THE RELATIONSHIP BETWEEN THE IMPLEMENTATION OF CLINICAL RISK MANAGEMENT AND PATIENT SAFETY INCIDENT IN INPATIENT PUBLIC HEALTH CENTER

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Abstract

The high number of patient safety incidents is the basis for the importance of patient safety efforts in health care facilities. Unfortunately, there are no clear details for the implementation of patient safety in public health facilities. This study aims to determine the relationship of clinical risk management implementation with patient safety incidents. This type of quantitative research is an analytic study with cross sectional design. The population consisted of 266 people from 6 Inpatient Public Health Centers. A sample of 78 people using consecutive sampling techniques. The research instrument uses clinical risk management questionnaires and patient safety incident questionnaires that have been tested for validity. The data were analyzed univariately and bivariately with the Spearman rank test. The result is Significant value (sig. 2-tailed) = 0,001 was obtained <α value = 0.05 which means that Ho was rejected and Ha was accepted. Correlation Coefficient value of -0.839, which means the relationship between variables is very strong. The value of correlation Coefficient is negative, which means the relationship between two variables is not unidirectional. If the implementation of clinical risk management is improved the patient safety incident rates will decrease. There is a significant relationship between the implementation of clinical risk management and patient safety incidents in inpatient Public Health Center of Samarinda. Implementation of clinical risk management needs to be improved to minimize the number of patient safety incidents.

Keywords: *Clinical risk management, patient safety incident*

INTRODUCTION

In recent years, patient safety has become a special concern in the context of health care. Health care facilities are places that are categorized as unsafe, about 10% of patients treated in health facilities in developed countries and more than 10% in developing countries experience unexpected events. Injuries may be experienced by patients or visitors to health care facilities, both due to the condition of existing facilities, infrastructure, and equipment, as well as due to the services provided[1].

Patient safety is a system that makes patient care safer, including risk assessment, identification and management of patient risk, reporting and analysis of incidents that aim to improve the quality of service in health care facilities. Patient safety in Permenkes No. 75 of 2014, then elaborated in several 2015 Health Center Accreditation standards[2].

Clinical risk management is a systemic or comprehensive process consisting of identification, analysis, and evaluation of actual and potential risks in health services. Clinical risk management plays a very important role in preventing and treating medical errors, because it can identify and prevent potential risks. The main objective of risk management is to provide an environment that safe and effective for patient safety[3].

The development of patient safety issues at the puskesmas is not as dynamic as at the hospital level. Explicitly, the aspect of patient safety in Puskesmas began to appear in Permenkes number 75 of 2014 concerning Puskesmas which was then included in the Puskesmas Accreditation Standard (as part of the First Level Health Facility Accreditation Standard in addition to Independent Clinics and Doctors). Unfortunately, there are no clear details for the implementation of patient safety in public health center[2].

A Safety Incident is any unintentional event that results in or has the potential to result in preventable injury to a patient consisting of KTD (Unexpected Event), KTC (Non-Injury Event), KNC (Near Injury Event), KPC (Potential Injury Event), and Sentinel. The high number of patient safety incidents is the basis for the importance of patient safety efforts in health care facilities. In the period from January to December 2016, the National Patient Safety Agency reported the number of patient safety incidents from the UK as many as 1,879,822 incidents. The Indonesian Ministry of Health reported that between 2006 and 2011 there were 877 patient safety incidents[4].

From the results of a preliminary study of one of the inpatient public health centers in Samarinda, data on patient safety incidents and risk management implementation activities were obtained. Reports regarding health center patient safety incidents recorded 44 cases of KPC, 10 cases of KNC, and 1 case of KTC in March to June 2018.

In the period from January to October 2019, Puskesmas X has not carried out risk management activities. The latest data on the implementation of risk management activities was in 2018. The puskesmas said that risk management activities were not carried out routinely and were only carried out when an incident occurred. All inpatient health centers in Samarinda have been accredited and should run a risk management program on a regular basis.

