

Nurses' Roles in the Implementation of the Fourth Patient Safety Goals: Literature Review

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Abstract:

Patient safety is a critical component of healthcare quality. Surgical procedures pose significant risks, with frequent incidents such as wrong-site surgeries and retained surgical instruments. To mitigate these risks, the Fourth Patient Safety Goals emphasize the correct site, correct procedure, and correct surgical patient. Nurses, who are involved in every stage of surgical care, play a vital role in ensuring of the correct site, procedure, and surgical patient. The objective of this research is to analyze and identify the role of nurses in implementing the Fourth Patient Safety Goal, specifically in ensuring the correct site, procedure, and patient in surgical settings. This study employed a literature review method using databases including Google Scholar, PubMed, and Science Direct. A total of 11 articles published between 2024 and 2025 were selected using inclusion and exclusion criteria based on the PICO(S) approach. Article quality was assessed using JBI Appraisal Tools. The findings show that nurses contribute significantly to all three phases of the Surgical Safety Checklist (sign in, time out, sign out). Their roles include verifying surgical information, ensuring team communication, providing emotional support for patients, coordinating interdisciplinary collaboration, and integrating technology-based tools. Barriers identified include lack of training, incomplete documentation, and limited compliance with protocols. Nurses play a central role in ensuring the correct site, procedure, and surgical patient. Strengthening their competence, fostering interprofessional collaboration, and applying technological innovations are essential strategies to enhance patient safety in surgical settings.

Article info:

Submitted:
30-06-2025
Revised:
18-08-2025
Accepted:
19-08-2025

Keywords:

nurse role, surgical, patient safety, surgical safety checklist

DOI: <https://doi.org/10.53713/htechj.v3i4.397>

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INTRODUCTION

The implementation of patient safety is one of the indicators that indicates the quality of healthcare facilities, giving safety is an obligation that has to be provided by healthcare facilities, the implementation of patient safety is intended to minimize unwanted events that often happen in healthcare areas (Afandi et al., 2024). But healthcare still has a high risk of patient safety incidents (Mulyatiningsih & Sasyari, 2021). The incident happened because patient safety is not being a priority agenda in the healthcare facilities (Afandi, Safitri, et al., 2023). The implementation to fulfill patient safety targets needs the collaboration of institutions, staff, and health providers to give a sense of safety for patients (Menteri Kesehatan Republik Indonesia, 2017). The culture of patient safety actually did very well in some hospitals; there was awareness and care about patient safety culture, but the implementation has to increase (Afandi, Pramita, et al., 2023).

To decrease the incident of patient safety Indonesian Ministry of Health using Joint Commission International, made the National of Patient Safety Goals with six indicators, such as right patient identify, increase effective communication, increase the alert medication, ensuring safe surgery, decrease the risk of infection, and decreasing the risk of patient falls (Salawati, 2020). The implementation of patient safety goals needs the collaboration of interprofessional health providers in order to increase the goals of patient safety, but interprofessional collaboration is still a task in some healthcare facilities (Afandi, Candrayani, et al., 2023). Communication as a key to increasing patient safety has to get more attention; good communication skills could be one of the indicators that can improve patient safety in healthcare facilities (Putri & Afandi, 2023).

One of the patient safety goals is correct site, correct procedure, and correct patient surgery with the implementation of the Surgical Safety Checklist (Menteri Kesehatan Republik Indonesia, 2017). But there were cases of surgical instruments left behind, such as surgical needles or sponges, which could cause infection (Rasyid et al., 2024). Time out phase is one of the phases that the Surgical Safety Checklist is past that's not obedient (Suryathi et al., 2021). Whereas surgical procedure is made to support patient care, to decrease disability, and to avoid complications (Riyanto et al., 2022).

World Health Organization (WHO) recorded giving impact to one in ten patients in the world, in the United States of America, it is the third leading cause of death after heart disease and cancer (Gousario et al., 2023). In 2017, the WHO mentioned that the cause of surgery has 27% cases (Pratiwi, 2023). The complication because surgery incident found 18.4% cases and adverse event because wrong site, wrong procedure, and wrong patient surgery found with 58.4% (Suryathi et al., 2021). The cases of patient safety incidents usually not recorded (Trilaksana et al., 2023).

