



The Relationship of The Nurse's Handover Process With Implementation of Patient Safety Targets in The Surgery Room and Icu

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<p>Track Record Article</p> <p>Accepted: 03 December 2023 Revised: 24 January 2024 Published: 15 March 2024</p> <p>How to cite : Pamphila, N., Ginting, Novalinda, C., & Nasution, Wahyuni, S. (2024). The Relationship of The Nurse's Handover Process With Implementation of Patient Safety Targets in The Surgery Room and Icu. <i>Contagion: Scientific Periodical Journal of Public Health and Coastal Health</i>, 6(1), 169–179.</p>	<p style="text-align: center;">Abstract</p> <p><i>Every year, millions of patients suffer injuries or die because of unsafe and Not Good-quality health care. Many medical practices and healthcare-related risks have emerged as major challenges to patient safety and contribute significantly to the burden of harm from unsafe care. The aim of this research is to determine the relationship between the nurse handover process and the implementation of patient safety targets in the surgical ward and ICU of the Royal Prime Hospital Medan 2022. This research is a type of quantitative research with a pre-experimental design method type one group pretest-posttest (single group initial test-final test), with a population of all nurses working in the surgical ward (26 nurses) and ICU (26 nurses). 25 nurses) Royal Prime Hospital Medan, totaling 51 people. Research sample collection techniques are primary data, secondary data and tertiary data. The instrument used is a questionnaire. Research data analysis is univariate analysis and bivariate analysis. The results of the research showed that there was a significant increase in the implementation of the nurse handover process before the treatment was 24.75 and it increased after the treatment to 39.22. Shows that there was a significant increase in the implementation of patient safety targets before treatment, amounting to 27.65 and an increase after treatment to 43.39. And showing a p value (0.005) < 0.05, it shows that there is a significant relationship between the handover process and the implementation of patient safety targets at the RSU. Royal Prima Medan in 2022.</i></p> <p>Keyword : Handover, Hospital, Patient Safety</p>
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INTRODUCTION

A hospital is an organization that has different characteristics, characteristics and functions, both in terms of types of services and objectives, which are managed by various human resources with different backgrounds who work in it (Hilda, 2018). With all the complexity that exists, this organization must be managed well in order to produce good and useful reciprocal services for the community and for the hospital (Anggraini, 2019). The increasing public awareness of health, care and shared services means that hospitals must be able to compete and be able to provide the best service and continue to maintain the services provided to patients (Ilyas, 2019). One of the hospital's efforts to improve the quality of service is through improving patient safety (Patient Safety) (Manurung, 2020) and this is also one of the requirements for hospitals to meet hospital accreditation standards (Kepmenkes RI No. 1128 of 2022).

Patient safety is a reference for providing confidence to patients that the services provided are quality, safe and reduce errors (Siokal, 2017). According to Minister of Health Regulation Number 11 of 2017, patient safety is a system that makes patient care safer (Huston, 2020), minimizes risks and prevents injuries caused by errors due to taking an action or not taking action that should be taken (Permenkes, 2011) and every hospital is obliged to implement safety standards patients (Chaboyer, 2017). The patient safety program in hospitals has the main objectives, namely increasing hospital accountability towards patients (Cahyono, 2018), creating a culture of patient safety in hospitals and implementing prevention programs so that unexpected errors do not occur and reduce unexpected events (KTD) (Dewi, 2022).

Every year, millions of patients suffer injuries or die because of unsafe and Not Good-quality health care (As'ad, 2020). Many medical practices and health care-related risks have emerged as major challenges to patient safety and contribute significantly to the burden of harm due to unsafe care (Kewuan, 2018).

Based on hospital patient safety incident reports by the National Committee for Hospital Patient Safety (KNKPRS) in 2022, there were reports based on incidents of 1,525 non-injury incidents (KTC), 1,676 near-injury incidents (KNC), 1,706 unexpected incidents (KTD) / Adverse Sentinel event / incident (Reese, 2019). The hospital patient safety incident report based on the results of the incident was that 41 people experienced serious injuries, 114 people experienced death, 335 people experienced moderate injuries, 766 people experienced minor injuries, 3,650 people experienced no injuries (Santiatih, 2021).

