Checklist of assignments of the nursing team in robotic surgeries

Checklist de atribuições da equipe de enfermagem em cirurgias robóticas

Lista de verificación de asignaciones del equipo de enfermería en cirugías robotizadas

Fernanda Bergonzini[1], Ernane Almeida[2], Rachel de Carvalho[1]*

ABSTRACT: Objective: To develop and validate a checklist of activities relevant to the nursing team working in the surgical center in robotic procedures. **Method:** This is a methodological study of validation, carried out in two phases: development of an assignment checklist and validation by a group of judges composed of seven expert nurses, members of the Robotics Committee of the Brazilian Association of Nurses of the Surgical Center, Anesthetic Recovery and Sterilization Processing Department (SOBECC). A Likert scale was used to analyze each of the items on the checklist by the judges, and the level of agreement above 80% was considered adequate. The study was conducted according to the ethical-legal precepts of Resolution 466/2012 and it was approved by the Research Ethics Committee. **Results:** The final checklist consisted of three steps (Sign in, Time out, and Sign out), according to the Surgical Safety Checklist proposed by the World Health Organization, although specific for robot-assisted surgeries. The level of agreement among the experts was above 80% in all checklist items, having been evaluated content, structure, presentation, and relevance. There was no need for a second round among them. The judges proposed adjustments, which were accepted, such as including the item of robotic platform specification and the side of the operating table in which the robot will be placed. **Conclusion:** The checklist of assignments of the nursing team in robotic surgeries was developed by the authors and validated by the expert judges, which enabled its application in hospitals that offer robotic surgery.

Keywords: Checklist. Robotic surgical procedures. Nursing, team.

RESUMO: Objetivo: Elaborar e validar um *checklist* de atividades pertinentes à equipe de enfermagem que atua no bloco cirúrgico, em procedimentos robóticos. **Método:** Estudo metodológico, de validação de conteúdo, estrutura e apresentação e relevância, realizado em duas etapas: elaboração da lista de atribuições na forma de *checklist* e validação por um grupo de juízes composto por sete enfermeiras especialistas integrantes do Comitê de Robótica da Associação Brasileira de Enfermeiros de Centro Cirúrgico, Recuperação Anestésica e Centro de Material e Esterilização (SOBECC). Utilizou-se uma escala do tipo Likert para analisar cada um dos itens do *checklist* pelas juízas e considerou-se adequado o nível de concordância acima de 80%. O estudo foi conduzido segundo os preceitos da Resolução 466/2012 e aprovado pelo Comitê de Ética e Pesquisa. **Resultados:** O *checklist* final ficou composto por três etapas (*Sign in, Time out e Sign out*), seguindo o *checklist* de cirurgia segura proposto pela Organização Mundial da Saúde, porém específicas para cirurgias robô-assistidas. Na avaliação dos itens, pelas especialistas, o nível de concordância ficou acima de 80% e não houve necessidade de segunda rodada. As juízas propuseram alterações, as quais foram atendidas, como a inclusão do item de especificação da plataforma robótica e o lado da mesa em que o robô será alocado. **Conclusão:** O *checklist* de atribuições da equipe de enfermagem em cirurgias robóticas foi construído pelos autores e validado por um grupo de juízas especialistas, o que possibilitou sua aplicação em hospitais que oferecem cirurgia robótica.

Palavras-chave: Lista de checagem. Procedimentos cirúrgicos robóticos. Equipe de enfermagem.

RESUMEN: Objetivo: Elaborar y validar una lista de verificación de asignaciones relevantes para el equipo de enfermería que actúa en el centro quirúrgico, en procedimientos robotizados. **Método:** Estudio metodológico de validación de contenido, estructura y presentación, y pertinencia, realizado en dos etapas: elaboración del *checklist* de asignaciones y validación por jueces expertos. Los jueces eran siete enfermeros especialistas miembros del Comité de

