

# Retention of intracavitary objects in surgical procedures: safety actions proposed by specialist nurses

*Retenção de objetos intracavitários em procedimentos cirúrgicos: ações de segurança propostas por enfermeiros especialistas*

*Retención de objetos intracavitarios en procedimientos quirúrgicos: acciones de seguridad propuestas por enfermeros especialistas*

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**ABSTRACT: Aims:** This study aimed to describe the safety actions to mitigate the risk of retention of intracavitary objects in surgical procedures, in the opinion of perioperative care specialist nurses. **Methods:** This is a qualitative study. Data from a scientific meeting held during the 14th Congress of the Brazilian Association of Nursing in the Surgical Centre, in 2019, in São Paulo. Participants were nurses specialized in perioperative nursing, randomly divided into five groups. Unavailability to participate in the meeting in full was considered an exclusion criterion. The data corpus comprised meeting recording and group records. Content analysis was used to evaluate the data. Resolution no. 466/2012 of the National Health Council (CNS) was followed. **Results:** A total of 19 nurses, mostly female, from six Brazilian states participated in this study. Actions proposed by the study participants to reduce the retention of intracavitary objects included promoting continuing and multidisciplinary education; establishing and following good institutional practices; following the safe surgery protocol; integrating with the sterilization service team; using processes and technologies that contribute to increasing patient safety; counting surgical instruments and materials; and strengthening interdisciplinary work. **Conclusion:** Actions to reduce retention of intracavitary objects include permanent education, interdisciplinary work, and multisectoral work, following flows and protocols aimed at patient safety. **Keywords:** Foreign bodies. Intraoperative period. Perioperative Nursing. Patient safety. Time out in healthcare.

**RESUMO:** Objetivo: Descrever ações de segurança para mitigar o risco de retenção de objetos intracavitários em procedimentos cirúrgicos, na opinião de enfermeiros especialistas em assistência perioperatória. Método: Estudo qualitativo. Dados oriundos de reunião científica realizada durante o 14º Congresso da Associação Brasileira de Enfermagem em Centro Cirúrgico, em 2019, em São Paulo. Participaram enfermeiros especialistas em enfermagem perioperatória, divididos aleatoriamente em cinco grupos. Indisponibilidade para participar da reunião na íntegra considerou-se critério de exclusão. Compuseram o *corpus* de dados: gravação da reunião e registros dos grupos. Procedeu-se à análise de conteúdo para avaliar os dados. Seguiu-se a Resolução nº 466/2012 do Conselho Nacional de Saúde (CNS). Resultados: Participaram 19 enfermeiros de seis estados brasileiros, a maioria mulheres. Ações propostas pelos participantes do estudo, visando a diminuir a retenção de objetos intracavitários: promover educação permanente e multiprofissional; estabelecer e seguir boas práticas institucionais; seguir protocolo de cirurgia segura; atuar de forma integrada à equipe do serviço de esterilização; usar processos e tecnologias que contribuem para ampliar a segurança do paciente; contar instrumental e materiais cirúrgicos; e fortalecer o trabalho interdisciplinar. Conclusão: Ações para reduzir a retenção de objetos intracavitários incluem educação permanente, trabalho interdisciplinar e multissetorial, seguimento de fluxos e protocolos que visem à segurança do paciente. **Palavras-chave:** Corpos estranhos. Período intraoperatório. Enfermagem perioperatória. Segurança do paciente. *Time out* na assistência à saúde.