The factors that contribute to patient safety are caused by clinical or non-clinical factors. But non-clinical things have the highest number, 70-80% such as communication, team decision, leadership, awareness, and decision making (Mulyatiningsih & Sasyari, 2021). In surgical settings, there was disobedience in the time-out phase because there were findings of incomplete documentation and surgical instruments left behind (Suryathi et al., 2021). Nurses in all the phases of the Surgical Safety Checklist showed that nurses have a big role in avoiding and controlling surgical patient safety incidents (Rasyid et al., 2024).

A lot of patient safety incidents in surgical settings gave background to the Indonesian Ministry of Health, which made rules about National Patient Safety Goals regarding correct site, correct procedure, and correct patient surgery. Surgical Safety Checklist is one of the method hospital uses, consisting of a checklist as a communication tool in the surgery room that is used by the professional team with the purpose of providing the best quality of surgical care (Trilaksana et al., 2023). Even though the Indonesian Ministry of Health had a solution for patient safety incidents, there were findings of disobedience in the implementation. Nurses were involved in all phases of the Surgical Safety Checklist, and there was a conclusion that nurses have a big role in decreasing surgical patient safety incidents (Suryathi et al., 2021). The literature review has the purpose of identifying the implementation of the fourth patient safety goals and nursing roles in the implementation of the fourth patient safety goals about correct site, correct procedure, and correct patient surgery from all the research that has already been done.

METHOD

This research uses the search engine Google Scholar, the database of PubMed, and Science Direct. The search engine can be accessed through the internet and provides open access and free full text. The Indonesian articles are using Google Scholar (<https://scholar.google.com/>), English

articles are using PubMed (<https://pubmed.ncbi.nlm.nih.gov/>) and Science Direct (<https://www.sciencedirect.com/>). The search of articles in the literature review used keywords of Boolean that use the connections of “AND, OR, NOT”. The keywords use the problem formulation “the nursing roles in implementation of patient safety goals, the correct site, correct procedure, and correct patient surgery”. The Indonesian keywords that are used are (“peran perawat” OR “tindakan perawat”) AND (“implementasi sasaran keselamatan pasien”) AND (“tepat lokasi, tepat prosedur, tepat pasien pembedahan” OR “keamanan pembedahan”), and the English keywords that are used are (“nursing”) AND (“patient safety implementation”) AND (“correct site, correct procedure, correct patient surgery” OR “ensure safe surgery”).

In this literature review, the method needs eligibility criteria using PICO(S) with inclusion criteria: the population is nursing research, the intervention is nursing roles in patient safety goals, correct site, correct procedure, and correct patient surgery; the outcomes are patient safety goals, correct site, correct procedure, and correct patient surgery. The exclusion criteria for the population are another health provider's research, the intervention is another health provider's role in patient safety goals, including correct site, correct procedure, and correct patient surgery, and the outcomes are another patient safety goal. The study design uses all study designs, the publication years between 2024 and 2025, and research articles in Indonesian and English. The articles identification using Flowchart PRISMA the first identification through search engine and database researcher got 181.853 articles, then researcher got 28.771 articles through years (2024-2025), then researcher got 90 articles through the title, screening from abstract researcher got 28 articles, after that article is screening by full text and eligibility criteria researcher got 13 articles, after did the critical appraisal using JBI researcher got 11 articles.

All of the 11 articles would be analyzed by the researcher through literature criticized literature with this steps, choosing and arranging the right logics from the information researcher got with purposed to find the conclusion of research question in literature review, checking and observing arguments from literature survey about the topic and arranging to logic sentences, and making last argument by analyzed knowledge that got by first argument to answer the research question, “how the nursing roles in the implementation of patient safety goals about correct site, correct procedure, and correct patient surgery?” Then researcher could do the conclusion of the literature review and see through all of this points the main point from the literature review is evaluating content or main idea, not just focusing on summary; analyzing every literatures and find characteristic that giving strong research concept; seeking the differences from some literature and identify unsolved problems; identify relevant literatures and could be use for the next research; finding the connection between literatures so that will be find new ideas to balancing the theories; and the result of the literature will be combine through evaluation and answering with critical, logic, and scientifically.

