

Strategies to improve surgical patient safety

RESUMO | Objetivo: O presente estudo objetiva refletir sobre quais estratégias melhoram a segurança do paciente cirúrgico. Método: Revisão narrativa, realizada em janeiro de 2023 com base em artigos publicados em periódicos e documentos de órgãos oficiais dos anos de 2010 a 2022. Os dados foram categorizados pela análise temática de Bardin. Resultados: organizados em três categorias: O primeiro deles abordou-se “Eventos Adversos e as Práticas Cirúrgicas”, no segundo, a “Segurança do Paciente”, e por último foi abordado “Lista de verificação de segurança cirúrgica e sistematização de assistência de enfermagem como estratégias de segurança do paciente”. Conclusão: As ferramentas investigadas são inerentes à atuação da enfermagem cirúrgica que contribuem com a prática acadêmica ao reforçar a importância da aplicação de instrumentos que contemplem a segurança do paciente, sobretudo na conjuntura atual.

Descritores: Segurança do Paciente; Cuidados de Enfermagem; Covid-19; Enfermagem Cirúrgica

ABSTRACT | Objective: This study aims to reflect on which strategies improve surgical patient safety. Method: Narrative review, carried out in January 2023 based on articles published in journals and documents from official bodies from 2010 to 2022. Data were categorized using Bardin's thematic analysis. Results: organized into three categories: The first of them addressed “Adverse Events and Surgical Practices”, in the second, “Patient Safety”, and finally, “Checklist of surgical safety and systematization of nursing care as patient safety strategies. Conclusion: The investigated tools are inherent to the performance of surgical nursing that contribute to academic practice by reinforcing the importance of applying instruments that address patient safety, especially in the current situation.

Keywords: Patient Safety; Nursing care; Covid-19; Surgical Nursing

RESUMEN | Objetivo: Este estudio pretende reflexionar sobre qué estrategias mejoran la seguridad del paciente quirúrgico. Método: Revisión narrativa, realizada en enero de 2023 a partir de artículos publicados en revistas y documentos de organismos oficiales de 2010 a 2022. Los datos fueron categorizados mediante el análisis temático de Bardin. Resultados: organizados en tres categorías: la primera de ellas abordó “Eventos Adversos y Prácticas Quirúrgicas”, en la segunda, “Seguridad del Paciente”, y finalmente, “Lista de verificación de seguridad quirúrgica y sistematización de los cuidados de enfermería como estrategias de seguridad del paciente. Conclusión: Las herramientas investigadas son inherentes al desempeño de la enfermería quirúrgica que contribuyen a la práctica académica al reforzar la importancia de aplicar instrumentos que aborden la seguridad del paciente, especialmente en la situación actual.

Palabras claves: Seguridad del Paciente; Cuidado de enfermera; COVID-19; Enfermería Quirúrgica

Fernanda Araujo Valle Matheus

Nurse. PhD in Nursing. Professor at the State University of Feira de Santana, Feira de Santana, Bahia, Brazil.
ORCID: 0000-0001-7501-6187

Health in the City Hall of Salvador, Salvador, Bahia, Brazil.
ORCID: 0000-0003-4565-4924

Salvador, Bahia, Brazil.
ORCID: 0000-0002-9152-3039

Elane Emmanuele Carvalho Fonseca

Nurse. Professor Edgar Santos University Hospital, Salvador, Bahia, Brazil.
ORCID: 0000-0003-3890-1659

Recebido em: 11/12/2022
Aprovado em: 23/01/2023

Sheyla Santana de Almeida

Nurse. Master in Nursing. Nurse at the Hospital das Clínicas of the Federal University of Uberlândia in Minas Gerais, Uberlândia, Minas Gerais, Brazil.
ORCID: 0000-0001-8855-8698

Ana Paula Fernandes de Carvalho

Nurse. Health Department of the State of Bahia, Salvador, Bahia, Brazil.
ORCID: 0000-0003-4197-6205

INTRODUÇÃO

The issue of patient safety and the development of a culture in favor of measures aimed at reducing the risk of harm is on the agenda of the World Health Organization (WHO), the judiciary, and several public and private health services. Patient safety is recognized as a dimension of quality with emphasis on actions directed toward continuous improvement, accountability for

