

Good practices in the use of the safe surgery checklist by nurses in the transoperative period

Buenas prácticas en el uso del checklist de cirugía segura por enfermeras en el transoperatório

Boas práticas na utilização do checklist de cirurgia segura por enfermeiros no período transoperatório

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How to cite this article:

Rocha RG, Nascimento EF, Alves SS, Alves SS, Marta CB, Tavares JMAB. Good practices in the use of the safe surgery checklist by nurses in the transoperative period. Glob Acad Nurs. 2021;2(1):e86.
<https://dx.doi.org/10.5935/2675-5602.20200086>

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Chief Editor: Caroliny dos Santos Guimaraes da Fonseca
Executive Editor: Kátia dos Santos Armada de Oliveira

Submission: 11-18-2020

Approval: 12-01-2020

Abstract

The aim was to analyze the use of the safe surgery checklist by nurses; describe results on the use of the safe surgery checklist presented in the literature from 2015 to 2020. It was a literature review, based on 20 articles, published between 2015 and 2020, and protocols from the Ministry of Health. Three sub-chapters emerged that responded to the proposed objectives, being described respectively as: - Adherence to Safe Surgeries; - Good practices to make Surgery Safe, and - Nursing and the Use of Checklist in Safe Surgery. Many studies have been noticed in the last two decades with the objective of restricting adverse events in surgeries, with great difficulty in the creation of a safety culture that contributes to the implementation of checklists. In this sense, Nursing is seen as having an important role for its validation and insertion, based on the scientific method, and anchored in the nursing process, to promote better practices and safer surgeries.

Descriptors: Perioperative Nursing; Surgery Center; Safe Surgery; Checklist; Patient Safety.

Resumen

El objetivo fue analizar el uso de la lista de verificación de cirugía segura por parte del personal de enfermería; describen los resultados sobre el uso de la lista de verificación de cirugía segura presentados en la literatura de 2015 a 2020. Fue una revisión de la literatura, basada en 20 artículos, publicados entre 2015 y 2020, y protocolos del Ministerio de Salud. Surgieron tres subcapítulos que respondió a los objetivos propuestos, siendo descritos respectivamente como: - Adherencia a Cirugías Seguras; - Buenas prácticas para hacer que la cirugía sea segura y; - Enfermería y uso de listas de verificación en cirugía segura. Numerosos estudios se han notado en las últimas décadas con el objetivo de restringir los eventos adversos en las cirugías, con gran dificultad en crear una cultura de seguridad que contribuya a la implementación de checklists. En este sentido, la Enfermería es vista como un rol importante para su validación e inserción, basada en el método científico y anclada en el proceso de enfermería, para promover mejores prácticas y cirugías más seguras.

Descriptoros: Enfermería Perioperatoria; Centro Cirúrgico; Cirugía Segura; Lista de Verificación; Seguridad del Paciente.

Resumo

Objetivou-se analisar a utilização do checklist de cirurgia segura por enfermeiros; descrever resultados sobre o uso do checklist de cirurgia segura apresentados na literatura de 2015 a 2020. Tratou-se de revisão de literatura, baseada em 20 artigos, publicados entre 2015 e 2020, e protocolos do Ministério da Saúde. Emergiram três subcapítulos que responderam aos objetivos propostos, sendo descritos respectivamente como: - Adesão às Cirurgias Seguras; - Boas práticas para tornar a Cirurgia Segura, e; - A enfermagem e a Utilização de Checklist em Cirurgia Segura. Percebeu-se muitos estudos nas duas últimas décadas com o objetivo de restringir eventos adversos em cirurgias, sendo identificada grande dificuldade na criação de uma cultura de segurança que contribua para a implantação dos checklists. Nesse sentido a Enfermagem é vista como detentora de um papel importante para sua validação e inserção, fundamentada no método científico e ancorada no processo de enfermagem, para promoção de melhores práticas e cirurgias mais seguras.

Descriptoros: Enfermagem Perioperatória; Centro Cirúrgico; Cirurgia Segura; Checklist; Segurança do Paciente.



relation to the promotion of a transdisciplinary work that can promote Safe Surgery.

