Patient Safety in the SUS: Challenges and Strategies for Improving Medical Practice in Operating Rooms

Segurança dos Pacientes do SUS: Desafios e Estratégias para a Melhoria da Prática Médica em Centros Cirúrgicos

Seguridad del Paciente en el SUS: Retos y Estrategias para Mejorar La Práctica Médica en los Quirófanos

RESUMO

A segurança do paciente tornou-se prioridade nas políticas de saúde. No Brasil, o SUS enfrenta desafios como subfinanciamento, gestão ineficiente e deficiências estruturais, especialmente nos centros cirúrgicos. Este artigo analisa como a adoção de Listas de Verificação Cirúrgica pode melhorar a prática assistencial. Com base em revisão bibliográfica e documental, são discutidas as principais barreiras e condições para a implementação eficaz dessas listas. Destacam-se barreiras como resistência institucional, falta de treinamento e escassez de recursos. Conclui-se que, embora promissora, a efetividade da estratégia está condicionada a capacitação, financiamento adequado e cultura organizacional consolidada em segurança.

DESCRITORES: Segurança do paciente. Sistema Único de Saúde. Centros cirúrgicos. Lista de verificação cirúrgica. Políticas públicas em saúde.

ABSTRACT

Patient safety has become a priority in health policies. In Brazil, the Unified Health System (SUS) faces challenges such as underfunding, inefficient management, and structural deficiencies, especially in surgical centers. This article analyzes how the adoption of Surgical Safety Checklists can improve care practices. Based on a bibliographic and documentary review, it discusses the main barriers and conditions for the effective implementation of these checklists. Barriers such as institutional resistance, lack of training, and resource shortages are highlighted. It is concluded that, although promising, the effectiveness of the strategy depends on professional training, adequate funding, and an organizational culture committed to safety.

DESCRIPTORS: Patient safety. Unified Health System (SUS). Surgical centers. Surgical safety checklist. Public health policies.

RESUMEN

La seguridad del paciente se ha convertido en una prioridad en las políticas de salud. En Brasil, el Sistema Único de Salud (SUS) enfrenta desafíos como el subfinanciamiento, la gestión ineficiente y las deficiencias estructurales, especialmente en los centros quirúrgicos. Este artículo analiza cómo la adopción de Listas de Verificación Quirúrgica puede mejorar la práctica asistencial. A partir de una revisión bibliográfica y documental, se discuten las principales barreras y condiciones para la implementación efectiva de dichas listas. Se destacan obstáculos como la resistencia institucional, la falta de capacitación y la escasez de recursos. Se concluye que, aunque prometedora, la efectividad de esta estrategia depende de la capacitación profesional, el financiamiento adecuado y una cultura organizacional consolidada en torno a la seguridad.

DESCRIPTORES: Seguridad del paciente. Sistema Único de Salud (SUS). Centros quirúrgicos. Lista de verificación quirúrgica. Políticas públicas de salud.

Matheus Silva Barbosa
University of Grande Rio Professor José de Souza Herdy – Duque de Caxias Campus
ORCID: https://orcid.org/0009-0003-3623-9689

Heike Felipe Rangel Dias
Physician specialized in Pain Medicine from the Albert Einstein Israelite Hospital.
ORCID: https://orcid.org/0009-0001-7261-9369

Received: 09/18/2025
Approved: 10/06/2025

INTRODUCTION

In recent decades, issues related to patient safety have become one of the thematic priorities on national and international agendas. However, the reality of public health in Brazil, specifically the Unified Health System (SUS), has never been sufficient due to its low funding, management inefficiency, and lack of technical and technological modernization of health centers [14].

In this context, operating rooms emerge as critical environments, where structural limitations, the unavailability of necessary supplies, and the absence of standardized protocols amplify the risks to the integrity of patients and health professionals. In view of these factors and challenges, lists, protocols, and public policies have emerged that emphasize the importance of patient safety, especially in the perioperative environment [14].

This article is justified by the importance of patient safety in achieving expected results, specifically in highly complex surgical procedures. Considering that perioperative complications represent a significant portion of preventable adverse events in the SUS, this article seeks to contribute to the discussion on safety strategies. The overall objective is to evaluate the potential of the Surgical Safety Checklist (SSC) as a strategy to reduce adverse events in SUS operating rooms, in the face of challenges such as underfunding and structural weaknesses.

