

## INTEGRATED RISK MANAGEMENT IN HOSPITAL MANAGEMENT STRATEGY

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### Abstract

Risk management is a crucial aspect of hospital management to ensure the safety of patients, staff, and smooth operations. The implementation of integrated risk management helps hospitals identify, assess, and manage risks, both clinical and non-clinical, to minimize injuries, accidents, and financial losses. This article aims to analyze the importance of integrated risk management in hospital management strategies and identify challenges and solutions for its implementation. Based on a literature review and various case studies, it is found that the implementation of international standards such as ISO 31000 has successfully optimized risk management in hospitals, especially in dealing with operational and clinical risks. However, significant challenges are still encountered, such as the lack of professionals trained in risk management and limited supporting technology. Suggested solutions include intensive training for staff, implementation of a technology-based incident reporting system, and integrating risk management with financial processes to prevent budget discrepancies. With these measures, the hospital can increase the effectiveness of risk management, improve patient safety, and maintain optimal continuity of operations.

**Keywords:** *Risk management, hospital, patient safety, ISO 31000*

### INTRODUCTION

Hospitals as one of the health care facilities have the responsibility to provide quality services, namely by paying attention to the provision of health services in terms of security, health and safety which includes identification, assessment and risk management to minimize unwanted risks and injuries (Fanny & Soviani, 2020). Risk is an integral part of human life, because every activity carried out must have a burden and risk borne. Risk is also defined as the possibility of something happening that has bad and detrimental consequences (Darmawi, 2016). So that risks do not hinder health service delivery activities, hospitals need to implement a risk management program.

Risk management according to AHIMA (2010) is a program that aims to reduce or prevent injuries and accidents and to minimize or prevent financial losses to the organization. The importance of risk management is also explained in the Hospital Accreditation Standards through the decree of the minister of health number 1128 of 2022, in standard point TKRS 14. The purpose of implementing risk management is to prevent injuries and losses in hospitals. Hospitals need to implement risk management and risk management plans to mitigate and reduce the risk of hazards that exist or may occur (Kepmenkes, 2022).

Hospitals are required to identify and control all significant strategic and operational risks. This includes all managerial and functional areas. Hospitals need to ensure systems are in place to control and mitigate risks. Risk management is closely related to the implementation of patient safety and occupational safety in hospitals and its impact on the achievement of hospital quality. Based on the description above, a problem formulation arises, namely how the implementation of integrated risk management can increase effectiveness in hospital management strategies, so the purpose of writing this paper is to try to summarize and analyze effective integrated risk management strategies in hospital management, as well as identify challenges and solutions in risk management implementation.

## LITERATURE REVIEW

### Definition and Concept of Hospital Risk Management

Risk is defined as any possibility for the occurrence of events that have a negative impact on the achievement of organizational goals (Permenkes RI No.25 of 2019). Risk can also be interpreted as a form of uncertainty about a situation that will occur later with decisions taken based on current considerations. Risk is generally seen as something negative, such as loss, danger and other consequences. Risk is something that must exist, we cannot avoid it but we can prevent it through risk management (Adhyka N, 2023).

Some experts describe risk management as a complete decision-making process from risk identification, assessment and decisions around risk issues. In principle, risks are dynamic and influence each other. A risk can become a chain of risk emergence in other parts of the same organization. So that risk management is not enough just ordinary risk management, but must be managed in an integrated manner. (Adhyka N, 2023)

Risk management is defined as a proactive and continuous process including identification, analysis, evaluation, control, communication information, monitoring, and reporting of risks including various strategies implemented to manage risks and their potential. Meanwhile, integrated risk management is the process of identifying, analyzing, evaluating and managing all potential risks and is applied to all units, sections, programs, or activities starting from the preparation of strategic plans, preparation and implementation of programs and budgets, accountability and monitoring and evaluation and reporting. In risk management, this process is continuous, systematic, logical and measurable which is used to manage risks in the agency. (Ministry of Health RI, 2019).

