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Surgical Safety Checklist: considerations on institutional policies

Lista de verificação de segurança cirúrgica: Considerações a partir da micropolítica institucional

Lista de Verificación de Seguridad Quirúrgica: Consideraciones sobre las políticas institucionales

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Abstract

Objective: To reflexive analysis on aspects of institutional micro that can influence the use of surgical safety checklist for health services. **Methods:** It is an article of reflection, based on scientific evidence available on the subject surgical safety checklist, available in the PubMed database. **Results:** There are aspects of the institutional micro that need to be considered in the implementation process of the surgical safety checklist, namely: management of health, planning, education process, audit, feedback to those involved, special situations of the labor process, beyond the subjectivity of health professionals. **Conclusion:** Recognize factors of institutional micro influencing the use of the checklist can contribute to the creation of mechanisms to ensure the successful implementation of the list for the safety of the patient.

Keywords: Patient Safety; Checklist; Health Services.

Resumo

Objetivo: Realizar uma análise reflexiva sobre aspectos da micropolítica institucional que possam influenciar o uso da lista de verificação de segurança cirúrgica pelos serviços de saúde. **Métodos:** Trata-se de um artigo de reflexão, fundamentado nas evidências científicas disponíveis sobre a temática lista de verificação de segurança cirúrgica, disponíveis na base de dados PubMed. **Resultados:** Existem aspectos da micropolítica institucional que precisam ser considerados no processo de implantação da lista de verificação de segurança cirúrgica, a saber: gestão dos serviços de saúde, planejamento, processo educativo, auditoria, *feedback* aos envolvidos, situações especiais do processo de trabalho, além da subjetividade dos profissionais de saúde. **Conclusão:** Reconhecer fatores da micropolítica institucional que exercem influência no uso da lista de verificação pode contribuir para a criação de mecanismos que garantam o sucesso da implantação da lista em prol da segurança do paciente.

Palavras-chave: Segurança do Paciente; Lista de Checagem; Serviços de Saúde.

Resumen

Objetivo: Análisis reflexivo sobre aspectos de micro institucional que pueden influir en el uso de la lista de verificación de seguridad quirúrgica para los servicios de salud. **Métodos:** Es un artículo de reflexión, basada en la evidencia científica disponible sobre el tema lista de verificación de seguridad quirúrgica, disponible en la base de datos PubMed. **Resultados:** Hay aspectos de la micro institucional que deben ser considerados en el proceso de aplicación de la lista de verificación de seguridad quirúrgica, a saber: la gestión de la salud, la planificación, el proceso de la educación, la auditoría, la retroalimentación de los participantes, las situaciones especiales del proceso de trabajo, más allá de la subjetividad de los profesionales de la salud. **Conclusión:** Reconocer factores de micro institucional que influyen en el uso de la lista de verificación puede contribuir a la creación de mecanismos para asegurar la implementación exitosa de la lista para la seguridad del paciente.

Palabras clave: Seguridad del Paciente; Lista de Verificación; Servicios de Salud.

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INTRODUCTION

Along with the increase in the longevity of the world's population, the role of surgery has grown significantly, even among the different socio-economic conditions of each country. Annually, it is estimated that 234 million surgeries are performed. That is about one for each 25 people in the world, which corresponds to approximately 63 million people undergoing surgical treatment[1]. Recent estimates suggest that 11% of the diseases in the world can be treated by surgery. This total is composed of traumatic lesions (38%), malignant tumors (19%), congenital anomalies (9%), complications of pregnancy (6%), cataract (5%) and conditions of birth (4%)[2].

It's important to mention that surgeries are at the end of the medical's classic model spectrum and as such It is an essential part of the Public Health Model. No matter how successful prevention strategies and treatment might be, surgical conditions will always be responsible for a significant portion of the onus of a population, particularly in developing countries, where conservative treatment often is not readily available, the incidence of trauma and obstetric complications are high and where there is a significant accumulation of untreated surgical diseases[3].

It is noteworthy that untreated surgical conditions tend to adversely affect the socioeconomic situation of the active population, and especially of individuals with little or no financial resources, since, in addition to the absenteeism at work, they often need pay for health expenses for the treatment of ongoing diseases. It's also important to mention that surgery has not always been considered a priority for the global health, and that is due to the inexistence of a wide guaranteed access to surgical assistance. Recently, the Global Health Community has recognized that surgical conditions form a significant disease burden, affect the quality of life and impact economically and socially the population[4].