The question to be answered is: given the challenges faced by healthcare professionals in SUS operating

DOI: https://doi.org/10.36489/nursing.2025v30i328p11630-11653

rooms, what are the impacts of applying rigorous procedural strategies on improving patient care practices? The starting point is the hypothesis that the systematic application of Safe Surgery Checklists, combined with continuous training programs and the correct allocation of financial resources, can significantly mitigate risks in SUS operating rooms.

This article is based on qualitative research, drawing on a review of the literature and documents from government, institutional, and academic sources. Among the sources consulted are publications by the Brazilian government, the World Health Organization (WHO), and the Ministry of Health (MS), as well as articles published on the subject in academic journals. To contextualize the challenges faced by SUS operating rooms, it is essential to understand the structure, financing, and organization of the Brazilian health system, which serves as the backdrop for the proposed analysis. This analysis begins with a characterization of the SUS, whose constitutional guidelines underpin the safety policies discussed here.

The Unified Health System

Definition

Created to guarantee full, universal, and free access to healthcare, the Unified Health System (SUS) represents the institutional framework within which the safety challenges in operating rooms addressed in this study are inserted. It was with the Federal Constitution of 1988 (CF/88) that healthcare was consolidated as an inalienable right for all, with an emphasis on prevention and health promotion. Previously, the public health system provided care only to workers affiliated with Social Security, with philanthropic entities responsible for caring for others in need (Brazil, [202-]).

Among the rights protected by the SUS, the following stand out: access to orderly and organized health systems, adequate, effective, and humane treatment that respects individual values. Managers and other health professionals must commit to the implementation of these principles (Brazil, [202-]).

SUS health services and management are shared by the three entities of the Federation: the Union, the states, and the municipalities. The SUS covers "primary, secondary, and tertiary care, urgent and emergency services, hospital care, epidemiological, health, and environmental surveillance, and pharmaceutical assistance" (Brazil, [202-]).

The SUS is composed of the Ministry of Health, states, and municipalities, each with its own related responsibilities. The Ministry of Health (MS) is responsible for formulating national health policies, overseeing them, and evaluating them, together with the National Health Council (CNS). The federal government is the main source of funding for the SUS and, historically, has accounted for half of the resources spent on public health in the country. The states and municipalities contribute the other half of the resources (Brazil, [202-]).

The State Health Secretariat participates in the formulation of health policies and actions, in addition to providing support to municipalities in accordance with the state council. Each state has a specific secretariat for health management. The state manager is responsible for applying its own resources and those transferred by the federal government in their respective municipalities. In addition, each federal unit formulates its own health policies, respecting federal regulations (Brazil, [202-]).

Finally, the Municipal Health Secretariat plans, controls, and executes health services in coordination with the municipal council and the state. According to the regulations, it is up to the municipal manager to apply their own resources and those transferred by the federal government and the state. Municipal management can establish partnerships with other municipalities to ensure full care for their population (Brazil, [202-]). The complexity of this federal architecture, however, does not solve a central challenge: chronic underfunding that compromises the system's operation, especially in highly complex services such as surgical centers.

Financing

Although the SUS was designed to be one of the largest public health systems in the world, its financing has been critical and unsustainable over the years. The greatest challenges faced by the system are the adequate allocation of resources, as well as inefficiency and inequality in access to health services. Brazil, like other developing countries, suffers from social inequality and poor management of public resources [13].

According to the Organization for Economic Cooperation and Development (OECD), in 2019, Brazil's public health expenditure was only 3.93% of its Gross Domestic Product (GDP), well below most countries, including a small portion of countries with similar economies. This low public participation is reflected in a scenario of underfunding of the SUS [13].

In contrast, in the same year, Brazilians spent 5.39% of GDP in the private sector, for example, on health insurance. These data point to the urgent need to reconfigure the federal, fiscal, and distributive arrangement of the State. After all, financing should be compatible

DOI: https://doi.org/10.36489/nursing.2025v30i328p11630-11653

with the constitutional principles of universality, comprehensiveness, and equity [13].