Permenkes number 66 of 2016 states that the implementation of risk management in health care facilities is carried out periodically every year and is reviewed if there are changes in facilities and infrastructure as well as work processes. Recording and reporting of risk management activities is carried out every time there is an incident and periodically every year[5].

Patient safety incidents that occur at the Puskesmas can have an impact on the health services concerned. There are reports regarding Incidents that occur will reduce public confidence in getting health services. Based on the description above, the researchers are

interested in conducting a study “The Relationship between Clinical Risk Management Implementation and Patient Safety Incidents at Inpatient Health Centers in Samarinda City”.

MATERIAL AND METHODS

The type of research used in this study is an analytic study design with a cross sectional design which aims to determine the relationship between variables. Sample size was determined by non-probability sampling with consecutive sampling method. Sampling was carried out using the formula for the estimation of the proportion in a limited population. From a total population of 266, it was obtained that a sample of 70 people was added to the sample drop out (10%) to 78 people. This research was conducted at an inpatient health center in the working area of the Samarinda City Health Office.

The instrument in this study used a questionnaire consisting of three categories of data, namely demographic data, clinical risk management and patient safety incidents. The data that has been obtained will be tested univariately and bivariately using the Spearman Rank test to determine the relationship between two variables with an ordinal scale.

RESULTS

Characteristics of Respondents

Table 1. Characteristics of Respondents in Inpatients Health Centers of Samarinda City in 2020

Characteristics	Frequency (n)	Percentage (%)
Gender		
Men	19	24,4
Women	59	75,6
Age Classification (years)		
21-30	46	59,0
31-40	29	37,2
41-50	2	2,6
51-60	1	1,3
Education Classification		
Diploma	41	52,6
Bachelor	34	43,6
Master	3	3,8
Length of Work (years)		
1-10	66	84,6
11-20	10	12,8
21-30	2	2,6

Based on table 1 above, it shows the characteristics of respondents by gender, almost all of them are female, totaling 59 people (75,6%). The characteristics of respondents by age group, most of them aged 21-30 years amounted to 46 people (59%). The characteristics of respondents by education group, most of them are Diploma graduates totaling 41 people

(52,6%). The characteristics of respondents based on the length of work group, almost all of them worked for 1-10 years totaling 66 people (84,6%).

Overview of Clinical Risk Management and Patient Safety Incident Implementation

Table 2. Description of Respondents based on the Implementation of Clinical Risk Management at Inpatient Health Centers in Samarinda City in 2020

Overview of Clinical Risk Management Implementation	Frequency (n)	Percentage (%)
Good	41	52,6
Not Good	37	47,4

Based on table 5, it can be seen that the respondents' perceptions of the implementation of clinical risk management are mostly good as many as 41 people (52,6%) and almost most are not good as many as 37 people (47,4%).

Table 3. Description of Respondents' Answers based on Patient Safety Incidents at the Samarinda City Inpatient Health Center in 2020

No.	Statements	Never	Very Rarely	Rarely	Likely	Often	Very Often	Total
	Adverse Events							
1	In the health center where I work, there is a provision of action to patients that results in injury to the patient	34 (43,5%)	30 (38,5%)	6 (7,7%)	2 (2,6%)	5 (6,4%)	1 (1,3%)	**78 (100%)**
2	At the health center where I work, there was an error in giving the patient an action, causing the patient to experience health problems other than the disease	49 (62,8%)	22 (28,2%)	6 (7,7%)	1 (1,3%)	0 (0%)	0 (0%)	**78 (100%)**
3	The patient who was treated at the puskesmas where I work fell from the bed so that the patient was injured because he did not identify and manage patient risk	49 (62,8%)	24 (30,8%)	4 (5,1%)	1 (1,3%)	0 (0%)	0 (0%)	**78 (100%)**
4	At the health center where I work, an error occurred in filling out patient medical record data, so I made an error in giving action to the patient which resulted in the patient being injured.	37 (47,5%)	33 (42,3%)	5 (6,4%)	3 (3,8%)	0 (0%)	0 (0%)	**78 (100%)**

