



Nurses and Patient Safety: A Literature Review Study

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Abstract

Patient safety is a global issue, especially when patients are in hospitals. The implementation of patient safety in hospitals requires the role of nurses as the most dominant health workers and directly meet patients for 24 hours, therefore it is necessary to see the extent of the role of nurses in preventing patient safety incidents. The purpose of this study was to identify the results of research on the implementation of patient safety by nurses in hospitals. The method used is a literature review, using an electronic database identified from Pubmed, Google Scholar, Google and Gray literature (National Library of Indonesia) with keywords: patient safety, compliance, implementation of patient safety by nurses. The inclusion criteria in this study were the implementation of patient safety carried out by nurses, the research design was qualitative and quantitative, the study used quantitative or qualitative methods, empirical papers in English or Indonesian published between 2018-2020. The articles collected were nine papers which were synthesized narratively. The results found four papers on the implementation of patient safety, one paper on the use of surgical safety checklist, two papers on reducing the risk of infection, one paper on handover and one paper on reducing the risk of falls. The results of this literature review found various innovations carried out by nurses in implementing patient safety in hospitals. These innovations can be used as a reference for hospitals as innovations in improving the quality of service that prioritizes patient safety as an aspect of patient satisfaction while in the hospital.

Keywords: Patient Safety, Compliance, Implementation of Patient Safety by Nurses

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1. Introduction

Patient safety is a global issue in various countries (WHO, 2019), an estimated 10-25% of inpatients experience patient safety incidents (Levett-Jones et al., 2020). Patient safety is an effort to prevent incidents that have an effect bad for patients that can cause injury or complications, by using quality practices that result in optimal health services (Canadian Nurses Association, 2019).

Effort Indonesia reduces patient safety incidents by implementing hospital standardization through the Hospital Accreditation Commission (KARS) in 2018, which has six Patient Safety Target Indicators (IPSG), namely correctly identifying patients, improving effective communication, improving high-alert drug safety, ensuring the correct location, procedure, and surgery on patients; reducing the risk of infection related to health services and reducing the risk of patient injury due to falls (KARS, 2018).

Preventing safety incidents is the main role of nurses in hospitals, because nurses are the most dominant health workers in Indonesia and have a direct relationship with patients. Nurses are also always around patients during health services. This position makes the role of nurses very important in preventing patient safety incidents (KARS, 2018).

Literature review previously conducted which showed that nurse compliance is very important for implementing patient safety (Larasati & Dhamanti, 2021). In order to clarify the results of research on the implementation of patient safety by nurses in hospitals, it is necessary to provide evidence development implementation patient safety carried out by nurses. This literature study aims to explain the results of research on the implementation of patient safety by nurses in hospitals, then analyze it to be used as evidence-based practice for hospitals to be able to improve the quality of service to patients, safe, quality and quality.

2. Research Method

Strategy search arranged and implemented using a combination of keywords using Indonesian is patient safety, compliance, implementation of patient safety by nurses.



