Research Article

Safe surgery control list: it is following a challenge, checklist of safe surgery: still a challenge, checklist of safe surgery: already um challenge

Abstract

Objective: To describe the changes in the operating room practices with respect to the safe surgery checklist using photographic research methods.

Methods: Qualitative study conducted by nursing technicians in an ambulatory surgical day case center in the city of Porto Alegre/RS - Brazil.

Results: This study highlights the fact that the implementation of the safe surgery checklist needs monitoring and evaluation of its implementation in real time, in order to strengthen the culture of patient safety and prevent adverse events.

Keywords: safe surgical checklist, patient safety, perioperative nursing

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Introduction

Despite recent global initiatives to promote patient safety in day care settings, there is still scope for professionals and researchers to improve the processes further. It is estimated that 234 million surgeries are performed annually worldwide, which works out to one surgical procedure for every 25 citizens.[1-5] Given this magnitude, safe surgery becomes the focus of attention and a priority issue. It has to be monitored closely in all institutions in order to minimize the occurrence of adverse events.[6] In Brazil, the National Patient Safety Program has evolved standards and regulations, to support and promote strategies for patient safety in healthcare settings with the goal of ensuring that surgery is undertaken at the correct site and patient by the correct procedure.[7] Concerns about patient safety occurred in the early 19th century around the time anesthesia was discovered and when surgeries were often performed under unsafe conditions, and associated with high perioperative morbidity and mortality.[8,9] Given the volume of surgical procedures in the modern era, various checklists and protocols have been introduced to minimise adverse events. Adherence to the protocols by the members of the surgical team demands greater investment by the hospital management in order to support, promote and strengthen the safety culture. Professional commitment and responsibility is necessary to complete the laid out protocols satisfactorily. This is a complex and challenging process but also a very effective strategy to avoid the human errors of omission and commission in the operation room (OR).

The Safe Surgery Checklist confirms various aspects of the patient data such as the patient's full name, doctor's name, signature on the consent form, procedure to be undertaken, site of surgery, history of allergies, nil by mouth status, details of medications, airway assessment, blood reserved and vital signs. Intra operative checklists also ensure that mop, instrument counts are checked to avoid disastrous consequences and litigation.[10] Even so, there is resistance on the part of the surgical team members in complying with the protocols stated and detailed in the checklist. Many consider the Safe Surgery Checklist a waste of time, and find some pretext or the other to bypass the steps enumerated during their shift.[11] It becomes necessary, therefore, to emphasise on the importance of performing the Safe Surgery Checklist to ensure the highest and safest quality of care the surgical patient. Adherence to the checklist protocols circumvents oversights and flaws in the process. The aim of this study was to observe the changes in attitudes that occurred in a surgical centre in relation to the Safe Surgery Checklist after introduction of audio recordings and photography.

Material & methods

A qualitative study was carried out among nursing technicians working in the outpatient surgical center of a hospital. Data was acquired through the focus group technique and photographic research methodology. Following a meeting with the hospital directors in January 2014, the Directives and Norms Regulating Researches Involving Human Beings, established by Resolution 466/12 of the National Health Council, and evaluated by the Ethics and Research Commission (CEP) of the research institutions, under CAAE opinion: 26690914.9 .0000.5328 was adopted.

The first focal group meeting took place in March 2014 for the discussion of the methodology to be adopted. In April that year, a photographic walk was executed with four participants that included the, the principal investigator, photographer, research assistant for field notings and a volunteer nursing technician. The second focal group meeting was held in the month of May 2014 for photographic elicitation when the focus groups, with eight participants each, held a meeting lasting 90 minutes to respond to a questionnaire. The questions raised were as follows:

a. What do you consider to be a safe surgical procedure?

b. In your opinion, what are the aspects that promote the application of the Safe Surgery Checklist?

c. What is your opinion on how the professional teams perform the Safe Surgery Checklists?

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d. What is the influence of the Safe Surgery Checklist on the care provided to the patient in the perioperative period?

Each participant (P) was assigned a number (P1, P2 etc) for each focus group and also for the narratives during the photographic walk. Audio recordings of these meetings were made to ensure the reliability of the information. The data was transcribed and clubbed with the photos in the program NVivo10, analyzed by the technique of content analysis of thematic type.[12] The study design conformed to the national and international standards of research ethics involving human subjects.

Results

The material collected was organized and grouped into three categories:

A. Difficulties faced in adherence to the Safe Surgery Checklist

B. Checklist Steps

C. Checklist relevance in ensuring patient safety

Difficulties in adherence to the checklist for safe surgery was sub grouped into the reasons for non adherence, difficulties in completing the protocols of the Safe Surgery Checklist, lacunae in training methods to ensure compliance with the protocols established by the institution. In the Checklist Steps category, feedback regarding steps that were not fulfilled by the staff and those that were retrospectively filled was elicited. During the photographic walk, instances of patients still in surgery with incomplete checklist and oversights with respect to pre operative huddles/time out were video recorded. In the focus group, instances where nursing technicians were under pressure to speed up patient turnover without fully completing checklists at the appropriate time were recorded. In the category of checklist for patient safety, participants of the focus groups who recognized that the checklist was a fundamental resource to prevent errors and to reinforce patient safety were shortlisted. Suggestions regarding improvements that could be implemented were also elicited as well as their preferences for manual or computer filling of each step of the checklist (Figure 1 & Figure 2).