[1]Faculdade Israelita de Ciências da Saúde Albert Einstein – São Paulo (SP), Brazil.
[2]Hospital Samaritano – São Paulo (SP), Brazil.
Corresponding author: prof.rachelcarvalho@gmail.com
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Robótica de la *Associação Brasileira de Enfermeiros de Centro Cirúrgico, Recuperação Anestésica e Centro de Material e Esterilização* (SOBECC). Los jueces utilizaron una escala Likert para analizar cada uno de los ítems del *checklist* y se consideró adecuado un nivel de acuerdo superior al 80%. El estudio se realizó según los preceptos ético-legales de la Resolución 466/2012, aprobada por el Comité de Ética e Investigación. **Resultados:** El *checklist* final propuesto por la Organización Mundial de la Salud constaba de tres pasos (*Sign in*, *Time out* y *Sign out*), específicos para cirugías asistidas por robot. El nivel de acuerdo entre los jueces fue superior al 80% en todos los ítems del *checklist*. No hubo necesidad de una segunda vuelta entre los jueces, quienes hicieron propuestas de ajustes, las cuales fueron aceptadas, como la inclusión del elemento de especificación para la plataforma robótica y el lado de la mesa en el que se ubicará el robot. **Conclusión:** La lista de verificación de asignaciones del equipo de enfermería en cirugías robotizadas fue elaborada por los autores y validada por jueces, y puede ser aplicada en hospitales que cuenten con cirugía robótica.

Palabras clave: Lista de verificación. Procedimientos quirúrgicos robotizados. Grupo de enfermería.

INTRODUCTION

With the advancement of technology in hospitals, robotic surgery is a great example of success, as it is a type of minimally invasive surgery, with the aim of providing state-of-the-art technology in procedure and offering better quality of life and quick recovery for the patient. The benefits of robotic surgery include an excellent level of precision of movements, three-dimensional view of the operating field, and ergonomic advantages, which are extremely important for an efficient result during and after procedures[1,2].

The advantages of this type of procedure are fewer incisions and blood loss during and after surgery and less painful and uncomfortable recovery, resulting in a shorter hospital stay and faster return of the patient to daily activities compared to conventional procedures. Currently, there are several robotic surgeries, especially those in the specialties of urology, gynecology, cardiology, and gastroenterology.

The da Vinci® robotic system is the most widely used in the world. It is composed of four robotic arms, one of them containing a high-resolution 3D camera, which ensures the quality and safety of the work of the medical and nursing teams, clinical engineering, and other professionals involved in the surgery. In the other three arms, several instruments (endowrist) are attached, such as tweezers, scissors, clip applicators, retractors, and other instruments necessary for the procedure[3-5].

The members of the nursing team who work in the operating room (OR), caring for patients undergoing robotic surgeries, must receive specific training to be qualified and certified. To handle the robot and its system, it is necessary to be constantly updated on new technologies and basic knowledge of the English language[5].

The nursing team is responsible for organizing the robotic room, managing and handling the equipment, placing the sterile covers on the robot arms (drapes), knowing the types of tweezers that each surgery requires, monitoring patient data, verifying calibration and surgical instruments, providing care and participating in the preparation of the patient in the perioperative period, in addition to ensuring a safe practice, in such a way that technological advances do not overstep patient care[6].

An assignment of extreme responsibility, together with the team of surgeons and anesthesiologists, is the patient positioning, considering the peculiarities of each procedure, the patient, and the surgeons[5]. Patient positioning during robotic surgery is of paramount importance, and the nurse must have the proper knowledge of the materials and positioners developed to provide more comfort to the patient in the intraoperative period. Thus, among the main challenges faced by the nursing team is the development of new skills and knowledge, team training, and patient safety in relation to robotic surgery[7].

In view of the complexity of the activities that the nursing team must perform in this type of intervention, it is necessary to develop an instrument that contemplates the assignments of these professionals in the OR in the intraoperative period (before, during, and after surgery), in order to ensure greater safety and promote organization for all those involved. In addition, there is a scarcity of publications in the national and international literature aimed at the qualification and training of the nursing team in robotic surgery, considering that most articles and books are intended for the preparation of the medical team.

OBJECTIVES

To develop a checklist of activities pertinent to the nursing team in robotic surgery;

To validate the content of the checklist of activities pertinent to the nursing team in robotic surgery, by a group of expert judges.

METHOD

This is a methodological study[8], divided into two stages: development of the checklist of activities pertinent to the nursing team in robotic surgery and validation of the checklist by a group of judges.

In the first stage of the study, a literature review was conducted, through a bibliographic search in articles, books, theses and dissertations on the subject, in order to elaborate the list of assignments of the nursing team (checklist). Publications in Portuguese, Spanish and English, without time frames, and which dealt with aspects related to the performance of the nursing team in robotic surgeries, were analyzed. At this stage, the experience of the authors working in robotic surgeries and with the application of the Surgical Safety Checklist, proposed by the World Health Organization (WHO), was also considered[9].