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**RESUMEN:** Objetivo: describir acciones de seguridad para mitigar el riesgo de retención de objetos intracavitarios en procedimientos quirúrgicos, según la opinión de enfermeros especialistas en cuidados perioperatorios. Método: estudio cualitativo. Datos de una reunión científica realizada durante el 14o Congreso de la Asociación Brasileña de Enfermería del Centro Quirúrgico, en 2019, en São Paulo. Participaron enfermeros especialistas en enfermería perioperatoria, divididos aleatoriamente en cuatro grupos. La falta de disponibilidad para participar en la reunión en su totalidad se consideró un criterio de exclusión. El corpus de datos estuvo compuesto por: grabación de la reunión y actas de los grupos. Se realizó un análisis de contenido para analizar los datos. A esto le siguió la Resolución no 466/2012 del Consejo Nacional de Salud (CNS). Resultados: Participaron 19 enfermeros de seis estados brasileños, la mayoría mujeres. Acciones propuestas por los participantes del estudio, con el objetivo de reducir la retención de objetos intracavitarios: promover la educación permanente y multiprofesional; establecer y seguir buenas prácticas institucionales; seguir un protocolo de cirugía seguro; actuar de manera integrada con el equipo del servicio de esterilización; hacer uso de procesos y tecnologías que contribuyan a aumentar la seguridad del paciente; realizar el conteo de instrumentos y material quirúrgico; fortalecer el trabajo interdisciplinario. Conclusión: las acciones para reducir la retención de objetos intracavitarios incluyen educación permanente, trabajo interdisciplinario y multisectorial, monitoreo de flujos y protocolos dirigidos a la seguridad del paciente.

**Palabras clave:** Cuerpos extraños. Periodo intraoperatorio. Enfermería perioperatoria. Seguridad del paciente. Pausa de seguridad en la atención a la salud.

## INTRODUCTION

Retention of surgical items is a rare, serious, and preventable event that may result in harm to the patient. It is known as a not infrequent adverse event in the intraoperative environment and is directly related to the assistance of the professionals who participated in the surgical moment. It often happens with gauzes, compresses, and surgical instruments in different regions, such as chest, pelvis, vagina, and, predominantly, abdomen<sup>1-3</sup>.

In Brazil, the latest bulletin on patient safety and quality in health services, published by the National Health Surveillance Agency (ANVISA) in 2020<sup>4</sup>, reports the notifications of incidents related to healthcare notified in the period from January to December 2018. As the document points out, in 2018, 2,387 never events, i.e., adverse events that should never occur, were notified, and the unintentional retention of a foreign body in a patient after surgery was the third most notified never event, accounting for 1.9% of the cases<sup>4</sup>.

Retention of intracavitary objects in surgical procedures is also classified as a sentinel event, which is characterized as a serious incident, either by harm to the patient or by the risk of injury<sup>5</sup>. According to The Joint Commission<sup>6</sup>, the most common sentinel event reported in 2017 and 2018 was surgical object retention<sup>6</sup>, that is, it is an event that needs to be investigated and analysed, and to avoid it, it is necessary to establish barrier measures<sup>5</sup>.

One of the measures considered a barrier is the counting of materials with higher risk of retention in the cavity, and in this sense, ANVISA Technical Note no. 04/2017<sup>7</sup> describes

that the counting of compresses, gauze, suture needles, and surgical instruments should be applied in procedures in which there is insertion of objects in cavities<sup>7</sup>.

There are some factors that may increase the chance of this event occurring, for instance, large surgical procedures, errors in counting the compresses verification, emergency surgical procedures, unexpected need for change of intervention, and patient with high body mass index<sup>1,2</sup>.

This type of adverse event may result in severe outcomes to patients, such as inflammatory process, infections, fistulas, and even death<sup>1</sup>. As an example, we can cite a study conducted in São Paulo, which analysed 4,547 cases of retention of intracavitary objects, showing that 14% of patients who suffered this adverse event had no symptoms, 61% were oligosymptomatic, presenting “nonspecific abdominal discomfort or presence of palpable mass,” and 25% had severe findings, such as “peritonitis, fistula, or intestinal obstruction”<sup>8</sup>. It is noteworthy that, in general, when an object is inadvertently retained, the body physiologically tends to manifest signs and symptoms, such as local pain, inflammation, and fever, and may trigger an infectious process, with repercussions in the tissues involved, such as perforation, and the object may also be encapsulated by the body. Moreover, the retention of objects unintentionally retained in a cavity after a surgical procedure may also lead to serious medical and legal implications<sup>7</sup>.

It is necessary to adopt safety measures in the intraoperative stages to mitigate the chances of retention of intracavitary objects<sup>9</sup>. The operating room (OR) nurse plays a very important role in the prevention of risks to the patient, as

they accompany the patients in an individualized manner, as well as knows the dynamics of the institution, thus being able to skilfully implement patient safety practices to reduce risks, such as the execution of the safe surgery protocol (e.g., safe surgery checklist, sign in, time out, and sign out) and the application of the Systematization of Perioperative Nursing Care (SAEP), enabling care with better quality and more safety<sup>10,11</sup>.