Figure 1 Manually filled checklist at Porto Alegre (RS), Brazil.

Figure 2 Computerized checklist at Porto Alegre (RS), Brazil, 2014.

Some of the comments obtained from the focus groups were "I think the computerized system will be better" (P1) "," A great idea, I think it's going to get better" (P21), " Most of the time we do not have access to the patient as I am a circulating staff" (P3), "I'm with one team that is in a hurry and having no time to fill checklists" (P4), " The checklists do not accompany the patient or I am sent to the pharmacy to get stores and have no time to fill in the forms" (P5) and "We do not have access to the patient". (P7). To reinforce the importance of completing the Safe Surveillance Checklist and to improve communication between teams, a chart (Figure 3) was prepared to highlight the most important data for the procedure in question. The intention was to reproduce the information from the Computerized System Checklist to this chart, in order to ensure that the team on duty scrutinizes details like patient's name, name of the assigned surgeon and anesthesiologist, procedure to be performed, anesthesia technique planned, dosages of drugs administered and their timing, details of antibiotics exhibited and also details of thrombosis prevention protocols.

Figure 3 Checklist information displayed in operating rooms at Porto Alegre (RS), Brazil.

Discussion

Analysis of the data acquired by the study indicates that the nursing team recognizes and supports the use of the Safe Surgery Checklist in order to enhance patient safety in the operating room. Some steps of the checklist process are still not completed and some members do not adhere to all the steps listed.[12,13] A study by Amaral and Oliveira[14] has shown that the steps of the Safe Surgery Checklist are not completely executed by the members of the surgical team, leading to failures related to protocol recording. Another study highlights the fact that adherence to the Checklist depends heavily on the institution's safety culture, as well as the commitment of front-line managers and workers.[15] Thomassen observed that poor communication and lack of time are barriers to the success of the implementation of the checklist protocols.[16] The same author suggests that involvement of the patient care managers, especially the doctor in charge can ensure better compliance and adherence to the steps of the Safe Surgery Checklist. Poor time management overloaded surgical list and a lack of a safety culture in health organizations are major barriers to the successful implementation of protocols and a safe surgery checklist.

Despite all of the above drawbacks and deficiencies in our hospital, the rates of postoperative complications and mortality remain low. One reason that may have influenced this fact is that ours is an exclusive day case hospital, and most surgical procedures are minor. Ever since the introduction of the Checklist, surgical complication rates have fallen from 11% to 7% and mortality rates decreased from 0.9% to 0.6%. Overall rates of surgical infection and unplanned reintervention have also decreased significantly.[17] A study carried out in eight local hospitals also reflect that the introduction of the Safe Surgery Checklist has reduced postoperative complications rates and mortality by an average of 36% from pre existing rate of 11% to 7%.[18] In the Fourcade study, there was a low percentage of adherence, around 61%, to the safe surgery checklist due to many problems with adaptation. This improved over time to 90% after addressing problems and issues like organizational attitudes, human skills, cultural characteristics and beliefs, verification activities, misuse, time allotment, communication problems among the professionals, lack of familiarity, opposition to change and hierarchial factors in the operating room.[19,20] In the present study data collected through a spreadsheet filled out by the nurse upon the patient's arrival in the recovery room resulted in 85% completion, but the general rate hovered around 60% completion. After the

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implementation of audio and video surveillance, the completion rate has improved to 92%. When any single item in the checklist is not correctly filled or incomplete, this is taken as an indicator of non compliance, but not allowed to interfere with the Safe Surgery Checklist at any stage.

Participants of the surgical team are now committed to the idea of supporting the Safe Surgery Checklist because they realise that they could themselves be patients requiring surgery one day. In a recent study, of the 281 participants, 93.4% were desirous of the Safe Surgery Checklist to be performed if they underwent a surgical procedure, and only four interviewees (1.6%) were equivocal. In the same study, of the 257 physicians who filled out the Safe Surgery Checklist instrument, 80% reported that it was easy to perform, while 19% reported that it took time to complete. The Safe Surgery Checklist is associated with significant reduction in complications following surgical interventions, minimizing risks through better team cohesiveness and coordination. Adherence to the Checklist contributes to a desirable safety culture in surgical units. It has to be, however, closely monitored to ensure total compliance.

The participatory audio and video methods used in monitoring staff compliance to the checklist approach are advancement in regulating and promoting the safety culture. Discussions regarding non compliance or incomplete filling of checklists with the recorded evidence aid in staff introspection of oversights and ensure better compliance to the schedules thereafter. In a study by Gimenes,[20] participatory photographic methods helped nursing professionals re-think and collaborate in a better manner, resulting in significant improvements of the safety culture within the work environment.

Conclusion

Application of the participatory restorative photographic methodology results in a near absolute compliance with adherence to safe surgical checklists in the OR. Implementation of the Safe Surgery Checklist requires monitoring and evaluation of its execution in real time, to strengthen the safety culture and prevent adverse events. This study demonstrates and supports findings from existing literature regarding the difficulties in applying the checklist. The participatory nature of the restorative photographic research methods makes it possible to show professionals errors of omission and commission and this feedback coupled with suggestions and discussions vastly improves compliance of participants. It can also provide a basis for awarding incentives for good safety records and evidence for safety audits.

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Conflict of interest

Author declares that there is no conflict of interest.

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