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ORIGINAL ARTICLE

Implementation of a Patient Safety Policy in Hospitalisation of Surgical Cases

Rina Budi Kristiani,[1] Chindy Maria Orizani,[2] Iswati Iswati,[1] Siti Nur Qomariah,[2] Abu Bakar,[3] Sosilo Yobel[4]

1. Diploma III Nursing Study Program, College of Health Science Adi Husada, Indonesia.
2. Bachelor of Nursing Program, College of Health Science Adi Husada, Indonesia.
3. Faculty of Nursing, University of Airlangga, Indonesia.
4. Bachelor of Nursing, College of Health Science Artha Bodhi Iswara, Indonesia.

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Corresponding author:
CHINDY MARIA ORIZANI
T: +62857-3222-3069
E: chindy@adihusada.ac.id

Abstract

Background/Aim: The Seven Steps to Patient Safety is a reference guide for hospitals implementing a patient safety program. The seven steps are building awareness of the value of patient safety, leading and supporting staff, integrating risk reporting activities, developing reporting systems, involving and communicating with patients, learning and sharing experiences about patient safety and preventing injuries through the implementation of patient safety systems. The purpose of this study was to evaluate the implementation of a patient safety policy in the hospitalisation of surgical medical cases.

Methods: In this cross-sectional research, 360 nurses from several Gresik City public and private hospitals participated. Questionnaires on the application of the patient safety policy and a questionnaire that modified the seven steps of patient safety as implemented by nurses in the medical-surgical inpatient wards were used as the study instruments. Multiple logistic regression analysis was used to examine the data.

Results: Most nurses have worked in medical-surgical for 6-10 years with work hours 40-59 every week. Implementation of patient safety had negative responses from nurses in Step 3 (integrated risk management) and Step 5 (open communication to patients and families). The simple logistic regression results for all steps were significant. Therefore, multiple logistic regression has shown that steps 1, 2, 4, 6 and 7 were significant to the implementation of patient safety policies.

Conclusions: Patient safety policy remains a shared commitment that needs to be implemented. Hospitals as healthcare institutions that directly treat patients must prioritise safe, quality, anti-discriminatory and effective health services, prioritising the interests of patients according to hospital service standards.

Key words: Evaluation; Hospital medicine; Patient safety; Policy.

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Introduction

Hospital building and equipment safety can affect patient and staff safety. Environmental safety (green productivity) affects environmental pollution and the safety of hospital "business" and the continued life of the hospital. However, it must be recognised that hospital institutional activities need to continue to operate if patients are present. For this reason, patient safety is a top priority that must be taken and this is related to quality issues and the image of the hospital.[1, 2]

Patient safety in hospitals defines safety as the absence of danger or risk. Patient safety is preventing patient injury. Injury prevention is defined as the non-occurrence of unintended or avoidable harm through medical treatment. Patient safety is defined as avoiding, preventing, and correcting unwanted consequences or losses caused by the healthcare process.[3] In hospitals there are hundreds of drugs, hundreds of tests and procedures, many technological tools and many types of professional and non-professional personnel ready to serve patients 24 h in 7 days. If the variety and routine of services are not managed properly, patient safety incidents and adverse events can occur in medical and surgical cases.[4]

According to Ministry of Health Regulation No 1691/Menkes/Per/VIII/2011, hospitals and medical personnel working in hospitals are required to implement programs related to the National Health Commission's national policy on patient safety. Each hospital is required to establish a Hospital Patient Safety Team appointed by its Head to conduct patient safety activities. The hospital director is responsible for the team. Patient safety is a patient's right. Patients have the right to be guaranteed safety and security while undergoing treatment at the hospitalisation of medical surgical cases. Patient safety is the absence of errors or unintentional injuries.[5]

Hospitals are high-density (busy work) service organisations; specifically, they are trade-intensive, capital-intensive, advanced technology-intensive and human resource- and expertise-intensive; because of this, hospital organisations face many problems. Poorly managed hospital complexity can create opportunities for service failures that negatively impact patient safety.[6] The Hospital Accreditation Commission has prepared patient safety standards. Hospitals must design or improve their processes, monitor and evaluate performance, thoroughly analyse problems and implement changes to improve performance and patient safety. The design process must refer to the "Seven Steps to Hospital Patient Safety" listed in the Regulation of the Minister of Health of the Republic of Indonesia Number 11 of 2017 concerning patient safety.[7] The Seven Steps to patient safety is a reference guide for hospitals implementing a patient safety program. The seven steps are building awareness of the value of patient safety, leading and supporting staff, integrating risk reporting activities, developing reporting systems, involving and communicating with patients, learning and sharing experiences about patient safety and preventing injuries through the implementation of patient safety systems.[8–10]

