

ORIGINAL ARTICLE

**IMPLEMENTATION OF OCCUPATIONAL SAFETY AND HEALTH RISK MANAGEMENT IN ISLAMIC HOSPITAL SURABAYA A. YANI**

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**ABSTRACT**

**Background:** Risk management is a preventive effort for a company, especially those engaged in the service sector, which is very prone to errors and complaints. For this reason, it is necessary to map the risks that occur in accordance with the work unit in it which is expected to minimize the number of accidents or errors in both patients, visitors and employees in the hospital. In the 2019 patient safety incident report data at the Surabaya A. Yani Islamic Hospital, it was found that there were incidents which included near miss 93%, not injured 4%, unexpected events 3% and Sentinel 0%. The purpose of this study was to identify and identify the application of occupational safety and health risk management at the A. Yani Islamic Hospital in Surabaya.

**Methods:** This thesis is a qualitative research with a case study method with the aim of fully describing the implementation of K3 risk management at Surabaya A. Yani Hospital based on observation, survey and documentation data on 37 units and hospital workplaces by identifying risks. , analyze and find risk control measures.

**Results:** The results showed that the implementation of K3 risk management in the Islamic Hospital of Surabaya A. Yani based on the results of risk identification obtained as many as 25 risks in the graha building and the old building which were further analyzed by finding 15 moderate risks and 10 high risks. can be done by repairing damaged infrastructure and improving the existing security system at the A. Yani Islamic Hospital in Surabaya.

**Conclusion:** The conclusion in this study is the implementation of K3 risk management at the Islamic Hospital of Surabaya A. Yani has 25 potential risks, of which there are 15 moderate risks and 10 high risks that can potentially cause accidents to employees, visitors and patients. In this case, control efforts are made to minimize the number of incidents and accidents.

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## Introduction

Occupational Health and Safety (K3) is a preventive effort made for workers or laborers as well as employers to prevent work accidents and diseases due to work relationships in the work environment by recognizing the potential that will cause work accidents and occupational diseases (PAK).<sup>1</sup> RI Law No. I of 1970 concerning work safety states that the workplace is a place where work is carried out for the purposes of a business where there are workers working and the possibility of danger in the workplace. This workspace includes all places of business activity with an economic or social motive.

Regulation of the Minister of Manpower Number PER.05/MEN/1996 states that the Occupational Health and Safety Management System, hereinafter referred to as the OHS Management System, is part of the overall management system which includes organizational structure, planning, responsibilities, implementation, achievement, assessment and maintenance of occupational safety and health policies in the context of controlling risks related to work activities in order to create a safe, efficient and productive workplace. Occupational health is one of the fields of public health that focuses attention on the working community, both in the formal sector and those in the informal sector<sup>2</sup>.

Risk management activities are an important issue for a service based on service quality.<sup>3</sup> Risk management is a preventive effort for a company, especially those engaged in the service sector where it is very vulnerable to errors and complaints. For this reason, it is necessary to first map the risks that occur according to the

work units in it. With that, it is hoped that risk management can minimize the number of accidents or errors both for patients, visitors and employees at the hospital. In achieving success in realizing risk control and mitigation in a health service, it is necessary to make rules and procedures and work targets so that they are clearly in accordance with the established agenda. For this reason, risk management makes policies and strategies that will be used in the process. This is intended to avoid errors in identification and monitoring of work programs so that they can focus on carrying out and planning activities in the service unit<sup>4</sup>.

Surabaya Islamic Hospital A. Yani is a hospital under the auspices of the Surabaya Islamic Hospital Foundation (YARSIS). Islamic Hospital Surabaya, which is one of the private hospitals with good service and accredited Plenary (Five Star) by KARS. With this, patients and visitors expect to get good and satisfying service. Based on the patient safety incident report data in 2019 it was found that the number of incident incidents was as follows:

Based on the data table for the 2019 patient safety incident report, it is explained that the percentage of patient safety incident frequency based on the type of incident is KNC 93%, KTC 4%, KTD 3% and Sentinel 0% at Islamic Hospital Surabaya A. Yani. Therefore, to improve service and customer satisfaction, an increase in patient safety services is needed. There is a need for regular monitoring and good risk management to ensure the safety of health workers, patients and visitors at the Surabaya A. Yani Islamic Hospital. Based on this description,

the authors conducted a study on "Application of Occupational Health and Safety Risk Management in Islamic Hospital Surabaya A. Yani".

The general and specific objectives of this study were to determine the application of OSH risk management at the Islamic Hospital of Surabaya A. Yani. Identifying occupational safety and health risks at the Surabaya A. Yani Islamic Hospital. Analyzing and evaluating risk at the Surabaya A. Yani Islamic Hospital, as well as knowing the control of risk at the Surabaya A. Yani Islamic Hospital.

