

Original Research Article

Operating Room Checklist and Nurse Professional Responsibility

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Abstract: INTRODUCTION: Based on the Guidelines for Surgical Recommendations, the WHO has developed a 19-item operating room safety checklist to support surgical teams, ensure quality and safety, and prevent mortality and postoperative complications. The checklist includes three phases (Sign In, Time Out, Sign Out), 20 items with checks to be performed during the surgery, and the corresponding boxes to be checked after the checks have been completed. It is recommended to appoint a checklist coordinator among the team members who is responsible for reviewing the checks by each member of the operating team, and only after the checks have been established. I developed the questionnaire following the WHO guidelines, specifically the "Guidelines for Surgery" document, which was drafted by the association to present the operating room checklist for patient and staff safety. **Objective:** The purpose of this survey is purely informative, to obtain a state-of-the-art overview and to compare it with my own work environment. **Methods:** Taking into account the key points highlighted by the WHO, I developed a total of eight questions. The questions addressed the importance of implementing the checklist, the checklist phases in general, the checklist coordinator, the role of the checklist coordinator, adapting the checklist to one's work environment, the sign-in phase, the time-out phase, and the sign-out phase. **Results:** As confirmed by the literature, the introduction of checklists and the use of clinical protocols, if used responsibly and effectively, significantly reduce clinical risks and can become an important prevention tool. **Conclusions:** After analyzing the responses, it can be deduced that the checklist is completed correctly, carefully, and scrupulously in most contexts. The percentage of correct answers consistently exceeds the percentage of incorrect ones. I believe the importance of the checklist as a tool for patient and healthcare worker safety is well understood. These data are also confirmed in the study by Tlili et al. (2017), where 98.1% agreed that the checklist improves safety culture and 97.2% stated that it represents an opportunity to avoid errors.

Keywords: Nurse, operating room, Surgical Safety Checklist.

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INTRODUCTION

Based on the Guidelines for Surgical Recommendations, the WHO has developed a 19-item operating room safety checklist to support surgical teams, ensure quality and safety, and prevent mortality and postoperative complications. It provides guidance on conducting checks to facilitate the implementation of the recommended safety recommendations. The tool supports both system change and individual behavior change by strengthening standards in safety and communication processes and addressing potential sources of error. The checklist was tested in a prospective study conducted on a sample of eight hospitals in different countries. Implementation of the checklist was associated with a simultaneous reduction in mortality and postoperative complications. Based on the WHO guidelines, the Ministry adapted the checklist to its national situation and added an additional item to the WHO's 19 items regarding review of the venous thromboembolism prophylaxis plan.

The checklist includes three phases (Sign In, Time Out, Sign Out), 20 items with checks to be performed during the surgery, and the corresponding boxes to be checked after the checks have been completed. It is recommended to appoint a checklist coordinator among the team members who is responsible for reviewing the checks by each member of the operating team, and only after the checks have been established [4]. The WHO recommends appointing a ward nurse. In terms of responsibilities, Ministerial Decree 739/94 (professional profile of the nurse) had already been clear: the nurse is the healthcare worker who, in possession of a qualifying university diploma and registration in the professional register, is responsible for general nursing care [5]. Law 251 of 2000 establishes: "Healthcare workers in the nursing field carry out professionally autonomously DM 739/1994 activities aimed at prevention, treatment, and protection of individual and collective health. Oral proof that the necessary checks have been performed is required [6]. A work environment that facilitates the coordinator's work

must be created throughout all phases. The group should help the coordinator ask specific questions and provide the necessary answers. Furthermore, based on the positive results reported in the international literature, it is recommended that National Health Service (NHS) healthcare facilities introduce the checklist into their operating rooms and adapt it to their specific needs. The checklist, in fact, is not intended to be exhaustive; rather, it was developed to be modified and consolidated based on specific local needs.

METHODS

I developed the questionnaire following the WHO guidelines, specifically the "Guidelines for Surgery" document, which was drafted by the association to present the operating room checklist for patient and staff safety [7].

Taking into account the key points highlighted by the WHO, I developed a total of eight questions. The questions addressed the importance of implementing the checklist, the checklist phases in general, the checklist coordinator, the role of the checklist coordinator, adapting the checklist to one's work environment, the sign-in phase, the time-out phase, and the sign-out phase. The questionnaire is as follows:

Operating room checklist and nurse professional responsibility.

