



OBJN
Online Brazilian Journal of Nursing

ENGLISH

Federal Fluminense University

AURORA DE AFONSO COSTA
NURSING SCHOOL



Original Articles



Difficulties in the application of the surgical checklist: a qualitative study of a restorative ecological approach

Nery José de Oliveira Junior¹, Ana Maria Müller de Magalhães²

¹ FADERGS University Center

² Federal University of Rio Grande do Sul

ABSTRACT

Aim: analyze the application of the safe surgery checklist, seeking to describe the main factors that can affect its completion and follow-up, according to the perception of nursing technicians. **Method:** this is a qualitative study performed with nursing technicians from an outpatient surgical center in southern Brazil. The data were collected through focus groups and photographic methods, from the perspective of ecological and restorative thinking. **Results:** three categories emerged from the information grouping: Checklist for patient safety – still a challenge; difficulty of adherence to the safe surgery checklist; and Checklist Steps. **Discussion:** the data indicate that some stages of this process are still not met and there is difficulty of adherence by the teams. **Conclusions:** among the main failures is the low adherence of the medical team to perform the time out and to the confirmation of the place and the procedure. The restorative ecological approach made it possible to engage professionals.

Descriptors: Checklist; Patient Safety; Perioperative Nursing.

INTRODUCTION

The movements in search of quality and safety in the health systems point out that we still need to advance in the issues that involve the safety of hospitalized patients. Even with recent global initiatives on patient safety in health services, safe surgery remains a major challenge in the current context.

Estimates indicate that in 234 million surgeries performed per year worldwide, about 2 million deaths occurred and 7 million clients suffered postoperative complications. 50% of these could have been avoided, according to official calculations⁽¹⁾.

During patient care, adverse events can occur and cause physical, social and psychological harm, in addition to suffering, disability, or death. Avoidable situations of patient falls from the surgical table, surgery in the wrong place or exchange of patients are adverse events that are not associated with the underlying disease and that can affect patients in the surgical center^(1,2).

To address this problem, the World Health Organization (WHO) has mobilized efforts to develop and implement strategies to ensure the quality of care provided to the surgical patient. The safe surgery checklist is considered a tool capable of preventing attendance process failures, reducing complications and length of hospital stay, in addition to contributing to reduce the mortality of patients undergoing surgical procedures⁽³⁾.

In the surgical center, the creation and implantation of a safe surgical checklist is one of the interventions adopted by the hospital institutions, with the purpose of assuring surgeries with correct intervention, procedure and patient, in compliance with the recommendations of goal four for patient safety, defined by the Joint Commission International^(4,5) and

reaffirmed by WHO and the National Patient Safety Program. The checklist also contributes to the reduction of mortality and postoperative complications, depending on the institution's safety culture, and the commitment of front-line managers and workers⁽⁵⁻⁹⁾.

From the foregoing, the following research questions arose: how is adherence to the safe surgery checklist? How is this process occurring in the daily practice of professionals who work in a surgical center? How do the nursing technicians perceive compliance with the protocol in the practice scenario?

To answer these questions, bearing in mind the complex organizational and individual aspects involved in surgical room environments, which may contribute to or hamper the implementation and consolidation of new practices, it was decided to conduct an investigation based on the perspective of ecological restorative thinking, using participatory photographic methods.

This research approach adapts the principles of ecological and restorative thinking to the sociotechnical systems of care in the field of health, with a close examination of the environment where care is provided, allowing to capture data by photographic methods, reliable aspects and real-time organizational phenomena. The careful analysis of how the relationship between people and the environments in which they coexist occurs provides the engagement and participation of the researched group, allowing the identification and illustration of problems encountered, as well as the discussion and proposition of improvements for the functioning of the unit, which, on a daily basis, may not be so visible⁽¹⁰⁻¹²⁾.

These considerations, together with the scarcity of national studies, point to the importance of researching this phenomenon in the Brazilian scenario, aiming to contribute to the

strengthening of policies and strategies related to patient safety in our country. The objective of this study was to analyze the application of the safe surgery checklist, seeking to describe the main factors that can affect its completion and follow-up, according to the perception of nursing technicians.

