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REVIEW ARTICLE

Implementing the safe surgery checklist: integrative review

Implementación de la lista de verificación de cirugía segura: revisión integradora

Implantação da lista de verificação de cirurgia segura: revisão integrativa

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Abstract

The aim of this article was to discuss aspects related to the implementation of the safe surgery list and describe strategies that contributed to the implementation of this tool. This is an integrative review with a qualitative approach. Data collection was performed through a systematic search of manuscripts in the Virtual Health Library. The search was conducted using the descriptors: checklist, patient safety and operating room, integrated by means of the Boolean operator AND. It is concluded that the checklist is a low-cost tool, and its application brings several benefits to health care, as it works as an instrument that conducts activities, favoring comprehensive and quality care.

Descriptors: Checklist; Patient Safety, Surgery Department, Hospital.

Resumén

El objetivo de este artículo fue discutir aspectos relacionados con la implementación de la lista de cirugía segura y describir las estrategias que contribuyeron a la implementación de esta herramienta. Se trata de una revisión integradora con un enfoque cualitativo. La recolección de datos se realizó mediante una búsqueda sistemática de manuscritos en la Biblioteca Virtual en Salud, la búsqueda se realizó mediante los descriptores: checklist, seguridad del paciente y quirófano, integrados mediante el operador booleano AND. Se concluye que la lista de verificación es una herramienta de bajo costo y su aplicación trae varios beneficios para la atención de la salud, ya que funciona como un instrumento que realiza actividades, favoreciendo una atención integral y de calidad.

Descriptores: Lista de Verificación; Seguridad del Paciente; Servicio de Cirugía en Hospital.

Resumo

Objetivou-se com esse artigo discutir os aspectos relacionados à implantação da lista de cirurgia segura e descrever estratégias que contribuíram para a implementação dessa ferramenta. Trata-se de uma revisão integrativa de abordagem qualitativa. A coleta de dados foi realizada por meio de busca sistematizada de manuscritos na Biblioteca Virtual em Saúde. A busca foi conduzida a partir dos descritores: *checklist*, segurança do paciente e centro cirúrgico, integrados por meio do operador booleano *AND*. Conclui-se que o *checklist* é uma ferramenta de baixo custo e sua aplicação traz diversos benefícios para assistência à saúde, pois este funciona como instrumento condutor de atividades, favorecendo o cuidado integral e de qualidade.

Descritores: Lista de Checagem; Segurança do Paciente; Centro Cirúrgico Hospitalar.

Introduction

In 2004, the World Health Organization (WHO) launched the World Alliance for Patient Safety, which aimed to sensitize health workers and encourage the adoption of practices that favor the improvement of care provided to the client through policies and strategies for this purpose[1].

Patient Safety is considered the most important dimension from the perspective of quality in healthcare. The core of this area is to produce quality health care, reducing the risks of morbidity and mortality to an acceptable minimum[2].

In this aspect, risk management (GR) emerges as a fundamental tool for promoting quality care, consisting in the use of means, interventions, actions, and management strategies in order to measure, monitor and supervise adverse events and risks that may affect customer safety and health[3].

Adverse events (AE) are unexpected, most often preventable episodes that occur during health care and that result in harm to the patient and can cause anything from physical injuries, such as impairment of some organ or function, even death[4].

Along with the exponential growth of surgical procedures, the chance of occurrence of AE also grows. The most common in patients in the operating room include patient fall from the operating table, extubation, errors related to the administration of medications, burns related to the use of the scalpel, hemorrhages due to incorrect handling of drains, among others[5].

The identification of significant occurrences of AE related to anesthetic and surgical procedures motivated strategies to minimize them. In this perspective, considering the increase in surgical production worldwide, between 2007 and 2008, the challenge Safe Surgery saves life was launched, a goal with the purpose of reducing adverse events to the client and standardizing safety actions[1].

The operationalization of the goal includes the adoption of actions and implementation of tools aimed at reducing AEs and surgical mortality, including the Safe Surgery Checklist. The checklist was developed by the WHO in partnership with Harvard University, with the aim of promoting safer surgery, through the adoption of a checklist before, during and after surgery[6,7].

Its operationalization includes three steps: sign in (identification), timeout (before starting the incision) and sign out (before the patient leaves the operating room)[8].

