KARYA KESEHATAN SIWALIMA
Open Access Full Text Article

Original Article

Strengthening Hospital Care Quality through Patient Safety Education: Evidence from a Regional Hospital in Eastern Indonesia

Feby Manuhutu[1], Dene Fries Sumah[2], Vanny Leutualy[3], Valencia Yeslin Tomasoa[4], Syulce Luselya Tubalawony[5], Nenny Parinussa[6], Hery Jotlely[7], Olivia Talahatu[8]

[1,2,3,4,5,6,7,8] Faculty of Health Sciences, Universitas Kristen Indonesia Maluku, Ambon, Indonesia

Vol 5(1),10-17

http://dx.doi.org/10.54639/kks.v5i1.1736

Article Information

Submitted: 28-08-2025 ;
Revised: 30-09-2025;
Accepted: 20-02-2026;
Published: 30-03-2026;

Corresponding Author:
Feby Manuhutu,
Faculty of Health Sciences, Universitas Kristen Indonesia Maluku, Ambon, Indonesia
Email: nsfebymanuhutu@gmail.com

Citation Information (APA Style)

Manuhutu, F., Sumah, DF., Leutualy, V., Tomasoa, VY., Tubalawony, SL., Parinussa, N., Jotlely, H., Talahatu, O. (2026). Strengthening Hospital Care Quality through Patient Safety Education: Evidence from a Regional Hospital in Eastern Indonesia. Karya Kesehatan Siwalima, 5(1), 10-17. http://dx.doi.org/10.54639/kks.v5i1.1736

E-ISSN: 2828-8181
P-ISSN: 2828-8408

Publisher
Lembaga Penerbitan Fakultas Kesehatan, Universitas Kristen Indonesia Maluku
https://ojs.ukim.ac.id/index.php/KKS/index

Abstract

Patient safety is an essential component in improving the quality of healthcare services. The World Health Organization, through the Global Patient Safety Action Plan 2021–2030, emphasizes the importance of healthcare systems that prioritize patient safety. However, the implementation of patient safety practices in hospitals continues to face several challenges, including limited knowledge among healthcare workers and a low culture of incident reporting. This community service activity was conducted by nursing lecturers at a regional hospital and involved 60 nurses. The methods employed included interactive lectures, group discussions, and practical simulations based on the six International Patient Safety Goals. Evaluation was carried out using pre-tests and post-tests. The results demonstrated a significant improvement in knowledge, with the average score increasing from 56% to 87%. Patient safety education was proven to be effective in enhancing nurses' understanding and awareness, thereby strengthening the culture of patient safety and improving the overall quality of healthcare services in hospitals.

Keywords: Patient safety; Nursing staff; Quality of healthcare; Patient safety culture; Health education

Introduction

Patient safety is a top priority in efforts to improve the quality of healthcare services. The World Health Organization (WHO) emphasizes that more than 134 million adverse events caused by unsafe healthcare occur each year in low- and middle-income countries, resulting in approximately 2.6 million deaths (World Health Organization, 2021). In response, WHO launched the Global Patient Safety Action Plan 2021–2030, which underscores the importance of implementing healthcare systems that are safe, proactive, and patient-centered (World Health Organization, 2021).

In Indonesia, this commitment is reflected in the Ministry of Health Regulation of the Republic of Indonesia Number 11 of 2017 on Hospital Patient Safety, which mandates six patient safety goals: correct patient identification, effective communication, improved safety of high-alert medications, ensuring correct location, procedure, and patient, infection prevention, and fall prevention (Kementerian Kesehatan RI, 2017). However, research indicates that the implementation of these goals in practice continues to face challenges, particularly in the area of incident reporting (Sari, Rosyidah, & Rulyandari, 2023).

Low levels of incident reporting may be influenced by both individual and systemic factors. Individual factors include limited knowledge, fear of sanctions, and negative perceptions of the reporting culture. Meanwhile, systemic factors involve inadequate facilities, heavy workloads, and weak managerial support (Apriliya, Ningrum, & Sarwadhamana, 2024). These conditions directly affect the quality of care and patient safety.

A regional referral hospital in eastern Indonesia is experiencing similar challenges. Preliminary observations revealed persistent barriers in implementing a patient safety culture, particularly in maintaining consistency in patient identification and incident reporting. In this context, this community service activity is positioned as part of a broader effort to implement and strengthen patient safety programs established by WHO through the Global Patient Safety Action Plan 2021–2030 and by the Ministry of Health through Regulation No. 11 of 2017.