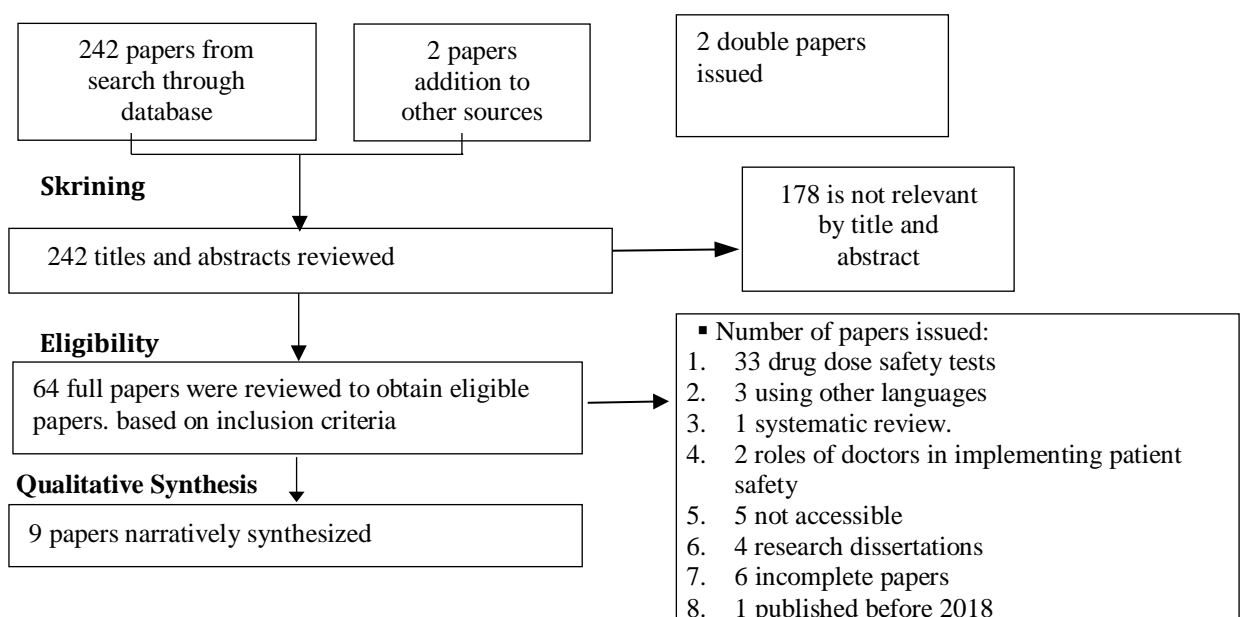


Keywords in English are patient safety for and adherence, or and implementing patient safety as a nurse. Inclusion criteria include: 1) implementation patient safety conducted by nurses, 2) the research design is qualitative and quantitative 3) the research uses quantitative or qualitative methods 4) empirical papers in English or Indonesian published between 2018-2020.

Review referring to the PRISMA guide (Preferred reporting items for systematic reviews and meta-analyses;Liberationet al., 2009). Data base on line that is Pubmed, Google Scholar, Google and Gray literature (National Library of Indonesia,) were systematically searched to obtain empirical papers in English and Indonesian published after the last reviewed paper, namely 2007-2017.

The search for papers was conducted by the first and second researchers between April 7-17, 2021. The first and second researchers searched online data together and then combined them. After that, narrative synthesis was carried out separately and the results were discussed. The search results were identified to exclude duplicate papers. Screening was done by reviewing the titles and abstracts of the remaining papers to select papers that were relevant to the objectives.

Identification





3. Results

The search yielded 244 papers with details, 185 papers from Pubmed, 19 papers from Google, and 38 papers from Google Scholar. Screening based on title and abstract found two duplicate papers and 178 irrelevant papers. A total of 64 full manuscripts of papers were reviewed separately based on inclusion criteria by two researchers with the results of 33 papers undergoing the test dose drug, three papers no use language English or Indonesia, one paper systematic review, two papers on the role of doctors in implementing patient safety, five papers were inaccessible, four were dissertation papers, six were incomplete papers and one paper was published before 2018. Nine papers that were deemed eligible were critically reviewed for narrative analysis.

Nine papers were synthesized. All papers focused on the implementation of patient safety carried out by nurses. This implementation is divided into five, namely the implementation of patient safety, the implementation of effective communication, the implementation of the Surgical safety checklist (SSC), reducing the risk of infection and reducing the risk of falls.

Four papers discussing the implementation of patient safety. The first paper conducted a study in one of the regional hospitals in Cilacap, Central Java, Indonesia which aims to find the relationship between nurse compliance in implementing patient safety targets, namely correct patient identification, effective communication, reducing the risk of nosocomial infection and preventing the risk of falls, the results of the study showed that the leadership style of the head of the room, rewards, attitudes and motivations have a significant relationship to nurse compliance and implementing correct patient identification and effective communication. Reducing the risk of nosocomial infection has a significant relationship to the leadership style and positive attitudes of nurses, while preventing the risk of falls has no relationship to gender, education level, attitude, motivation, leadership style, work environment and rewards. The consultative leadership style of the head of the room can change the level of nurse compliance in implementing IPSG 1 by 5.6 times, with 5.06 times against IPSG 2 and 4.71 times against IPSG 5 (Alhidayah et al., 2020).





Another paper also conducted research in hospitals, which provided results that knowledge, supervision, motivation, and implementation of patient safety goals (p -value < 0.05) (Suryani et al., 2021). Another paper that was also found showed existence influence supervision, the character of the authority figure and disobedient coworkers influence nurses' decisions to implement patient safety. However, gender ($p=0.691$), work environment ($p=0.891$), and conflicting orders ($p=0.243$) was found to have no effect on nurses' compliance with patient safety policies (Hastuti et al., 2020).