In implementing patient safety targets, effective communication is the most important thing to support this implementation. Effective communication will improve professional relationships between nurses and other health teams (Pino, 2019). Communication of various information regarding patient progress between health professionals in hospitals is a fundamental component in patient care. Patient handover (Handover) is a form of nurse communication in carrying out nursing care for patients. Gaps in communication within a unit can result in interruption of continuity of service, inappropriate treatment, and potential risks resulting in injury to patients. This crucial point of transfer is known as handover or patient handover (Pino, 2019). According to Alvaro et al effective communication that is integrated with patient safety and thoroughly disseminated to implementing nurses will increase effectiveness in communicating important information in supporting patient safety. Lack of communication will pose a threat to patient safety and quality of care. Inaccurate information can have a serious impact on patients, almost 70% of incidents resulting in death or serious injury in hospitals are due to Not Good communication during the nurse handover process. The

transfer of information during shift changes, called the handover process, aims to convey information from each shift change and ensure effectiveness and safety in patient care (Pambudi, 2018).

According to research by Istiningtyas (2016) regarding the relationship between resources and the implementation of handovers as a target for patient safety, it shows that there is a relationship between resources and the implementation of handovers as a target for patient safety. Royal Prima Medan General Hospital is one of the largest type B private general hospitals in the city of Medan which has a vision of becoming a superior hospital in the fields of health services, education and health research and development by prioritizing the interests of public health, required to provide complete quality health services. by implementing mutually appropriate standards without compromising patient safety. Royal Prime Hospital Medan has nurses in the surgical ward and ICU who will always try to provide good performance that refers to the concept of patient safety.

METHODS

This research is a type of quantitative research with a pre-experimental design method type one group pretest-posttest (preliminary test-single group final test). The location of this research was carried out in the surgical ward and ICU where nurses worked intensively at Hospital of Royal Prima Medan from October 2022 until completion. The population was all nurses who worked in the surgical ward (26 nurses) and ICU (25 nurses) at Royal Prime Hospital Medan, totaling 51 people and sampling used total sampling. The data collection techniques obtained were primary, secondary and tertiary data. With univariate and bivariate data analysis. The reliability test results show that from 27 questions for Nurse Handover and 30 questions for patient safety, all of them show a value of $r_{\text{Count}} > r_{\text{Table}}$ (0.361) and a Cronbach Alpha value > 0.60 so that it can be concluded that the questionnaire used is valid and reliable. Variables in the study This is the dependent variable in this research, namely the implementation of patient safety targets and the independent variable in this research is the nurse handover process.

RESULTS

Handover Process

Table 1 Frequency Distribution of Patient Safety Target Implementation Categories

Implementation of Patient Safety Goals	N	%
Pretest		
Good	2	3,9
Quite Good	25	49,0
Not Good	24	47,1
Posttest		
Good	22	43,1
Quite Good	29	56,9
Not Good	0	0,0
Total	51	100,0

Based on the table above, it is known that the frequency distribution of patient safety target implementation before treatment (pretest) was mostly quite good (49.0%), and after treatment (posttest) it was quite good (56.9%).

The frequency distribution of accurate patient identification can be seen as follows:

Table 2 Frequency Distribution of Categories of Accurate Patient Identification

Accuracy of Patient Identification	N	%
Good	17	33,3
Quite Good	31	60,8
Not Good	3	5,9
Total	51	100,0

Based on the table above, it is known that the frequency distribution of accuracy in patient identification was found to be the majority quite good (60.8%), followed by good (33.3%) and Not Good (5.9%).

The frequency distribution of increasing effective communication can be seen as follows:

Table 3 Frequency Distribution of Categories for Increasing Effective Communication

Increased Effective Communication	N	%
Good	13	25,5
Quite Good	36	70,6
Not Good	2	3,9
Total	51	100,0

Based on the table above, it is known that the frequency distribution of increasing effective communication is found to be the majority quite good (70.6%), followed by good (25.5%) and Not Good (3.9%).

The frequency distribution of drug safety improvements that need to be watched out for can be seen as follows:

Table 4 Frequency Distribution of Drug Safety Improvement Categories that Need to Be Watched For

Increased Drug Safety to Be Aware of	N	%
Good	20	39,2
Quite Good	26	51,0
Not Good	5	9,8
Total	51	100,0

Based on the table above, it is known that the frequency distribution of drug safety improvements that need to be watched out for shows that the majority is quite good (51.0%), followed by good (39.2%) and Not Good (9.8%).