METHOD

This is a qualitative, exploratory-descriptive research carried out with nursing technicians working in the outpatient surgical center of a private and philanthropic day-hospital, located in the city of Porto Alegre, Southern Brazil. At the surgical center chosen for this study, there are 60 nursing technicians and four nurses who work between 7am and 1pm, from Monday to Saturday.

The surgical center consists of eight surgical rooms, where about 600 surgeries are performed per month, with an average of 30 procedures per day, mainly in the areas of traumatology, gynecology, urology and aesthetics. It is the responsibility of the nurse to manage the distribution of surgeries in the operating room, as well as to coordinate and supervise the nursing staff in their activities, including the correct completion of the safe surgery checklist, along with the medical team. The institution implanted the protocol of safe surgery four years ago and all the nursing workers were trained for its application.

It should be noted that the checklist adopted at the institution was adapted from the WHO protocol and is developed in four stages: before the patient enters the surgical room (admission and identification), before anesthetic induction, before the incision (time out), and before leaving the room (check out).

The sample was chosen for convenience and conformed by those who showed interest in participating in the study, after the invitation was made through an information poster in the unit. The invitation was extended to all nursing technicians of the surgical center; however, only eight enrolled and participated in the study.

The inclusion criteria consisted of prior registration and confirmation of interest in the study participation, through verbal contact. The nursing technicians were the actors of this research for carrying out, together with the medical team, the completion of the safe surgery checklist. For this moment, the study takes a look at how nursing technicians perceive and perform the protocol of the checklist of safe surgery in their daily work.

Data were collected through the focus group technique and photographic methods of research, from the perspective of ecological and restorative thinking, after meeting with the institution's directors in January 2014, in which the technical director of the institution participated. In line with the methodological assumptions of the study, this meeting had the objective of presenting the research project and committing the managers with the results and possible alternatives for improvement that might arise during the research. It should be emphasized that the researcher himself was the nurse responsible for the surgical center, at the time of the research development, which reinforced the commitment of the managers to the project and the translation of the knowledge produced for the practice.

In March 2014, the first focal group took place for the discussion of the theme and elaboration of the photographic journey script. In April of that year, the photographic walk was carried out, with four participants: principal investigator, photographer, research assistant for field notes and a volunteer nursing techni-

cian, who participated in the first focal group. The second focal group was held in May for discussion and photographic elicitation.

The focal groups had eight participants each, upon prior registration and confirmation of the interested parties. The discussions were audio-taped to ensure the reliability of the information. The meetings lasted 1 hour and 30 minutes and took place in a meeting room of the institution, in order to ensure the privacy of the group. In the first focus group, a topic guide was used with the following questions: What do you consider a safe surgical procedure? In your opinion, what are the aspects that influence the application of the safe surgery checklist? How does the multiprofessional team carry out the safe surgery checklist application? What is the influence of the safe surgery checklist on the care given to the patient in the perioperative period?

Each participant (P) was assigned a number (P1, P2 [...] P8), both for each focus group and for the narratives of the photographic walk.

Data were transcribed and organized together with the photos in the NVivo10 program, and they were analyzed by the content analysis technique of the thematic type, followed by the phases of pre-analysis, material exploration, treatment of results, inference and interpretation⁽¹³⁾.

The study was carried out in the Research Ethics Committee of the institution and was registered in the Brazil Platform under Consubstantiated Opinion No. 530.038, of February 13, 2014, under CAAE: 26690914.9.0000.5328. For data collection, the Free and Informed Consent Form (TCLE) was provided to each participant of the focal group who, through the signature in the two copies of this document (one for the participant and one for the researcher), expressed their agreement to participate of the study and its agreement with audio

recording. Guidelines were also provided for each participant in the photographic walk and different TCLEs were prepared for patients/relatives and physicians/employees who were in the environments where the images were being recorded, in compliance with national and international standards of research ethics involving humans⁽¹⁴⁾.

RESULTS

After the organization and grouping of the material, three thematic categories emerged: Checklist for patient safety: still a challenge; difficulty of adherence to the safe surgery checklist; and checklist steps.

Patient safety checklist: still a challenge

In the debates, it was emphasized that the checklist works as a barrier to prevent possible errors of laterality of the surgical procedure and of patient exchange in the operating room, besides ensuring the correct identification of the patient at the moment of the preparation to enter the surgical center.