In the second stage, after developing the checklist, the content was validated by a group of seven judges specialized in robotic surgery, members of the Robotics Committee of the Brazilian Association of Nurses of the Surgical Center, Anesthetic Recovery and Sterilization Processing Department (*Associação Brasileira de Enfermeiros de Centro Cirúrgico, Recuperação Anestésica e Centro de Material e Esterilização* – SOBECC), a national nonprofit association of non-compulsory participation that brings together committees of experts in several areas of perioperative nursing. One of these is the Robotics Committee, which currently (May 2023) has ten nurses working in robotic procedures in several hospitals.

For the stage of the judges' validation of the checklist content, an instrument composed of two parts was used: characterization of the professional (number of the judge, age, sex, education, time of training, degree and time of experience in robotic surgery) and evaluation of the topics of the checklist (content, structure and presentation, relevance, and suggestions).

A four-point Likert scale was used to evaluate each item:

1. Inadequate;
2. Partially adequate;
3. Adequate; and
4. Totally adequate, allowing to verify the levels of judgment of the same topic and its intensity.

It is a psychometric response scale, widely applied in opinion polls. By answering a questionnaire based on the Likert Scale, participants specify their level of agreement by a statement[10].

Initially, one of the researchers, in a virtual meeting of the SOBECC Robotics Committee, presented the project, its objectives and importance, while the other contacts with the seven judges were made via email. All of them signed the Informed Consent Form. The project was approved by the board of directors of SOBECC, by the scientific committee of the college in which the researchers are enrolled, and by the Research Ethics Committee (CEP) of the proposing institution, via Plataforma Brasil database (Opinion 5.740.825), following the ethical-legal precepts of Resolution 466/2012[11] of the National Health Council (*Conselho Nacional de Saúde* – CNS).

RESULTS

The first version of the checklist was developed according to the recommendations of the literature and considering the authors' experience. Based on the WHO[9] Surgical Safety Checklist, the checklist of nursing team assignments in robotic surgery was divided into three phases or stages: Sign in/Before anesthetic induction; Time out/Before skin incision; and Sign out/At the end of surgery.

The first version was analyzed by a group of judges (seven specialist nurses). We invited the ten specialist nurses members of the SOBECC Robotics Committee to participate in the validation stage of the checklist, seven of whom were willing to participate in the process.

Of the seven judges (aged 39 to 56 years), six had a specialization degree and one had a master's degree. The instrument was evaluated for content, structure and presentation, and relevance, on a Likert-type scale, from one to four points, respectively: inadequate, partially adequate, adequate, and totally adequate.

In Table 1 we present the result of the evaluation of each item of the checklist by the judges.

We observed that the seven judges assigned scores 3 (adequate) and 4 (totally adequate) to all items of each of the criteria they evaluated (content, structure and presentation, and relevance), with no inadequate or partially adequate judgment, with scores 1 and 2. Thus, there was a high level of agreement of the evaluated items, all above 80%. The judges made suggestions regarding the description of some items on the checklist, which were adopted.

Table 1. Evaluation of the content, structure and presentation, and relevance of the checklist of nursing team assignments in robotic surgeries by the expert judges.

Item Content	Number	Percentage (%)
The information/content is consistent with the needs of the target audience		
Inadequate	0	0.0
Partially adequate	0	0.0
Adequate	1	14.3
Totally adequate	6	85.7
The information/content is important to identify the assignments of the nursing team in robotic surgery		
Inadequate	0	0.0
Partially adequate	0	0.0
Adequate	3	42.85
Totally adequate	4	57.15
The checklist assists in carrying out a safer procedure		
Inadequate	0	0.0
Partially adequate	0	0.0
Adequate	1	14.3
Totally adequate	6	85.7
The checklist is able to collaborate with the scientific community		
Inadequate	0	0.0
Partially adequate	0	0.0
Adequate	2	28.6
Totally adequate	5	71.4
The checklist meets the objectives of institutions that provide assistance in robotic surgeries		
Inadequate	0	0.0
Partially adequate	0	0.0
Adequate	3	42.85
Totally adequate	4	57.15
Structure and presentation		
The checklist is appropriate for the target audience		
Inadequate	0	0.0
Partially adequate	0	0.0
Adequate	1	14.3
Totally adequate	6	85.7
The items are presented in a clear and objective way		
Inadequate	0	0.0
Partially adequate	0	0.0
Adequate	1	14.3
Totally adequate	6	85.7
The information is scientifically correct		
Inadequate	0	0.0
Partially adequate	0	0.0
Adequate	4	57.15
Totally adequate	3	42.85

Continue...