1. Implementation of the operating room checklist:
 - Reduces waiting times
 - Reduces mortality and postoperative complications
 - Is not associated with improvements
2. How many steps does the checklist includes:
 - 3 steps
 - 4 steps
 - 5 steps
3. According to the WHO, who should be designated as the checklist coordinator during a surgical procedure?
 - The operating room nurse
 - Anesthesiologist
 - The surgeon designates them
4. What is the role of the checklist coordinator?
 - Review of the checks by each team member

- Completion of the checklist
- Other

5. Can the checklist be adapted to your work needs?

- Yes
- No

6. Sign-in phase: Which checks are included in this phase?

- Marked surgical site
- Pain therapy
- None of the above options

7. Time-out phase: When does it begin?

- After induction of anesthesia and before the skin incision is made
- After the surgical incision
- At the end of the procedure

8. Sign-out phase: When does it end?

- In the inpatient ward
- Before the patient leaves the operating room
- At the end of surgery

The questionnaire was administered anonymously online, via the Forms platform, through WhatsApp groups, from January 12, 2024, to January 15, 2024, to nurses belonging to the AICO (Italian Association of Operating Room Nurses). A total of 49 responses were recorded. The participants are all nurses who work in the operating room. By analyzing the data collected, I will be able to gain an overview of the correct use of the checklist in the operating room.

Limits

The sample of 49 nurses does not allow us to generalise the results. The questionnaire I created is based on WHO guidelines but has not been validated.

RESULTS

As confirmed by the literature, the introduction of checklists and the use of clinical protocols, if used responsibly and effectively, significantly reduce clinical risks and can become an important prevention tool [8].

To the first question, "The implementation of the operating room checklist," 80% responded "reduces mortality and postoperative complications," 12% "reduces waiting times," and 8% "is not associated with improvements."



Figure 1: Implementation of the operating room checklist.

To the second question, “How many steps does the checklist include?”, 82% answered 3, 14% answered 4, and 4% answered 5.



Figure 2: How many steps does the checklist includes?

To the third question, “According to WHO, who should be appointed as the checklist coordinator during a surgical operation?”, 92% answered “the

operating room nurse,” 6% answered “the anesthetist,” and 2% answered “the surgeon appoints him or her.”

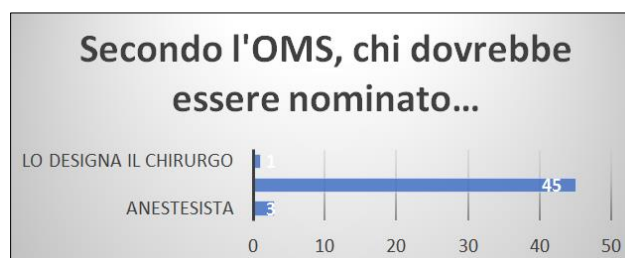


Figure 3: According to the WHO, who should be designated as the checklist coordinator during a surgical procedure?

To the fourth question, “What is the role of the checklist coordinator?”, 65% answered “review of the

controls by each team member,” 31% answered “completion of the checklist,” and 4% answered “Other”.



Figure 4: What is the role of the checklist coordinator?

To the fifth question, “Can you adapt the checklist to your work needs?”, 65% answered “yes,” 33% answered “no,” and 2% answered “other.”

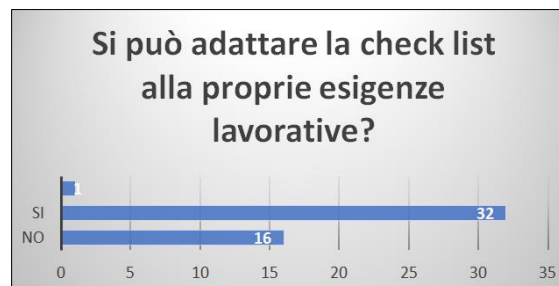


Figure 5: Can the checklist be adapted to your work needs?

To the sixth question, “Sign-in phase: which checks are included in this phase?”, 92% answered

“marked surgical site”, 6% “pain therapy” and 2% “none of the options”.



Figure 6: Sign-in phase: Which checks are included in this phase?

To question seven, "Time-out phase: when does it start?", 61% answered "after induction of anesthesia

and before the skin incision is made," 8% "the surgical incision," and 31% "at the end of the surgery."