Juliana dos Reis Neponuceno de Oliveira

Nurse. Professor Edgar Santos University Hospital, Salvador, Bahia, Brazil.
ORCID: 0000-0002-7039-3837

Jean Carla de Lima

Health Auditor at the Health Department of the State of Bahia, Salvador, Bahia, Brazil.
ORCID: 0000-0001-6180-9813

Carleone Vieira dos Santos Neto

Nurse. Master in Care Management. Family

Caroline dos Santos Pinto de Oliveira

Nurse. Ernesto Simões Filho General Hospital,

access and effectiveness of care added to patient-centered care and respect for the patient's right to suffer unnecessary harm associated with health care.⁽¹⁾

The role of nursing is essential for the efficiency of the procedures performed in the operating room, promoting continuous and safe patient care,⁽²⁾ through instruments and methodologies that operationalize this assistance, such as the Surgical Safety Checklist (SSSL) and the Systematization of Perioperative Nursing Assistance (PESA). Patient safety received prominence in the COVID-19 pandemic.

According to WHO, the team is determinant for the success of a safe surgery, considering the complexity of the actions performed in the surgical center (OR), it is inferred that the efficiency of the team is associated with communication, skills and awareness of the risks involved by professionals, directly influencing patient safety.⁽³⁾ However, the personal safety of the team members was also on the agenda in the context of the pandemic.

Measures to improve the team's dialogue are indispensable for safe surgery, since the excessive use of personal protective equipment (PPEs) can interfere with the professionals' communication and, consequently, with the safety of the procedure.⁽⁴⁾

It is inferred that perioperative patient safety in times of the COVID-19 pandemic requires the implementation of strategies aimed at controlling viral transmissibility. To this end, such strategies must contemplate the surgical environment, the team, and the patient himself.

Worldwide data reveal the high frequency of adverse events in the operating room. Annually, seven million complications resulting from surgical interventions are recorded worldwide, and at least one million of these patients die.⁽⁵⁾ Thus, it is necessary that prevention and control measures are taken in order to provide safety for professionals

and patients.

The functions performed by the nursing team are essential to ensure the safety of the surgical patient. The role of the nurse contributes to the development of technologies and, when applied correctly, provide safety and quality to the care provided.⁽⁶⁾ Therefore, it is necessary that this assistance is done in a systematic way.

The PESA is fundamental to establish patient safety, since it promotes a continuous, participative, individualized and documented assistance.⁽⁷⁾ Besides the SAEP, the nurse can use instruments that verify the safety of the surgical procedure.

One of the tools that favor patient safety is the VHLSC, which improves teamwork, communication, and patient safety.⁽⁸⁾ The increased vulnerability to surgical errors with the pandemic has spurred discussions about adaptations of the checklist to cover surgical interventions on people under respiratory isolation.⁽⁹⁾

Therefore, the study is motivated by the need to ensure safe care for the perioperative patient in order to prevent the contagion and worsening of COVID-19. Contributing to the academic practice by reinforcing the importance of the application of instruments that address patient safety, especially in the current situation.

The present study aims to reflect on which strategies improve surgical patient safety

METHODOLOGY

Narrative review, conducted in January 2023 based on articles published in journals and documents from official agencies from the years 2010 to 2022. The data were categorized by Bardin's thematic analysis. The narrative review method allows us to describe the state of the art, in order to synthesize the knowledge already exposed in the literature, added to the reflections proposed by the authors. This methodology contributes to the discussion on a theme and is indicated for themes that need more in-depth study, that support the practice, and that serve as a subsidy to look at the safety of the surgical patient.

In the first stage, identification of the topic and selection of the research question, the PICo strategy was used, which stands for acronym for problem/population (P), interest (I), context (Co), as pointed out in table 1. Based on this strategy, the following question was framed:

Which strategies improve patient safety in the operating room?

The second stage, referring to the survey and bibliographic search, was carried out in January 2023, based on articles published in journals and documents from official bodies from the years 2010 to 2022.

The search for the terms for the research was conducted using the Health Science Descriptors (DeCS) along with the PICo strategy, defining the following search strategies: Patient safety strategies and operating rooms in the Virtual Health Library (VHL). We considered as inclusion criteria: original articles in

Picture 1: Application of the PICo strategy

Strategy	Definition	Application
P	Problem	Patient Safety
I	Interest	Strategies
Co	Context	Surgery Center

Source: adapted by the authors, 2023.