With the adoption of fiscal austerity policies and the resulting restrictions imposed by the economic crisis in Brazil, the SUS became even more limited in its financing capacity. Constitutional Amendment (EC) No. 95 of December 15, 2016, for example, limited the growth of health expenditures. The year 2020, however, saw an increase in spending due to COVID-19, which led the Brazilian government to resort to extraordinary credits to finance emergency actions. Total health spending that year reached R$ 418 billion [13].

Currently, the main sources of funding for the SUS are the states and municipalities. Thus, there is a process of transferring responsibility for financing public health in Brazil. In this sense, it is essential that there be coordination between the three levels of government so that resources are allocated appropriately to local and regional needs [13]. This scarcity of resources directly impacts the operation of different levels of health care, especially in highly complex services, such as surgical centers, as detailed below.

Levels of health care and assistance

In this context of financial constraints, the hierarchical organization of SUS services is essential to understanding the vulnerability of operating rooms and why they require specific safety protocols. SUS serves more than 190 million people every year. Due to this high demand, in order for its care to be organized and the system to function properly, there are different levels of care and assistance for patients. The services offered are then grouped according to the degree of complexity of each patient. These levels were established by Ordinance 4,279 of December 30, 2010, and are: primary care, secondary care, and tertiary care (Frasão; Ribeiro, 2022).

All treatments and services offered by the SUS were organized based on parameters determined by the World Health Organization (WHO). The idea is that, in Primary Health Care (PHC), most of the patients' problems are resolved; otherwise, professionals can refer them to secondary and tertiary levels, which involve more complex treatments (Frasão; Ribeiro, 2022).

Basic Health Units (BHUs), which are PHC facilities, focus on actions and care aimed at prevention and health promotion. This is done through examinations and consultations with professionals specialized in family health. Prevention and awareness are essential in these cases to optimize and allocate resources used for hospitalizations and treatments of diseases that could have been prevented, such as diabetes, hypertension, and physical inactivity. Currently, there are 48,161 UBS spread throughout the country (Frasão; Ribeiro, 2022).

Specialized care is divided into secondary and tertiary care, which are of medium and high complexity, respectively. Medium complexity consists of specialized services found in hospitals and outpatient clinics, such as Emergency Care Units (UPA). Their capacity is between 150 and 450 patients per day. In addition, the Mobile Emergency Care Service (SAMU) aims to immediately reach victims in a state of emergency, in public and private places. Currently, 85.89% of the national population (179,077,162 people) have access to this service (Frasão; Ribeiro, 2022).

UPAs operate daily, 24 hours a day, and generally handle most local emergencies. It is through them that the first care for surgical and trauma cases occurs, where the aim is to stabilize the patient, investigate their initial diagnosis, to define the most appropriate treatment, also ensuring that patients in more complex situations are directed to other levels of care. In these situations, it may be necessary to transfer these patients to hospitals and care centers with more advanced equipment and specialized care. Regardless of the degree of complexity, the SUS must ensure the continuity of treatment for the patient, providing hospitalization and specialized medical intervention (Frasão; Ribeiro, 2022).

Large hospitals and teaching and research units fall into the high-complexity level of specialized care. These are facilities with intensive care unit (ICU) beds and large, complex operating rooms that require high technology and higher investment and maintenance costs. Specialists in this category are able to treat more complex cases that could not be resolved in primary care or in medium-complexity specialized care (Frasão; Ribeiro, 2022).

Patient safety in health services

Definition and importance

According to the WHO, unsafe healthcare practices are still a reality around the world. In recent years, there has been a significant increase in the number of patients who have died or become disabled due to unsafe healthcare. According to recent estimates, the social cost of patient harm can be estimated at between US$1 trillion and US$2 trillion per year (WHO, 2021).

In Brazil, the incidence of adverse events (AE) is high. About 66% of errors are considered preventable. The promotion of safe care practices, monitoring, and regulation by health authorities enable the prevention of recurrence of unwant-

DOI: https://doi.org/10.36489/nursing.2025v30i328p11630-11653

ed events. For decades, the Brazilian public health service has been engaged in a process of standardizing safe health practices, in addition to efforts to integrate and coordinate these actions, with a view to patient safety (WHO, 2021).