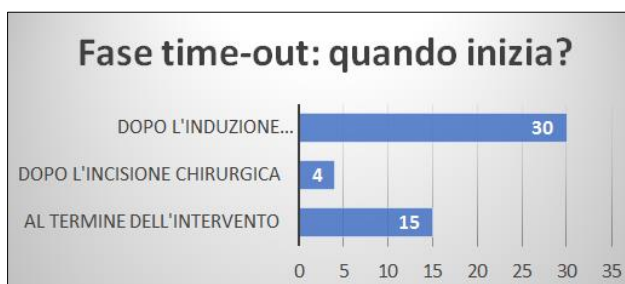


Figure 7: Time-out phase: When does it begin?

To the eighth question, "Sign-out phase: when does it end?", 53% answered "before the patient leaves

the operating room", 43% "at the end of the surgery" and 4% "in the hospital ward".

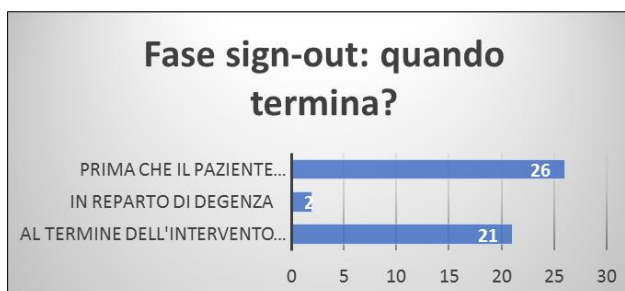


Figure 8: Sign-out phase: When does it end?

CONCLUSIONS

In light of the results obtained, there is consensus regarding the correct answers for the first two questions. To the first, "Implementation of the operating room checklist", thirty-nine out of forty-nine nurses have clear ideas about the importance of implementing the operating room checklist; only four nurses state that implementing the checklist does not lead to improvements. While the remaining six respond, "It reduces waiting times," the checklist was not designed for this; indeed, if done correctly, it requires time to complete correctly.

The second question, "How many phases does the checklist include," receives consensus, as stated above. Forty out of forty-nine nurses identify and recognize the three phases of the checklist: sequential, sign-in, time-out, and sign-out.

Question number three, "According to the WHO, who should be appointed as the checklist coordinator during a surgical procedure?", along with question number six, "Sign-in phase: which checks are included in this phase?", were the ones that the respondents had the least doubts about. Forty-five out of forty-nine respondents all agreed that the checklist coordinator should be the operating room nurse, as recommended by the WHO. Four nurses stated "the anesthesiologist" and only one "designates the surgeon."

To the fourth question, "What is the role of the checklist coordinator?", thirty-two out of forty-nine nurses stated, "Review of the checks by each team member," and fifteen stated that the coordinator's role is merely "compiling the checklist."

To the fifth question, "Can the checklist be adapted to one's work needs?", thirty-two out of forty-nine nurses stated that the checklist can be adapted to

one's work needs; that is, starting from a standard, checks can be added or modified based on the types of interventions being performed. Seventeen nurses disagreed.

To the sixth question, "Sign-in phase: which checks are included in this phase?", another question with the highest number of votes, forty-five out of forty-nine nurses stated that the surgical site marked as one of the checks included in the sign-in phase.

For the seventh question, "Time-out phase: when does it start?", thirty out of forty-nine nurses indicated the correct answer, "after induction of anesthesia and before the skin incision." This, along with question eight, had the highest percentage of incorrect answers, but still lower than the correct answers.

To question eight, "Sign-out phase: when does it end?", twenty-six out of forty-nine nurses correctly answered "before the patient leaves the operating room," since the checks scheduled for the immediate post-operative period are part of the final phase of the checklist, the sign-out phase. Twenty-one nurses answered "at the end of surgery."

After analyzing the responses, it can be deduced that the checklist is completed correctly, carefully, and scrupulously in most contexts. The percentage of correct answers consistently exceeds the percentage of incorrect ones. I believe the importance of the checklist as a tool for patient and healthcare worker safety is well understood. These data are also confirmed in the study by Tlili *et al.*, (2017), where 98.1% agreed that the checklist improves safety culture and 97.2% stated that it represents an opportunity to avoid errors [9].

The study by Akopol *et al.*, (2016) highlights how errors can be prevented by applying a surgical safety checklist. Checklists are readily available, inexpensive, and simple to use. The use of such questionnaires could improve teamwork and understanding among team members, with a direct impact on the outcome of the procedure [10]

The WHO SSC is an effective tool for reducing hospital complications, thus producing a favorable outcome [11].

Abbreviations

WHO: world health organization

SSC: Surgical Safety Checklist

Conflicts of Interest: The author declares that he has no conflicts of interest.

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