Portuguese and English related to the theme, national and international consensus available in full of free access and published between the years 2010 and 2022. The exclusion criteria were articles that did not meet the object of study, duplicate publications, theses, books, reviews and non-original articles

The interpretations of the results were discussed based on the articles found on patient safety. Aiming at a better understanding of the present study, the results were categorized by Bardin's thematic analysis into three categories. The first one dealt with "Adverse Events and Surgical Practices", the second one with "Patient Safety", and the last one with "Surgical Safety Checklist and Nursing Care Systematization as Patient Safety Strategies" which contributes to the academic practice by reinforcing the importance of the application of instruments that address patient safety, especially in the current situation.

RESULTS:

Adverse Events and Surgical Practice

Adverse events are understood as any unnecessary damage caused to the patient that results in effects or compromises structures and functions of the body, among the causes are diseases, injuries, disabilities, and deaths, and are classified as physical, social, or psychological.⁽¹⁰⁾ Adverse events can also vary according to severity.

Among the surgical adverse events, infections and other problems involving the surgical wound were the most recurrent, followed by infections not related to the surgical wound and hemorrhage.⁽¹¹⁾ It is necessary to reinforce the importance of preventing these complications during the team's work.

From 460 to 360 b.c., Hippocrates coined the postulate *non nocere*, which means first do no harm. At the end of the last century, Avedis Donabedian established the seven attributes of health care that define its quality: efficacy,

effectiveness, efficiency, optimization, acceptability, legitimacy, and equity in order to better understand the concept of quality in health.⁽¹²⁾

This is because the Institute of Medicine has presented a "Toerrishuman" report on adverse effects, which in the USA amounts to 98,000 deaths due to errors in care. These numbers generate impacts by overtaking traffic deaths, cancer, and HIV in addition to costing the public coffers \$29 million annually.⁽¹³⁾

It is worth noting that medication errors, burns during the procedure, patient falls, and bleeding due to drain disconnection are examples of the most frequent adverse events in nursing care.⁽¹⁴⁾ However, adverse events should be avoided by all professionals involved in the process, since their occurrence is not restricted to the nurse's action.

Furthermore, worldwide statistics revealed that 234 million surgeries were performed in 2008, a ratio of one surgery for every 25 people alive. Among these procedures, two million resulted in deaths and approximately seven million caused preventable complications.⁽¹⁴⁾ The information obtained in the surveys justified the urgency of the campaign of the second global challenge proposed by the WHO.

Since the Second Global Challenge for Patient Safety, Brazil has been committed to strengthening measures regarding patient safety. However, in Brazilian hospitals, a high incidence of adverse events continues to be observed, among which 20.0% correspond to surgical and anesthetic complications.⁽¹⁵⁾

A study conducted in the two years following the release of the second challenge proposed by the WHO, showed that 36% of complications and 47% of mortality in surgical patients were reduced after the implementation of safe surgery.⁽⁶⁾ However, in Brazil, a survey revealed that among the most frequent surgical adverse events are inadvertent retention of surgical items in patient

cavities, mistaken surgeries and wrong side.⁽¹⁶⁾

The postoperative retention of foreign bodies is highlighted, especially in abdominal surgeries with an incidence between 0.15% and 0.2%, which can cause severe complications to the patient, since they corroborate a mortality rate between 10% and 18%.⁽¹⁷⁾ It is noticeable that the incidence rate of surgical adverse events is still significant, ratifying the need to adopt strategies that reinforce safety in the service.

Patient Safety

Patient Safety is defined as the reduction of avoidable harm to a minimum acceptable value.⁽¹⁰⁾ This fundamental principle of care has become a constant concern in health care, since failures in care can cause irreparable harm to the patient and negatively impact health care systems.⁽⁵⁾

From the 21st century on, patient safety has become a global concern and is considered a key indicator of quality in healthcare. New associations and organizations related to patient safety have been established in countries with different healthcare systems besides the United States, among them England, Ireland, Australia, Canada, Spain, France, New Zealand, and Sweden.⁽¹⁸⁾

In this sense, the WHO established the World Alliance for Patient Safety in 2004, with the purpose of supporting the adoption of a culture of patient safety in key areas of care delivery, evidence-based policies, and global research.⁽¹⁹⁾ Three global challenges were then proposed in specific contexts that needed to strengthen care safety.

