



Relationship between Patient Safety Goals and Patient Safety Incident Reporting by Nurses at Aceh Besar District Health Center

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ABSTRACT: Patient safety goals and patient safety incident reporting are important to improve the quality of service at the health center. In fact, this has not been done optimally and has not been well coordinated. The purpose of the study was to determine the relationship between patient safety goals and patient safety incident reporting by nurses. The research design is correlational quantitative with a cross sectional study approach at 24 inpatient health centers in Aceh Besar District with a sample of 172 people, data collection using a questionnaire. The statistical test to see the relationship was carried out with the Fisher's Exact Test, it was found that there was a relationship between patient safety goals ($p = .003$), identify patients correctly ($p = .011$), improve effective communication ($p = .011$), improve the safety of high-alert medications ($p = .001$), reduce the risk of healthcare-associated infections ($p = .002$), reduce the risk of patient harm resulting from falls ($p = .006$) with nurse reporting of patient safety incidents. The results of multivariate analysis showed reduce the risk of healthcare-associated infections ($OR = 18.945$ $p = .002$), and reduce the risk of patient harm resulting from falls ($OR = 8.267$ $p = .011$), were the patient safety goals sub-variables that were most associated with reporting safety incidents patient. It is recommended for nurses to improve the implementation of hand hygiene 6 steps 5 moments and initial assessment of patients at risk from falling by attending training, seminars, workshops on patient safety.

KEYWORDS: Patient Safety Goals, Nurses, Patient Safety Incident Reporting

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I. INTRODUCTION

Patient safety is a global and national issue for hospitals, an important component of the quality of health services, and is a basic principle in patient care and a critical component in quality management[1]. The Institute of Medicine (IOM) defines patient safety as "freedom from accidental injury". The implementation of patient safety in Indonesia has become an obligation for every health service facility to carry out patient safety according to the first level health care facility accreditation standard. The International Patient Safety Goals (IPSG) have six goals to ensure patient safety, this provision was released by the Joint Commission International (JCI)[2]. The goals of patient safety are 1) Identify patients correctly, 2) Improve effective communication, 3) Improve the safety of high-alert medications 4) Ensure safety procedure, 5) Reduce the risk of healthcare-associated infections, 6) Reduce the risk of patient harm resulting from falls.

Patient safety is very important for quality health care and is a development challenge in health care in many countries. Interventions to address patient safety culture in primary care are limited compared to secondary care. Puskesmas as the first level health care facility, organizes public health efforts and is expected to provide comfortable and safe services. Implementation of patient safety in accordance with standards can be realized by implementing Patient Safety Goals which are believed to reduce the number of Patient Safety Incidents [3].

Puskesmas still do not have a patient safety driver for each clinical unit, there is no clear risk management activity and reporting of patient safety incidents is still only an internal Puskesmas reporting that is reported using a report book[4]. Puskesmas officers who do not understand well the flow of patient safety

incident reporting (IKP) and there are officers who are inconsistent in recording and reporting patient safety[5]. Nurses as Puskesmas officers are closely related to health care and must prioritize patient safety. Based on this, to determine the implementation of patient safety goals and their relationship with patient safety incident reporting by nurses, measurements were made using a patient safety goals implementation questionnaire.

II. METHOD

The research design is correlational quantitative with a cross sectional study approach at 24 inpatient health centers in Aceh Besar District with a sample of 172 people, data collection using a questionnaire. The statistical test to see the relationship was carried out with the Fisher's Exact Test to determine the relationship between the implementation of patient safety goals and the patient safety incident reporting by nurses.

III. FINDINGS

Based on Table 1, the demographics of the subjects are as follows: 172 nurses participated. The respondents' age of preponderance (52,9%) varied from 36 to 45 years, women were the most visible (87,2%), 68,9% of subjects were Civil Servant, and (70,3%) had Diploma degrees in nursing. Most respondents had working period > 10 years (69,8%), and not attending patient safety training (85,8%).