## METHOD

This paper is prepared based on a systematic review of literature in the form of journals collected from various sources such as Google scholar, Pubmed, Scopus, and nationally indexed journals within the 2019-2024 publication period. Book references as well as national hospital reports and guidelines are also used in the preparation of the content of the paper. The references used were in Indonesian or English. References were searched based on the keywords "hospital risk management", "hospital risk management strategy" or "healthcare facility risk mitigation strategy". References were collected and then screened for relevance to the topic of the paper.

## RESULTS AND DISCUSSION

### Scope and Types of Risk in Hospitals

The scope of hospital risk management includes (RSUD dr.Moewardi, 2021):

- a. Patients and families
- b. Visitors
- c. Medical staff
- d. Other health workers working in the hospital
- e. Hospital facilities and environment, consisting of:
  - 1) Safety and security.  
Safety is described as a particular condition of the hospital's roof, floors, grounds, and equipment that may pose a hazard or risk to patients, staff and visitors. While security is the risk of loss, destruction and damage or use of access by unauthorized persons.
  - 2) Hazardous and toxic materials (B3) and their waste. In this case, it is the risk of handling, storing, and using radioactive materials and other hazardous materials and hazardous waste.
  - 3) Disaster management (emergency), namely the risk of possible disasters, response in the event of outbreaks, disasters and emergencies including integrated evaluation of the patient's environment.
  - 4) Fire safety, i.e. the fire risk of the property/building and its occupants.
  - 5) Medical equipment, in the form of risks in the selection, maintenance and use of medical equipment
  - 6) Support system (utilities)m i.e. the risk of failure to operate electricity, water and other support systems
- f. Hospital business

Meanwhile, based on the risk category, it can be grouped as follows:

- a. Strategy (related to organizational goals), i.e. risks that affect the guidance of long-term plans for achieving goals.
- b. Operational (development plans to achieve organizational goals), covering internal and external processes that affect the organization's operations.
- c. Finance (safeguarding assets), which is anything that puts pressure on the organization's finances and expenditures.
- d. Compliance (Compliance with laws and regulations), which is the risk of not complying with or not implementing the applicable rules/regulations.
- e. Reputation (image perceived by the public), which is the risk of declining public trust due to negative perceptions.
- f. Policy, namely the risk of organizational policies both internal / external that have a direct impact on the organization
- g. Legal risk is the risk of lawsuits against the organization
- h. Fraud risk, which is the potential for fraud by internal parties that harms state finances

Based on the type, hospital risks are categorized into:

- a. Clinical risks, such as risks related to drug management systems, fall risks, infection risk control, risks related to nutritional issues, and facility and equipment risks (fire, laser use, etc.).
- b. Non-clinical risks, which include financial risk, legal/regulatory compliance risk, strategic risk and reputation risk.

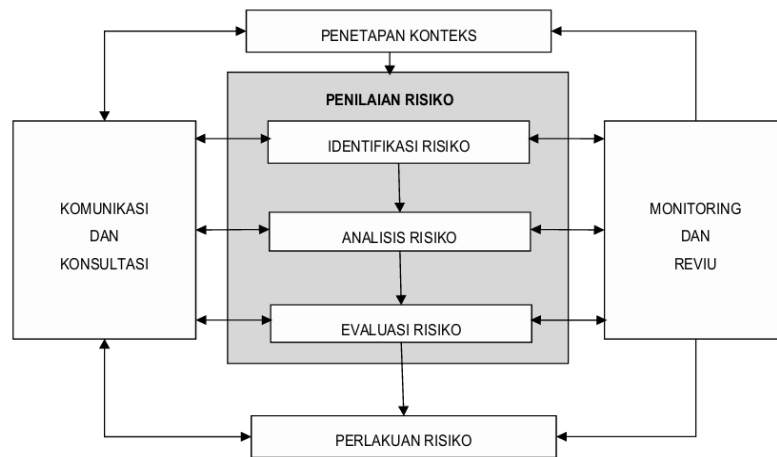
### ISO 31000 on Risk Management

ISO 31000 is an international standard widely adopted by healthcare organizations in Indonesia due to its flexibility and comprehensiveness in managing various types of risks. This standard assists hospitals and other healthcare facilities in systematically identifying, analyzing, and controlling risks. Some of the advantages of ISO 31000 are conformity with national regulations, namely in line with the regulations of the Ministry of Health of the Republic of Indonesia which emphasize the importance of risk management in health services, flexibility that can be adapted to various sizes and types of health organizations and increased reputation where ISO 31000 certified health organizations get more trust from patients and other stakeholders (BSN, 2018; Susanto & Wijaya, 2023).