One can see the importance of creating checklists of the activities usually performed by nurses who work in the Surgical Center, such as the checklist. This being an effective strategy to identify, assess and manage the risks found in patients in the preoperative, intraoperative, and immediate postoperative period. Thus, it is considered that many surgical complications can be avoided through systematic measures, which contribute to safe surgeries⁵.

In view of these notes, concerns emerged from experiences lived by the research team, since, from clinical practice in health units, it is possible to verify that among the surgeries the use of the checklist by nurses, without the necessary attention can cause serious damage to the patient, such as injuries resulting from forgetfulness of surgical instruments, compresses or even lead to serious adverse events, such as death.

We sought to answer the following guiding question: can errors made in the operating room be avoided by using the safe surgery checklist correctly? The general objective of this study was to analyze the use of the safe surgery checklist by nurses. Its specific objective was to describe results on the use of the safe surgery checklist presented in the literature from 2015 to 2020.

The development of this research is justified because there is a significant number of scientific productions on the topic of safe surgery, but whose applicability of the results remains far from ideal, pointing to the need to modify the strategies within the scenarios of assistance to the surgical patient. One of the biggest difficulties is related to its implantation in health units.

It should be noted that instruments such as the Surgical Safety Checklist, was published by WHO in 2008, therefore more than a decade ago, and constitutes an essential tool for the reduction of errors, especially in situations that demand practicality and security, simultaneously.

Methodology

The literature review based on articles from the Scientific Electronic Library Online was used, whose defined time frame was from 2015 to 2020, with a view to obtaining current articles, using the following descriptors and their combinations: Operating room (45), Perioperative nursing (115) and Patient safety (358). The following inclusion criteria were defined: to be available for free, to have full text, to be in Portuguese. Exclusion criteria were the duplicity of the article and access restrictions.

A total of 518 articles were found with the searches but reduced to 285 by the criterion "Portuguese language". Of these, 54 were duplicated, 130 were not aligned to the theme, 59 were not available in full text and 22 were not available for free. Thus, 20 articles were obtained, on which the research was based. Also included are 2 manuals and protocols of the Ministry of Health, which publication dates were disregarded, but the last valid guidelines were selected⁷.

Introduction

In Brazil, there has been a growing increase in the number of publications about patient safety in recent years, as this is a constant concern of health teams, especially those working in the hospital environment. A recent study on the topic of "safe surgery" showed worrying results, indicating that one in six surgical patients is the victim of some type of error or adverse event, which could be avoided through preventive measures¹.

According to the National Health Surveillance Agency (ANVISA), the World Health Organization (WHO) has been reinforcing the need for best practices to provide safer care to patients, especially since the launch of the global challenge "Safe Surgeries Save Lives" of the year 2009 and the publication of the Guideline and safe surgery checklist^{2,3}.

Still in relation to safe surgery, the WHO presents, from studies in underdeveloped countries, a mortality rate of 5 to 10% associated with major surgeries. Infections and other postoperative complications are also a serious global concern⁴.

The operating room is the place where errors and adverse events occur most frequently and can be avoided by around 43%. In this sense, surgical procedures deserve special attention, mainly because the damage can be physical, social, and psychological, including injuries, suffering, disability or even death. Among the most common events are infections of the surgical site, procedures on the wrong side of the body, inadequate surgical positioning, problems with the anesthetic procedure and the incorrect administration of medications⁵.

In Brazil, the incidence of Adverse Events (AEs) in their hospitals reaches 38.4%. From an analysis carried out in three hospitals in different regions of the country, it was identified by the Ministry of Health that eight out of 100 patients suffer one or more AEs in the surgical environment. About one million patients die, seven million develop complications, and one in 150 dies annually because of these events¹.