Table 1. Nurses Demographic Characteristic

Characteristics	f	%
Age (years)		
≤ 35	47	37,3
36 - 45	91	52,9
≥ 46	34	19,9
Gender		
Male	22	12,8
Female	150	87,2
Level of education		
Diploma	152	88,4
Bachelor	20	11,6
Employment status		
Devotion	15	8,7
Contract	36	20,9
Civil Servant	121	70,3
Period of working		
1 - 5 years	20	11,6
6 - 10	32	18,6
> 10 years	120	69,8
Attending patient safety training		
Attending	25	14,5
Not Attending	147	85,8

Table 2 shows that nurses implementing patient safety goals are mostly in the good category, Identify patients correctly (90.7%), Improve effective communication (90.7%), Improve the safety of high-alert medications (98.3%).), Ensure safety procedure (97.7%), Reduce the risk of healthcare-associated infections (95.5%), Reduce the risk of patient harm resulting from falls (52.3%), then get the overall Patient Safety Goals in the good category (97.7%), and Patient Safety Incident Reports (90.7%) in table 3.

Table 2. International Patient Safety Goals (IPSG)

Independent Variable	f	%
Identify Patients Correctly	16	9,3
• Less	156	90,7
• Good		
Improve Effective Communication		
• Less	16	9,3
• Good	156	90,7
Improve The Safety of High-Alert Medications		
• Less	3	1,7
• Good	169	98,3
Ensure Safety Procedure		
• Less	4	2,3
• Good	168	97,7

Independent Variable	f	%
Reduce the Risk of Healthcare-Associated Infections		
• Less	7	4,1
• Good	165	95,5
Reduce the Risk of Patient Harm Resulting from Falls		
• Less	82	47,7
• Good	90	52,3
Nurse Applying Patient Saafety		
• Less	4	2,3
• Good	168	97,7

Tabel 3. Patient Safety Incident Reports

Dependent Variable	f	%
Patient Safety Incident Reports		
• Less	16	9,3
• Good	156	90,7

Table 4 shows a bivariate analysis of the relationship between patient safety goals and patient safety incident reporting by nurses carried out with the Fisher's Exact Test, It was found that there was a relationship between Patient Safety Goals ($p = .003$), Identify patients correctly ($p = .011$), Improve effective communication ($p = .011$), Improve the safety of high-alert medications ($p = .001$), Reduce the risk of healthcare-associated infections ($p = .002$), Reduce the risk of patient harm resulting from falls ($p = .006$) with Patient Safety Incident Reports by nurses at the Aceh Besar District Health Center.

Tabel 4. Bivariat Analisis International Patient Safety Goals and Patient Safety Incident Reports

No	Variable	Patient Safety Incident Reports				Amount		α	p
		Less		Good		f	%		
		f	%	f	%				
1.	Identify Patients Correctly								
	• Less	5	2,9	11	6,4	16	100	0,05	.011
	• Good	12	7,0	144	83,7	156	100		
2.	Improve Effective Communication								
	• Less	5	2,9	11	6,4	16	100	0,05	.011
	• Good	12	7,0	144	83,7	156	100		
3.	Improve the Safety of High-Alert Medications								
	• Less	3	1,7	0	0	3	100	0,05	.001
	• Good	14	8,1	155	90,1	169	100		
4.	Ensure Safety Procedure								
	• Less	1	0,6	3	1,7	4	100	0,05	.343
	• Good	16	9,3	152	88,4	168	100		
5.	Reduce the Risk of Healthcare-Associated Infections								
	• Less	4	2,3	3	1,7	7	100	0,05	.002
	• Good	13	7,6	152	88,4	165	100		
6.	Reduce the Risk of Patient Harm Resulting from Falls								
	• Less	14	8,1	68	39,5	82	100	0,05	.006
	• Good	3	1,7	87	50,6	90	100		
7.	Patient Safety Goals								
	• Less	3	1,7	1	0,6	4	100	0,05	.003
	• Good	14	8,1	154	89,5	168	100		

Table 5 shows the results of the multivariate logistic regression analysis. It can be concluded that the variables that are significantly related are reduce the risk of healthcare-associated infections (OR = 18.945 p = .002), and reduce the risk of patient harm resulting from falls (OR = 8.267 p = .011).

