East African Scholars Multidisciplinary Bulletin
Abbreviated Key Title: East African Scholars Multidiscip Bull
ISSN 2617-4413 (Print) | ISSN 2617-717X (Online) |
Published By East African Scholars Publisher, Kenya

OPEN ACCESS

DOI: 10.36349/easmb.2019.v02i08.001 Volume-2 | Issue-8 | Aug-2019 |

Research Article

Qualitative Study on Readiness of Hospital Disaster Plan in Facing Fire Disasters in Hospitals Tk. 14.07.02 Iv Dr. Sumantri Parepare City In 2019

Muhammad Jufri[1*], Masyitha Muis[2] and Fridawaty Rivai[3]

[1]Master Program, Public Health Faculty, Hasanuddin University, Indonesia
[2]Department of Occupational Safety and Health, Public Health Faculty, Hasanuddin University, Indonesia
[3]Department of Health Administration, Public Health Faculty, Hasanuddin University, Indonesia

*Corresponding Author
Muhammad Jufri

Abstract: Hospitals are at high risk of causing casualties when burned, in addition to losses to assets, building losses, health service processes, social impacts and good name of the hospital itself are at stake. This study aims to obtain information about the readiness of the fire disaster management team disaster hospital at Hospital Tk. IV 14.07.02 Dr. Sumantri in the face of a fire disaster. Data was obtained through in-depth interviews, observation and document review, the number of informants was 8 people, this research was carried out at the Hospital Tk. IV 14.07.02 Dr. Sumantri City of Parepare in June 2019. The method of determining data sources with snowball sampling. Based on the results of the study, it can be concluded that the readiness of the organization of the Fire Disaster Prevention Team of the Hospital TK. IV 14.07.02 Dr. Sumantri is still lacking, the communication system in the form of code red activation is not maximal because there is still a lack of intensity in practice simulation and fire protection because it still relies on APAR, operational systems or work mechanisms are equipped with SOPs, Human Resources Readiness is sufficient, financing system still depends on the leadership policy so that the procedure for financing fire handling is only limited to the introduction of APAR without evacuation simulation. Coordination between work units has not been implemented and external socialization is still lacking for external agencies / stakeholders, it is necessary to immediately add additional hydrant indoor hospital facilities and fire simulation planning so as to be able to increase staff expertise in hospital fire management efforts, and make MOU between hospitals with outside agencies such as Fire Department, BPBD (Regional Disaster Management Agency) and PLN (State Electricity Company).

Keywords: Hospital Disaster Plan, Readiness, Communication System, Operations, Financing.

INTRODUCTION

Fire is an oxidation reaction from the meeting of fuel, oxygen and heat. The impact of a fire can result in loss of property or injury or even death (Ramli, 2010) Hospital is one place that has a risk of fire. Some neighborhoods in hospitals that can cause sources of fire hazards are: Emergency Room Installation (IGD), Surgical Room, Intensive Care Unit (ICU), Radiology, Laboratories, Laundry, Kitchens, Boilers, and Generators (Directorate of Occupational Health Development, Ministry of Health, Republic of Indonesia, 2006). Fire disasters do not know the time so that the occurrence can not be predicted when and where this event can occur because of that fire can be said as an unwanted fire (Suprapto, 2005)

In hospitals there are generally solid consumables and medical devices such as oxygen, masks, nasal cannula, endotracheal tubes (ETT) made of polyvinyl cloride (PVC) or silicone, dressings, ointments, gowns, beds, blankets, suction catheters, flexible endoscopes, fiberoptic cable covers, gloves, packaging materials, all of which are prone to fire Most of the causes of fires in hospitals come from different sources, namely sources of flammable liquids, presence of small sparks or heat originating from operating equipment in the tube zone) 2, and O2 gas channel components or liquid O2 tanks, and cylinders carrying pure O2 (Chowdhury, 2014)

Quick Response Code

Journal homepage:
http://www.easpublisher.com/easmb/

Article History
Received:15.07.2019
Accepted: 26.07.2019
Published: 04.08.2019

Hospitals have a high risk of causing casualties when burned, in addition to losses to assets, building losses, health service processes, social impacts and reputation of the hospital itself (Nayka, 2012) Most of the residents of the hospital are undergoing medical treatment in conditions that require physical assistance in evacuation. Therefore, the evacuation will certainly be different from the handling of fires that occur in markets, settlements, hotels or tourist attractions (Ramli, 2010).