Several factors can contribute to the error and insecurity in relation to the surgical patient, which can be individual, as they are inappropriate behavior, lack or failures in communication and performance below the expected for the occasion; they can also be environmental or related to the organization of work, such as lack of training, work overload, extensive workload or work in various locations; may also be related to tasks, such as the lack of protocols; related to the patient: complexity of the surgical procedure; personality, for generating failures or lack of communication, extremes of life, severity of the disease and comorbidities⁶.

Errors in routine processes can be prevented by creating redundancies and duplicate checks in the form of checklists, return readings or other standardized safety procedures, such as marking the surgical site⁵.

In this sense, it is necessary that the nursing team has autonomy to conduct the intrinsic processes within its competence, as well as to identify difficulties encountered, a way in which it can guide the multidisciplinary team in



Buscou-se com o desenvolvimento desse estudo abordar as Boas Práticas Clínicas em Centro Cirúrgico na utilização do *checklist* de cirurgia segura por enfermeiros, maneira pela qual esse conhecimento poderá ser disseminado e contribuir para a redução de riscos e eventos adversos em pacientes cirúrgicos. Do mesmo modo poderá ampliar discussões de equipes multidisciplinares e auxiliar na difusão de um conhecimento que não é novo, mas que ainda não atingiu de forma eficaz as unidades cirúrgicas brasileiras, dada a não implantação do checklist de cirurgia segura ou o uso inadequado dessa ferramenta.

Results and Discussion

Adherence to safe surgeries

Surgeries are defined as any procedures that involve incision, excision, manipulation or suturing of tissue, which usually requires regional, general anesthesia, or deep sedation to perform pain control, and are performed at the Surgical Center. The Surgical Center stands out as one of the most important areas in the hospital, considering the number of procedures performed, the high complexity of equipment and qualified personnel to perform surgical interventions. Precisely due to the high turnover of procedures, it becomes a critical place that demands a large part of the investments of hospital institutions¹.

One of the International Patient Safety Targets advocated by the Joint Commission International, a healthcare facility accreditation body based in the United States, seeks to ensure surgeries with the correct intervention site, the correct procedure and the correct patient, and the application of a checklist is recommended. in all invasive procedures to achieve this goal. The World Alliance for Patient Safety (AMSP) aims to achieve customer safety through three complementary actions, which are: avoid the occurrence of adverse events, make them visible if they occur and minimize their effects with effective interventions⁸.

To respond to this need for patient safety, the protocol defined as "Safe Surgery Saves Lives" was implemented in 2007 and 2008 by WHO, with the purpose of preventing and preventing the occurrence of AEs, aiming to reduce morbidity and mortality and ensure better quality of services. procedures performed with a standard to be followed by all participating members. This protocol was divided into three phases: before anesthetic induction (identification), before the surgical incision (confirmation) and before the patient leaves the operating room (registration)⁴.

The greatest difficulties encountered in the implementation of the checklist are related to the cultural change of the nursing team for a complete adherence to the process about "stopping" everything so that the checklist is carried out effectively. However, patient safety will depend on the learning that comes from mistakes, providing a culture where the teams involved can discuss them and build joint mechanisms and strategies to avoid them, without guilt. In this sense, it is also worth noting that an organizational culture that supports the reporting of events

Authors⁹ corroborate this understanding by stating that the safety climate, the perception of management, the perception of the team's stress, the working conditions, communication in the surgical environment and the perception of professional performance will be the preponderant factors in the proper adherence to the checklist to get safe surgeries. The study of these authors validated a checklist in Brazilian version and considered the environment vulnerable to the occurrence of events that compromise patient safety, mainly due to the need for effective communication between health professionals and the risks inherent to the surgical procedure.

The safe surgery checklist is separated into three phases: before anesthetic induction (identification), before the surgical incision (confirmation) and before the patient leaves the operating room (registration) and provides greater safety for the team, enabling the standardization of services and routine, instigating the team to be concerned with patient safety and minimizing friction caused by unexpected situations. Therefore, the great relevance and applicability of the checklist for safe surgery is observed, calling attention to the need to sensitize the professionals involved in performing surgeries to implement these actions, with a focus on patient safety¹⁰.