According to ISO 31000 in 2009, risk management has 11 basic principles, namely:

- a. Creates value
- b. Connected to the organizational process (an integral part of organizational process)
- c. Part of decision making
- d. Addressing uncertainty (explicitly addresses uncertainty)
- e. Systematic, structured and timely
- f. Provide the best information
- g. Made as needed
- h. Take into account human factors and organizational culture
- i. Transparent and inclusive
- j. Dynamic and responsive
- k. Improvements and changes

The risk management process according to SNI ISO 31000 is as follows:



**Image 1.** Risk Management Process Based on SNI ISO 31000

**Phase 1: Communication and Consultation**

Communication and consultation is carried out by stakeholders from both internal and external parties with the aim that each party understands what needs to be done, applied in the risk management process and understands why these activities must be carried out.

**Phase II: Setting the Context**

Setting the context is intended to determine everything that happens in the internal and external environment with the boundaries that become a reference in the implementation of the risk management process. Determining this context is like determining the objectives to be achieved, the types of risks, the parties involved, when the implementation time is and so on. Setting the context is very important in risk identification and management, for example in hospitals setting the context area of the ICU room, emergency room or operating room with high priority for risk management in relation to patient care (Alam, 2016).

**Phase III: Risk Assessment**

*Risk Identification*

One important aspect of risk identification is to list as many possible risks as possible. This action starts from the process of finding, identifying and providing a description of the risk. In SNI ISO 31000, the risk identification process also identifies: risk sources, impact areas, causes (occurrence) of risk events, and potential impacts. Techniques that can be used in risk identification include brainstorming with experts, surveys, interviews, historical information, or working groups. The result of risk identification is a comprehensive list of organizational risks and events that may support, increase, decrease, prevent, delay or accelerate the achievement of the objectives of each organizational business process.

*Risk analysis*

Risk analysis refers to the various activities of measuring exposure to risk impacts and the possibility of doing so qualitatively, semi-quantitatively and quantitatively. Risk analysis uses an assessment of two parameters, namely likelihood (how often the risk is likely to occur or the frequency of risk occurrence) and consequence (how much impact if the risk occurs) by weighting or providing an index of 1-5 (Mahsudi et al., 2021).

*Risk Evaluation*

Risk evaluation is the activity of comparing the estimated risk level with the predetermined risk level criteria. The result of risk evaluation is a list of risk priorities for further action. If the risk is categorized as low risk, then the risk is accepted with little further handling (Mahsudi et al., 2021). Risk evaluation is carried out with the aim of helping the risk management decision-making process, prioritizing risks based on the risk analysis obtained and how important the risk must be handled immediately (Alam, 2016).

*Risk Treatment*

According to SNI ISO 31000, risk management is a process of modifying risks, especially in terms of risk reduction. In such situations, a cost benefit analysis can be conducted to select the form of risk treatment among the many risk treatment options available. Risk treatment is about considering options for treating risks that are not considered acceptable or tolerable. Risk treatment can be selected based on the color status. If the risk status is green, then the risk is considered small and the handling is also small or even unnecessary. Meanwhile, if the yellow risk status means that the risk is medium and the handling is based on cost and benefit considerations (Mahsudi et al., 2021). Organizations have choices in risk treatment, for example by changing the likelihood,

changing the impact or changing the likelihood and impact (Hutagalung, 2022). Risk handling seeks to minimize risky events that can hinder the achievement of organizational goals.