Health institutions that implemented this checklist as a tool for surgical safety doubled the possibility of safe and quality care. Research shows a decrease in the rate of mortality and complications related to errors after the adoption of the checklist[6].

When considering the volume of surgeries performed annually in the world (1 in 25 people undergo a surgical procedure) and the probability of complications associated with the surgical anesthetic procedure (3 to 16% of severe complications after highly complex procedures and 1 death to every 300 interventions) it is necessary to discuss actions to prevent these occurrences, since AEs are preventable in 50% of cases[9].

The magnitude of the checklist lies in preventing errors such as the laterality of the surgical procedure; changing patients in the operating rooms; ensure patient identification at the time of admission to the operating room, among other qualifications that enhance this tool[10].

The adoption of tools that systematize collective actions tends to favor safe care practices, especially in the complex context that involves the perioperative period. Thus, knowing any obstacles is as important as identifying resolvable strategies in the implementation of the tool in the different contexts of health services[11]. Through knowledge of the checklist implementation process, it will be possible to identify possible difficulties, recognizing the necessary adjustments to adapt its use and promote patient safety.

The proposed study intends to clarify discussions and present studies that indicate favorable actions for the use and implementation of the checklist for safe surgeries. In this context, the aim of the study is to discuss aspects related to the implementation of the safe surgery list and describe strategies that contributed to the implementation of this tool.

As steps to achieve the study objectives, the identification of strategies for implementing the Safe Surgery List and pointing out any difficulties experienced in this perspective were defined by specific objectives.

Methodology

This is an integrative literature review (IR), whose qualitative approach intends to know the aspects related to the implementation of the Safe Surgery Checklist.

Qualitative research to address peculiar issues and cannot or should not be measured. For the author, objectification is fundamental, which provides the opportunity to recognize the object of study through scientific investigation[12].

IR is a research method that aims to bring together scientific research and professional practice within the scope of professional practice, is based on Evidence-Based Practice (EBP) and involves the organization and exposure of outcomes obtained in bibliographic research in the area. that may be relevant in care, stressing the importance of conducting studies during the undergraduate period for clinical practice[13].

A RI consiste na produção de conhecimento a partir da analysis of published primary sources. It took place in 6 phases: 1) definition of the theme, 2) determination of exclusion and inclusion criteria, 3) choice of information that will be used, 4) evaluation of information, 5) interpretation and 6) presentation of the review[13].

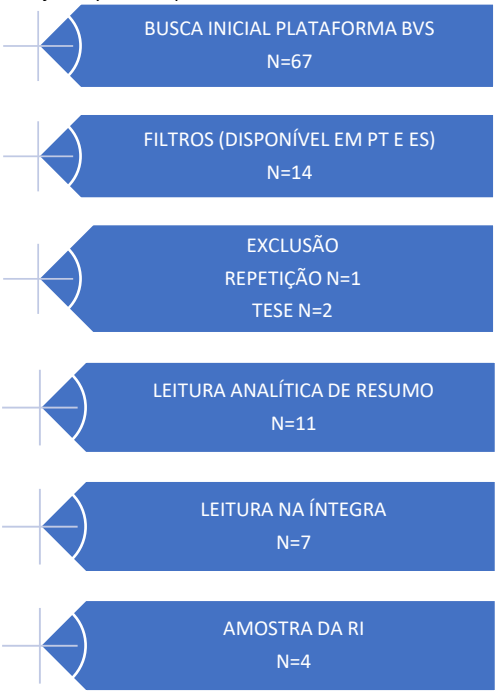
The operationalization of the study was initiated by the selection of the theme of collective interest. Sequentially, the question that guided the sample selection was described as a guiding question: which aspects are related to the implementation of the Safe Surgery List and which strategies contributed to the effective implementation of this tool?

To conduct the study, manuscripts in Portuguese and Spanish, published from 2008, were defined as criteria for sample eligibility, as this period coincides with the

publication of the Manual of Safe Surgery. Research projects on conduction, regulations, service manuals were excluded, as these did not represent experiences lived in the implementation of the checklist.

The search in the VHL database, based on the integration of descriptors, took place between September and October 2017, initially resulting in 67 studies. After inclusion of eligibility criteria, 11 articles were submitted to an analytical reading of the abstract. Of these, 07 showed potential to respond to the proposed objective and were submitted to a full reading. After analysis, a sample of 04 studies was selected to compose the integrative review, as shown below Figure 1.