Through educational approaches, training, and mentoring for nursing staff, this program aims to enhance nurses' knowledge, attitudes, and practices in fostering a culture of patient safety, particularly in incident reporting and patient identification. Therefore, this activity not only supports the

achievement of patient safety goals at the regional healthcare facility level but also contributes to strengthening the national patient safety system in alignment with global and national health policy directions.

Method

This community service activity was conducted in 2025 at a regional referral hospital in eastern Indonesia by a team of nursing lecturers. The program adopted a participatory community service design, emphasizing collaboration, empowerment, and the active involvement of healthcare workers as partners in strengthening the patient safety culture. A total of 60 nurses from various hospital service units participated in the activity.

The implementation began with a preparation phase that involved coordination with hospital management to identify needs, define activity targets, and obtain approval for program implementation. The main implementation phase focused on enhancing nurses' capacity through educational and interactive approaches. Learning sessions were delivered through interactive lectures on the six patient safety goals, group discussions based on case studies to promote problem-solving and peer learning, and simulation practices, including the use of patient identification wristbands, the application of SBAR communication, and fall prevention procedures.

The follow-up and evaluation phase was conducted through mentoring and field observations to reinforce the application of patient safety principles in daily nursing practice. Evaluation was carried out using pre-tests and post-tests to assess improvements in participants' knowledge, as well as observations of their engagement and active participation during the sessions. The collected data were analyzed descriptively to illustrate changes in knowledge, attitudes, and practices related to patient safety.

Through this structured participatory approach, the community service activity not only enhanced participants' knowledge but also functioned as a practical empowerment initiative to strengthen the implementation of a patient safety culture within regional hospital settings.

Results

The patient safety education activity was conducted with the participation of 60 nurses. As presented in Table 1, the majority of participants were in the adult age group (30–50 years) (63.3%), followed by those aged >50 years (20.0%) and <30 years (16.7%). Most participants were female (91.7%), with

educational backgrounds predominantly at the vocational level (Diploma/Bachelor) (75.0%), while 25.0% had professional nursing qualifications. In terms of work experience, the majority had more than 10 years of service (60.0%), indicating a workforce with substantial clinical exposure.

Table 1. Characteristic of Participants

Characteristics	n	%
Age		
Young (<30 years)	10	16.7
Adult (30–50 years)	38	63.3
Older (>50 years)	12	20.0
Gender		
Male	5	8.3
Female	55	91.7
Educational Level		
Vocational (Diploma/Bachelor)	45	75.0
Professional (Nursing Profession)	15	25.0
Length of Service		
New (<5 years)	11	18.3
Intermediate (5–10 years)	13	21.7
Long (>10 years)	36	60.0

The pre-test evaluation showed an average knowledge score of 56%, which increased to 87% in the post-test. As illustrated in Figure 1, improvements were observed across all six patient safety goals. The greatest increases were found in effective communication (SBAR) and patient identification, while relatively smaller gains were noted in infection prevention.

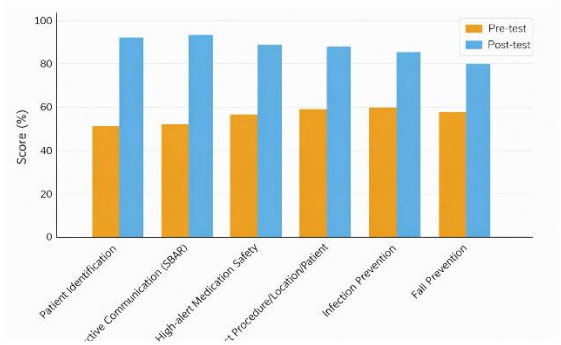

Figure 1. Comparison of Pre-test and Post-test Scores on the Six Patient Safety Goals

A comprehensive discussion included an analysis of the six patient safety goals: patient identification, effective communication, high-alert medication safety, accuracy of procedures, infection prevention, and fall prevention. The findings also highlighted several implementation challenges, including limited facilities and infrastructure, high nurses' workload, and a suboptimal culture of incident reporting. These results are consistent with previous studies (Afiasi, 2023; Apriliya et al., 2024), which emphasize the importance of fostering a strong patient safety culture and its association with improved patient satisfaction. Education, therefore, proved to be an effective strategy for strengthening patient safety culture in hospital settings.

