Incident analysis of patient safety in hospital: Based on feedback and supervision concept

by Perpustakaan IIK Bhakti Wiyata

Submission date: 15-Mar-2025 10:49AM (UTC+0700)
Submission ID: 2501098975
File name: Based_on_feedback_and_supervision_concept_-_NIKMATUS_SA_ADAH.pdf (305.54K)
Word count: 4136
Character count: 21345

ORIGINAL ARTICLE

Bali Medical Journal (*Bali Med.J*) 2022, Volume 11, Number 2: 665-670
P-ISSN.2089-1180, E-ISSN: 2302-2914

Incident analysis of patient safety in hospital: Based on feedback and supervision concept

Agus Aan Adriansyah[1*], Budhi Setianto[1], Indah Lestari[1], Pinky Ayu Marsela Arindis[1], Wahyu Eka Kurniawana[1], Nikmatus Sa'adah[2]

[1]Department of Public Health, Faculty of Health, Universitas Nahdlatul Ulama Surabaya, 60237 Surabaya, East Java, Indonesia;
[2]Department of Dentistry, Faculty of Dentistry, Institut Ilmu Kesehatan Bhakti Wiyata Kediri, 64114 Kediri, East Java, Indonesia;

*Corresponding author:
Agus Aan Adriansyah;
Department of Public Health, Faculty of Health, Universitas Nahdlatul Ulama Surabaya, 60237 Surabaya, East Java, Indonesia;
aan.naufal87@unusa.ac.id

Received: 2022-05-24
Accepted: 2022-07-22
Published: 2022-07-31

ABSTRACT

Introduction: The concept of feedback and supervision is at the core of efforts to reduce hospital patient safety incidents. This study aimed to analyze the effect of feedback and supervision on the occurrence of patient safety incidents in hospitals.
Methods: The population included 18 work units that provide services to patients with samples of the unit head or room head, the person in charge of work shifts and the person in charge of patient safety quality. Data in the form of respondents' perceptions were collected through a questionnaire using Google form and analyzed using cross-tabulation and the Pareto approach with a note that it is influential if a difference of >20% is found between the independent and the dependent variable.
Results: The results showed that most of the feedback in the work unit was lacking (50.0%), and supervision in the work unit was good (55.6%). The number of patient safety incidents at the Surabaya Islamic Hospital was dominated by near-injury incidents (NII) with a green rating. The outpatient unit is the unit with the highest incidence. Feedback and supervision affect the number of patient safety incidents because they have a difference of 22.2% and 52.5%, respectively. This study has shown that hospital patient safety incidents are influenced by feedback and supervision.
Conclusion: This study showed that feedback and supervision influence the incidence of patient safety incidents in hospitals. Therefore, there is a need for training on supervision at the head of the room, providing socialization and education about the importance of patient safety, and increasing the commitment of decision-makers and related stakeholders.

Keywords: feedback, supervision, incident, patient safety, hospital.
Cite This Article: Adriansyah, A.A., Setianto, B., Lestari, I., Arindis, P.A.M., Kurniawana, W.E., Sa'adah, N. 2022. Incident analysis of patient safety in hospital: Based on feedback and supervision concept. *Bali Medical Journal* 11(2): 665-670. DOI: 10.15562/bmj.v11i2.3137

INTRODUCTION

Patient safety is a system that makes patients safer. This system includes risk assessment, identification, patient risk management, incident reporting and analysis, the ability to learn from incidents and their follow-up, as well as the implementation of solutions to minimize risks and prevent injuries caused by errors due to carrying out an action or taking action that should be taken.[1] A patient safety incident is any unintentional event and condition that results in or has the potential to cause preventable injury to a patient.[2] Based on data from the directorate general of health services, the number of reported patient safety incidents in Indonesia until 2019 has reached 10,570 cases. In addition, according to data from WHO, 134 million adverse events are annually in hospital low- and middle-income countries (LMICs), contributing to 2.6 million deaths due to unsafe care.[3] Based on the data collected, there was an increase in the incidence of safety incidents at the Surabaya Islamic Hospital by 0.3% in 2019 compared to previous years. Near-injury events with a green rating dominated the number of incidents that occurred.[1] In addition, the culture of patient safety at the Surabaya Islamic Hospital is still weak in several categories: individual, patient, environmental, and organizational. This research is limited to organizational factors because organization is one of the important factors in realizing hospital quality and patient safety. Organizational factors examined in this research are feedback and supervision.