Another paper also conducted a study comparing several rooms in a hospital to find out which rooms were compliant with patient safety practices. The results showed that less than two-thirds of nurses were not compliant with patient safety. Intensive care unit has the highest compliance value compared to medical intensive care unit, chest intensive care unit, obstetrics intensive care unit, neurosurgery intensive care unit, pediatric intensive care unit, cardiothoracic intensive care unit and coronary care unit (Aly Abd Elhamid et al., 2020).

One paper that does research on SSC. The paper does the application of SSC and the comprehensive surgical patient safety system (Surpass) to reduce errors in surgical risk, research results show that the application of SCC and Surpass reduces the rate of complications, reoperations, (Storesund et al., 2020).

Two papers were found on reducing the risk of infection. Both papers assessed the importance of the role of the ward manager in preventing the risk of infection in hospitals. The first paper conducted a study on compliance in implementing standard operating procedures for infection risk prevention. The results of the study showed that democratic and authoritarian leadership styles were the types of leadership styles that were most related with compliance nurse in implementing the HAIs bundle SOP (p 0.018), especially in implementing the IAD bundle SOP (p 0.040) (Dehghan et al., 2022).

The second research paper relates to the function of the head of the room's direction and the compliance of nurses in carrying out hand hygiene. The results of the study showed that there was a relationship between nurses' perceptions of the head of the room's direction function and nurses' compliance in practicing hand hygiene (Indiyani et





al., 2021). The results of the literature review found one paper on the implementation of effective communication, namely handover. The first paper is a quantitative study with a descriptive correlation research design on 40 nurses in the inpatient ward of Petaa Bumi Hospital, Riau, Indonesia. The results of the study showed that there was no relationship with nurse compliance in carrying out handovers in the inpatient ward with $P\text{value} = 0.407$ ($P \leq 0.05$) (Oktopia et al., 2021).

The only paper on fall risk reduction that conducted patient and family education interventions, visual cues and provision of non-slip socks, seat belts and bed alarms, followed by a fall risk assessment using the Johns Hopkins Fall Assessment Tool (JHFAT). The study results showed that fall rates decreased by 55% and staff compliance with interventions for highrisk fall patients increased to 89% (Bargmann & Brundrett, 2020).

4. Discussions

The role of nurses is urgent in the implementation of safety. The implementation of patient safety is an important task for nurses because nurses are the largest group of health professionals who are most interactive with patients. Nurses have also been shown to be able to make simple and effective strategies to prevent and reduce the risk of patient safety incidents. Other studies also mention that nurses can also function to recognize and respond to deteriorating patient safety (Massey et al., 2017).

Motivating nurses to improve patient safety, nurses need to create a broader vision of the patient safety system and process to ensure the safety and quality of care they provide. In addition, according to other opinions, nurses also need to improve their knowledge, skills, and motivation towards patient safety to improve health services (Marthoenis & Mutiawati R, 2020). Other studies also argue that the higher the knowledge of nurses and the more positive attitudes they have, the better they implement patient safety.

Many factors influence nurses to implement patient safety, namely patient participation, knowledge and attitudes of health care providers, nurse collaboration, appropriate electronic equipment and systems, education and feedback, and





standardization of care processes (Vaismoradi et al., 2020). In addition, there is also the influence of age, level of education, experience work, knowledge, attitudes, work culture and motivation with the implementation of patient safety by nurses (Nuari & Susanto, 2020).

The role of the head of the room also has an effect on the implementation of patient safety, such as research conducted in several hospitals in Parana, which concluded that although the strategy for implementing patient safety was contradictory, there was a feeling of satisfaction. In addition, work design also greatly influences the implementation patient safety, if the perception of nurses' work is good, then the implementation of patient safety will also be good (Nugroho & Widiyanto, 2020).

Surgical procedures are actions taken to diagnose, treat diseases and deformities of the body through the creation of wounds that can cause physiological changes in the body and can affect other bodies. Patient safety incidents in the operating room are related to human factors (Koleva, 2020). For prevent incident the recommended use SSC which is a patient safety instrument in the operating room that aims to improve communication and teamwork as well as evidence-based compliance. The use of SSC has been shown in other studies that nurses have more knowledge about SSC compared to other medical personnel in the operating room. There are three times when patient safety incidents occur in the operating room, namely before anesthesia, before incision and before the patient leaves the operating room. The use of SSC has also been shown to reduce incidents during emergency surgery (Krismanto & Jenie, 2021).

