



Patient Safety Round to Improve Patient Safety Goals in Hospital Inpatient Units

Swastika Dwi Saptarini ^{1✉}, Untung Sujianto ², Nurjazuli³

Faculty of Public Health Diponegoro University Semarang

Article Info

Article History:
Recived
Accepted
Published

Keywords:
Patient Safety
Round, Hospital

Abstract

The patient safety round is one way to improve the patient safety culture. Potential injury, non-injury and adverse events can be prevented by the patient safety rounds. The purpose of this study was to increase patient safety goals with patient safety rounds in inpatient units by nurses. This study is a quasi-experimental design with a pre- and post-test with a control group. The research subjects consisted of 30 control groups and 30 intervention groups. Patient safety achievements are measured by a patient safety checklist. Data analysis used the Mc Nemar test to determine the difference in the achievement of patient safety goals before and after the patient safety round was carried out. The results of data analysis showed that the patient safety round significantly affected the completeness of the achievement of patient safety goals ($p=0.000$). Monitoring and evaluation of implementation and achievements must be carried out regularly in order to find new breakthroughs to improve the hospital quality in the 4.0 era. With the patient safety rounds, it is hoped that patient safety goals can be achieved and the level of patient safety will be increased.

[✉]Correspondence Address :
Jl. Prof. Soedarto No.1269, Semarang 50275, Indonesia
E-mail: Swastikadwi27@gmail.com

BACKGROUND

Safety is a highlighted global issue in various work areas, in this case it applies to hospitals. There are five important issues related to safety in hospitals, i.e. patient safety, workers or health workers safety, hospital buildings and equipment safety that can have an impact on patient and staff safety, environmental safety (green productivity) that have an impact on environmental pollution and hospital business safety related to hospital survival. (Kementrian Kesehatan, 2016).

Patient safety in hospitals then becomes an important issue because of the many cases of medical errors that occur in various countries. Every year in America, almost 100,000 hospitalized patients died from medical errors. In addition, a study stated that 50% of deaths from medical injuries were possibly be prevented. The United States Institute of Medicine (IOM) published a report "The error is Human, Building to Safer Health System" which stated that hospitals in Utah and Colorado found adverse events of 2.9% and 6.6% of them died, while in New York adverse events 3.7% adverse events and 13.6% of them died. Furthermore, the mortality rate due to adverse events in hospitalized patients in the United States, which was 33.6 million per year, ranges from 44,000 to 98,000 people. (Cahyono, 2012; Huwaina et al., 2020; Restiana Kartika et al., 2018).

The Safety Round is one of the Hospital Patient Safety Programs which is quite easy to implement but very useful in the implementation of Hospital Patient Safety Programs. The safety round is carried out by the nurse when doing handovers related to patient safety and directly crosschecks in accordance with International Patient safety goals, i.e. correct patient identification, increasing effective communication, increasing safety of drug administration that requires attention, increasing correct location, correct patient, correct surgical procedure, reduce the risk of infection, reduce the risk of patient injury due to falls (Ariyani et al., 2020; Koizer, 2012; Nur et al., 2018).

Referring to the results of the patient safety culture survey conducted in January 2020 at the

K.R.M.T. Wongsonegoro Hospital Semarang, it was found that a patient safety round never been done the inpatient unit and the level of patient safety culture was found to have several indicators of patient safety that should be highlighted. The data shows a significant increase in the incidence of potential injury where in 2019 was 12.24% and in 2020 it was increased to 57.31%. In addition, the non-injury incident rate was also still high, 33.99% in 2020, this incident needs to be highlighted because the patient has been exposed to procedures that have the potential for injury. While adverse events rate was 6.32% in 2020, this was decreased compared to 2019's which was 19.39%, but still, it harmed the patients. Although the sentinel incidence was 0% in 2020, the incidence in 2019 was at 1.02% which means it has already caused serious injury to patients.

The indicators of patient safety mentioned above need special attention because the low level of patient safety culture will affect the quality of service and patient safety. Therefore, the purpose of this study was to conduct a patient safety round to determine the difference in the achievement of patient safety goals before and after the patient safety round at the K.R.M.T Wongsonegoro Hospital Semarang in the form of a patient safety round.

METHOD

The type of this research was a quasi-experimental with a pre- and post-test design with a control group design. The population in this study was a class III inpatient ward nurse at K.R.M.T Wongsonegoro Hospital Semarang, a total of 60 people were divided into research samples of 30 people in control group and 30 people in intervention group, taken by purposive sampling technique.