Figure 1. Trajectory for sample selection. Rio de Janeiro, RJ, Brazil, 2017



Data collection was performed through a systematic search of manuscripts in the Virtual Health Library (VHL) database platform. The descriptors that conducted the search were checklist, patient safety and operating room, integrated through the Boolean operator AND. The study and search for articles started in June 2017 and concluded in December 2018.

After sorting, the data were subjected to detailed reading for analysis and interpretation of the data, through Simple Content Analysis, which consists of selecting articles by identifying the title and abstract, and then carefully reading the text, in search of similarities that express response to the objective of the study, these similarities were then grouped into categories.

For Bardin, the analysis is related to the following steps: pre-analysis, material exploration and treatment of results.

The pre-analysis consists of the organization phase. In this, the data obtained from the search in the databases were sorted[14]. For that, they were inserted in a table in Microsoft Word® software, contemplating year of publication, type of publication, title, author, language, abstract, objective and author conclusion.

The material exploration phase allowed the identification of categories through the codification of findings with common characteristics. The categorization favored the organization of data according to their similarities. For data treatment, a deep reading was performed, from that, inferences were produced that led to interpretation. Both tools were essential for selecting relevant information, used in the construction of the integrative review[14].

Results and Discussion

The 4 articles selected to compose the IR sample were published in 2015 and 2016, in journals classified by Qualis-Capes as B1 and B2.

As for the language, only one of the selected articles was published in Spanish. It was also observed that 75% of the articles were written by nursing professionals and/or academics. In 25% of the productions, it was not possible to identify the background of the authors. The articles selected for the RI sample are listed below.

Chart 1. Articles selected for review composition. Rio de Janeiro, RJ, Brazil, 2017

Title	Authors	Journal	Authors' conclusions
Análisis cultural de los ítems de das listas de verificación quirúrgica de España y Argentina	Blanca Torres-Manrique Andreu Nolasco-Bonmati Loreto Maciá-Soler Matías Milberg Alba Noemi Vilca María José López-Montesinos Víctor Manuel González-Chordá	Rev Gaúcha de Enfermagem 2016 B1	It highlights the importance of a normative of adjustments in the list for implementation, ensuring the fidelity of the philosophy proposed by the WHO. Barriers for implementing the checklist are the belief, perception and training of professionals, the organization's management model, leadership for conducting the implementation and lack of institutional support.
Adesão ao uso de um checklist cirúrgico para segurança do paciente	Maziero, Eliane Cristina; Sanches;Silva, Ana Elisa Bauer de Camargo; Mantovani, Maria de Fátima; Cruz, Elaine Drehmer de Almeida	Rev Gaúcha de Enfermagem 2015 B1	The checklist directs tasks, promotes item verification, improves care quality, and contributes to patient safety. He points out as the main difficulties: social difficulties, insufficient number of nurses, tiredness, and lack of team commitment.
Avaliação da adesão ao checklist de cirurgia segura em Hospital Universitário Público	Adriana Cristina Galbiatti Paminonde Elias Denise Rodrigues Costa Schmidt Christiane Sayuri Itu Yonekura Alexsandro Oliveira Dias Elizabeth Silva Ursi Robertha Pickina Juvencio Silva Vivian Biazon El Reda Feijo	Revista Sobecc 2015 B2	Difficulties in implementing the checklist: team resistance to using the instrument.
A Percepção da equipe de enfermagem acerca da utilização do checklist de cirurgia segura no centro cirúrgico em uma maternidade no sul do Brasil.	Cladis Loren Kifer Morais, Josemar Guilherme Neto, Guilherme Leticia Ostrante dos Santos	Global Academic Nursing Journal 2020	Nursing professionals must work in the best possible way, using their knowledge and skills in favor of the patient, avoiding errors, which are often irreparable.
Aplicabilidade do checklist de cirurgia segura em centros cirúrgicos hospitalares.	Souza Rayanne Morais de; Araujo, Mara Gabriela Silva; Veríssimo, Regina Célia Sales Santos; Comasseto, Isabel; Ferreira, Fabiana Andrade Soares; Bernardo, Thís Honório Lins.	Revista Sobecc 2016 B2	The checklist is a low-cost tool, but still little used due to the resistance of professionals, who in most cases trivialize the steps of the checklist.