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## Methods

This research is qualitative research with a case study method that is used to understand a problem or problem by using an event, process, activity and program with the aim of obtaining a complete and in-depth description or picture by collecting data from various sources including observation, , documentation and reports. This study will describe the application of occupational safety and health risk management which includes the stages of risk identification, risk analysis and risk control at the Islamic Hospital of Surabaya A. Yani.

1. The unit of analysis in this study is all workplaces and units in the hospital, totaling 37 hospital units that have the potential to pose a risk of danger at the Islamic Hospital of Surabaya A. Yani.
2. In this study, the techniques used in data collection were divided based on the source of the data obtained, namely primary data and secondary data. Primary data is data obtained

directly from the object of research, namely all units and workplaces at the Surabaya A. Yani Islamic Hospital through observations and surveys using a potential risk identification form. While the secondary data was obtained from the annual data recap which is a report recorded at the Surabaya A. Yani Islamic Hospital. While the data analysis techniques used are observation, survey, and documentation. Observations were made by direct observation of all units and workplaces at the Surabaya A. Yani Islamic Hospital which have the potential to have risks and hazards and to obtain secondary data, namely reports from the PMKP unit.

3. This survey was conducted using a risk identification form to obtain information from the field regarding the potential risks of hazards that cause accidents to health workers, employees and visitors or patients at the Surabaya A. Yani Islamic Hospital. Documentation is carried out with the aim of completing the information obtained so that it is more complete and supports the truth and information provided relating to the identification of potential hazards. From all stages of the process, the researcher inputs the data that has been obtained in the risk identification form and then describes it with photos or documentation in accordance with the conditions in the field and is described in the form of a narrative in the discussion and research results.

After obtaining all the data obtained from the research, it is analyzed to determine the potential hazards or causes of accidents and their sources, and reviewing the control efforts

that have been carried out in accordance with the AS/NZS 4360 standard, in particular by conducting a hazard risk analysis to determine the priority level of risk as a risk control measure so that does not cause work accidents.

4. The unit of analysis in this study is the place or environment in the Surabaya Islamic Hospital
  - a. those who have potential risks that open 37 units
5. This research was conducted at the Islamic Hospital Surabaya A. That is, in 37 units of analysis, namely the Graha building and the old RSI . building

The research was conducted from January to February 2021 with the object of research being all units and workplaces around the Surabaya A. Yani Islamic Hospital. Researchers have used and applied research ethics in this study, the researcher has explained in advance the intent and purpose of carrying out the research to the Surabaya A. Yani Islamic Hospital through an official licensing process from the University with the approval of the location to be studied, the data obtained from the unit and workplace at the Islamic Hospital of Surabaya A. Yani is guaranteed to be kept confidential by providing a report to the researcher, the risk identification form is given from the Hospital with guidance and direction from the General Section and the K3RS Committee, the statement that was studied obtained permission and approval from the Hospital with the output in the form of suggestions and input related to risk control at the Surabaya A. Yani Islamic Hospital.

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## Results

This research is qualitative research with a case study method that is used to understand a problem or problem by using an event, process, activity and program with the aim of obtaining a complete and in-depth description or picture by collecting data from various sources including observation., documentation and reports. This study will describe the application of occupational safety and health risk management which includes the stages of risk identification, risk analysis and risk control at the Islamic Hospital of Surabaya A. Yani. The unit of analysis in this study is all workplaces and units in the hospital, totaling 37 hospital units that have the potential to pose a risk of danger at the Islamic Hospital of Surabaya A. Yani.

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field regarding the potential risks of hazards that cause accidents to health workers, employees and visitors or patients at the Surabaya A. Yani Islamic Hospital. Documentation is carried out with the aim of completing the information obtained so that it is more complete and supports the truth and information provided relating to the identification of potential hazards. From all stages of the process, the researcher inputs the data that has been obtained in the risk identification form and then describes it with photos or documentation in accordance with the conditions

in the field and is described in the form of a narrative in the discussion and research results. After obtaining all the data obtained from the research, it is analyzed to determine the potential hazards or causes of accidents and their sources, and reviewing the control efforts that have been carried out in accordance with the AS/NZS 4360 standard, in particular by conducting a hazard risk analysis to determine the priority level of risk as a risk control measure so that does not cause work accidents.