This began with Collegiate Board Resolution (RDC) No. 63, of November 28, 2011, which provides for Good Operating Practice (GOP) requirements for health services, defining minimum standards such as professional qualification, humanization of care, and reduction and control of risks to users. In April 2013, the National Patient Safety Program (PNSP) was launched by the Ministry of Health through the publication of Ordinance No. 529, dated April 1, 2013 (Brazil, 2016).

Patient safety is defined as:

> A framework of organized activities that creates cultures, processes, procedures, behaviors, technologies, and environments in healthcare that consistently and sustainably reduce risks, decrease the occurrence of preventable harm, make errors less likely, and reduce the impact of harm when it occurs (WHO, 2021, p. 105).

Some values are fundamental to structuring the development and implementation of this Program: involving patients and family members in medical care; analyzing and sharing data; identifying measurable areas for improvement; basing policies and actions on the aspect of care; instilling a culture of safety in the design and delivery of healthcare (Brazil, 2016).

Patient safety is a collective responsibility, requiring coordinated action by the Brazilian government, the Ministry of Health, and its executive agencies at the national, regional, and municipal levels. Regulatory bodies and all healthcare facilities, from primary care centers to large hospitals, are also responsible for promoting patient safety. Among all healthcare settings, operating rooms deserve special attention due to the high risk inherent in invasive procedures, justifying the creation of international regulatory instruments to mitigate them. There is a common interest in civil society to protect patients from preventable events (WHO, 2021).

Operating room safety

In view of this need, since 2002, the World Health Organization (WHO) has been issuing specific guidelines to improve safety in surgical procedures, with an emphasis on Checklists (LVSC). These guidelines are structured around four fundamental pillars: prevention of surgical site infections; ensuring safe anesthetic practices; optimizing communication between the perioperative team; and implementing quality of care indicators. In view of this, the Surgical Safety Checklist emerges as a strategic tool for reducing adverse events in these high-risk environments. Although surgical complications are potentially controllable, it should be noted that the associated costs represent a critical challenge for the sustainability of health systems, especially in contexts with limited resources such as the SUS (WHO, 2009).

Surgical complications have become the focus of discussions on patient safety due to the high number of surgeries performed each year, the many complications observed, and the numerous deaths. The most common types of adverse effects are poor patient care, poor medication administration, and events resulting from invasive procedures. In addition, both organizational and human factors contribute to unfavorable surgical outcomes, such as inexperienced medical staff, professional exhaustion, outdated technology, and poor communication between professionals and patients (WHO, 2009).

Among the recommendations is that surgical intervention should be performed in an appropriate location, using the most viable procedure for the case presented, in order to avoid serious surgical complications. A patient safety check should be performed before any procedure, including the sanitary and structural conditions of the operating room. The discovery of any type of allergy in the patient should result in a pause by the team before the procedure begins. Communication failure, inadequate planning, and lack of adherence to the surgical pause are the main causes of adverse events. This is because the success of any human activity involves interpersonal communication. Signs are normally used to facilitate the task of each team member in procedures. The use of cell phones in the operating room runs counter to the intention of effective communication due to the greater propensity for distractions (WHO, 2009).

Surgical indications and the patient's clinical conditions are information that must be clearly communicated between healthcare professionals. However, this is often not the case. As a result, communication failures are the third biggest challenge among the problems faced, being classified as one of the main causes of adverse events (The Joint Commission, 2021).

It should be noted that since the creation of Surgical Safety Checklists (SSC), communication during surgical procedures has been facilitated. As a result, mortality and surgical complication rates have been

DOI: https://doi.org/10.36489/nursing.2025v30i328p11630-11653

reduced. The SSCR was developed by the WHO and is used worldwide, with the aim of standardizing and improving patient safety (WHO, 2021).

Through an international multicenter study conducted by Haynes and other theorists in 2009 in eight hospitals in eight cities (Toronto, New Delhi, Amman, Auckland, Manila, Ifakara, London, and Seattle), the checklist was applied. Despite the economic and cultural diversity of the countries analyzed, the results were positive in relation to the application of the checklist. There was a reduction in the overall complication rate from 11% to 7% and a decrease in hospital mortality from 1.55% to 0.8%. Operating room infection and unplanned reoperation rates also declined significantly. This study was conducted on hospitalized patients [9].