No.	Statements	Never	Very Rarely	Rarely	Likely	Often	Very Often	Total
5	At the puskesmas where I work, communication between officers is not effective, resulting in incidents that harm patients	31 (39,7%)	34 (43,6%)	8 (10,3%)	5 (6,4%)	0 (0%)	0 (0%)	**78 (100%)**
	Not Injured Incidents							
6	In the health center where I work, there is an action given to a patient that results in an incident that has been exposed to the patient but did not result in injury to the patient	27 (34,6%)	19 (24,4%)	14 (17,9%)	6 (7,7%)	10 (12,8%)	2 (2,6%)	**78 (100%)**
7	At the puskesmas where I work, there is an error in giving the patient an action but it does not result in other health problems	26 (33,3%)	18 (23,1%)	15 (19,3%)	9 (11,5%)	6 (7,7%)	4 (5,1%)	**78 (100%)**
8	At the health center where I work, an error occurred in filling out the patient's medical record data, so I made a mistake in giving the action but the patient was not injured	14 (17,9%)	26 (33,3%)	10 (12,8%)	14 (17,9%)	12 (15,5%)	2 (2,6%)	**78 (100%)**
9	The patient who was treated at your place of work fell out of bed but the patient was not injured	13 (16,6%)	23 (29,5%)	15 (19,3%)	15 (19,3%)	5 (6,4%)	7 (9%)	**78 (100%)**
10	At the health center where I work, communication between officers is not effective, so an incident occurs but does not result in injury to the patient	12 (15,5%)	24 (30,7%)	17 (21,7%)	15 (19,3%)	5 (6,4%)	5 (6,4%)	**78 (100%)**
	Near-Injury Incdents							
11	The patient at the puskesmas where I work almost had an incident but it didn't happen because the other officers soon found out	12 (15,5%)	23 (29,4%)	16 (20,5%)	11 (14,1%)	11 (14,1%)	5 (6,4%)	**78 (100%)**
12	At the health center where I work, an error occurred in filling out patient medical	14 (17,9%)	18 (23,1%)	18 (23,1%)	11 (14,1%)	11 (14,1%)	6 (7,7%)	**78 (100%)**

No.	Statements	Never	Very Rarely	Rarely	Likely	Often	Very Often	Total
	record data, but it was immediately discovered and repaired							
13	The patient who is being treated at the puskesmas where you work almost fell out of bed but didn't because the officers immediately noticed	18 (23,1%)	25 (32,1%)	7 (9%)	14 (17,9%)	11 (14,1%)	3 (3,8%)	**78 (100%)**
14	In the health center where I work, communication between officers is not effective but there are no incidents with patients	14 (17,9%)	31 (39,8%)	9 (11,5%)	10 (12,9%)	9 (11,5%)	5 (6,4%)	**78 (100%)**
	Incidents of Potential Injury							
15	The bed of patients treated at the puskesmas where I work does not have a safety fence	24 (30,7%)	14 (17,9%)	16 (20,5%)	15 (19,3%)	7 (9%)	2 (2,6%)	**78 (100%)**
16	The storage of drugs at the puskesmas where I work is not in accordance with the rules of procedure	40 (51,3%)	18 (23,1%)	11 (14,1%)	9 (11,5%)	0 (0%)	0 (0%)	**78 (100%)**
17	The high alert medicine at the puskesmas where I work was never given a sign	43 (55,1%)	19 (24,4%)	13 (16,7%)	3 (3,8%)	0 (0%)	0 (0%)	**78 (100%)**
18	The floor of the patient's bathroom at the health center where I work is often found to be slippery	24 (30,7%)	16 (20,5%)	20 (25,6%)	8 (10,3%)	7 (9%)	3 (3,8%)	**78 (100%)**
	Sentinel Incidents							
19	Errors in administering drugs to patients treated at the puskesmas where I work, with a chronology of incidents the patient was given antibiotic drug therapy without an allergy skin test, so the patient died	67 (85,9%)	8 (10,3%)	3 (3,8%)	0 (0%)	0 (0%)	0 (0%)	**78 (100%)**
20	Errors in administering drugs to patients treated at the puskesmas where I work, with a chronology of incidents the patient was given antibiotic drug therapy without an allergy skin test,	71 (91%)	7 (9%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	**78 (100%)**