Several studies have been conducted on patient safety culture feedback and supervision. Finn et al., 2018 examined the effectiveness of increasing the supervision of inpatient doctors on medical errors, patient safety, and resident education. The study explained that supervision practices must consider the distance between doctors and resident students for better learning.[4] Farokhzadian conducted a qualitative study regarding the challenges felt by nurses in achieving an effective patient safety culture, and the results of this study showed that nurses believed the lack of several measures, such as feedback to staff, follow-up feedback and the lack of importance of reporting on existing safety culture weaknesses.[5]

Although much research on feedback and supervision on patient safety culture has been carried out, the above research in general still shows that patient safety incidents are often found in hospitals. Direct supervision allows nursing managers to find various obstacles or problems in implementing patient care in the room by thoroughly reviewing the

factors that influence it and with nursing staff to find solutions. However, the obstacle faced is the lack of implementation related to supervision in reporting patient safety incidents.[6] If the supervisor does not carry out his duties properly, of course, not many reports and information will be obtained, so that it has an impact on the lack of feedback given by the leadership to the staff in fixing all aspects that should still have many shortcomings.

The discussion above shows that it is important to be aware that an error resulting from a poor monitoring system and the absence of direct feedback from management to staff can lead to increased patient safety incidents. Therefore, there is a need to deepen the role of feedback and supervision of patient safety incidents; strategic efforts are needed to overcome problems and obstacles in implementing feedback and supervision. This study aimed to analyze the role of feedback and supervision in the occurrence of patient safety incidents in a hospital.

METHODS

General Background of Research

The method used in this research is descriptive-analytic with cross sectional design. The analysis of this research is all service work units that provide direct services to patients, totaling 18 work units. Participants included 21 heads of work units, 51 people in charge of work units and 18 people in charge of work unit quality.

The variables studied included feedback, supervision, and patient safety incidents. The data were obtained primarily using a questionnaire instrument outlined in the google form. Data for the feedback variable was collected through a questionnaire containing six statements with answer choices using a Likert scale. Then, data on supervision variables were collected using a questionnaire from the Manchester Clinical Supervision Scale (MCSS), which contained 26 statements with answer choices using a Likert scale. The results obtained, both feedback and supervision data, were then categorized into the poor category (≤ 3.2) and the good category (> 3.2).

Instrument and Procedures

The variable data of patient safety incidents were obtained from the quality improvement and patient safety of Islamic Hospital Surabaya, which was then grouped by work unit, calculated the impact and probability of incident occurrence, then entered in a risk matrix table with a weighted assessment by the researcher. Determination of the high and low incidence rates in each work unit is obtained from the average number of incidents in all work units. The data that have been obtained are then categorized into two, namely the incidence of the low category (incidence rate <11.8) and the incidence of the high category (≥11.8).

Data Analysis

Data were analyzed using SPSS ver. 25. The effect of workload and communication on patient safety incidents was analyzed using cross-tabulation. The cross-tabulation results are then interpreted using the Pareto concept, which has an effect if the difference from the calculation is >20%. The results of the analysis of these variables are used to determine strategic issues by researchers, which Forum Group Discussions (FGDs) then carry out to develop recommendations.

RESULTS

Analysis of feedback and supervision of patient safety incidents was carried out on all service-related performance units consisting of 18 Surabaya Ahmad Yani Islamic Hospital work units. The following is a presentation of the full results.