The need for patients to feel safe was emphasized by the study participants in reporting the moments they interacted with patients during the completion of the surgical checklist at all stages: pre, trans and postoperative.

In the institutional routine, the patient, upon arriving at the surgical reception, is received by an administrative assistant who collects identification data, prints and installs a white bracelet on the patient's right arm, guiding and informing the purpose of the use of the identification bracelet. Afterwards, the patient is referred to the surgical prep room, where care is given as a result of the reconfirmation of his/her identification data by oral question,

check of the medical record and information contained in the identification bracelet. The clothes are changed, the vital signs are verified and the interview is continued in order to investigate the use of medications, allergies and previous surgical procedures, and to ratify the procedure to be performed.

The presence of allergies is signaled by the placement of an orange colored bracelet in order to highlight this information for all teams. This moment characterizes the beginning of the nursing process in the surgical center, in which the information that will later be used in the operating room and in the post-anesthetic recovery room is gathered. Figure 1 depicts the moment of patient admission to the surgical prep room and represents the first step of applying the checklist.

Figure 1. Admission of patients to the surgical prep room - Surgical Center. Porto Alegre/RS, 2014



Figure 2 shows the identification of the patient by means of the bracelet, fulfilling WHO's goal 1 of patient safety, thus avoiding mistakes in identifying or changing names among patients. Another aspect highlighted by the participants of the study that emphasizes the importance of the use of identification wristbands and signs of allergies is that it prevents the inadequate administration of drugs

to which patients are allergic, enhancing their safety. The excerpts below show some of the group members' statements on these aspects:

At the moment that we receive the patient, whoever is in the screening has to confirm with the patient the full name, before the patient enters or at the moment that he is changing; we confirm this for the safety of the patient. (P1) Focus group 2, 28/06/2014.

I had an experience in which I called the patient, and he was not the patient I was calling. I find it wonderful to have a bracelet to identify the patient. Everything is not enough. (P3) Focus group 2, 28/06/2014.

Figure 2. Patient Identification and Allergy Risk Bracelet - Surgical Staging Room. Porto Alegre/RS, 2014



According to the participants, in the focus group discussions, patients are anxious and with signs of nervousness in the moments before the call for surgery, which can cause difficulties and blocks in hearing their names or similar names, creating situations of possible patient exchange.

In order to prevent these possible failures, the institution has adopted routines in which it is emphasized that any member of the surgical or nursing team, when seeking the patient in

the surgical preparation room, should call him by his full name, check with the medical record and identification bracelet, and reinforce patient guidance on the bracelet that signals the presence of allergy risk. In the operating room, at the time of completion of the checklist, these same items must be confirmed, in addition to being ratified the name of the procedure to be performed.

Difficulty adhering to the safe surgery checklist

In this category, the reasons for noncompliance, as well as the difficulties regarding compliance with the protocols for the application of the safe surgery checklist were grouped. Talking with the group, it was noticed that everyone knew the instrument to perform the checklist of the safe surgery; however, they reported having difficulties filling it, mainly due to the need to streamline the process and promptly refer the patient to the operating room. The group's discussions reflected difficulties of adherence by physicians, surgeons and anesthetists, in following the protocol, as can be seen in the following section:

We have a barrier with the checklist inside the room, depending on our doctors. [...] Because there are some doctors who don't accept it. [...] (P1) Focus group 1, 03/18/2014.

In a room, it's very complicated to do it. What do we do? We identify ourselves, check the list at the screening, confirm patients' name, bracelet, surgery, surgeon, allergies; we talk about everything we are supposed to, because when we arrive in the room they the patient is already on the table

being punctured; they don't let us talk. (P8) Focus group 1, 03/18/2014.

There are doctors who will not let us do anything, not even ask the patient anything. He takes the patient into the room right away. (P2) Focus group 1, 03/18/2014.

According to the participants, in order for the use of the safe surgery checklist to take place adequately, nursing and medical teams need training in order to reinforce the importance and benefits of applying the instrument, encouraging its use and contributing to change of the institution's safety culture.

Checklist steps

In this category, the ideas related to the different stages of the checklist that, several times, did not take place in the times recommended and hampered its use as a barrier to failures in the surgical process, were approached.