All this makes surgical care essential for health, but not risk-free. In Brazil, as for surgical care, it can be observed the incidence of 7,6% of surgical adverse events, of which 66.7% were considered avoidable[5]. According to the World's Health Organization (WHO), in developing countries the main factors that contribute to this include: poor infrastructure, poor quality of medicines and supplies, failures in the management of services and infection control, inadequate training of personnel, and severe underfunding. Added to that is also the complexity of the procedures, each one with countless opportunities for failure, besides the deficiencies in the quantity and quality of human resources. Moreover, it is evident that pre existing safety procedures do not seem to be used systematically by some health services, despite the evidences recommend adherence to scientifically proven prevention measures[1].

In order to provide a reasonable understanding of the key concepts of patient safety, WHO has created the International Classification for Patient Safety (ICPS).This consists of a conceptual framework of an international ranks which aims at guiding the development of global guidelines to define, measure and report adverse events in health care, develop evidence-based policies and establish international standards of excellence[6].

The main concepts of the ICPS taxonomy include: i. Patient Safety: the reduction of risk of unnecessary harm associated with healthcare to an acceptable minimum; ii. Risk: the probability than an incident will occur; iii. Harm: the impairment of structure or function of the body and/or any deleterious effect arising there from, including disease, injury, suffering, disability and death, and may be physical, social or psychological; iv. Healthcare-associated harm: the harm arising from or associated with plans or actions taken during the provision of healthcare, rather than an underlying disease or injury; v. Incident: an event or circumstance that could have resulted, or did result, in unnecessary harm to a patient; vi. Harmful incident (adverse event): an incident that results in harm to a patient ; vii. Event: Something that happens to or involves a patient; viii. Error: is a failure to carry out a planned action as intended or application of an incorrect plan. Errors may manifest by doing the wrong thing (commission) or by failing to do the right thing (omission), at either the planning or execution phase[6].

In that direction and in an attempt to minimize the occurrence of surgical adverse events, improve surgical care, communication and teamwork and the safety of the patient worldwide, WHO encourages the adoption of safety standards to be operated by a surgical security checklist with verbal check of its items by the multidisciplinary team in the operating room[1]. This safety tool is also endorsed by the Brazilian Health Ministry[7,8].

In short, the checklist is a method to ensure adherence to fundamental processes of surgical care and can help provide a safer and trustful care. The adoption of the checklist in complex and susceptible to errors processes is one of the greatest advances in the area of patient safety[9]. However, the experiences related to the adoption of the surgical safety checklist has shown many shortcomings and mistakes in their use, such as poor adherence, incompleteness of the checklist items, the absence of the multidisciplinary team in check, checks without verbalization of its items and resistance to its use by professionals[10-14], among others.

Thus, one should pay special attention to the institutional micro-policy in health care that can exert influence on the list's implementation process, so that it can properly fulfill its function on behalf of patient safety[10-14]. Moreover, in Brazil, although the recent spread of user experiences of the surgical safety checklist in health services, the issue is still little investigated.

Considering this context and assuming that there must be harmony between the safety standards that guide the surgical safety checklist proposed by WHO and its operationalization, we propose to carry out a reflexive analysis on aspects of institutional micro-policies that can influence the use of the surgical safety checklist by the health services. It is an article of reflection, based on the scientific evidence available on surgical safety checklist, available in the PubMed database. In this research, the choice of

the PubMed database was due to its significant standout before the remaining by the number of article citations from biomedical literature in its platform.

HEALTH POLICIES FOR PATIENT SAFETY

Adverse events arising from health care have got the attention of governments and international organizations, presenting the theme quality of care in health and patient safety in the WHO agenda and, in the case of the Americas, the Pan American Health Organization (PAHO). In the 57th World Health Assembly in 2004, it was ratified the commitment to the issue and support in the creation of the World Alliance for Patient Safety. This alliance has become responsible for coordinating, at an international spam, the implementation of patient safety programs in member countries, in which Brazil is also included.

From that moment on, macro actions have been defined, called "Global Challenges", and have been identified as strategies to guide member countries to systematically promote improvements in Patient Safety Framework. The first Global Challenge, implemented between 2005-2006, addressed the prevention and the reduction of infections related to the care. Between 2008-2009, the challenge cast as priority was safe surgery, which resulted in the production of the document entitled "Safe Surgeries Save Lives". The goal of this challenge is to improve the quality of surgical care worldwide by defining a set of security standards that can be applied in all countries and settings[1].

Safety standards include: emphasis on teamwork with encouraging to communication and efficiency in carrying out preparatory stages of surgery; safe anesthesia, for the proper monitoring of the patient and advance preparation to identify anesthetics or life-threatening problems; prevention of surgical site infection and measurement of surgical care for the creation of indicators to measure the processes and outcomes of surgical care. These standards are operationalized through the implementation of the surgical safety checklist to be checked verbally by the staff in the operating room[1].