The first global challenge, launched in 2005, focused on the prevention of HAIs (healthcare-associated infections); the second, in 2008, focused on surgical safety; the third, in turn, was released in 2017, aiming to reduce unnecessary harms associated with drug therapy.⁽¹⁹⁾ It can be observed that surgical safety is a central priority in the second challenge

pointed out by the WHO.

The Systematization of Nursing Care (SAE) is a fundamental work methodology to guide the actions of nursing care to the individual in the health-disease context with the objective of bringing together nursing activities so that they are not done in isolation but are part of a process. This is called the nursing process, which can be understood as a nursing work tool, guided by at least one theory, and composed of ordered, dynamic, interacted and independent steps that can occur in any scenario of direct care to the client.⁽²⁰⁾ The SAE favors a care practice based on scientific knowledge, contributing positively to the patient, family, the nursing team, and the health service, focusing on care and patient safety.⁽²¹⁾ For Waldow, care is our practice and is characterized by actions and behaviors performed with the intention of favoring, maintaining and improving the living and dying process, providing attention to the biopsychosocial and spiritual needs of people.⁽²²⁾

Thus, with the nursing process, nurses are able to manage the risks that patients are exposed to, since there are standardized languages to name them, which should be used to facilitate communication among professionals and to obtain and monitor health outcome indicators.⁽²³⁾ Outcome indicators are used to guide processes and actions, as well as permanent and continuing education, in order to provide the best care and minimize incidents related to health care.⁽³⁾

It should be emphasized that these incidents are circumstances that may not directly affect the patient (near miss), affect them without causing any damage (incident without injury) or result in unnecessary compromises that we call adverse events, causing damage that prolongs the length of hospital stay, promotes disability and even death.⁽⁴⁾ We know that errors culminate in adverse events, but not all adverse events result from error.⁽²⁵⁾ Understanding the concept

of error is necessary for the development of prevention strategies, especially for preventable adverse events.

In Brazil, since 1990, the nursing process (NP) had already been proposed to support the care of surgical patients in the pre-, trans- and immediate postoperative periods (IPO), namely:

The preoperative period is divided into mediate and immediate, being the mediate preoperative period from the moment the decision for surgery is made up to one day before the procedure. The immediate preoperative period occurs 24 hours before the anesthetic-surgical act [...]. The transoperative period starts when the patient enters the operating room and ends when the patient leaves the operating room after the anesthetic-surgical procedure is over. The immediate post-operative period covers the first 24 hours after surgery and includes the time the patient stays in the post-anesthesia recovery room (PACR).⁽²⁶⁾

After seven years, due to the COVID-19 pandemic, the National Health Surveillance Agency (ANVISA) published a technical note of guidelines for health services emphasizing the prevention and control of infections by the new coronavirus (SARS-CoV-2) in surgical procedures,⁽²⁷⁾ since the risk of harm to the patient is inherent to the surgical environment.

The surgical center (SC) is a highly complex unit within the hospital environment. The team of workers in this sector, the material resources and the technologies used focus on perioperative patient care, with the aim of ensuring treatment success.⁽⁷⁾ Surgical procedures are responsible for treating numerous pathologies.

Although these interventions are fundamental for the treatment of several disabilities and reduction of deaths secondary to diseases, the lack of quality

care is still a worldwide problem,⁽⁵⁾ evidenced by factors that promote the occurrence of damage to the perioperative patient.

The high risk of surgical incidents may be related to individual or collective factors, especially the high level of tension among professionals, ineffective team communication, high workload, and other employment ties.⁽²⁸⁾ Therefore, both the multiprofessional team and the service managers should be involved in building a patient safety culture.