This experiment also considered the impact of the checklist on the safety culture of healthcare organizations. The implementation of the checklist was widely adopted. However, it is stated that adoption alone does not have such a positive impact on safety culture [9]. In view of this, the main benefits of the LVSC are:

> Decrease in the number of communication failures in the operating room; Reduction in the number of complications resulting from surgery; Reduction in the risk of wrong-site surgery; Development of greater concern for safety on the part of the surgical team; Improved compliance with the use of antibiotics and deep vein thrombosis prophylaxis; Facilitation of communication and memory support for critical tasks (Sousa; Mendes, 2019, p. 195).

However, there are still questions about the real impact on mortality and prevention of adverse events, as a result of the difference in existing methodologies. It is understood that the ideal situation would be to use the lists from the moment the patient is admitted to the hospital until the postoperative period (Sousa; Mendes, 2019).

In Brazil, the Surgical Safety Checklist was modified and renamed the Protocol for Safe Surgery, as part of the National Patient Safety Program (PNSP). The protocol must be applied in all healthcare facilities, starting with the verification of the structure of these facilities, their supplies, facilities, and equipment. Work processes must be verified, and a strategy for dissemination and adequate training must be created for all healthcare professionals involved in the use of the checklist, especially in cases of surgery and anesthesia (Federal District, 2022). The effectiveness of this protocol, however, depends on its rigorous and contextualized application, as detailed below.

Application of the Surgical Safety Checklist

The effectiveness of the guidelines described above depends on the correct execution of the steps in the Surgical Safety Checklist. The LVSC items must be checked at three points during the perioperative period: before induction of anesthesia (sign in), before the surgical incision (time out or surgical stop/pause), and before the patient leaves the operating room (sign out). At each stage, a single professional must check a specific item on the list, verbally and in front of all members of the surgical team. The choice of a coordinator, whether an anesthesiologist or surgeon, is essential to achieving good results. The choice of coordinator should be made by the team, and the designated person should be familiar with the list (WHO, 2009).

Before inducing anesthesia, the coordinator must check the items in the first stage of the surgical procedure. First, the person in charge must verbally confirm the patient's identification, identification bracelet, and data. Patients undergoing surgery must have their identification on a white bracelet containing their full name, age, date of birth, and medical record/clinical file number. Room or ward numbers should be avoided as possible identification data, as there is a possibility of mix-ups during the procedure. Thus, patient identification seeks to ensure that care is provided to the right person (Federal District, 2022).

The type of procedure to be performed and the part of the body that will undergo intervention are also verified. The surgeon will be responsible for identifying the surgical site before the patient is referred for the procedure. If possible, this should preferably be done with the patient conscious and awake. The organization must mark the site to be operated on in a standardized manner in order to avoid errors (Federal District, 2022).

At this time, the patient is also presented with the consent forms necessary for the procedure, containing information about the surgery, anesthesia, and the possibility of blood transfusion. The anesthesiologist is responsible for checking items related to anesthesia, such as drugs and equipment. The equipment must be capable of maintaining the airways, including ventilators and aspirators (Federal District, 2022).

In addition, the postoperative period must be taken into account, such as confirming the availability of beds in appropriate units, such as

DOI: https://doi.org/10.36489/nursing.2025v30i328p11630-11653

the Intensive Care Unit (postoperative ICU)[1] and the Intermediate Care Unit (ICU)[2], if necessary. The checklist also mentions the mandatory use of a pulse oximeter[4] in procedures under sedation. The professional responsible for monitoring oximetry will not participate in the procedure, i.e., monitoring will not be performed by an anesthesiologist. Capnography[4] and blood pressure monitors should also be used, thus allowing for the rapid detection of any abnormalities (Federal District, 2022).

As for deep sedation[5], it can only be performed by a specialist physician in a safe environment. The patient is assessed for any allergies to medication, as well as whether their airways meet the requirements of the procedure in question. It is essential that the patient undergoes a pre-anesthetic consultation to identify any risks before any invasive procedure. This prior assessment protects high-risk patients and determines the need for equipment, techniques, and even another professional to assist at the time of anesthetic induction. This other professional will not always be another anesthesiologist. The possibility of bronchoaspiration[6] is also closely monitored in these cases (Brazil, 2017).