The dependent variable of this research was the achievement of patient safety goals and the control variable was the patient safety round. The variable of patient safety goals achievement was measured using a check list of patient safety goals.

The patient safety round was done during March 2021 by conducting training on patient safety rounds in the intervention group. The

safety round was done every time there is a shift change between nurses. The nurse filled out a checklist of patient safety goals before and after carrying out the patient safety round.

The results of the measurement using the check list were grouped into achieved group and not achieved group. The data was then analyzed using the Mc Nemar test to determine the effectiveness of the patient safety round on the achievement of patient safety goals before and after the intervention.

RESULT AND DISCUSSION

The results of this study were consisted of the characteristics of the respondents, the achievement of patient safety goals in the control group and the intervention before/after the patient safety round. Characteristics of respondents in the form of age, gender, level of education and length of work in the hospital. Here are the results of the research.

Table 1. Characteristics of Respondents

Characteristic	Group	
	Control	Intervention
Age		
<25 years old	2 (6,70%)	3 (10,0%)
25-34 years old	23 (76,7%)	24 (80,0%)
35-44 years old	5 (16,7%)	3 (10,0%)
Total	30 (100%)	30 (100%)
Gender		
Male	14 (46,7%)	13 (43,3%)
Female	16 (53,3%)	17 (56,7%)
Total	30 (100%)	30 (100%)
Level of Education		
Nursing diploma	16 (53,3%)	14 (46,7%)
Nursing undergraduate	14 (46,7%)	16 (53,3%)
Total	30 (100%)	30 (100%)
Length of Work		
≤ 3 years	13 (43,3%)	10 (33,3%)
4-6 years	11 (36,7%)	12 (40,0%)
7-10 years	5 (16,7%)	5 (16,7%)
>10 years	1 (3,30%)	3 (10,0%)
Total	30 (100%)	30 (100%)

The table shows that most respondents aged 25-34 years old in the control group 76.7% and the intervention group is 80.0%, dominated by female in the control group 53.3% and the intervention group 56.7%, the level of education was mostly nursing diploma in the control group 53.3% and nursing undergraduate in the intervention group 53.3%, the longest working

experience was 4-6 years in the control group 36.7% and the intervention group was 40.0%. The majority of respondents are aged 25-34 years old, which is an early adulthood age group. This age group is a productive age. In theory, that age group is where a person has high morale and works optimally. The higher the age, the more experience gained in life, the more knowledge gained. Robbins also said that increasing in age will increase one's wisdom maturity in making decisions, thinking rationally, controlling emotions, and tolerant of other people's views, meaning that person's performance also increases one's wisdom maturity in making decisions, thinking rationally, controlling emotions, and tolerating other people's views, means that person's performance also increases (Robbins. & Judge, T., 2015; Widyastuti, 2018).

The female gender was the majority in this study. Women theoretically have a high sensitivity compared to men. The accuracy of women is better than that of men. Research shows that female employees tend to be more diligent, disciplined, thorough and patient at work (Alhidayah et al., 2020).

The majority of level of education was a diploma in the control group and an undergraduate graduates in nursing in the intervention group. The higher the level of education, the higher the knowledge gained. The nursing degree is managerially more material than the nursing diploma. The theory explains that there is a relationship between the level of education and the compliance of nurses in implementing patient safety. Furthermore, nurses should continue to provide education and training opportunities for all aspects of nursing, such as registered nurses and nursing specialists (Widiasari, 2018).

Educational background affects performance. Research also shows that the level of education of nurses affects the performance of the nurses concerned. (Salbiah, 2015). Nurses with higher education will perform better because they have broader knowledge and insight compared to nurses with lower education. This statement is supported by research which states that the results of this study found that nurses

with an undergraduate and nurse profession education background were more obedient in implementing patient safety guidelines compared to nurses with nursing diploma education. Statistically it is known that there is a significant relationship between the level of education and the compliance of nurses in implementing patient safety guidelines (Awliyawati, 2015).

Length of work in this study was mostly < 3 years in the control group and 4-6 years in the intervention group. The length of work is directly proportional to the amount of experience gained in the field (Yehouenou et al., 2020). The study also stated that there was a positive correlation between length of work and work motivation of nurses, the longer an employee works, the lower the employee's desire to leave his job, based on this the increase in nurse performance in a hospital will be influenced by the nurse's length of work. (Robbins. & Judge, T., 2015). This statement is supported by research which stated that nurses who have worked more than 2 years had a compliance rate of 87.9% compared to employees who work less than 2 years whose compliance level was 42.9%.(Awliyawati, 2015).