In the focus groups, it was discussed that there were failures in filling the checklist of the safe surgery and this could be verified during the photographic walk, when it was observed that, in some situations, the instrument was completely filled before starting the surgery or after its end, without respecting the correct moments of its application. According to the participants, this practice is done to give greater agility to the surgical process.

In my opinion, this checklist must be done before, because in a surgery everything goes very fast and we have to get the patient, and this paper goes along. So, if you don't fill it out at that moment, and you have to fill it out

fast, you can't fill it out afterwards and you end up going to the recovery room without it. (P8) Focus group 2, 6/28/2014.

They do not understand it. They don't want to waste time in the room; they think this is silly, foolishness. And when we tried to apply the checklist in the room before, we had several barriers, several arguments. [...] Actually, here, we can't do what we are supposed to; the surgeon plays his role, and the anesthetist does his part. [...] because the anesthesiologist thinks it's silly, and the surgeon thinks it's silly. (P1) Focus group 2, 6/28/2014.

For the control and conference held at the patient's arrival in the recovery room, it was identified that practically all patients had the complete records in the checklist. However, during the photographic walk, it was noticed that, in some cases, the patient was still in surgery and the checklist was already filled, or the filling had not been started; in another procedure, the patient was still awake, talking to the team and being prepared for the procedure, and the document was already largely completed, corroborating that the time out (pause before the surgical incision, when the patient is already anesthetized) did not happen in that situation, but it was filled as if it had occurred at the right times. Figure 3 illustrates the described aspects, with the instrument completely filled before the beginning of the surgery.

Figure 3. Early checklist completion - Surgical room. Porto Alegre/RS, 2014



In the focus group, the nursing technicians emphasized that the medical team did not allow the surgical pause to be performed, accelerating the surgical process to enable the execution of several procedures in sequence.

Another reported nonconformity was the lack of marking of surgical laterality. According to the institutional protocol, the patient would have to make the first surgical mark (red circle) with the accompaniment of a nursing professional; and the second mark should be performed by the surgeon physician, by means of a blue circle, with the intention of confirming with the patient, still awake, where the procedure would be performed. However, this second confirmation does not always occur.

Figure 4 shows the surgical marking performed by the patient and the non-confirmation by the surgeon, since the patient was already sedated. During the photographic walk, it was recorded that there was only the lateral marking performed by the patient. At the time of confirmation of the laterality by the doctor, he was already performing the surgical brushing of the hands to enter the field, without confirming the place of accomplishment of the procedure with the blue circle, as recommended by protocol.

Figure 4. Laterality marking - Operating room. Porto Alegre/RS, 2014

DISCUSSION

These results may contribute to the knowledge of an emerging theme in health care systems, which still needs to be explored in the context of Brazilian hospitals to improve patient safety, specifically in the surgical center area.

The use of an innovative methodology, such as participatory photographic methods in the restorative ecological approach, can contribute to the implantation and improvement of the use of the safe surgery checklist, through the mobilization and commitment of the professionals involved in the processes, the managers and the decision makers in the institutions studied.

The findings of this study demonstrate the recognition of the nursing team about the importance of using the safe surgery checklist to promote patient safety in the operating room. However, some steps in this process are still not fulfilled by the difficulty of adherence by the medical and nursing teams.

The follow-up of the stages, as recommended, with pauses for conferences at the critical moments of the surgical-anesthetic procedures, as before anesthetic induction, before the incision and before leaving the operating room, still needs to be emphasized through

training and guidelines of the medical and nursing teams. Failure to comply with each of these steps can lead to failures and harm to patients. This was highlighted in a study conducted at a referral hospital in Ethiopia, which identified that the surgical checklist contributed to improved communication among professionals. However, it was reiterated that it is still necessary to increase the training of the assistance teams and to reinforce the use of this tool⁽¹⁵⁾.

The findings of the present study agree with the results of other studies^(16,17) that indicate that the checklist is applied in all surgical procedures; however, the checklist steps are not fully executed, proving that there are flaws related to the registration of the protocol and that adherence to the checklist depends on the safety culture of the institution and the empowerment of the surgical and nursing teams.