It should be noted that the retention of intracavitary objects persists, and it is essential to discuss and research this issue in order to highlight actions and strategies aimed at reducing this grievance, which justifies this study.

In this context, the following guiding question was raised: What are the safety actions capable of mitigating the risk of retention of intracavitary objects in surgical procedures, in the opinion of nurses specialized in perioperative care?

## AIMS

This study aimed to describe safety actions to mitigate the risk of retention of intracavitary objects in surgical procedures, in the opinion of specialist nurses in care.

## METHODS

This is a descriptive, exploratory study with a qualitative approach. Data are from a scientific meeting of perioperative nursing specialists held during the 14th Congress of the Brazilian Association of Nursing in the Surgical Centre, in September 2019, in São Paulo. The meeting, lasting for 90 min, aimed at fostering discussion about patient safety during the transoperative period, had as its agenda the retention of intracavitary objects in surgical procedures.

Specialist nurses in the surgical centre area from different regions of the country were invited to participate in the study. The invitation was intentionally made personally during the event to perioperative care specialist nurses present at the congress. The objectives of the activity were explained: to encourage discussion on the theme and obtain data for this research. It was also explained how the activity would be conducted. Participants who agreed to participate in the study signed a free and informed consent form. The room where the meeting took place had capacity for 25 people, and the invitation did not exceed this number, because the target of the research were nurses specialized in perioperative

nursing who worked in health or higher education institutions in Brazil.

Inclusion criteria were as follows: being a nurse, having experience in perioperative nursing, and participating in the congress. Unavailability to fully participate in the scientific meeting was considered an exclusion criterion.

Randomly, participants were divided into four groups, three of them containing five nurses and one containing four. Each group elected one interlocutor member to moderate the discussion and one responsible for recording it.

The researcher started the scientific meeting by explaining its purpose and how the dynamics of the activity would be carried out, read the questions that would be discussed in the small groups, and explained the need for each group to elect one member to mediate the discussion (interlocutor) and another to record the points raised. The researcher did not participate in the discussion in the small groups, but remained in the room while the discussions were taking place. At the end, he moderated the open discussion and the groups' explanations. The interlocutor member of each group presented, by means of a flip chart, the main records referring to the issues discussed. This moment was audio-recorded and later transcribed.

At each stage, paper, pen, flip chart, and six envelopes numbered 1–6 were provided, each containing an open question to be discussed by the group, sequentially, according to the number of the envelope, starting with envelope number 1 and ending with envelope number 6.

The questions, prepared by the researchers, referred to the following topics: approach to the topic “retention of intracavitary objects at the institutional level” in health-care institutions; factors that contribute to the occurrence of retention of intracavitary objects in surgical procedures; factors that represent a greater risk for the occurrence of retention of intracavitary objects in surgical procedures; actions to increase patient safety regarding the retention of intracavitary objects; and nursing action to prevent unintentional retention of foreign bodies in patients after surgery.

The interlocutor was instructed to open one envelope at a time, starting the discussion with each of the open questions contained in the envelopes. A brief record of the points discussed and the answers that emerged was made on a sheet of paper by each group. The person responsible for these records, at the end of the discussion, also recorded on flip chart paper the main topics to be shared with the large group.

About 5–7 min were allowed for the discussion of each question in the small groups and, at the end of 30 min, space was given for each one to present the results related to each question, using the flip chart. Each speaker presented their group’s answers, which were recorded on the flip chart and audio-recorded. The general discussion was moderated by the lead researcher and an assistant researcher. The meeting time was thus divided as follows: 30 min for discussion in the groups and 60 min for presentation of the topics listed by them and general discussion.

At the end of the scientific meeting, the groups delivered the records to the researchers, composing, together with the later transcribed recording, the corpus of data of this study, which were evaluated from the perspective of content analysis proposed by Bardin<sup>12</sup>, following the steps: pre-analysis, exploration of the material, treatment of the

results obtained, and inference and interpretation of data. These were grouped (Chart 1) according to the questions and the groups’ answers.

The study was guided by Resolution 466/2012 of the National Health Council. The project was approved by the Research Ethics Committee, under CAEE no. 33693320.6.0000.5308.