RESULT

The final stage is to assess the eligibility of articles using the JBI Critical Appraisal, with a total of 11 articles obtained. These articles will be given ID numbers with numbers A1-A11 in order to facilitate mention. The articles will be synthesized using the meta-synthesis method. Meta-synthesis is a method carried out by grouping filtered data. For further study and analysis in depth, so that conclusions can be obtained that can answer the objectives.

From the results of the search that has been carried out in accordance with the inclusion criteria, a total of 11 scientific articles were obtained for analysis. From the 11 articles, several studies were obtained, namely qualitative studies of 5 scientific articles, analytical cross-sectional studies of 2 scientific articles, quasi-experimental studies of 1 scientific article, randomized controlled trial

studies of 1 scientific article, and textual evidence expert opinion studies of 2 scientific articles. The articles were published over a two-year period, from 2024 to 2025. The sample of the study consisted of nurses, surgical nurses, anesthetists, patients, surgeons, anesthetists, health technicians, and other health workers, but this study will focus on the role of nurses. Each article has its own theme regarding the target of surgical patient safety, including the implementation of surgical safety checklists (A1, A2, A5, A7, A11); providing a sense of security (A3); training to support surgical patient safety (A4, A9, A10); technology related to surgical patient safety (A6); list of case studies on surgical patient safety (A8).

The distribution of articles includes Indonesia (A1, A2); Sweden (A3); Denmark (A4); Pakistan (A5); Brazil (A6); Norway (A7); United States (A8); South Korea (A9); Taiwan (A10); and Rwanda (A11). Each scientific article has its own characteristics; articles from Indonesia (A1, A2), Pakistan (A5), Norway (A7), and Rwanda (A11) focus on discussing the implementation of the Surgical Safety Checklist. Articles from Sweden (A3) focus on providing a sense of security to patients outside the Surgical Safety Checklist. Meanwhile, articles from Denmark (A4), South Korea (A9), and Taiwan (A10) discuss training to support surgical patient safety. Articles from Brazil (A6) discuss technology that helps surgical patient safety. While articles from the United States (A8) discuss case studies of near misses in surgical patients.

The Implementation of Patient Safety Goals: Correct Site, Correct Procedure, and Correct Patient Surgery

The implementation of patient safety targets has been carried out in all health care facilities with various approaches. The implementation of the Surgical Safety Checklist has been proven to be effective in reducing the number of patient safety incidents, as stated in articles A2, A5, and A11. There needs to be increased team coordination or awareness of interprofessional collaboration, according to the findings in articles A4, A7, and A9. Then the approach through technology as an effort to educate patients is needed, one of which is through a technological approach, such as the use of applications stated in article A6. However, in its implementation, there was still a lack of compliance in documentation in accordance with the findings in articles A2 and A5, a lack of training related to patient safety targets that focused on surgery according to the statements in articles A1 and A11, and a lack of reporting culture as stated in article A8.

Nursing Roles in The Implementation of Patient Safety Goals: Correct Site, Correct Procedure, and Correct Patient Surgery

Based on the entire article, it can be identified that nurses have a role as technical implementers in all phases, namely sign-in, time-out, and sign-out, according to articles A1, A2, and A5. Nurses can be coordinators in the surgical team in ensuring the completeness of instruments and implementing effective communication based on articles A7 and A9. The role of nurses as emotional support providers who can increase the sense of security in patients, according to article A3. Nurses can be incident reporters and be at the forefront of preventing near-misses in surgery, according to article A8, and nurses can be developers of educational applications using a technological approach for patients, as described in article A6. Nurses have an important role in reducing patient safety incidents in surgery as described in articles A1, A2, A5, and A7. The presence of nurses near the patient during the surgical procedure is essential as described in article A3 regarding emotional support (Larsson & Engström, 2024). The nursing approach in technology in creating applications also supports the surgical education process for patients, according to article A6 (Silva et al., 2024). However, there is still a lack of nurse involvement in decision-making as

described in article A4, so it is necessary to provide training and awareness of interpersonal collaboration to improve the safety of surgical patients in accordance with article A9.