Tabel 5. Multivariat Analisis Logistic Regression

Variable	<i>p</i>	OR	95% C.I. for EXP(B)	
			Lower	Upper
Reduce the Risk of Healthcare-Associated Infections	0,002	18,945	2,908	123,423
Reduce the Risk of Patient Harm Resulting from Falls	0,011	8,267	1,629	41,955

IV. DISCUSSION

Implementation of Patient Safety Goals

The implementation of patient safety goals by nurses was mostly in the good category (97.9%), with patient safety incident reporting (90.7%). These results are supported by the characteristics of nurses, most of them are aged 36-45 years (52.9%), female (87.2%), Diploma nursing education (88.4%), civil servants (70.3%), working period > 10 years (69.8%), and did not participate in patient safety training (85.8%). Although nurses did not receive training on patient safety, but the implementation of patient safety goals was in the good category (97.9%) this was evidence of the existence of socialization and increased understanding of patient safety by improving quality and safety where nurses who worked longer hours would be experienced and exchange information so as to make nurses' knowledge increase based on the experience they have gained.

According to Morika, nurses aged >30 years (60%) have good performance, not much different from young nurses <30 years[6]. Vocational education nurses (97.9%), female gender (88.5%), with the implementation of patient safety goals (84%) showed that most female nurses with vocational education had implemented safety goals patients well because the level of education is one of the individual characteristics that can increase the knowledge of nurses to implement patient safety goals. The length of work associated with the implementation of standard operating procedures, the exchange of experience, skills and the latest knowledge will make nurses more professional in carrying out their duties[7]. Cahyono stated that there is a relationship between the level of knowledge of nurses and patient safety practices, it is known that the higher the level of knowledge of nurses about patient safety, the better and correct nursing care and has a positive relationship[8].

Relationship between Patient Safety Goals and Patient Safety Incident Reporting

Bivariate analysis of the relationship between safety goals and reporting of patient safety incidents in the good category (89.5% p = .003), with the relationship between each target, namely: The relationship between identify patients correctly (83.7% p = .011). The relationship improve effective communication (83.7% p = .011). The relationship improve the safety of high-alert medications (90.1% p = .001). The relationship ensured safety procedure (88.4% p = .343). The relationship to reduce the risk of healthcare-associated infections (88.4% p = .002). The relationship reduce the risk of patient harm resulting from falls (50.6% p = .006). Based on the results of the study, the patient safety target sub-variable showed a relationship with reporting patient safety incidents except for the sub-variable ensure safety procedure (88.4% p = .343). This shows that the Puskesmas still has not developed a verification process before the procedure is carried out, there is no time-out checklist before the start of the procedure, for example in patients with minor surgery and invasive procedures, because these procedures are rarely carried out at the Puskesmas and there is a need for improvement in this regard.

Research on patient safety goals wrong location, wrong procedure, and wrong patient surgery is something that is worrying and often in hospitals. this is the result of ineffective communication between surgical team members, less/no involvement of the patient in site marking and no procedure for leveraging the surgical site[9]. In medical action planning is needed before, during, and before medical action is carried out, this activity is carried out to reduce unexpected events[10]. Furthermore, according to research Riplinger "accurately inferred safety increases safety and quality of care"[11]. Communication is influenced by systems, processes and culture, in communication there are often failures in communication between the sender and recipient of the message[12].

The study Mahfudhah and Mayasari showed that the description of drug administration by nurses based on the principle 6 was in the good category (100%) in the description of drug administration based on correct information (92.5%)[13]. Medication errors are events that can result in injury to patients, lack of supervision from the leadership, insufficient number of nurses, high turnover, Standard Operational Procedures for administering drugs with the correct 6 principle are not available, socialization is not carried out continuously and the absence of education and training programs are factors that affect patient safety[14].

“Nurses received little training before obtaining a license to practice”[15]. Lack of knowledge of nurses is one of the obstacles faced during the administration of drug safety, nurses reported that they wanted to have additional training to update their pharmacology knowledge[16].