A study carried out in Switzerland on the implementation of the checklist of safe surgery between the public and private services, presented a greater difficulty of adherence in the private services, having as answer "a waste of time"⁽¹⁷⁾.

The literature⁽¹⁸⁻²⁰⁾ points out that the implantation of this tool can contribute to the reduction of general complications in surgical patients, besides corroborating to improve the

patient's safety awareness, minimizing risks from a greater cohesion between the teams and by coordinating activities and providing higher quality of care. Some difficulties for the implantation of the safe surgery checklist are due to organizational problems, human abilities, cultural characteristics and beliefs, which may result in duplication of activities, inappropriate use, time consumed, insufficient time, poor communication among professionals, and absence of familiarity among the professionals or constraints in the surgical room.

The difficulties of adhesion found indicate that strategies are needed for the implantation of the safe surgery checklist, in order to facilitate adaptation and increase the adhesion of the teams. Moreover, it is essential that leaders, in addition to the front-line medical and nursing teams, commit to the implementation and follow-up of the safe surgery checklist⁽¹⁸⁾.

Other aspects raised from the focus group discussions referred to how nursing technicians, after training on the filling and the importance of the safe surgery checklist, felt empowered to apply the instrument. These considerations led to questioning whether they really valued this instrument or whether it was just another document to be filled. Regarding these considerations, it can be assumed that, in some situations, the nursing team did not feel responsible for charging the medical team for the follow-up of the protocol, since it did not seem to be valued by these professionals, who related the delay in initiating the surgical procedures to fill the checklist.

Confirmation of laterality and marking of the surgical procedure (blue circle) by the surgeon did not occur according to the institutional protocol, as discussed in the focus group and as verified during the photographic walk. It was observed at various moments that only the patient performed

the marking with the aid of nursing, in the surgical admission room.

These findings reinforce the recommendations of other studies on the importance of the marking of surgical laterality by the American professional associations of perioperative nursing, emphasizing that it should happen in the preoperative period, in a timely manner, with the certainty of the place to be operated. This process aims to prevent the surgery from being performed in the wrong person and place, in addition to avoiding procedures that jeopardize the safety of the patients and the team^(8,15).

It is important to note that the timeout was not observed during the photographic walk, and it should be noted that the application of the surgical pause is one of the most important moments of the checklist, since it is the moment to confirm the members of the surgical team, besides being sure of the surgical site, ensuring patient safety. It was identified that failure to follow the protocol steps resulted in inappropriate situations, as for example, in cases where the checklist form was completely filled out when the patient was not yet anesthetized or, in other cases, in which the patient was undergoing surgery and the checklist remained blank and being filled only at the end of the surgical procedure.

The photographic methods used in the research contributed to the professionals reassessing their place of work, as well as the application of the activities and the care routines. At the time of the elucidation of the photos, in the second focus group, the images spoke for themselves, with the participants interpreting the photos and identifying improvements, as well as pointing out situations that needed adjustments.

Similar to the findings of another study⁽¹⁹⁾, the use of the participatory restorative pho-

tographic approach helped nursing professionals re-think and collaborate, generating significant improvements for the physical design, arrangement and organization of materials and equipment. Moreover, it made possible the understanding of many facets involved in the complex environment in which care actions are developed in hospital institutions, contributing to the strengthening of the safety culture within the work environment⁽¹²⁾.

CONCLUSION

The safe surgery checklist was a protocol that helped to prevent flaws in care processes and consequent harm to patients. Its implementation in health institutions needs to be monitored and evaluated in order to identify possible failures in the implementation stages, as well as the difficulties in terms of adherence of the teams, in the sense of proposing improvement strategies. Among the main failures, there is the low adherence of the medical team to the time out and confirmation of the location of the procedure, by means of marking, according to institutional protocol.

The participatory nature of the restorative photographic research methods allowed the professionals of the field of study to engage and made many improvements in the application of the checklist, based on suggestions and proposals made by them.

Despite the relevance of the findings and descriptions of situations that may be common in other institutions in the surgical center settings in our country, the need for new research with different approaches is highlighted, in order to deepen the knowledge of the investigated phenomenon.