The surgical safety checklist is divided into three phases, each corresponding to a specific time in the normal flow of the surgical anesthetic procedure, that is, the period before the induction of anesthesia prior to the surgical incision and immediately after closing the surgical incision[1].

As for the issue of patient safety in Brazil, there is the pioneering work of the Brazilian Network for Nursing and Patient Safety (REBRAENSP). The REBRAENSP was established in May 2008, linked to the International Network for Nursing and Patient Safety (RIENSP) as a PAHO initiative. The REBRAENSP objectives are to disseminate and consolidate the patient safety culture in healthcare organizations, schools, universities, government organizations, users and their families. This important initiative priors the concerns of the Health Ministry in relation to patient safety and brings visibility to nursing in the development of safety culture[15].

In Brazil, patient safety has permeated the health legislation, but only in 2013 was launched an official program on the subject. This is the Ordinance of the Heath Ministry Nº 529, April 1st/2013, which established the National Program for Patient Safety (NPPS) and created the Implementation Committee of NPPS, and other regulations to ratify such recommendations.

The main objectives of NPPS are: to contribute to the qualification of health care in all health facilities in the country; promote and support the implementation of initiatives aimed at patient safety in different areas of attention, organization and management of health services, through the implementation of the management of risks and centers for Patient Safety[8] in health facilities; involve patients and families in patient safety actions; increase the company's access to information on patient safety; produce, systematize and disseminate knowledge about patient safety; foster the inclusion of the patient safety issue in technical education and undergraduate and graduate programs in health care[7].

INSTITUTION'S POLICY AND THE SURGICAL SAFETY CHECKLIST

It's undeniable the contribution of the national and international current recommendations for patient safety. Worldwide, studies have shown the beneficial effect of this tool on clinical practices. A pioneer study to evaluate the effect of using the surgical safety checklist in reducing surgical morbidity and mortality of patients was conducted in eight hospitals globally, with different socioeconomic characteristics, and in specified regions by the WHO, has evidence a significant reduction in mortality rates (from 1.5% to 0.8%) and complications from 11.0% to 7.0%[16].

In Brazil, as for the experience of using the surgical safety checklist, we can highlight a study conducted to assess the adherence of the surgery staff to using that instrument. It was found that, of the 375 surgeries analyzed, the implementation of the checklist was 61%, and only 4% were totally satisfied. The researchers have pointed out the problematics for implementing the checklist, but have not investigated the aspects of the implementation process, that is, they have not answered some knowledge gaps, such as which strategies were used by the health service in the adoption of this tool and what factors were impediments to its broad adherence, for example[17].

However, as for the experience of using this checklist in health services, it appears that its incorporation in some health services occurred in summarily, passively and in bureaucratic ways. That can be translated as another gap to be filled in the records of surgical patients, imposed on the nursing staff, than a planned, clear and participatory approach[10-14].

Thus, it is recognized that there are challenges to using the surgical safety checklist by the health services. Addressing these aspects can light up conditions for the use of the surgical safety checklist and bring contributions to Brazilian health services and health professionals who wish to deploy this initiative for patient safety.

According to the appreciation of the available evidences, in order to incorporate the surgical safety checklist for health care, we must recognize the broader aspects of the institutions' policies that influence this process, namely: management, leadership, planning, education, audit and feedback to the operating room staff, special situations of the working process and the subjectivity of health professionals[10-14], as demonstrated in Table 1.

In order to adopt security as one of the guiding principles of the health management, the health services can count on the support of the Ministry of Health, which stimulates the creation of the Patient Safety Center in health care[7,8]. It is understood that such rule pledges to lead the conduction of this process, and it is in the level of each institution's policy, where institutional arrangements should be developed for its implementation.

From the perspective of nursing care management, the implementation of security practices, such as the surgical safety checklist, meets the challenge of reconciling the needs of teamwork, considering their needs as well as the customer's, the family's and the institution's ones[18]. However, incorporating the surgical safety checklist as part of a care methodology can also be an opportunity to continuously seek changes in the working process for the development of human resources in their personal and professional dimensions, and culminating in the best assistance the customer can be offered.

Regarding the safety culture and the surgical safety checklist, this relationship can be considered a two-way street, since the use of the checklist can influence the culture, but its success can also be determined by the culture of the organization. It is a misconception to believe the naive assumption that the mere inclusion of a checklist in a clinical complex process, without dealing with cultural issues, will increase safety. Therefore, it is recommended that health services be committed to promoting a culture of safety aimed at implementing specific projects, such as the improvement of safe surgery[9].