Law of the Republic of Indonesia., 2009, concerning Hospitals In article 11 requires that hospitals must have fire prevention and prevention infrastructure, in the form of instructions, standards and facilities for evacuation in the event of an emergency that meets safety standards, and occupational safety and health which is carried out must be maintained and functioning properly

Hospital accreditation standards in Health Facility Management (MFK) in fire safety standards state that hospitals must plan and implement a program for prevention, fire prevention, and the provision of safe means of escape from facilities in response to fire and other emergencies. (Suhariono, 2018)

Fire events on Thursday July 18, 2019 in the City of Pematang Siantar, North Sumatra, Pharmacy Room, Morgue Room and Laundry Horas Insani General Hospital Burned by charcoal electricity (Ricky Fernando Hutapea, 2019) prove the intensity of the incidence of fires in hospitals, Here are some cases of fires that hit various hospitals including: Burning Turkish hospitals (May 25, 2009). Eight patients died after a fire occurred allegedly due to electrical damage, Fire Hospital Calcutta, East India (December 10, 2010). The escape of medical staff left the patient when the fire engulfed allegedly as the cause of the death of more than 89 patients. Fire data center room Pamekasan Madura Hospital (January 11, 2010). All patient and employee data and other important data are on fire. AMRI Hospital, Kolkata India, 91 dead (December 2011), fire at this private hospital started in the basement, highly flammable medical equipment, No. Psychiatric Hospital. 14 Ramensky, Russia, 38 dead, locked windows and doors hamper evacuation (April 2013), Fukuoka Japanese Orthopedic Hospital, 10 dead, (October, 2013) General Hospital of West Nusa Tenggara Province Mataram burned (July 10, 2011). The fire burned the building which was estimated at Rp. 50 billion, and two patients treated were killed (Arrazy, Sunarsih and Rahmiwati, 2014) and (Pan American Health Organization, 2014)

Based on the case example, the first question arises as to who will make the first outage attempt whether the medical officer in the room, is the technical HR of the hospital, whether the hospital security is waiting for the Fire Department. how to organize fire disaster management at the hospital. The next question is what is the duty of each HR in the hospital when a fire occurs (related to the work tasks) whether saving patients, whether saving facilities whether saving documents etc. Is the evacuation track arrow safe to follow (Murni, 2014)

In addition to these problems, density is a major factor in the high vulnerability to fire hazards in an area because the more densely packed an area is, the easier the fire to propagate because of the dense structure of the building and coinciding between one building and another (Findia, 2017) Hospital Tk. IV 14.07.02 Dr. Sumantri which is located in a densely populated area with a hospital location of around 7600 m², Building Area = 1407 m² which is not too wide, potentially has a high risk of fire, based on observations at the Tk Hospital. IV 14.07.02 Dr. Sumantri was informed that the head of the hospital issued a warrant for the disaster management team, in which one of the Safety Officers was responsible for handling the fire, one of the disasters at the Tk Hospital. IV 14.07.02 Dr. Sumantri who is wary of fires, for fire protection facilities still relies on Light Fire Extinguishers (APAR), the number of which is installed as many as 23 tubes. This study is intended to obtain information about the readiness of the fire disaster management team at the Tk Hospital. IV 14.07.02 Dr. Sumantri in the face of a fire disaster.

METHODOLOGY

This type of research is a qualitative descriptive study with a phenomenological research design, the informants in this study were 8 people, including the Head of Hospital, OSH Section and members of the disaster management team, the team consisted of military members and hospital Officers. IV 14.07.02 Dr. Sumantri City of Parepare in June 2019, this study aims to obtain information about the readiness of the disaster preparedness team in the face of fire disasters which include organizational readiness, communication systems and means of fire protection, operational systems or work mechanisms, human resources, financing systems and coordination systems , data collection is done by in-depth interviews, document review and observation, the technique of determining data sources from informants in this study is purposive sampling, ie data sources are selected based on specific considerations and objectives and if additional informants are needed, the method of determining data sources with snowball sampling .