Phase IV: Monitoring and Review

Monitoring is the regular monitoring of the performance and implementation of the risk management process compared to the plan that will be produced. Review is a periodic assessment or review of current conditions and with a specific focus. Monitoring and review are carried out to guarantee and ensure that the implementation of risk has been successfully carried out. The results of monitoring and review must be incorporated into organizational activities as a measure of the organization's performance (Hutagalung, 2022). These risk management stages are in accordance with the risk management framework described in the regulation of the minister of health Number 25 of 2019 as follows:

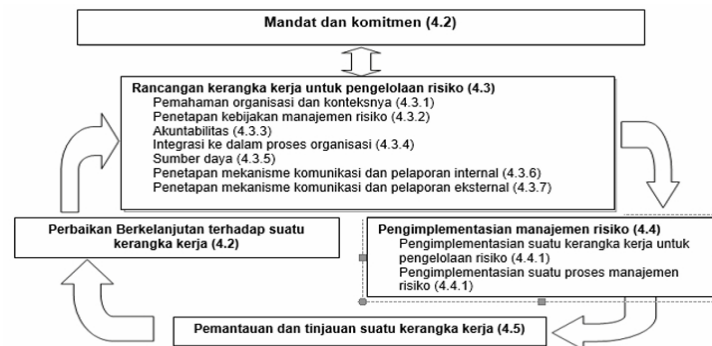


Image 2. Risk Management Framework

The success of risk management depends on the effectiveness of the management framework that provides the foundation to be embedded in the organization. The framework helps in managing risks effectively through the application of risk management processes at various levels and in the specific context of the organization. The objective of the risk management framework is to ensure that information about risks derived from the risk management process is adequately reported and used as a basis for decision-making and the fulfillment of accountability at all relevant levels of the organization.

**Framework for Risk Management in the Health Sector.**

Risk management in the healthcare sector is essential to ensure patient safety, operational efficiency, and regulatory compliance, and good risk management is associated with improved quality of healthcare services. The selection and application of an appropriate framework should be tailored to the specific needs and context of the healthcare organization to ensure effectiveness in managing risks. Here are some risk management frameworks specific to the healthcare sector that can be used.

1) *ISO 31000*

ISO 31000 is an international standard that provides general principles and guidelines for risk management. In the context of healthcare, ISO 31000 is used to identify, analyze, and control risks that may affect the quality of healthcare services (ISO, 2018).

2) *Failure Mode and Effects Analysis (FMEA)*

FMEA is a proactive method used to identify potential failures in healthcare processes and determine their impact on patients. Thus, preventive measures can be implemented before problems occur. (Ohno & Matsumura, 2022)

3) *Healthcare Failure Mode and Effects Analysis (HFMEA)*

HFMEA is an adaptation of FMEA designed specifically for the healthcare sector. It focuses on clinical and operational processes to improve patient safety by identifying and mitigating potential risks (Smith & Lee, 2023).

4) *The Clinical Risk Management Framework (CRMF)*

The CRMF provides a systematic structure for managing clinical risks, including risk identification, assessment, mitigation, and monitoring. This framework assists healthcare organizations in creating a safe and high-quality environment. (Kumar & Patel, 2021)

5) *Lean Six Sigma*

Lean Six Sigma combines Lean principles for process efficiency and Six Sigma for quality control. In the healthcare sector, this framework is used to reduce process variation, improve operational efficiency, and reduce the risk of medical errors. (Zhang & Nguyen, 2020)

6) *National Patient Safety Goals (NPSG) by The Joint Commission*

The NPSGs are a set of patient safety goals established by The Joint Commission to help healthcare organizations improve patient safety through best practices and risk management.

7) *Risk Evaluation and Mitigation Strategies (REMS)*

REMS is a program regulated by the FDA (Food and Drug Administration) to ensure that the benefits of a drug outweigh its risks. In a hospital context, REMS helps in the management of risks related to the use of certain medications. (Brown & Garcia, 2022)

8) *Enterprise Risk Management (ERM)*

ERM is a holistic approach to identifying, evaluating, and managing risks across an organization. In the healthcare sector, ERM helps healthcare organizations understand and integrate different types of risks, including clinical, operational, financial, and overall business strategic risks. This approach enables better decision-making and increased organizational resilience to various threats (Lam, 2023; Wong & Bhamra, 2022).

9) *COSO Framework (Committee of Sponsoring Organizations)*

COSO provides a comprehensive framework for ERM, which can be applied in the healthcare sector. The framework focuses on five main components: Internal Environment, Goal Setting, Event Identification, Risk Assessment, Risk Response, Control Activities, Information and Communication, and Monitoring (COSO, 2017; Johnson & Taylor, 2023).