## RESULTS

The meeting was attended by 19 specialist nurses in the surgical centre area from different states, being Santa Catarina, Bahia, and Pará represented by 1 participant each, 3 from Rio de Janeiro, 4 from Rio Grande do Sul, and 9 from São Paulo. Most of them (n=15) were women.

**Chart 1.** Perception of nurses specializing in perioperative care about the risk of retention of intracavitary objects in surgical procedures.

Questions		Group 1	Group 2	Group 3	Group 4
1. In the institution where you work, is there any discussion regarding the retention of intracavitary objects?	Records	Yes.  It occurs in parts, through institutional actions, of the patient safety programme, with good practices, quality and risk management. Continuing and permanent education.	Yes. There is discussion, but it is often motivated and linked to the occurrence of adverse events. It can happen in specific events or in research groups.	Yes. There are specific protocols with “safe surgery steps.” Occurs at sign out, with assessment when incident or adverse event occurs.	There is not. When it exists, it is informal and related to the occurrence of some case; reactive situation.  It should occur through the establishment of a standard operating procedure (evidence-based strategy)
	Recording	“Yes. In one of the institutions, there is a patient safety program that follows what exists in the other three hospitals, which are: good practices, quality, risk management, continuing and continuing education within the sector. So, there is a sector for continued education and permanent education within the sector, with people assigned to it.”	“[...] there is discussion, however, it is often motivated by the occurrence of the event [...] in the imminence of the adverse event or near miss [...].”	“[...] when there is damage, an event, the discussion is reignited; much less as a preventive action, which is the protocol, but when the damage happens, people actually care about the matter.”	“[...] there is no protocol in the institutions to which we are linked, [...] however, when it exists, it is informal, related to specific situations. They are reactive situations to some adverse event that occurred, and we end up discussing because we have this [...] educational issue involved, not that it is something institutional, that the institution promotes to be able to solve these specific cases. [...] I just wanted to emphasize [...] there is no [...], but we understood that this discussion should occur based on a standard operating procedure that was an evidence-based strategy, discussed and focused on the patient’s need.”

Continue...

Chart 1. Continuation.

Questions		Group 1	Group 2	Group 3	Group 4
2. What factors do you think contribute to the retention of intracavitary objects?	Records	The non-adherence to the safe surgery checklist by the multiprofessional team; the safety culture not understood by the multiprofessional team; the absence of training; emergency procedures; multiple procedures at the same time and on the same patient; failure of communication at shift change.	Overconfidence on the part of professionals; resistance to process and safety routines; lack of legislation that meets the demand; lack of commitment; not include the CME in the cooperation process	Lack of control over the registration of compresses and objects used in surgery; communication problems with the surgeon; haste and lack of time; lack of nursing autonomy and lack of institutional support	Banalization of surgical procedures and the safe surgery protocol; inattention; intense dynamics of the operating room; work overload; lack of training; and lack of interest.
	Recording	"[...] non-adherence to the safe surgery checklist by the multidisciplinary team [...] absence of training [...] emergency procedures [...], multiple procedures in the same patient; common failure	"[...] overconfidence [...] resistance to the process [...] legislation [...] lack of commitment [...] not including the material center in this process, in the instrument count, for example."	"[...] better defined institutional protocols for prevention [...] and lack of institutional support for the nursing team [...]."	"[...] we understand that the factors [...] that contribute to this are the trivialization of the procedure [...], work overload of professionals [...] and lack of training and even interest [...]."
3. Of these factors, which are the most critical for the occurrence of retention of intracavitary objects?	Records	Communication failure and human factor.	Legislation and processes.	Control of registration of intracavitary objects and lack of autonomy and support.	Trivialization of patient safety.
	Recording	"[...] the lack, the communication failure and the human factor [...] communication failure for everyone [...]."	"[...] lack of legislation [...]."	"[...] institutional support [...] for the development of greater autonomy within the operating room."	"[...] trivialization [...] of the patient safety culture."
4. What measures could be taken to reduce the risk of retention of intracavitary objects in surgical procedures?	Records	Role of industry leadership; empowerment of the nursing team; training involving the multidisciplinary team (continuing and permanent education); and investments in certifications of good practice	Shared responsibility. The nursing professional would be a "barrier" in the operating room.	Education and updating of professionals; and elaboration and implementation of protocols.	Teamwork for patient safety.