After completing the first step of the checklist, the patient is taken to the operating room for anesthesia induction and/or deep sedation. At this stage, the possible level of blood loss is estimated, whether venous access is compatible with the necessary replacement flow, and the necessary fluid is assessed, whether solutions or blood components. The limits for blood loss are estimated at 500 ml/kg for adults and 7 ml/kg for pediatric patients, which will determine the choice of venous access (Brazil, 2017).

The use of blood components is costly for the SUS, as it requires cutting-edge technology, specialized human resources, and its supply is subject to voluntary donation. Therefore, its use must be rationalized, considering the safety of the donor, recipient, and access. To this end, the Ministry of Health has published several guidelines for healthcare professionals to assist them in choosing the most appropriate time and blood component for a transfusion (Brazil, 2015).

Surgical incisions, which involve opening part of the patient's body to perform a surgical procedure, also require specific care to ensure the safety of both the patient and the healthcare professional. The choice of the appropriate technique and the sterilization of the surgical instruments to be used, such as scalpels, scissors, forceps, and retractors, are intended to ensure asepsis, prevent infections, and damage to the patient's surrounding tissues. To begin the surgical incision, the area to be operated on is marked, followed by skin asepsis and the application of local or general anesthesia, depending on the situation. The care required for the surgical incision is not limited to the preoperative period. In the postoperative period, the patient must keep the incision area clean and protected in order to prevent infections and ensure proper healing (SBIBAE, 2014).

Precisely in these highly complex environments where failures can have serious consequences, patient safety becomes a non-negotiable priority. In view of this, the surgical pause is defined as the ideal time to confirm the completion of antimicrobial prophylaxis 30-60 minutes prior, if necessary. At this point, the surgeon will present the possibility of any critical events during surgery. The anesthesiologist may present their considerations regarding anesthesia induction and their concerns regarding possible coexisting diseases such as hypertension and diabetes. The surgical technician must confirm that the equipment has been completely and safely sterilized. At this stage, the availability of the imaging exams essential for performing the surgery in the operating room is also verified. Finally, the surgery begins (SBIBAE, 2014).

The third and final stage of the

[1] Specialized area within a hospital designed to monitor and care for patients who have undergone surgical procedures, especially those of greater complexity, offering support and intensive care during the recovery phase.

[2] Hospital sector that provides care to patients who require a more intensive level of care than a regular hospital bed, but who are not as seriously ill or unstable as patients in an Intensive Care Unit (ICU). These units are designed for patients who require continuous nursing care, specialized human resources, and diagnostic and therapeutic technologies.

[3] A medical device that non-invasively measures blood oxygen saturation and heart rate.

[4] A monitoring technique that measures the concentration or partial pressure of carbon dioxide (CO2) exhaled by the patient, providing valuable information about ventilation, perfusion, and metabolism. It is widely used in anesthesia, intensive care, and medical emergencies to assess the effectiveness of ventilation, confirm the position of the endotracheal tube, and detect respiratory complications.

[5] It is a pharmacologically induced state of depressed consciousness in which the patient is not easily awakened and may have a partial or total loss of protective reflexes, reacting only to painful stimuli. It is a safe procedure when performed by qualified professionals, such as anesthesiologists, and is used in situations that require immobility and absence of pain, such as endoscopies, colonoscopies, biopsies, and minor surgeries.

[6] It is the entry of substances, such as food, saliva, or vomit, into the lower airways (trachea and lungs), instead of proceeding to the esophagus and stomach.

DOI: https://doi.org/10.36489/nursing.2025v30i328p11630-11653

checklist occurs while the patient is still in the operating room. The surgical technician must confirm that the final and initial counts of instruments match. In the event of any inconsistency, the entire surgical team must be immediately alerted. The correct labeling of any biological material samples collected during the surgical procedure should also be a priority for the medical team, as it prevents misdiagnosis. All events witnessed during the procedure, such as blood loss, acute pain control, and other concerns, should be described in the patient's medical record. The goal is to protect the patient during the transfer of care, which is essential for the effectiveness of the SUS as an integrated system (SBIBAE, 2014).

