

THE ANALYSIS OF RISK MANAGEMENT IMPLEMENTATION INPATIENT INSTALLATION OF MEURAXA HOSPITAL, BANDA ACEH, ACEH-INDONESIA

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Abstract-

BACKGROUND: risk management is the clinical and administrative activities carried out to identify, evaluate, and reduce the risk of injury to patients, staff, and visitors as well as the risk of harm to the organization. The application of risks that are not good will have an impact on the quality of service and community satisfaction. Several previous studies stated that the death rate due to clinical risk each year exceeds the death rate from AIDS and cancer. This study aims to analyze the implementation of risk management based on the commitment of leaders, persons in charge, training and monitoring at the Inpatient Installation of Meuraxa Hospital.

MATERIALS AND METHODS: This type of quantitative research is cross-sectional design. Determining the number of samples by purposive sampling, namely paramedics in Class III Inpatient Installation who are involved in the application of risk management and have worked for more than 2 (two) years. The number of research samples is 80 people. The statistical analysis used is Partial Least Square with smartPLS 4.0 .

RESULT: The R-square value for implementing risk management is 0.892. These results indicate that the leadership's commitment, the person in charge, training and continuous monitoring can influence the implementation of risk management by 89%, the remaining 11% is influenced by other factors outside the model. There is a significant relationship between the commitment of the leadership, person in charge, and continuous monitoring of the implementation of risk management in Class III Inpatient Installations.

CONCLUSION: Based on the SmartPLS model, it is concluded that the commitment of the leadership, the person in charge, training and monitoring of the application of risk management at the Class III Inpatient Installation of Meuraxa Hospital in Banda Aceh has appropriate and overall the model can be said to be fit.

Keywords- Risk management, Identification, Analysis, Hospital, Inpatient Installation

INTRODUCTION

Health services in hospitals have complex characteristics and organizations. Hospitals have human resources with various professions, who interact with one another in carrying out service activities. Risks related to health services cannot be completely eliminated, especially in complex organizations such as hospitals, therefore patient safety is a challenge and top priority in health services. Patient safety challenges can be both organizational and clinical. One way to overcome this challenge is to develop and implement risk management systematically.^[1] Various current health care organization risk management practices and processes originate from the report of The Institute of Medicine (IOM) entitled: To Err is Human: Building a Safe Health System.^[2]

The IOM records that around 98,000 people die due to medical errors while in hospital. To follow up on this incident, the Patient Safety Congress drafted the Patient Safety and Quality Improvement Act of 2005.^[3] Globally, 42.7 million patients per year are estimated to experience side effects from the health care process.^[4] Every day there are millions of patients who are hospitalized to get safe health services, but not all of these patients are free from danger. This is due to the risky and accident-prone health care system and the ineffective implementation of patient safety.^[5] Other studies revealed that around 2.9% -16.6% of patients experienced unwanted events and 5% -13% of them resulted in death, where 50% of these events were actually preventable.^[6]

Several studies have shown that it is difficult to eliminate risks in health care facilities such as incidents of patient falls, unexpected events that result in temporary loss, disability, and even death. The best solution to overcome this is to develop a patient safety program and implement risk management.^[7] The Agency for Healthcare Research and Quality (AHRQ) identifies risky processes that are often encountered in health care facilities including a. Verification of the surgical area/location; b. Incorrect specimen labeling; c. Medication errors: right drug, right dose, right patient, equipment failure/abuse; d. Indwelling device infections: urinary catheter, central venous catheter, percutaneously inserted central venous catheter, hand hygiene provider; e. Officers lack of rest; f. Provider turnover to providers; g. Inadequate staff/high volume of patients per provider; h. Diagnostic error; i. The patient fell.^[2]

