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FIRE SAFETY POLICY AND PROCEDURE AT GOVERNMENT HOSPITAL: CASE STUDY HOSPITAL RAJA PEREMPUAN ZAINAB II

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Abstract:

Fire safety management has an essential aspect that must be carried out to ensure building performance will be maintained for daily operations. In Malaysia, the fire safety aspects are very new but the numbers of cases involved in hospital building are higher. The fire cases in Malaysia at government hospital are issued by Fire and Rescue Department of Malaysia (FDRM) such as recent cases at fire Intensive Care Unit (ICU) of Hospital Sultanah Aminah, where fire occurred and the seven victims were trapped during the fire in the building. The study in fire safety aspects able to improve fire safety management practices at the government hospital. The objectives of the study are to determine the level of compliance with policy and the procedure that is applied at the Hospital Raja Perempuan Zainab II Kota Bharu. This study employed both quantitative and qualitative methods to obtain data. 50 respondents from hospital staff took part in the study as the survey respondents. The data were analysed using the Average Index Method. From the findings, five factors policy and procedure have been applied at the government hospital. The finding of this research stated that the most critical aspect is staff training. The ways to improve fire safety management practices at the hospital is they must ensure that technical training is conducted among hospital staff and the evacuation frequency need to be improved. In addition, it is found that government hospital needs to emphasize the five factors in policy and procedure to ensure that hospital has good practice in fire safety management.

Keywords: Fire safety management; Policy and procedure

1.0 INTRODUCTION

The building that is crowded by patients and staff can be particularly dangerous to building occupants during building in operation or during emergency. However, many of the cases have failed due to irregularity in maintaining the safety system of their premises and becomes a problem when fire happens. In addition, fire is a potential life-altering threat in any building and can create an even worse situation if there is no prior preparation especially for the high density of building user. This is due to the fact cases such as in a fire emergency. The fire issues had been emphasized explicitly and systematically for the commercial and public building which have resulted in lower quality of fire safety management, especially for the policy and procedure aspect. The fault of fire safety management may arise when it is separated from fire safety designs and management when building is in operational. There is the need for building owner or government to increase public awareness of the importance of maintaining building safety and fire safety management, especially to prevent mishap during the cases of fire.

Every year fire cases in Malaysia at government hospital are being issued by Fire and Rescue Department of Malaysia (FRDM). Fire safety management is a current issue in Malaysia. As stated by Woon and Suleiman (2015), the problems occur due to blockage of fire safety equipment, blockage of fire escape, fire rated door were locked at night, smoke detector does not function and the usage of combustible material which is usage of plastic wallpaper. These are worth issues that need to be settled appropriately and fast especially for government hospital in Malaysia.

Therefore, the research was conducted to identify the level of fire safety management policy and procedure in the government hospital. The objectives of the study were first being to identify the policy and procedure implemented for fire safety management in the government hospital. Second was to determine the compliance level for fire safety policy and procedure aspect in the government hospital. The third objective was to suggest the measure to improve policy and procedure for fire safety management in the government hospital.

2.0 LITERATURE REVIEW

2.1. *Fire safety management*

According to Howarth and Zaitri (1999), fire safety management can be defined as the application by a manager of policy, standards, tools, information, and practices to the task of analyzing, evaluating and controlling fire safety. In addition, good management of fire safety in a building is essential to ensure that any fire safety matters that arise are always effectively addressed. In simple premises, this can be achieved by the manager or owner maintaining and planning fire safety in line with general health and safety. As stated Milton (2016) a fire safety plan with at least four parts should be worked out beforehand. This should include maintenance plan, staff training plan, fire action plan and fire prevention plan. In addition, the fire safety management must have an effective fire safety management plan that includes the training and education for tenants and staff in order to reduce the chances of fire outbreaks from occurring. This is because a person who is not properly trained and lacks awareness may not only be responsible for causing a fire but also help it spreads through ignorance and panic resulting in loss of life and damage to property. From interview session with Mr. Amat Sapekis from Fire Operation Officer, Fire Department Seri Iskandar, the main components of fire safety management are emergency action procedure, risk assessment, staff training, maintenance and fire audit and legislation.