Based on the results of the preliminary study in medical-surgical inpatient wards, the data showed that more than half of the incidents that occurred in the last three months were unexpected events involving injured patients. Both local and private hospitals have an incident reporting system. However, in its implementation, there are still many delays and there are units that do not report. This is also the case with risk management reporting. Failure mode effect analysis (FMEA) and root cause analysis (RCA) still exceed the specified deadline. In addition, many patient safety documents have not been completed in the work unit. The facilities and infrastructure in the work unit are also considered insufficient and inappropriate.

Patient safety is much more important than service effectiveness.[11] Patient safety solutions are systems or interventions that create, prevent, or reduce patient harm arising from the healthcare processes. Patient safety incidents often occur in medical-surgical cases. Cases involving an incorrect procedure or surgery on the wrong side are mostly caused by poor communication, lack of information, or inaccurate information. Communication errors are a common cause of errors in the operating room and during pre- and postoperative care. Types of communication failures include failure to listen to or gather information from the patient, family and other physicians and failure to convey information relevant to the patient's status.[12, 13] This result can be significant harm or even death to the patient. The primary factor contributing to these types of errors is the absence or lack of standardised presurgical processes.[14–16] If standardised pre-surgery processes were implemented, accidents, surgical failures and problems would be eliminated and other patient safety concerns would undoubtedly be reduced. Based on this background, this research aimed to evaluate the implementation of patient safety policies in the hospitalisation of surgical medical cases.

Methods

This research was a cross-sectional study. This research was conducted in 7 private or commercial hospitals and 1 public hospital owned by the government of Gresik City. The source population comprised nurses aged 20-59 years old, both male and female. Inclusion criteria was nurses in inpatient wards with medical/ surgical cases and implementation of patient safety. Inclusion criteria for the policy of patient safety nurses from Quality Link Safety Champions (QLSC) included nurses as unit managers inwards, nurses as a committee on quality and patient safety and hospital director.

The sample size was determined using *EPidata* statistical software version 3.03 with the single population proportion statistical formula. The assumption Z = 1.96 at a 95 % confidence level, the P-prevalence was 50 % based on the unknown prevalence in a previous study with the outcome of the prevalence of the incidents between 10 % and 90 %,[11] the non-responsive rate of 10 % and a 5 % margin error. Therefore, the calculated sample size was 330 and after considering a 10 % non-response rate, the final sample size was 360.

Systematic random sampling was used to select study participants. Initially, 8 hospitals were randomly selected among the 19 hospitals in Gresik City to represent all hospitals. The sample size assigned to the chosen region was in line with the Gresik region's source population. The data from each hospital's human resources department were used to identify the source population for each selected hospital. By dividing the source population by presented sample [(N/n) = 2240/124 = 18], the sampling interval was obtained. A sampling frame with lists of the nurses in the chosen hospital was used and until the desired sample size was reached, every 18th name was chosen for the study sample using systematic random sampling.

Questionnaires provided by interviewers were employed in a pre-tested, systematic data-gathering process for this study. Five percent of the entire sample size was examined in a pretest that was held in a different hospital that was not one of the chosen hospitals. The pre-test was used as a basis for questionnaire revision, editing and necessary revisions. Throughout the data collection process, daily checks were performed to ensure consistency and completeness. Questions covered policy and patient safety implementation along with demographics. The Hospital Accreditation Commission, the National Standards for Hospital Accreditation in Indonesia, the first edition of 2018 and published literature were the sources from which the questionnaires were modified. There were seven steps or dimensions to a patient safety questionnaire, each of which includes positive and negative statement elements. Regarding negative statements, nurses' disagree/strongly disagree responses indicated a positive response. In contrast, the nurses' agree/ strongly agree response to a positive statement indicated a positive response; the respondent's disagree/strongly disagree response indicated a negative response and the respondent's uncertain response indicated a neutral attitude. Data were collected from 17 May 2022 to 18 June 2022. Face-to-face interviews were conducted to gather data while adhering to predetermined sampling intervals.

Data analysis

Data were analysed descriptively; a simple logistic regression was performed and variables with a p-value < 0.25 were included in the multiple logistic regression. Then, variables with p-values < 0.05 were considered significant. Adjusted odd ratios (AOR) with 95 % confidence intervals (CI) were calculated.