A retrospective study in 2017 examined more than three hundred root cause analyzes over an eight year period, suggesting that the three most common types of events were activity related complications of procedures, cardiopulmonary arrest and neurological deficits. Types of solutions that are often carried out are training (20%), process change (19.6%), and policy strengthening (15.2%). The study concluded that the most commonly proposed solutions were easy actions, which tended to prevent the incident from

recurring.^[2] The findings of other studies state that the death rate due to clinical risk each year exceeds the death rate from AIDS and breast cancer.^[6]

Clinical risks if not addressed can cause problems for patients and increase the financial burden on the health care system.^[8] Even in health services, hazard investigation is given more attention than activities to minimize hazards before they occur^{[9], [10]}. Some problems stem from the basis of risk assessment such as how to express risk and use risk assessment as a tool to improve patient safety.^[11] Risk baseline systems tend to be used as a bureaucratic data collection tool, rather than to diagnose potential problems and provide inadequate risk evaluation guidelines.^[12] This indicates that efforts are needed to improve risk assessment practices.^[5] The results of previous research at a class B educational hospital in the Special Region of Yogyakarta showed that there were 138 patient safety incidents (IKP), consisting of incidents related to Patient Safety Goals (SKP) 1, namely patient identification 31.88%, SKP 2, namely effective communication 7.97%, SKP 3 is drug safety 41.30%, SKP 4 is certainty of exact location, procedure and patient 2.90%, SKP 5 is a 1.45% reduction in the risk of infection, SKP 6 is a 13.0% reduction in the risk of falling and Facility-related incidents of 1.45%.^[13]

A study conducted in inpatient rooms at 15 hospitals with 4500 medical records, obtained results that varied greatly in the number of Unexpected Events (KTD), namely 8.0% to 98.2% for diagnostic error and 4.1% to 91.6% for medication errors. In 2005 the Minister of Health of the Republic of Indonesia launched the Patient Safety Movement, since then Indonesia has developed a voluntary reporting system for Adverse Events (KTD) in hospitals. Although the number of reported adverse events was still relatively low, namely only around 300 cases in 2009, this was quite encouraging as the beginning of the growth of a hospital organizational culture that was oriented towards patient safety.^[14]

The author conducted a preliminary study by interviewing the Head of the Quality and Accreditation Section for Health Service Facilities at the Aceh Health Service on October 12, 2022. The results of the interviews obtained information that most hospitals in Aceh Province had just implemented risk management in health care facilities, including hospitals. The application of risk management in hospitals is due to the accreditation process and the mandate of the Minister of Health Number 80 of 2020 concerning the Hospital Quality Committee. The guidelines that are often used in conducting risk assessments refer to meeting the elements of accreditation standards, rather than identifying problems in the field. Most of the risk assessments are carried out by persons in charge who do not have expertise and experience in the field of risk management. There is a need for a risk assessment guide in the hospital that can be used to guide officers in carrying out a good risk assessment.

Preliminary data collection was also carried out at the Meuraxa Banda Aceh Regional General Hospital (RSUD) on November 30, 2022. The results of data collection showed that the Meuraxa Banda Aceh Regional Hospital was a class B hospital owned by the Banda Aceh City government which had plenary accreditation. The high number of inpatient visits each year reaches 8735 people in 2021, indicating that this hospital is one of the priorities of choice for the people of the city of Banda Aceh, therefore efforts are needed to maintain the quality of service, one of which is by implementing risk management according to standards.

The results of the interviews with the authors of the quality committee at the Meuraxa Hospital in Banda Aceh obtained information that activities related to risk management have been running since 2021 and there are already staff trained in the field of risk management. RSUD Meuraxa has formed a quality committee whose duties include implementing risk management in the hospital. In implementing risk management in hospitals, there are several obstacles, including not all officers responsible for risk receive risk management training, each unit, including units in inpatient installations, only submits risk registers to the hospital quality committee, while the process of identification, analysis and evaluation is carried out by each unit. Based on the description above, the researcher felt interested in researching the implementation of risk management based on risk assessment at Class III Inpatient Installation at Meuraxa Hospital Banda Aceh.