REFERENCES

1. Spruce L. Back to basics: implementing the surgical checklist. [Internet]. *AORN J.* 2014; 100(5):465-73; quiz 474-6. [cited 2015 sep. 15]. Available from: <http://www.aornjournal.org/article/S0001-2092%2814%2900877-1/pdf>. doi: <http://dx.doi.org/10.1016/j.aorn.2014.06.020>
2. Wilson RM, Michel P, Olsen S, Gibberd RW, Vincent C, El-Assady R, Rasslan O, Qsous S, Macharia WM, Sahel A, Whittaker S, Abdo-Ali M, Letaief M, Ahmed NA, Abdellatif A, Larizgoitia I; WHO Patient Safety EMRO/AFRO Working Group. Patient safety in developing countries: retrospective estimation of scale and nature of harm to patients in hospital. [Internet]. *BMJ.* 2012; 344:e832. [cited 2015 nov. 10]. Available from: <http://www.bmj.com/content/344/bmj.e832.full.pdf>. doi: 10.1136/bmj.e832
3. Haugen AS, Søfteland E, Almeland SK, Sevdalis N, Vonem B, Eide GE, et. al.
4. Effect of the World Health Organization Checklist on Patient Outcomes- A stepped wedge cluster randomized controlled trial. [Internet]. *Ann Surg.* 2015;261(5):821-828. [cited 2016 oct. 30]. Available from: <http://journals.lww.com/annalsofsurgery/toc/2015/05000>. doi: 10.1097/SLA.0000000000000716
5. Borchard A, Schwappach DL, Barbir A, Bezola P. A systematic review of the effectiveness, compliance, and critical factors for implementation of safety checklists in surgery. [Internet]. *Ann Surg.* 2012; 256(6):925-33. [cited 2015 jun. 20]. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/22968074>. doi: 10.1097/SLA.0b013e3182682f27
6. Joint commission international. National patient safety goals effective. 2013. [cited 2015 nov. 11]. Available from: http://www.jointcommission.org/hap_2014_npsgs
7. Walker A, Reschamwalla S, Wilson IH. Surgical safety checklists: do they improve outcomes? [Internet]. *BrJAnaesth.* 2012; 109(1):47-54. [cited 2015 jul. 11]. Available from: <http://bjaoxfordjournals.org/content/109/1/47.full.pdf>. doi:10.1093/bja/aes175
8. Cruz YL, Algonso PM, Pérez ACD. Seguridad del paciente en la cirugía refractiva con