Surgical safety checklist and nursing care systematization as patient safety strategies

One of the alternatives found by the WHO was the elaboration of the VHLSC, presented as a checklist to reinforce safety practices and improve communication and teamwork among health areas.⁽³⁾

This is a standard checklist that all professionals on the surgical team must participate in. It involves three different application times: before induction of anesthesia (Sign In), before the surgical incision (Time Out), and before the patient leaves the operating room (Sign Out).⁽²⁹⁾

The LVSC addresses key moments for verifying surgical patient safety risks, totaling 20 items. The first check occurs before induction of anesthesia, where the following points are addressed:

⁽¹⁾ identification of patient data and consent, ⁽²⁾ demarcation of surgical site, ⁽³⁾ verification of functioning of anesthesiology equipment and medications, ⁽⁴⁾ pulse oximeter functioning, ⁽⁵⁾ allergy investigation and recording, ⁽⁶⁾ evaluation by anesthesiologist for risk of difficult airway for intubation, and ⁽⁷⁾ risk of blood loss.⁽³⁰⁾

After anesthetic induction and before the surgical incision, staff checks follow, confirming information about the procedure and detailing possible critical

events:

[...] ⁽⁸⁾ presentation of the team members according to name and function, ⁽⁹⁾ confirmation of patient identification and ⁽¹⁰⁾ the location where the incision will be performed, description of possible critical events considered by the ⁽¹¹⁾ surgeon, ⁽¹²⁾ anesthesiologist, ⁽¹³⁾ nursing team; ⁽¹⁴⁾ certification of completion of antibiotic prophylaxis in the last 60 minutes and ⁽¹⁵⁾ access to imaging exams. ⁽³⁰⁾

Finally, after the end of the procedure, before the patient is removed from the operating room, the procedure is confirmed, the inputs used are counted, as well as their defects, the collection is collected for histopathological investigation and the evaluation is carried out. professionals about the evolution of treatment:

[...] ⁽¹⁶⁾ the type of procedure, ⁽¹⁷⁾ instrument, swab, and needle count results, ⁽¹⁸⁾ specimen identification, and ⁽¹⁹⁾ equipment problems, ⁽²⁰⁾ the entire surgical team (Nurse, Anesthesiologist and Surgeon) describe their concerns regarding care for patient recovery and management. ⁽³⁰⁾

The checklist is also highly feasible because it is a quick-to-use and low-cost tool. ⁽²⁹⁾ After the implementation of the checklist, significant surgical improvements were observed. WHO experts conducted a survey in eight countries (Canada, India, Jordan, Philippines, New Zealand, Tanzania, England, and USA), which revealed a 36% decrease in surgical complications, 47% decrease in mortality rate, 50% decrease in infections, and a 25% chance of another surgical intervention. ⁽³¹⁾

The PESA enables the planning and control of care in the pre, trans and postoperative periods, it is the basis for the nurse's role in the HS to promote comprehensive and quality care, and allows

an appropriate intervention, planned, individual and evaluation of results. ⁽³²⁾ Knowing the stages of PESA is essential to put it into practice.

The PESA, for most professionals, is essential to establish the quality of care. However, lack of time, work overload, and lack of understanding about the nurse's duties in the OR are factors that hinder its implementation by professionals. ⁽³²⁾ Thus, understanding the importance of nursing care is also fundamental to the safe surgery process.

The nurse who works in the operating room is considered an indispensable professional to promote the safety of both patients and professionals by assisting in the organization of perioperative care, especially in the context of public emergency caused by the pandemic of COVID-19. ⁽³³⁾

DISCUSSION

Serious adverse events secondary to surgical interventions are related to patient care, prolonging the patient's hospitalization, increasing costs, and the risk of death. The failures in the assistance can be observed in procedures performed in incorrect sites, in surgical site infections, when there are mistakes in the positioning of the patient, in drug administration and in anesthetic induction. ⁽⁵⁾

It is worth noting that in 2013, the National Health Surveillance Agency (ANVISA) established the national program for patient safety with the goal of contributing to the quality of care provided in health care facilities with the institution of six patient safety protocols focused on the problems of highest incidence (1- Correct patient identification, 2-improving communication between health professionals, 3-improving the safety of high surveillance drugs, 4-performing the right surgery in the right intervention site and correct patients, 5- Hand hygiene more frequently to prevent infections, 6- Reducing the occur-

rence of falls). ⁽¹⁰⁾

In this sense, investing in the quality of care is important to establish patient safety, especially in the CC, where adverse events happen more frequently. It can be highlighted that 50% of the serious adverse events are associated with surgical practice and were classified as preventable. ⁽⁵⁾

WHO data revealed that surgical procedures, in industrialized countries, accounted for 3-16% of relevant complications and about 0.4-0.8% of permanent disability or death rates. In developing countries, extensive surgeries have a mortality rate equivalent to 5-10%. In sub-Saharan Africa, deaths secondary to general anesthesia occur in one out of every 150 individuals. ⁽³⁾

Issues related to the theme were highlighted after the report ToErrisHumand released by the Institute of Medicine (IOM) in the United States, where adverse events were responsible for approximately 100 thousand deaths per year and increased service costs. ⁽¹³⁾ The information obtained in the research revealed the importance of the global debate about patient safety.