AIM:

The aim of the study is to analyze the implementation of risk management based on the commitment of leaders, persons in charge, training and monitoring at the Inpatient Installation of Meuraxa Hospital.

OBJECTIVE:

Objective : to analyze the implementation of risk management based on the commitment of leaders, persons in charge, training and monitoring at the Inpatient Installation of Meuraxa Hospital Banda Aceh using Smart-PLS.

METHODS:

Study Type: quantitative research with cross sectional design

Study Setting:

Samples have been selected from Meuraxa Hospital, Banda Aceh-Aceh, Indonesia- according to the inclusion and exclusion criteria.

Sampling technique: Purposive sampling technique.

Sample size: 80 (the head of the room and all medical and paramedical officers in Meuraxa Hospital)

Inclusion criteria:

- Willing to become a research subject by signing an informed concern
- Paramedical staff on duty at the Class III Inpatient Installation
- Has served for at least 2 (two) years at the Class III Inpatient Installation at the Meuraxa Hospital

Exclusion criteria:

- Subjects who are non-cooperative
- Subjects with unstable vitals
- Subjects is on leave, study assignments and other reasons when off the field

Data collection and Analysis:

A quantitative research by cross-sectional design in 80 samples. Determining the number of samples by purposive sampling, namely paramedics in Class III Inpatient Installation of Meuraxa Hospital. Data collection techniques using research questionnaires consist of 2 parts, namely: Factors that influence the application of risk management. The Risk Management Application Questionnaire was adopted from the theory of Kaya G^[5], the Indonesian Ministry of Health^[15], ACHS^[16], and Rachmina^[17]. Data analysis using Smart Partial Least Square is often called Smart PLS. This research has passed the ethical test held by the Faculty of Medicine, Syiah Kuala University on April 28, 2023 with registration number 072/EA/FK/2023.

RESULT

The description of the characteristics of the respondents divided according to age, gender, education level, profession, marital status, rank class, and years of service is shown in table 1.

TABLE 1. Frequency Distribution According to Respondent Characteristics

Characteristics	N	%
Age (year)		
21-30	33	41,2
31-40	40	50,0
41-50	7	8,8
Total	80	100
Sex		
Male	12	15
Female	68	85
Total	80	100
Level of Education		
Diploma III	61	76,2
SI (Bachelor)	19	23,8
Total	80	100
Marital Status		
Not Married	25	31,2
Get married	55	68,8
Total	80	100
Profession		
Nurse	79	98,8
Midwife	1	1,2
Total	80	100
Work		
Non civil servants	68	85
civil servant	12	15
Total	80	100
Years of service		
<10 years	56	70
11-20 years	24	30
Total	80	100

TABLE 2. SmartPLS R-Square and R Square adjusted, R², Q² PR, Index GoF test results

	R Square	R Square Adjusted	R ²	Q ² Predictive Relevance	Index GoF
Y1. Person Responsible	0.743	0.740	0.8	0.892	0.77
Y2. Monitoring	0.433	0.426	0.92		

Y3. Deployment	0.892	0.886
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Table 2 shows the value of R Square including the strong model. The predictive relevance Q2 value is a strong model because it has a Q2 value of 0.892. This indicates that exogenous latent variables (leadership commitment, person in charge, training and continuous monitoring) are able to predict the endogenous latent variable by 89%. The remaining 11% is influenced by other factors outside the model. The result of calculating the GoF index value is 0.77 which indicates a strong model. Therefore, it can be concluded based on the SmartPLS model that the influence of the leadership's commitment, the existence of a person in charge, training and monitoring of the application of risk management in Class III Inpatient Installation at Meuraxa Hospital Banda Aceh has model fit and overall the model can be said to be fit.