**Table 2.** Data of Risk Control of Graha RSI Surabaya Building A. Yani

No	Possible risks	Root of the problem	Control Recommendations
1	- Stumble - hit by an object - Falls	Excessive placement of items in the workspace	Placed in a safer place such as a warehouse or other storage room.
2	- Get hit by a drugstore - fire extinguisher blocked - Stumbled alkes	Placement of medical equipment around APAR	Placed in a safer place such as a warehouse or other storage room.
3	- Slipped - Falls	Water leaks from the roof that soaks the floor	Repair of the roof and or marking of slippery floors around the floor.
4	- The fire extinguisher cannot be used optimally in the event of a fire	APAR hose that is loose and not maintained	Repair and check fire extinguishers on a regular or scheduled basis
5	- Struck by APAR	Setting the fire extinguisher too high	Place the fire extinguisher in the correct and strategic height position
6	- Stumble - Crashing - Falls	Wheelchair in the hallway	Moving to a safer place and does not hinder activities in the work environment

7	- Noise - Hearing disorders	Machine makes noise	Store it in a soundproof room and wear ear plugs
8	- Slipped - Falls	Cracked and leaking roof	Patching and repairing the roof
9	- Disturbance of electric current - Electrocuted - Can happen fong	Messy cables and close to work activities	Tidy cables and provide cable safety lock
10	- hit by an object - Damage to Facilities - Disturbance of electric current	Putting objects or items on the gallon near the computer	Move objects to a place that has been provided such as a drawer or table

**Table 3** Data. of Risk Control of Old Building RSI Surabaya A. Yani

No	Possible risks	Root of the problem	Control Recommendations
1	- Stumble - Slipped - Falls	The stairs are not wide enough and there is no safety, such as rubber on the steps	Renovations and repairs by providing safety rubber on the stair steps
2	- Security system breached - Power failure - Network failure	The electrical installation room is unlocked	Padlocked and locked the room when not in use
3	- Get hit by an item - Falls - Stumble	Putting things and equipment on the stairs	Move items to a safe place
4	- Stumble - Falls - Overturned	Cracked and hollow floor in pharmacy corridor	Floor patching and repair
5	- Insect or vector entry - Smelly water	The water reservoir for oxygen is unlocked and poorly maintained	Periodic checks and monitoring as well as padlocks

6	- Wood cover - Scratched with cracked glass	Sanitary facilities for clinic and spiritual rooms that have been peeled off and cracked glass	Sanitation facility improvement
7	- hit by glass - Stumble	Placement of glass on the road	Move to a safer place
8	- Stumble - Falls - Overturned	Placement of pipes along roads where there is frequent activity	Moving pipes to a safer location or warehouse
9	- Disturbance of electric current - Electrocutted - Can happen fong	Messy cables and close to work activities	Tidy cables and provide cable safety lock
10	- Falls - Stumble - Crashing	Placement of goods in the workspace	Store it in a warehouse or in a safer place
11	- Slipped - Stumble - Falls	Floor rubber starting to peel off	Repair and replace rubber
12	- Slipped - Falls	Water leaks from the roof that soaks the floor	Repair of the roof and or marking of slippery floors around the floor.
13	- Nosy people breaking into - Electrical system shuts down when needed	Unlocked electrical installation	Locking and checking regularly
14	- Falls - Slipped - No Ergonomics	Steep access roads and passages in the ICU hallway and no safety or footing	Added handrails on each side and steps like stairs
15	- Electrocutted - Prone to short circuit when it rains	An open path around the generator and unlocked	Closing the fence and locking it and not being used as an access road

## Discussion

In research activities that have been carried out at the Surabaya A. Yani Islamic Hospital, researchers observed and focused on one of the activities, namely the application of OHS risk management which includes risk identification, risk analysis and efforts to control risk. The implementation of the risk management program at the Surabaya A. Yani Islamic Hospital was slightly hampered due to the Covid-19 pandemic which caused monitoring or examination not to be in accordance with the predetermined schedule. The K3 Committee of RSI A. Yani supports and encourages the implementation of risk management in several stages, namely: First, Communicating and showing support for risk management. Second, Trust, report every incident or incident and manage risk. Third, Appreciate and empower good risk management practices. Fourth, Identify and sustainably manage the factors that cause accidents or incidents that occur at the Surabaya A. Yani Islamic Hospital. Fifth, Encouraging organizational learning with established structures and tasks. Sixth, Developing appropriate risk management strategies to reduce the likelihood or recurrence of incident problems, and Seventh, Continuous monitoring and evaluation of the implemented strategies to ensure they are effective or not.

The implementation of OHS risk management is an overall part that includes organizational structure, planning, responsibilities, implementation, procedures, processes and resources needed for the development, implementation, achievement, review and maintenance of OHS<sup>5</sup> policies in the

context of risk control or prevention of work-related accidents, and occupational diseases in order to create a safe, comfortable and productive workplace<sup>3</sup>.

According to the Guidelines for Management of Occupational Health and Safety (K3) in Hospitals, K3RS management is an activity process that begins with the planning, organizing, implementing and controlling stages that aim to cultivate OSH in hospitals. The analysis in the implementation of this research refers to the 4 main elements contained in the Ministry of Health, namely Commitment and Policy, Planning, Organizing and implementation<sup>5,6</sup>.