Results

This research showed that most nurses were female about 40-49 years old (33.3 %). Nurses had work experience in medical-surgical inpatient wards; the majority were 6-10 years (40 %), working 40-59 h every week (51.1 %) and most had a valid period of practice license (Table 1 and 2).

Table 1: Sociodemographic data of nurses (n = 360)

Variable	Mean ± SD	(Min-Max)
Age	36.36 ± 6.81	(25-59)
Work experience in current units	15.39 ± 6.82	(4-29)
Working hours every week	45.15 ± 8.15	(20-106)

Table 2: Sociodemographic data of nurses (n = 360)

Variable	N	%
Age group		
25-29	72	20.0
30-39	108	30.0
40-49	120	33.3
50-59	60	16.7
Gender		
Male	102	28.3
Female	258	71.7
Work experience in current units		
< 1 years	12	3.3
1-5 years	102	28.3
6-10 years	144	40.0
11-15 years	48	13.3
16-20 years	24	6.7
> 20 years	30	8.4
Validity period practice license		
Still valid	340	94.4
Expired	20	5.6
Working hours every week		
20-39	122	31.1
40-59	184	51.1
60-79	34	9.4
80-99	20	5.6
> 100	10	2.8

Table 3: Implementation of patient safety in surgical-medical case inpatient wards

Step	Variable	Categories	N %	Simple logistic regression		Multiple logistic regression		
				COR (95 % CI)	P-value	AOR (95 % CI)	Wald Stat (df)	P-value
1	**Build awareness of the value of patient safety** Hospital directors, unit heads and department heads create policies regarding open disclosure	Positive responses Negative responses	144 (40) 216 (60)	1 0.63 (0.57-1.32)	0.025	1 0.63 (0.57-1.32)	12.019	0.011
2	**Lead and support your staff field monitoring visits to work units** Identification and documentation of patient safety behaviour	Positive responses Negative responses	180 (50) 180 (50)	1 0.58(0.26-1.30)	0.013	1 3.06 (2.88-9.10)	5.208	0.001
3	**Integrate risk management activities** Measuring safety quality indicators and carrying out improvements	Positive responses Negative responses	126 (35) 234 (65)	1 2.25(1.68-5.03)	0.009	1 0.98 (0.56-0.99)	0.899	0.144
4	**Develop a fault reporting system** Regulations regarding hospital safety culture reporting systems Confidential systems Easy to access and simple in reporting patient safety incidents	Positive responses Negative responses	198 (55) 162 (45)	1 2.18 (1.95-6.48)	0.034	1 2.37 (1.44-4.12)	4.028	0.049

	Engage and communicate with patients							
5	Health education and patient safety culture information Explaining efforts to control patient safety culture problems	Positive responses Negative responses	126 (35) 234 (65)	1 1.75(1.36-4.26)	0.020	1 0.84 (0.35-0.99)	0.023	0.399
	Learning and sharing experiences on patient safety							
6	All reports are identified in a timely manner Evidence of identifying problems in the system that cause health workers to behave in a dangerous manner	Positive responses Negative responses	198 (55) 162 (45)	1 2.38(1.77-8.73)	0.000	1 1.84 (1.56-3.86)	5.262	0.016
	Prevent injury through the implementation of the patient safety system							
7	Implementing a process to prevent losses/ impacts on reporting individual problems related to culture safety	Positive responses Negative responses	180 (50) 180 (50)	1 1.84(1.10-2.92)	0.006	1 3.11 (2.97-7.13)	11.137	0.023

COR = crude odds ratio; AOR = adjusted odds ratio; CI = confidence interval; df = degree of freedom;

Not all steps in the implementation of the seven steps to patient safety have been carried out well by nurses, especially steps three and five had lower positive responses (35 %) and higher negative responses (65 %), which are integrated risk management and open communication with patients and families about incidents. Implementing patient safety in surgical-medical inpatient wards had significant results in a simple logistic regression. After multiple logistic regression, the results showed that step 3 integrated risk management activities and step 5 open communication were not significant (Table 3).