Authors¹¹ reinforce this importance by stating that the use of a checklist for safe surgery is being increasingly elucidated in health services, based on communication, seeking to promote patient-centered care.

Many factors contribute for surgical procedures to be performed safely: trained professionals, environment, equipment, and materials suitable for the procedure, compliance with current legislation, among others. The checklist, or checklist, came as an alternative to halve the chance of the patient having treatment with inadequate care and is guided by three principles: simplicity, wide applicability, and the possibility of measuring the impact, allowing efficient steps to be followed safety criticism⁸.

However, the Safe Surgery Verification protocols recall that it is necessary even though at Check in, 09 items are checked by the nursing team when the patient enters the Surgical Center; at Time Out (stop in time), before anesthetic induction, the nursing team, anesthesiologist and at least one member of the surgical team must check 19 items before anesthetic induction; at Time Out, before the Surgical Incision, 12 items must be checked by the nursing team and the surgical team before the skin incision; and at Checkout, 13 items must be checked by the nursing team when the patient leaves the operating room¹².

Each of these phases corresponds to a specific moment in the normal flow of surgery. For the use of the checklist, a single person must be responsible for conducting the checking of the items. At each stage, the checklist driver will confirm that the team has completed the tasks before proceeding. If any item checked is not in compliance, the check should be stopped, and the patient kept in the operating room until it is resolved. Applying the checklist requires knowledge of the nurse or coordinator of the list on



how to carry it out at all stages. It is necessary to be able to involve the whole team during the check, so that everyone respects each of the items on the list and is aware that, for its realization, it is necessary to do it and not just pretend to do it⁹.

Good Practices to Make Surgery Safe

The causes of surgery incidents lead to the need to use the checklist for safe surgery. They are suspension of surgery, perforation of gloves, accidents with patients due to technical failures in the procedure and technical failures in service management. These incidents were attributed to the team's distraction, prescription failure, little knowledge, work overload and service organization failure. The need for improvements in the materials and human resources management process is evident¹³.

Authors¹⁴ describe the safe surgery checklist as initially checking the patient and the correct anatomical site. This protocol is recommended by the WHO, mainly due to the great occurrence of the removal of wrong members due to lack of marking or checking. Another safety element is the verification of preoperative fasting, avoiding incidents such as bronchoaspiration, triggering complications of airway occlusion.

There is also a need for blood reserves and intravenous access, with fluid planning, as any surgery presents risks and can lead to unexpected complications. It is necessary to be prepared to act, giving greater safety to the patient.

This process also includes the induction of an adverse drug reaction or an allergic reaction known to be at risk to the patient, thus considering the event of anaphylactic shock. As for infection, the recommendation is that the team should confirm the use of antimicrobial prophylaxis within 60 minutes before the surgical incision. When checking out, the patient's checklist should be included in the item check, to make sure that all materials used have not been retained in the operative field, avoiding harm to the patient. The institutional checklist includes the counting of surgical instruments and needles, compresses and gauze¹⁵.

It must also include all samples taken from the patient, which must be immediately and correctly identified for later checking and referral to the responsible department. And finally, as a last item, attention is drawn to the records of the entire procedure. Hospital care documents constitute records of relevant information in the event investigation chain, including surgical procedures, infections, errors, and occupational exposure to biological material¹⁶.

The implementation of measures that require changes in behavior and processes is complex in the health environment, and the application of the checklist is no exception. WHO recommends that the list be completed or modified in order to adapt it to local practice, in order to find a greater consensus on filling it out. In most hospitals that implemented it, the list was modified, adjusting it to the characteristics of each specialty and to the organization's administration, independent in each country¹⁵.

In this sense, authors¹⁷ claim that the pioneering use of the checklist is to prevent errors and human failures in this interaction process. However, in the health care environment, it is emphasized that the first principle to be considered is variability. Therefore, this adaptability of the checklist should be considered whenever necessary.

Authors¹⁸ tested a script based on the three phases of the WHO safe surgery checklist, adapted for cardiac surgery, and report that the result is not always consistent with the recommended. They also state that the WHO checklist is necessary, however professional training and continuing education constitute the guideline for the formation of a critical health team and aware of its role in patient safety.