The application of infection risk prevention was carried out (86.25%) in the observation that there were officers who carried out hand washing 6 steps (10%) this was due to individual barriers such as behavior, habits or forgetfulness[17]. Nurses with less knowledge (64%), sufficient knowledge (32%), good knowledge (4%). The results of observations on 135 occasions indicated that only 47 hand hygiene procedures were carried out, the overall level of hand hygiene (35%). The highest adherence was after contact with the patient's body fluids, while the lowest compliance was before contact with the patient. As part of primary care routinely conduct fall risk assessments at every patient visit, the majority of nurses carry out regular fall risk checks but most are not carried out in accordance with fall risk assessment standards[18].

This study shows that there is a relationship between the implementation of patient safety goals and patient safety incident reporting, this is in accordance with the research proposed by Lawati, incident reporting is an important aspect to achieve patient safety, there is need to develop an incident reporting system in primary care in-center computerized Healthcare and assists to tracking and following up on incidents[3]. Good reporting system is needed to build a patient safety culture, valid and accurate reporting data can be used as a basis for improving the service system and preventing the recurrence of patient safety incidents[19]. Qualitative methods study, the results obtained are patient safety culture, patient safety incident reporting culture, and professional compliance of caregivers in implementing patient safety goals is not optimal, the average achievement is 89%, output is not 100% targeted [20]. Compared to research Kirana and Nurmallasari, where respondents are members of the quality improvement and patient safety team through observation and interviews, it shows a real form of patient safety implementation focusing only on improving the environment and facilities. The development of Standard Operational Procedures for patient safety was tested for a long time before being established, and has no clear details due to the absence of written standards[21].

The Sub-variable of Patient Safety Goals that is Most Significantly Related to Patient Safety Incident Reporting

The results of the multivariate analysis of logistic regression modeling showed a reduce the risk of healthcare-associated infections (OR 18.945 $p = .002$) where nurses who reduced the risk of healthcare-associated infections with good categories had the opportunity to report patient safety incidents as much as 19 times greater than nurses with less categories. Reducing the risk of patient harm resulting from falls (OR 8.267 $p = .011$) where nurses who reduce the risk of patient harm resulting from falls with good categories report patient safety incidents as much as 8 times greater than nurses with less categories. It can be concluded that the two patient safety target sub-variables are the most significantly related to patient safety incident reporting. In preventing the risk of infections, it is related to the nurse's compliance in doing hand hygiene 6 steps 5 moments where the highest compliance is after contact with the patient's body fluids and the lowest compliance is before contact with the patient. Then the prevention of fall risk is related to nurse compliance in carrying out the initial assessment of patients at risk of falling, nurses with high motivation are more obedient, while nurses with low motivation are more disobedient in implementing standard operational procedures.

Prevention of healthcare-associated infections (HAIs) is one of the main issues of the six patient safety goals, health care related infections have negative impacts including increased length of stay, morbidity, mortality and increased health care costs. This study shows that the overall score for the head nurse's strategy to reduce health care related infections is proper hand hygiene[22]. Internationally applicable guidelines can be obtained from the World Health Organization (WHO). Puskesmas have a collaborative process to develop policies or procedures to adapt and adopt generally accepted hand hygiene guidelines for implementation of these guidelines in Puskesmas.

The use of the Morse fall scale instrument to assess the risk of falling is very important for several reasons such as assisting in decision making, enabling the accuracy of intervention for each patient, facilitating treatment planning and transmission of information between health professionals[23]. Anggraini state that as many as (82.5%) of respondents comply with reassessment of patients with fall risk, there is a relationship between knowledge of Morse fall scale assessment and compliance with fall risk reassessment[17].

V. CONCLUSION

In this study, in general, the patient safety goals variable was related to the patient safety incidents reporting ($p = .003$). There are 2 patient safety target sub-variables that are significantly related to patient safety incident reporting, namely reduce the risk of healthcare-associated infections (OR 18.945 $p = .002$) and reduce the risk of patient harm resulting from falls (OR 8.267 $p = .011$). Where in reducing the risk of infections it is related to nurse compliance in doing hand hygiene 6 steps 5 moments, namely the highest compliance is after contact with the patient's body fluids and the lowest compliance is before contact with the patient. Then the

reduction in the risk of falling is related to nurse compliance in carrying out the initial assessment of patients with the risk of falling, nurses with high motivation are more obedient, while nurses with low motivation are more disobedient in implementing standard operational procedures.

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