The informants involved in this study were Train Management. Rumkit, Community Information Liaison, Liaison Officer, Operations Planning, Logistics, Finance, and OSH of the Hospital / MFK Committee. The data analysis technique used is triangulation technique, the triangulation that will be used is source triangulation, by comparing interview data or answers from one informant with other

informants and checking data obtained from various sources.

RESULTS

The results of research on fire disaster preparedness planning analyze aspects of fire disaster preparedness in this hospital using the Disaster Preparedness Guidelines for Hospitals or Hospital Disaster Plans issued by the Ministry of Health of the Republic of Indonesia. In 2009 the aspects of preparedness that were examined were devoted to fire disasters, these aspects include aspects of organizational readiness, operational systems, financing systems and coordination systems of socialization obtained in-depth interviews for organizational readiness, organizational readiness includes the results of identification of potential risks through hazard vulnerability analysis (HVA), hazard vulnerability assessment or risk identification at home ill regulated in Regulation of the Minister of Health Number 66 of 2016 concerning Hospital Occupational Safety and Health Article 19 paragraph 2 and 4, Section K3 Hospital Tk. IV 14.07.02 Dr. Sumantri has made a disaster risk identification report document issued by the head of the hospital dated January 12, 2019.

Based on the results of interviews with informants about risk identification, information was obtained that the most potential results of vulnerability assessment of hazards at the TK Hospital. IV 14.07.02 Dr. Sumantri is a fire, because the location of the hospital is in densely populated settlements and there are gas stations so that the results of the analysis of potential fires are quite high.

Based on the results of interviews with informants about the establishment of a disaster preparedness team, it can be seen that the Head of the Hospital has formed a team of internal and external disaster response in the form of an official Order, to facilitate the coordination and responsibility of each member, Safety Officers are specifically responsible for fire events. by coordinating each room for the division of code red activation tasks in the event of a fire.

From the interviews, it is known that the communication system is the first occurrence during a fire, that is, if it is possible for picket officers to ring a bell in the guard room, or employees who are serving the first time firing will notify other officers in sequence with red code activation, code red responsible different every shift.

From the results of interviews with informants, information can be obtained that at the Tk Hospital. IV 14.07.02 Dr. Sumantri provided 23 APARs that were in good condition and were installed in all rooms, other fire protection such as Hydrants or sprinklers did not yet exist. From the results of interviews with informants, information can be obtained that the hospital officers are required to be able to extinguish the fire by using APAR and each shift has the responsibility to deliver fire information through the guard duty officer or directly to the information room. fire or large or small fire is occurring by immediately operating APAR or if possible using a wet sack, if the fire event is large enough and unable to control the fire then contact the local Fire Fighting Service as much as possible to immediately provide assistance for suppression, informants who others said that each fire incident was reported to the safety officer who was responsible for submitting the report to the head of the hospital.

From the results of interviews with informants, it can be seen that most of the officers have received fire and red code socialization. For training with simulation practices, the cost of replacing APAR after use is quite large. Based on the results of interviews with informants, it is known that funding of disaster events is not included in financial planning, but funding or special disaster funding for pre-disaster fires is prepared in the form of socialization or fire simulation, even though it uses internal costs.

The results of interviews with informants are known that the hospital will contact PLN if the fire is large enough, coordinate with the Extinguishing and Rescue Service, Regional Disaster Management Agency (BPBD) Parepare City, Police and so on if there is a fire in the hospital area. The hospital fire management planning team and its programs have been socialized to some employees of the Hospital. IV 14.07.02 Dr. However, Sumantri has not yet been submitted to external agencies or stake holders.

DISCUSSION

Aspects of fire disaster preparedness in this hospital use the Hospital Disaster Plan Guidelines issued by the Ministry of Health of the Republic of Indonesia in 2009, aspects of preparedness that are carefully studied in the face of fire disasters, these aspects consist of readiness organization, communication and fire protection systems, operational systems or working mechanisms, human resources, financing systems and coordination and socialization systems, each of these aspects.