Further evaluation was conducted using pre-tests and post-tests consisting of 20 multiple-choice questions covering

the six patient safety goals. The pre-test results reflected limited baseline knowledge, whereas the post-test results demonstrated a significant improvement. As shown in Figure 1, the most notable improvements occurred in effective communication (SBAR) and patient identification, likely due to the practical and simulation-based learning approaches applied during the sessions. In contrast, the smallest improvement was observed in infection prevention, which may be influenced by limitations in supporting facilities.

Beyond cognitive outcomes, improvements were also evident in participants' attitudes and practical skills. Through group discussions, nurses became more proactive in identifying potential risks frequently encountered in daily practice, such as medication errors, patient falls, and miscommunication during shift handovers. During simulation sessions, most participants were able to correctly perform patient identification procedures, including the use of identification wristbands and verbal verification.

Discussion

1. Improvement of Nurses' Knowledge

The relatively low pre-test results illustrate a gap between national patient safety policies and their implementation at the service level. This finding is consistent with Afiasi (2023), who reported that the culture of patient safety in Indonesian hospitals remains variable and has not been consistently implemented. The average increase of 31% in post-test scores indicates that educational interventions—through lectures, group discussions, and simulations—are effective strategies for improving nurses' understanding.

Research by Apriliya et al. (2024) further supports these findings, demonstrating that the implementation of patient safety is positively correlated with patient satisfaction, particularly through improvements in communication skills and patient identification procedures. Therefore, the results of this activity reaffirm the importance of continuous education as a key component of hospital quality improvement programs.

2. Analysis Based on the Six Patient Safety Goals

The patient safety education program demonstrated positive effects on nurses' understanding across the six International Patient Safety Goals. In the area of patient identification, some nurses previously relied solely on facial recognition without formal verification. Following the simulation, participants understood that the use of identification

wristbands and verbal verification are mandatory standards, resulting in a 40% improvement in scores for this domain.

Effective communication was another critical area where errors frequently occurred. Through the introduction of the SBAR method (Situation, Background, Assessment, Recommendation), nurses learned to convey information more systematically (Nurti et al., 2025). Case discussions revealed that miscommunication during shift handovers often led to duplication or omission of care, underscoring the need for structured communication practices.

Regarding high-alert medication safety, the training emphasized the importance of double-checking medications such as insulin, heparin, and chemotherapy agents (Ayre, Lewis, & Keers, 2023). Participants demonstrated improved understanding, although they also reported limitations in facilities for the specialized storage of high-risk medications.

Ensuring correct procedures, locations, and patients was reinforced through the practice of a "time-out" prior to medical interventions. This practice was highly valued by participants, as it had not been consistently implemented, despite its critical role in preventing procedural errors (Nijor et al., 2022).

Infection prevention showed the smallest improvement in knowledge scores. The primary barriers identified included the limited availability of alcohol-based hand hygiene facilities and inconsistent compliance with the use of personal protective equipment (PPE) (Sousa et al., 2022). Although participants understood the principles of hand hygiene, implementation remained suboptimal due to infrastructural constraints.

Finally, fall prevention emerged as a significant concern. Case discussions revealed that patient falls most frequently occurred in inpatient wards, particularly among elderly patients. The training enhanced participants' ability to assess fall risk using standardized instruments and to implement preventive strategies, such as the use of bed rails and family education.

Overall, these findings demonstrate that a combination of lectures, case discussions, and simulation-based practices can significantly enhance nurses' knowledge, attitudes, and skills in implementing patient safety, while also highlighting areas where infrastructural support remains inadequate.

3. Implementation Challenges

The implementation of patient safety is not without challenges. One of the primary barriers is the limitation of facilities and infrastructure. For example, patient identification wristbands are not always available, and alcohol-based hand hygiene facilities are unevenly distributed across hospital units. These limitations hinder the consistent application of standard procedures, particularly in patient identification and infection prevention.

Another significant challenge is the workload of nurses. An imbalance between the number of nurses and patients often limits the time available to ensure adherence to patient safety procedures (Zaitoun, Said, & de Tantillo, 2023). Consequently, although knowledge improves through training, consistent implementation in daily practice remains constrained by limited time and human resources.

The culture of incident reporting also presents challenges. Some nurses remain hesitant to report errors or adverse events due to fear of sanctions, indicating that the reporting system has not fully embraced a *no-blame culture* (Zaitoun, Said, & de Tantillo, 2023). This highlights the need for supportive management policies that promote openness and learning from incidents without punitive consequences.