Based on the results of the study, it can be concluded that the commitment of the Surabaya A. Yani Islamic Hospital related to K3RS is an initial commitment that is expressed verbally, but has not been realized in written form specifically regarding K3. However, policies regarding structure and organization have been formed and several work programs have been running, although slightly hampered in 2020 due to the Covid-19 pandemic. In addition, funding related to K3RS and facilities such as personal protective equipment (PPE) is complete and implemented.

There are some human resources who handle K3RS at the Surabaya Islamic Hospital A. Yani who do not have special expertise in the field of K3, because the training system is carried out in rotation and alternately, existing resources need to be included in K3 training so that the hospital has the resources competent person which is manifested in the form of an organizational container for the K3RS committee<sup>7</sup>. The Islamic Hospital of Surabaya A. Yani also has a policy



that all workers in the hospital must receive counseling about K3.

It is known that several strategies that have been arranged at the Surabaya A. Yani Islamic Hospital, namely the socialization of the K3RS program, the formation of an K3 committee organization even though it has not become an independent organization and is still in the service sector and several human resources in the K3 committee who do not have the basics of K3 but they receive adequate training and work programs that have been arranged.

Risk Analysis is a process to identify and provide a risk assessment that measures the impact, frequency or probability as well as the magnitude of losses to recipients caused by exposure to hazards that result in work accidents or occupational diseases<sup>8</sup>. Based on the risk assessment with the product of the impact, the level of probability and loss to the recipient at the Surabaya Islamic Hospital A. Yani through a survey and observation process using the risk identification form from the OSH Committee of the Surabaya Islamic Hospital A. Yani with the AS/NZS 4360 standard, it was obtained Some of the medium risk and high risk in the graha building and the old building totaling 37 units or sections that are at risk of causing work accidents to health workers, employees, patients and visitors.

Moderate risks were found, such as the placement of excessive items in the workspace that narrowed the workspace area, placement of medical devices along the road and around the stairs, water leaks from the roof that wet the floor which was at risk of slipping, the rubber floor was peeling off and there were bumps on the surface

of the floor that can cause health workers and visitors and patients to fall or stumble when accidentally passing the location point, other risks such as computer installation cables or dispensers in the workspace are messy and close to risky work activities that can cause electrical disturbances, electric shock and can cause fong, then reservoirs or water pumps that are not locked which are at risk of entering insects or vectors that can cause smelly or polluted water and placing excess goods in the workspace which poses a risk to workers when carrying out work activities falling or tripping over objects. However this result was found to be similar with previous study<sup>9</sup>.

High risks include such as an unlocked electrical installation system and water tendons which can result in being broken into by irresponsible and irresponsible people and causing the hospital's electrical system to be disrupted and problematic, placing the fire extinguisher in a position that is too high and close to work activities that are at risk of falling and happened to people who were close to the location, then checked the unscheduled fire extinguisher so that the condition of the fire extinguisher was not good, such as rubber or hoses that had peeled and expired so that the use of the fire extinguisher when needed and a fire could be hampered . Another risk is the roof of the meeting room in the old building peeling off and almost collapsing which risks falling on people who are in the room and causing a detrimental impact and scattered and messy cables that are near work activities and computer equipment, this can be at risk of current disturbances. electricity

and fongs and can cause a fire. Previous study in Japan also found similar result that<sup>10</sup>.

Control measures that can be taken from the risks found are such as the condition of runnah walls at several points that have cracked and leaky roofs as well as cracked and perforated floors and some rubber floors that are starting to peel as well as the placement of items scattered around the streets and spaces<sup>11,12</sup>. work, scattered cables, wet and slippery floor surfaces at several locations, some of which can cause work accidents for health workers, employees and patients or visitors at the Surabaya A. Yani Islamic Hospital.

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### Conclusion

Based on research on the application of occupational safety and health risk management at the Surabaya A. Yani Islamic Hospital, it was concluded that the implementation of K3 risk management in the risk management program at the Surabaya A. Yani Islamic Hospital was running well but not optimal because it was caused by the Covid-19 pandemic that causing monitoring or inspection not according to a predetermined schedule. Risk identification obtained 25 potential risks contained in 37 units which include the graha building and the old building at the Surabaya A. Yani Islamic Hospital, while the existing risks include the risk of falling, tripping, slipping, electrocution, breaking the security system and noise risk. Risk analysis at the Surabaya Islamic Hospital there are 25 potential risks in the graha building and the old building, Among them there are 15 moderate risks and 10 high risks. The graha building has 7 moderate risks and 3 high risks, while the old

building has 8 moderate risks and 7 high risks. Risk control that can be done is by repairing infrastructure that has started to break down, providing a special place or space for storing medical items and equipment and improving the security system to avoid breaking into electrical installations and water tendons by irresponsible people and checking and monitoring regularly scheduled.

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### Conflict of Interest

The author stated there is no conflict of interest

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