Identification is something that must be carried out for the first time in determining the emergency conditions that exist in a hospital environment including a fire disaster, the result of identification originating from potential disasters or emergency conditions that may occur in the Hospital's environment. IV 14.07.02 Dr. Sumantri is a fire, the location of hospitals in densely populated urban settlements, based on the results of research from Ratna Saraswati et al. There is a relationship between the percentage of semi-permanent buildings and fire events, namely the greater the percentage of semi-permanent buildings, the more

fire incidents in West Jakarta. However, the fire incident is not related to population density, other than the location of the Sumantri hospital which is in the middle of a dense settlement adjacent to Pertamina gas stations, the method for determining safe distance values of fire or explosion from sources such as gas stations is called Screening Distance Value, SDV 170,000 liters of gas stations for fire scenarios are 976 m and 1200 m, although some researchers use SDV values from IAEA references of 5 km for fire and explosion scenarios around the site (Priambodo, 2018), as for the distance of the Hospital Kindergarten. IV 14.07.02 Dr. Sumantri with Fur Tip SPBU less than 400 M.

Fire source factors other than external hospitals, potential risks can also come from internal hospitals, namely electrical short circuit, gas stove from canteen or kitchen room, medical machines, air conditioners, water pump dynamos, LPG canisters, cigarettes sources of fire can also come from electrical panel rooms, generator rooms, vehicles that are parked, etc.

After determining the identification of potential hazards, one of the efforts to prevent the occurrence of fire risk in hospitals is an administrative effort by establishing an organizational structure for fire risk control, the Disaster Management Team Organizational Structure at the Tk Hospital. IV 14.07.02 Dr. Sumantri especially the Safety Officer was also responsible for the fire incident at the Hospital Tk. IV 14.07.02 Dr. Sumantri

Based on the National Hospital Accreditation System (SNARS) Guidelines, Management of Health Facilities (MFK) 7 standard Fire Protection Sub-Section, MFK 7 point 2 evaluation element, states that the hospital must have a Hospital or Control Fire Responsible Team or Team Hospital or K3 Hospital, hospital is allowed to have one of the teams in question, the disaster management team issued in the form of an Order (SP) with Number Sprin / 84 / I / 2019 signed by the Head of Rumkit, the Safety Officer in the organizational structure is responsible coordinating the head of the room for the division of duties and authority for activation of code red every time a fire occurs, activation of code red is regulated in the fire prevention operational standard.

The TNI-AD Technical Guidance (2016) of the Army Hospital needs to have a guideline that contains the vulnerability and disaster risks that may be experienced as well as the handling steps, the success of disaster management in the Army Hospital depends on each personnel, where each personnel must have a patriotic spirit and upholding the oath of soldiers and eight faces of the TNI.

According to Minister of Manpower Decree No. KEP. 186 / MEN / 1999 fire emergency response is a task force that has a functional task specifically in the field of fire. Officers of the role of fire prevention are officers who are given additional tasks to identify sources of danger and fire prevention efforts in their work units.

Communication system for the first incident during a fire at the TK Hospital. IV 14.07.02 Dr. Sumantri if the fire incident occurs in the treatment room or other inpatient room, the officer who knows must immediately report to the guard duty officer, the picket officer immediately rings a bell or tells the information room to immediately activate the red code to utilize fire protection tools, according to the Minister of Work Regulation General of the Republic of Indonesia Number: 26 / Prt / M / 2008 Fire detection and alarm systems, and communication systems installed using an alternative permitted in these technical requirements must be viewed as the required system, in this case the Hospital Tk. IV 14.07.02 Dr. Sumantri has not used an early warning alarm system according to the building requirements, but uses a communication system with bell clerk or oral delivery.

Based on Hospital Infrastructure Guidelines for Technical Guidelines for Active Fire Protection Systems Kementerian Kesehatan RI, 2012 facilities for dealing with fire disasters in hospitals including prohibited smoking signs, evacuation route signs, fire alarms, heat detector devices, smoke detector devices, fire extinguishers, water slang and or hydrants and emergency special telephone lines.

According to Minister of Home Affairs Regulation No. 27 of 2007 concerning Guidelines for Preparation of Facilities and Infrastructure in Disaster Management Article 1 paragraph 2 (14), one of the readiness of a system of prevention and disaster management in a hospital can be seen in the condition of existing facilities and infrastructure, in this case in the form of a Light Fire Extinguisher at the Kindergarten Hospital. IV 14.07.02 Dr. Sumantri, which consists of 23 tubes and has been installed in a position that is easily visible, hanging and red, based on Permenaker No: Per.04 / Men / 1980 Terms of Installation and Maintenance of Light Fire Extinguishers (PER.04/MEN/1980, 1980)

In line with previous research by Hodiri Adi Putra that PKU Bantul Hospital has basically fulfilled the complete facilities and infrastructure for fire protection, only there are components that do not meet the standards that cannot be ruled out to avoid emergency conditions and components that are not standardized can result fatal.