There is lots factor nurse no using SSC in the operating room such as the absence of a policy regarding the implementation of SSC, lack of socialization regarding SSC, lack of knowledge regarding SSC, lack of awareness of the importance of using SSC and filling SSC becomes an additional workload. Other studies also state that SSC is not used because it makes the workload heavier and lacks ability regarding SSC implementation (Gong et al., 2021). In fact, the use of SSC does not increase the workload and has the effect of reducing overall costs for each procedure surgery. To increase the use of SSC in the operating room requires optimal leadership, clear delegation of responsibilities from





health workers, collaboration between team members, institutional support in providing the necessary human and material resources.

Healthcare-Associated Infections (HAIs) or commonly called nosocomial infections are an infection event that occurs in patients during the treatment process in health care facilities. Health facilities if patients are infected can be a source of infection transmission to other patients, health workers and visitors. This infection occurs more than 48 to 72 hours after admission and within ten days after discharge from the hospital.

Hi own effect side which dangerous that can worsen the body's dysfunction and cause emotional stress, as well as increase morbidity. HAIs can also prolong the patient's length of stay, increase hospital costs, cause a decrease in quality of life, and even cause patient death. HAIs can also cause diseases ranging from mild skin infections to life-threatening conditions such as sepsis. Hand hygiene is the most important intervention to prevent HAIs, but health workers still often do not adhere to recommended hand hygiene procedures. Although there are other studies that say that hand hygiene has been implemented by the majority, but the implementation of washing hands before wearing gloves and the use of personal protective equipment is still low. This is different from other studies, although the level of knowledge is sufficient, but infection control practices are going well.

Lack of knowledge among nurses regarding infection control principles has a significant relationship with increasing HAIs. Lack of training is also an obstacle to controlling infection incidents in hospitals (Mahmud and Sahib, 2011). Although service providers have provided facilities to increase knowledge in the form of training infection control and prevention, but only 32% percent attended. In addition, another study also showed that nurses' compliance with infection control guidelines was only 54% at the Ridge Regional Hospital in Accra, Ghana. It is essential to implement continuous prevention efforts to prevent HAIs from occurring (Scholz et al., 2019).

The consequences of communication barriers during handover are medication errors, inaccurate patient plans, delayed patient transfer to critical care, delayed hospital discharge, and repeated health tests at the time of acceptance. The information conveyed





must be clear, complete, accurate and understood by the recipient. In addition, it has been suggested that the handover process must have clear standards and health workers must receive training on the most effective, safe, satisfactory and efficient way to carry out handovers (Merten et al., 2017).

Falls are one of the most common incidents in hospitalization, and can lead to increased cost health care, increased length of stay, and increased risk of disability. Several studies agree that to prevent falls it is necessary to identify risk factors (Lerdal et al., 2018). Several studies also emphasize that it is very important to assess each patient's risk factors. This is done to obtain information for preventing falls while the patient is in the hospital. One of the fall risk assessments is using the Morse scale (Pasa et al., 2017). This assessment requires an active role from nurses while the patient is in the hospital. Nurses can use the scale to identify patients at risk of falling, which can allow nurses to have control to prevent patients from falling. So nurses need to identify the most vulnerable things in patients while in the hospital that can cause fall incidents (Pasa et al., 2017).

Nurses have also been shown to have a key role in efforts to prevent patients from falling while in the hospital. Nurses can also function as planners of strategies or interventions to prevent falls. Other studies also argue that nurses' knowledge and experience are also very important in preventing the risk of falls in patients. Reducing the incidence of fall risk requires creating programs and interventions that focus on the patient, as evidenced by 19 articles reviewed by, proving that the success rate is 30%. Some actions of nurses who are often negligent in preventing the risk of falls are not conducting daily fall risk assessments, not providing adequate transportation for infants, not verifying medications that can change mobility and balance, not placing children with a history of fall risk close to the nurse's room and forgetting to record evaluations and incident reporting (Luzia et al., 2018).

5. Conclusion

This study shows that the implementation of patient safety is carried out by nurses to prevent patient safety incidents in hospitals. Nurses as dominant health workers and





always in direct contact with patients make them have an important role in implementing patient safety. There needs to be increased knowledge through training, as well as monitoring and evaluation to instill a culture of safety.

6. Compliance with ethical standards

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Disclosure of conflict of interest

All authors of this article declare that there are no competing interests.

Statement of informed consent

Every action we take as authors is a mutual agreement or consent.

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