These findings are consistent with reports from the World Health Organization (2024), which identify common barriers to patient safety implementation in developing countries, including limited resources, weak organizational culture, and ineffective reporting systems.

4. Implications for Service Quality

Patient safety education not only improved nurses' knowledge but also had broader implications for the overall quality of healthcare services. Increased awareness among nurses can reduce the risk of adverse events, thereby enhancing patient safety and strengthening public trust in healthcare institutions. Improved service quality ultimately contributes to higher patient satisfaction, as demonstrated by Apriliya et al. (2024).

Conclusion

Patient safety education conducted by nursing lecturers successfully improved the knowledge and skills of 60 nurses. This activity demonstrated that patient safety education is a simple yet effective intervention for enhancing nurses' competence in both knowledge and clinical practice. The implementation of the six patient safety goals must be supported by hospital management through the provision of adequate facilities and infrastructure, as

well as the establishment of a safe and supportive incident reporting system. In this way, a strong patient safety culture can be fostered, ultimately contributing to improvements in the overall quality of healthcare services within the hospital.

Conflict of Interests Statement

The authors declare that there are no conflicts of interest regarding the publication of this study. This research was conducted independently without any financial support, sponsorship, or personal relationships that could have influenced the results or interpretation of the findings.

References

Apriliya, T. N., Ningrum, I. R. P., & Sarwadhamana, R. J. (2024). Implementation of patient safety in hospitals related to patient satisfaction in 2023. *Media Keperawatan Indonesia*.

Ayre, M. J., Lewis, P. J., & Keers, R. N. (2023). Understanding the medication safety challenges for patients with mental illness in primary care: A scoping review. *BMC Psychiatry, 23*(1), 417. https://doi.org/10.1186/s12888-023-04893-8

Kementerian Kesehatan Republik Indonesia. (2024). *Menkes: Keselamatan pasien adalah hukum tertinggi*.

Manuhutu, F., & Tomasoa, V. Y. (2024). Peningkatan pelaksanaan identifikasi pasien risiko jatuh oleh petugas kesehatan melalui supervisi pimpinan dan sarana prasarana di puskesmas. *Mollucas Health Journal, 6*(1), 23–28. https://doi.org/10.54639/mhj.v6i1.1278

Manuhutu, F., Harsono, D., Parinussa, N., & Talahatu, O. (2025). Penyebab rendahnya pelaporan insiden keselamatan pasien di RSUD Piru: Studi kualitatif perawat. *Jurnal Karya Kesehatan Siwalima, 10*(2), 45–57. https://doi.org/10.12345/jkks.v10i2.5678

Nijor, S., Rallis, G., Lad, N., & Gokcen, E. (2022). Patient safety issues from information overload in electronic medical records. *Journal of Patient Safety, 18*(6), e999–e1003. https://doi.org/10.1097/PTS.0000000000001031

Nurti, Y. G., Simamora, R. S., Indrawati, L., Pranata, A., Nuryanti, L., & Deniati, K. (2025). Strengthening nursing SBAR communication compliance to improve patient safety. *The Malaysian Journal of Nursing (MJN), 17*(1), 84–93. https://doi.org/10.31674/mjn.2025.v17i01.009

Sari, D. W., Rosyidah, R., & Rulyandari, R. (2023). Penerapan budaya keselamatan pasien di rumah sakit (Implementation of patient safety culture in hospitals). *Afiasi: Jurnal Kesehatan Masyarakat, 8*(3), 527–539. https://doi.org/10.31943/afiasi.v8i3.316

Sousa, R. K. D., Gonçalves, N., Silva, T. L., & Echevarria-Guanilo, M. E. (2022). Personal protective equipment in hospital nursing care: A scoping review. *Texto & Contexto-Enfermagem, 31*, e20210421. https://doi.org/10.1590/1980-265X-TCE-2021-0421

World Health Organization. (2021). *Global patient safety action plan 2021–2030*. https://www.who.int/publications/i/item/9789240032705

World Health Organization. (2024). *Global patient safety report 2024*. https://www.who.int/publications/i/item/9789240095458

Zaitoun, R. A., Said, N. B., & de Tantillo, L. (2023). Clinical nurse competence and its effect on patient safety culture: A systematic review. *BMC Nursing, 22*(1), 173. https://doi.org/10.1186/s12912-023-01327-5