10) *Bowtie Analysis*

Bowtie Analysis is a visual method used to identify and analyze risks by mapping the causes and consequences of a risk. In the healthcare sector, Bowtie Analysis helps in understanding the relationship between various risk factors and developing effective mitigation strategies. (Al-Humaidi & Yusoff, 2021; Harris & Clark, 2022)

11) *ProActive Risk Management Framework*

ProActive is a risk management approach that emphasizes proactive identification and mitigation of risks before they become problems. In the healthcare sector, ProActive assists organizations in anticipating potential risks and implementing appropriate preventive measures. (Chapman & Ward, 2022; Lee & Chen, 2023)

12) *Safety Culture Framework*

The framework focuses on developing a culture of safety in healthcare organizations. A strong safety culture can reduce the risk of medical errors and improve overall patient safety. The main components of the Safety Culture Framework include management commitment, training and education, incident reporting, and effective communication. (Singer & Vogus, 2023; Peterson & Whitaker, 2022)

### Risk Management in Hospital Accreditation Standards

Accreditation is a recognition of the quality of hospital services obtained after an assessment. A hospital is categorized as accredited if it has met the accreditation standards approved by the Government. In its implementation, hospital accreditation standards are grouped according to important functions common in hospital organizations (Kepmenkes RI, 2022). Standards are grouped according to functions related to the provision of services for patients (good clinical governance) and efforts to create a safe, effective and well-managed hospital organization.

Risk management itself is found in several standards such as in the hospital governance standard (TKRS). In TKRS 1, hospital management is asked to review risk management reports every 6 months and provide feedback on improvements by owner representation that must be implemented by management and the results are re-evaluated at the next meeting in writing. Whereas in TKRS 5 it is explained that risk management to proactively improve high-risk processes, for example those that have been analyzed by FMEA. TKRS 9 and 10 mention that the head of the work unit prepares a work program that includes quality improvement and patient safety activities and risk management every year. Hospitals are also required to create an integrated risk management program used to prevent injuries and losses in the hospital in TKRS 14.

### Case Study of Risk Management Implementation in Hospital

The results of Susanto and Wijaya's research (2023) shows that hospitals that successfully implement this standard effectively manage risks related to patient safety, medical equipment availability, and disaster management. Prabowo and Lestari (2023) studied the implementation of *Enterprise Risk Management (ERM)* in private hospitals in Indonesia. The results showed that hospitals that implemented ERM experienced improvements

in financial risk management, regulatory compliance, and improved patient safety. One of the case study hospitals in this research is Mitra Keluarga Hospital.

Nugroho and Suryanto (2022) showed that, after the implementation of HFMEA, there was a significant decrease in the number of medical error incidents. The study by Santoso and Rahmawati (2023) found that the hospital had successfully developed a good patient safety culture, supported by top management commitment, regular safety training, and an effective incident reporting system. Research conducted by Kurniawan and Luhulima (2023) showed that the implementation of ProActive helps hospitals identify and anticipate risks before they develop into bigger problems. However, limitations in terms of information technology and risk management skills are the main obstacles in the full implementation of this framework. Research by Hidayat and Putri (2023) found that COSO ERM helps hospitals manage strategic and operational risks in a more structured manner, especially in the face of regulatory changes and hospital accreditation demands. However, implementing this framework requires a large initial investment, especially for training and technology.

### CONCLUSION

1. Risk management is a very important process in hospital management, as it relates to minimizing injuries, accidents, and financial losses that may occur.
2. The implementation of integrated risk management is able to improve the effectiveness of hospital management, because it includes identification, assessment, control, and mitigation of risks in all units and parts of the hospital.
3. Risks in hospitals can be divided into clinical and non-clinical risks, both of which require systematic handling to maintain service quality and patient safety.
4. Standards such as ISO 31000 and various other risk management frameworks have been implemented in several hospitals and proven to help in identifying and mitigating risks effectively.
5. The main challenges in implementing risk management include the lack of trained human resources and technological limitations, which leads to uneven implementation across all hospitals.

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