2.2. *Management policy and procedure*

2.2.1 Organization structure

According to Porter (1990), the management policies will also need to consider the interaction of fire safety with the other aspects of the operation of the building, particularly security. The concept of organization structure must be able to achieve the objective of the hospital. According to Ministry of Health (2017) on the Fire Action Plan of Hospital Raja Perempuan Zainab II, the organization structure was established to ensure the hospital management is available for the implementation, maintenance, monitoring and review of the fire safety strategy and policy that should have a clear standard requirement. For instance, Ministry of Health has established *Unit Pembangunan dan Penswastaaan* to provide standardization in development at the hospital which is for upgrading and maintenance activities. This department needs to monitor and coordinate procurement processes for development work and coordinate the implementation of minor repairs and small projects according to the Ministry of Health procedure.

This clearly highlights the importance in providing clarity when dealing with issues and activities that are critical to health and safety, legal liabilities and regulatory requirements. Other than that, as required under safety and health act 1994 section 30, Ministry of Health, under government organization, the JKK committee members belong to the hospital staff and are supervised by hospital director. The hospital director, who also acts as a chairman and secretary of a committee, will appoint a safety secretary of safety and health officer (SHO). This committee will conduct HIRARC for example hazard identification, risk assessment, and risk control. Besides that, fire Prevention and Rescue Committee was formed for preparation and preventive measure. The committee needs to ensure that staff is aware and understand this Fire Prevention Policy. In addition, the role of the committee is to conduct safety audits to prevent fire arising from work activities and working environment conditions.

2.2.2 Maintenance and building audit

According to Tsui and Chow (2004), detail management work on maintenance of passive and active fire safety measures involve maintaining clear escape routes, repairing damage with routine testing and inspection and housekeeping for fire prevention such as replacing potential ignition sources. Besides that, the audit provides a valuable assessment of the condition of the physical asset while, the data gathered provides a benchmark for the present condition of the building and can easily be updated. The audit results are usually given to the Ministry of Health through a Department of Engineering an indication of the usefulness and long-term outlooks for the hospital building. In addition, the prevention stage, the outsources as in the privatization agreement of hospital support services have their responsibility to carry out building audit and shall manage the fire safety audit by the fire department once a year. In the scope to ensure the maintenance, inspection and testing by competent persons or contractor of all fire detection and warning systems, portable extinguishers, hose reels and fixed firefighting systems, emergency lighting, smoke control systems and any other preventive or protective measures need to be properly done as to form part of the building services.

2.2.3 Risk management

In the risk management process there is a combination of a few of scopes which are safety audit, hazard management, and risk assessment. Risk management will obtain the latest information through the safety audit where it indicates the position of the safety management system from Ministry of Health organization. The safety and health committee has responsibility to propose and prepare any alterations to hospital building that likely affects the building user during an emergency situation such as means of escape, exit routes plan. At the committee stages the safety and health committee must ensure the people responsible for the operation procedure in hospital have permit to work and they prepare the procedure for works involving flammable material work such as welding, flame cutting, use of blow lamps or portable grinding wheels in areas near flammable materials whether it is done by employees or contractors This committee must prepare HIRARC report that covers the three aspects such as hazard identification, risk assessment, and risk control. The content of HIRARC report has all the review of the possibility that causes damages and dangerous situation for building user and surrounding.

2.2.4 Staff training

Tsui and Chow (2004) stipulate staff training includes designation of a fire safety officer and other staff (full-time or on a voluntary basis) who are responsible for fire safety activities, assignment of fire wardens as evacuation guides, training of designated staff to use first-aid fire appliances and carry out regular fire drills. The policy and procedure Hospital Raja Perempuan Zainab II under fire action plan has stated the requirement of staff training for HRPZ II and it must be conducted annually. The exercise is to ensure that all its members have skills in rescue work and ability to use fire-fighting equipment. Thus, training should be conducted at least once every year. In addition, Rescue Department may be needed especially in giving talks and observe the overall rescue and safety training. In the exercise, the department involves will give and explain the steps of action in the event of an accident or condition emergency department/unit. Theoretically, the role and duties of a hospital staff must be clear as to avoid lack of response during emergency situation and aware of the situation. At this stage, the staff at the hospital could be trained to know what they should do during an emergency situation when an emergency alarm is active.

2.2.5 Emergency action procedure

The action procedure needs to include the building user and fire department should be notified immediately and all the building occupant must know and being informed if any fire occurring in the building. Therefore, it is very important to attract more attention to emergency preparedness and the planning process to manage, overcome and recover emergencies (Alexander, 2005). As required by Ministry of Health Malaysia, in fire action plan, government hospital must establish emergency response

team. All officers, staff, contractors, visitors, and trainees shall be responsible in implementing fire and displacement emergency measures. In addition, the emergency response team should be the initial team to act during the early stage of fire before it is taken over by the fire department.