Table 1. Continuation.

Item	Number	Percentage (%)
Content		
There is a logical sequence of the proposed items		
Inadequate	0	0.0
Partially adequate	0	0.0
Adequate	2	28.6
Totally adequate	5	71.4
The items are well-structured in terms of agreement and spelling		
Inadequate	0	0.0
Partially adequate	0	0.0
Adequate	1	14.3
Totally adequate	6	85.7
The style of the writing is consistent with the purpose of the checklist		
Inadequate	0	0.0
Partially adequate	0	0.0
Adequate	1	14.3
Totally adequate	6	85.7
The information is consistent		
Inadequate	0	0.0
Partially adequate	0	0.0
Adequate	2	28.6
Totally adequate	5	71.4
The overall presentation is adequate		
Inadequate	0	0.0
Partially adequate	0	0.0
Adequate	2	28.6
Totally adequate	5	71.4
Relevance		
It prioritizes key information for its application		
Inadequate	0	0.0
Partially adequate	0	0.0
Adequate	2	28.6
Totally adequate	5	71.4
It allows it to be applied to other realities		
Inadequate	0	0.0
Partially adequate	0	0.0
Adequate	5	71.4
Totally adequate	2	28.6
The content is necessary for the activities of the nursing team in robotic surgery		
Inadequate	0	0.0
Partially adequate	0	0.0
Adequate	1	14.3
Totally adequate	6	85.7
It is suitable to be applied to the target audience		
Inadequate	0	0.0
Partially adequate	0	0.0
Adequate	3	42.85
Totally adequate	4	57.15

The development of the instrument was completed after the following adjustments:

- Insert the other robotic platforms;
- Add "Cleaning the robotic system: before and after the procedure";
- Add the type of docking (pelvic, cephalic, lateral);
- Insert associated surgical positioning, such as lithotomy + Trendelenburg and reverse Trendelenburg + lateral;
- Insert number of dockings;
- Insert "Schedule of pre-cleaning of the tweezers and robotic materials inside the operating room";
- Include "Allergic patient?";
- Change endoscopes from 0° or 30° to the option mark ( ) 0° ( ) 30°;
- Add the "Not applicable" option to "Pneumatic leg protectors available?"
- Insert "Full Medical Team" in Sign in;
- Insert "CO_2 Check" in Sign in;
- Change "Sterilization markers checked" to "Sterilization process indicators in compliance";
- Insert "Specify the tweezers."

After making the changes proposed by the judges, we obtained the final version of the checklist of assignments of the nursing team in robotic surgery (Appendix).

DISCUSSION

Robotic surgery offers advantages over the conventional endoscopic procedure in terms of visualization, dexterity, and ergonomics, maintaining benefits in the perioperative period of this minimally invasive surgery[12].

Despite more than 20 years of existence of the Intuitive Surgical, Inc., the Da Vinci® platform represents nearly 35 years of combined efforts and technology in favor of robotic surgery. Compared to the Zeus platform, the Da Vinci® system is significantly better than those previously developed by the American company[13].

In the checklist, it was suggested to add the Versius® and Hugo™ robotic models, which are beginning to be used in Brazil and are produced by other companies. The Versius® system was recently launched by Cambridge Medical Robotics (CMR). It is an ergonomic platform equipped with an open console, which allows the professional to handle the device standing or sitting, reducing stress and fatigue. The surgeon can use up to five lightweight robotic arms, each positioned as a robotic unit, offering more freedom of placement of the portals. Its main advantage is the presence of individual arms, which mimic laparoscopic arms[14].

The latest robotic system, introduced by Medtronic, called Hugo™ RAS System, consists of an "open" surgical console with a passive HD–3D display, a system tower, and four independent, extendable arm carts, each with six joints. This system can be raised or lowered on the cart column for vertical positioning. The robotic arms are designed to be connected to the trocar and the installed instruments are driven by a motor called the "instrument drive unit"[15]. This model, the first in Latin America, was recently acquired by a private hospital in São Paulo and began to be used in May 2023.

With numerous robotic systems being created, one of the nurse's roles in robotic surgery is to prepare and control the system as well as position the patient and ensure the safety of the patient and staff. The nursing team's responsibilities during surgery involve assisting the surgeon, paying attention to the rules of asepsis, distinguishing the sterile and non-sterile parts of the robot, correctly and quickly reading the data on the videoscope screen, reporting them to the surgeon, and taking immediate action in the event of a power or system failure[16].