Table 2. Completeness of patient safety goals achievement

Group	Completeness	
	Complete	Incomplete
Control		
Pre	12 (40,0%)	18 (60,0%)
Post	21 (70,0%)	9 (30,0%)
Intervention		
Pre	18 (60,0%)	12 (40,0%)
Post	30 (100%)	0

Table 2 shows a change in the completeness of the achievement of patient safety goals. The completeness control group increased by 30.0% to 70.0%, while the intervention group increased by 40.0% to 100%.

Bivariate Analysis

The bivariate analysis in this study was to examine the effectiveness of the patient safety round in improving the achievement of patient safety goals. The test used is the Mc Nemar Test.

Tabel 3. Bivariate analysis

Group	P*
Control	0,013
Intervention	0,000

*McNemar Test

The table shows a significant difference between pre and post in the two groups, but the significance of the intervention group is more significant than the control group which is indicated by p intervention < p control (0.000 < 0.013) it can be concluded that the safety round is effective in improving patient safety goals.

An increase in frequency in the intervention group was more than the control group in terms of findings of incomplete patient safety goals and the intervention group was statistically more significant than the control group. This shows that the patient safety round has proven to be effective in achieving patient safety goals, on the other hand the control group has also experienced an increase in the implementation of the patient safety round.

The researcher had confirmed several control group respondents and 10 respondents said they were motivated to complete patient safety goals even though they were not part of the intervention group. The effectiveness of the patient safety round intervention is in accordance with the theory that developing a patient safety culture is one of them is implementing patient safety rounds. (Cahyono, 2012). This theory is supported by a research result which states that the better the organizational culture and patient safety culture, the higher the patient safety goals achieved. (Irviranty, 2014). These results are also supported by research that nurses are the biggest contributors to patient safety goals in hospitals (Alhidayah et al., 2020). Other study also states that the implementation of patient safety rounds is proven to be effective in increasing the achievement of patient safety goals (Setiyani, 2018).

Improving patient safety is very important. Aside from having a direct impact on patients, the quality of a hospital's home is also assessed from safety, which is free from accidents (Joint Commission International, 2016; Tutiany et al., 2017). Patient safety also affects patient

satisfaction, this is shown by research which states that there is a significant relationship between the application of patient safety and patient satisfaction. There were 82 (57.3%) patient safety applications and 66 (80.5%) who expressed satisfaction (Widiasari, 2018).

Therefore, nurses who are always 24 hours around the patients must continue to monitor, complement, maintain and innovate in order to support patient safety. Nurses' knowledge must be continuously improved and awareness of building a patient safety culture must be cultivated. One way to build this culture is to implement patient safety rounds (Iriviranty, 2014; Setiyani, 2018).

CONCLUSIONS AND SUGGESTIONS

It can be concluded that the patient safety round is proven to be effective in increasing the achievement of patient safety goals. The patient safety round is a communication between nurses to double check patient safety goals. One of the indicators of the quality of a service is the achievement of patient safety goals, therefore nurses must ensure that patients are safe and free from injury.

ACKNOWLEDGEMENT

Thanks to God the Almighty who has given the author the strength to complete this article. Sincere thanks to the respondents who have given their time for approximately one month and all those who have helped this research. The author realizes that this research is still far from perfect, therefore constructive criticism and suggestions are expected for better writing.

REFERENCES

- Alhidayah, T., Susilaningsih, F. S., & Somantri, I. (2020). Factors Related with Nurse Compliance in the Implementation of Patient Safety Indicators at Hospital. *Jurnal Keperawatan Indonesia*, 23(3), 170–183. <https://doi.org/10.7454/jki.v23i3.975>
- Ariyani, I., Jati, S. P., Arso, S. P., & Semarang, U. D. (2020). *Service Quality Leadership of Emergency Department of RSUD K. R. M. T*

Wongsonegoro (K. R. M. T Wongsonegoro District Hospital). 6(1).