Continue...

Chart 1. Continuation.

Questions		Group 1	Group 2	Group 3	Group 4
	Recording	“[...] continuous and permanent multidisciplinary education [...] certifications and establishment of good practices [...], quality seal [...].”	“[...] to establish the safety culture as a priority, and one of the things that have been appearing there, continuously, is the empowerment of the nursing professional within the operating room. [...] wrap”	“[...] the most appropriate plan for preventing the retention of surgical items starts in the academic training bank of the doctor and nurse [...].”	“[...] patient safety is [...] the basis of everything and specifically for item retention prevention measures, thinking about this co-participation, co-responsibility of all professionals, right, multiprofessional, so we understand that counting is a primordial factor [...] documentation [...] registration with responsibility and effectiveness [...].”
5. What is the role of the nursing team in reducing the retention of intracavitary objects in surgical procedures?	Records	Continuing and permanent education (multiprofessional), certification of the establishment of good practices and the importance of leadership performance.	Implementation of processes, safety culture and empowerment of surgical centre nursing professionals, involving the MSC and the use of technologies.	Education and institutional support.	Prior count of materials and instruments during and after surgery; work to strengthen nursing and interdisciplinary work.
	Recording	“[...] empowerment [...] continuing and ongoing multidisciplinary education [...] leadership role [...].”	“[...] essential and shared role with the surgical team [...], shared responsibility [...] professional nursing would be important to really be a barrier [...] in the operating room[...].”	“[...] risk reduction [...] a prominent role in the development and implementation of well-designed protocols [...] constantly educate and update your team [...].”	“[...] management of these risks [...] division of responsibility to ensure active participation with the team [...] co-responsible [...] element within the operating room or within the surgical center.”

The professionals pointed out the following factors as contributors to retention of intracavitary objects: non-adherence to the safe surgery protocol by the multiprofessional team; resistance of professionals who work in the OR to follow safety processes and protocols; scarcity or absence of training; high number of surgical procedures, with work overload; urgency and emergency procedures; failure in communication between professionals during shift change; trivialization of the surgical procedure, that is, ignoring or not properly measuring the risks that permeate the surgical

process; overconfidence; lack of commitment and interest; and lack of institutional backing.

The main factors were failure in communication, lack of institutional support for the development of nursing autonomy within the OR, and trivialization of patient safety, i.e., the steps of the safe surgery protocol being followed as a merely bureaucratic activity and not as a real strategy to mitigate risks to the patient.

To improve patient safety and mitigate the risk of intracavitary object retention in surgical procedures, the

participants pointed out the following actions: promote continuing and permanent education, in a multiprofessional way; insert the topic of patient safety in the training of health professionals; adopt safety actions based on protocols; establish safety culture as a priority; value the performance and speech of nursing professionals in the intraoperative period; involve the team of the sterile material centre (CME) in the management, maintenance, and counting of surgical instruments; use technologies that increase patient safety, such as gauze and radiopaque compresses; control and count the materials and surgical instruments before the start of surgery, as well as during and at the end of it; record them properly and completely; and strengthen interdisciplinary work.

Chart 1 describes the questions presented to the groups and their respective answers. The data were obtained by means of the groups' records on flip chart paper and on recording, which are, in turn, derived from the recording of the meeting.

## DISCUSSION

For the implementation of a safety culture, the recognition of the potential risk of situations is essential and needs to be guided proactively, that is, before the occurrence of the adverse event. It can be observed that three groups reported a discussion on the theme motivated or linked to the occurrence of an adverse event and, in one of them, the discussion only took place after the occurrence of some risk situation. This fact denotes a reactive risk management, that is, the discussion on risks, the related factors, and the preventive measures, is only established after the incident. Situations with the potential to generate harm to patients should be discussed by the health services management in order to promote safety in the care processes and the prevention of the occurrence of incidents<sup>13</sup>.

Regarding risk management, ANVISA emphasizes that notification is the main source of information for them to be analysed and preventive actions implemented.<sup>4</sup> The federal agency itself highlights that underreporting of incidents in health services persists.<sup>4</sup>

The suggestion of the groups is to discuss safety actions in the care of surgical patients, through continuing education, and implemented routines and standard operating procedures (SOP) based on scientific evidence in order to promote safe care. In this context, the literature points out that

safety should be a priority for all professionals involved in perioperative care<sup>5,14</sup>.