Robotic surgery also has inherent disadvantages, such as high-cost devices, lack of information about the system and, because it is large, it requires ample spaces in operating rooms[16,17].

As this type of procedure is under development, the number of qualified and experienced nurses is limited. According to a study conducted in Turkey, nurses working in the OR had positive opinions about robotic surgery, but only 35.8% had received training before joining the robotic team, while 55.2% had researched information individually. Nurses with experience in robotic surgery had significantly higher individual innovation scores. More than 85% of nurses who received training adapted to robotic surgery in three months or less, while nurses with higher individual innovation scores adapted in a significantly shorter period. Training, teamwork, and practical experience were mentioned as facilitating factors; inadequate training and technical problems have been reported as obstructive[17].

In view of the complexity of the activities that the nursing team must perform in a robotic surgery, we deemed necessary to develop an instrument, in the form of a checklist, that would contemplate the assignments of these professionals working in the OR in the intraoperative period, in order to promote more safety and organization for those involved in robotic procedures. In addition, the literature review and the authors' experience showed a lack of publications aimed at the qualification and training of the nursing team in robotic surgery.

The validation of the checklist of assignments of the nursing team in robotic surgery, developed through this research, had a level of agreement higher than 80%, in the evaluation of the expert judges, regarding content, structure and presentation, and relevance.

A study shows that the use of the Surgical Safety Checklist proposed by the WHO can contribute to minimizing errors, as it reduces dependence on memory and intuition, in addition to having a low cost for health services[18].

Other studies conducted in Canada, the United States of America, and Asia have shown a decrease in complication rates from 11% to 7% and mortality in major surgeries in the perioperative period from 1.5% to 0.8% since the beginning of the application of the checklist[19].

Therefore, we decided to develop and validate a checklist of nursing team assignments in robotic surgeries, based on the WHO model, as an instrument that should help professionals regarding safety and organization in the procedure and collaborate on minimizing risks in this type of intervention.

Contributions to perioperative nursing

In view of the complexity of the activities developed by the nursing team responsible for the organization of the operating room and the patients undergoing robotic procedures, this study aims to collaborate, in a forceful way, on increasing the safety and quality of the provided care. We believe that the checklist of nursing team assignments in robotic surgeries, developed and validated, has the potential to be applied in any hospital that offers robotic surgeries.

Study limitations

The limitations of the present study may be related to the small number of experts who validated the checklist and the lack of publications on the topic, making it difficult to deepen the discussion of the results. Moreover, the instrument has not been applied in robotic procedures. Furthermore, research aimed at the application of this checklist in robotic surgeries is being conducted.

CONCLUSIONS

The present study enabled the development of the checklist of assignments of the nursing team in robotic surgeries, which was validated by a group of seven expert judges who are members of the Robotics Committee of SOBECC. All of them assigned scores 3 and 4 (adequate and totally adequate) to each of the criteria, demonstrating the adequacy of the device in terms of its content, structure and presentation, and relevance. There was agreement above 80% in each of the items evaluated by the experts.

The validated checklist has applicability in robotic-assisted surgeries, as it is of paramount importance for patient safety and offers benefits to the multidisciplinary team and to the institutions where such interventions are performed. In addition, the cost for its manufacture and distribution is low, which makes its use viable.

It is recommended that the checklist be the object of new studies, comparing the results before and after its application, which may contribute to the reliability of the results that demonstrate improvements in the quality of the service provided, in the safety of the team and of the patients undergoing robotic surgeries.

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CONFLICT OF INTERESTS

The authors declare no conflicts of interest.

AUTHORS' CONTRIBUTIONS

FB: Conceptualization, Data collection, Writing – original draft. EA: Supervision, Visualization, Validation. RC: Project administration, Writing – review & editing, Supervision.

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Appendix. Checklist of assignments of the nursing team in robotic surgery (final version validated by the expert judges).