According to the second Global Challenge for Patient Safety, preventing surgical site infections, performing safe anesthesia, establishing safe surgical teams, and using surgical care indicators have been constituted as measures to increase quality in health services around the world. ⁽³⁾ Therefore, strategies to meet this challenge have been created in several countries, including Brazil.

However, only after the second global challenge, surgical safety issues intensified. In 2009, the Ministry of Health (MH) and the Pan American Health Organization (PAHO) published the translated version into Portuguese of the Safe Surgeries Save Lives manual, which supports the implementation of patient safety measures. ⁽⁶⁾ The theme is also reinforced in later publications.

In 2009, the Ministry of Health (MH) and the Pan American Health Organi-

zation (PAHO) published the translated version into Portuguese of the Safe Surgeries Save Lives manual, which supports the implementation of patient safety measures.⁽⁶⁾ The theme is also reinforced in later publications.

The patient safety culture constitutes a structural pillar of the health services, and its incorporation in the assistance is responsible for contributing to the development of safe practices. Thus, the organizational processes are improved, reducing the incidence of adverse effects and, consequently, gradually improving the quality of care,⁽¹⁹⁾ especially in surgical care.

Surgical safety covers all perioperative periods, aiming to reduce complications secondary to surgical procedures.⁽²⁾ Surgical site infections and deaths secondary to anesthetic complications, for example, stand out among the serious complications.⁽³⁾ Thus, adverse events in HS must be minimized.

LVSC is based on three principles: Simplicity, broad applicability, and measurability of impact. The purpose is to facilitate application, address all contexts,

identify and quantify meaningful data.⁽³⁾

In addition, teamwork, communication and patient safety have also improved considerably after the use of the VLSC since its implementation in hospitals.⁽⁸⁾ However, the restriction of its use to the trans operative period constitutes a limitation of the instrument.

Despite the efficiency of the SLV, applying nursing care in a systematized, organized, and sequential manner in the preoperative, trans operative and postoperative periods corroborates the safety of the patient submitted to surgery.⁽²⁶⁾ Thus, there is also the need to systematize nursing care, so that safety issues are effective throughout the perioperative period.

Systematization begins with the preoperative visit for nursing assessment, and from this assessment, preoperative care is planned and implemented. After implementation, the assistance is evaluated during the postoperative nursing visit, verifying the need to reformulate the assistance according to the results obtained.⁽²⁶⁾

The nurse in the operating room can

identify problems, possible errors, difficulties and weaknesses that may interfere with patient safety in the perioperative period.⁽⁶⁾ Therefore, the nurse, by using tools such as the LVSC and PESA, which address the safety of care, can contribute to the minimization of damage to patients, especially in the pandemic of COVID-19 that increases the risk of adverse events.

CONCLUSION

PESA and LVSC are inherent tools in surgical nursing. The emergency nature of public health revealed the importance of nurses in reorganizing perioperative care, to meet the new demands of this critical period and ensure the safety of professionals and patients.

The emergency nature of public health revealed the importance of nurses in reorganizing perioperative care, to meet the new demands of this critical period and ensure the safety of professionals and patients.