- Awliyawati, F. D. (2015). Hubungan Karakteristik Perawat Dengan Kepatuhan Dalam Menerapkan Pedoman Patient Safety Di Instalasi Rawat Inap Rumah Sakit Islam Faisal Makassar. *Ekp*, 13.
- Cahyono, S. (2012). *Membangun budaya keselamatan pasien dalam praktik kedokteran*.
- Huwaina, F., Iqbal, F., Yuniastuti, A., Kasmini, O. W., Program, S., Profesi, A., Universitas, I., Sultan, A., & Semarang, I. (2020). The Relation of Drug Amount, Comorbidity, Blood Pressure, and Residential Area to Drug-Related-Problems of Hypertension Patients. *Public Health Perspectives Journal Fildza Huwaina Fathnin*, 5(3), 2020–2178. <http://journal.unnes.ac.id/sju/index.php/phpj>
- Iriviranty, A. (2014). Analisis Budaya Organisasi dan Budaya Keselamatan Pasien Sebagai Langkah Pengembangan Keselamatan Pasien di RSIA Budi Kemuliaan Tahun 2014. *Jurnal Administrasi Rumah Sakit*, 1(3), 196–206. <file:///F:/ersih/organizing.pdf>
- Joint Commission International. (2016). *Hospital national patient safety goals. the joint commission international accreditation hospital*.
- Kementrian Kesehatan. (2016). *Evaluasi pelaporan E-Reporting pelaporan keselamatan pasien RS sampai Februari 2016*.
- Koizer, B. et al. (2012). *Fundamental of nursing: concepts, process and practice* (7th ed.). Prentice-Hall Inc.
- Nur, D., Marchamah, S., & Semarang, U. N. (2018). Komitmen Kebijakan, Penerapan SMK3, Pengetahuan, dan Sikap K3 terhadap Penggunaan APD Perusahaan Jasa Bongkar Muat. *Public Health Perspective Journal*, 2(3), 270–278.
- Restiana Kartika, M, S., & Ratna, R. (2018). Analisis Faktor Individu dan Faktor Penguat dengan Kepatuhan pada Kewaspadaan Universal di Layanan Kesehatan. *Public Health Perspective Journal*, 2(3), 206–214.

- Robbins., S. P., & Judge, T., A. (2015). *Perilaku Organisasi*. Salemba Empat.
- Salbiah, S. (2015). Pengetahuan Tenaga Kesehatan Dalam Sasaran Keselamatan Pasien Di Rumah Sakit Sumatera Utara. *Idea Nursing Journal*, 6(2), 1–6.
- Setiyani, P. (2018). Ronde Keselamatan Pasien: Strategi Praktis untuk Meningkatkan Budaya Keselamatan Pasien di RSUP dr. Kariadi Semarang. *RSUP Dr. Kariadi Semarang*, 15(40), 6–13. http://awsassets.wfnz.panda.org/downloads/earth_summit_2012_v3.pdf<http://hdl.handle.net/10239/131>https://www.uam.es/gruposinv/meva/publicaciones/jesus/capitulos_espanyol_jesus/2005_motivacion_para_el_aprendizaje_Perspectiva_alumnos.pdf
- Tutiany, Lindawati, & Krisanti, P. (2017). Bahan Ajar Keperawatan: Manajemen Keselamatan Pasien. *Pusat Pendidikan Sumber Daya Manusia Kesehatan Kementerian Kesehatan RI*, 297.
- Widiasari. (2018). Hubungan Penerapan Keselamatan Pasien dengan Kepuasan Pasien di Rumah Sakit. *Universitas Indonesia*.
- Widyastuti. (2018). *Hubungan pelaksanaan timbang terima dengan keselamatan pasien di ruang Rawat Inap kelas III RSI Sultan Agung Semarang*.
- Yehouenou, C. L., Yehouenou, C. L., Yehouenou, C. L., Dohou, A. M., Dohou, A. M., Fiogbe, A. D., Fiogbe, A. D., Esse, M., Degbey, C., Degbey, C., Simon, A., Simon, A., Dalleur, O., & Dalleur, O. (2020). Hand hygiene in surgery in Benin: Opportunities and challenges. *Antimicrobial Resistance and Infection Control*, 9(1), 1–8. <https://doi.org/10.1186/s13756-020-00748-z>
- Alhidayah, T., Susilaningsih, F. S., & Somantri, I. (2020). Factors Related with Nurse Compliance in the Implementation of Patient Safety Indicators at Hospital. *Jurnal Keperawatan Indonesia*, 23(3), 170–183. <https://doi.org/10.7454/jki.v23i3.975>
- Ariyani, I., Jati, S. P., Arso, S. P., & Semarang, U. D. (2020). *Service Quality Leadership of Emergency Department of RSUD K. R. M. T Wongsonegoro (K. R. M. T Wongsonegoro District Hospital)*. 6(1).
- Awliyawati, F. D. (2015). Hubungan Karakteristik Perawat Dengan Kepatuhan Dalam Menerapkan Pedoman Patient Safety Di Instalasi Rawat Inap Rumah Sakit Islam Faisal Makassar. *Ekp*, 13.
- Cahyono, S. (2012). *Membangun budaya keselamatan pasien dalam praktik kedokteran*.
- Huwaina, F., F., Yuniastuti, A., Kasmini, O. W., Program, S., Profesi, A., Universitas, I., Sultan, A., & Semarang, I. (2020). The Relation of Drug Amount, Comorbidity, Blood Pressure, and Residential Area to Drug-Related-Problems of Hypertension Patients. *Public Health Perspectives Journal Fildza Huwaina Fathnin*, 5(3), 2020–2178. <http://journal.unnes.ac.id/sju/index.php/phpj>
- Iririvanty, A. (2014). Analisis Budaya Organisasi dan Budaya Keselamatan Pasien Sebagai Langkah Pengembangan Keselamatan Pasien di RSIA Budi Kemuliaan Tahun 2014. *Jurnal Administrasi Rumah Sakit*, 1(3), 196–206. file:///F:/ersih/organizing.pdf
- Joint Commission International. (2016). *Hospital national patient safety goals. the joint commission international accreditation hospital*.
- Kementrian Kesehatan. (2016). *Evaluasi pelaporan E-Reporting pelaporan keselamatan pasien RS sampai Februari 2016*.
- Koizer, B. et al. (2012). *Fundamental of nursing: concepts, process and practice* (7th ed.). Prentice-Hall Inc.
- Nur, D., Marchamah, S., & Semarang, U. N. (2018). Komitmen Kebijakan, Penerapan SMK3, Pengetahuan, dan Sikap K3 terhadap Penggunaan APD Perusahaan Jasa Bongkar Muat. *Public Health Perspective Journal*, 2(3), 270–278.
- Restiana Kartika, M, S., & Ratna, R. (2018). Analisis Faktor Individu dan Faktor Penguat dengan Kepatuhan pada