SIGN IN
Patient's confirmation: 1. Patient's identification: _____ 2. Procedure to be performed: _____ 3. Surgical site: _____ 4. Informed consent form: ( ) YES ( ) NO
Allergic patient: ( ) Medication ( ) Food ( ) Latex ( ) Other: _____ If YES, indicate which: _____
Difficult airway ( ) YES ( ) NO If YES, make materials available for difficult airway intubation.
Reserve of blood components ( ) YES ( ) NO
ICU reservation ( ) YES ( ) NO
CO_2 check ( ) Cylinder ( ) Network
Robotic system cleaning performed ( ) YES ( ) NO
Reserved Robotic Platform: ( ) Da Vinci® Si System ( ) Da Vinci® X System ( ) Da Vinci® Xi System ( ) Versius® System ( ) Hugo™ System ( ) Other: _____ The cabling of the robotic integrated system was checked ( ) YES ( ) NO ● Cables that connect all systems to have the same functionality ( ) ● Safety key for opening the robot's tweezers ( ) ● Surgeon console ( ) ● Vision tower ( ) ● Programmed Surgeon Console ( ) YES ( ) NO If marked NO, register the doctor on the platform. ● Robot Assembly: ( ) Placement of drapes ( ) Arms protection ● Were the robotic vision cart/vision tower tested? ( ) YES ( ) NO ● Optics calibration: Endoscopes: ( ) 0° ( ) 30° Notes:_____
Confirm the side of the table on which the robot will be available: ( ) Right ( ) Left ( ) Headboard ( ) Other: _____ Docking Type: ( ) Pelvic ( ) Cephalic ( ) Lateral ( ) Other: _____

Continue...

Appendix. Continuation.

Number of robotic arms that will be used: ( ) 1 ( ) 2 ( ) 3 ( ) 4
Accessories checking: Operating table compatible with robotic surgery ( ) YES ( ) NO Skin protection cushions ( ) YES ( ) NO Pneumatic leg protectors available ( ) YES ( ) NO ( ) NOT APPLICABLE Thermal blankets available ( ) YES ( ) NO Compression stockings and antithrombotic leg protectors available ( ) YES ( ) NO Antithrombotic compressor available ( ) YES ( ) NO Electrosurgery equipment available ( ) YES ( ) NO Anesthesia cart cleared for use ( ) YES ( ) NO
Medical team that participated in *SIGN IN*: Names:_____ _____
TIME OUT
Full medical and nursing staff ( ) YES ( ) NO Surgeon:_____ Attending Physician: _____ Surgical technician: _____ Anesthesiologist:_____ Nurse:_____ Nursing technician/circulator nurse: _____ Other professionals: _____
Calibrated endoscopes (optics) ( ) YES ( ) NO
Surgical positioning: ( ) Reverse Trendelenburg ( ) Trendelenburg ( ) Lateral position ( ) right ( ) left ( ) Lithotomy ( ) Lithotomy + Trendelenburg ( ) Reverse Trendelenburg + lateral ( ) Other: _____
Robotic surgical tweezers available ( ) YES ( ) NO Specify the tweezers according to quantity, model (reference), and serial number.
Specific robotic instrument boxes ( ) YES ( ) NO Specific robotic (separate) accessories ( ) YES ( ) NO Does it have an integrator? ( ) YES ( ) NO Sterilization process indicators in compliance ( ) YES ( ) NO
Disposables available ( ) YES ( ) NO Specify:
Robot docking performed ( ) YES ( ) NO Professional's Name: _____ Number of dockings: _____

Continue...

Appendix. Continuation.

SIGN OUT
Robot undocking performed ( ) YES ( ) NO Professional's Name: _____ Number of undockings: _____
Robotic system cleaning performed ( ) YES ( ) NO
Specimen for anatomical pathology ( ) YES ( ) NO If YES, describe the specimen/quantities: _____
Checking of gauze, swabs, needles, instruments and others ( ) YES ( ) NO If there is a divergence in the checking, follow the institutional protocol.
Was the pre-cleaning of the robotic tweezers and inside the operating room performed? ( ) YES ( ) NO If YES, specify the time: _____
Sterilization labels attached to the medical record ( ) YES ( ) NO Sterilization process indicators ( ) YES ( ) NO
Patient referred to: ( ) Post-anesthesia care unit ( ) Intensive Care Unit ( ) Other unit: _____ The patient received intraoperative blood components ( ) YES ( ) NO If YES, describe which: _____ Was there any intraoperative complications reported? ( ) YES ( ) NO If YES, describe which: _____
Was there any material with failure/defect observed during surgery? ( ) YES ( ) NO If YES, report which: _____
Nursing annotation for care transition:

Date: _____/_____/_____

_____

Signature and stamp
In the absence of a stamp, write the full name of the professional