Referências

1. Bezerra ALQ. A Segurança do Paciente e a Enfermagem. *Revista Nursing*, 2018; 21 (239): 2091.
2. Souza ATG, Silva TKP, Domingues NA, Tognoli SH, Eduardo AHA, Macedo JI et al. Segurança do paciente em centro cirúrgico: percepção dos profissionais de enfermagem. *Revista SOBECC*. 2020; 25(2):75-82.
3. Organização Mundial da Saúde. Segundo desafio global para a segurança do paciente: Manual - cirurgias seguras salvam vidas (orientações para cirurgia segura da OMS). Rio de Janeiro: Organização Pan-Americana da Saúde; Ministério da Saúde; Agência Nacional de Vigilância Sanitária, 2009.
4. Lima DS, Leite Filho JAD, Gurgel MVSA, Aguiar Neto AF, Costa EFM, Maia FXF Filho et al. Recomendações para cirurgia de emergência durante a pandemia do COVID-19. *Journal of Health & Biological Sciences*. 2020; 8(1):1. <http://dx.doi.org/10.12662/2317-3076jhbs.v8i1.3176.p1-3.2020>
5. Araújo IS, Carvalho R. Eventos adversos graves em pacientes cirúrgicos: ocorrência e desfecho. *Revista SOBECC*. 2018; 23(2): 77–83. <https://doi.org/10.5327/Z1414-4425201800020004>
6. Silva AMR, Silva ITC, Rocha GS, Teixeira E. Protocolo De Cirurgia Segura : Análise Da Produção E Execução. *Revista SOBECC*. 2019; 25(3):128–135. <https://doi.org/10.5327/Z1414-4425202000030002>
7. Jost MT, Viegas K, Caregnato RCA. Sistematização da assistência de enfermagem perioperatória na segurança do paciente: revisão integrativa. *Revista SOBECC*. 2018; 23(4): 218–225. <https://doi.org/10.5327/Z1414-4425201800040009>
8. Tostes MFP, Galvão CM. Implementação e uso diário da lista de verificação de segurança cirúrgica em hospitais. *Revista SOBECC*. 2020; 25(4): 204–211. <https://doi.org/10.5327/Z1414-4425202000040003>
9. Oliveira TDC, Gonçalves PA, Lima TAC. Adaptação da lista de verificação de cirurgia segura para o contexto da COVID-19. *Enfermagem em Foco*. 2020; 11(2):114–120. <https://doi.org/10.21675/2357-707X.2020.v11.n2.ESP.4012>
10. Brasil. Portaria nº 529, de 1º de abril de 2013. Institui o Programa Nacional de Segurança do Paciente (PNSP) [Internet]. Brasília: Ministério da Saúde, 2013 [acesso 2020 abr 26]. Disponível em: https://bvsm.s.saude.gov.br/bvs/saudelegis/gm/2013/prt0529_01_04_2013.html
11. Sell BT, Amante LN, Martins T, Sell CT, Pinho FM, Silva R. Eventos adversos em uma unidade de internação cirúrgica: estudo descritivo.

Revista SOBECC. 2016; 21(3):146. <https://doi.org/10.5327/Z1414-4425201600030005>

12. Petreça DR, Sandreschi PF, Streit IA, Mazo GZ. Estratégias de avaliação para programas de promoção da saúde com ênfase na atividade física. *Revista Brasileira de Educação Física e Esporte*. 2019; 33(2): 301–312. <https://doi.org/10.11606/1807-5509201900020301>

13. Institute of Medicine (US). Committee on Quality of Health Care in America; Kohn LT, Corrigan JM, Donaldson MS, editors. *To Err is Human: Building a Safer Health System*. Washington (DC): National Academies Press (US); 2000.

14. Silva FG, Oliveira Junior NJ, Oliveira DO, Nicoletti DR, Comim E. Análise de Eventos Adversos em um Centro Cirúrgico Ambulatorial. *Revista SOBECC [Internet]*. 2015 [acesso 2023 fev 10]. 20(4): 68–70. Disponível em <https://revista.sobecc.org.br/sobecc/article/view/91>

15. Siman AG, Brito MJM. Mudanças na prática de enfermagem para melhorar a segurança do paciente. *Revista gaucha de enfermagem*. 2017; 37(n. spe): e68271. <https://doi.org/10.1590/1983-1447.2016.esp.68271>

16. Tada MMI, Paulo LCG, Souza VS, Tostes MFP, Barbieri A, Santos MM. Eventos adversos cirúrgicos divulgados na mídia audiovisual: um estudo documental. *Escola Anna Nery*. 2021; 25(2):1–10. <https://doi.org/10.1590/2177-9465-EAN-2020-0198>

17. Amaral ALS, Borges O, Cordeiro AP, Matos RR. Corpo estranho intra abdominal: relato de caso. *Revista Ciência e Estudos Acadêmicos de Medicina [Internet]*. 2014 [acesso 2023 fev 10]; 1: 54–60. Disponível em: <https://periodicos.unemat.br/index.php/revistamedicina/article/view/349/332>