In regards to leadership, this aspect is considered one of the critical factors involved in the implementation of the surgical safety checklist[10-14]. It is suggested that this role should be taken over by nurses, given their expertise in managing the care of the surgical patient.

It's important to emphasize the influence of the three levels of leadership, namely: the central leadership, ie, the nursing, anesthesiology and surgery managements, which should support the use of the surgical safety checklist in all surgical procedures; the leadership division of all three disciplines, which should devote a portion of their weekly working hours for the communication and feedback to members of their respective disciplines and participate in a meeting for the planning, preferably periodic, with the rest of the team performing the surgical safety checklist; the last level is composed by the local leaders, professionals who are recognized by their peers as being able to influence them. These can promote its use and be available to receive feedback on any issues within its work field. This leadership has been assigned as a success factor, as it has facilitated the adoption of the surgical safety checklist during its implementation and trial[12].

Regarding the planning, it is often observed that changes in the work process are performed with minimal organization and abruptly. Because of this, inappropriate circumstances are brought up and can lead to a disorganized implementation, and promote worsening of the irritation and unwillingness of team members. Changes made in such format prevent that those involved have a real positive impression on them and receive them favorably, even if they are supported by practices based on evidences[12].

The emphasis on the multidisciplinary team is considered a success factor in the planning and use of the surgical safety checklist because it facilitates greater adhesion than when the application is under the responsibility of a single member of the surgical team, such as the nursing staff[11]. It is reinforced that the multidisciplinary team of implementation shall meet weekly to review the process, discuss issues about the feedback received in order to apply changes if they are needed[12].

Other authors also reinforce this aspect when considering that the distribution of responsibility, enhanced communication and teamwork are essential. It is up to multidisciplinary team to admit that this process requires effort and concentration of energy to promote the work and communication among its members[10-14]. The coordinating nurse of the surgical safety checklist must follow these considerations and create mechanisms for their development.

Considering the gradual introduction of the checklist, by applying WHO's recommendations, that is, involving a single surgeon and an operating room at first, and, likewise, considering performing a pilot test in the operating room[1,12] will give subsidies to nurses to understand the extent of this initiative in other operating cites and with other surgical teams.

The educational process is equally relevant. It this one should be emphasized why and how to use this working tool[10]. The emphasis on the "why" and "how" the surgical safety checklist should be used includes providing a justification for its use, highlighting the values of the institution aligned with the checklist and the surgical team, recognizing its own role in promoting patient safety.

The dialogues around the "why" are important to generate enthusiasm and gain acceptance of this idea by all staff[10,14].

Regarding the "how to do" not only refers to the execution of the checklist itself, but also to its input method in the operating room and support for a sustainable change. The key points include specific education with real-time training, monitoring and feedback, reading it aloud instead of relying on memory, directly addressing the staff's concerns in implementing the procedure and giving long-term support[10].

With regard to the teaching resources used in the educational process, it could be used lectures with slideshows and video, printed materials, educational posters in the operating room, classroom sessions of dialogue among the team members and local leaders, direct mentoring and frequent updates by email[10-14].

It is important to enlighten some impediments that may compromise the teaching-learning process on this theme,

Table 1. Aspects of institutional policies for the implementation of the surgical safety checklist by the health care services

Management
Adopt security as a guiding principle for health management.
Develop institutional arrangements, such as th creation of an institutional policy for patient safety.
Set security practices in accordance with international and national recommendations in force.
Establish a safety culture and promote it widely.
Provide conditions and support the use of the surgical safety checklist early to its implementation.
Leadership
Identify the core leadership (directors of the three disciplines: nursing, anesthesiology and surgery).
Involve leadership in planning and implementing the checklist.
List the respected local leaders of each discipline.
Planning
Stimulate the involvement of the whole team in changing the work process.
Establish partnerships with the multidisciplinary team
Conduct pilot test in the operating room.
Plan the gradual implementation, involving one surgeon and an operating room at first.
Education
Offer educational activities to the whole multidisciplinary team with participatory approach and permeated by dialogue.
Address "why" and "how" to use the surgical safety checklist in the educational process.
Encourage the participation of the leaders in this process.
Encourage the participation of all professional categories working in the sector.
Recognize that some profession categories can be more reluctant to using the checklist.
Provide continuing education in the work process daily.
Audit and feedback to the operating room staff
Establish audit to supervise the implementation process.
Determine professionals involved in the audit process.
Request feedback from the multidisciplinary team about the implementation.
Publicize the audit results.
Define strategies for possible readjustments.
Special situations of the work process
Pay attention to existing checklist and processes that may become duplicate by the surgical safety checklist.
Consider the time of checking.
Develop strategies to minimize staff turnover.
Understand that emergencies may hinder the use of the surgical safety checklist.
Subjectivity of health professionals
Recognize that individual factors influence the implementation of the surgical safety checklist.

such as the absence of the leaders in this process. Thus, their participation and involvement can ensure good training and personal understanding[12,13].

