of Nursing Care and Nursing Process, although both are identified as important tools by most nurses in Brazil, is still a challenge to be overcome. (22) According to professionals, this is partly due to lack of appreciation of management and bureaucratic practices.

This study has as limitations the low number of participants and the fact that it was carried out in a single setting; it is noteworthy, however, that all nurses interviewed in the surgicenter of the referred institution who met the adopted eligibility criteria were interviewed. Furthermore, it is known that university hospitals are unique contexts for nurses' practice, which compromises the comparison of findings with most of the hospital care network.

Conclusion

The present study analyzed how the management process in surgicenters has been developed by nurses. Attributes such as leadership, agility, decision-making, flexibility and empathy stood out as necessary skills for nurses working in this sec-

tor. Communication, planning and surgery protocol are essential tools for decision-making of professionals in surgicenters. Similarity analysis demonstrated the role of the surgicenter's nursing team and its direct relationship with patient care, while the nurses' performance was characterized by predominantly management actions related to work organization. Through an inductive thematic analysis, three categories related to management in surgicenters were listed: people management, material resource management, and management tools. Management and assistance are interdependent attributions of nurses and especially relevant to those who work in this sector, due to the complexity of surgical care and the various situations of indispensability and uncertainty that permeate this daily work. Therefore, these professionals need to develop competencies for care management and to know management tools, focusing on quality user assistance regarding surgical treatment. The study is expected to enable advances and continuous improvements in care management in surgicenters, being a tool in hospital management and fostering scientific discussion.

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Collaborations =

KN Martins contributed to the research design, data analysis and interpretation and writing of the article. AA Bueno participated in data analysis and interpretation and writing of the article. SR Mazoni, VB Machado and RA Evangelista collaborated with data analysis and interpretation and writing of the article. AF Bolina, project coordinator, cooperated with research design, data analysis and interpretation, article writing, critical review of intellectual content and all authors approved the final version.

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