The context of a surgical procedure involves the orchestrated work of a multidisciplinary team, requiring attention and the following of pre-established routines and protocols, in order to ensure that the patient is safely assisted during the transoperative process, regardless of the surgery. However, the more complex is the situation and the performance of care to be performed, the greater is also the risk of adverse events, which justifies the relevance of proactive risk management<sup>14</sup>.

According to the last report on health-related incidents published by ANVISA<sup>4</sup>, the OR is the fourth place with the highest number of reported incidents, preceded by the inpatient, intensive care, and urgent and emergency units.

The intense and complex dynamics of the OR, with urgency and emergency procedures, several professionals working in the OR, multiple procedures at the same time, and sometimes on the same patient, large amount of instruments and materials used and work overload are risk factors for retention of intracavitary objects. And it is exactly in this context that the importance of counting the materials with a higher risk of being retained in the cavity is evident, respecting the objective 7 of the global patient safety challenge, which indicates that "the team will prevent the inadvertent retention of compresses or instruments in surgical wounds"<sup>15</sup>.

This is also the case with the safety checklist (the safe surgery checklist), which involves three crucial moments: before induction of anaesthesia, before the surgical incision, and before the patient leaves the operating theatre, and it is at this last stage that the final count of surgical instruments, compresses, and needles should take place<sup>4,15</sup>. The application of the safety checklist at the indicated times ensures the incorporation and follow-up of key safety elements in the routine of the OR, regardless of the type of surgery<sup>7,15</sup>.

This study was carried out in Brazil, with 531 nursing professionals, and showed that 99.49% of them believe that the application of the safe surgery checklist increases patient safety; however, when asked whether they fill in the checklist, only 13.27% reported implementing 100% of the instrument<sup>16</sup>.

Moreover, it is observed that several factors described by the participants of this study are related to the fragility in the safety culture and in following safety protocols, the failure to control and record the materials used in the

cavity and overconfidence on the part of health professionals, among others. Safety culture comprises values, attitudes, perceptions, and individual and collective skills, which determine a standard of performance and commitment to safety of all involved, whether patients, professionals, or the institution<sup>15</sup>.

According to a study on the perspective of the room circulator regarding surgical counting, eventually, when there is divergence in the final number of materials, the medical team questions whether it was not a counting error of the surgical operator<sup>17</sup>. In this case, the team must be mobilized to confirm the non-retention of intracavitary objects. In teamwork, there must be cooperation in order to achieve the same goal, which is patient safety, the responsibility of all<sup>17</sup>.

The National Patient Safety Programme (NPSP) advocates a safety culture based on five pillars: a culture in which all professionals of the institution, regardless of the area in which they work, demonstrate commitment to their own safety and that of their colleagues, patients, and families; prioritization of safety; encouraging the identification, reporting, and resolution of situations that may compromise safety; promoting education based on the failures that occur; and establishing an institutional policy that provides resources and structure for the effective maintenance of safety<sup>7,18</sup>.

The actions suggested by the groups to reduce the risk of retention of intracavitary objects are in line with what is indicated in the literature as strategies to ensure the quality of actions during the perioperative period: compliance with the surgical protocol, considering all its stages<sup>16,17,19,20</sup>, promotion of training<sup>16,17,20</sup>, investments in leadership and teamwork<sup>16,20</sup>, and involvement of all professionals involved in the surgical process in the commitment to quality and safety<sup>13,17</sup>.

It is noteworthy that the nursing team plays a key role in reducing the risk of retention of intracavitary objects, controlling all the material and instruments delivered to the surgeon and returned to the table<sup>11</sup>, which reinforces the importance of valuing the role of the nursing team for patient safety, therefore, together with the surgical team. Thus, it is understood that patient safety involves constant care, management, and attention from all professionals, the patient, and their family.

This study highlights the problem of retention of intracavitary objects in surgical procedures and the need for this issue to be widely discussed in health institutions,

involving surgeons, nurses, and nursing technicians. Such discussion should be programmed, and not only after the occurrence of the adverse event, thinking about actions to mitigate the risk and ensure greater safety for the patient. And, in the occurrence of adverse events, the situation should be rigorously evaluated and the data resulting from this analysis should be used in order to contribute to the education of professionals involved in the activities of the OR.