TABLE 3. Results of Hypothesis Testing of Risk Management Implementation

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistic (O/STDEV)	P Value
X1. Commitment --> Y1. Responsible	0,862	0.864	0,028	31,234	0,000
X1. Commitment --> Y3. Deployment	0,349	0,340	0,098	3,571	0,000
X2. Training-->Y2. Monitoring	0,658	0,665	0,061	10,760	0,000
X2. Training-->Y3. Deployment	0,051	0,053	0,056	0,903	0,366
Y1. Responsible-->Y3. Deployment	0,445	0,441	0,096	4,618	0,000
Y2. Monitoring -->Y3. Deployment	0,106	0, 170	0,080	2,017	0,44

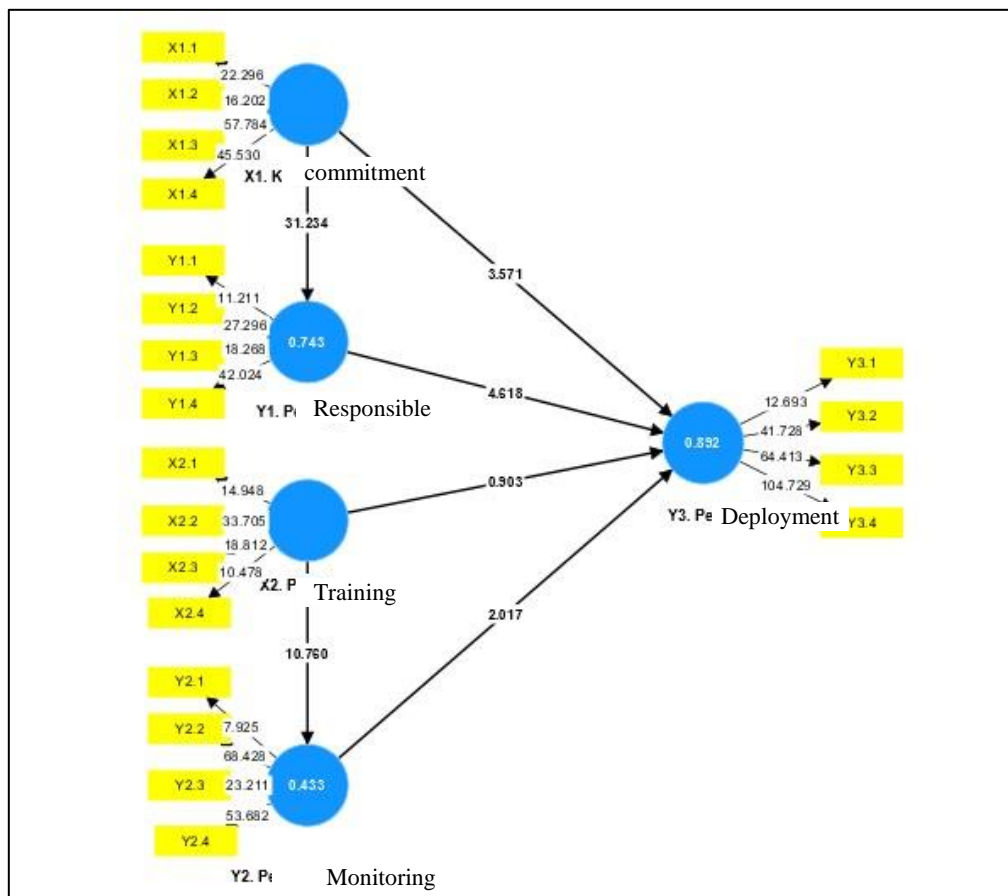


FIGURE 1. Smart PLS Inner Model of Risk Management Implementation

Table 3 shows that there is a positive relationship between the variables X1 and Y1, between X2 and Y2 so that the first (H1) and second (H2) hypotheses are accepted. There is a relationship between Leadership Commitment and the implementation of risk management, as well as between the person in charge and the implementation of risk management, the third hypothesis (H3) and fourth (H4) are accepted. But there is no relationship between training and the application of risk management, the fifth hypothesis (H5) is rejected. There is a significant relationship between continuous monitoring and the implementation of risk management, which means that the sixth hypothesis (H6) is accepted.