- laser. [Internet]. *Revista Cubana de Oftalmología*. 2012; 25(1):57-64. [cited 2015 aug. 23] Available from: http://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S0864-21762012000100008&lng=es.
9. Haynes AB, Weiser TG, Berry WR, Lipsitz SR, Breizat AH, Dellinger EP, et. al. Safe Surgery Saves Lives Study Group. Changes in safety attitude and relationship to decreased postoperative morbidity and mortality following implementation of a checklist-based surgical safety intervention. [Internet]. *BMJ Qual Saf*. 2011; 20(1):102-7. [cited 2015 mar. 8]. Available from: <http://qualitysafety.bmj.com/content/20/1/102.full.pdf>. doi:10.1136/bmjqs.2009.040022
 10. Brasil. Documento de referência para o Programa Nacional de Segurança do Paciente. [Internet]. Brasília: Ministério da Saúde, 2014. [cited 2015 oct 20]. Available from: http://bvsm.sau.gov.br/bvs/publicacoes/documento_referencia_programa_nacional_seguranca.pdf
 11. Marck PB, Molzahn A, Berry-Hauf R, Hutchings LG, Hughes S. Exploring safety and quality in a hemodialysis environment with participatory photographic methods: a restorative approach. [Internet]. *Nephrol Nurs J*. 2014; 41 (1): 25-35. [cited 2015 mar. 15]. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/24689262>
 12. Ray JL, Smith AD. Using photographs to research organizations: evidence, considerations, and application in a field study. [Internet]. *Organizational Research Methods*. 2012; 15 (2): 288-315. [cited 2014 may. 13]. Available from: <http://orm.sagepub.com/content/early/2011/12/19/1094428111431110.full.pdf>. doi:10.1177/1094428111431110
 13. Magalhães AMM, Dall'Agnol CM, Marck PB. Nursing workload and patient safety - a mixed method study with an ecological restorative approach. [Internet]. *Rev. Latino-Am. Enfermagem*. 2013; 21, Spec No: 146-154. [cited 2015 nov. 11]. Available from: <http://www.scielo.br/pdf/rlae/v21nspe/19.pdf>. doi.org/10.1590/S0104-11692013000700019
 14. Minayo MC. [Qualitative analysis: theory, steps and reliability]. *Cienc Saude Coletiva*. 2012; 17(3):621-6. Portuguese.
 15. Brasil. Resolução nº 466/12. [Internet]. Brasília; 2012 [cited 2014 oct. 11]. Available from: <http://conselho.saude.gov.br/resolucoes/2012/Reso466.pdf>
 16. Fourcade A, Blache JL, Grenier C, Bourgain JL, Minvielle E. Barriers to staff adoption of a surgical safety checklist. [Internet]. *BMJ Qual Saf*. 2011; 21(3):191-7. [cited 2015 mar. 15]. Available from: <http://qualitysafety.bmj.com/content/early/2011/11/07/bmjqs-2011-000094.full.pdf>. doi:10.1136/bmjqs-2011-000094
 17. Maziero ECS, Silva AEBC, Mantovani MF, Cruz EDA. Adherence to the use of the surgical checklist for patient safety. [Internet]. *Rev Gaúcha Enferm*. 2015; 36(4):14-20. [cited 2015 dec. 10]. Available from: <http://www.seer.ufrgs.br/RevistaGauchadeEnfermagem/article/viewFile/53716/35653>. doi: <http://dx.doi.org/10.1590/1983-1447.2015.04.53716>
 18. Cullati S, Licker MJ, Francis P, Degiorgi A, Bezola P, Courvoisier DS, et. al. Implementation of the Surgical Safety Checklist in Switzerland and Perceptions of Its Benefits: Cross-Sectional Survey. [Internet]. *PLoS ONE*. 2014, 9(7), e101915. [cited 2015 oct. 10]. Available from: <http://journals.plos.org/plosone/article/asset?id=10.1371%2Fjournal.pone.0101915.pdf>. doi:10.1371/journal.pone.0101915
 19. Liza, S. Back to basics: implementing the surgical checklist. [Internet]. *AORN J*. 2014; 100(5):465-73. [cited 2015 nov. 18]. Available from: <http://www.aornjournal.org/article/S0001-2092%2814%2900877-1/pdf>. doi: <http://dx.doi.org/10.1016/j.aorn.2014.06.020>
 20. Gimenes FR, Marck PB, Atila EG, Cassiani SH. Engaging nurses to strengthen medication safety: fostering and capturing change with restorative photographic research methods. [Internet]. *Int J Nurs Pract*. 2014. Epub ahead of print. [cited 2015 dez. 10]. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/24724623>. doi:10.1111/ijn.12304
 21. Papaconstantinou HT, Jo C, Reznik SI, Smythe WR, Wehbe-Janek H. Implementation of a Surgical Safety Checklist: Impact on Surgical Team Perspectives. [Internet]. *The Ochsner Journal*. 2013; 13(3), 299-309. [cited 2015 nov. 15].

Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3776503/pdf/i1524-5012-13-3-299.pdf>.

Received: 05/11/2016

Revised: 03/22/2018

Approved: 03/22/2018

All authors participated in the phases of this publication in one or more of the following steps, in according to the recommendations of the International Committee of Medical Journal Editors (ICMJE, 2013): (a) substantial involvement in the planning or preparation of the manuscript or in the collection, analysis or interpretation of data; (b) preparation of the manuscript or conducting critical revision of intellectual content; (c) approval of the version submitted of this manuscript. All authors declare for the appropriate purposes that the responsibilities related to all aspects of the manuscript submitted to OBJN are yours. They ensure that issues related to the accuracy or integrity of any part of the article were properly investigated and resolved. Therefore, they exempt the OBJN of any participation whatsoever in any imbroglios concerning the content under consideration. All authors declare that they have no conflict of interest of financial or personal nature concerning this manuscript which may influence the writing and/or interpretation of the findings. This statement has been digitally signed by all authors as recommended by the ICMJE, whose model is available in http://www.objnursing.uff.br/normas/DUDE_eng_13-06-2013.pdf