Other researchers¹⁹ also recommend that checklists undergo adaptation to each reality and situation, as daily practice shows that, although those already used include general risk factors, they often do not include factors for specific surgeries, in the case of the authors' study, cardiac, such as: equipment; use of cardiopulmonary bypass; pre-procedure confirmations when compared to the primitive list.

From the results of a study carried out, it was demonstrated that the frequency of checking in surgery was unsatisfactory, showing the need for improvements, based on the safety culture of the surgical patient. This fact calls attention to the need to sensitize health professionals regarding the use of the checklist for patient safety²⁰.

Nursing and the use of checklist in safe surgery

The use of the checklist makes surgeries safer, avoiding errors and the possibility of infections in the postoperative period, decreasing hospitalization time and hospital costs, and nurses have a relevant role in the implementation and use of the checklist, from patient preparation, until leaving the operating room, helping to make communication between the members of the surgical team more effective, providing safety to the people involved in the procedure²¹.

Nursing has the possibility to act in the promotion of safer care good practices for the team and for the patients considering that the risks in the assistance are present and can be faced through a work that guides about this need¹⁶.

Even before starting surgery, it is possible for nurses to think about patient safety. In the assembly of the operating room, this factor will be essential to rethink the processes, being possible to reorganize them and obtain better results in the process. Thus, the nurse in the operating room combines the activities of the operating room with the new work methodologies in search of patient safety. The room assembly process, even if it involves different units, can be valued by nursing professionals and be one of the processes that can interfere with patient safety²².

Researchers²³ demonstrated that nursing professionals perceive the need to ensure patient safety, point out that protocols contribute to the quality of care and services. They also point out that the safety culture is present in most of the highly credible health institutions,



which are characterized by complex risk processes, but with low error rates.

The nursing process is a methodological instrument and a valuable hard light technology to be used to ensure safety in the context of nursing practices, however it must be applied with quality and in its entirety, being in line with the institutional objectives to thus promote patient safety²⁴.

Conclusion

It was observed that the search for safety in surgery has been a recurring theme over the years and more intensely in the last two decades. Attention is increasingly focused on the involvement of the patient who will undergo surgery, whose purpose is to ensure that receiving the best care and care, referring to the type of surgery, procedures, and medications, thus restricting the possibility adverse events.

All consulted authors report the importance of using the checklist, as well as the need for its insertion in the surgical practice, and that when inserted in the hospital context, the results are extremely favorable, minimizing errors since the patient's entry into the operating room, during procedures performed and on leaving the unit.

The cultural difficulty of its implementation was widely highlighted, mainly due to the understanding of many professionals that all this care is unnecessary; other results of the studies show that there is still the understanding that it is a waste of time in an increasingly fast world. The authors reinforce, however, the need to sensitize the professionals involved about its importance in the surgical context.

The effort to implement the checklist is observed in all selected studies, aiming at improving patient safety, its importance being recognized and should be encouraged for its consolidation. The cultural difficulties presented should not be a disincentive, but on the contrary, they should provide reflection and promote improvements.

It was found that the nursing teams, directly and daily involved in the surgery procedures, are those that have a primary role in the insertion, validation and use of the protocols and checklist of safe surgery, ensuring the minimization of adverse events and the prevention of patient safety.

It was noticed the need for investments to promote actions aimed at the quality of care and patient safety, making it evident that both structures and qualified teams for safe care are elementary in this process, which can guarantee best practices and reduce errors. Also highlighted was the recommendation for a periodic evaluation regarding adherence to the checklist to reduce complications, aiming to increase its use through local evidence on its positive impact, which can be verified through studies related to the theme, including comparing up the moment before and after its implantation.

Finally, it was identified that nursing, in their daily lives, can improve their knowledge and work to propose new alternatives to improve the care provided to patients, always based on the scientific method, that is, anchored in the process nursing care and the use of a checklist to ensure best practices and, consequently, safer surgeries.

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