No.	Statements	Never	Very Rarely	Rarely	Likely	Often	Very Often	Total
	so the patient died							
21	The patient who was treated at the puskesmas where I work fell from the place because the nurse forgot to put a safety fence, and the patient died	72 (92,3%)	6 (7,7%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	**78 (100%)**

Based on table 6 it can be seen from the respondent's statement that the most frequent incidents that occur at the Samarinda City Inpatient Health Center are Unexpected Events in the form of giving actions to patients who cause injury to patients, namely 1 person (1,3%), Non-Injury Events in the form of patients falling out of bed but not injured, namely 7 people (9%), Near Injury Events in the form of errors in filling out patient medical record data but immediately knowing and repairing as many as 6 people (7,7 %), Potential Injury Events in the form of bathroom floors which are often found to be slippery as many as 3 people (3,8%), and sentinel events in the form of medication errors to patients treated at the primary health center where I work, with a chronology of incidents patients were given antibiotic drug therapy without an allergy skin test, so 3 patients died (3,8%).

Relationship between Clinical Risk Management Implementation and Patient Safety Incident

Table 4. The Relationship between Clinical Risk Management Implementation and Patient Safety Incidents at the Samarinda City Inpatient Health Center

Correlations				
			Clinical Risk Management	**Patient Safety Incidents**
Spearman's rho	**Clinical Risk Management**	Correlation Coefficient	1.000	-.839**
		Sig. (2-tailed)	.	.000
		N	78	78
	Patient Safety Incidents	Correlation Coefficient	-.839**	1.000
		Sig. (2-tailed)	.000	.
		N	78	78
Correlation is significant at the 0.01 level (2-tailed).				

Based on the results of the analysis in table 7, a significance value is obtained which shows that (sig. 2-tailed) = 0,001 < value = 0,05 which means Ho is rejected and Ha is accepted or there is a statistically significant relationship between the implementation of clinical risk management and patient safety incidents, the value of the Correlation Coefficient is negative, namely -0.839, which means that the relationship between the two variables is not

in line with the correlation between the variables of clinical risk management implementation and the patient safety incident variable, which is very strong. If the implementation of clinical risk management is getting better, the number of patient safety incidents will be minimal.

DISCUSSION

Discussion of Univariate Analysis results

Respondent's Characteristics

Gender

Based on the results of the study, it was found that almost all of them were female, amounting to 59 people (75.6%) and a small proportion of male sex was 19 people (24.4%). Researchers assume that gender does not affect all forms of activities and actions taken by officers health. Every health worker basically has the same understanding regarding the implementation of patient safety and the implementation of risk management that has been provided by the respective puskesmas.

This is in accordance with research conducted by Rivai (2010) which states that there is no significant difference between the sexes of men and women in terms of work roles and work productivity and job satisfaction of each individual in carrying out his role in the world of work. There are also no differences between men and women that can influence or change in terms of problem solving, analytical skills, competitive drive, motivation, sociability, and ability to learn[6].

Another study conducted by Surahmat, Neherta and Nurariati (2018) reported that in the results of the bivariate analysis there was no relationship between gender and the implementation of patient safety goals with a p-value (0,681). The ability to learn and act is not influenced by gender, where the gender is mostly female. Men and women are equal in terms of learning and acting abilities, memory, reasoning abilities, creativity, and intelligence[7].

Age

Based on the research, it was found that most of the people aged 21-30 years found 47 people (60.2%) and a small portion aged 51-60 years collected 1 person (1.3%). respondents in this study were in adulthood so it can be said that the distribution of health workers with productive age still many. This is in accordance with research conducted by Yusuf (2017). The study showed that most of the respondents aged 25-35 years, namely 36 people (59%) who were involved in the implementation of patient safety, one of which was prevention of patient falls[8].

Seeing this, the researcher assumes that age has a close relationship with terms of work, age is related, and the level of psychological maturity shows maturity in the sense that individuals become wiser in making decisions and the more experience they gain.