Patient Safety Incident

Patient safety incidents (PSI) that arise can have a negative impact on hospitals and patients as recipients of health services. Reporting is an important element in patient safety. Valid information on the reporting made can be good material for the organization's learning process. Organizations can learn from previous experience and, of course, will hone the organization's ability to identify risk factors early to prevent or reduce incidents. Several things must be considered from reporting patient safety incidents, namely the type of incident and incident grading and the accuracy of incident reporting. An overview of patient safety incidents is presented in Table 1 and Table 2.

Table 1 and Table 2 show that of the 18 service work units at RSI Ahmad Yani, 6 work units (33.3%) have a high PSI rate and the highest PSI are the Outpatient, Hemodialysis and Multazam units. Meanwhile, during the second semester of 2019, the type of patient safety incident reported was KNC (83.8%) and the highest reported patient safety incident grading was Green (83.8%).

Feedback

Feedback on errors describes officers who get information related to errors so that evaluations can be carried out to prevent errors from happening in the future. The existence of feedback regarding errors that have occurred plays an important role for staff in being aware of potential errors that may occur during the service process to patients. The implementation of feedback in work units related to patient safety at the surabaya islamic hospital can be seen in Table 3 and Table 4.

Table 3 and 4 show the feedback made by the unit head regarding patient safety incidents in the work unit divided into good and poor categories. The recapitulation of each category from the results of the coordination of the implementation of feedback related to patient safety incidents in the work unit by the head of the unit to the staff is still lacking because 50% of work units still exist with poor feedback implementation.

Meanwhile, the effect of feedback on patient safety incidents is arranged in a cross-tabulation with analysis using a 20:80 Pareto concept approach. That is, if there is a difference of > 20%, there is a feedback effect on patient safety incidents. The complete results are presented in Table 5.

Based on Table 5, it can be informed that, if the implementation of feedback is carried out properly, the majority will have an impact on the low patient safety incident rate (77.8%). The difference in the percentage obtained between categories of feedback on patient safety incidents is 22.2% (>20%), so it is concluded that the

implementation of feedback influences patient safety incidents.

Supervision

The application of culture in an organization cannot be separated from the active role of superiors, in this case, the implementation of supervision carried out by the head of the unit. To assess the expectations and actions of the unit head in supporting patient safety, it can be seen from the consideration of the unit head in accepting staff suggestions to improve patient safety, praising staff who follow patient safety procedures, and not ignoring patient safety issues. The implementation of supervision in hospital work units can be seen in Table 6 and Table 7.

Table 1. Patient Safety Incident Rates for Semester 2 of 2019.

No.	Work Unit	PSI	Category
1	Outpatient	57.2	High
2	Emergency room	16.9	High
3	Tan im, Muzdalifah & Jeddah room	13.3	High
4	Sofa room	13.0	High
5	Pharmacy	12.3	High
6	Hijir Ismail room	12.0	High
7	Hemodialysis	10.0	Low
8	Operation room	9.5	Low
9	Makkah room	9.0	Low
10	Laboratory	9.0	Low
11	Mina room	8.5	Low
12	Thoif & Bersalin room	7.5	Low
13	Radiology	7.5	Low
14	Madinah room	7.3	Low
15	Arofah room	5.7	Low
16	Multazam room	5.5	Low
17	Intensive care unit	4.3	Low
18	Zam-zam room	4.0	Low

PSI: Patient Safety Index

Table 2. Recapitulation of Categories, Types and Grading of Patient Safety Incidents.

No.	PSI Distribution	n	%
PSI Category in the work unit			
1	High	6	33.3
2	Low	12	66.7
Total		18	100
Type of PSI			
1	KNC	269	83.8
2	KTC	24	7.5
3	KTD	28	8.7
4	Sentinels	0	0.0
Total		321	100
PSI Grading			
1	Blue	22	6.9
2	Green	294	91.6
3	Yellow	5	1.6
4	Red	0	0.0
Total		321	100

PSI: Patient Safety Index

The result data in Table 6 and Table 7 show that the supervision carried out by the unit head regarding patient safety incidents in the work unit is divided into good and poor categories. The recapitulation of each category from the results of coordination of the implementation of supervision related to patient safety incidents in the work unit by the head of the unit to the staff is still not going well because there are still 44.4% of work units with poor supervision.