Kindergarten Hospital IV 14.07.02 Dr. Sumantri where the location of land and buildings that are relatively tight and not so wide is very potential for easy fire transfer quickly, the length of time a fire occurs depends on the fuel capacity in the room. What is meant by fuel is everything that is in the room and is flammable (material, furniture, electronic equipment, etc.). The size of the space determines the propagation of fire, it is because the greater the space, the more O2 content in space and accelerates the rate fire. (Subagyo, 2012), by this means fire protection facilities other than APAR must be a priority for installation of installations such as hydrants and sprinklers.

Kindergarten Hospital IV 14.07.02 Dr. Sumantri already has a Fire Mitigation Standard Operating Procedure (SPO) with the SPO / MFK-RSS / I / 2018 Document number, with the SOP being provided, the communication and coordination procedures flow in the event of a fire have been prepared in a clear set of systems. This will be very useful to support the overall fire disaster preparedness and in each room the schedule for disaster code picket staff is equipped with a colored helmet, according to the results of the study by Nayka, 2012 In the Tabanan BRSU, information was obtained that there was a fixed procedure regarding fires already in each room. The hospital also cooperated with the local PMK, the Police, the Ministry of Manpower, and the local community but there was no written agreement for outside assistance.

The ability of officers to handle fire control before the assistance of firefighters arrived at the hospital through training and simulation of blackouts, training or outreach to prevent the emergence of greater risks associated with the occurrence of fires is one of the risk reduction efforts, previous research by Arrazy, Sunarsih and Rahmiwati, 2014 explained that evacuation training and simulation at Dr. Sobirin has not been done regularly and periodically for all employees. The last training carried out in 2010 was not enough to guarantee that the Fire Control Team officers were ready in a fire emergency.

Blackout training and simulations that have been carried out for all nurses and midwives and administrative staff at the Hospital Tk. IV 14.07.02 Dr. Sumantri, which is a simulation exercise directly to the fire source that has been prepared and to the trainees, is asked to try to extinguish the fire directly to the source, the training is guided by the disaster preparedness team and the OSH section. , but it is expected that the frequency of fire prevention simulation training programs can be periodic at least once a year.

Funding for pre-disaster at the Hospital TK. IV 14.07.02 Dr. Sumantri for Pre-Disaster, special budgeting does not yet exist, but using internal funds for training activities and fire simulation preparations for accreditation, the budget is intended to reserve APAR replacement / filling funding that has been used, the addition of new installations (sprinklers, hydrants) Hermanto, Widjasena and Suroto, 2017 in his research mentioned that budgeting from management must be more open to the K3 team, high financing will be carried out in stages using priority scale, according to Republic of Indonesia Ministerial Regulation Number 39 of 2014 concerning Disaster Management at the Ministry of Defense and Indonesian National Army Hospital Article 13 mentions that financing Disaster management in the Kemhan Hospital and TNI is supported by the Ministry of Defense and the Indonesian National Budget.

If there is a bigger fire where the officers cannot extinguish the Hospital TK. IV 14.07.02 Dr. According to the informant, Sumantri will coordinate with BPBD, Fire Extinguishing Service and Rescue of Parepare, Health Service, Police and others, but there is no agreement yet, unlike the Bhayangkara Tulungagung Hospital, which has entered into a cooperation agreement with the Civil Service Police Officers. Fire Kab. Tulungagung in 2017 as an effort to strengthen the fire prevention and prevention system, in addition to the fire department, hospitals should also carry out cooperation agreements also with PLN, BPBD and other relevant agencies. Collaboration between hospitals and the Fire Department can also be in the form of cooperation in the form of checking the condition of the installed APAR and filling in the APAR if there are already used