Figure 1 shows that the factors that most influence the implementation of risk management in Class III Inpatient Installations are the presence of a person in charge of risk management ($t= 4.618$) and leadership commitment ($t= 3.571$).

Discussion

The results of the study showed that there was a relationship between the presence of a person in charge of risk management and the implementation of risk management in Class III Inpatient Installation at Meuraxa Hospital Banda Aceh. The existence of a person in charge of risk management affects the implementation of risk management because the person in charge will develop a work program, implement and evaluate program achievements to determine corrective actions so as to minimize risk.

In line with research conducted by Drogalas^[18], regarding the role of internal audit and management in supporting the effectiveness of risk management, there is one factor that contributes positively to effective risk management, namely risk-based internal audit and the involvement of internal auditors in risk management. Another study conducted by Briner^[1] concerning the level of maturity of the implementation of Clinical Risk Management in 324 Hospitals in Switzerland in 2013 stated that the maturity level of hospital level risk management is at a high level of maturity, but at the level of service units the maturity varies. Variables that greatly influence the level of maturity of clinical risk management implementation are organizational factors, namely the presence of a coordinator or person responsible for the risk management program and the integration of clinical risk management^[1].

Statistical test results show that training is not related to the implementation of risk management, this is not in line with research conducted by Priyarsono^[19] regarding the importance of developing human resources to increase the effectiveness of implementing organizational risk management. Research conducted by Zaboli^[20] found that the variables that influence the implementation of Clinical Risk Management in hospitals include understanding of risk management, status of risk management in hospitals, policies and procedures related to risk management^[21]. According to the researchers' observations, there is no relationship between training and the application of risk management in the Class III Inpatient Installation because most officers have not been trained in risk management, but there are socialization meetings regarding risk management and in the unit there are guidelines on how to carry out implementation and risk assessment which are posted on the walls of each room of the Meuraxa Hospital in Banda Aceh. The guide helps staff become more independent in implementing and assessing risks in hospitals.

In line with research conducted by Kabuye^[22], concerning the importance of tone at the top from top management and the quality of internal audit to the effectiveness of risk management. The results of the study found that one of the key success factors for risk management is the quality of internal audit. Another study conducted by Drogalas^[18], regarding the role of internal audit and management in supporting the effectiveness of risk management, there is one factor that contributes positively to effective risk management, namely risk-based internal audit and the involvement of internal auditors in risk management.

Previous research related to Clinical Risk Management in several countries, has successfully identified obstacles in its implementation, including high workload, lack of financial and physical resources, organizational culture, inadequate training programs, inadequate education.^[6], besides that the rapid change of managers, lack of leadership support, and lack of assessment and supervision affect the course of the Clinical Risk Management program.^{[23],[24]} Continuous monitoring (supervision, monitoring and review) aims to ensure that risk management and proposed improvements have been implemented according to the treatment plan. Monitoring and review are carried out periodically by examining existing measurements and parameters.^[15]

Overall, based on the results of the study, it was concluded that the leadership's commitment, the person in charge, training and monitoring of the application of risk management at the Class III Inpatient Installation at Meuraxa Hospital in Banda Aceh has model fit and overall the model can be said to be fit.

LIMITATIONS OF THE STUDY :

1. The study was done in a short time with a limited number of subjects.
2. No proper follow-up data was collected.

RECOMMENDATIONS:

1. To make the study more valid, a long-term study with a large sample size is recommended.
2. Further studies are recommended to analysis of risk assessment as an important part in the implementation of risk management
3. Regular follow-up should be done.

CONCLUSION

These findings are based on the Smart PLS model, it can be concluded that the commitment of the leadership, responsible, training and monitoring in the application of risk management at the Class III Inpatient Installation of Meuraxa Hospital Banda Aceh is appropriate and overall the model can be said to be fit.

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