3.0 METHODOLOGY

To achieve the objective of this study, few methods were applied on how to get the information about the fire safety policy and procedure as well as in determining the level of compliances of the government hospital. This research used three stages upon completing the research. It involved the identification of the issues or problems that occur, literature review, a framework of the research methodology which used the quantitative method that consists of primary and secondary data. The qualitative method enabled the researcher to achieve by the first objective of this study that was to identify the fire safety management implemented at the Government Hospital. In addition, the data were collected and gathered all the required information through interview section that focussed on maintenance team to achieve the first objective which was to study good management practice of fire safety at the public hospital. Hospital Raja Perempuan Zainab II, Kota Bharu was chosen as the case study for this research. The method used was quantitative through a survey among the hospital staff. The survey was conducted to about 10 percent from the total number of hospital staff. The questionnaire was distributed to 50 respondents. The return percentage collected was 100 % all the 50 respondents. The survey used a likert scale method to achieve the second and third objectives which were to measure compliance level for policy and procedure in management and to suggest ways or measures to improve the existing fire safety policy and procedure when necessary.

4.0 ANALYSIS AND FINDINGS

Finding from the study shows that the arrangement of organization structure, building audit, staff training, risk management and emergency respond procedure were obtained for the Hospital Raja Perempuan Zainab II. The table 1 indicates for the compliance level at the hospital. The discussion was based on the Average Index as the yardstick for comparing each statement.

Table 1: Compliance level for fire safety policy and procedure

No.	Policy and procedure	Frequency					Average Index	Category of rating scale
		1	2	3	4	5		
1.0	Organization structure			15	23	12	3.94	4
2.0	Maintenance and building audit			11	25	14	4.06	4
3.0	Risk management		6	19	18	7	3.52	4
4.0	Staff training		16	15	19		3.06	3
5.0	Emergency action procedure		12	6	24	8	3.56	4

Based on the average analysis, it shows that the most critical aspect of fire safety policy and procedure at government hospital is staff training, the average index is 3.06 with partially agree. The staff training procedure included safety and health committee was conducted first action training during fire among hospital staff and has conducted a fire drill at least once a year. The second of lowest aspect is risk management with an average index 3.52 but it is still considered that the respondents agree to the statement. In risk management practices, the hospital has a proper guideline according to the standard operating procedure which is implementing good housekeeping practices such as hospital needs to ensure fire safety equipment does not block anything. The management of flammable materials still does not achieve level satisfaction among the staff. The average index from organization structure and emergency action procedure are good for the government hospital in term of arrangement organization in fire safety aspect. In addition, data were obtained from the structure department at the hospital. It was observed that the hospital has an effective policy and strategy to manage the fire safety with good planning practices

and the hospital has clear scope on the role of maintenance organization. The maintenance and building audit received the highest score for the case study with an average index 4.06. In fire safety management practice the hospital has conducted building audit and monitoring work done by outsourcing contractors. In addition, the maintenance support services at the hospital has maintenance planning, a proper record of maintenance work and a checklist of fire safety equipment. Overall, the level compliance with the data obtained shows satisfactory in all five (5) aspects of fire safety policy and procedure. Next, Table 2 describes data on the suggestions to improve the existing fire safety policy and procedure at the government hospital.

Table 2: Ways to improve fire safety policy

No	Policy and procedure	Scale					Average Index
		1	2	3	4	5	
1.	Establish safety and health committee at all department/ward.			23	20	7	3.68
2.	The frequency of maintenance and audit schedule.			18	25	2	3.28
3	Carry out the risk management at high risk area by weekly.			5	25	10	3.3
4	Conduct technical training to represented of each department/ward.			11	30	9	3.96
5	Improve the evacuation frequency			3	29	18	4.14

The most relevant method reported by the respondents in order to facilitate fire safety policy and procedure is by improving the evacuation frequency with a 4.14 average index, followed by the necessity to conduct technical training to staff with a 3.96 average index. The respondents also agree to establish safety and health committee at all department/ward with a 3.68 average index and the lowest was to improve the frequency of maintenance or building audit with an average index of 3.28.

5.0 CONCLUSION

As a conclusion, this study found that the fire safety policy and procedure at Hospital Raja Perempuan Zainab II are in a good condition. However, there is still room for improvement especially in the training aspect among hospital staff. Policy and procedure for government hospital must have good planning in the future as to avoid any damages for the building. It is advisable that during the planning stages government agency through the Ministry of Health must review the existing five aspects of policy and procedure of the hospital.

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