Meanwhile, the effect of supervision on patient safety incidents was compiled in a cross-tabulation with analysis using the Pareto 20:80 concept approach. That is, if there is a difference of >20%, then there is an effect of the implementation of supervision on patient safety incidents. The complete results are presented in Table 8.

Based on Table 8, it can be informed that if the supervision is carried out properly, the majority will have an impact on the low patient safety incident rate (90.0%). The difference in the percentage obtained between the supervision categories for patient safety incidents was 52.5% (>20%), so it was concluded that the implementation of supervision influenced patient safety incidents.

DISCUSSION

Feedback is generally considered a powerful teaching technique for enhancing knowledge and skills. Feedback is an overlooked part of the incident reporting system. In this study that feedback is important in the reporting system; even if it is a simple system, resources must be available to support follow-up on reports made and provide feedback to the reporter, and at least conduct a limited investigation when reporting all respondents stated highly related to feedback either in units or individuals. Several points indicate that more emphasis needs to be placed on what happened after the report was submitted. There is no point in reporting if health care services and systems are not improved

to be safer for patients. In addition, for a reporting system to be successful, healthcare providers must understand that the reported event must result in a tangible response and change.

Improved reporting will not occur without a proper follow-up system and strong feedback. Feedback is one of the most powerful influences on learning and achievement, but it can have a positive or negative impact.[1] In this study, 50% of work units with good feedback and 50% lacked feedback, with a percentage difference of 22.2%, which means that feedback influences the incidence of patient safety incidents at the Surabaya Islamic Hospital. A high incidence of low feedback occurs in work units with many patients, so these units rarely give feedback. The feedback provided by the work unit is only delivered by the head of the unit in the morning so that not all staff are aware of incidents that occur within the unit or in other units. This condition causes the information conveyed to be interrupted and not received by the staff in the work unit. The non-uniform reception of information also causes a non-uniform understanding in the work unit.

Research conducted by Benn J and L Wallace stated that the lack of feedback from incident reporting is considered a barrier for staff to report incidents.[7] Research has identified several factors that hinder reporting, including fear of blame, time pressure, resource constraints, the perception that reporting is unnecessary and the lack of a clear definition what constitutes a reportable incident.[8] Effective feedback from incident reporting systems in health care is essential if organizations learn from failures in care delivery.[6] Feedback from incident reports must include solutions to improve patient safety and be developed technologically to facilitate the reporting system and feedback from incidents.

The results showed that most of the supervision implementation went well there were 55.6% of work units included in that category. The percentage difference was 22.2% which means that the implementation of supervision has an influence on the occurrence of patient safety incidents at the Surabaya Islamic Hospital, there are still 44, 4% of work units with low supervision related to the implementation of safety incidents. Supervision is low because the head of the unit/head of the room is still focused on service, so supervision is carried out only during free time. The implementation of supervision is not carried out routinely by the head of the work unit. The supervision carried out is also not comprehensive, only on implementing daily tasks. This could be because the head of the unit/head of the room did not understand how to implement proper supervision, and there were no operational standards in implementing supervision in hospitals.

Implementation of supervision can increase the effectiveness and efficiency of work. The increase in these two things is related to reducing errors in doing work and can minimize the use of wasted resources.[9] The implementation of supervision can also increase staff knowledge and skills and improve communication and coordination relationships within the work unit.[2] Therefore, seeing the importance of implementing supervision in work units and supervision is also one of the management functions, hospitals can provide ongoing socialization to unit heads/heads of rooms regarding the importance of implementing supervision and can provide training related to

Table 3. Distribution of Work Unit Feedback.