CONCLUSION

Based on the results of the study it can be concluded the readiness of the organization of the Fire Disaster Prevention Team of the Hospital. IV 14.07.02 Dr. Sumantri is still lacking, the communication system in the form of code red activation is not maximal because there is still a lack of intensity in practice simulation and fire protection because it still relies on APAR, operational systems or work mechanisms are equipped with SOPs, Human Resources Readiness is sufficient, financing system still depends on the leadership policy so that the procedure for financing fire handling is only limited to the introduction of APAR without evacuation simulations, the coordination between work units has not been implemented and external socialization is still lacking in terms of outreach to external agencies / stakeholders

REFERENCES

1. Arrazy, S., Sunarsih, E., & Rahmiwati, A. (2014a). Penerapan Sistem Manajemen Keselamatan Kebakaran Rumah Sakit DR. Sobirin Kabupaten Musi Rawas Tahun 2013. *Jurnal Ilmu Kesehatan Masyarakat*.
2. Arrazy, S., Sunarsih, E., & Rahmiwati, A. (2014b). Rumah Sakit Dr . Sobirin Kabupaten Musi Rawas Tahun 2013 Implementation Of Fire Safety Management System At Dr . Sobirin Hospital

District Of Musi Rawas 2013. *Jurnal Ilmu Kesehatan Masyarakat*, *5*, 103–111.
3. Chowdhury, K. (2014). Fires in Indian hospitals : root cause analysis and recommendations for their prevention. *Journal of Clinical Anesthesia*, *26*(5), 414–424. https://doi.org/10.1016/j.jclinane.2013.12.014
4. Findia. (2017). Analisis Tingkat Kerentanan Terhadap Potensi Bahaya Kebakaran Di Permukiman Padat Penduduk Di Kelurahan Pelita Kecamatan Samarinda Ilir Kota Samarinda, *KURVAS*, *6*(1) 42–46.
5. Hermanto, O., Widjasena, B., & Suroto, S. (2017). Analisis Implementasi Sistem Evakuasi Pasien Dalam Tanggap Darurat Bencana Kebakaran Pada Gedung Bertingkat Di Rumah Sakit X Semarang. *Jurnal Kesehatan Masyarakat (e-Journal)*, *3*(3), 555–562.
6. Health Ministry of the Republic of Indonesia. (2012). *Pedoman Teknis Prasarana Rumah Sakit Sistem Proteksi Kebakaran Aktif*. (Kementerian Kesehatan RI, Ed.). Jakarta: Kementerian Kesehatan RI.
7. Murni, T. W. (2014). *Peran Tenaga Teknis Perumahsakitan Dibidang Manajemen Bencana diluar Rumah sakit* (External disaster)., 1–5.
8. Nayka, E. P. dan M. (2012). *Penilaian Risiko dan Upaya Tanggap Darurat Kebakaran di BRSU Tabanan Bali*, *Tidak diterbitkan*. Universitas Airlangga.
9. Pan American Health Organization. (2014). *Hospitals Don't Burn! Prevention, Hospital Fire Guide, Evacuation*. Washington DC.
10. Priambodo, D. (2018). Penentuan Nilai Jarak Aman Sumber Tidak Bergerak: Skenario Kebakaran dan Ledakan pada SPBU dan SPPBE di Sekitar Tapak RDE. *Jurnal Pengembangan Energi Nuklir*, *20*(1), 9. https://doi.org/10.17146/jpen.2018.20.1.4314
11. Ramli, S. (2010a). *Pedoman Praktis Manajemen Bencana (Disaster Management)*. Jakarta: PT Dian Rakyat.
12. Ramli, S. (2010b). *Petunjuk Praktis Manajemen Kebakaran*. (Husjain Djayaningrat, Ed.). Dian Rakyat.
13. Ricky Fernando Hutapea. (2019, July). Korsleting, Kebakaran Hanguskan Ruang Jenazah dan Farmasi RSU Horas Insani. *Sindonews.Com*.
14. Subagyo, A. (2012). Antisipasi yang Diperlukan Terhadap Kebakaran Listrik pada Bangunan Gedung. *Issn*, *1*.
15. Suhariono. (2018). *Manajemen Keselamatan Dan Kesehatan Kerja Rumah Sakit*. Surabaya.
16. Suprapto. (2005). *Telaah Kebakaran dan Mengantisipasinya*. Medan: Mitra Persada Dunia.