FINAL CONSIDERATIONS

As demonstrated in the application of the LVSC, the SUS has established itself as the main guarantor of patient safety in Brazil. However, its potential to serve 190 million people annually faces structural challenges analyzed here. Its comprehensive, universal, and free access for the entire population has become an inalienable right, with an emphasis on prevention and health promotion. However, for years there has been a decline in public spending on public health due to the application of fiscal austerity measures caused by political changes in the country.

It is urgent to reconfigure the federal, fiscal, and distributive arrangement of the state. After all, financing must be compatible with the local needs of each patient. For healthcare outcomes in the SUS to show significant improvements, structural and technical changes need to be introduced. As proposed in this study's hypothesis, combining LVSC with continuous training and adequate allocation of financial resources shows promise for mitigating risks. The perspectives of multidisciplinary professionals, leadership, management, and the patient themselves must be aligned. Professionals must be trained and have the necessary organizational support to implement the Checklists.

The advantages associated with implementing LVSCs in organizations are real but difficult to achieve. When financial resources are limited and there is a lack of commitment from the entire team of professionals, the review and organization of all processes becomes non-existent. Reviewing all LVSC items is essential, but this does not exclude the possibility of adaptations in different scenarios in the country.

Considering that surgical complications are one of the most common causes of death and human disability, their prevention through the application of the SSCL in different groups and institutions around the world, as discussed, has been found to be effective. Thus, in order to also promote a culture of patient safety, the Surgical Safety Checklist should be part of the surgical culture. However, there are organizational, interpersonal, and cultural obstacles that include the time spent checking items, lack of communication between professionals, and professional inexperience.

If properly implemented, the SSC represents a disruptive innovation by replacing fragmented medical practices with systemic protocols. Even so, if the list is not used correctly, the effects will be negative, increasing patient insecurity. When poorly applied—due to staff distraction, inappropriate timing of verification, or professional resistance—the SSC can increase risks. Mere formal compliance in audits does not guarantee safety. Therefore, in response to the initial question of this article, the evidence points to the most viable strategy for improving healthcare practice being the mandatory implementation of LVSC, with regional adaptations supervised by the Ministry of Health, linked to a specific budget allocation for team training, technology, and collaborative governance between the spheres of the SUS.

Some examples of the aforementioned misapplication are staff distraction during safety processes, inappropriate timing for item verification, or resistance to its application by some professionals. Mere compliance with the requirements set forth in the SSCL in audits/reviews does not guarantee total patient safety and favorable outcomes. Other factors limiting its implementation are high employee turnover and lack of qualified training, as well as the absence of high-tech systems, which should be offered to surgeons and anesthesiologists.

This study demonstrated that the Surgical Safety Checklist, when integrated with continuing education policies and adequate funding, has the potential to transform perioperative safety in the SUS. The sustainability of this transformation, however, requires political commitment, federal coordination, and the valorization of health professionals, which are fundamental elements for the constitutional principle of comprehensiveness to materialize in safe and dignified surgical environments.

DOI: https://doi.org/10.36489/nursing.2025v30i328p11630-11653

References

1. [2] Conselho Federal de Medicina (BR). Resolução CFM nº 2.174, de 2017 (Relator Alexandre de Menezes Rodrigues). Dispõe sobre a prática do ato anestésico e revoga a Resolução CFM nº 1.802/2006. Diário Oficial da União. 2018 fev 27;Seção 1:82.

2. [3] Agência Nacional de Vigilância Sanitária (BR). Implantação do Núcleo de Segurança do Paciente em Serviços de Saúde. Brasília: Anvisa; 2016. 68 p. (Série Segurança do Paciente e Qualidade em Serviços de Saúde).

3. [4] Ministério da Saúde (BR). Secretaria de Atenção à Saúde. Departamento de Atenção Especializada e Temática. Guia para uso de hemocomponentes. 2a ed, 1a reimpr. Brasília: Ministério da Saúde; 2015. 136 p.