No.	Work Unit	Score	Category
1	Zam-zam room	3.8	Good
2	Intensive Care Unit	3.5	Good
3	Arofah room	3.5	Good
4	Mina room	3.5	Good
5	Thoif & Bersalin room	3.5	Good
6	Laboratory	3.5	Good
7	Hijir Ismail room	3.4	Good
8	Makkah room	3.4	Good
9	Shofa room	3.3	Good
10	Madinah room	3.2	Less
11	Operation room	3.2	Less
12	Tan im, Muzdalifah & Jeddah room	3.1	Less
13	Pharmacy	3.1	Less
14	Emergency unit	3.1	Less
15	Radiology	3.1	Less
16	Outpatient	3.1	Less
17	Hemodialysis	3.1	Less
18	Multazam room	3.0	Less

Table 4. Recapitulation of Feedback Categories.

No.	Work unit category	n	%
1	Good	9	50.0
2	Less	9	50.0
Total		18	100

Table 5. Analysis of the Quality of Feedback on Patient Safety Incidents.

Feedback	Patient Safety Incidents		Total n (%)
	Low n (%)	High n (%)	
Good	7 (77.8)	2 (22.2)	9 (100)
Less	5 (55.6)	4 (44.4)	9 (100)
Total	12 (66.7)	6 (33.3)	18 (100)

supervision.[10]

Based on the data that has been obtained, several strategic issues that can be submitted are as follows:

1. Feedback.
   Most work units have carried out feedback regularly. In addition, feedback is provided only during the morning shift briefing, there may be some staff who are not informed. Therefore, making technological feedback through Hospital Management Information System (SIMRS). If the feedback is done manually, it is possible to record every feedback implementation.
2. Supervision.
   Supervision has been carried out by the head of each unit every week. In addition, supervision of implementing patient safety has not been carried out routinely, and supervision training has not been carried out periodically. Therefore, it is necessary to provide an opportunity for patient safety supervision training, and the head of the work unit must be able to divide the focus between service and management properly.

Table 6. Distribution of Work Unit Supervision.

No.	Work Unit	Score	Category
1	Shofa room	2.9	Less
2	Pharmacy	3.0	Less
3	Hemodialysis	3.0	Less
4	Hijir Ismail room	3.1	Less
5	Madinah room	3.1	Less
6	Emergency unit	3.1	Less
7	Outpatient	3.1	Less
8	Multazam room	3.1	Less
9	Intensive Care Unit	3.3	Good
10	Makkah room	3.3	Good
11	Arofah room	3.4	Good
12	Mina room	3.4	Good
13	Operation room	3.4	Good
14	Radiology	3.4	Good
15	Thoif & Bersalin room	3.5	Good
16	Laboratory	3.5	Good
17	Tan im, Muzdalifah & Jeddah room	3.5	Good
18	Zam-zam room	3.7	Good

Table 7. Recapitulation of Supervision Categories.

No.	Work unit category	n	%
1	Good	10	55.6
2	Less	8	44.4
Total		18	100

Table 8. Analysis of the Quality of Supervision on Patient Safety Incidents.

Supervision	Patient Safety Incidents		Total n (%)
	Low n (%)	High n (%)	
Good	9 (90)	1 (10.0)	10 (100)
Less	3 (37.5)	5 (62.5)	8 (100)
Total	12 (66.7)	6 (33.3)	18 (100)

CONCLUSION

Many work units at the Surabaya Ahmad Yani Islamic Hospital have a low workload, while the communication aspect is still considered unsatisfactory. In addition, hospital patient safety incidents are dominated by near-injury events (KNC) with a green rating, and the highest incidence rates are in outpatient units. This study showed that feedback and supervision influence the incidence of patient safety incidents in hospitals. Therefore, there is a need for training on supervision at the head of the room, provide socialization and education about the importance of patient safety, and increasing the commitment of decision-makers and related stakeholders. Monitoring from the field of nursing services on supervision activities also needs to be done. Then carry out regular supervision activities based on job descriptions and respective functions based on the agreed schedule.

FUNDING

The authors are responsible for all of the study funding without a grant or any external funding source.

CONFLICT OF INTEREST

No potential conflict of interest relevant to this article was reported.

AUTHOR CONTRIBUTION

All authors similarly contribute to the think about from the investigation concepts, information acquisitions, information investigation, factual investigations, changing the paper until detailing the consider comes about through publication.