In view of the detailed and detailed analysis of the publications, three categories emerged: strategies for implementing and implementing the checklist, benefits in implementing the checklist, difficulties in implementing the checklist.

Strategies for implementation and implementation

The existence of regulations for the implementation of the safe surgery checklist (LVCS) emerges as a favorable strategy, which confirms the importance of the tool for patient safety in the operating room. It is suggested to adapt a differentiated list for each service, but with the same objective, seeking strategies that influence the proper use[11].

Therefore, it is essential to adopt measures to raise awareness of the team on how the checklit can contribute as a tool to advance quality indicators, based on the exposure of the benefits of the method for the service[11,15].

Awareness-raising actions involving the multidisciplinary team, linked to permanent education, continuous supervision, cultural change and the development of effective communication, are strategies listed as effective for the implementation of the LVCS[11,16,17].

It is also recommended that the list is not used as an instrument to control the surgical procedure, but as a strategy to encourage teamwork[18].

Benefits related to the implementation of the checklist

The checklist is a low-cost tool that works to guide the tasks, promoting the verification of items, improving the quality of care, and contributing to patient safety, considering that the safer a procedure is, the better will be patient recovery and interpersonal relationships between the multidisciplinary team. The benefits of team communication in the operating room, service optimization and reduction of resulting failures, such as laterality,

medication errors, burn with a scalpel plate and even fall from the operating table emerged as benefits[15,16,17].

Equity as non-variant, regardless of sex, age, ethnicity or religion, considering the patient as the main target of all the service provided, emerges as a result of the implementation. Nursing professionals must work in the best possible way, using their knowledge and skills in favor of the patient, avoiding errors, which are often irreparable[15,17,19].

Difficulties in implementing the checklist

When discussing the difficulties, the acceptance and active participation of the team in the implementation stands out among the publications. Authors attribute to the behavior of the team, called resistance, the failure to reach the main objective of the checklist, which leads to failures throughout the process. After continuous use and acceptance of the tool by the team, there are improvements and due contribution to the main focus, the patient[16,17].

Difficulty in understanding the checklist compromises its implementation, since carrying it out without adequate knowledge does not guarantee the quality or safety of care. Weaknesses related to the training of the team directly impact customer care in the operating room, hence the need for prior training and the professionals' understanding of the importance of this tool[17].

Limitations related to the potential of educational actions denote the need to consider the multifactorial nature that interferes with collective work processes in patient care. Conceptions related to the participation and collaboration of work teams deserve in-depth discussions that emphasize working conditions, organizational policies, in addition to the personal aspects that involve education at work[20].

Insufficient staff dimensioning is an obstacle to the implementation of the LVCS, since the insufficient number of nurses is associated with the difficulty in carrying out the checklist. In addition, the reduced number of professionals generates overload, fatigue and lack of commitment, thus reducing the chances of applying the LVCS[16].

Conclusion

The checklist is a low-cost tool that brings numerous benefits to customer care in the operating room. Despite the advantages such as the impact on patient safety and the achievement of results, there are still several difficulties for its implementation.

This study provided the analysis that the implementation of the checklist reflects on improving the quality of care, as it acts as a conductor of the tasks to be performed, favoring comprehensive and safe care.

Associations with individual aspects related to team collaboration emerged at the expense of organizational aspects. Thus, in the studies analyzed, the greatest difficulty was related to the resistance of the team, to whom the instrument and its stages were attributed to trivialization. As an implementation action, permanent education was suggested, as a tool to raise awareness of professionals in the surgical center.

Despite the notable effectiveness of the LVCS, it is necessary to consider aspects related to the diversity of organizational and technical-operational aspects that influence the achievement of favorable results, as well as considering educational activities as ancillary in this context.

It is also necessary to improve teamwork and interpersonal communication, since the absence of effective communication favors errors.

Some questions that were not expressed arose with the evolution of research, such as why we did not find the interest of researchers or peer analysis, but rather nursing professionals and academics. This is a subject that does not end and studies are very incipient, arousing the interest of further research on the subject and thus contributing to the knowledge of health professionals and academics about the advantages and challenges found in implementing the checklist , as well as alternative to improve them.

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