Discussion

Based on questionnaires and interviews, the hospital has made efforts to build awareness through the implementation of a reward system in the form of money for work units that report incidents to completion. The quality committee reminded workers about incident reporting, distribution of incident forms to work units, socialisation during new employee orientation and coordination about reporting between work units and related departments. Activities promoted are limited to reporting and collecting data. The hospital has received accreditation, so the existing mindset is that patient safety in the hospital is already running and just needs to be continued, so it has not yet reached the stage of improving or improving the patient safety system and culture toward a better direction.[17, 18] Awareness to develop toward improvement is still lacking. If no effort is made to increase awareness, it will have an impact on the implementation of patient safety, which only reports incidents but will continue to repeat the same incidents because there is no learning effort, initiative, concern, or calling to carry out better services and prioritise patient safety.[19]

Integrate risk management activities when risks and follow-ups are carried out in a work unit can be a lesson for other work units in the hospital.[20–22] Risk management in the hospital is still in the reporting stage, where work units identify their respective risks, conduct risk assessments and report them to a committee on quality and patient safety every three months. There is no learning process related to the risks that occur in the work unit. Risk management meetings that should be held every 3 months have been held only once a year. Not all staff are involved in risk management. Not all units have monitored the risks in their units due to a lack of understanding of risk management. There are still many delays in reporting and even many units do not report risk management reporting.

Internal incident reporting from work units to committees can be done by telephone or directly using an incident form. For green and blue incident grading, committees only receive and recapitulate reports. The reporting system developed by the hospital is not yet optimal. There are still many delays in the monthly incident reporting from the work units. This result differs

from another previous study in which incident reporting systems were considered safety culture promoters.[23] Many incidents are not reported because there is still a culture of blaming and punishing in the work unit.[24] The committee has conducted socialisation so that there is no culture of blaming in the hospital. This is supported by research on the decline in incident reporting, which found that the fear of being blamed was due to the uneven patient safety culture in the hospital.[25]

Incident reports are considered a burden because they are complicated, busy work units make reports untouched; the mindset of staff does not need to report incidents that do not cause injury to patients, lack of active role of the committee to guide the completion of incidents reporting and some incidents are known too late. This fact sounds similar to other research, namely, busy work makes incident reports delayed.[25] The hospital does not yet have any policies or guidelines related to communicating incidents to patients.[26–28] Staff are confused about what to do, whether to be open or whether to pretend not to know. Hospitals must disclose medical errors by considering the situation and conditions. Being open about what has happened and discussing the issue promptly, fully and compassionately can help patients cope with the effects of the error.

RCA was conducted using the RCA method for incidents with a yellow or red colour. The RCA involves the committee of the parties involved in the incident and the work unit that experienced the incident.[29] The RCA results have not been disseminated to all work units. There are several obstacles. It is difficult to gather the parties involved in the incident at one time and it requires a follow-up process that takes a long time, especially for case resolution, which requires considerable costs. Thus, the implementation of the RCA exceeds the time limit. Only the number of incidents during the quarterly leadership meeting was submitted. Dissemination of incident titles and follow-up information through the hospital's IT blog has not been routinely carried out.

To make a contribution in preventing injuries, hospitals should use the FMEA method,[30] which can be conducted twice a year. The committee prioritises risks in redesigned work units. Prioritised risks are risks with high to very high grades. In the implementation of FMEA, there are still obstacles, namely the implementation requires large funds, it must be done in stages and requires a long time and bureaucracy. The implementation often clashes with other hospital programs and there is a vacuum of risk management meetings.

Conclusion

Patient safety is a patient's right. The Seven Steps to Patient Safety is a reference guide for hospitals implementing a patient safety program. Efforts have been made to achieve other steps, but these efforts are still not optimal. Hospital management should socialise the patient safety programs and conduct patient safety training for all hospital staff, make it a habit to hold discussions or meetings related to patient safety so that it can become a positive culture to implement patient safety in medical-surgical cases.

Ethics

The study protocol was reviewed and approved by the Adi Husada Ethical Review Board (approval number 305/ERB/STIKES-AH/2022), dated 15 May 2022. The Gresik City Health Department has granted written permission. The participants provided written informed consent to participate in the study.

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Conflicts of interest

The authors declare that there is no conflict of interest.

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Data access

The data that support the findings of this study are available from the corresponding author upon reasonable individual request.

Author ORCID numbers

Rina Budi Kristiani (RBK):
0000-0001-5130-191X
Chindy Maria Orizani (CMO):
0000-0001-6038-6185
Iswati Iswati (II):
0000-0001-8602-8538
Siti Nur Qomariah (SNO):
0000-0001-8218-3952
Abu Bakar (AB):
0000-0002-3692-4841
Sosilo Yobel (SY):
0009-0001-8300-0633

Author contributions

Conceptualisation: RBK, CMO
Validation: RBK, CMO, II, SNO, AB, SY
Formal analysis: RBK, CMO
Investigation: RBK, CMO
Data curation: RBK, CMO
Writing - original draft: RBK, CMO
Writing - review and editing: RBK, CMO, II, SNO, AB, SY
Supervision: RBK, CMO, II, SNO, AB, SY.

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