Further research showing strategic actions implemented by health institutions may contribute to encourage a culture of patient safety in the perioperative period.

## Study limitations

The study was based on a strategy to raise awareness among nurses from several Brazilian states, with a view to discussing the current and relevant issue of patient safety in the intraoperative period. A limitation of this study is the lack of analysis of risk management actions regarding the unintentional retention of intracavitary objects in surgical procedures.

## CONCLUSION

The retention of intracavitary objects in surgical procedures is considered an adverse event, classified as a never event, i.e., a type of adverse event that should never happen.

The actions proposed by participants to reduce this risk include continued and permanent education, involving all health professionals who work in the OR; follow the protocol of surgery; count surgical materials and instruments before and after surgery; record them properly and completely at each surgery; establish the culture of safety as an institutional priority; value the speech of nursing professionals in the intraoperative period; and insert the issue of patient safety in the training of health professionals.

The study also allowed to know the perception of nurses specializing in perioperative care of the risk of retention of intracavitary objects in surgical procedures and highlights, as pointed out by the participants, the trivialization of safety in the perioperative period, i.e., not following the safe surgery protocol, respecting all its steps, or its application as a merely bureaucratic activity, without the necessary rigor. This perception is also pointed out by the participants as a concern,



and they highlight the importance of expanding the discussion on the retention of intracavitary objects, involving the professionals that make up the surgical team, in order to ensure patient safety.

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None.

## CONFLICT OF INTERESTS

The authors declare that there is no conflict of interest.

## AUTHORS' CONTRIBUTION

PT: Project management, formal analysis, conceptualization, data curation, research, methodology, resources, writing – original draft, writing – revision & editing, supervision, validation, visualization. MSS: Investigation, formal analysis, writing – original draft, writing – revision & editing, visualization. AZCS: Investigation, writing – original draft, writing – revision & editing, viewing. TP: Writing – original draft, writing – revision & editing, viewing. MCOP: Project management, conceptualization, investigation, methodology, validation, visualization. GAAM: Project management, conceptualization, investigation, methodology, validation, visualization.