18. Reis CT, Martins M, Laguardia JA. A segurança do paciente como dimensão da qualidade do cuidado de saúde - Um olhar sobre a literatura. *Ciência e Saude Coletiva*. 2013; 18(7): 2029–2036. <https://doi.org/10.1590/S1413-81232013000700018>

19. Costa EAM, Lobão WM, Ribas CLM, Passos NM. Segurança do paciente em serviços de saúde: uma análise na cidade de Salvador, Bahia. *Revista SOBECC*. 2020; 25(1): 17–24. <https://doi.org/10.5327/Z1414-4425202000010004>

20. Tannure MC, Pinheiro AM. *SAE Sistematização da Assistência de Enfermagem*. 3ª ed. Guanabara, 2019

21. Lefevre RA. *Aplicação do Processo de Enfermagem - Fundamento para o Raciocínio Clínico*. 8ª ed. Artmed; 2014.

22. Carpenito LJ. *Diagnósticos de Enfermagem aplicação à prática clínica*. 15ª ed. Artmed; 2019.

23. Lucena AF, Silva ERR. *Diagnósticos de enfermagem com base em sinais e sintomas*. Porto Alegre: Artmed, 2011.

24. Brasil. Documento de referência para o Programa Nacional de Segurança do Paciente. Brasília: Ministério da Saúde, 2014.

25. Travassos C, Caldas B. Capítulo 1 - Qualidade do cuidado em saúde e segurança do paciente: histórico e conceitos. IN: ANVISA, *Assistência Segura: uma reflexão teórica aplicada à prática*. Série Segurança do paciente e qualidade em serviços de saúde. Brasília, 2013, pp. 19-27.

26. Luciano FRS, Rosa LM, Alvarez AG, Kuze EB. Validação de instrumento para registro da sistematização da assistência de enfermagem perioperatória. *Revista SOBECC*. 2019; 24(4): 200–210. <https://doi.org/10.5327/Z1414-4425201900040005>

27. Agência Nacional de Vigilância Sanitária (Anvisa). Nota Técnica GVIMS/GGTES/ANVISA no06/2020. Orientações para a prevenção e controle das infecções pelo novo coronavírus (SARS-CoV-2) em procedimentos cirúrgicos. Brasília: Anvisa, 2020. p.23.

28. Silva Junior JFS, Jesus Junior PJ, Carvalho TA, Aguiar MPC, Mendonça SCB, Lordelo DS. Cultura de segurança do paciente: percepções e atitudes dos trabalhadores de centro cirúrgico. *Revista SOBECC*. 2020; 25(3): 136–142, 2020. <https://doi.org/10.5327/Z1414-4425202000030003>

29. Souza RM, Araujo MGS, Verissimo RCSS, Ferreira FAS, Bernardo THL. Aplicabilidade Do Checklist De Cirurgia Segura Em Centros Cirúrgicos Hospitalares. *Revista SOBECC*. 2016; 21(4): 192. <https://doi.org/10.5327/Z1414-4425201600040003>

30. Santos EA, Domingues AN, Eduardo AHA. Lista de verificação para segurança cirúrgica: conhecimento e desafios para a equipe do centro cirúrgico. *Enfermería actual en Costa Rica*. 2019; 18(38):75-88. <http://dx.doi.org/10.15517/revenf.v0i38.37285>

31. Alpendre FT, Cruz EDA, Dyniewicz AM, Montovani MF, Silva EBC, Santos GSS. Cirurgia segura: Validación de checklist pre y postoperatorio. *Revista Latino-Americana de Enfermagem*. 2017; 25:e2907. <https://doi.org/10.1590/1518-8345.1854.2907>

32. Fengler FC, Medeiros CRG. Sistematização da assistência de enfermagem no período perioperatório: análise de registros. *Revista SOBECC*, 2020; 25(1): 50–57. <https://doi.org/10.5327/Z1414-4425202000010008>

33. Trevilato DD, Jost MT, Araujo BR, Martins FZ, Magalhães AMM, Caregnato RCA. Centro cirúrgico: recomendações para o atendimento de pacientes com suspeita ou portadores de COVID-19. *Revista SOBECC*. 2020; 25(3): 187–193. <https://doi.org/10.5327/Z1414-4425202000030009>