The frequency distribution of certainty about the exact location, exact procedure, correct patient operation can be seen as follows:

Table 5 Frequency Distribution of Categories: Certainty of Correct Location, Correct Procedure, Correct Patient Operation

Certainty of the Right Location, Right Procedure, Right Operation Patient	n	%
Good	37	72,5
Quite Good	9	17,6
Not Good	5	9,8
Total	51	100,0

Based on the table above, it is known that the frequency distribution of certainty of correct location, correct procedure, correct patient operation was found to be mostly good (72.5%), followed by quite good (17.6%) and Not Good (9.8%).

The frequency distribution of operational risk reduction can be seen as follows:

Table 6 Frequency Distribution of Infection Risk Reduction Categories

Reducing the Risk of Infection	n	%
Good	31	60,8
Quite Good	19	37,3
Not Good	1	2,0
Total	51	100,0

Based on the table above, it is known that the distribution of surgical risk reduction was found to be mostly good (60.8%), followed by quite good (37.3%) and Not Good (2.0%).

The frequency distribution of reducing the risk of patient falls can be seen as follows:

Table 7 Frequency Distribution of Categories for Reducing the Risk of Patient Falls

Reducing the Risk of Patient Falls	N	%
Good	34	66,7
Quite Good	13	25,5
Not Good	4	7,8
Total	51	100,0

Based on the table above, it is known that the distribution of the reduction in the risk of patients falling was found to be mostly good (66.7%), followed by quite good (25.5%) and Not Good (7.8%).

Bivariate Analysis

Bivariate analysis was carried out to see whether there were differences before and after being given treatment in the form of good and correct handover training for nurses at Royal Prime Hospital Medan using the Wilcoxon test. The results of the Wilcoxon test on the nurse handover process are as follows.

Table 8 Wilcoxon Test Results on the Nurse Handover Process

Handover Process	N	Mean	Sig.
Pretest	51	24,75	0,000
Posttest	51	39,22	

Based on the table above, it is known that from 51 nurses at Royal Prima Medan Hospital, the average nurse handover process score before treatment was 24.75 and increased after treatment to 39.22. The Wilcoxon test results obtained a sig value. 0.000 (< 0.05) which means that there is a difference in the average handover treatment score before and after being given good handover training treatment. So it can be concluded that there is an influence of good handover training on the handover treatment of nurses at Royal Prime Hospital Medan.

Bivariate analysis was also carried out to see whether there were differences before and after treatment in the patient safety target implementation scores. The results of the Wilcoxon test on the implementation of patient safety targets for nurses are as follows.

Table 9 Wilcoxon Test Results on Implementation of Patient Safety Targets

Implementation of Patient Safety Goals	N	Mean	Sig.
Pretest	51	27,65	0,000
Posttest	51	43,39	

Based on the table above, it is known that from 51 nurses at Royal Prime Hospital Medan, the average score for implementing patient safety targets for nurses before treatment

was 27.65 and increased after treatment to 43.39. The Wilcoxon test results obtained a sig value. 0.000 (< 0.05) which means that there is a difference in the average score for implementing patient safety targets before and after being given training treatment. So it can be concluded that there is an influence of training on the implementation of patient safety targets for nurses at Royal Prime Hospital Medan.

Bivariate analysis was also carried out to see whether there was a relationship between the handover process and the implementation of patient safety targets. The results of the Pearson correlation test can be seen as follows.

Table 10 Relationship between the Handover Process and the Implementation of Patient Safety Goals

Variabel	Correlation Coefficient (r)	Sig.
Handover Process	0,385	0,005

Based on the table above, it is known that the p value ($0.005 < 0.05$) shows that there is a significant relationship between the handover process variable and the implementation of patient safety targets for nurses at Royal Prima Hospital in Medan. The relationship between the handover process and the implementation of patient safety targets shows a significant positive correlation ($r=0.385$), which means that the better you are at carrying out handovers, the better you will be at implementing patient safety targets.

DISCUSSION

Nurse Handover Process

This research is a pre-experimental design study with pre-post single group training involving 51 nurses in the ICU and surgical wards taken using a total sampling technique (Mursidah, 2022). Demographic data analysis consists of data on gender, education, age, length of work. Knowledge of handover implementation was measured with 27 questions from the training material and knowledge of implementing patient safety targets was measured with 30 questions from the training material. Before conducting the research, the researcher asked for the respondent's consent by providing an explanation of the activities, objectives and benefits obtained, after which the respondent agreed to become a respondent (Putri, 2019).