ETHICAL CONSIDERATION

This research was approved by the Health Research Ethics Committee of Universitas Nahdlatul Ulama.

ACKNOWLEDGMENTS

Our gratitude goes to Universitas Nahdlatul Ulama Surabaya and LPPM, for motivating, facilitating, and supporting us to continue actively creating, researching, writing, and publishing scientific papers.

REFERENCES

1. Gandhi TK, Graydon-Baker E, Huber CN, Whittemore AD, Gustafson M. Closing the loop: follow-up and feedback in a patient safety program. Jt Comm J Qual Patient Saf. 2005;31(11):614–21. Available from: http://dx.doi.org/10.1016/S1553-7250(05)31079-8
2. Tristantia AD. Evaluasi Sistem Pelaporan Insiden Keselamatan Pasien Di Rumah Sakit. J Adm Kesehat Indones. 2018;6(2):83.
3. Fleming M, Wentzell N. Patient safety culture improvement tool: development and guidelines for use. Healthc Q. 2008;11(3 Spec No.):10–5.
4. Finn JD, Rock DA. Academic success among students at risk for school failure. J Appl Psychol. 1997;82(2):221–34.
5. Karami A, Farokhzadian J, Foroughameri G. Hehehe. PLoS One. 2017;12(11):1–15.
6. Tulus H, Maksum H, Studi P, Manajemen M, Sakit R, Kedokteran F, et al. Redesain Sistem Identitas Pasien sebagai Implementasi Patient Safety di Rumah Sakit Redesigning Patient Identity System as Patient Safety Implementation at Hospital. 2012;28(2):221–7.
7. Benn J, Koutantji M, Wallace L, Spurgeon P, Rejman M, Healey A, et al. Feedback from incident reporting: Information and action to improve patient safety. Qual Saf Heal Care. 2009;18(1):11–21.
8. Zaccaro SJ, Rittman AL, Marks MA. Zaccaro et al.(2001)Leader.Q..pdf. Leadersh Q. 2001;12:451–83. Available from: https://www.sciencedirect.com/science/article/pii/S1048984301000935
9. Hardjono B, San LP. Customer Relationship Management Implementation and its Implication to Customer Loyalty in Hospitality Industry. J Din Manaj. 2017;8(1):92–107.
10. Carayon P, Wood KE. Patient safety: The role of human factors and systems engineering. Stud Health Technol Inform. 2010;153:23–46.

Incident analysis of patient safety in hospital: Based on feedback and supervision concept

ORIGINALITY REPORT

11%	10%	5%	%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	blog.balimedicaljournal.org Internet Source	4%
2	repository.unusa.ac.id Internet Source	1%
3	link.springer.com Internet Source	1%
4	balimedicaljournal.org Internet Source	1%
5	docslib.org Internet Source	1%
6	jurnal.globalhealthsciencegroup.com Internet Source	1%
7	Okuyama, Ayako, Minako Sasaki, and Katsuya Kanda. "The Relationship Between Incident Reporting by Nurses and Safety Management in Hospitals :", Quality Management in Health Care, 2010. Publication	<1%
8	ijisrt.com Internet Source	<1%
9	www.coursehero.com Internet Source	<1%
10	worldwidescience.org Internet Source	<1%
11	rsp.fsp.usp.br Internet Source	<1%
	www.freepatentsonline.com	

12	Internet Source	<1%
13	conference.unsri.ac.id Internet Source	<1%
14	Nahian Hossain. "Malocclusion Following Early Primary Tooth Extraction: The Role of Socio-Economic Factors and Parental Awareness in Bangladesh", Cold Spring Harbor Laboratory, 2025 Publication	<1%
15	www.ijmedrev.com Internet Source	<1%
16	Turkmen, Emine, Ulku Baykal, Seyda Seren Intepeler, and Serap Altuntas. "Nurses' Perceptions of and Factors Promoting Patient Safety Culture in Turkey :", Journal of Nursing Care Quality, 2013. Publication	<1%
17	www.id-press.eu Internet Source	<1%

Exclude quotes	On	Exclude matches	Off
Exclude bibliography	On		