## REFERENCES

1. Association of Operating Room Nurses. Guidelines for perioperative practice. Denver: AORN; 2019.
2. Grazziano ES, Peniche ACG, Palazzo S. Retenção de objetos estranhos em sítio cirúrgico: ainda ocorre? SOBECC. 2011;16(3):30-4. Disponível em: <https://revista.sobecc.org.br/sobecc/article/view/205>
3. Steelman VM. Retained surgical items: evidence review and recommendations for prevention. AORN J. 2019;110(1):92-6. <https://doi.org/10.1002/aorn.12740>
4. Brasil. Agência Nacional de Vigilância Sanitária. Boletim Segurança do Paciente e Qualidade em Segurança de Saúde nº 20: Incidentes Relacionados à Assistência à Saúde – 2018. Brasília: ANVISA; 2020 [acessado em 04 abr. 2022]. Disponível em: <https://www.gov.br/anvisa/pt-br/assuntos/servicosdesaude/notificacoes/notificacao-de-incidentes-eventos-adversos-nao-infecciosos-relacionados-a-assistencia-a-saude/relatorios-de-incidentes-eventos-adversos-relacionados-a-assistencia-a-saude>
5. World Health Organization. A world alliance for patient safety. Geneva: WHO; 2004 [acessado em 04 abr. 2022]. Disponível em: <https://www.who.int/teams/integrated-health-services/patient-safety/about/world-alliance-for-patient-safety>
6. Joint Commission. Preventing unintended retained foreign objects. Sentinel Event Alert. 2013;(51):1-5. PMID: 24143853
7. Brasil. Agência Nacional de Vigilância Sanitária. Nota Técnica GVIMS/GGTES nº 04/2017. Práticas seguras para prevenção de retenção não intencional de objetos após realização de procedimento cirúrgico em serviços de saúde. Brasília: ANVISA; 2017. [acessado em 04 abr. 2022]. Disponível em: <https://www.gov.br/anvisa/pt-br/centraisdeconteudo/publicacoes/servicosdesaude/notas-tecnicas/nota-tecnica-gvims-ggtes-no-04-2017.pdf/view>
8. Birolini DV, Rasslan S, Utiyama EM. Retenção inadvertida de corpos estranhos após intervenção cirúrgica. Análise de 4547 casos. Rev Col Bras Cir. 2016;43(1):12-7. <https://doi.org/10.1590/0100-69912016001004>
9. Stawicki SPA, Moffatt-Bruce SD, Ahmed HM, Anderson 3rd HL, Balija TM, Bernescu I, et al. Retained surgical items: a problem yet to be solved. J Am Coll Surg. 2013;216(1):15-22. <https://doi.org/10.1016/j.jamcollsurg.2012.08.026>
10. Mendes PJA, Araújo KCGS, Morgan PEM. Atuação do enfermeiro na prevenção de eventos adversos no centro cirúrgico, utilizando SAEP. BIUS. 2020;19(13). Disponível em: <https://www.periodicos.ufam.edu.br/index.php/BIUS/article/view/7661>
11. Sociedade Brasileira de Enfermeiros de Centro Cirúrgico, Recuperação Anestésica e Centro de Material de Esterilização. Diretrizes de práticas em enfermagem cirúrgica e processamento de produtos para a saúde. 7ª ed. São Paulo: Manole; 2017.
12. Bardin L. Análise de conteúdo. 7ª ed. São Paulo: Edições; 2011.
13. Sagawa MR, Silva AEBC, Lima JC, Bezerra ALQ, Costa NN, Sousa MRG, et al. Análise de circunstâncias notificáveis: incidentes que podem comprometer a segurança dos pacientes. Cogitare Enferm. 2019;24:e61984. <https://doi.org/10.5380/ce.v24i0.61984>
14. Lemos GC, Azevedo C, Bernardes MFVG, Ribeiro HCTC, Menezes AC, Mata LRF. A cultura de segurança do paciente no âmbito da enfermagem: reflexão teórica. Rev Enferm Cent-Oeste Min. 2018;8:1-10. <https://doi.org/10.19175/recom.v8i0.2600>
15. World Health Organization. World alliance for patient safety. The second global patient safety challenge. Safe surgery saves lives. Geneva: WHO; 2010. Disponível em: [https://apps.who.int/iris/bitstream/handle/10665/70080/WHO\\_IER\\_PSP\\_2008.07\\_eng.pdf?sequence=1&isAllowed=y](https://apps.who.int/iris/bitstream/handle/10665/70080/WHO_IER_PSP_2008.07_eng.pdf?sequence=1&isAllowed=y)

16. Poveda VB, Lemos CS, Lopes SG, Pereira MCO, Carvalho R. Implementação de *checklist* de segurança cirúrgica no Brasil: estudo transversal. Rev Bras Enferm. 2021;74(2):e20190874. <https://doi.org/10.1590/0034-7167-2019-0874>
17. Gomes ET, Santos ML, Araújo SSSL, Assunção MCT, Püschel VAA. Contagem cirúrgica e segurança do paciente na perspectiva do circulante de sala operatória. Rev SOBEC. 2019;24(1):37-42. <https://doi.org/10.5327/10.5327/Z1414-4425201900010008>
18. Brasil. Ministério da Saúde. Documento de referência para o Programa Nacional de Segurança do Paciente. Brasília: Ministério da Saúde; 2014. Disponível em: [https://bvsm.s.saude.gov.br/bvs/publicacoes/documento\\_referencia\\_programa\\_nacional\\_seguranca.pdf](https://bvsm.s.saude.gov.br/bvs/publicacoes/documento_referencia_programa_nacional_seguranca.pdf)
19. Alves Santos E, Domingues AN, Appoloni Eduardo AH. Lista de verificação para segurança cirúrgica: conhecimento e desafios para a equipe do centro cirúrgico. Enferm Actual Costa Rica. 2020;(38):75-88. <https://doi.org/10.15517/revenf.v0i38.37285>
20. Silva PHA, Conde MBC, Martinasso PF, Maltempi RP, Jacon JC. Cirurgia segura: análise da adesão do protocolo por médicos e possível impacto na segurança do paciente. Rev Col Bras Cir. 2020;47:e20202429. <https://doi.org/10.1590/0100-6991e-20202429>