This is in accordance with what was stated by Notoatmodjo (2007) that the older a person is, the more experience he gains during his lifetime so that in making decisions or actions, he will be calmer because he is experienced. On the other hand, the younger a person is, the less experience they have during their lifetime, so that it affects the actions they take[9].

Education

Based on the results of the study, it was found that most of the D1-D3 graduates were 41 people (52.6%) and a small portion were 3 S2 graduates (3.8%). The results of this study are in line with previous research conducted by Surahmat et al. (2019), in implementing patient safety goals, it is known that some respondents have not completed their education and at most are Diploma III graduates, researchers state that the higher the level of education A person will affect his level of ability because it is easier for him to develop his knowledge and apply it in the world of work and services to patients and the community, one of which is to prevent the risk of falling patients[7].

The results of another study by Surahmat, Neherta and Nurariati (2018) who reported that in his research education at the vocational stage was 94 people (97.9%) with good implementation of patient safety standards (84%) which showed that most of the respondents with vocational education stage has implemented safety objectives well. While the results of the bivariate analysis there is a relationship between education and the implementation of patient safety goals. The education achieved by a person is expected to be a determinant of productivity, including sufficient knowledge, skills, abilities, attitudes and behavior in carrying out their work activities[10].

Length of Work

Based on the results of the study, it was found that almost all of them worked for 1-10 years totaling 66 people (84,6%) and some of them worked for 21-30 years totaling 2 people (2,6%). According to researchers, length of work is an individual experience that'll determine growth in work and position, officers who have a longer tenure will understand more about patient safety. This is in line with research by Sarwono (2011) which states that the length of work is the basis for the application of patient safety, someone has more years and work experience is more familiar with implementing safety standards than new workers[11].

This is in accordance with research by Setiyani, Zuhrotunida and Syahridal (2016) which reports that there is a relationship between length of work and the implementation of patient safety goals. The varying working period will affect the skills and experience of officers in their work, namely providing safe services to patients. The different experiences of each officer will lead to different abilities in problem solving related to patient safety incidents and service performance that pays attention to patient safety[12].

Discussion of the results of Bivariate Analysis

Relationship between Clinical Risk Management Implementation and Patient Safety Incident

Each Inpatient Health Center in Samarinda City has implemented a clinical risk management program as this is already one of the standards for Puskesmas accreditation. All Puskesmas already have guidelines and SOPs regarding the implementation of clinical risk management. The Public Health Center is still trying to improve the patient safety system so that there are no patient safety incidents. The implementation of risk management plays an important role in preventing and dealing with medical errors because it can prevent potential risks.

This is in line with research Farokhzadian, Nayeri and Borhani (2015) which states that. The prevalence of risks in health services such as adverse events, KNC, and other clinical incidents is of great concern to health care providers. Risk management plays a very important role in preventing and dealing with medical errors, because it can identify and prevent potential risks[13]. Several studies have shown that creating a broad and in-depth understanding of medical error management can improve patient care related to incident reporting (Zaboli et al., 2011).

The results of this study are reinforced by the statement (Zimmer et al., 2010) that the application of risk management has been shown to be able to reduce the error rate in the emergency unit. Neale Graham in his research shows that 20% of incidents occur in the operating room and that the application of risk management can reduce the number of these events. Likewise with Handel who stated that the implementation of risk management programs can effectively reduce the number of medical errors[14].

According to researchers, the implementation of clinical risk management at the Samarinda Inpatient Health Center was able to reduce the number of patient safety incidents. The Puskesmas still need to increase the awareness of all employees to actively participate in the implementation of clinical risk management in each Puskesmas so that there are no obstacles.

CONCLUSION

The conclusion of this study is that there is a significant relationship between the implementation of clinical risk management and patient safety incidents at the Samarinda Inpatient Health Center.

The results of this study are expected to be an evaluation for the City Inpatient Health Center regarding the implementation of clinical risk management that has been carried out so far and its impact on patient safety incidents that occur. The Puskesmas is expected to be

able to carry out risk management programs properly in accordance with SOPs (Standard Operating Procedures) and carried out regularly.

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