It is considered that there are differences in receptivity and adherence to the use of the surgical safety checklist related to the existing hierarchy in the surgical center. Scientific evidences point out the resistance to the use of the surgical safety checklist among the different professional categories. Such factor can be exemplified by a study on the implementation of the surgical safety checklist in which anesthesiologists and nurses were largely favorable, but some surgeons were not enthusiastic to its implementation. With regards to the feedback given by the

surgical teams, they were generally positive, but the support tended to be higher from nurses and anesthetists than surgeons[13].

It is recommended that in order to establish a partnership with a surgeon, someone who is totally committed, may dedicate enough time and be responsible for the communication and coordination of the educational process in the surgery department. So that they can reduce social and cultural barriers that permeate this process, as some doctors might mistakenly face the standardization as a limiting factor to their clinical judgment[14].

It is considered that the physician's involvement is a critical part of the culture change in the surgery room. Having the name of a surgeon or their image linked to a project of this magnitude without their active participation in everyday life, can be considered an insufficient decision-making, especially because this type of partnership can determine the promotion of adherence to this essentially interdisciplinary plan of care and safety[12].

In the educational process, besides the objective data inherent in the use of the surgical safety checklist, for the more complacent people may be, it is recommended to consider the approach of the subjective aspects of professionals, which include comprising the sense of ownership of some team members[13].

From this perspective, a lifelong education incorporated into the perioperative work process allows collective, dialogic and constant discussion of the problems experienced, and the collective search for solutions to face these challenges.

As for the aspects involving audit and feedback to the staff of the operating room, processes that incorporate continuous feedback, in real time, and regular audits are critical to ensure that the care be efficient, effective and safe[13,14].

Operationally, it is motivated that the nurse invite the nursing staff, anesthesiologists and surgeons to give feedback on the content, on the easy use and on the overall opinion about the use of the surgical safety checklist. When leaders can not be present in the operating room, the feedback may be given by e-mail[10].

In regards to special situations of the work process in the operating room, there are pragmatic challenges to maintain efficient workflow with the use of the checklist[11]. When institutions have a large number of checklist, the additional implementation of a checklist may lead to the fatigue of verification, which unnecessarily complicates the process and, in turn, reduces trust and credibility in the instrument[12]. Added to that is also the high staff turnover, where some team members might not be familiarized with the instrument. It is noteworthy that, in emergency cases, its use can be inconvenient[13].

The work in health care, even if guided by scientific evidences, is deeply dependent on the subjective aspects of the professionals. Thus, implementing the surgical safety checklist can be directly dependent on these factors. In the work process, the worker is conceived as a subject as it is not restricted to mere task developer, but instead, they attempt to interfere in the guidelines that govern them and adjust them to circumstantial needs. This attitude, which intervention may be only slightly different from the established orders, reflect significantly in their subjectivity, as they seek to reconcile their personal and cultural choices with the demands and orders. These activities are, in fact, remodeled and sometimes reinvented and, therefore are appropriated by the individuals subjects who recreate their environment and, as far as possible, individualize their work actions according to their own bodily, subjective, appreciated and symbolic uses[19].

In this sense, the worker does not behave passively before the regulations governing how to do their activity; on the contrary, in the work situation, they negotiate the operating procedures, showing that the environment both coerces and receives their interventions[19]. Hence, it is necessaryto recognize the professionals working in the operating room, as subjects of the perioperative care production process, to the success of strategies that change the work process and affect the know-how of health professionals, such as the surgical safety checklist.

CONCLUSION

It appears that there are challenges to using the surgical safety checklist in health services, even though it is grounded in international and national recommendations with solid foundations that guide this process. Thus, this paper has presented important considerations about the aspects of institutional policies that can influence the use of the surgical safety checklist by health care services, namely: the management of health care services, the planning, the education process, the audit, the feedback to those involved, the special situations in the work process, and the subjectivity of healthcare workers. Recognizing these elements can contribute to the proper planning and the creation of mechanisms to ensure the its successful implementation as well as sustainable changes for the safety and quality of surgical care.

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