4. [5] Ministério da Saúde (BR). Sistema Único de Saúde – SUS [Internet]. Brasília, DF: Ministério da Saúde; [202-]. Disponível em: . Acesso em: 2025 ago 1.

5. [6] Castellanos BEP, Jouclas VMG. Assistência de enfermagem perioperatória: um modelo conceptual. Rev Esc Enferm USP. 1990 dez;24(3):359–70.

6. [7] Conselho Federal de Medicina (BR). Resolução CFM nº 2.174/2017: dispõe sobre a prática do ato anestésico e revoga a Resolução CFM nº 1.802/2006. Diário Oficial da União. 2018 fev 27;Seção 1:82.

7. [8] Secretaria de Estado de Saúde do Distrito Federal (BR). Protocolo de Atenção à Saúde: Segurança do Paciente - Cirurgia Segura. Portaria SES-DF n. 470, de 19 de julho de 2022. Diário Oficial do Distrito Federal. 2022 jul 25;(138). Disponível em: . Acesso em: 2025 ago 3.

8. [9] Frasão G, Ribeiro K. Atenção primária e atenção especializada: conheça os níveis de assistência do maior sistema público de saúde do mundo. Saúde Explica [Internet]. 2022 mar 28 [atualizado 2022 nov 3]. Disponível em: . Acesso em: 2025 ago 1.

9. [10] Haynes AB, Weiser TG, Berry WR, Lipsitz SR, Breizat A-HS, Dellinger EP, et al. A surgical safety checklist to reduce morbidity and mortality in a global population. N Engl J Med. 2009 jan 29;360(5):491–9. Disponível em: . Acesso em: 2025 ago 1.

10. [11] Oliveira AL, Conte LN. O Conselho Nacional de Saúde e a luta do financiamento. In: Nascimento CF, Bitencourt RR, Coelho Conte LN, organizadores. O financiamento do SUS: uma luta do controle social. Porto Alegre: Rede Unida; 2021. p. 21–31. (Série Participação Social & Políticas Públicas; v. 11). E-book.

11. [12] Organização Mundial da Saúde. Orientações da OMS para a cirurgia segura: cirurgia segura salva vidas. Edição em português. Lisboa: Direção-Geral da Saúde; 2009. 195 p.

12. [13] Organização Mundial da Saúde. Plano de ação global para a segurança do paciente 2021–2030: em busca da eliminação dos danos evitáveis nos cuidados de saúde. Genebra: OMS; 2021. 107 p. Disponível em: . Acesso em: 2025 ago 1.

13. [14] Pereira BLS, Oliveira AL, Souza LE, Santos RF, Nascimento CF, Bitencourt RR, et al. Financiamento do Sistema Único de Saúde. In: Pereira BLS, et al. Financiamento da saúde no Brasil: perspectivas dos estados e municípios. Brasília: Conass; 2025.

14. [15] Rocha RC, Bezerra ALQ, Sousa PAF, Souza DLB. Patient safety culture in surgical centers: nursing perspectives. Rev Esc Enferm USP. 2021;55:e03774.

15. [16] Sociedade Beneficente Israelita Brasileira Albert Einstein. Manual de prevenção de infecção de sítio cirúrgico. Zero Infecção. São Paulo: SBIBAE; 2014. Disponível em: . Acesso em: 2025 ago 1.

16. [17] Sousa P, Mendes W, organizadores. Segurança do paciente: conhecendo os riscos nas organizações de saúde [recurso eletrônico]. 2a ed. rev. e atual. Rio de Janeiro: CDEAD/ENSP; Editora Fiocruz; 2019. 524 p.

17. [18] Souza LE, Oliveira AL, Santos RF. A luta pelo financiamento adequado do sistema universal de saúde no Brasil. In: Nascimento CF, Bitencourt RR, Coelho Conte LN, organizadores. O financiamento do SUS: uma luta do controle social. Porto Alegre: Rede Unida; 2021. p. 45–52. (Série Participação Social & Políticas Públicas; v. 11). E-book.

18. [19] The Joint Commission. Improving America's hospitals: The Joint Commission's annual report on quality and safety 2012. Oakbrook Terrace (IL): The Joint Commission; 2012. 45 p.

DOI: https://doi.org/10.36489/nursing.2025v30i328p11630-11653