DISCUSSION

Nurses have an important role in reducing patient safety incidents in surgery, as described in articles A1, A2, A5, and A7 regarding the Surgical Patient Checklist. The use of the Surgical Patient Safety Checklist is a form of implementation of patient safety targets in the right location, right procedure, and right surgical patient, whose coordination can be led by nurses (Purwanti et al., 2022). Because nurses are involved in every line or phase of the surgical procedure, nurses can carry out their role as coordinators.

According to researchers, in its implementation, there needs to be a nurse who specifically plays a role in coordinating the Surgical Safety Checklist. In addition to providing focus on the implementation of surgical patient safety targets, it can also reduce the workload or overlapping roles that may occur between members of the surgical team. The presence of a nurse near the patient during the surgical procedure is very necessary, as described in article A3 related to emotional support, namely being near the patient during the surgical procedure, nurses can be a friend to talk to the patient, which can indirectly reduce patient anxiety. Patient anxiety before surgery itself is still found due to a lack of assistance and communication related to surgical procedures, which can be overcome by providing therapeutic communication actions, which then result in reduced anxiety responses and an increased sense of security in patients (Sulastri et al., 2019). Therefore, it can be concluded that nurses can fulfill their role as communicators for patients and provide a sense of security to patients. According to researchers, emotional support has a good impact on reducing anxiety before surgery. This form of modification can be added to improve patient safety targets in the right location, right procedure, and right surgical patient.

However, there is still a lack of nurse involvement in decision-making as described in article A4, so it is necessary to conduct training and raise awareness of interpersonal collaboration to improve surgical patient safety according to articles A7 and A9. The same perception in surgical team members consisting of nurses, anesthetists, surgeons also affect the achievement of patient safety targets for the right location, right procedure, and right surgical patient, good communication between surgical team members has a big influence with the aim of providing success in surgery without finding patient safety incidents (Suryathi et al., 2021). Interprofessional collaboration can improve surgical patient safety; nurses can be a liaison between health workers in the operating room as facilitators who provide coordination and carry out communication to improve the performance of the surgical team (Vatn & Dahl, 2022). According to researchers, nurses as facilitators have the same opportunity to become leaders in implementing the right location, right procedure, and right surgical patient safety targets.

A technological approach is also needed to monitor patient conditions or provide education to patients before or after surgery, such as research conducted in article A6 in the form of educational applications for patients and educational technology for nurses in article A10 in the form of surgical simulations with virtual reality that can increase nurses' confidence and belief so that they can support the safety of surgical patients. Technological modifications are not only about following the times but also utilizing existing resources, which can then be combined with the field of nursing (Alotaibi & Federico, 2017). Nurses in this case can be educators for patients; nurses can provide knowledge to patients so as to support procedures and support the safety of surgical patients. According to researchers, a technological approach is very necessary considering the increasingly

developing era and the ability to provide education directly without face-to-face meetings, thus supporting a more sustainable care process.

According to article A8, there was still a lack of incident reporting by nurses. This is based on a low patient safety culture, inadequate patient safety management from health facilities, reporting that is not followed up due to unclear SOPs (Standard Operating Procedures), and facilities that are less supportive (Nugrahaeni et al., 2021). Nurses can become advocates as reporters of patient safety incidents and protect the safety rights of surgical patients, as stated in Article A8. According to researchers, it is necessary for health facilities to provide SOP management related to clear reporting that is biased towards nurses and patients. Patient safety culture can also be carried out through routine training and can be applied continuously.

CONCLUSION

Patient safety targets regarding the right location, right procedure, and right patient for surgery can be implemented using the Surgical Safety Checklist, consisting of sign-in, time out, and sign-out. The implementation of patient safety targets for the right location, right procedure, and right patient for surgery has been carried out using various methods, both with emotional support and technological approaches. The role of nurses in implementing patient safety targets for the right location, right procedure, and right patient for surgery has a multidimensional role, including facilitators who bridge team coordination and communication, becoming educators for patients, and advocates for both nurses and patients. To achieve success in implementation, it is necessary to provide support from health care facilities, including providing training, ensuring reporting that is biased towards patients and nurses, and providing approaches beyond physical procedures, such as providing emotional and technological support.

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