- Kewaspadaan Universal di Layanan Kesehatan. *Public Health Perspective Journal*, 2(3), 206–214.
- Robbins., S. P., & Judge, T., A. (2015). *Perilaku Organisasi*. Salemba Empat.
- Salbiah, S. (2015). Pengetahuan Tenaga Kesehatan Dalam Sasaran Keselamatan Pasien Di Rumah Sakit Sumatera Utara. *Idea Nursing Journal*, 6(2), 1–6.
- Setiyani, P. (2018). Ronde Keselamatan Pasien: Strategi Praktis untuk Meningkatkan Budaya Keselamatan Pasien di RSUP dr. Kariadi Semarang. *RSUP Dr. Kariadi Semarang*, 15(40), 6–13. http://awsassets.wfnz.panda.org/downloads/earth_summit_2012_v3.pdf<http://hdl.handle.net/10239/131>https://www.uam.es/gruposinv/meva/publicaciones/jesus/capitulos_espanyol_jesus/2005_motivacion_para_el_aprendizaje_Perspectiva_alumnos.pdf<https://www>
- Tutiany, Lindawati, & Krisanti, P. (2017). Bahan Ajar Keperawatan: Manajemen Keselamatan Pasien. *Pusat Pendidikan Sumber Daya Manusia Kesehatan Kementerian Kesehatan RI*, 297.
- Widiasari. (2018). Hubungan Penerapan Keselamatan Pasien dengan Kepuasan Pasien di Rumah Sakit. *Universitas Indonesia*.
- Widyastuti. (2018). *Hubungan pelaksanaan timbang terima dengan keselamatan pasien di ruang Rawat Inap kelas III RSI Sultan Agung Semarang*.
- Yehouenou, C. L., Yehouenou, C. L., Yehouenou, C. L., Dohou, A. M., Dohou, A. M., Fiogbe, A. D., Fiogbe, A. D., Esse, M., Degbey, C., Degbey, C., Simon, A., Simon, A., Dalleur, O., & Dalleur, O. (2020). Hand hygiene in surgery in Benin: Opportunities and challenges. *Antimicrobial Resistance and Infection Control*, 9(1), 1–8. <https://doi.org/10.1186/s13756-020-00748-z>