Based on the results of research on the preparation stage, it was found that nurses who had a good preparation stage were (68.6%), and quite good (31.4%) (Manurung, 2020). Based on the results of research at the implementation stage, it was found that nurses who had a good implementation stage were (74.5%), followed by good (21.6%) and Not Good (3.9%). Based on the results of research on the post-handover stage, it is known that nurses who had a good

post-handover stage were (68.6%), followed by quite good (23.5%) and Not Good (7.8%). The handover process in nursing activities can cause safety problems but can also be a success in patient safety, therefore the handover process in implementing patient safety targets is important to study and practice (Chaboyer, 2017). This is because 80% of these problems involve medical errors (Pino, 2019). The handover is carried out by the primary nursing nurse to the primary nurse (in charge) of the afternoon or night shift in writing and orally (Cahyono, 2018). The learning process is one part of behavior formation, by providing learning through training it can increase a person's knowledge and skills to support work performance in accordance with their duties. This agrees with Dessler in Marquis & Huston (2020) who states that training is a method used to obtain the skills needed to do one's job. This is in line with (As'ad, 2020) statement that training will improve employee abilities, and the research results of (Chaharsoughi, 2019) that training is an effective educational method in the SBAR technique for nurses. Delivering effective SBAR communication that is carried out correctly can facilitate communication between health workers and is a form of professionalism in working in the hospital.

Implementation of Patient Safety

This research is a pre-experimental design study with pre-post single group training involving 51 nurses in the ICU and surgical wards taken using a total sampling technique. Knowledge of implementing patient safety goals was measured with 30 questions from the training materials (Caldwell, 2022).

Based on the research results, the proportion of 51 nurse respondents for implementing patient safety targets before being given treatment (pre-test) was 49.0% for the quite good category and after being given treatment (post-test) there was an increase of 56.9% for the quite good category, as many as 3.9% were in the good category before being given treatment (pre-test) and after being given treatment (post-test) as many as 43.1% were in the good category and 47.1% were in the Not Good category before being given treatment (pre-test) and 0.0 % after being given treatment (post-test). There is a significant difference in the average knowledge before and after training (Heig, 2016).

Relationship between the Nurse Handover Process and the Implementation of Patient Safety Goals

Based on the results of statistical tests, it was found that the p value ($0.005 < 0.05$) indicated that there was a significant relationship between the handover process and the implementation of patient safety targets (Heig, 2016). The relationship between the nurse's handover process and the implementation of patient safety targets shows a correlation with the

degree of correlation ($r=0.385$), which means that if the handover process is good then the implementation of patient safety targets is good and conversely if the relationship between the handover process is Not Good then the implementation of patient safety targets is getting worse (Huston, 2020).

The positive results of this study show a significant improvement in patient safety standards after being given handover training with an effective communication approach (Rachmah, 2018). The increase in patient safety compliance by implementing nurses occurs due to an increase in all dimensions of patient safety implementation which include the dimensions of patient identification (Scovell, 2020), effective communication during handover, avoiding medication administration errors, eliminating procedural errors, preventing nosocomial infections, as well as preventing patient falls after administration and training. handover with an effective communication approach that also includes patient safety implementation (Riesenberg, 2020).

CONCLUSIONS

Based on the results of research and discussion on "The Relationship between the Handover Process and the Implementation of Patient Safety Targets in Royal Prime Hospital Medan in 2022" then it can be concluded as follows: the research results show that there is a significant increase in the implementation of the nurse handover process before being given treatment by 24.75 and an increase after treatment to 39.22, the research results show there is a significant increase in the implementation of targets Patient safety before treatment was 27.65 and increased after treatment to 43.39 and the research results showed a p value ($0.005 < 0.05$) indicating that there was a significant relationship between the handover process and the implementation of patient safety targets at the Royal Prime Hospital Medan in 2022. This research suggests the importance of commitment to improving the implementation of handovers and the implementation of patient safety through policies in the form of standards and procedures for weigh-in, direction and evaluation of the implementation of weigh-in, for the continuity of nursing care which has an impact on increasing the implementation of patient safety.

REFERENCE

- Alvarado, K., Lee, R., Christoffersen, E., Fram, N., Boblin, S., Poole, N. et al. 2016. *Transfer of Accountability : Transforming Shift Handover to Enhance Patient Safety. Health Care Quarterly. Special Issue.*
- As'ad. 2020. *Psikologi Industri.* Liberty.
- Anggraini, D., Novieastari, E., Nuraini T. 2019. *Peningkatan Kemampuan Timbang Terima Pasien Melalui Budaya Komunikasi (SBAR) Di RS Di Bekasi.* Universitas Indonesia.
- Cahyono. *Membangun Budaya Keselamatan Pasien Dalam Praktik Kedokteran.* Penerbit Kanisius; 2018.
- Caldwell G. 2022. Clinical leadership in quality and safety at the point of care. *J Artic Clin Risk.* 18(3):84-89.
- Chaboyer, W, McMurray, A, & Wallis M. 2017. *Bedside Nursing Handover: A Case Study. Research Centre for Clinical and Community Practice Innovation, Griffith University Gold Coast Campus, Griffith University, Queensland 4222, Australia.*
- Chaharsoughi, N.T., Ahrari, S., & Alikhah S. 2019. Comparison the effect of teaching of SBAR technique with roleplay and lecturing on communication skill of nurses. *J caring Sci.* 3(2):141-147.
- Dessler G. *Manajemen Sumber Daya Manusia. Edisi 10, Jilid 1.* PT. Indeks
- Dewi. 2022. Pengaruh Pelatihan Timbang Terima Pasien Terhadap Penerapan Keselamatan Pasien Oleh Perawat Pelaksana di RSUD Raden Mattaher Jambi. *J Heal Sport.* 5(3):645-655.
- Haig, K. M., Sutton, S., & Whittington J. 2016. SBAR: A shared mental model for improving communication between clinicians. *Jt Commision J Qual Patient Saf.* 32(3):167-175.
- Hilda H, Setiadi R, Putri Wahyuni E, Supriadi S, Rasmun R, Lorianana R et al. 2018. Strengthening Patients Safety Culture through the Implementation of SBAR Communication Method. *Heal Notions.* 2(8):856-861.
- Ilyas. 2019. *Perencanaan Sumber Daya Manusia Rumah Sakit Teori, Metoda Dan Formula.* Fakultas Kesehatan Masyarakat Universitas Indonesia.
- Kewuan, N & Karyuni P. 2018. *Manajemen Kinerja Keperawatan.* EGC.
- Huston M&. 2020. *Kepemimpinan Dan Manajemen Keperawatan: Teori Dan Aplikasi.* EGC.
- Reese. 2019. *Occupation Health and Safety Management : A Practical Approach. USA: CRC Press by Taylor and Francis Group.*
- Riesenberg, A, L., Leitzsch, J., & Cunningham M. 2020. Nursing handoffs : A systemic review of the literature : surprisingly little is known about what constitutes best practice. *Am J Nurs.* 110(4):24-34.
- Manurung N& MS. 2020. *Manajemen Timbang Terima Pasien.*
- Mursidah. 2022. Pengaruh Pelatihan Timbang Terima Pasien Terhadap Penerapan Keselamatan Pasien Oleh Perawat Pelaksana di RSUD Raden Mattaher Jambi. *J Heal Sport.* 5(3).
- Pambudi YSAYD. 2018. *Faktor-Faktor Yang Mempengaruhi Perawat Dalam Penerapan 6 SKP Pada Akreditasi JCI Di Ruang Rawat Inap Rumah Sakit Panti Waluya Malang.* Nursing Newa.
- Pino, F. A., Sam, K. J., Wood, S. L., Tafreshi, P. A., Parks, S. L., Bell, P. A., Hoffman, E. A., Koebel, L. M., & St. Peter SD. 2019. *Increasing Compliance with a New Interunit Handoff Process: A Quality Improvement Project. Pediatric Quality & Safety.*
- Putri. 2019. *Trend Dan Issu Keperawatan (1th Ed.).* In Media.
- Rachmah, Mustikasari & G. 2018. *Pengaruh Komunikasi SBAR Dalam Timbang Terima Terhadap Penerapan Keselamatan Pasien Yang Dipersepsikan Oleh Perawat Pelaksanan Di RSU Bunda Jakarta Dan RSU Bunda Margonda. (Tesis).* (Program

Magister Ilmu Keperawatan, Fakultas Ilmu Keperawatan, Universitas Indonesia. Depok I, ed.).

Santiasih, W. A. dkk. (2021). Analisis Penyebab Pending Klaim Bpjs Kesehatan Rawat Inap di RSUD Dr. RM Djoelham Binjai. *Journal of Healthcare Technology and Medicine*, 7(2), 1381–1394.

Scovell. 2020. Role of the nurse to nurse handover in patient care. *J Nurs Stand*. 24(30):35-39.

Siokal, B., Patmawati S. 2017. *Falsafah Dan Teori Dalam Keperawatan*. Trans Info Media.